Commonwealth Accountability Testing System

2010–11 Technical Report

Based on the Analysis of Data from the 2010–11 School Year

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100 Education Way, Dover, NH 03820 (800) 431-8901
WWW.MEASUREDPROGRESS.ORG

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CHAPTER 1. OVERVIEW OF THE KENTUCKY CORE CONTENT TEST

1.1 PURPOSE OF THE ASSESSMENT SYSTEM

The 2010–11 administration of the Kentucky Core Content Test (KCCT) took place in the interim period during which state school accountability was temporarily suspended as per Kentucky Senate Bill 1 passed early in 2009. During this interim period the KCCT was administered and results were used to meet federal accountability requirements as mandated by the No Child Left Behind (NCLB) Act of 2001. Further, under Senate Bill 1, arts and humanities and practical living/vocational studies assessments as well as the writing portfolio were eliminated. The quality of instructional programs in writing, arts and humanities, and practical living/vocational studies will be evaluated via program review in 2012–13.

1.2 PURPOSE OF THIS REPORT

The purpose of this report is to document technical aspects of the 2010–11 KCCT. In spring 2011, students in grades 3 through 8, 10, and 11 participated in the KCCT while twelfth-grade students participated in the fall 2010 administration of the KCCT On-Demand Writing Test. This report provides information about the technical characteristics of the assessments, including a description of the processes used to develop, administer, and score the assessments and to analyze the assessment data. It also describes the score reports. This technical report is intended to serve as a collection of critical information, as well as a guide for replicating and/or improving procedures in subsequent years.

The primary audience of this report is experts in psychometrics and educational research, although it will be useful to others, including school and district administrators, education students, and interested members of the public. Several sections of the report assume a working knowledge of measurement concepts, such as reliability and validity, and statistical concepts, such as correlation and central tendency. In some chapters, the reader is presumed to be familiar with advanced topics in measurement and statistics.

1.3 ORGANIZATION OF THIS REPORT

The organization of this report is based on the conceptual flow of a test's life span. The report begins with the initial test specification and addresses all the intermediate steps that lead to final score reporting. Chapters 2 through 4 provide a description of the KCCT by covering the test design and development process, the administration of the tests, and scoring. Chapters 5 through 7 provide statistical and psychometric summaries, including item analysis, scaling and equating, and reliability. Chapter 8 is devoted to KCCT score

reporting, and Chapter 9 is devoted to discussions on validity. Finally, the references cited throughout the report are provided, followed by the report appendices.

CHAPTER 2. DEVELOPMENT AND DESIGN

In 2009, the Kentucky General Assembly passed Senate Bill 1 requiring the implementation of a new public school assessment program beginning in 2011–12. The Bill also suspended the state accountability system and suspended the assessment for arts and humanities and practical living/vocational studies, two content areas previously assessed as part of the KCCT. In order to support the development of the new assessment program, the Kentucky Department of Education (KDE) chose to suspend item and test development activities tied to the *Core Content for Assessment* for the 2009 and 2010 test administrations. In order to meet the annual assessment requirements of NCLB for reading, mathematics, and science, the KDE chose to repeat the operational KCCT administered in 2009 for the 2011 assessment.

In February of 2010, the Kentucky Board of Education adopted the Common Core State Standards (CCSS). With their adoption, the Board of Education formally adopted the higher, clearer, and more in-depth academic standards as required by Senate Bill 1. This Board action also called for instruction to begin in the fall of 2011 with students to be assessed on the new standards beginning in the spring of 2012. The decision to implement the assessment in 2012 required pretesting items in the 2011 assessment for reading and mathematics.

Although the 2011 operational assessments were based on the 2009 KCCT, there were minor changes in the assessments for science and social studies. In addition, the arts and humanities and practical living/vocational studies portions of the assessment were removed from the 2011 test booklets. In the sections below, we highlight the changes made to the assessments for science and social studies and outline the development process for the 2011 pretest items for reading and mathematics. Those interested in the processes used to develop the operational items appearing in the 2011 assessments are referred to the *2008-09 Technical Report* which details the item development and test construction processes used when the operational forms were originally developed.

The 2011 Commonwealth Accountability Testing System (CATS) included assessments in reading, mathematics, science, social studies, and on-demand writing. Assessments in these five content areas were administered at the grade levels shown in Table 2-1.

Table 2-1. 2010–11 KCCT: Content Areas and Grade Levels Assessed

Content Area	Grade Levels Assessed
Reading	3, 4, 5, 6, 7, 8, 10
Mathematics	3, 4, 5, 6, 7, 8, 11
Science	4, 7, 11
Social Studies	5, 8, 11
On-Demand Writing	5, 8, 12

3 = End of Primary (EP; Grades K–3)

2.1 ITEM TYPES

All content areas in the 2011 CATS contained a combination of multiple-choice (MC) items (with four options) and open-response (OR) items. A new item type, short-answer (SA) items, was introduced in the pretest sections for reading and mathematics to support the assessment of the CCSS. The 2011 CATS contained common, matrix, matrix-equating, and pretest items (for reading and mathematics only). Student scores were computed based only on common, matrix, and matrix-equating items. Table 2-2 presents the total number of operational and pretest items per form for each content area based on the test designs.

Table 2-2. 2010–11 KCCT: Total Number of Operational and Pretest Items per Form (A and B) by Content Area and Item Type

Content Area and Grade	*Total Number of*					
	Operational Items		*Pretest Items*			*Writing Tasks*
	MC	*OR*	*MC*	*OR*	*SA*	
Reading EP	38	2	18	2	4	-
Reading 4, 5, 6, 7, 8, 10	33	3	12	2	2	-
Mathematics EP	32	4	6	1	-	-
Mathematics 4, 5, 6, 7, 8, 11	32	4	6	1	-	-
Science 4, 7, 11	32	4	6	-	-	-
Social Studies 5, 8, 11	32	4	6	-	-	-
On-Demand Writing 5, 8	12	-	-	-	-	2
On-Demand Writing 12	-	-	-	-	-	3

2.2 TEST DESIGNS AND BLUEPRINTS

The CATS operational test designs included a common set of items to be administered to all students within a grade level. There was also sampling of additional content by creating forms with unique matrix items added. Like in 2009, the 2011 test design applied the matrix sampling approach to all assessed areas of CATS; however, due to the small item pools in certain grades of reading, items were repeated across forms. Although there were items specifically identified as matrix-equating items based on their status in 2009, the entire operational item pool was considered to be eligible for equating given that the 2011 assessment was a repeat of the previously administered forms.

For content areas and grades historically assessed by the KCCT, and by the 2011 CATS, six unique versions of the test were created—Forms 1 through 6. For grades 4–8, the assessments included both an A and B version for each of the six forms to accommodate the pretest reading design. For the EP assessment, the reading pretest design required only six forms without employing the A and B format. Because the KDE chose to implement a different model for future high school assessments, new pretest items were not developed for Grade 10. Consequently, only six forms were administered at Grade 10, again without employing the A/B format.

2.2.1 Reading Assessment Design

The reading assessments at grades 4, 5, 7, and 10 had unique matrix items across all six forms. Due to the limited item pools at grades 6 and 8, the 2011 CATS had fewer than six completely unique operational forms: in grade 6, there were two repeated matrix passages (and sets of items) across Forms 1 and 6; in grade 8, there was one repeated matrix passage (and set of items) across Forms 1 and 6 and across Forms 2 and 5.

2.2.2 Reading Blueprint

The test blueprint for the reading CATS includes four assessable subdomains: Forming a Foundation, Developing an Initial Understanding, Interpreting Text, and Demonstrating a Critical Stance. Table 2-3 provides the reading blueprint targets by subdomain.

Table 2-3. 2010–11 KCCT: Reading Blueprint Targets by Subdomain

Subdomain	*EP*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*	*Grade 10*
Forming a Foundation	25%	20%	15%	10%	10%	10%	10%
Developing an Initial Understanding	40%	35%	35%	30%	30%	30%	25%
Interpreting Text	30%	40%	40%	45%	45%	45%	40%
Demonstrating a Critical Stance	5%	5%	10%	15%	15%	15%	25%

Table 2-4 provides the actual reading content coverage by subdomain in the 2011 CATS.[1] This table reflects the subdomain based on the primary content code only, although an individual item can receive up to two content codes.

Table 2-4. 2010–11 KCCT: Actual Reading Coverage by Subdomain

Subdomain	*EP*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*	*Grade 10*
Forming a Foundation	20%	23%	15%	14%	10%	14%	14%
Developing an Initial Understanding	46%	47%	41%	53%	50%	44%	50%
Interpreting Text	27%	23%	26%	23%	23%	31%	14%
Demonstrating a Critical Stance	6%	8%	17%	11%	16%	10%	23%

Note: Totals may not equal 100 due to rounding.

In addition to the breakdown by subdomain, reading had an additional test blueprint that specified the distribution by genre: Literary and Informational, which was further segmented into Expository, Persuasive, and Procedures/Documents. Table 2-5 provides the reading blueprint targets by genre.

[1] The actual content coverage for all content areas and grade levels was calculated based on the total number of MC and OR items at each subdomain (using the primary content code only) across all forms of the assessment.

Table 2-5. 2010–11 KCCT: Reading Blueprint Targets by Genre

Genre	*EP and Grade 4*	*Grades 5 and 6*	*Grades 7 and 8*	*Grade 10*
Literary	60%	50%	40%	30%
Informational	40%	50%	60%	70%
• Expository	30%	25%	20%	20%
• Persuasive	5%	15%	20%	30%
• Procedures/Documents	5%	10%	20%	20%

Table 2-6 provides the actual reading coverage by genre in the 2011 CATS. It is important to note that in previous years items were coded on the basis of the genre designation of the passage. Beginning in 2007, those items that assessed the use of text features (e.g., illustrations, charts, lists, tables, graphs) received a genre designation of Procedures/Documents, which was consistent with the National Assessment of Educational Progress (NAEP) Framework. In 2011, each reading item was given a genre designation.

Table 2-6. 2010–11 KCCT: Actual Reading Coverage by Genre

Genre	*EP*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*	*Grade 10*
Literary	42%	37%	34%	27%	34%	31%	21%
Informational	58%	63%	66%	73%	66%	69%	79%
• Expository	40%	31%	21%	38%	40%	13%	29%
• Persuasive	6%	3%	20%	23%	18%	29%	19%
• Procedures/Documents	12%	28%	24%	12%	8%	27%	31%

Note: Totals may not equal 100 due to rounding.

The KDE identified depth-of-knowledge (DOK) targets for the 2011 assessment. The following percentages were set as acceptable DOK ranges for all grades of reading: for multiple-choice items, 40% to 60% at DOK 1, and 60% to 40% at DOK 2; for open-response items, at least 50% at DOK 3, with the rest at DOK 2.

Tables 2-7 through 2-9 provide the actual distribution of DOK levels in the 2011 assessment for both operational and pretest items based on item type. At EP and grade 4, the operational multiple-choice items met the articulated target of 40% of DOK 1 items and 60% of DOK 2 items. Grades 5 through 10 had more than 60%of operational multiple-choice items at DOK 2. For each of grades 5, 6, 7, 8, and 10, the number of operational open-response items at DOK 3 was above 50%.

Table 2-7. 2010–11 KCCT: Actual Distribution of DOK in Reading—EP and Grades 4 and 5

DOK Level	*EP*				*Grade 4*				*Grade 5*			
	Operational		*Pretest*		*Operational*		*Pretest*		*Operational*		*Pretest*	
	MC	*OR*	*MC*	*OR*	*MC*	*OR*	*MC*	*OR*	*MC*	*OR*	*MC*	*OR*
1	41%	0%	36%	0%	40%	0%	29%	0%	33%	0%	18%	0%
2	59%	57%	61%	90%	60%	56%	69%	50%	67%	22%	79%	50%
3	0%	43%	3%	10%	0%	44%	1%	50%	0%	78%	3%	50%

Note: Totals may not equal 100 due to rounding.

Table 2-8. 2010–11 KCCT: Actual Distribution of DOK in Reading—Grades 6 and 7

DOK Level	Grade 6				Grade 7			
	Operational		Pretest		Operational		Pretest	
	MC	OR	MC	OR	MC	OR	MC	OR
1	26%	0%	17%	0%	36%	0%	14%	0%
2	74%	44%	82%	17%	64%	11%	83%	25%
3	0%	56%	1%	83%	0%	89%	3%	75%

Note: Totals may not equal 100 due to rounding.

Table 2-9. 2010–11 KCCT: Actual Distribution of DOK in Reading—Grades 8 and 10

DOK Level	Grade 8				Grade 10			
	Operational		Pretest		Operational		Pretest	
	MC	OR	MC	OR	MC	OR	MC	OR
1	23%	0%	13%	0%	7%	0%	10%	0%
2	77%	6%	88%	17%	92%	6%	82%	25%
3	0%	94%	0%	83%	2%	94%	8%	75%

Note: Totals may not equal 100 due to rounding.

During the form construction process, WestEd made an effort to balance difficulty across different forms within each grade of reading. Table 2-10 presents the average *p*-value for reading multiple-choice items per form by grade.[2] As discussed earlier, due to limited item pools, there were fewer than six operational forms in reading at EP and grades 6 and 8. Within each grade of reading, the range of difficulty as measured by *p*-values across all forms was within +/-.08.

Table 2-10. 2010–11 KCCT: Average Reading Item *P*-Value per Form by Grade

Grade	Form(s)	P-Value
EP	01	0.77
	02	0.79
	03	0.80
	04	0.79
	05	0.79
	06	0.81
4	01	0.75
	02	0.70
	03	0.75
	04	0.74
	05	0.73
	06	0.74
5	01	0.78
	02	0.77
	03	0.73

continued

[2] Form difficulty for all content areas and grade levels was calculated for operational MCs only (i.e., common, matrix, and matrix-equating MCs).

Grade	Form(s)	P-Value
5	04	0.73
	05	0.75
	06	0.78
6	01	0.76
	02	0.74
	03	0.71
	04	0.74
	05	0.73
	06	0.76
7	01	0.71
	02	0.74
	03	0.76
	04	0.79
	05	0.76
	06	0.76
8	01	0.71
	02	0.72
	03	0.68
	04	0.73
	05	0.70
	06	0.71
10	01	0.72
	02	0.74
	03	0.77
	04	0.72
	05	0.78
	06	0.75

2.2.3 Mathematics Assessment Design

Each form of the operational mathematics assessment in EP and grades 4, 5, 6, 7, 8, and 11 included 24 common multiple-choice items, 3 common open-response items, 8 matrix multiple-choice items, 1 matrix open-response item, 16 pretest multiple-choice items, 1 pretest open-response item, and 2 pretest short-answer items. The test design is discussed in greater detail in Section 1.4.

2.2.4 Mathematics Blueprint

The test blueprint for the mathematics CATS includes five assessable subdomains: Number Properties and Operations, Measurement, Geometry, Data Analysis and Probability, and Algebraic Thinking. Table 2-11 provides the mathematics blueprint targets by subdomain.

Table 2-11. 2010–11 KCCT: Mathematics Blueprint Targets by Subdomain

Subdomain	*EP*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*	*Grade 11*
Number Properties and Operations	40%	40%	40%	40%	30%	22%	20%
Measurement	10%	10%	10%	10%	15%	15%	12%
Geometry	25%	20%	20%	20%	20%	20%	18%
Data Analysis and Probability	10%	15%	15%	15%	15%	15%	15%
Algebraic Thinking	15%	15%	15%	15%	20%	28%	35%

Table 2-12 provides the actual mathematics coverage by subdomain in the 2011 CATS. This table reflects the subdomain based on the primary content code only, although an individual item can receive up to two content codes. The mathematics assessment at all grades corresponded closely to the subdomain targets, with differences of no more than three percentage points.

Table 2-12. 2010–11 KCCT: Actual Mathematics Coverage by Subdomain

Subdomain	*EP*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*	*Grade 11*
Number Properties and Operations	40%	40%	41%	40%	30%	20%	21%
Measurement	11%	8%	9%	8%	14%	13%	11%
Geometry	23%	19%	19%	17%	19%	22%	19%
Data Analysis and Probability	13%	15%	17%	17%	18%	17%	15%
Algebraic Thinking	13%	18%	14%	18%	19%	29%	34%

Note: Totals may not equal 100 due to rounding.

The KDE identified DOK targets for the 2011 assessment. The following percentages were set as acceptable DOK ranges for all grades of mathematics: for multiple-choice items, 60% at DOK 1, and 40% at DOK 2; for open-response items, at least 50% at DOK 3, with the rest at DOK 2.

Tables 2-13 through 2-15 provide the actual distribution of DOK levels in the 2011 assessment for both operational and pretest mathematics items based on item type. For all grades, the percentage of operational multiple-choice items at DOK 1 ranged from 49% to 60%; the percentage of operational multiple-choice items at DOK 2 ranged from 40% to 51%. The only grade levels to include a DOK 3 multiple-choice item were the EP (operational), grade 5 (operational), and grade 11 (pretest). The majority of the operational open-response items were at DOK 2. The percentage of operational DOK 2 open-response items ranged from 63% to 96%. The highest percent of operational open-response items at DOK 3 was at grade 11 (38%). Note: The Core Content for Assessment (CCA) includes DOK ceilings of 1, which explains the DOK 1 open-response items at EP.

Table 2-13. 2010–11 KCCT: Actual Distribution of DOK in Mathematics—EP and Grades 4 and 5

DOK Level	EP				Grade 4				Grade 5			
	Operational		Pretest		Operational		Pretest		Operational		Pretest	
	MC	OR	MC	OR	MC	OR	MC	OR	MC	OR	MC	OR
1	54%	4%	44%	17%	58%	0%	42%	0%	54%	0%	25%	0%
2	43%	96%	56%	67%	42%	75%	58%	83%	43%	75%	75%	67%
3	3%	0%	0%	17%	0%	25%	0%	17%	3%	25%	0%	33%

Note: Totals may not equal 100 due to rounding.

Table 2-14. 2010–-11 KCCT: Actual Distribution of DOK in Mathematics—Grades 6 and 7

DOK Level	Grade 6				Grade 7			
	Operational		Pretest		Operational		Pretest	
	MC	OR	MC	OR	MC	OR	MC	OR
1	60%	0%	50%	0%	55%	0%	25%	0%
2	40%	71%	50%	83%	45%	75%	75%	67%
3	0%	29%	0%	17%	0%	25%	0%	33%

Note: Totals may not equal 100 due to rounding.

Table 2-15. 2010–11 KCCT: Actual Distribution of DOK in Mathematics—Grades 8 and 11

DOK Level	Grade 6				Grade 7			
	Operational		Pretest		Operational		Pretest	
	MC	OR	MC	OR	MC	OR	MC	OR
1	56%	0%	36%	0%	49%	0%	28%	0%
2	44%	75%	64%	83%	51%	63%	69%	67%
3	0%	25%	0%	17%	0%	38%	3%	33%

Note: Totals may not equal 100 due to rounding.

Table 2-16 presents the average *p*-value for mathematics multiple-choice items per form by grade. As discussed earlier, due to a limited item pool, there were fewer than six operational forms in mathematics at EP and grades 4, 6, and 7. Within each grade of mathematics, the range of mean difficulty was less than or equal to 0.05.

Table 2-16. 2010–11 KCCT: Average Mathematics MC Item *P*-Value by Form and Grade

Grade	Form	P-Value
EP	01	0.75
	02	0.74
	03	0.74
	04	0.74
	05	0.73
	06	0.76
4	01	0.66
	02	0.66
	03	0.66

continued

Grade	Form	P-Value
4	04	0.65
	05	0.64
	06	0.65
5	01	0.63
	02	0.63
	03	0.66
	04	0.61
	05	0.63
	06	0.65
6	01	0.58
	02	0.58
	03	0.56
	04	0.59
	05	0.58
	06	0.56
7	01	0.59
	02	0.59
	03	0.58
	04	0.59
	05	0.58
	06	0.58
8	01	0.61
	02	0.61
	03	0.60
	04	0.61
	05	0.61
	06	0.59
11	01	0.54
	02	0.55
	03	0.53
	04	0.55
	05	0.54
	06	0.55

2.2.5 Science Assessment Design

In 2011, each form of the operational science assessment included 24 common multiple-choice items, 3 common open-response items, 8 matrix multiple-choice items, and 1 matrix open-response item. The pretest items previously administered in Part B were removed, and items from Parts A and C were allocated resulting in a test consisting of just two parts—A and B. This change was requested by the KDE in response to Senate Bill 1, which required the overall reduction in testing time for future assessments. Table 2-17 presents the science assessment design and the reallocation of items across Parts A and B.

Table 2-17. 2010–11 KCCT: Science Assessment Design, Grades 4, 7, and 11

Part	*Position*	*Item Type*	*Item Function*
A	1	MC	Common
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18	OR	Common
	19		
B	20	MC	Common
	21		
	22		
	23	MC	Matrix/Equating
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31	MC	Common
	32		
	33		
	34		
	35	OR	Matrix-Equating
	36	OR	Common

All grades of the science assessment—that is, grades 4, 7, and 11—had unique matrix items across all six forms.

2.2.6 Science Test Blueprint

The test blueprint for the science CATS includes four assessable subdomains: Physical Science, Earth/Space Science, Life Science, and Unifying Ideas. Table 2-18 provides the science blueprint targets by subdomain.

Table 2-18. 2010–11 KCCT: Science Blueprint Targets by Subdomain

Subdomain	*Grade 4*	*Grade 7*	*Grade 11*
Physical Science	25%	25%	20%
Earth/Space Science	25%	25%	20%
Life Science	30%	20%	25%
Unifying Ideas	20%	30%	35%

Table 2-19 provides the actual science coverage by subdomain in the 2011 CATS. This table reflects the subdomain based on the primary content code only, although an individual item can receive up to two content codes.

Table 2-19. 2010–11 KCCT: Actual Science Coverage by Subdomain

Subdomain	*Grade 4*	*Grade 7*	*Grade 11*
Physical Science	23%	26%	19%
Earth/Space Science	25%	25%	21%
Life Science	30%	19%	26%
Unifying Ideas	21%	30%	34%

Note: Totals may not equal 100 due to rounding.

For grades 7 and 11, the target subdomain distribution was met within one percentage point. For grade 4, the target subdomain distribution was met within two percentage points.

The KDE identified DOK targets for the 2011 science assessment. The following percentages were set as acceptable DOK ranges for all three grades of science: for multiple-choice items, 40% to 60% at DOK 1, and 60% to 40% at DOK 2; for open-response items, at least 50% at DOK 3, with the rest at DOK 2.

Table 2-20 provides the actual distribution of DOK in the 2011 assessment for the operational test based on item type. The percentage of operational multiple-choice items at DOK 1 ranged from 46% at grade 11 to 51% at grade 4. The percentage of operational multiple-choice items at DOK 2 ranged from 47% at grade 4 to 54% at grade 11. Grade 4 included four operational multiple-choice items at DOK 3; grade 7 included one operational multiple-choice item at DOK 3. Both grade 4 and grade 11 included at least 58% of operational open-response items at DOK 3. Grade 7 had 42% of operational open-response items at DOK 3.

Table 2-20. 2010–11 KCCT: Actual Distribution of DOK in Science

DOK Level	Grade 4		Grade 7		Grade 11	
	Operational		Operational		Operational	
	MC	OR	MC	OR	MC	OR
1	51%	0%	50%	0%	46%	0%
2	47%	42%	49%	58%	54%	17%
3	2%	58%	1%	42%	0%	83%

Note: Totals may not equal 100 due to rounding.

Table 2-21 presents the average *p*-value for science multiple-choice items per form by grade. Within each grade of science, the range of difficulty across all six forms was within +/-.01.

Table 2-21. 2010–11 KCCT: Average Science MC Item *P*-Value by Form and Grade

Grade	Form	P-Value
4	01	0.77
	02	0.77
	03	0.77
	04	0.77
	05	0.77
	06	0.77
7	01	0.58
	02	0.58
	03	0.57
	04	0.58
	05	0.58
	06	0.58
11	01	0.52
	02	0.52
	03	0.52
	04	0.52
	05	0.52
	06	0.52

2.2.7 Social Studies Assessment Design

Each form of the social studies assessment included 24 common multiple-choice items, 3 common open-response items, 8 matrix multiple-choice items, and 1 matrix open-response item. The test design for social studies mirrored that of science with the deletion of the pretest items and the reassignment of items to yield a two-part assessment as opposed to the three-part test administered in 2009. Table 2-22 presents the social studies assessment design.

Table 2-22. 2010–11 KCCT: Social Studies Assessment Design

Part	Position	Item Type	Item Function
A	1	MC	Common
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18	OR	Common
	19		
B	20	MC	Common
	21		
	22		
	23	MC	Matrix/Equating
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31	MC	Common
	32		
	33		
	34		
	35	OR	Matrix-Equating*
	36	OR	Common

All grades of the social studies assessment—that is, grades 5, 8, and 11—had unique matrix items across the six forms.

2.2.8 Social Studies Blueprint

The test blueprint for the social studies CATS includes five assessable subdomains: Government and Civics, Cultures and Societies, Economics, Geography, and Historical Perspective. Table 2-23 provides the social studies blueprint targets by subdomain.

Table 2-23. 2010–11 KCCT: Social Studies Blueprint Targets by Subdomain

Sub-domain	*Grade 5*	*Grade 8*	*Grade 11*
Government and Civics	20%	30%	20%
Cultures and Societies	15%	10%	10%
Economics	15%	10%	15%
Geography	20%	15%	15%
Historical Perspective	30%	35%	40%

Table 2-24 provides the actual social studies coverage by subdomain in the 2011 CATS. This table reflects the subdomain based on the primary content code only, although an individual item can receive up to two content codes. The social studies assessment corresponded closely to the subdomain targets, with differences of no more than three percentage points across all grades of the assessment.

Table 2-24. 2010–11 KCCT: Actual Social Studies Coverage by Subdomain

Subdomain	*Grade 5*	*Grade 8*	*Grade 11*
Government and Civics	21%	30%	22%
Cultures and Societies	13%	11%	8%
Economics	17%	11%	15%
Geography	19%	15%	12%
Historical Perspective	30%	34%	43%

Note: Totals may not equal 100 due to rounding.

The KDE identified DOK targets for the 2011 assessment. The following percentages were set as acceptable DOK ranges for all grades of social studies: for multiple-choice items, 40% to 60% at DOK 1, and 60% to 40% at DOK 2; for open-response items, at least 50% at DOK 3, with the rest at DOK 2.

Table 2-25 provides the actual distribution of DOK in the 2011 assessment for operational social studies items based on item type. For grades 5 and 11, the proportion of operational multiple-choice items was within the targeted 40% to 60% range. Grade 8 had a higher proportion of operational multiple-choice items at DOK 1 (68%). There were no DOK 3 multiple-choice items at these grade levels. For the operational open-response items, grade 11 had 54% of items at DOK 3. Grades 5 and 8 each had 71% of operational open-response items at DOK 2.

Table 2-25. 2010–11 KCCT: Actual Distribution of DOK in Social Studies

DOK Level	*Grade 4*		*Grade 7*		*Grade 11*	
	Operational		*Operational*		*Operational*	
	MC	*OR*	*MC*	*OR*	*MC*	*OR*
1	59%	0%	68%	0%	54%	0%
2	41%	71%	32%	71%	46%	46%
3	0%	29%	0%	29%	0%	54%

Note: Totals may not equal 100 due to rounding.

Table 2-26 presents the average *p*-value for social studies multiple-choice items per form by grade. Within each grade of social studies, the range of difficulty across all six forms was within +/- .03.

Table 2-26. 2010–11 KCCT: Average Social Studies MC Item *P*-Value by Form and Grade

Grade	*Form*	*P-Value*
5	01	0.67
	02	0.66
	03	0.66
	04	0.67
	05	0.67
	06	0.68
8	01	0.63
	02	0.63
	03	0.63
	04	0.61
	05	0.63
	06	0.63
11	01	0.60
	02	0.60
	03	0.59
	04	0.60
	05	0.61
	06	0.61

2.3 METHODS FOR ALIGNMENT TO THE CCA

Ensuring the content-related validity of an assessment is one of the primary responsibilities of a test development contractor throughout item development and selection and the form production process. In Kentucky, the CCA is the document that serves as the guide to content validity. Because pretest items have the potential to be edited during production, WestEd asked all content developers to provide content codes and DOKs for all operational items when the items were originally administered in 2009 through a blind coding process. In this process, each developer was provided with the final *CCA Version 4.1* and all items in the 2009 assessment stripped of content codes and DOKs. Developers had to provide content codes using only the *CCA Version 4.1*. (They were allowed to consult their notes about what constituted the different DOK levels).[3] Upon receipt of materials from this blind coding process, WestEd flagged items whose codes did not match what the CAC had determined. Those items went to another content expert for resolution. As long as there was agreement among at least two different content experts, the coding of the item was changed (or maintained) based on the alignment protocol approved by the KDE.

[3] For those content areas that are assessed once per grade span—i.e., science and social studies—*all* content codes that apply were recorded regardless of the grade at which the material was assessed. For example, if a grade 7 science item could be coded appropriately to content statements at grade 5 in addition to grade 7, then both codes were noted.

CHAPTER 3. TEST ADMINISTRATION

To ensure fair and standardized test administration throughout the state, the *District and Building Assessment Coordinators' Manual* (*DAC/BAC Manual*) and training sessions were provided to Kentucky school districts prior to testing to assist with implementation of testing procedures, student participation requirements, accommodations, and security.

3.1 RESPONSIBILITY FOR ADMINISTRATION

Kentucky District Assessment Coordinators (DACs) were responsible for all aspects of administration of the 2010–11 KCCT. The KDE Office of Assessment and Accountability was responsible for communicating with DACs as to the precise nature of their responsibilities and for apprising DACs of all changes to state requirements, including those resulting from 2009 legislation. The *DAC/BAC Manual*, prepared and distributed by the KDE, provides explicit directions and scripts to be read aloud to students by test administrators, thereby promoting standardization of test administration. Information is also communicated to DACs by the KDE via weekly e-mails, regional meetings, and webinars. DACs shared communications among themselves, the KDE, test contractor Measured Progress, and the schools. DACs also distributed test and administration training materials, including manuals, to Building Assessment Coordinators (BACs), who, along with building principals, were responsible for proper test administration.

The *DAC/BAC Manual* provides detailed instructions as to inventory, tracking, and test return procedures. Coordinators are instructed to read the *DAC/BAC Manual* and become familiar with instructions in the *Test Administrators' Manuals* (*TAM*s) to prepare themselves for test administration. The 2010-11 *TAM*s include task checklists for test administrators to use in preparing themselves, their classrooms, and their students for test administration. The *TAM*s also detail the procedures to be followed for each test session and provide instructions for preparing the materials for return to the BACs.

The 2011 spring testing window extended from April 18–29. In addition, the legislature approved three additional testing windows in spring 2011 for those districts that missed excessive days of school due to inclement weather. Sample schedules were provided, but schools were free to set their schedules to suit their own needs within the designated timeframes.

3.2 ADMINISTRATION PROCEDURES

The intent of Kentucky legislation is that all students enrolled in tested grades participate in the KCCT through a standard test administration, an administration with accommodations, or the Alternate Assessment Program. In 2010–11, any student who was absent during any session of the KCCT was expected to take a make-up test within the 10-day testing window.

Schools are required to return a student response booklet for every student enrolled on the first day of testing, except for students participating in the Alternate Assessment Program. If it is deemed impossible to

test a particular student, school personnel are required to inform the KDE. Authorized school personnel enter one of the following acceptable nonparticipation criteria in the Online Data Verification System:

- The student is a foreign exchange student.
- The student is expelled and not receiving services as provided for in Kentucky Revised Statutes (KRS) 158.150(2).
- The student is medically unable to take the assessment.
- The student is a limited English proficient (LEP) student who is in the first year of enrollment in a U.S. school. (First-year LEP students were required to take the mathematics portion of the test.)
- The student moved out of Kentucky public schools during the testing window.
- Other (The KDE must be notified for final approval, and documentation must be sent to the KDE.)

Test participation rates for 2010–11 are presented in Tables 3-1 through 3-5.

Table 3-1. 2010–11 KCCT: Student Participation Number and Rate by Demographic Category—Reading, Grades 3–8 and 10

Category	*Description*	*Enrollment*	*Approved Exemptions*	*Accountability Participants*	*Percent Participation*
All	All students	351,072	1,643	349,205	99.5
Gender	Male	180,497	873	179,493	99.4
	Female	170,564	769	169,704	99.5
	Not reported	11	1	8	72.7
Race/Ethnicity	White (non-Hispanic)	288,322	876	287,304	99.6
	African American	38,232	238	37,941	99.2
	Hispanic	12,620	236	12,370	98.0
	Asian/Pacific Islander	4,727	248	4,472	94.6
	American Indian/Alaskan Native	522	3	519	99.4
	2 or More	6,426	33	6,386	99.4
LEP	Current	7,444	611	6,814	91.5
	Monitoring year 1/2	3,350	9	3,341	99.7
SES	SES	196,372	1,039	195,189	99.4
IEP	IEP	44,980	412	44,529	99.0
504 plan	504 plan	4,743	19	4,721	99.5
Migrant	Migrant	534	7	526	98.5
	First-year eligible	47	0	47	100.0
Title I	Basic program	215,699	828	214,781	99.6

Table 3-2. 2010–11 KCCT: Student Participation Number and Rate by Demographic Category—Mathematics, Grades 3–8 and 11

Category	*Description*	*Enrollment*	*Approved Exemption*	*Accountability Participants*	*Percent Participation*
All	All students	346,682	1,638	344,801	99.5
Gender	Male	177,849	839	176,872	99.5
	Female	168,822	798	167,921	99.5
	Not reported	11	1	8	72.7
Race/Ethnicity	White (non-Hispanic)	285,424	942	284,339	99.6
	African American	37,378	218	37,091	99.2
	Hispanic	12,250	202	12,034	98.2
	Asian/Pacific Islander	4,642	226	4,412	95.0
	American Indian/Alaskan Native	491	3	487	99.2
	2 or More	6,266	34	6,222	99.3
LEP	Current	7,201	518	6,667	92.6
	Monitoring year 1/2	3,215	8	3,206	99.7
SES	SES	192,804	978	191,665	99.4
IEP	IEP	44,189	407	43,731	99.0
504 plan	504 plan	4,679	20	4,653	99.4
Migrant	Migrant	515	7	507	98.4
	First-year eligible	46	0	46	100.0
Title I	Basic program	214,674	845	213,724	99.6

Table 3-3. 2010–11 KCCT: Student Participation Number and Rate by Demographic Category—Science, Grades 4, 7, and 11

Category	*Description*	*Enrollment*	*Approved Exemption*	*Accountability Participants*	*Percent Participation*
All	All students	146,372	704	145,489	99.4
Gender	Male	74,726	323	74,308	99.4
	Female	71,639	380	71,177	99.4
	Not reported	7	1	4	57.1
Race/Ethnicity	White (non-Hispanic)	121,220	427	120,695	99.6
	African American	15,668	91	15,517	99.0
	Hispanic	4,868	76	4,785	98.3
	Asian/Pacific Islander	1,935	95	1,836	94.9
	American Indian/Alaskan Native	197	0	196	99.5
	2 or More	2,368	9	2,351	99.3
LEP	Current	2,670	186	2,475	92.7
	Monitoring year 1/2	1,276	2	1,273	99.8
SES	SES	78,747	380	78,247	99.4
IEP	IEP	17,938	154	17,753	99.0
504 plan	504 plan	1,994	6	1,984	99.5
Migrant	Migrant	200	5	195	97.5
	First-year eligible	15	0	15	100.0
Title I	Basic program	77,052	297	76,684	99.5

Table 3-4. 2010–11 KCCT: Student Participation Number and Rate by Demographic Category—Social Studies, Grades 5, 8, and 11

Category	*Description*	*Enrollment*	*Approved Exemption*	*Accountability Participants*	*Percent Participation*
All	All students	145,025	742	144,103	99.4
Gender	Male	74,437	349	73,987	99.4
	Female	70,586	393	70,115	99.3
	Not reported	2	0	1	50.0
Race/Ethnicity	White (non-Hispanic)	120,569	482	119,982	99.5
	African American	15,564	79	15,427	99.1
	Hispanic	4,479	66	4,405	98.3
	Asian/Pacific Islander	1,883	95	1,788	95.0
	American Indian/Alaskan Native	208	0	207	99.5
	2 or More	2,228	11	2,211	99.2
LEP	Current	2,379	172	2,199	92.4
	Monitoring year 1/2	1,214	1	1,212	99.8
SES	SES	76,903	387	76,394	99.3
IEP	IEP	17,203	162	17,005	98.8
504 plan	504 plan	2,015	10	2,001	99.3
Migrant	Migrant	173	2	171	98.8
	First-year eligible	21	0	21	100.0
Title I	Basic program	75,884	315	75,506	99.5

Table 3-5. 2010–11 KCCT: Student Participation Number and Rate by Demographic Category—On-Demand Writing, Grades 5, 8, and 12

Category	*Description*	*Enrollment*	*Approved Exemption*	*Accountability Participants*	*Percent Participation*
All	All students	144,706	637	144,034	99.5
Gender	Male	74,161	316	73,820	99.5
	Female	70,526	321	70,195	99.5
	Not reported	19	0	19	100.0
Race/Ethnicity	White (non-Hispanic)	120,295	409	119,861	99.6
	African American	15,640	70	15,566	99.5
	Hispanic	4,385	59	4,322	98.6
	Asian/Pacific Islander	1,816	81	1,735	95.5
	American Indian/Alaskan Native	208	0	208	100.0
	2 or More	2,286	12	2,273	99.4
LEP	Current	2,305	167	2,133	92.5
	Monitoring year 1/2	1,170	1	1,169	99.9
SES	SES	75,767	339	75,405	99.5
IEP	IEP	16,947	150	16,788	99.1
504 plan	504 plan	1,937	9	1,927	99.5
Migrant	Migrant	269	0	269	100.0
	First-year eligible	18	0	18	100.0
Title I	Basic program	75,766	297	75,453	99.6

3.3 ADMINISTRATOR TRAINING

In addition to providing the *DAC/BAC Manual* and *TAM*s online, conducting Web conferences, and distributing update materials, the KDE conducted test administration workshops in regional locations throughout the state. The purpose of these workshops was to inform school personnel about the KCCT and to provide training on administration policies and procedures. Test security and proper handling of test materials were emphasized. Measured Progress staff members were available at each of the workshops to answer any questions regarding the handling of test materials.

3.4 DOCUMENTATION OF ACCOMMODATIONS

The *DAC/BAC Manual* and *TAM*s provided directions for coding student disability status and specific accommodation information in the Online Data Verification System. All accommodations used during any test session were to be coded by authorized school personnel after testing was completed. A list of Standard Test Accommodations is provided in Appendix B.

Accommodations and modifications may be provided to students if stipulated in their Individualized Education Program (IEP), 504 plan, or Program Services Plan (PSP) and used as part of daily classroom instruction. Decisions regarding accommodations were to be made by students' educational teams on an individual basis. Most accommodations and modifications typically used during a student's regular classroom instruction were allowable for testing. Tables 3-6 and 3-7 summarize the accommodations used for the 2010-11 KCCT administration.

Table 3-6. 2010–11 KCCT: Test Accommodations Used by Students with Disabilities—Grades 3–12

Accommodation	*Grade*								
	3	*4*	*5*	*6*	*7*	*8*	*10*	*11*	*12*
Paraphrasing or repeating directions	2,541	3,112	3,143	2,699	2,639	2,431	1,810	1,583	1,222
Interpreter	11	10	5	14	16	12	10	13	9
Personal cuing systems	2,895	3,398	3,573	2,912	2,648	2,445	1,745	1,572	856
Reader (oral administration)	2,472	2,965	3,010	2,616	2,473	2,336	1,799	1,503	1,320
Online administration	0	0	0	0	0	0	0	0	0
Other technology	208	314	324	364	364	392	260	275	267
Scribe (student dictates)	2,039	2,573	2,720	2,260	1,829	1,681	948	773	683
Extended time	3,216	3,932	4,117	3,541	3,315	3,113	2,364	2,048	1,765
Audiotape	28	36	31	194	281	253	359	330	211
Other	2,261	2,621	2,651	1,968	1,713	1,716	1,146	982	731

continued

Accommodation	Grade								
	3	*4*	*5*	*6*	*7*	*8*	*10*	*11*	*12*
Braille	5	8	3	5	0	2	4	3	5
Large-print	37	41	41	32	23	27	25	20	33

More than one accommodation may have been provided to some students where required by their IEPs and used in classroom instruction.

Table 3-7. 2010–11 KCCT: Test Accommodations Used by LEP Students—Grades 3–12

Accommodation	Grade								
	3	*4*	*5*	*6*	*7*	*8*	*10*	*11*	*12*
Paraphrasing or repeating directions	15	18	8	0	0	0	0	0	0
Paraphrasing in English or primary language	741	662	523	263	167	211	90	41	75
Interpreter/translator	4	1	0	0	0	0	0	0	0
Bilingual dictionary/glossary	132	164	135	177	115	132	148	118	105
Personal cuing systems	336	318	249	157	103	97	37	42	40
Reader (oral administration)	14	10	7	0	0	0	0	0	0
Online administration	0	0	0	0	0	0	0	0	0
Other technology	8	11	9	22	27	38	25	17	1
Scribe	324	260	211	82	33	16	8	8	6
Extended time	792	678	569	332	226	252	182	115	102
Read in English	474	432	382	215	151	154	91	75	24
Oral translation to primary language	43	49	41	33	35	43	22	35	8
Small group	177	167	149	93	75	91	81	50	30

More than one accommodation may have been provided to some students where required by their IEPs and used in classroom instruction.

3.5 TEST SECURITY

Maintaining test security and ensuring proper administration are critical not only to the validity of the KCCT but also to the effectiveness of school accountability. The *DAC/BAC Manual* and the *TAM*s explain in detail all test security measures and administration procedures. School personnel were informed that any concerns about breaches in test security were to be reported to the BAC and principal immediately. The BAC (and/or the principal) was responsible for immediately reporting the concerns to the DAC, who in turn

reported them to the KDE or Measured Progress. Test security was also strongly emphasized during the test administration workshops noted above. Allegations of possible test security breaches were investigated by the KDE.

Following test administration, the BAC of each participating school was required to log on to a secure Web site and complete the *Building Assessment Coordinator's Certification of Proper Test Administration* form for each grade level tested. BACs were requested to report the number of secure tests received from Measured Progress, the number of tests administered to students, and the number of secure tests returned to Measured Progress. BACs were then instructed to print a hard copy of the form, sign it, and return it with their test materials shipment. By signing the form, BACs certified that the KCCT was administered according to the test administration procedures outlined in the *DAC/BAC Manual* and *TAM*s, that the security of the tests was protected, that no secure material had been duplicated or in any way retained by the school(s), and that all test materials had been accounted for and returned to Measured Progress.

3.6 TEST ADMINISTRATION WINDOW

In 2011 districts and schools were allowed six days for test administration and four days for make-up sessions within one of the following two-week windows. Note that the latter two of the four testing windows listed below were provided due to the inclement weather conditions experienced by some districts.

- April 18-29, 2011
- April 25 through May 6, 2011
- May 2 through May 13, 2011
- May 9 through May 20, 2011

3.7 SERVICE CENTER

Service center support provides a central point that individuals in the field can call, toll-free, with specific questions or to report any problems. Service center support was provided by both the Measured Progress KCCT Service Center and the Kentucky Educational Technology System (KETS) Service Center.

The Measured Progress KCCT Service Center provided primary support to schools and districts before, during, and after testing. The service center was staffed by representatives at varying levels, based on need and volume. Service center representatives were available from 8 a.m. to 4 p.m. EDT beginning two weeks before the start of testing and ending two weeks after testing. Representatives were responsible for receiving, responding to, and tracking calls, as well as for routing issues to the appropriate person(s) for resolution. All calls were logged into a database that was provided to the KDE after testing was completed.

The KETS Service Desk was staffed by KDE Office of Education Technology personnel who were available from 7:30 a.m. to 5 p.m. EDT. The service desk served as the initial communication point of contact for schools and districts throughout the Commonwealth. Its personnel were responsible for receiving, responding to, and tracking calls, as well as for routing issues to the appropriate person(s) at the KDE or Measured Progress for resolution. All calls were logged into a database.

The KETS Service Desk also provided support during assessment administration to KDE staff members. The KETS Service Desk also assists members of the general public contacting the service desk with questions about KDE Web sites.

CHAPTER 4. SCORING

Accurate and timely scoring of open-response, short-answer, and multiple-choice items is an important process in any successful assessment program. This chapter defines the scope and processes of Measured Progress's Scoring Services for the 2010–11 KCCT.

4.1 MACHINE-SCORED ITEMS

Preceding the arrival of the Kentucky KCCT student response booklets, Measured Progress prepared customized scanning programs to enable selective reading of all scannable materials, including student identification and demographics, and to electronically format the scanned information.

Once the student answer documents were received from each Kentucky school following test administration, Measured Progress optically scanned each page from every student booklet to create digital images of the entire document. Every page was bar coded so that the scores applied to each item could be linked to the correct student, school, and district. Student responses were then imported into *iScore*™, Measured Progress's proprietary, image-based scoring system, for secure processing and scoring. By using this image scoring system, Measured Progress was able to increase reliability and productivity as well as monitor and maintain quality control.

Student multiple-choice response data were machine-scored at the same time that student open-response and short-answer items were scanned into iScore for person-scoring. Multiple-choice items were compared to scoring keys via item analysis software. Correct multiple-choice answers were assigned a score of one point and incorrect answers were assigned zero points. Student multiple-choice responses consisting of multiple marks and blank responses were also assigned zero points.

Student responses that could not be physically scanned (e.g., documents damaged during administration or shipment) were physically reviewed and scored on an individual basis by trained, qualified staff. These scores were linked to the student's demographic data and merged with the student's scoring file by Measured Progress's Data and Reporting Services Department.

4.2 PERSON-SCORED ITEMS

Scanned images of open-response items were processed and organized into item-specific groups in preparation for person-scoring by iScore. iScore's secure, Web-based application provided qualified staff, including readers and their leadership, password-protected access for reading and scoring electronic student responses at one or multiple scoring sites without compromising confidentiality. The digital image clip information of open-response and short-answer responses allowed iScore to replicate student responses just as they appeared on the originals and to display the replicated responses on individual monitors for person-scoring. In addition, the processes of item benchmarking, reader training, scoring, editing/cleanup, and reporting were all accomplished electronically and without further reference to the originals.

Organized by iScore in this way, qualified readers were able to view only one response from a single item at a time. Because item responses were randomly distributed and tracked among groups of readers by iScore, each response in an individual student's response booklet was able to be assigned to and be scored by a different reader. This maximization of the number of readers per student response booklet effectively minimized bias errors due to reader sampling.

Leadership staff, on the other hand, had constant (albeit view-only) access to all of the imaged responses from a student's booklet for whenever necessary. The actual test booklets and answer documents were also available to the content chief reader and the iScore Operational Manager (see section Scoring Location and Staff).

To ensure the security of open-response and short-answer items and responses scored, all scoring activities in iScore were performed "blind": that is, without student names, district, and/or school information visible or able to be associated with responses or raw scores. During scoring, iScore distributed images of student responses to the computer monitors of readers located at one of Measured Progress's scoring facilities. When iScore sent an image of a student response to an individual reader's computer monitor, the reader evaluated the response and recorded the score via keypad or mouse entry. Once the score was entered, a new response appeared immediately on the screen.

Although iScore is based on conventional scoring techniques, it also offered the following benefits:

- provided leadership staff with real-time information about group and individual level performance including scoring accuracy and consistency as well as overall process monitoring and reporting,
- ensured the randomized distribution of student responses among readers during scoring and automatically assigned student responses to one or more scorers for interrater agreement monitoring,
- permitted password-only access limited to those solely in the employ of Measured Progress working within a qualified scoring or scoring management capacity,
- maintained student anonymity and confidentiality by masking student biographical information from viewers,
- offered immediate access to samples of student responses and scores for reporting and analysis,
- offered early access to subsets of data for tasks such as standard setting, and
- reduced material handling, which saved time and labor while enhancing the security of materials.

4.2.1 Scoring Location and Staff

Scoring Location

The iScore database, its control operation, and its administrative offices were all based at Measured Progress's headquarters in Dover, New Hampshire. The iScore system monitored all scoring accuracy, consistency, and quality across all Measured Progress scoring facilities. 2010–11 KCCT item training and hand-scoring took place over a period of approximately four weeks at the Louisville, Kentucky, scoring facility.

Scoring Staff

Staffing for the 2010–11 Kentucky KCCT implemented low leadership-to-reader ratios and were carried out by the following Measured Progress staff members:

- *scoring project manager*, who oversaw the overall contract from a scoring perspective and acted as a liaison with contract management staff, data analysis staff, and the client while managing the content experts (chief readers, quality assurance coordinators, etc.).
- *chief readers*, who prepared training materials and trained, qualified, and monitored readers during the scoring process; supervised quality assurance coordinators, senior readers, and readers; and monitored scoring accuracy and consistency. The ratio of chief readers to the scoring project manager was 5:1.
- *quality assurance coordinators* (QACs), who managed the training and benchmarking of grades and items within the KCCT. QACs trained, qualified, and monitored readers during the scoring process; supervised senior readers and readers; and monitored scoring accuracy and consistency. The ratio of QACs to chief readers was approximately 5:1.
- *senior readers* (SRs), who supervised readers during the scoring process and monitored scoring accuracy and consistency while managing quality control measures via iScore. The ratio of SRs to QACs was approximately 3:1.
- *readers*, who were qualified, temporary staff members performing the bulk of scoring work, evaluating and scoring student responses according to the KCCT guidelines provided for each grade level and content area scored. Readers received the same orientation and training as direct hires. The ratio of readers to SRs was approximately 9:1.

Benchmarking Procedure

The purpose of benchmarking was to select a sufficient number of student responses to open-response and short-answer items on the 2011 KCCT pretest. Responses selected in this process exemplified each item's respective score point range by identifying representative response types in order to create reader training

materials prior to pretest scoring. These training materials would subsequently guide the scoring process, including scoring leadership and reader training, qualification, scoring, and the quality control thereof.

Item Benchmarking

Before the scheduled start of pretest scoring, scoring staff first reviewed pretest item prompts, including scoring guides and scoring notes, and participated in the initial selection of proposed score point exemplars for each short-answer and open-response item. During the selection process, careful attention was given to include responses that demonstrated typical attributes of each score point, including examples of rubric-defined ideas, answers, and concepts that students could use to construct their responses. Score point exemplars were selected based on what Measured Progress deemed the best interpretation of each pretest item's intent and scope. Chief readers for each content area worked closely with benchmarking QACs who facilitated the selection process.

Construction of each item's preliminary selection of responses (called a "fat pack") contained a minimum of one (suggested) anchor exemplar for each representative score point that demonstrated each item's different score point levels (anchor papers are considered midrange exemplars of a score point). In addition to anchor papers in the fat packs, an additional 6 to 10 extra responses per score point were also included as potential score point exemplar substitutes. Each fat pack of proposed anchors and extras typically included 40 to50 total student responses for each four-point CR item, and 20 to30 total student responses for each two-point SA item.

Benchmarking Meetings

Fat packs assembled for benchmarking meetings were provided to WestEd content development representatives during a rolling delivery schedule that occurred between May 24 and June 9. Files for WestEd were placed on secure FTP locations for impending pickup and eventual reference by the developer(s) before and during the benchmarking meetings.

Pretest item benchmarking meetings included Measured Progress scoring staff and WestEd content development specialists via conference call between May 31 and June 17, 2011. During the meetings, WestEd representatives and scoring staff (content chief readers) collaborated on the selection of appropriate responses and the editing of the item-specific scoring guides as needed. Discussion during the meetings ensured that the proposed training materials were consistent and corresponded to the intent of the item.

Upon the completion of each grade level content meeting with WestEd, scoring staff then forwarded all item-specific scoring guides and corresponding anchor sets to the KDE's curriculum staff for final review, comment, and approval. KDE representatives were provided the opportunity to discuss and provide feedback about the benchmarking meeting packs to scoring staff on an as-needed basis between June 7 and June 24,

2011. During these discussions, the scoring guides, scoring notes, and anchor exemplars were modified and approved for use in finalized, client-approved reader training materials prior to scoring.

The scope of pretest benchmarking operations by content and grade is provided in Table 4-1.

Table 4-1. 2010–11 KCCT: Kentucky Core Academic Standards (KCAS) Field Test Items

Grade	*Reading*			*Mathematics*	
	OR Part B	*OR KCAS*	*SA KCAS*	*OR Part B*	*SA KCAS*
3	N/A	N/A	24	6	12
4	6	12	24	6	12
5	6	12	24	6	12
6	6	12	24	6	12
7	6	12	24	6	12
8	6	12	24	6	12
Total	30	60	144	36	72

4.2.2 Reader Recruitment and Qualifications

In preparation for scoring the 2010–11 KCCT, Measured Progress actively sought and recruited readers to represent a diverse spectrum of educational, professional, and ethnic populations. The customary cross section of readers employed included content specialists such as editors, business professionals, scientists, authors, graduate school students, and both current and retired educators.

Although the employment of readers holding a four-year college degree or higher was preferred, all readers were required to have successfully completed a minimum of at least two years of college and to have demonstrated knowledge of the content area they scored. All readers were required to submit documentation (i.e., college transcript and/or resume) of their qualifications.

For training and qualification, readers were placed at grade levels and in content areas that matched their areas of experience and expertise. Reader demographic information (gender, educational, and ethnic background, etc.) was electronically documented for reporting. All readers were subject to stringent nondisclosure requirements and supervision and were required to sign a nondisclosure/confidentiality agreement. Table 4-2 summarizes the educational credentials of the 2010–11 KCCT readers and QACs.

Table 4-2. 2010–11 KCCT: Qualifications of Scoring Leadership and Readers—Spring Administration

Scoring Responsibility	*Educational Credentials*				*Total*
	Doctorate	*Master's*	*Bachelor's*	*Other*	
Scoring leadership	5.1%	24.5%	54.1%	16.3%	100.0%
Readers	3.2%	24.5%	42.2%	30.1%	100.0%

Readers were secured through temporary employment agencies. Each reader was required to sign a nondisclosure/confidentiality agreement.

4.2.3 Methodology for Scoring Polytomous Items

Possible Score Points

The ranges of possible score points for the different polytomous items found on the 2010–11 KCCT are shown in Table 4-3.

Table 4-3. 2010–11 KCCT: Possible Score Points for Polytomous Item Types

Polytomous Item Type	*Possible Score Point Range*	*Assessment Usage*
On-demand writing task	0–4	Operational
Open-response (CR)	0–4	Operational
Short-answer (SA)	0–2	Pretest

Nonscorable Items

When numerical score point parameters did not apply to a student response, readers had the option of designating one of the following nonscorable options:

- Blank response (empty entry without an attempt at responding to the question)
- Unreadable response (response is too illegible or faint to accurately interpret)
- Wrong Location (a relevant response entered into the space reserved for a different item)
- Non-English response (a response written entirely in a language other than English)
- Off-Topic (On-Demand Writing)
- Insufficient Amount to Score (On-Demand Writing)
- Repeats the Prompt (On-Demand Writing)

Note**:** Unreadable and Wrong Location responses were resolved by consulting the original test booklet and/or by identifying the correct location.

4.2.4 Reader Training

For each item scored in the 2010–11 KCCT, Measured Progress readers were required to demonstrate their scoring ability by participating in training sessions specific to each student response item scheduled to be scored. The scoring project began with an introduction of the onsite scoring staff and providing an overview of the KCCT program's purpose and goals (including discussion about document security, student confidentiality, the proprietary nature of testing materials, scoring materials, and iScore procedures).

Actual training began with groups of readers organized into content-, grade-, and item-specific group assignments. Each reader per group was provided a personal hard copy of item-specific training materials

distributed at the beginning of each work session and accounted for secure collection at the end of each work session. During training, readers were strongly encouraged to take notes and highlight their own hard copies of the training materials.

For each item trained, the QAC assigned to the item commenced reader training by reviewing and discussing the item-specific scoring guide. The training QAC demonstrated the process of applying the item scoring guide and score point descriptors to the exemplars found in the subsequent *anchor set* and *training set* before attempting to demonstrate scoring accuracy in the *qualifying set*.

Anchor Set

This is a set of responses approved by Measured Progress and WestEd (the developer) content specialists for reading, mathematics, or science representing the KDE. Each anchor set contained one developer-approved sample response per score point considered to be a midrange exemplar. This set occasionally included a second sample response if there was more than one plausible way to illustrate the merits and intent of a score point. Responses in the anchor sets were typical rather than unusual or uncommon; solid rather than controversial or borderline; and true, meaning that their scores could not be changed except by the KDE, WestEd, and Measured Progress test development specialists.

Each anchor set response was read aloud to readers by the training QAC. Training QACs facilitated group discussion of responses in relation to the scoring guide and score point descriptors to help readers internalize the typical characteristics of score points. The anchor set served as a reference for readers as they went on to scoring sample responses in the training set that followed.

Training Set

Next, readers practiced applying the scoring guide and anchor set to responses in the training set. The training set typically included 6 to 10 student responses designed to help establish both the full score point range and the variation of possible responses within each score point. The training set often included unusual responses that were less clear or solid (e.g., briefer than normal, employing atypical approaches, simultaneously containing very low and very high attributes, and written in ways difficult to decipher).

Responses in the training set were presented to readers without scores and in a randomized score point order. Once readers had independently read and applied their score to a training set response, the training QAC would poll readers and then announce the actual response score. The QAC then responded to reader questions and/or comments while pointing out particular scoring issues at hand (e.g., the borderline between two score points). Throughout each item training, the QAC continually routed reader discussion of score points back to the anchor set and scoring guide. After the training set had been completed, readers were required to demonstrate scoring accuracy using qualifying sets assembled for constructed-response items.

Qualifying Set

Following participating in each item training session, readers were administered a qualification set of Committee-Reviewed Responses (CRRs) assigned to each item in the reader's content area. Each qualifying set was composed of 10 preselected, previously scored responses chosen as clear illustrations of score point examples that would measure which readers had adequately internalized item training before being able to score live student responses. These CRRs were selected by scoring leadership and randomly distributed to each reader via iScore during qualification.

In order to qualify on a qualification set, readers were required to demonstrate a scoring accuracy level of at least 80% exact agreement (i.e., exactly match scores on at least 8 of the 10 CRRs) and at least 90% exact-or-adjacent agreement (i.e., exactly match or be within one score point on 9 or 10 of the 10 CRRs). In other words, readers were allowed one discrepant score (i.e., one score out of the 10 CRRs that was more than one score point from the CRR score) provided they had at least eight exact scores.

Once a group of readers qualified on a particular item, responses for that item in iScore were randomly assigned and presented to them on their computer monitors, one response at a time. Readers unable to qualify on the first qualifying set received QAC retraining (see section Retraining below) and a subsequent opportunity at qualification on a second qualification set. Readers unable to qualify on the second qualification set were not eligible to score that item.

Retraining

Readers unable to qualify on the first qualification set received QAC retraining by reviewing their qualification set performance in relation to the item training materials. The QAC responded to reader questions and routed discussion of score points back to the anchor set and scoring guide. Readers were then allowed the opportunity at qualification on a second qualification set. Readers unable to qualify on the second qualification set were not eligible to score that item.

4.2.5 Leadership Training

A core group of scoring leadership staff including QACs and SRs guided and monitored readers throughout the scoring process. Because quality control by QACs and SRs moderated the scoring process and maintained the integrity of scores, the individuals chosen to fill those positions were selected for their accuracy and consistency. In addition, the training QACs assigned to train readers were also selected for their ability to instruct and their content area specialization.

The purpose of leadership training was to ensure that QACs provided thorough and consistent training and feedback to readers. Chief readers were able to discuss item details and score point rationale within training materials in order to prepare scoring leadership for reader questions. Chief readers trained and reviewed items with QACs, who in turn trained and reviewed items with their SRs. During actual item

scoring, QACs trained and supervised readers and monitored SR accuracy and consistency. The SRs in turn supervised their own group of readers and monitored reader accuracy and consistency. Similar to readers, scoring leadership who performed quality control measures in iScore were also required to qualify using qualification sets by demonstrating a scoring accuracy level of at least 80% exact agreement and at least 90% exact-or-adjacent agreement.

4.2.6 Monitoring of Scoring Quality Control

iScore was preprogrammed to monitor individual reader accuracy and scoring consistency among readers on a constant basis. iScore's multiple monitoring techniques were critical to the process of live scoring, allowing only those qualified readers who met or exceeded accuracy standards access to continue scoring. After a reader scored a student response, iScore determined whether that response should be scored by a second reader, scored by a QAC or an SR, or routed for special attention. Scoring leadership used iScore to access reader accuracy and consistency reports at any time.

Reader accuracy and consistency were measured in iScore throughout the scoring process using the following methods and tools:

- read-behind scoring
- double-blind scoring
- reader arbitration
- recalibration sets

Read-Behind Scoring

Read-behind scoring refers to scoring leadership (typically an SR) scoring a response that was recently scored by a reader. The form of reader monitoring created an immediate, real-time picture of each reader's accuracy and consistency during scoring. SRs were required to perform read-behinds during all open-ended item type scoring per reader throughout each day and at any point during scoring.

Once called up in iScore by the SR, read-behind responses were selected by iScore and placed into the SR's read-behind queue. Readers were not aware of iScore's selection or which of their scored responses were to be reviewed by their SR. Likewise, SRs were not aware of the reader's score when iScore presented each read-behind response for their own review and eventual score. The SR then applied their own score to the response before the reader's score was made viewable in iScore. This SR review and comparison of the two scores created the score-of-record determination (i.e., the reported score) as follows:

- If the reader and SR applied the same score (exact agreement), no action was necessary; the reader's score became the score of record.
- If the reader and SR scores differed by one point (adjacent), the SR's score became the score of record, thereby overriding the reader's score.
- If the reader and SR scores differed by more than one point (discrepant), the SR's score became the score of record, thereby overriding the reader's score.

Readers with a disproportionate number of adjacent and/or discrepant scores in read-behinds were subject to increased monitoring, additional read-behinds, consultation by scoring leadership, and/or retraining by the QAC. Following these measures, it was at the discretion of scoring leadership whether or when the reader could resume scoring. If the individual was allowed to resume scoring, scoring leadership carefully monitored these readers by increasing the number of read-behinds. Table 4-4 outlines the resolution of reader scores using read-behind scoring.

Table 4-4. 2010–11 KCCT Examples of Read-Behind Scoring Resolution

Reader Score	*QAC/SR Score*	*Score of Record*
4	4	4
4	3	3*
4	2	2*

* QAC/SR's score.

Double-Blind Scoring

Scoring procedures for both open-response and short-answer item types included both single-scoring and double-scoring. Single-scored responses were scored by one reader. Double-scored responses were scored "blindly" by two different readers, unaware of the other's score. These double-blind scores were monitored for interrater agreement accuracy and scoring consistency. A default minimum setting of 2% from all open-ended item types was double-blind scored. In grades 5 and 8, the on-demand writing tasks were 100% double-blind scored with the requirement that the two scores for each writing component were at least adjacent. Table 4-5 outlines the default percentage of double-blind -scored responses per content.

Table 4-5. 2010–11 KCCT: Frequency of Double-Blind Scoring by Grade and Content

Grade	*Content Area*	*Responses Double-Blind Scored*
3–8, 10	Reading	2%
3–8, 11	Mathematics	2%
4, 7, 11	Science	2%
5, 8, 11	Social Studies	2%
5, 8	Writing	100%
All	Unreadable responses	100%
All	Blank responses	100%

Nonadjacent scores were automatically routed for arbitration scoring by scoring leadership (see section Reader Arbitration). In addition, responses marked Blank, Unreadable, and non-English were automatically routed for double-blind scoring. Table 4-6 outlines the resolution of reader scores using double-blind scoring.

Table 4-6. 2010–11 KCCT Examples of Double-Blind Scoring Resolution

Reader #1	*Reader #2*	*QAC/SR Resolution*	*Final*
4	4	-	4
4	3	-	4
3	4	-	4
4	2	3	3
4	1	2	2
3	1	1	1

*If reader scores are identical or adjacent, the higher score is used as the final score. If reader scores are neither identical nor adjacent, the resolution score is used as the final, reported score.

Reader Arbitration

When double-blind scores applied by two readers on a single response differed by more than one point (discrepancy), iScore placed the response into an arbitration queue for review and rescoring by the SR. Readers were not aware of the discrepancy arbitration or which of their scored responses was to be arbitrated. Likewise, the SR was not aware of either reader's scores when iScore presented the response for review. It was only after the SR had applied his or her own score to the response that the readers' scores were then made viewable. This SR review and rescoring of the response became the score of record, thereby overriding the readers' scores.

Readers with a disproportionate number of adjacent and/or discrepant scores during double-blind scoring were subject to increased monitoring, additional read-behinds, consultation by scoring leadership, and/or retraining by the QAC. Following these measures, it was at the discretion of scoring leadership

whether or when the reader could resume scoring. If the individual was allowed to resume scoring, scoring leadership carefully monitored these readers by increasing the number of read-behinds.

In the case that the individual was not allowed to resume scoring, the scoring project manager had the right to remove ("void") all of that reader's scores applied to the item from that day's work totals. Voided responses in iScore were "cleaned" of that reader's scores and returned back to the response queue to be rescored by readers able to maintain the scoring accuracy standard.

Recalibration Sets

Before resuming scoring work on a previously begun item, readers were required to review the item-specific training materials and anchors. Following this review, readers were required to take an online recalibration set to determine whether readers were still calibrated to the scoring standard before resuming scoring work. Following this start-of-shift recalibration set, readers were also required to take a second recalibration set at the shift midpoint. Each recalibration set consisted of five responses representing the entire range of possible scores, including some with a score point of "0." Recalibration sets were employed for all KCCT constructed-response items.

- Readers who were discrepant on two of five responses of the first recalibration set, or exact on two or fewer, were not permitted to score on that item that day and were either assigned to a different item or dismissed for the day.
- Readers who were discrepant on only one of five responses of the first recalibration set, and/or exact on three, were retrained by scoring leadership by discussing the recalibration set responses in terms of the score point descriptions and the original anchor set. After this retraining, such readers began scoring operational responses under the provision that the reader's scores for that day and that item would be kept only if the reader was exact on all five of the five responses in the second recalibration set, administered at the shift midpoint. The QAC determined whether or when these readers had received enough retraining to resume scoring operational responses. Scoring leadership also carefully monitored the accuracy of such readers by significantly increasing the number of their read-behinds.
- Readers who were not discrepant on any response of the first recalibration set, and exact on at least four, were allowed to begin scoring operational responses.

The results of both recalibration set s were combined with the expectation that readers would have achieved an overall 80% exact and 90% adjacent standard for that item for that day.

In the case that a reader was not able to demonstrate accurate calibration to the scoring standard on any recalibration set and for any item, that reader was not allowed to resume scoring for that item. For readers not able to demonstrate accurate calibration to the scoring standard on the second recalibration set, the scoring project manager had the right to remove ("void") all of that reader's scores applied to the item from that day's work totals. Voided responses in iScore were "cleaned" of that reader's scores and returned back to the response queue to be rescored by readers able to maintain the scoring accuracy standard.

CHAPTER 5. CLASSICAL ITEM ANALYSIS

As noted in Brown (1983), "A test is only as good as the items it contains." A complete evaluation of a test's quality must include an evaluation of each item. Both *Standards for Educational and Psychological Testing* (AERA et al., 1999) and *Code of Fair Testing Practices in Education* (2004) include standards for identifying quality items. Items should assess only knowledge or skills that are identified as part of the domain being tested and should avoid assessing irrelevant factors. Items should also be unambiguous and free of grammatical errors, potentially insensitive content or language, and other confounding characteristics. In addition, items must not unfairly disadvantage students, in particular racial, ethnic, or gender groups.

Both qualitative and quantitative analyses are conducted to ensure that KCCT items meet these standards. Qualitative analyses are described in earlier chapters of this report; this chapter focuses on quantitative evaluations. Statistical evaluations are presented in four parts: 1) difficulty indices, 2) item-test correlations, 3) differential item functioning (DIF) statistics, and 4) dimensionality analyses. The item analyses presented here are based on the statewide administration of the KCCT in spring 2011. Note that, for the KCCT, students receive scores based on both a set of common items and items that are specific to the particular form they are administered. Therefore, for most analyses, results are presented separately by form. In the case of dimensionality analyses, however, a form was randomly chosen to use for running the analyses.

5.1 CLASSICAL DIFFICULTY AND DISCRIMINATION INDICES

All multiple-choice and open-response items are evaluated in terms of item difficulty according to standard classical test theory practices. Difficulty is defined as the average proportion of points achieved on an item and is measured by obtaining the average score on an item and dividing it by the maximum possible score for the item. Multiple-choice items are scored dichotomously (correct versus incorrect); so, for these items, the difficulty index is simply the proportion of students who correctly answered the item. Open-response items are scored polytomously, meaning that a student can achieve a score of 0, 1, 2, 3, or 4. By computing the difficulty index as the average proportion of points achieved, the indices for the different item types are placed on a similar scale, ranging from 0.0 to 1.0, regardless of the item type. Although this index is traditionally described as a measure of difficulty, it is properly interpreted as an *easiness* index, because larger values indicate easier items. An index of 0.0 indicates that all students received no credit for the item, and an index of 1.0 indicates that all students received full credit for the item.

Items that are answered correctly by almost all students provide little information about differences in student abilities, but they do indicate knowledge or skills that have been mastered by most students. Similarly, items that are correctly answered by very few students provide little information about differences in student abilities, but they may indicate knowledge or skills that have not yet been mastered by most students. In general, to provide the best measurement, difficulty indices should range from near-chance performance (0.25 for four-option multiple-choice items or essentially zero for open-response items) to 0.90, with the majority of

items generally falling between 0.4 and 0.75. However, on a standards-referenced assessment such as the KCCT, it may be appropriate to include some items with very low or very high item difficulty values to ensure sufficient content coverage.

A desirable characteristic of an item is for higher-ability students to perform better on the item than lower-ability students do. The correlation between student performance on a single item and total test score is a commonly used measure of this characteristic of the item. Within classical test theory, the item-test correlation is referred to as the item's discrimination, because it indicates the extent to which successful performance on an item discriminates between high and low scores on the test. For open-response items, the item discrimination index used was the Pearson product-moment correlation; for multiple-choice items, the corresponding statistic is commonly referred to as a point-biserial correlation. The theoretical range of these statistics is –1.0 to 1.0, with a typical observed range from 0.2 to 0.6.

Discrimination indices can be thought of as measures of how closely an item assesses the same knowledge and skills assessed by other items contributing to the criterion total score. That is, the discrimination index can be thought of as a measure of construct consistency.

Summaries of the item difficulty and item discrimination statistics by grade for each content area are presented in Tables 5-1 through 5-5. Note that the statistics are presented for all items as well as by item type (multiple-choice and open-response). The mean difficulty and discrimination values shown in the tables are within generally acceptable and expected ranges and are consistent with results obtained in previous administrations.

Table 5-1. 2010–11 KCCT: Summary of Item Difficulty and Discrimination Statistics by Grade—Mathematics

Grade	*Form*	*Item Type*	*Number of Items*	*p-Value*		*Discrimination*	
				Mean	*Standard Deviation*	*Mean*	*Standard Deviation*
3	00	ALL	27	0.77	0.15	0.39	0.10
		MC	24	0.81	0.11	0.37	0.09
		OR	3	0.48	0.20	0.54	0.10
	01	ALL	9	0.73	0.19	0.39	0.09
		MC	8	0.76	0.18	0.37	0.07
		OR	1	0.49		0.56	
	02	ALL	9	0.71	0.19	0.35	0.14
		MC	8	0.74	0.17	0.33	0.13
		OR	1	0.45		0.53	
	03	ALL	9	0.70	0.13	0.40	0.07
		MC	8	0.72	0.13	0.39	0.07
		OR	1	0.58		0.44	
	04	ALL	9	0.68	0.21	0.39	0.09
		MC	8	0.73	0.17	0.38	0.10
		OR	1	0.33		0.45	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
3	05	ALL	9	0.68	0.14	0.39	0.12
		MC	8	0.70	0.14	0.36	0.08
		OR	1	0.54		0.64	
	06	ALL	9	0.79	0.14	0.38	0.12
		MC	8	0.82	0.13	0.35	0.07
		OR	1	0.62		0.66	
4	00	ALL	27	0.70	0.12	0.40	0.09
		MC	24	0.71	0.12	0.39	0.09
		OR	3	0.59	0.08	0.49	0.05
	01	ALL	9	0.71	0.12	0.41	0.09
		MC	8	0.74	0.09	0.39	0.07
		OR	1	0.51		0.58	
	02	ALL	9	0.71	0.14	0.36	0.11
		MC	8	0.74	0.11	0.33	0.08
		OR	1	0.49		0.60	
	03	ALL	9	0.65	0.18	0.37	0.09
		MC	8	0.69	0.15	0.35	0.07
		OR	1	0.34		0.52	
	04	ALL	9	0.62	0.19	0.41	0.09
		MC	8	0.65	0.17	0.38	0.06
		OR	1	0.35		0.59	
	05	ALL	9	0.60	0.13	0.38	0.06
		MC	8	0.61	0.13	0.37	0.05
		OR	1	0.48		0.46	
	06	ALL	9	0.62	0.17	0.44	0.08
		MC	8	0.65	0.15	0.42	0.05
		OR	1	0.38		0.63	
5	00	ALL	27	0.67	0.11	0.39	0.08
		MC	24	0.67	0.11	0.38	0.07
		OR	3	0.61	0.09	0.50	0.06
	01	ALL	9	0.64	0.14	0.43	0.06
		MC	8	0.68	0.08	0.41	0.04
		OR	1	0.33		0.54	
	02	ALL	9	0.63	0.16	0.42	0.11
		MC	8	0.65	0.16	0.39	0.08
		OR	1	0.47		0.63	
	03	ALL	9	0.69	0.16	0.38	0.08
		MC	8	0.73	0.13	0.36	0.06
		OR	1	0.45		0.52	
	04	ALL	9	0.57	0.15	0.39	0.12
		MC	8	0.59	0.15	0.37	0.11
		OR	1	0.42		0.56	
	05	ALL	9	0.62	0.14	0.38	0.08
		MC	8	0.63	0.14	0.37	0.07
		OR	1	0.55		0.53	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
5	06	ALL	9	0.72	0.09	0.43	0.11
		MC	8	0.74	0.09	0.41	0.09
		OR	1	0.63		0.60	
6	00	ALL	27	0.61	0.15	0.40	0.09
		MC	24	0.61	0.14	0.39	0.07
		OR	3	0.56	0.18	0.53	0.09
	01	ALL	9	0.64	0.16	0.36	0.12
		MC	8	0.68	0.14	0.34	0.11
		OR	1	0.38		0.50	
	02	ALL	9	0.64	0.17	0.40	0.13
		MC	8	0.67	0.15	0.37	0.11
		OR	1	0.37		0.62	
	03	ALL	9	0.56	0.14	0.42	0.12
		MC	8	0.58	0.13	0.40	0.08
		OR	1	0.38		0.65	
	04	ALL	9	0.69	0.10	0.37	0.13
		MC	8	0.70	0.10	0.35	0.12
		OR	1	0.58		0.52	
	05	ALL	9	0.64	0.11	0.41	0.09
		MC	8	0.65	0.12	0.40	0.09
		OR	1	0.60		0.54	
	06	ALL	9	0.58	0.11	0.39	0.08
		MC	8	0.59	0.11	0.37	0.06
		OR	1	0.50		0.55	
7	00	ALL	27	0.65	0.11	0.42	0.11
		MC	24	0.65	0.11	0.39	0.09
		OR	3	0.65	0.10	0.62	0.02
	01	ALL	9	0.61	0.13	0.45	0.07
		MC	8	0.64	0.09	0.43	0.04
		OR	1	0.35		0.62	
	02	ALL	9	0.64	0.14	0.41	0.13
		MC	8	0.67	0.11	0.39	0.11
		OR	1	0.37		0.64	
	03	ALL	9	0.61	0.14	0.40	0.14
		MC	8	0.61	0.14	0.36	0.08
		OR	1	0.56		0.70	
	04	ALL	9	0.65	0.15	0.39	0.09
		MC	8	0.68	0.14	0.36	0.03
		OR	1	0.42		0.60	
	05	ALL	9	0.61	0.15	0.47	0.08
		MC	8	0.63	0.14	0.45	0.06
		OR	1	0.45		0.62	
	06	ALL	9	0.62	0.14	0.42	0.09
		MC	8	0.64	0.14	0.40	0.06
		OR	1	0.46		0.60	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
8	00	ALL	27	0.65	0.11	0.41	0.12
		MC	24	0.67	0.11	0.38	0.10
		OR	3	0.56	0.16	0.61	0.05
	01	ALL	9	0.64	0.12	0.43	0.15
		MC	8	0.66	0.11	0.40	0.12
		OR	1	0.49		0.69	
	02	ALL	9	0.64	0.17	0.42	0.11
		MC	8	0.67	0.16	0.40	0.09
		OR	1	0.43		0.60	
	03	ALL	9	0.60	0.11	0.39	0.10
		MC	8	0.62	0.11	0.37	0.08
		OR	1	0.49		0.54	
	04	ALL	9	0.63	0.11	0.43	0.13
		MC	8	0.66	0.08	0.40	0.09
		OR	1	0.41		0.69	
	05	ALL	9	0.62	0.14	0.43	0.10
		MC	8	0.65	0.12	0.40	0.06
		OR	1	0.40		0.64	
	06	ALL	9	0.58	0.11	0.43	0.12
		MC	8	0.61	0.08	0.40	0.09
		OR	1	0.36		0.65	
11	00	ALL	27	0.55	0.14	0.42	0.10
		MC	24	0.57	0.13	0.40	0.07
		OR	3	0.37	0.12	0.60	0.10
	01	ALL	9	0.55	0.12	0.45	0.13
		MC	8	0.57	0.11	0.43	0.09
		OR	1	0.37		0.69	
	02	ALL	9	0.59	0.18	0.37	0.13
		MC	8	0.63	0.15	0.34	0.08
		OR	1	0.28		0.67	
	03	ALL	9	0.49	0.15	0.36	0.15
		MC	8	0.52	0.14	0.33	0.11
		OR	1	0.32		0.63	
	04	ALL	9	0.57	0.14	0.43	0.09
		MC	8	0.60	0.10	0.40	0.06
		OR	1	0.29		0.62	
	05	ALL	9	0.52	0.15	0.42	0.13
		MC	8	0.55	0.14	0.39	0.09
		OR	1	0.31		0.69	
	06	ALL	9	0.59	0.15	0.42	0.12
		MC	8	0.60	0.16	0.39	0.06
		OR	1	0.57		0.71	

Table 5-2. 2010–11 KCCT: Summary of Item Difficulty and Discrimination Statistics by Grade—Reading

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
3	00	ALL	16	0.76	0.17	0.41	0.06
		MC	14	0.80	0.12	0.41	0.06
		OR	2	0.46	0.04	0.46	0.08
	01	ALL*	24	0.81	0.09	0.42	0.06
	02	ALL*	24	0.80	0.09	0.41	0.08
	03	ALL*	24	0.81	0.13	0.40	0.08
	04	ALL*	24	0.81	0.11	0.39	0.09
	05	ALL*	24	0.83	0.11	0.37	0.05
	06	ALL*	24	0.81	0.10	0.40	0.07
4	00	ALL	14	0.70	0.16	0.37	0.07
		MC	12	0.73	0.14	0.35	0.05
		OR	2	0.48	0.01	0.49	0.06
	01	ALL	22	0.75	0.14	0.38	0.08
		MC	21	0.77	0.12	0.37	0.08
		OR	1	0.40		0.55	
	02	ALL	22	0.68	0.14	0.36	0.08
		MC	21	0.69	0.13	0.35	0.07
		OR	1	0.46		0.53	
	03	ALL	22	0.75	0.14	0.38	0.07
		MC	21	0.76	0.13	0.37	0.06
		OR	1	0.48		0.50	
	04	ALL	22	0.74	0.13	0.42	0.09
		MC	21	0.75	0.13	0.41	0.08
		OR	1	0.54		0.61	
	05	ALL	22	0.72	0.15	0.36	0.09
		MC	21	0.74	0.14	0.35	0.09
		OR	1	0.43		0.50	
	06	ALL	22	0.74	0.14	0.41	0.05
		MC	21	0.75	0.14	0.40	0.05
		OR	1	0.50		0.55	
5	00	ALL	14	0.76	0.14	0.32	0.07
		MC	12	0.80	0.11	0.31	0.07
		OR	2	0.53	0.01	0.38	0.00
	01	ALL	22	0.79	0.14	0.38	0.10
		MC	21	0.80	0.13	0.37	0.10
		OR	1	0.49		0.55	
	02	ALL	22	0.79	0.10	0.40	0.05
		MC	21	0.80	0.09	0.39	0.04
		OR	1	0.56		0.55	
	03	ALL	22	0.75	0.10	0.36	0.09
		MC	21	0.76	0.09	0.36	0.08
		OR	1	0.51		0.53	
	04	ALL	22	0.71	0.15	0.40	0.06
		MC	21	0.72	0.14	0.40	0.05
		OR	1	0.46		0.55	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
5	05	ALL	22	0.74	0.14	0.35	0.09
		MC	21	0.75	0.14	0.35	0.08
		OR	1	0.56		0.50	
	06	ALL	22	0.78	0.11	0.37	0.05
		MC	21	0.79	0.08	0.37	0.04
		OR	1	0.44		0.50	
6	00	ALL	14	0.72	0.12	0.35	0.07
		MC	12	0.75	0.09	0.33	0.07
		OR	2	0.53	0.03	0.44	0.06
	01	ALL	22	0.76	0.15	0.41	0.08
		MC	21	0.78	0.13	0.40	0.07
		OR	1	0.40		0.58	
	02	ALL	22	0.78	0.14	0.39	0.07
		MC	21	0.80	0.11	0.38	0.07
		OR	1	0.41		0.55	
	03	ALL	22	0.77	0.11	0.41	0.08
		MC	21	0.78	0.11	0.40	0.08
		OR	1	0.61		0.47	
	04	ALL	22	0.72	0.15	0.37	0.08
		MC	21	0.74	0.14	0.36	0.07
		OR	1	0.43		0.59	
	05	ALL	22	0.76	0.11	0.41	0.07
		MC	21	0.76	0.11	0.40	0.07
		OR	1	0.65		0.55	
	06	ALL	22	0.76	0.16	0.39	0.08
		MC	21	0.77	0.14	0.38	0.07
		OR	1	0.40		0.59	
7	00	ALL	14	0.75	0.15	0.33	0.07
		MC	12	0.78	0.13	0.30	0.05
		OR	2	0.53	0.02	0.47	0.00
	01	ALL	22	0.67	0.17	0.37	0.07
		MC	21	0.67	0.17	0.36	0.06
		OR	1	0.50		0.56	
	02	ALL	22	0.74	0.12	0.40	0.08
		MC	21	0.75	0.12	0.40	0.08
		OR	1	0.51		0.47	
	03	ALL	22	0.77	0.10	0.40	0.06
		MC	21	0.78	0.09	0.40	0.05
		OR	1	0.51		0.55	
	04	ALL	22	0.79	0.10	0.40	0.05
		MC	21	0.81	0.09	0.40	0.04
		OR	1	0.55		0.51	
	05	ALL	22	0.76	0.12	0.37	0.06
		MC	21	0.77	0.10	0.36	0.06
		OR	1	0.51		0.52	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
7	06	ALL	22	0.79	0.11	0.40	0.07
		MC	21	0.80	0.10	0.39	0.06
		OR	1	0.54		0.59	
8	00	ALL	14	0.72	0.10	0.38	0.08
		MC	12	0.73	0.10	0.37	0.08
		OR	2	0.61	0.02	0.47	0.01
	01	ALL	22	0.72	0.08	0.45	0.07
		MC	21	0.73	0.06	0.45	0.07
		OR	1	0.50		0.59	
	02	ALL	22	0.74	0.12	0.40	0.08
		MC	21	0.75	0.12	0.39	0.07
		OR	1	0.52		0.62	
	03	ALL	22	0.76	0.13	0.39	0.09
		MC	21	0.77	0.12	0.38	0.07
		OR	1	0.55		0.62	
	04	ALL	22	0.73	0.13	0.38	0.07
		MC	21	0.74	0.12	0.38	0.06
		OR	1	0.44		0.49	
	05	ALL	22	0.70	0.11	0.38	0.07
		MC	21	0.70	0.10	0.37	0.07
		OR	1	0.56		0.50	
	06	ALL	22	0.78	0.12	0.43	0.06
		MC	21	0.79	0.10	0.42	0.05
		OR	1	0.49		0.58	
10	00	ALL	14	0.76	0.13	0.40	0.10
		MC	12	0.79	0.12	0.37	0.07
		OR	2	0.61	0.01	0.57	0.03
	01	ALL	22	0.69	0.14	0.43	0.09
		MC	21	0.70	0.14	0.42	0.08
		OR	1	0.52		0.63	
	02	ALL	22	0.73	0.11	0.43	0.08
		MC	21	0.73	0.11	0.42	0.07
		OR	1	0.62		0.59	
	03	ALL	22	0.78	0.11	0.41	0.10
		MC	21	0.79	0.10	0.40	0.09
		OR	1	0.57		0.64	
	04	ALL	22	0.70	0.14	0.41	0.09
		MC	21	0.70	0.15	0.40	0.08
		OR	1	0.64		0.60	
	05	ALL	22	0.77	0.11	0.42	0.08
		MC	21	0.78	0.10	0.41	0.07
		OR	1	0.52		0.62	
	06	ALL	22	0.72	0.14	0.40	0.10
		MC	21	0.73	0.14	0.39	0.09
		OR	1	0.54		0.56	

* All item types for this form were multiple-choice.

Table 5-3. 2010–11 KCCT: Summary of Item Difficulty and Discrimination Statistics by Grade—Science

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
4	00	ALL	27	0.76	0.12	0.37	0.08
		MC	24	0.79	0.11	0.35	0.05
		OR	3	0.57	0.05	0.54	0.06
	01	ALL	9	0.75	0.10	0.41	0.07
		MC	8	0.77	0.09	0.39	0.05
		OR	1	0.61		0.54	
	02	ALL	9	0.73	0.14	0.37	0.10
		MC	8	0.76	0.10	0.35	0.07
		OR	1	0.47		0.55	
	03	ALL	9	0.72	0.18	0.36	0.10
		MC	8	0.76	0.16	0.34	0.07
		OR	1	0.45		0.55	
	04	ALL	9	0.75	0.17	0.34	0.11
		MC	8	0.78	0.14	0.32	0.08
		OR	1	0.47		0.56	
	05	ALL	9	0.74	0.14	0.33	0.09
		MC	8	0.78	0.09	0.32	0.09
		OR	1	0.45		0.45	
	06	ALL	9	0.75	0.12	0.32	0.10
		MC	8	0.78	0.09	0.33	0.11
		OR	1	0.53		0.31	
7	00	ALL	27	0.59	0.10	0.34	0.10
		MC	24	0.60	0.10	0.33	0.08
		OR	3	0.48	0.03	0.49	0.09
	01	ALL	9	0.60	0.13	0.40	0.10
		MC	8	0.61	0.14	0.37	0.07
		OR	1	0.51		0.60	
	02	ALL	9	0.63	0.19	0.34	0.10
		MC	8	0.65	0.19	0.32	0.09
		OR	1	0.41		0.50	
	03	ALL	9	0.56	0.18	0.35	0.13
		MC	8	0.59	0.18	0.32	0.08
		OR	1	0.39		0.62	
	04	ALL	9	0.60	0.15	0.35	0.11
		MC	8	0.62	0.15	0.32	0.08
		OR	1	0.46		0.57	
	05	ALL	9	0.58	0.13	0.39	0.10
		MC	8	0.61	0.12	0.36	0.07
		OR	1	0.37		0.57	
	06	ALL	9	0.59	0.16	0.39	0.08
		MC	8	0.62	0.13	0.37	0.05
		OR	1	0.32		0.55	
11	00	ALL	27	0.51	0.14	0.35	0.09
		MC	24	0.54	0.13	0.33	0.05
		OR	3	0.33	0.12	0.55	0.09

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
11	01	ALL	9	0.49	0.10	0.35	0.13
		MC	8	0.50	0.11	0.32	0.12
		OR	1	0.44		0.54	
	02	ALL	9	0.52	0.11	0.30	0.13
		MC	8	0.54	0.10	0.28	0.12
		OR	1	0.37		0.45	
	03	ALL	9	0.47	0.13	0.32	0.10
		MC	8	0.49	0.14	0.29	0.06
		OR	1	0.39		0.56	
	04	ALL	9	0.50	0.13	0.29	0.14
		MC	8	0.52	0.13	0.26	0.10
		OR	1	0.39		0.56	
	05	ALL	9	0.53	0.14	0.30	0.12
		MC	8	0.52	0.15	0.27	0.10
		OR	1	0.55		0.49	
	06	ALL	9	0.51	0.12	0.35	0.14
		MC	8	0.53	0.12	0.32	0.13
		OR	1	0.39		0.56	

Table 5-4. 2010–11 KCCT: Summary of Item Difficulty and Discrimination Statistics by Grade—Social Studies

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
5	00	ALL	27	0.66	0.13	0.35	0.09
		MC	24	0.69	0.09	0.33	0.08
		OR	3	0.40	0.02	0.47	0.09
	01	ALL	9	0.62	0.13	0.34	0.15
		MC	8	0.65	0.12	0.32	0.15
		OR	1	0.44		0.53	
	02	ALL	9	0.61	0.12	0.35	0.08
		MC	8	0.62	0.13	0.34	0.09
		OR	1	0.53		0.39	
	03	ALL	9	0.59	0.12	0.38	0.08
		MC	8	0.62	0.09	0.36	0.05
		OR	1	0.38		0.53	
	04	ALL	9	0.61	0.09	0.40	0.06
		MC	8	0.63	0.08	0.39	0.06
		OR	1	0.46		0.47	
	05	ALL	9	0.59	0.09	0.33	0.12
		MC	8	0.61	0.08	0.30	0.10
		OR	1	0.45		0.53	
	06	ALL	9	0.66	0.15	0.37	0.07
		MC	8	0.69	0.12	0.36	0.05
		OR	1	0.39		0.50	

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
8	00	ALL	27	0.66	0.12	0.40	0.09
		MC	24	0.68	0.11	0.39	0.09
		OR	3	0.53	0.03	0.48	0.04
	01	ALL	9	0.60	0.13	0.42	0.11
		MC	8	0.61	0.13	0.40	0.10
		OR	1	0.48		0.60	
	02	ALL	9	0.64	0.11	0.43	0.09
		MC	8	0.66	0.09	0.41	0.07
		OR	1	0.47		0.62	
	03	ALL	9	0.59	0.11	0.38	0.07
		MC	8	0.59	0.12	0.36	0.06
		OR	1	0.54		0.51	
	04	ALL	9	0.56	0.09	0.38	0.09
		MC	8	0.56	0.10	0.36	0.08
		OR	1	0.52		0.52	
	05	ALL	9	0.61	0.09	0.43	0.07
		MC	8	0.63	0.08	0.42	0.07
		OR	1	0.46		0.51	
	06	ALL	9	0.61	0.11	0.41	0.09
		MC	8	0.63	0.11	0.40	0.08
		OR	1	0.48		0.51	
11	00	ALL	27	0.58	0.12	0.37	0.11
		MC	24	0.60	0.11	0.35	0.08
		OR	3	0.42	0.05	0.56	0.02
	01	ALL	9	0.55	0.16	0.41	0.08
		MC	8	0.58	0.14	0.39	0.06
		OR	1	0.31		0.55	
	02	ALL	9	0.59	0.18	0.41	0.11
		MC	8	0.62	0.16	0.39	0.11
		OR	1	0.33		0.54	
	03	ALL	9	0.57	0.19	0.38	0.08
		MC	8	0.61	0.15	0.36	0.06
		OR	1	0.25		0.52	
	04	ALL	9	0.62	0.13	0.41	0.09
		MC	8	0.66	0.07	0.39	0.07
		OR	1	0.31		0.58	
	05	ALL	9	0.62	0.13	0.36	0.11
		MC	8	0.64	0.11	0.35	0.11
		OR	1	0.40		0.48	
	06	ALL	9	0.65	0.13	0.44	0.09
		MC	8	0.67	0.12	0.42	0.07
		OR	1	0.49		0.57	

Table 5-5. 2010–11 KCCT: Summary of Item Difficulty and Discrimination Statistics by Grade—Writing

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
5	00	ALL*	4	0.81	0.20	0.16	0.02
	01	ALL	11	0.68	0.12	0.46	0.25
		MC	8	0.74	0.04	0.32	0.09
		WP	3	0.50	0.02	0.83	0.01
	02	ALL	11	0.70	0.10	0.40	0.25
		MC	8	0.76	0.04	0.26	0.09
		WP	3	0.56	0.02	0.78	0.02
	03	ALL	11	0.68	0.16	0.46	0.24
		MC	8	0.76	0.13	0.32	0.03
		WP	3	0.50	0.01	0.83	0.02
	04	ALL	11	0.67	0.16	0.44	0.26
		MC	8	0.73	0.14	0.29	0.03
		WP	3	0.50	0.02	0.84	0.01
	05	ALL	11	0.68	0.16	0.50	0.23
		MC	8	0.76	0.12	0.37	0.06
		WP	3	0.48	0.02	0.85	0.02
	06	ALL	11	0.70	0.16	0.45	0.24
		MC	8	0.77	0.13	0.31	0.05
		WP	3	0.51	0.01	0.81	0.02
	07	ALL	11	0.59	0.14	0.45	0.25
		MC	8	0.63	0.15	0.31	0.05
		WP	3	0.50	0.01	0.83	0.02
	08	ALL	11	0.59	0.14	0.42	0.25
		MC	8	0.63	0.16	0.27	0.05
		WP	3	0.51	0.03	0.80	0.01
	09	ALL	11	0.63	0.13	0.44	0.23
		MC	8	0.68	0.10	0.31	0.03
		WP	3	0.48	0.02	0.81	0.02
	10	ALL	11	0.66	0.13	0.45	0.26
		MC	8	0.72	0.10	0.30	0.04
		WP	3	0.49	0.01	0.85	0.02
	11	ALL	11	0.64	0.16	0.40	0.27
		MC	8	0.68	0.17	0.24	0.06
		WP	3	0.51	0.02	0.81	0.01
	12	ALL	11	0.63	0.17	0.37	0.25
		MC	8	0.68	0.17	0.23	0.04
		WP	3	0.50	0.02	0.76	0.02
8	00	ALL*	4	0.70	0.08	0.22	0.03
	01	ALL	11	0.63	0.15	0.49	0.23
		MC	8	0.70	0.11	0.36	0.08
		WP	3	0.45	0.01	0.84	0.01
	02	ALL	11	0.69	0.15	0.48	0.25
		MC	8	0.75	0.12	0.34	0.07
		WP	3	0.51	0.01	0.86	0.01

continued

Grade	Form	Item Type	Number of Items	p-Value		Discrimination	
				Mean	Standard Deviation	Mean	Standard Deviation
8	03	ALL	11	0.67	0.13	0.49	0.22
		MC	8	0.73	0.10	0.37	0.04
		WP	3	0.52	0.01	0.84	0.02
	04	ALL	11	0.67	0.14	0.48	0.23
		MC	8	0.73	0.10	0.35	0.04
		WP	3	0.48	0.01	0.83	0.01
	05	ALL	11	0.66	0.14	0.48	0.24
		MC	8	0.69	0.16	0.35	0.06
		WP	3	0.58	0.01	0.84	0.01
	06	ALL	11	0.61	0.15	0.48	0.23
		MC	8	0.65	0.15	0.36	0.07
		WP	3	0.48	0.01	0.83	0.02
	07	ALL	11	0.63	0.14	0.49	0.24
		MC	8	0.70	0.09	0.36	0.07
		WP	3	0.45	0.01	0.85	0.01
	08	ALL	11	0.67	0.12	0.47	0.24
		MC	8	0.73	0.10	0.34	0.06
		WP	3	0.53	0.01	0.83	0.02
	09	ALL	11	0.67	0.14	0.45	0.25
		MC	8	0.72	0.12	0.31	0.08
		WP	3	0.53	0.01	0.82	0.02
	10	ALL	11	0.68	0.14	0.46	0.25
		MC	8	0.74	0.12	0.32	0.09
		WP	3	0.53	0.01	0.83	0.01
	11	ALL	11	0.66	0.13	0.44	0.26
		MC	8	0.70	0.13	0.30	0.09
		WP	3	0.56	0.01	0.84	0.03
	12	ALL	11	0.65	0.14	0.43	0.26
		MC	8	0.70	0.13	0.28	0.09
		WP	3	0.51	0.01	0.82	0.01
12	00	ALL**	3	0.56	0.02	0.94	0.01
	01	ALL**	3	0.49	0.01	0.86	0.01
	02	ALL**	3	0.58	0.01	0.85	0.01
	03	ALL**	3	0.51	0.01	0.85	0.01
	04	ALL**	3	0.52	0.01	0.83	0.01
	05	ALL**	3	0.55	0.01	0.83	0.01
	06	ALL**	3	0.56	0.01	0.79	0.01
	07	ALL**	3	0.52	0.01	0.84	0.01
	08	ALL**	3	0.56	0.01	0.81	0.02
	09	ALL**	3	0.55	0.01	0.85	0.01
	10	ALL**	3	0.54	0.01	0.84	0.01
	11	ALL**	3	0.53	0.02	0.83	0.01
	12	ALL**	3	0.54	0.02	0.84	0.01

* All item types for this form were multiple-choice.
** All item types for this form were writing-prompt.

A comparison of indices across grade levels is complicated because these indices are population dependent. Direct comparisons would require that either the items or students were common across groups. Since that is not the case, it cannot be determined whether differences in performance across grade levels are because of differences in student abilities, differences in item difficulties, or both.

Difficulty indices for multiple-choice items tend to be higher (indicating that students performed better on these items) than the difficulty indices for open-response items because multiple-choice items can be answered correctly by guessing. Similarly, discrimination indices for the four-point open-response items were larger than those for the dichotomous items because of the greater variability of the former (i.e., the partial credit these items allow) and the tendency for correlation coefficients to be higher given greater variances of the correlates. Note that these patterns are an artifact of item type, so in interpreting classical item statistics, comparisons should only be made among items of the same type.

In addition to the item difficulty and discrimination summaries presented above, item level classical statistics and item level score point distributions were also calculated. Item level classical statistics are provided in Appendix C; item difficulty and discrimination values are presented for each item. The item difficulty and discrimination indices are within generally acceptable and expected ranges. Very few items were answered correctly at near-chance or near-perfect rates. Similarly, the positive discrimination indices indicate that students who performed well on individual items tended to perform well overall. There were a small number of items with near-zero discrimination indices; the one that was negative was not reliably different from zero. While it is not inappropriate to include items with low discrimination values or with very high or very low item difficulty values to ensure that content is appropriately covered, there were very few such cases on the KCCT. Item level score point distributions are provided for open-response items in Appendix C; for each item, the percentage of students who received each score point is presented.

5.2 DIFFERENTIAL ITEM FUNCTIONING

Code of Fair Testing Practices in Education (2004) explicitly states that subgroup differences in performance should be examined when sample sizes permit and that actions should be taken to ensure that differences in performance are because of construct-relevant, rather than irrelevant, factors. *Standards for Educational and Psychological Testing* (AERA et al., 1999) includes similar guidelines. As part of the effort to identify such problems, KCCT items were evaluated in terms of DIF statistics.

For the KCCT, the standardization DIF procedure (Dorans & Kulick, 1986) was employed to evaluate subgroup differences. The standardization DIF procedure is designed to identify items for which subgroups of interest perform differently, beyond the impact of differences in overall achievement. The DIF procedure calculates the difference in item performance for two groups of students (at a time) matched for achievement on the total test. Specifically, average item performance is calculated for students at every total score. Then an overall average is calculated, weighting the total score distribution so that it is the same for the two groups.

When differential performance between two groups occurs on an item (i.e., a DIF index in the "low" or "high" categories, explained below), it may or may not be indicative of item bias. Course-taking patterns or differences in school curricula can lead to DIF, but for construct-relevant reasons. On the other hand, if subgroup differences in performance could be traced to differential experience (such as geographical living conditions or access to technology), the inclusion of such items should be reconsidered.

Computed DIF indices have a theoretical range from—1.0 to 1.0 for multiple-choice items, and the index is adjusted to the same scale for open-response items. Dorans and Holland (1993) suggested that index values between -0.05 and 0.05 should be considered negligible. The preponderance of KCCT items fell within this range. Dorans and Holland further stated that items with values between –0.10 and –0.05 and between 0.05 and 0.10 (i.e., "low" DIF) should be inspected to ensure that no possible effect is overlooked, and that items with values outside the –0.10 to 0.10 range (i.e., "high" DIF) are more unusual and should be examined very carefully.[4]

For the 2010–11 KCCT, DIF analyses were conducted for all subgroups (as defined in NCLB) for which the sample size was adequate. In all, seven subgroup comparisons were evaluated for DIF:

- male versus female
- white versus black
- white versus Hispanic
- white versus Asian/Pacific Islander
- IEP versus not IEP
- economically disadvantaged versus not economically disadvantaged
- LEP versus not LEP

The tables in Appendix D present the number of items classified as either "low" or "high" DIF, overall and by group favored. Overall, relatively few items exhibited either low or high DIF, and the numbers were fairly consistent with results obtained for previous administrations of the test.

5.3 DIMENSIONALITY ANALYSIS

The DIF analyses of the previous section were performed to identify items that showed evidence of differences in performance between pairs of subgroups beyond that which would be expected based on the primary construct that underlies total test score (also known as the "primary dimension"; example, general achievement in mathematics). When items are flagged for DIF, statistical evidence points to their measuring an additional dimension(s) to the primary dimension.

[4] It should be pointed out here that DIF for items is evaluated initially at the time of field-testing. If an item displays high DIF, it is flagged for review by a Measured Progress content specialist. The content specialist consults with the KDE to determine whether to include the flagged item in a future operational test administration.

Because tests are constructed with multiple content area subcategories, and their associated knowledge and skills, the potential exists for a large number of dimensions being invoked beyond the common primary dimension. Generally, the subcategories are highly correlated with each other; therefore, the primary dimension they share typically explains an overwhelming majority of variance in test scores. In fact, the presence of just such a dominant primary dimension is the psychometric assumption that provides the foundation for the unidimensional item response theory (IRT) models that are used for calibrating, linking, scaling, and equating the 2010-11 KCCT forms. As noted in the previous section, a statistically significant DIF result does not automatically imply that an item is measuring an *irrelevant* construct or dimension. An item could be flagged for DIF because it measures one of the construct-*relevant* dimensions of a subcategory's knowledge and skills.

The purpose of dimensionality analysis is to investigate whether violation of the assumption of test unidimensionality is statistically detectable and, if so, 1) the degree to which unidimensionality is violated and 2)the nature of the multidimensionality. Dimensionality analyses for the 2010-11 KCCT were performed on the common items for a randomly selected form for each grade level within each content area:mathematics, reading, science, social studies, and writing. The analysis randomly sampled a single form from the multiple forms for each grade level within each content area because the multiple forms were constructed to be psychometrically and substantively parallel to each other and the students taking each form were randomly equivalent. (Note: Only common items were analyzed for each randomly selected form since they are used for score reporting.)

The dimensionality analyses were conducted using the nonparametric IRT-based methods DIMTEST (Stout, 1987; Stout, Froelich, & Gao, 2001) and DETECT (Zhang & Stout, 1999). Both of these methods use as their basic statistical building block the estimated average conditional covariances for item pairs. A conditional covariance is the covariance between two items conditioned on expected total score for the rest of the test, and the average conditional covariance is obtained by averaging over all possible conditioning scores. When a test is strictly unidimensional, all conditional covariances are expected to take on values within random noise of zero, indicating statistically independent item responses for examinees with equal expected total test scores. Nonzero conditional covariances are essentially violations of the principle of local independence, and local *dependence* implies multidimensionality. Thus, nonrandom patterns of positive and negative conditional covariances are indicative of multidimensionality.

DIMTEST is a hypothesis-testing procedure for detecting violations of local independence. The data are first divided into a training sample and a cross-validation sample.

Then an exploratory analysis of the conditional covariances is conducted on the training sample data to find the cluster of items that displays the greatest evidence of local dependence. The cross-validation sample is then used to test whether the conditional covariances of the selected cluster of items displays local dependence, conditioning on total score on the nonclustered items. The DIMTEST statistic follows a standard normal distribution under the null hypothesis of unidimensionality.

DETECT provides an effect-size measure of multidimensionality. As with DIMTEST, the data are first divided into a training sample and a cross-validation sample. The training sample is used to find a set of mutually exclusive and collectively exhaustive clusters of items that best fit a systematic pattern of positive conditional covariances for pairs of items from the same cluster and negative conditional covariances from different clusters. Next, the clusters from the training sample are used with the cross-validation sample data to average the conditional covariances: within-cluster conditional covariances are summed, from this sum the between-cluster conditional covariances are subtracted, this difference is divided by the total number of item pairs, and this average is multiplied by 100 to yield an index of the average violation of local independence for an item pair. DETECT values less than 0.2 indicate very weak multidimensionality (or near unidimensionality); values of 0.2 to 0.4, weak to moderate multidimensionality; values of 0.4 to 1.0, moderate to strong multidimensionality; and values greater than 1.0, very strong multidimensionality.

DIMTEST and DETECT were applied to the 2010-11 KCCT. The data for the randomly selected form for each grade and content area were split into a training sample and a cross-validation sample. Every grade/content area combination, except for writing, had at least 7,900 student examinees. Grades 5, 8, and 12 in writing had about 3,000, 4,500, and 3,000 examinees, respectively. Thus, except for the writing grades, every training sample and cross-validation sample had at least 3,950 students. Thus, the sample sizes were considered large for every test, except for perhaps the writing tests. DIMTEST was then applied to every data set. Next DETECT was applied to each data set for which the DIMTEST null hypothesis was rejected in order to estimate the effect size of the multidimensionality. Because multiple hypothesis tests were being conducted, instead of using the standard significance level of 0.05, we used 0.01. With a significance level of 0.05, we would expect to see from 0 to 3 false rejections in 23 hypothesis tests; whereas with a significance level of 0.01, we would expect to see at most one false rejection in 23 hypothesis tests, thus giving us greater confidence that a rejection is due to power rather than Type 1 error.

When sample size is large, DIMTEST is sensitive to even quite small violations of unidimensionality. Thus, it was not surprising that the null hypothesis of unidimensionality was rejected for every data set except for grade 12 writing. We next used DETECT to estimate the effect size of the violations of local independence found by DIMTEST. Table 5-6 displays the multidimensional effect size estimates from DETECT for all the KCCT forms, except for grade 12 writing for which the DIMTEST null hypothesis of unidimensionality was not rejected.

Table 5-6. 2010–11 KCCT: Multidimensionality Effect Sizes by Grade and Subject

Subject	*Grade*	*Multidimensionality Effect Size*	
		2009-10	*2010-11*
Mathematics	3	0.14	0.12
	4	0.14	0.20
	5	0.10	0.26
	6	0.18	0.17
	7	0.19	0.17
	8	0.15	0.16
	11	0.16	0.13
	Average	0.15	0.17
Reading	3	0.10	0.12
	4	0.12	0.11
	5	0.10	0.13
	6	0.13	0.11
	7	0.14	0.14
	8	0.13	0.15
	10	0.18	0.15
	Average	0.13	0.13
Science	4	0.12	0.09
	7	0.08	0.10
	11	0.10	0.09
	Average	0.10	0.09
Social Studies	5	0.09	0.12
	8	0.15	0.16
	11	0.20	0.14
	Average	0.15	0.14
Writing	5	0.24	0.25
	8	0.37	0.33
	Average	0.31	0.29

Note: Results for grade 12 writing are not included in the table because the null hypothesis of unidimensionality was not rejected.

Of the 22 DETECT values, 21 indicated either weak or very weak multidimensionality, while one indicated moderate multidimensionality. The moderate multidimensionality index occurred for grade 8 writing. The averages for the four major content areas are also in line with these results, with the averages for mathematics, reading, and science all indicating very weak multidimensionality, whereas the average for writing indicates weak-to-moderate multidimensionality. Also shown in Table 5-6 are the values reported in last year's dimensionality analyses. The averages for every content area are seen to be very similar to those for this year.

We also investigated how DETECT divided the tests into clusters to determine whether there were any discernable patterns with respect to the multiple-choice and open-response items. Inspection of the DETECT clusters indicated that multiple-choice - open-response separation occurred to a significant degree primarily with the math and writing tests. Specifically, grades 4, 5, 6, 8, and 11 in math all had

clusters in which either multiple-choice or open-response items dominated the vast majority of scores points. In grades 3 and 7, in addition to having multiple-choice -dominant and open-response -dominant clusters, there were clusters in which multiple-choice and open-response points were approximately equal. For the reading tests, only the grade 5 and grade 10 tests displayed notable multiple-choice - open-response separation and both also had mixed clusters. None of the science tests showed notable multiple-choice - open-response separation. Among the social studies tests, grade 11 alone showed strong multiple-choice - open-response separation. For the writing tests, both grade 5 and grade 8 showed complete separation of the multiple-choice and open-response items. This sort of behavior did not occur with grade 12 writing because it consisted of only open-response items, all of which were deemed by DIMTEST to be measuring a single primary dimension. Although a number of tests (mainly in math and writing) had notable dimensionality-based separation of multiple-choice and open-response items, the DETECT results indicated that the constructs measured by them where still very similar.

In summary, the dimensionality analyses indicated that the violations of local independence on the KCCT forms are mostly weak in magnitude, except for grade 8 writing that had a moderate effect size. For the 23 test forms analyzed, the null hypothesis of unidimensionality was rejected for 22 cases (exception was grade 12 writing), but in 21 of these 22 cases the violations of local independence were either weak or very weak as measured by the DETECT index. The moderate multidimensionality found with grade 8 writing seems to be due to differences in skills being measured by multiple-choice and open-response items.

CHAPTER 6. ITEM RESPONSE THEORY (IRT) CALIBRATION, SCALING, AND EQUATING

This chapter describes the procedures used to calibrate, equate, and scale the KCCT. During the course of these psychometric analyses, a number of quality control procedures and checks on the processes were implemented. These procedures included evaluations of the calibration processes (e.g., checking the number of Newton cycles required for convergence for reasonableness; checking item parameters and their standard errors for reasonableness; examination of test characteristic curves [TCCs] and test information functions [TIFs] for reasonableness); evaluation of model fit; evaluation of equating items (e.g., delta analyses; rescore analyses; examination of *a*-plots and *b*-plots for reasonableness) and evaluation of the scaling results (e.g., parallel processing by the Psychometrics and Research and Data and Reporting Departments; comparing lookup tables to the previous year's). All steps in the IRT calibration, equating, and scaling were parallel processed by HumRRO, and results for all calibrated and equated item parameters, as well as final scale score and lookup tables, were only considered complete once both Measured Progress and HumRRO had agreed that they had achieved identical results. Daily standup meetings and a final results meeting were held during the processing of data; the KDE participated in all meetings. Results were considered final when the KDE approved the results jointly presented by HumRRO and Measured Progress.

In 2011, test forms for all subjects except writing were originally administered in 2009. In these cases, there was no need to perform the IRT scaling and equating, and the raw-score-to-scale-score lookuptables established for these forms in 2009 were used. For writing, the procedures outlined in this chapter were followed.

There were no items that required intervention either during item calibration or as a result of the evaluations of the equating items. Since this procedure was performed only on two tests (writing grades 5 and 8), it is not surprising that there were no interventions this year. Note that in most cases (mathematics, reading, social studies, and science) intact forms from a previous administration were reused (see the Equating section below for more information). No equating or item calibrations were necessary for these tests, and, as a result, they do not appear in some of the tables and graphs discussed in this chapter.

The KCCT items were calibrated using IRT. IRT uses mathematical models to define a relationship between an unobserved measure of student performance, usually referred to as theta (θ), and the probability (p) of getting a dichotomous item correct or of getting a particular score on a polytomous item (Hambleton, Swaminathan, & Rogers, 1991; Hambleton & Swaminathan, 1985). In IRT, it is assumed that all items are independent measures of the same construct (i.e., of the same θ). Another way to think of θ is as a mathematical representation of the latent trait of interest. Several common IRT models are used to specify the relationship between θ and p (Hambleton & van der Linden, 1997; Hambleton & Swaminathan, 1985). The process of determining the specific mathematical relationship between θ and p is called item calibration.

After items are calibrated, they are defined by a set of parameters that specify a nonlinear, monotonically increasing relationship between θ and *p*. Once the item parameters are known, an estimate of θ for each student can be calculated. This estimate, $\hat{\theta}$, is considered to be an estimate of the student's true score or a general representation of student performance. It has characteristics that may be preferable to those of raw scores for equating purposes.

For the 2010–11 KCCT, the three-parameter logistic (3PL) model was used for dichotomous items (Hambleton & van der Linden, 1997; Hambleton, Swaminathan, & Rogers, 1991) and the generalized partial credit model (GPCM) was used for polytomous items (Nering & Ostini, 2010). The 3PL model for dichotomous items can be defined as

$$P_i\left(1\middle|\theta_j,\xi_i\right)=c_i+\left(1-c_i\right)\frac{\exp\left[Da_i\left(\theta_j-b_i\right)\right]}{1+\exp\left[Da_i\left(\theta_j-b_i\right)\right]},$$

where
i indexes the items,
j indexes students,
a represents item discrimination,
b represents item difficulty,
c is the pseudo guessing parameter,
ξ_i represents the set of item parameters (*a*, *b*, and *c*), and
D is a normalizing constant equal to 1.701.

In the GPCM for polytomous items, an item is scored in *k* number of score points. The logistic form of this model can be defined as

$$P_{ijk}\left(k\middle|\theta_i,\zeta_j\right)=\frac{\exp\sum_{v=0}^{k}\left[Da_j\left(\theta_i-b_j+d_v\right)\right]}{\sum_{c=1}^{m}\exp\sum_{v=1}^{c}\left[Da_j\left(\theta_i-b_j+d_v\right)\right]},$$

where
k represents an observed category score,
θ represents student ability for student *i*,
ζ represents the set of estimated item parameters for item *j*,
i indexes the student,
j indexes the item,
v indexes response category,
m represents total number of response categories,
a represents item discrimination,
b represents item difficulty,
d represents a category step parameter, and
D is a normalizing constant equal to approximately 1.701.

Finally, the item characteristic curve (ICC) for polytomous items is computed as a weighted sum of ICCCs, where each ICCC is weighted by a score assigned to a corresponding category:

$$E_i(\theta_j) = \sum_{k}^{m+1} w_{ik} P_{ik}(k \mid \theta_j),$$

Where
i indexes the items,
j indexes students,
k indexes score category,
θ is the student ability,
w is the weighting constant and is equal to the number of score points for the score category, and
P is the probability of a student with ability θ achieving score category k.

For more information about item calibration and determination, the reader is referred to Lord and Novick (1968), Hambleton and Swaminathan (1985), or Baker and Kim (2004).

6.1 ITEM RESPONSE THEORY

The tables in Appendix E give the estimated Item Response Theory (IRT) item parameters of the operational items on the 2010–11 KCCT test forms by grade and content area. The standard errors for the item parameter estimates are zero for all the tests except writing because the other tests had already been previously calibrated in 2009 and thus had item parameters set equal to the parameter estimates reported for the 2009 tests (see the technical report for the 2008–09 tests for more information). In addition, Appendix F shows graphs of the TCCs and TIFs, which are defined below.

TCCs display the expected (average) raw score associated with each θ_j value between –4.0 and 4.0. Mathematically, the TCC is computed by summing the ICCs of all items that contribute to the raw score. Using the notation introduced above, the expected raw score at a given value of θ_j is

$$E(X \mid \theta_j) = \sum_{i=1}^{n} P_i(k \mid \theta_j),$$

where
i indexes the items (and *n* is the number of items contributing to the raw score),
j indexes students (here, θ_j runs from –4 to 4),
k represents an observed category score, and
$E(X \mid \theta_j)$ is the expected raw score for a student of ability θ_j.

The expected raw score monotonically increases with θ_j, consistent with the notion that students of high ability tend to earn higher raw scores than do students of low ability. Most TCCs are "S-shaped": flatter at the ends of the distribution and steeper in the middle.

The TIF displays the amount of statistical information the test provides at each value of θ_j. Information functions depict test precision across the entire latent trait continuum. There is an inverse relationship between the information of a test and its standard error of measurement (SEM). For long tests,

the SEM at a given θ_j is approximately equal to the inverse of the square root of the statistical information at θ_j (Hambleton, Swaminathan, & Rogers, 1991), as follows:

$$SEM(\theta_j) = \frac{1}{\sqrt{I(\theta_j)}}.$$

Compared to the tails, TIFs are often higher near the middle of the θ distribution where most students are located and where most items are sensitive by design.

The number of Newton cycles required for convergence for each grade and content area during the IRT analysis can be found in Table 6-1. As noted above, only the writing tests were calibrated. The number of cycles required fell within acceptable ranges.

Table 6-1. 2010–11 KCCT: Number of Newton Cycles Required for Convergence

Subject	*Grade*	*Cycles*
Writing	5	54
	8	39

6.2 EQUATING

The purpose of equating is to ensure that scores obtained from different forms of a test are equivalent to each other. Equating may be used if multiple test forms are administered in the same year, as well as to equate one year's forms to those given in the previous year. Equating ensures that students are not given an unfair advantage or disadvantage because the test form they took is easier or harder than those taken by other students. See Chapter 2 for more information regarding how the test development supports successful equating annually.

In 2011, several tests were reused from 2008–09. As a result, for these tests there was no equating performed, and the lookup tables mapping raw scores onto scaled scores that were created at the time of the original administration were used. The grades/subjects for which previously administered forms were used were mathematics, reading, social studies, and science at all grades. For the writing tests for both grades 5 and 8, equating was performed using true score equating (Hambleton, Swaminathan & Rogers, 1991; Kolen & Brennan, 1995), in which test forms are equated to the theta scale established on the reference form (i.e., the form used in the most recent standard setting). This is accomplished through the chained linking design, in which every new form is equated back to the theta scale of the previous year's test form. It can therefore be assumed that the theta scale of every new test form is the same as the theta scale of the reference form, since this is where the chain originated.

The groups of students who took the equating items on the 2010–11 KCCT writing tests are not equivalent to the groups who took them in the reference years. IRT is particularly useful for equating

scenarios that involve nonequivalent groups (Allen & Yen, 1979). Equating for the KCCT uses the anchor-test-nonequivalent-groups design described by Petersen, Kolen, and Hoover (1989). In this equating design, no assumption is made about the equivalence of the examinee groups taking different test forms (i.e., naturally occurring groups are assumed). Comparability is instead evaluated by using a set of anchor items (also called equating items). However, the equating items are designed to mirror the common test in terms of item types and distribution of emphasis. Subsets of the equating items are matrixed across forms.

Item parameter estimates for writing for 2010–11 were placed on the operational scale by using the method of Stocking and Lord (1983), which is based on the IRT principle of item parameter invariance. According to this principle, the equating items for both the reference forms and 2010–11 forms for the KCCT writing tests should have the same item parameters. After the item parameters for each 2010–11 writing test were estimated using PARSCALE (Muraki & Bock, 2003), the Stocking and Lord method was employed to find the linear transformation (slope and intercept) that adjusted the equating items' parameter estimates such that the 2010–11 TCC was as close as possible to that of the reference TCC.

6.3 EQUATING RESULTS

Prior to calculating the Stocking and Lord transformation constants, a variety of evaluations of the equating items were conducted. These items were scrutinized and a decision was made as to whether to include each item as an equating item or to discard it. The procedures used to evaluate the equating items are described below.

Appendix G presents the results from the delta analysis. This procedure was used to evaluate adequacy of equating items; the discard status presented in the appendix indicates whether the item was flagged as potentially inappropriate for use in equating.

Also presented in Appendix G are the results from the rescore analysis. With this analysis, 200 random papers from the previous year were interspersed with this year's papers to evaluate scorer consistency from one year to the next. All effect sizes were well below the criterion value for excluding an item as an equating item, 0.80. Note that results are also reported for the pre-equated tests, for documentation purposes.

Finally, *a*-plots and *b*-plots, which show IRT parameters for 2010–11 plotted against the values for 2009–10, are presented in Appendix H. Any items that appeared as outliers in *any* of the plots were evaluated in terms of suitability for use as equating items.

All outlier items were then evaluated, and it was determined that none should be flagged for removal. Next, the Stocking and Lord method of equating was used to place the item parameters onto the previous year's scale, as described above. The Stocking and Lord transformation constants are presented in Table 6-2.

Table 6-2. 2010–11 KCCT: Stocking and Lord Transformation Constants

Content Area	*Grade*	*α-Slope*	*b-Intercept*
Writing	5	0.917607	0.184602
	8	0.924985	0.141703

6.4 REPORTED SCALED SCORES

Because the θ scale used in IRT calibrations is not readily understood by most stakeholders, reporting scales were developed for the KCCT. The reporting scales are simple linear transformations of the underlying θ scale. A unique KCCT reporting scale was developed for each grade such that grade 3 scaled scores range from 300 to 380, grade 4 from 400 to 480, and so forth through the grade 11 scale of 1100 to 1180. Likewise, the lowest scaled score in the Proficient range was fixed at "*x*40" for each grade level, where *x* is the grade level. So, to be classified in the Proficient performance level or above in grade 3, for example, a minimum scaled score of 340 is required. The comparable scaled score for grade 4 is 440, and so forth.

By providing information that is more specific about the position of a student's results, scaled scores supplement performance-level scores. School- and district-level scaled scores are calculated by computing the average of student-level scaled scores. Students' raw scores (i.e., total number of points) on the 2010–11 KCCT were translated to scaled scores using a data analysis process called *scaling*. Scaling simply converts from one scale to another. In the same way that a given temperature can be expressed on either Fahrenheit or Celsius scales, or the same distance can be expressed in either miles or kilometers, student scores on the 2010–11 KCCT can be expressed in raw or scaled scores.

It is important to note that converting from raw scores to scaled scores does not change students' performance-level classifications. Given the relative simplicity of raw scores, it is fair to question why scaled scores for the KCCT are reported instead of raw scores. Scaled scores make consistent the reporting of results. To illustrate, standard setting typically results in different *raw* cut scores across content areas. The raw cut score between Apprentice and Proficient could be, for example, 35 in mathematics but 33 in reading, yet both of these raw scores would be transformed to scaled scores of *x*40. It is this uniformity across *scaled score*s that facilitates the understanding of student performance. The psychometric advantage of scaled scores over raw scores comes from their being *linear* transformations of θ. Since the θ scale is used for equating, scaled scores are comparable from one year to the next. Raw scores are not.

The scaled scores are obtained by a simple translation of ability estimates ($\hat{\theta}$) using the linear relationship between threshold values on the θ metric and their equivalent values on the scaled score metric. Students' ability estimates are based on their raw scores and are found by mapping through the TCC. Scaled scores are calculated using the linear equation

$$SS = m\hat{\theta} + b,$$

where
m is the slope and
b is the intercept.

For the KCCT, a separate linear transformation was used for each grade-content area combination. Each linear function was determined by fixing both the Apprentice/Proficient cut score and the Novice/Apprentice cut score of the scale; that is, the $x40$ and $x20$ values, where x represents the grade level. Because these two cut scores within the θ scale score space were fixed ($x20$ and $x40$), the cut score between Proficient and Distinguished varied across the grade-content combinations.

Table 6-3 shows the slope and intercept terms used to calculate the scaled scores for each grade and content area. Note that the values in Table 6-3 will not change until the standards are reset.

Table 6-3. 2010–11 KCCT: Scaled Score Slope and Intercept by Subject and Grade

Subject	*Grade*	*Slope*	*Intercept*
Mathematics	3	26.8	349.4
	4	24.0	447.9
	5	23.7	545.7
	6	21.7	642.9
	7	22.3	741.1
	8	22.9	839.0
	11	22.7	1134.3
Reading	3	22.9	354.3
	4	20.2	453.0
	5	18.5	550.8
	6	18.1	649.5
	7	16.4	747.5
	8	15.9	846.2
	10	15.1	1043.9
Science	4	18.8	448.3
	7	17.7	742.8
	11	17.5	1135.8
Social Studies	5	18.7	545.3
	8	18.4	841.0
	11	17.9	1136.7
Writing	5	11.6	541.6
	8	11.1	837.5

Appendix I contains scaled score distribution graphs for each grade and content area. These distributions were calculated using the sparse data matrix files that were used in the IRT calibrations.

6.5 50/50 Weighting between Multiple-Choice and Open-Response Items

KDE policy requires a 50/50 weighting of multiple-choice and open-response items, which necessitates that conversion tables use a weighted combination of multiple-choice and open-response scores instead of simple total raw scores. If weighting were natural (i.e., based on the number of score points associated with each item type), different combinations of multiple-choice and open-response scores could

produce the same total raw scores. But with a 50/50 weighting scheme, a specific multiple-choice and open-response combination produces its own weighted raw score.

For example, the KCCT mathematics grade 4 assessment has 32 multiple-choice score points and 16 open-response score points. In a natural weighting scheme, the maximum raw score would be 48. However, to make the 50/50 weighting scheme, open-response scores must be weighted by a factor of 2 so that both multiple-choice items and open-response items have a maximum possible score of 32 points. In a natural weighting scheme, if student A received 20 multiple-choice points and 5 open-response points, and student B received 15 multiple-choice points and 10 open-response points, they would both receive the same unweighted raw score of 25. But in the 50/50 weighting scheme, where open-response scores are doubled, student A receives a weighted raw score of 30 = (20 + 5*2) and student B receives 35 = (15 + 10*2). The two students' scores will map to different scaled scores in the conversion table. In addition, because the KCCT uses a common/matrix test design, note that there is a separate conversion table for each scale form. The full set of two-dimensional raw-to-scaled-score conversion tables is presented in Appendix J.

Presented in Appendix K are the scaled-score-to-performance-level lookup tables. As with the raw-to-scaled-score tables, there is one table for each combination of content area, grade, and scale form. Included in the tables are the scaled scores and their associated conditional standard errors and performance levels. Note that, because different theta scores (i.e., based on different combinations of multiple-choice and open-response scores) can map to the same scaled score, the conditional standard errors associated with a given scaled score can vary. The values presented in Appendix K are the average of the conditional standard errors associated with each scaled score.

6.6 ACHIEVEMENT STANDARDS

Cutpoints for the KCCT were set at standard-setting meetings held in 2007. Details of the standard-setting procedures can be found in the standard-setting report prepared at that time.

The cuts on the theta scale are presented in Table 6-4 below. Note that the operational θ-metric cut scores will remain fixed throughout the assessment program unless standards are reset for any reason. Also shown in the table are the cutpoints on the reporting score scale.

Table 6-4. 2010–11 KCCT: Cut Scores on the Theta Metric and Reporting Scale by Subject and Grade

Subject	*Grade*	*Theta*			*Scaled Score*				
		Cut 1	*Cut 2*	*Cut 3*	*Minimum*	*Cut 1*	*Cut 2*	*Cut 3*	*Maximum*
Mathematics	3	-1.09678	-0.35112	0.54299	300	320	340	364	380
	4	-1.15984	-0.32768	0.68929	400	420	440	464	480
	5	-1.08358	-0.24035	0.75906	500	520	540	564	580
	6	-1.05577	-0.13268	0.85349	600	620	640	661	680
	7	-0.94496	-0.04980	0.95422	700	720	740	762	780
	8	-0.83052	0.04331	1.03623	800	820	840	863	880
	10	-0.62981	0.25208	1.31086	1100	1120	1140	1164	1180

continued

Subject	Grade	Theta			Scaled Score				
		Cut 1	Cut 2	Cut 3	Minimum	Cut 1	Cut 2	Cut 3	Maximum
Reading	3	-1.50036	-0.62629	0.82505	300	320	340	373	380
	4	-1.62935	-0.64097	0.90504	400	420	440	471	480
	5	-1.66358	-0.58160	0.98976	500	520	540	569	580
	6	-1.62672	-0.52415	1.02882	600	620	640	668	680
	7	-1.67472	-0.45742	1.10289	700	720	740	766	780
	8	-1.64336	-0.38927	1.19266	800	820	840	865	880
	11	-1.58133	-0.25893	1.31422	1000	1020	1040	1064	1080
Science	4	-1.50158	-0.43933	0.64918	400	420	440	460	480
	7	-1.28483	-0.15715	1.07156	700	720	740	762	780
	11	-0.90018	0.24214	1.55658	1000	1120	1140	1163	1080
Social Studies	5	-1.35218	-0.28251	1.00636	500	520	540	564	580
	8	-1.14590	-0.05691	1.01088	800	820	840	860	880
	11	-0.93089	0.18478	1.02703	1100	1120	1140	1155	1180
Writing	5	-1.86648	-0.13971	1.93415	500	520	540	564	580
	8	-1.58237	0.22212	2.19076	800	820	840	862	880

Table L-1 in Appendix L shows performance-level distributions by subject and grade. Results are shown for each of the last three years.

6.7 LEXILE AND QUANTILE SCALING

In addition to providing scaled scores and performance-level classifications, in 2010 and 2011 interpretability of the KCCT in reading and mathematics was further strengthened by linking the Kentucky 3PLscale to the Lexile and Quantile scales (Rasch) available through MetaMetrics. Based on content frameworks developed by the publisher, these longitudinal scales are associated with the development of student's reading and mathematics skills without reference to age or grade. The scales are also associated with specific content material in reading and mathematics. Studies linking the Lexile and Quantile with the corresponding KCCT were conducted by the KDE in cooperation with MetaMetrics in 2010. Reports discussing the studies are available from the KDE.

CHAPTER 7. RELIABILITY

Although an individual item's performance is an important focus for evaluation, a complete evaluation of an assessment must also address the way items function together and complement one another. Tests that function well provide a dependable assessment of the student's level of ability. Unfortunately, no test can do this perfectly. A variety of factors can contribute to a given student's score being either higher or lower than his or her true ability. For example, a student may misread an item or mistakenly fill in the wrong bubble when he or she knew the answer. Collectively, extraneous factors that impact a student's score are referred to as measurement error. Any assessment includes some amount of measurement error; that is, no measurement is perfect. This is true of all academic assessments—some students will receive scores that underestimate their true ability, and other students will receive scores that overestimate their true ability. When tests have a high amount of measurement error, student scores are very unstable. Students with high ability may get low scores, or vice versa. Consequently, one cannot reliably measure a student's true level of ability with such a test. Assessments that have less measurement error (i.e., errors made are small on average and student scores on such a test will consistently represent their ability) are described as reliable.

There are a number of ways to estimate an assessment's reliability. One possible approach is to give the same test to the same students at two different points in time. If students receive the same scores on each test, the extraneous factors affecting performance are small and the test is reliable. (This is referred to as "test-retest reliability.") A potential problem with this approach is that students may remember items from the first administration or may have gained (or lost) knowledge or skills in the interim between the two administrations. A solution to the "remembering items" problem is to give a different but parallel test at the second administration. If student scores on each test correlate highly, the test is considered reliable. (This is known as "alternate forms reliability," because an alternate form of the test is used in each administration.) This approach, however, does not address the problem that students may have gained (or lost) knowledge or skills in the interim between the two administrations. In addition, the practical challenges of developing and administering parallel forms generally preclude the use of parallel forms' reliability indices. One way to address the latter two problems is to split the test in half and then correlate students' scores on the two half-tests; this in effect treats each half-test as a complete test. By doing this, the problems associated with an intervening time interval and with creating and administering two parallel forms of the test are alleviated. This is known as a "split-half estimate of reliability." If the two half-test scores correlate highly, items on the two half-tests must be measuring very similar knowledge or skills. This is evidence that the items complement one another and function well as a group. This also suggests that measurement error will be minimal.

The split-half method requires psychometricians to select items that contribute to each half-test score. This decision may have an impact on the resulting correlation, since each different possible split of the test into halves will result in a different correlation. Another problem with the split-half method of calculating reliability is that it underestimates reliability, because test length is cut in half. All else being equal, a shorter

test is less reliable than a longer test. Cronbach (1951) provided a statistic, α (alpha), that eliminates the problem of the split-half method by comparing individual item variances to total test variance. Cronbach's α was used to assess the reliability of the 2010-11 KCCT:

$$\alpha \equiv \frac{n}{n-1}\left[1-\frac{\sum_{i=1}^{n}\sigma^{2}_{(Y_i)}}{\sigma_x^2}\right],$$

where
i indexes the item,
n is the total number of items,
$\sigma^{2}_{(Y_i)}$ represents individual item variance, and
σ_x^2 represents the total test variance.

7.1 RELIABILITY AND STANDARD ERRORS OF MEASUREMENT

Tables 7-1 through 7-5 present descriptive statistics, Cronbach's α coefficient, and raw score standard errors of measurement (SEMs) by grade for each content area. Again, because students receive scores based on both a set of common items and items that are specific to the particular form they are administered, results are presented separately by form. Generally, reliability estimates are in acceptable ranges and consistent with results obtained for previous administrations of the test.

Table 7-1. 2010–11 KCCT: Raw Score Descriptive Statistics, Cronbach's Alpha, and SEM by Grade—Mathematics

Grade	*Form*	*Number of Students*	*Raw Score*			*Alpha*	*SEM*
			Maximum	*Mean*	*Standard Deviation*		
3	01	8,364	48	33.02	8.19	0.87	2.95
	02	8,258	48	32.84	8.23	0.86	3.05
	03	8,191	48	33.27	8.19	0.87	3.00
	04	8,197	48	32.34	8.10	0.87	2.94
	05	8,137	48	32.84	8.62	0.87	3.10
	06	8,137	48	34.16	8.15	0.87	2.94
4	01	8,609	48	32.19	9.16	0.88	3.18
	02	8,453	48	32.25	8.88	0.87	3.15
	03	8,403	48	31.11	8.98	0.87	3.20
	04	8,374	48	30.74	9.27	0.88	3.25
	05	8,404	48	31.17	8.83	0.87	3.17
	06	8,369	48	30.93	9.48	0.88	3.30
5	01	8,555	48	30.22	9.64	0.88	3.39
	02	8,389	48	30.50	9.86	0.87	3.49
	03	8,368	48	31.23	8.97	0.87	3.27
	04	8,374	48	29.84	9.20	0.87	3.30

continued

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	05	8,378	48	30.66	9.17	0.87	3.28
	06	8,362	48	31.90	9.48	0.87	3.36
6	01	8,755	48	27.88	9.26	0.88	3.20
	02	8,166	48	28.15	9.09	0.88	3.09
	03	8,141	48	27.75	9.52	0.89	3.17
	04	8,146	48	29.43	9.14	0.88	3.19
	05	8,138	48	29.11	9.32	0.88	3.17
	06	8,154	48	28.15	9.11	0.88	3.15
7	01	8,742	48	29.63	10.52	0.90	3.39
	02	8,164	48	30.55	9.63	0.89	3.19
	03	8,069	48	30.83	9.93	0.89	3.28
	04	8,102	48	30.58	9.54	0.89	3.19
	05	8,102	48	30.49	10.14	0.89	3.32
	06	8,103	48	30.58	9.64	0.89	3.20
8	01	8,578	48	29.56	10.31	0.89	3.37
	02	7,964	48	29.87	9.75	0.89	3.27
	03	7,907	48	29.60	9.42	0.88	3.22
	04	7,879	48	29.85	10.13	0.89	3.37
	05	7,906	48	29.42	9.89	0.88	3.37
	06	7,872	48	29.00	9.74	0.89	3.26
11	01	7,978	48	23.61	10.32	0.90	3.24
	02	7,253	48	24.47	9.57	0.89	3.17
	03	7,239	48	23.75	9.51	0.89	3.20
	04	7,232	48	24.30	9.92	0.90	3.21
	05	7,221	48	23.84	9.90	0.90	3.19
	06	7,204	48	25.56	9.70	0.90	3.10

Table 7-2. 2010–11 KCCT: Raw Score Descriptive Statistics, Cronbach's Alpha, and SEM by Grade—Reading

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
3	01	8,364	46	34.21	7.63	0.90	2.37
	02	8,137	46	34.02	7.53	0.90	2.39
	03	8,258	46	34.24	7.20	0.89	2.36
	04	8,137	46	34.22	7.24	0.89	2.37
	05	8,191	46	34.95	6.79	0.88	2.31
	06	8,197	46	34.42	7.29	0.90	2.35
4	01	8,610	45	30.49	7.16	0.88	2.51
	02	8,453	45	28.99	7.30	0.87	2.64
	03	8,403	45	30.42	7.13	0.87	2.55
	04	8,372	45	30.46	7.62	0.89	2.55
	05	8,404	45	29.81	6.96	0.86	2.57
	06	8,369	45	30.39	7.27	0.88	2.51
5	01	8,555	45	32.55	6.51	0.86	2.45
	02	8,388	45	32.67	7.01	0.86	2.59
	03	8,370	45	31.82	6.78	0.85	2.59

continued

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	04	8,374	45	30.78	7.27	0.87	2.60
	05	8,378	45	31.71	6.58	0.85	2.58
	06	8,361	45	32.35	6.61	0.86	2.50
6	01	8,755	45	31.05	7.34	0.88	2.56
	02	8,155	45	31.80	6.85	0.86	2.54
	03	8,169	45	31.97	7.38	0.87	2.62
	04	8,137	45	30.51	7.09	0.86	2.62
	05	8,146	45	31.85	7.56	0.88	2.65
	06	8,135	45	31.11	7.07	0.87	2.58
7	01	8,743	45	29.54	7.29	0.86	2.69
	02	8,163	45	31.50	7.07	0.87	2.53
	03	8,070	45	32.09	7.07	0.87	2.52
	04	8,102	45	32.68	6.83	0.87	2.48
	05	8,102	45	32.05	6.79	0.86	2.55
	06	8,102	45	32.57	6.92	0.87	2.47
8	01	8,582	45	30.83	8.44	0.90	2.61
	02	7,876	45	31.50	7.61	0.88	2.60
	03	7,961	45	32.05	7.33	0.88	2.57
	04	7,904	45	30.96	7.55	0.87	2.69
	05	7,906	45	30.75	7.54	0.88	2.65
	06	7,877	45	32.46	7.57	0.89	2.50
10	01	8,779	45	30.71	8.37	0.90	2.68
	02	7,968	45	32.33	7.89	0.89	2.56
	03	7,906	45	33.23	7.62	0.89	2.56
	04	7,974	45	31.74	7.82	0.89	2.62
	05	7,949	45	32.91	7.62	0.89	2.55
	06	7,923	45	31.88	7.64	0.88	2.60

Table 7-3. 2010–11 KCCT: Raw Score Descriptive Statistics, Cronbach's Alpha, and SEM by Grade—Science

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
4	01	8,609	48	34.40	7.46	0.87	2.66
	02	8,453	48	33.73	7.68	0.87	2.79
	03	8,403	48	33.53	7.32	0.87	2.67
	04	8,373	48	33.73	7.33	0.86	2.70
	05	8,404	48	33.74	7.24	0.86	2.74
	06	8,370	48	34.12	7.05	0.86	2.67
7	01	8,743	48	26.81	8.56	0.87	3.11
	02	8,163	48	27.22	8.00	0.85	3.08
	03	8,069	48	26.51	8.33	0.86	3.14
	04	8,102	48	27.07	8.02	0.86	3.04
	05	8,102	48	26.55	8.31	0.86	3.09
	06	8,103	48	26.48	8.32	0.86	3.13
11	01	7,977	48	22.04	8.43	0.87	3.06
	02	7,253	48	22.83	8.02	0.85	3.06

continued

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
11	03	7,238	48	22.31	8.25	0.86	3.14
	04	7,231	48	22.64	7.93	0.85	3.05
	05	7,223	48	23.26	8.03	0.85	3.08
	06	7,205	48	22.60	8.40	0.86	3.14

Table 7-4. 2010–11 KCCT: Raw Score Descriptive Statistics, Cronbach's Alpha, and SEM by Grade—Social Studies

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	01	8,555	48	28.43	7.70	0.86	2.89
	02	8,388	48	28.34	7.50	0.86	2.82
	03	8,370	48	28.00	7.74	0.86	2.89
	04	8,375	48	28.36	7.83	0.87	2.86
	05	8,379	48	28.00	7.66	0.85	2.93
	06	8,359	48	28.51	7.57	0.86	2.83
8	01	8,581	48	29.04	8.64	0.89	2.81
	02	7,960	48	29.83	8.41	0.89	2.79
	03	7,906	48	29.54	8.19	0.88	2.80
	04	7,879	48	29.38	8.18	0.88	2.82
	05	7,906	48	29.61	8.35	0.89	2.78
	06	7,874	48	29.62	8.26	0.89	2.79
11	01	7,979	48	24.80	9.02	0.88	3.07
	02	7,253	48	25.97	8.55	0.88	3.02
	03	7,236	48	25.27	8.45	0.87	3.03
	04	7,231	48	26.03	8.77	0.88	3.04
	05	7,225	48	26.14	8.62	0.87	3.13
	06	7,203	48	26.76	8.80	0.88	3.04

Table 7-5. 2010–11 KCCT: Raw Score Descriptive Statistics, Cronbach's Alpha, and SEM by Grade—Writing

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	01	2,938	36	21.21	5.62	0.80	2.51
	02	5,621	36	22.68	4.61	0.76	2.24
	03	2,135	36	21.28	5.18	0.80	2.34
	04	6,254	36	20.97	5.40	0.78	2.51
	05	3,283	36	20.74	5.75	0.81	2.50
	06	5,082	36	21.57	4.96	0.79	2.29
	07	2,648	36	20.17	5.41	0.80	2.43
	08	5,728	36	20.42	5.15	0.77	2.45
	09	4,935	36	20.27	5.43	0.79	2.50
	10	3,441	36	20.94	5.79	0.78	2.69

continued

Grade	Form	Number of Students	Raw Score			Alpha	SEM
			Maximum	Mean	Standard Deviation		
5	11	3,804	36	20.87	5.10	0.76	2.49
	12	4,557	36	20.75	4.55	0.75	2.30
8	01	4,450	36	19.02	6.22	0.82	2.62
	02	4,115	36	21.10	6.13	0.81	2.68
	03	3,948	36	21.14	6.18	0.82	2.64
	04	4,023	36	20.37	5.92	0.81	2.60
	05	4,826	36	22.32	5.95	0.82	2.54
	06	3,081	36	19.39	6.26	0.81	2.71
	07	2,976	36	19.30	6.09	0.82	2.59
	08	4,901	36	21.36	5.54	0.81	2.42
	09	3,670	36	21.33	5.89	0.79	2.68
	10	4,242	36	21.55	5.85	0.80	2.61
	11	2,537	36	21.86	6.13	0.79	2.79
	12	5,337	36	20.56	5.70	0.79	2.62
12	01	2,883	48	24.38	7.99	0.96	1.69
	02	4,903	48	27.45	7.64	0.95	1.70
	03	2,809	48	25.17	7.62	0.95	1.65
	04	4,437	48	26.30	7.14	0.94	1.67
	05	5,056	48	26.36	7.18	0.95	1.67
	06	2,207	48	27.13	6.69	0.93	1.74
	07	3,583	48	25.54	7.48	0.95	1.66
	08	3,663	48	27.11	6.80	0.94	1.63
	09	4,570	48	26.37	7.43	0.95	1.68
	10	2,655	48	26.48	6.96	0.95	1.62
	11	4,556	48	26.08	7.21	0.95	1.68
	12	2,644	48	26.16	7.31	0.95	1.70

Because different grades and content areas have different test designs (e.g., the number of items varies by test), it is inappropriate to make inferences about the quality of one test by comparing its reliability to that of another test from a different grade and/or content area.

7.2 SUBGROUP RELIABILITY

The reliability coefficients discussed in the previous section were based on the overall population of students who took the 2010-11 KCCT. Appendix M presents reliabilities for various subgroups of interest. Subgroups of Cronbach's α were calculated using the formula defined above using only the members of the subgroup in question in the computations; values are only calculated for subgroups with 10 or more students. Note that for purposes of calculating subgroup reliabilities the form that was taken by the largest number of students was used for each grade and content area.

For several reasons, the results of this section should be interpreted with caution. First, inherent differences between grades and content areas preclude making valid inferences about the quality of a test based on statistical comparisons with other tests. Second, reliabilities are dependent not only on the

measurement properties of a test but on the statistical distribution of the studied subgroup. For example, it can be readily seen in Appendix M that subgroup sample sizes may vary considerably, which results in natural variation in reliability coefficients. Or α, which is a type of correlation coefficient, may be artificially depressed for subgroups with little variability (Draper & Smith, 1998). Third, there is no industry standard to interpret the strength of a reliability coefficient, and this is particularly true when the population of interest is a single subgroup.

7.3 RELIABILITY OF PERFORMANCE-LEVEL CATEGORIZATION

While related to reliability, the accuracy and consistency of classifying students into achievement categories are even more important statistics in a standards-based reporting framework (Livingston & Lewis, 1995). After the performance levels were specified and students were classified into those levels, decision accuracy and consistency analyses were conducted to determine the statistical accuracy and consistency of the classifications. For the KCCT, students are classified into one of four performance levels: Novice, Apprentice, Proficient, or Distinguished. This section of the report explains the methodologies used to assess the reliability of classification decisions and results are given. Chapter 8 describes the reporting categories in greater detail.

Accuracy refers to the extent to which decisions based on test scores match decisions that would have been made if the scores did not contain any measurement error. Accuracy must be estimated, because errorless test scores do not exist. Consistency measures the extent to which classification decisions based on test scores match the decisions based on scores from a second, parallel form of the same test. Consistency can be evaluated directly from actual responses to test items if two complete and parallel forms of the test are given to the same group of students. In operational test programs, however, such a design is usually impractical. Instead, techniques have been developed to estimate both the accuracy and consistency of classification decisions based on a single administration of a test. The Livingston and Lewis (1995) technique was used for the 2010-11 KCCT because it is easily adaptable to all types of testing formats, including mixed-format tests.

The decision accuracy and consistency estimates reported in Appendix N make use of "true scores" in the classical test theory sense. A true score is the score that would be obtained if a test had no measurement error. Of course, true scores cannot be observed and so must be estimated. In the Livingston and Lewis method, estimated true scores are used to categorize students into their "true" classifications.

For the 2010-11 KCCT, after various technical adjustments (described in Livingston & Lewis, 1995), a four-by-four contingency table of accuracy was created for each content area and grade, where cell [i, j] represented the estimated proportion of students whose true score fell into classification i (where i = 1 to 4) and observed score into classification j (where j = 1 to 4). The sum of the diagonal entries (i.e., the proportion of students whose true and observed classifications matched) signified overall accuracy.

To calculate consistency, true scores were used to estimate the joint distribution of classifications on two independent, parallel test forms. Following statistical adjustments per Livingston and Lewis (1995), a new four-by-four contingency table was created for each content area and grade and populated by the proportion of students who would be categorized into each combination of classifications according to the two (hypothetical) parallel test forms. Cell [*i*, *j*] of this table represented the estimated proportion of students whose observed score on the first form would fall into classification *i* (where *i* = 1 to 4) and whose observed score on the second form would fall into classification *j* (where *j* = 1 to 4). The sum of the diagonal entries (i.e., the proportion of students categorized by the two forms into exactly the same classification) signified overall consistency.

Another way to measure consistency is to use Cohen's (1960) coefficient κ (kappa), which assesses the proportion of consistent classifications after removing the proportion of consistent classifications that would be expected by chance. It is calculated using the following formula:

$$\kappa = \frac{\text{(Observed agreement)} - \text{(Chance agreement)}}{1 - \text{(Chance agreement)}} = \frac{\sum_i C_{ii} - \sum_i C_{i.}C_{.i}}{1 - \sum_i C_{i.}C_{.i}},$$

where
Ci.. is the proportion of students whose observed performance level would be Level i (where i = 1 – 4) on the first hypothetical parallel form of the test;
C.i is the proportion of students whose observed performance level would be Level i (where i = 1 – 4) on the second hypothetical parallel form of the test; and
Cii is the proportion of students whose observed performance level would be Level i (where i = 1 – 4) on both hypothetical parallel forms of the test.

Because κ is corrected for chance, its values are lower than are other consistency estimates.

7.3.1 Accuracy and Consistency

The decision accuracy and consistency analyses described above are provided in Table N-1 of Appendix N. The table includes overall accuracy and consistency indices, including kappa. Accuracy and consistency values conditional on performance level are also given. For these calculations, the denominator is the proportion of students associated with a given performance level. For example, the conditional accuracy value is 0.72 for Novice for mathematics grade 3. This figure indicates that among the students whose true scores placed them in this classification, 72% would be expected to be in this classification when categorized according to their observed scores. Similarly, a consistency value of 0.61 indicates that 61% of students with observed scores in the Novice level would be expected to score in this classification again if a second, parallel test form were used.

For some testing situations, the greatest concern may be decisions around level thresholds. For example, in testing done for NCLB accountability purposes, the primary concern is distinguishing between

students who are proficient and those who are not yet proficient. In this case, the accuracy of the Apprentice/Proficient threshold is of greatest interest. For the 2010-11 KCCT, Table N-2 in Appendix N provides accuracy and consistency estimates at each cutpoint as well as false positive and false negative decision rates. (A false positive is the proportion of students whose observed scores were above the cut and whose true scores were below the cut. A false negative is the proportion of students whose observed scores were below the cut and whose true scores were above the cut.)

The above indices are derived from Livingston and Lewis's (1995) method of estimating decision accuracy and consistency. It should be noted that Livingston and Lewis discuss two versions of the accuracy and consistency tables. A standard version performs calculations for forms parallel to the form taken. An "adjusted" version adjusts the results of one form to match the observed score distribution obtained in the data. The tables use the standard version for two reasons: 1) this "unadjusted" version can be considered a smoothing of the data, thereby decreasing the variability of the results; and 2) for results dealing with the consistency of two parallel forms, the unadjusted tables are symmetrical, indicating that the two parallel forms have the same statistical properties. This second reason is consistent with the notion of forms that are parallel; that is, it is more intuitive and interpretable for two parallel forms to have the same statistical distribution.

Note that as with other methods of evaluating reliability the decision accuracy and consistency statistics calculated based on small groups can be expected to be lower than those calculated based on larger groups. For this reason, the values presented in Appendix N should be interpreted with caution. In addition, it is important to remember that it is inappropriate to compare decision accuracy and consistency statistics between grades and content areas.

7.4 INTERRATER CONSISTENCY

Chapter 4 of this report describes in detail the processes that were implemented to monitor the quality of the hand-scoring of student responses for open-response items. One of these processes was double-blind scoring: Approximately 2% of student responses were randomly selected and scored independently by two different scorers (100% for on-demand writing). Results of the double-blind scoring were used during the scoring process to identify scorers who required retraining or other intervention and are presented here as evidence of the reliability of the KCCT. A summary of the interrater consistency results are presented in Table 7-6 below. Results in the table are collapsed across the hand-scored items by subject and grade. The table shows the number of score categories, number of included scores, percent exact agreement, percent adjacent agreement, correlation between the first two sets of scores, and percent of responses that required a third score. This same information is provided at the item level in Appendix O. These interrater consistency statistics are the result of the processes implemented to ensure valid and reliable hand-scoring of items as described in detail in Chapter 4.

Table 7-6. 2010–11 KCCT: Summary of Interrater Consistency Statistics Collapsed across Items by Subject and Grade

Subject	*Grade*	*Number of Score Categories*	*Number of Included Scores*	*Percent Exact*	*Percent Adjacent*	*Correlation*	*Percent of Third Scores*
Mathematics	3	5	4,132	80.03	18.18	0.93	1.89
	4	5	4,484	73.86	23.42	0.89	2.79
	5	5	4,409	73.49	23.97	0.90	2.52
	6	5	4,305	80.21	18.65	0.93	1.14
	7	5	4,405	79.00	18.96	0.92	2.07
	8	5	4,209	80.71	17.68	0.93	1.59
	11	5	3,742	77.66	20.74	0.91	1.60
Reading	3	5	2,123	72.87	26.10	0.77	0.99
	4	5	3,279	62.76	35.47	0.68	1.65
	5	5	3,314	60.86	36.99	0.71	2.11
	6	5	3,163	63.55	35.06	0.77	1.36
	7	5	3,101	64.62	33.83	0.73	1.42
	8	5	3,138	65.30	32.76	0.74	1.98
	10	5	3,064	62.79	35.08	0.76	2.09
Science	4	5	4,282	66.42	31.57	0.79	1.96
	7	5	3,998	72.09	25.44	0.83	2.48
	11	5	3,627	64.27	32.12	0.78	3.50
Social Studies	5	5	4,252	60.07	37.23	0.68	2.63
	8	5	5,536	61.15	36.34	0.66	2.29
	11	5	3,779	65.36	32.71	0.80	1.85
Writing	5	4	97,272	62.13	36.13	0.59	3.11
		5	48,636	61.89	36.43	0.60	3.11
	8	4	91,402	60.96	37.02	0.63	3.67
		5	45,701	59.66	37.95	0.66	3.67
	12	4	171,802	60.58	37.46	0.59	3.49
		5	85,901	62.02	36.26	0.62	3.49

CHAPTER 8. SCORE REPORTING

8.1 PARENT GUIDE TO REPORTS

Schools provided parents with guides to the Kentucky Core Content Test Report and the Kentucky Alternate Assessment Report to assist them in correctly interpreting information in the Individual Student Report. Copies of the parent guide are presented in Appendix P.

8.2 PRIMARY REPORTS

Measured Progress provided two primary reports for the 2010-11 KCCT:

- Individual Student Report
- Student Listing Report

Two printed copies of each Individual Student Report (one for the parents and one for the school) were shipped to DACs for distribution to schools within their districts. The Student Listing Reports were made available to districts and schools to view or download on a password-secure Web site hosted by Measured Progress. Student-level data files were also available for districts to download from the secure Web site. Each of these reports is described in the following subsections. Sample reports are provided in Appendix Q.

8.2.1 Individual Student Report

The interim KCCT Individual Student Report is comprised of a single, two-sided page, folded in half to create a front cover, a back cover, and an interior report page. The front cover explains the purpose of the KCCT. The outside back cover presents information about KCCT performance levels, scale scores, and general performance-level descriptions. The interior report page is divided into three sections, providing a profile of the individual student's performance. The top section, formatted as a table, again identifies the student, displaying his or her name, date of birth, and state ID. The rows of the table list the tested content areas, followed by the student's performance levels and scale scores. This information is then repeated in a graphic display. The graphic is composed of a number line labeled from X00 to X80, with X denoting grade, and partitioned into four sections by performance-level cut score. The student's scale score is situated on the number line centered in a bar, the length of which represents the standard error of measurement. The state average scale score for each content area is presented in the last cell of the row, adjacent to the number line.

The middle section of the report offers a comparison of the student's performance level to the percentage of students at each performance level across the school, district, and state by content area.

The bottom section of the report presents the student's performance level and scale score in each content area. For the Novice and Apprentice levels, performance is further divided into three ranges: low, medium, and high.

The KCCT Individual Student Report is confidential and should be kept secure within the school and district. The Family Educational Rights and Privacy Act (FERPA) requires that access to individual student results be restricted to the student, the student's parents/guardians, and authorized school personnel.

8.2.2 Student Listing Report

The KCCT Student Listing Report provides a roster of all students in each school, as well as information about their performance on the assessment. The first section of this report provides accountability and student status information. In addition, the number of students the school tested (either at the school or at another school) and for whom the school is accountable is reported by participation in the KCCT or the Alternate Assessment Program. The number of students tested at the school for whom the school is not accountable is also indicated in this section. The box at the right of this section indicates the number of students at the school who were exempted from the KCCT, the Kentucky Alternate Assessment Program, and the Alternate Assessment Attainment Tasks.

The second section provides the following information for each student listed:

- state student identification (SSID) number
- student response booklet lithocode number
- participation in the alternate assessment
- testing accommodations
- student status
- accountability/testing school
- scale score by content area
- performance level by content area

The KCCT Student Listing Report is confidential and should be kept secure within the school and district. The FERPA requires that access to individual student results be restricted to the student, the student's parents/guardians, and authorized school personnel.

8.3 Interim Performance Reports

The Interim Performance Reports (IPR)—state, district, and school editions—are posted on the KDE Web site at www.education.ky.gov. These reports present student results aggregated to the school, district, or

state level. As required by statute, these reports are received by school districts no later than 150 days after the first day of the testing window.

IPR results at all school levels are based on information received from many sources: students, schools, district offices, the KDE, and testing contractors.

Following the cover page, there are three IPR pages: 1) Trend Data: Performance Percents; 2) Disaggregation: Performance Level Percents; and 3) Core Content. These pages are grouped within each of the five tested content domains—reading, mathematics, science, social studies, and on-demand writing.

8.4 EXPLANATION OF IPR REPORT PAGE CONTENTS

The contents of each page of the IRR reports are described below.

8.4.1 Cover Page

The cover page of the IPR consists of two panels. The left-hand panel provides an overview of testing program and reporting changes resulting from Senate Bill 1, signed into law in March 2009. The right-hand panel indicates the school and district name and displays the IPR table of contents.

8.4.2 Trend Data: Percentages

This page features horizontal bar graphs offering year-to-year comparisons of the percentages of students achieving Distinguished, Proficient, Apprentice (high, medium, and low), and Novice (high, medium, and low) by content domain. The computation reflects the total percentage of students in each jurisdiction—school, district, and state—collapsed across grade levels. These results can be used to help schools assess their strengths and weaknesses in each content domain, including how their students are progressing through the Novice and Apprentice performance levels.

8.4.3 Disaggregation: Performance-Level Percents

This page presents stacked (or sectioned) horizontal bars displaying the percentage of students in each disaggregated student group. The length of each stacked section of the bar reflects the percentage of students scoring at each performance level—Distinguished, Proficient, Apprentice, and Novice. This disaggregation includes gender, ethnicity, migrant status, identified limited English proficient, free-reduced lunch (approved), and students with disabilities categories for tested students versus accountability students (those for whom the school is accountable).

Within disaggregation categories, separate bars distinguish the performance of tested students from accountability students (i.e., those for whom a school is accountable). Results are presented by grade level. The information provided in the stacked bars located on the left-hand side of the page is repeated in tabular form on the right.

Two cautionary notes should be kept in mind when reviewing disaggregation data for schools: 1) the accuracy of the data disaggregation depends on the accuracy of the school-provided subgroup information on the student response booklets; and 2) where fewer than 10 students were reported in a school or district for a category, or more than 10 students scored in a category but all these students scored at the same performance level (e.g., all were Apprentice), no disaggregated results are presented. This ensures protection of the privacy of individual students. With these cautions in mind, data disaggregation information can be helpful to schools and districts in evaluating student performance in relation to educational programs.

8.4.4 Core Content

This page reports school and state results by content subdomain for multiple-choice and open-response questions. The codes are those employed in the *Kentucky Core Content for Assessment*. Results are presented by grade level.

Subdomain labels are provided on the left-hand side of the page. Information includes the percentage of students scoring in each score category (correct and incorrect for multiple-choice and 0, 1, 2, 3, 4 for open-response questions). The mean item score across multiple items within the subdomain is provided for both the school/district and the state. Note that all comparisons must be made **within** the same content area subdomain rather than between subdomains. The difference between the school mean and the state mean, as well as the standard error of the mean, is included to support interpretation of the comparisons within subdomains.

Note that although the *Core Content for Assessment* includes four levels of specificity reporting is done at the content domain and subdomain levels only. For example, for mathematics, the *Core Content* subdomain codes are as follows:

Mathematics

I. Number Properties and Operations
II. Measurement
III. Geometry
IV. Data Analysis and Probability
V. Algebraic Thinking

8.5 2011 No Child Left Behind Reports

8.5.1 NCLB Adequate Yearly Progress Report 2011

The NCLB school- and district-level reports include three pages following the cover page: 1) Federal Accountability NCLB Adequate Yearly Progress (AYP); 2) Federal Accountability Reading Annual Measurable Objective (AMO); and 3) Federal Accountability Mathematics AMO.

- **Cover Page**—This page indicates the school name, grade span, and school code. Positioned beneath this information is the number of AYP target goals met in the current year, along with the school AYP outcome: *Made Overall AYP: Yes vs. No*. The cover also displays a table indicating student subgroup status in meeting AYP in reading and mathematics: *Yes vs. No.* The school's participation rate status and Other Academic Indicator status are also presented.
- **Federal Accountability**—This page is organized into two main sections. The tables on the upper panel summarize the school's reading and mathematics AMOs by year, its AYP history, and its NCLB Consequences history. The lower-left panel begins a presentation that is carried over into the right-hand section. This presentation summarizes AYP requirements, NCLB school and district improvement, and NCLB Consequences.
- **Federal Accountability 2011 Reading AMO and Mathematics AMO**—This report consists of two identically formatted pages: one for reading results and the other for mathematics results. The top section of each page displays box-and-whiskers graphs framed by vertical and horizontal axes, the box representing the score and the whisker representing the standard deviation. The percentage of students scoring Proficient or above at the school are mapped onto the vertical axis, and student subgroups are listed on the horizontal axis. The background of the chart is partly shaded, the height of the shaded area reflecting the school's annual target or AMO in terms of percentage Proficient or above. The box-and-whiskers graphs reflect the school's actual percentage Proficient or above for all students and for each disaggregated student subgroup (assuming the subgroup is of sufficient size). If the top of the whisker on any box protrudes above the edge of the shaded area, the school has made AYP with respect to the group. If the top of the whisker is below the shaded area (in over its head), the school does not make AYP for that group.

On the same page, positioned beneath the graphic, is a table presenting the percentage of students in each disaggregated group that met their AMO by year, the number and percentage of students who participated in the assessment in 2011, and the school's status on the Other Academic Indicator in 2011.

8.5.2 Briefing Packet State Release NCLB AYP Report 2011

The briefing packet provides extensive information concerning the history and provisions of NCLB. It presents highlights of state results for schools, districts, and the state. It includes tables reporting the percentage and number of schools and districts that did not make AYP, organized by subpopulation and school level.

8.6 DECISION RULES

To ensure that reported results for the 2010–11 KCCT were accurate with respect to collected data and other pertinent information, a document delineating analysis and reporting decision rules was created. These decision rules were observed in the analyses of KCCT test data and in reporting the assessment results. Moreover, these rules were the main reference for quality assurance checks.

The decision rules document used for reporting results of the 2010–11 administration of KCCT is found in Appendix R. The first section provides general information related to the data reported. This includes descriptions of the tests administered, the reports and files to be produced, school types, and the special forms that were administered. The second section describes student participation and exclusion rules. The next section, calculations, details the general rules related to the data, while the following two sections provide the rules specific to each report and to the data files provided to the KDE. Addenda delineating all changes made after the initial sign-off of the decision rules complete this documentation.

8.7 QUALITY ASSURANCE

Another type of quality assurance measure was parallel processing. Students' scaled scores for each content area were assigned by a psychometrician through a process of equating and scaling. The scaled scores were also computed by a data analyst to verify that they and their corresponding performance levels were assigned accurately. Respective scaled scores and performance levels were compared across all students for 100% agreement. Different exclusions assigned to students determining whether each student received scale scores and/or was included in different levels of aggregation were also parallel processed. Using the decision rules document, two data analysts independently wrote a computer program that assigned students' exclusions. For each content area and grade combination, the exclusions assigned by each data analyst were compared across all students. Only when 100% agreement was achieved could the analysis proceed.

The third aspect of quality control involved the procedures implemented by the quality assurance group to check the veracity and accuracy of reported data. Using a sample of schools and districts, the quality assurance group verified that reported information was correct. The step was conducted in two parts: 1) verification that the computed information was obtained correctly through appropriate application of different decision rules and 2) verification that the correct data points populated each cell in the reports. The selection of sample schools and districts for this purpose was very specific, as it affects the success of the quality control efforts. This set included those that satisfy the following criteria:

- one-school district
- two-school district
- multi-school district

The quality assurance group used a checklist to implement its procedures. After the checklist was completed, sample reports were circulated for psychometric checks and program management review. The appropriate sample reports were then presented to the client for review and sign-off.

CHAPTER 9. VALIDITY

Because interpretations of test scores, and not a test itself, are evaluated for validity, the purpose of the *2010–11 KCCT Technical Report* is to describe several technical aspects of the KCCT in support of score interpretations (AERA, 1999). Each chapter contributes an important component in the investigation of score validation: test development and design; test administration; scoring, scaling, and equating; item analyses; reliability; and score reporting. Additional technical information regarding the test forms administered in 2011 is presented in the *2008–09 KCCT Technical Report*.

Standards for Educational and Psychological Testing (AERA, et al., 1999) provides a framework for describing sources of evidence that should be considered when constructing a validity argument. The evidence around test content, response processes, internal structure, relationship to other variables, and consequences of testing speaks to different *aspects* of validity but are not distinct *types* of validity. Instead, each contributes to a body of evidence about the comprehensive validity of score interpretations.

Evidence on test content validity is meant to determine how well the assessment tasks represent the curriculum and standards for each content area and grade level. Content validation is informed by the item development process, including how the test blueprints and test items align to the curriculum and standards. Viewed through this lens provided by the standards, evidence based on test content was extensively described in Chapters 2 and 3. Item alignment with KCCT content standards; item bias, sensitivity, and content appropriateness review processes; adherence to the test blueprint; use of multiple item types; use of standardized administration procedures, with accommodated options for participation; and appropriate test administration training are all components of validity evidence based on test content. As discussed earlier, all KCCT questions were aligned by KCCT educators to specific KCCT content standards and underwent several rounds of review for content fidelity and appropriateness. Items are presented to students in multiple formats (open-response and multiple-choice). Finally, tests are administered according to state-mandated standardized procedures, with allowable accommodations, and all test administrators and proctors are required to attend annual training sessions at the local level.

The scoring information in Chapter 4 describes the steps taken to train and monitor hand-scorers, as well as quality control procedures related to scanning and machine-scoring. To speak to student response processes, however, additional studies would be helpful and might include an investigation of students' cognitive methods using think-aloud protocols.

Evidence based on internal structure is presented in great detail in the discussions of item analyses, reliability, and scaling and equating in Chapters 5 through 7. Technical characteristics of the internal structure of the assessments are presented in terms of classical item statistics (item difficulty, item-test correlation), differential item functioning analyses, dimensionality analyses, reliability, standard errors of measurement, and item response theory parameters and procedures. Each test is equated to the same grade and content test from the prior year in order to preserve the meaning of scores over time. In general, item difficulty and

discrimination indices were in acceptable and expected ranges. Very few items were answered correctly at near-chance or near-perfect rates. Similarly, the positive discrimination indices indicate that most items were assessing consistent constructs, and students who performed well on individual items tended to perform well overall. Please see the individual sections for more complete results of the different analyses.

Evidence based on the consequences of testing is addressed in the scaled score information in Chapter 6 and the reporting information in Chapter 8. Each of these chapters speaks to the efforts undertaken to promote accurate and clear information provided to the public regarding test scores. Scaled scores offer the advantage of simplifying the reporting of results across content areas, grade levels, and subsequent years. Performance levels provide users with reference points for mastery at each grade level, which is another useful and simple way to interpret scores. Several different standard reports are provided to stakeholders. In addition, a data analysis tool is provided to each school system to allow educators the flexibility to customize reports for local needs. Additional evidence of the consequences of testing could be supplemented with broader investigation of the impact of testing on student learning.

To further support the validation of the assessment program, additional studies might be considered to provide evidence regarding the relationship of KCCT results to other variables including the extent to which scores from the KCCT converge with other measures of similar constructs, and the extent to which they diverge from measures of different constructs. Relationships among measures of the same or similar constructs can sharpen the meaning of scores and appropriate interpretations by refining the definition of the construct.

The evidence presented in this report supports inferences of student achievement on the content represented on the KCCT content standards for reading, writing, mathematics, science, and social studies for the purposes of program and instructional improvement and as a component of school accountability.

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APPENDICES

Appendix A—CONTENT STANDARDS

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Core Content for Arts and Humanities Assessment

Version 4.1

August 2006

Kentucky Department of Education

Introduction
Core Content for Arts and Humanities Assessment

What is the *Core Content for Arts and Humanities Assessment*?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Arts and Humanities Assessment Version 4.1* represents the arts and humanities content from Kentucky's Academic Expectations and *Program of Studies* that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Arts and Humanities Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the *Kentucky Core Content Test* (KCCT) beginning in 2007.

The *Core Content for Arts and Humanities Assessment* is not intended to represent the comprehensive local curriculum for arts and humanities assessment and instruction. It is also not the comprehensive *Program of Studies for Arts and Humanities*, which specifies the minimum content for the required credits for high school graduation, and the primary, intermediate and middle-level programs leading to these requirements.

Kentucky Academic Expectations for Arts and Humanities

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment.*

Goal 1*: Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.*

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes. (Drama)

1.13 Students make sense of ideas and communicate ideas with the visual arts.

1.14 Students make sense of ideas and communicate ideas with music.

1.15 Students make sense of and communicate ideas with movement. (Dance)

Goal 2: *Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.*

2.22 Students create works of art and make presentations to convey a point of view.

2.23 Students analyze their own and others' artistic products and performances using accepted standards.

2.24 Students have knowledge of major works of art, music, and literature and appreciate creativity and the contributions of the arts and humanities.

2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

How is the *Core Content for Arts and Humanities Assessment* organized?

Version 4.1 *Core Content for Arts and Humanities Assessment* is organized by grade level (end of primary, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th) in order to ensure continuity and conceptual development. This is different from Version 3.0, which was organized in grade spans. This version of the *Core Content for Arts and Humanities Assessment* includes 'off year' content standards as well as content for the assessed grades (five, eight and eleven).

SUBDOMAINS with related ORGANIZERS

Subdomain	Organizers
Structures in the Arts	Music Dance Drama/Theatre Visual Arts
Purposes for Creating the Arts	Music Dance Drama/Theatre Visual Arts

Subdomain	Organizers
Humanity in the Arts	Music Dance Drama/Theatre Visual Arts
Processes in the Arts	Music Dance Drama/Theatre Visual Arts

Subdomain	**Organizers**
Interrelationships Among the Arts (high school level only)	Music Dance Drama/Theatre Visual Arts

Creating and performing in the arts is included under the *Processes in the Arts* subdomain. All other subdomains address the process of responding to the arts. Since *Processes in the Arts* involves creating and performing in the arts, content statements on this part of the document will not be assessed as a part of the state KCCT assessment. However, creating and performing the arts is an absolute necessity for students to be able to understand and have context to respond to the arts on a proficient level. This part of the *Arts and Humanities Core Content for Assessment* should be part of the comprehensive arts curriculum.

The Core Content for Arts and Humanities Assessment is organized into five subdomains, which are further defined within the Core Content for Assessment. The five subdomains for arts and humanities are:

- Structures in the Arts
- Humanity in the Arts
- Purposes for Creating the Arts
- Processes in the Arts
- Interrelationships Among the Arts (high school level only)

The *Core Content for Arts and Humanities Assessment* includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items inside the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Arts and Humanities Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

What do the codes for the *Core Content for Arts and Humanities Assessment* mean?
Each content standard is preceded by a code. The code begins with AH for arts and humanities and is then followed by a grade level designation and then a 3-digit number that indicates subdomain, organizer and sequential standard, respectively. The codes used are listed below.

Grade Level Codes
EP = end of primary
04 = fourth grade
05 = fifth grade
06 = sixth grade
07 = seventh grade
08 = eighth grade
HS = high school

Subdomain
1 = Structures in the Arts
2 = Humanity in the Arts
3 = Purposes for Creating the Arts
4 = Processes in the Arts
5 = Interrelationships Among the Arts

Organizer
1 = Music
2 = Dance
3 = Drama/Theatre
4 = Visual Arts

A typical code may look like AH-05-1.1.1. This means fifth grade arts and humanities in the subdomain of (1) Structures in the Arts, in the organizer (1) music and (1) is the first standard listed for that organizer at that grade level.

AH-05-1.1.1
- AH Arts and Humanities (domain)
  - 05 fifth Grade
    - 1 Structures in the Arts (subdomain)
      - 1 Music (organizer)
        - 1 (first standard)

Structures in the Arts

Understanding of the various structural components of the arts is critical to the development of other larger concepts in the arts. Structures that artists use include elements and principles of each art form, tools, media and subject matter that impact artistic products and specific styles and genre that provide a context for creating works. It is the artist's choice of these in the creative process that results in a distinctively expressive work. Students make choices about how to use structural organizers to create meaningful works of their own. The more students understand, the greater their ability to produce, interpret or critique artworks from other artists, cultures and historical periods.

End of Primary	4th Grade	5th Grade
Music		
AH-EP-1.1.1 *Students will begin to recognize and identify elements of music using musical terminology.* *Elements of music:* *Rhythm - bar lines, measures, whole notes, half notes, quarter notes (aurally and visually)* *Tempo - steady beat, slower, faster (aurally)* *Melody – notes, lines and spaces on treble clef staff (visually)* *Harmony - rounds and simple 2-part songs (aurally), songs are major or minor (aurally)* *Form - call and response form, AB form and ABA form (aurally)* *Timbre (tone color) - recognize different qualities of musical sounds, instruments by family-brass, woodwind, string, percussion (aurally and visually) and human voices (aurally)* *Dynamics - soft, loud (aurally)*	**AH-04-1.1.1** **Students will identify or describe elements of music in a variety of music.** **DOK 2** **Elements of music:** **Rhythm - time signature (2/4, 3/4, 4/4), bar lines, rhythmic durations (whole, half, quarter, eighth notes and rests), measure** **Tempo - steady beat, slower or faster** **Melody - shape, direction (pitches move up, down, by step, by skip, stay the same), treble clef sign, pitch notation (notes from middle C to F at top of treble clef staff), high vs. low notes (pitches)** **Harmony - parts (notes performed together to create harmony), major/minor (aurally); unison (non-harmony)** **Form - call and response, two-part (AB), three-part (ABA), round, verse/chorus, repeat signs** **Timbre (tone color) - recognize different qualities of musical sounds, orchestral instruments by family - brass, woodwind, string, percussion, how instrument sounds are produced, human voices (high voices, low voices)** **Dynamics - soft (*piano - p*), medium soft**	**AH-05-1.1.1** **Students will analyze or explain the use of elements of music in a variety of music.** **DOK 3** **Elements of music:** **Rhythm - time signature (2/4, 3/4, 4/4), bar lines, rhythmic durations (whole, half, quarter, eighth notes and rests), measure** **Tempo - steady beat, slow, fast** **Melody - shape, direction (pitches move up, down, by step, by skip, stay the same), treble clef sign, pitch notation (notes from middle C to F at top of treble clef staff), high notes vs. low notes (pitches)** **Harmony - parts (notes performed together to create harmony), major/minor (aurally); unison (non-harmony)** **Form - call and response, two-part (AB), three-part (ABA), round, verse/chorus, repeat signs** **Timbre (tone color) - recognize different qualities of musical sounds, orchestral instruments by family - brass, woodwind, string, percussion, how instrument sounds are produced, human voices (high voices, low voices)** **Dynamics - soft (*piano - p*), medium soft**

	(mezzo piano - mp), medium loud (mezzo forte - mf), loud (forte - f)	**(*mezzo piano - mp*), medium loud (*mezzo forte - mf*), loud (*forte - f*)**
AH-EP-1.1.2 *Students will identify various styles of music (spirituals, game songs, folk songs, work songs, lullabies, patriotic, bluegrass).*	*AH-04-1.1.2* *Students will identify and describe various styles of music (spirituals, game songs, folk songs, work songs, lullabies, patriotic, bluegrass).*	*AH-05-1.1.2* *Students will identify and describe various styles of music (spirituals, game songs, folk songs, work songs, lullabies, patriotic, bluegrass).*
Dance		
AH-EP-1.2.1 *Students will observe dance/movement and describe elements and movements using dance terminology.* *Elements of dance:* *<u>Space</u> – direction of dance movements (forward, backward, right, left, up, down), pathway (straight, curved, zigzag), levels (high, middle, low), shape (individual and group shapes)* *<u>Time (tempo)</u> – dance movements that follow a steady beat or move faster or slower* *<u>Force</u> – dance movements that use more or less energy (e.g., gentle movements versus strong movements)* *Dance Form – beginning, middle, end*	**AH-04-1.2.1** **Students will identify or describe elements of dance in a variety of dances.** **DOK 2** **Elements of dance:** **<u>Space</u> – direction of dance movements (forward, backward, right, left, up, down), pathway (straight, curved, zigzag), levels (high, middle, low), shape (individual and group shapes)** **<u>Time (tempo)</u> – dance movements that follow a steady beat or move faster or slower** **<u>Force</u> – dance movements that use more or less energy (e.g., energy - sharp/smooth, weight - heavy/light, flow-free/bound)** **Dance Form - call and response, AB, ABA, choreography**	**AH-05-1.2.1** **Students will analyze or explain the use of elements of dance in a variety of dances.** **DOK 3** **Elements of dance:** **<u>Space</u> – direction of dance movements (forward, backward, right, left, up, down), pathway (straight, curved, zigzag), levels (high, middle, low), shape (individual and group shapes)** **<u>Time (tempo)</u> – dance movements that follow a steady beat or move faster or slower** **<u>Force</u> – dance movements that use more or less energy (e.g., energy - sharp/smooth, weight - heavy/light, flow-free/bound)** **Dance Form - call and response, AB, ABA, choreography**
AH-EP-1.2.2 *Students will observe, define and describe locomotor (e.g., walk, run, skip, gallop) and nonlocomotor (e.g., bend, stretch, twist, swing) movements.*	**AH-04-1.2.2** **Students will describe how dance uses space, time, force and various locomotor and nonlocomotor movements to communicate ideas, thoughts and feelings.** **DOK 2**	**AH-05-1.2.2** **Students will describe how dance uses space, time, force and various locomotor and nonlocomotor movements to communicate ideas, thoughts and feelings.** **DOK 3**

Drama/Theatre		
AH-EP-1.3.1 *Students will observe dramatic productions and describe literary elements, technical elements and/or performance elements using drama/theatre terminology.* *Elements of drama:* *<u>Literary elements</u> – Script, Story line (plot), Character, Story organization (beginning, middle, end)* *<u>Technical elements</u> - Scenery, Costumes, Props, Make-up* *<u>Performance elements</u> - Acting (how speaking, moving help to create characters)*	**AH-04-1.3.1** **Students will identify or describe elements of drama in dramatic works.** **DOK 2** **Elements of drama:** **<u>Literary elements</u> – Script, Story line (plot), Character, Story organization (beginning, middle, end), Setting, Dialogue, Monologue, Conflict** **<u>Technical elements</u> – Scenery (set), Costumes, Props, Sound and Music, Make-up** **<u>Performance elements:</u>** **Acting (how speaking, moving help to create characters)** **Speaking – vocal expression, projection, speaking style, diction** **Nonverbal expression – gestures, facial expression, movement**	**AH-05-1.3.1** **Students will analyze or explain the use of elements of drama in dramatic works.** **DOK 3** **Elements of drama:** **<u>Literary elements</u> – Script, Story line (plot), Character, Story organization (beginning, middle, end), Setting, Dialogue, Monologue, Conflict** **<u>Technical elements</u> – Scenery (set), Costumes, Props, Sound and Music, Make-up** **<u>Performance elements:</u>** **Acting (how speaking, moving help to create characters)** **Speaking – vocal expression, projection, speaking style, diction** **Nonverbal expression – gestures, facial expression, movement**
	AH-04-1.3.2 *Students will identify, describe or explain relationships among characters and settings as related to a script, a scenario or a classroom dramatization.*	*AH-05-1.3.2* *Students will identify, describe or explain relationships among characters and settings as related to a script, a scenario or a classroom dramatization.*
AH-EP-1.3.3 *Students will identify a variety of creative dramatics (improvisation, mimicry, pantomime, role playing and storytelling).*	*AH-04-1.3.3* *Students will identify and describe a variety of creative dramatics (improvisation, mimicry, pantomime, role playing and storytelling).*	*AH-05-1.3.3* *Students will identify and describe a variety of creative dramatics (improvisation, mimicry, pantomime, role playing and storytelling).*

Visual Arts		
AH-EP-1.4.1 *Students will identify or describe elements of art and principles of design in works of art.* *<u>Elements of art</u>:* *Line, Shape, Form, Texture and Color (primary and secondary hues) and color schemes (warm, cool, neutral – black, white, gray, sometimes brown/beige as earth tones)* *<u>Principles of design</u>:* *Organization of visual compositions: Emphasis (focal point), Pattern, Balance (symmetry), Contrast (e.g., black/white, rough/smooth)*	**AH-04-1.4.1** **Students will identify or describe elements of art and principles of design in works of art.** **DOK 2** **<u>Elements of art</u>:** **Line, Shape, Form, Texture and Color (primary and secondary hues) and color schemes (warm, cool, neutral - black, white, gray, sometimes brown/beige as earth tones)** **<u>Principles of design</u>:** **Organization of visual compositions: Emphasis (focal point), Pattern, Balance (symmetry), Contrast (e.g., black/white, rough/smooth)**	**AH-05-1.4.1** **Students will analyze or explain the use of elements of art and principles of design in works of art.** **DOK 3** **<u>Elements of art:</u>** **Line, Shape, Form, Texture and Color (primary and secondary hues) and color schemes/groups (warm, cool, neutral - black, white, gray, sometimes brown/beige as earth tones)** **<u>Principles of design:</u>** **Organization of visual compositions: Emphasis (focal point), Pattern, Balance (symmetry), Contrast (e.g., black/white, rough/smooth)**
	AH-04-1.4.2 **Students will identify or describe how an artist uses various media and processes.** **DOK 2** **<u>Media (plural) / medium (singular):</u> (used to produce artworks)** **<u>Two-dimensional</u> - crayon, pencil, paint, fabric, yarn, paper** **<u>Three-dimensional</u> - clay, papier-mâché** **<u>Art processes:</u>** **<u>Two-dimensional</u> - drawing, painting, fiber art (e.g., fabric printing, stamping), collage** **<u>Three-dimensional</u> - pottery, sculpture, fiber art (e.g., constructing with fiber, weaving, quilting)** **<u>Subject matter</u>: (e.g., landscape, portrait, still life)**	**AH-05-1.4.2** **Students will identify or describe how an artist uses various media and processes.** **DOK 2** **<u>Media (plural) / medium (singular):</u> (used to produce artworks)** **<u>Two-dimensional</u>- crayon, pencil, paint, fabric, yarn, paper** **<u>Three-dimensional</u> - clay, papier-mâché** **<u>Art processes:</u>** **<u>Two-dimensional</u> - drawing, painting, fiber art (e.g., fabric printing, stamping), collage** **<u>Three-dimensional</u> - pottery, sculpture, fiber art (e.g., constructing with fiber, weaving, quilting)** **<u>Subject matter</u>: (e.g. landscape, portrait, still life)**

Humanity in the Arts

The arts reflect the beliefs, feelings and ideas of those who create them. Experiencing the arts allows one to experience time, place and/or personality. By experiencing the arts of various cultures, students can actually gain insight into the beliefs, feelings and ideas of those cultures. Students also have the opportunity to experience how the arts can influence society through analysis of arts in their own lives and the arts of other cultures and historical periods. Studying the historical and cultural stylistic periods in the arts offers students an opportunity to understand the world past and present and to learn to appreciate their own cultural heritage. Looking at the interrelationships of multiple arts disciplines across cultures and historical periods is the focus of humanities in the arts.

End of Primary	4th Grade	5th Grade
Music		
AH-EP-2.1.1 *Students will identify music from the following cultures and periods.* *Cultures:* *Native American,* *Traditional Appalachian* *West African* *Periods:* *Colonial American*	**AH-04-2.1.1** **Students will identify how music has been a part of cultures and periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of music (e.g., ceremonial purposes) and the use of elements of music among cultures (musical instruments, e.g., Native American – rattles, drums, flutes, Appalachian – dulcimer, fiddle, banjo, guitar, West African – drums, rattles, thumb piano); polyrhythm in West African music not in Native American** **Periods:** **Colonial American (e.g., work songs, game songs, patriotic music, lullaby, folk music)** **Native American includes period in North America before European settlement**	**AH-05-2.1.1** **Students will describe or explain how music has been a part of cultures and periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of music) (e.g., ceremonial purposes) and the use of elements of music among cultures (musical instruments, e.g., Native American – rattles, drums, flutes, Appalachian – dulcimer, fiddle, banjo, guitar, West African – drums, rattles, thumb piano); polyrhythm in West African music not in Native American** **Periods:** **Colonial American (e.g. work songs, game songs, patriotic music, lullaby, folk music)** **Native American includes period in North America before European settlement**

	European influences in American music, similarities between the music in the American colonies and the cities of Europe (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)	**European influences in American music, similarities between the music in the American colonies and the cities of Europe (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)**
Dance		
AH-EP-2.2.1 *Students will identify dances of the following cultures and periods.* *Cultures:* *Native American,* *Traditional Appalachian* *West African* *Periods:* *Colonial American*	**AH-04-2.2.1** **Students will identify how dance has been a part of cultures and periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of dance (e.g., purposes: harvest and hunting dances in Native American and West African cultures), use of elements of dance among cultures** **Periods:** **Colonial American (European influences on American dance, e.g., social dances, square dancing, folk dances)** **Native American includes period in North America before European settlement**	**AH-05-2.2.1** **Students will describe or explain how dance has been a part of cultures and periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of dance (e.g., purposes: harvest and hunting dances in Native American and West African cultures), use of elements of dance among cultures** **Periods:** **Colonial American (European influences on American dance, e.g., social dances, square dancing, folk dances)** **Native American includes period in North America before European settlement**

Drama/Theatre		
AH-EP-2.3.1 *Students will identify folktales, legends or myths from the following cultures and periods.* *Cultures:* *Native American,* *Traditional Appalachian* *West African* *Periods:* *Colonial American*	**AH-04-2.3.1** **Students will identify how drama has been a part of cultures and time periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **(The use of storytelling, myths, legends, folktales in these cultures)** **Periods:** **Colonial American - European influence on American drama/theatre, plays from England (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)** **Native American includes period in North America before European settlement**	**AH-05-2.3.1** **Students will describe or explain how drama has been a part of cultures and time periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **(The use of storytelling, myths, legends, folktales in these cultures)** **Periods:** **Colonial American - European influence on American drama/theatre, plays from England (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)** **Native American includes period in North America before European settlement**

Visual Arts		
AH-EP-2.4.1 *Students will identify art from the following cultures and periods.* *Cultures:* *Native American,* *Traditional Appalachian* *West African* *Periods:* *Colonial American*	**AH-04-2.4.1** **Students will identify how visual art has been a part of cultures and time periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of art (e.g., purposes for creating art, folk art) and elements of art and principles of design among cultures (e.g., how line, color, pattern, etc. are used in artworks), media in relation to these cultures (e.g., wood, fiber)** **Periods:** **Colonial American** **European influences in American visual art, similarities between the visual art in the American colonies and the cities of Europe (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)** **Native American includes period in North America before European settlement**	**AH-05-2.4.1** **Students will describe or explain how visual art has been a part of cultures and time periods throughout history.** **DOK 2** **Cultures:** **Native American,** **Traditional Appalachian** **West African** **Similarities and differences in the use of art (e.g., purposes for creating art, folk art) and elements of art and principles of design among cultures (e.g., how line, color, pattern, etc. are used in artworks), media in relation to these cultures (e.g., wood, fiber)** **Periods:** **Colonial American** **European influences in American visual art, similarities between the visual art in the American colonies and the cities of Europe (The influence of Europe was very strong in the colonies due to the movement of settlers from Europe to America.)** **Native American includes period in North America before European settlement**

Purposes for Creating the Arts

The arts have played a major role throughout the history of humans. As the result of the power of the arts to communicate on a basic human level, they continue to serve a variety of purposes in society. The arts are used for artistic expression to portray specific emotions or feelings, to tell stories in a narrative manner, to imitate nature and to persuade others. The arts bring meaning to ceremonies, rituals, celebrations and commemorations. Additionally, they are used for recreation and to support recreational activities. Students experience the arts in a variety of roles through their own creations and performances and through those of others. Through their activities and observations, students learn to create arts and use them for a variety of purposes in society.

End of Primary	4th Grade	5th Grade
Music		
AH-EP-3.1.1 *Students will experience music created for a variety of purposes.* *Purposes of music (different roles of music)* *Ceremonial - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)* *Recreational - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)* *Artistic Expression - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)*	**AH-04-3.1.1** **Students will identify how music fulfills a variety of purposes.** **DOK 2** **Purposes of music (different roles of music)** **Ceremonial - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)** **Recreational - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)** **Artistic Expression - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**	**AH-05-3.1.1** **Students will describe or explain how music fulfills a variety of purposes.** **DOK 2** **Purposes of music (different roles of music)** **Ceremonial - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)** **Recreational - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)** **Artistic Expression - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**

Dance		
AH-EP-3.2.1 *Students will experience dance created for a variety of purposes.* *Purposes of dance: (different roles of dance)* *<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)* *<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)* *<u>Artistic Expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas, (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)*	**AH-04-3.2.1** **Students will identify how dance fulfills a variety of purposes.** **DOK 2** **Purposes of dance: (different roles of dance)** **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)** **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)** **<u>Artistic Expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas, (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**	**AH-05-3.2.1** **Students will describe or explain how dance fulfills a variety of purposes.** **DOK 2** **Purposes of dance: (different roles of dance)** **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)** **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)** **<u>Artistic Expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas, (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**

Drama/Theatre		
AH-EP-3.3.1 *Students will experience dramatic works created for a variety of purposes.* *Purposes of drama/theatre (different roles of drama)* *<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., storytelling, role playing, narrative works)* *<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, myths and legends)* *<u>Recreational</u> drama for entertainment (e.g., drama/theatre as a hobby)* *<u>Artistic expression</u> - dramatic works created and performed by actors in a theatrical setting for an audience*	**AH-04-3.3.1** **Students will identify how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of drama/theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., storytelling, role playing, narrative works)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, myths and legends)** **<u>Recreational</u> drama for entertainment (e.g., drama/theatre as a hobby)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed by actors in a theatrical setting for an audience)**	**AH-05-3.3.1** **Students will describe or explain how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of drama/theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., storytelling, role playing, narrative works)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, myths and legends)** **<u>Recreational</u> drama for entertainment (e.g., drama/theatre as a hobby)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed by actors in a theatrical setting for an audience)**

Visual Arts		
AH-EP-3.4.1 *Students will experience visual art works created for a variety of purposes.* *Purposes of art: (different roles of art)* *Ceremonial - ritual, celebration, artworks created to support worship ceremonies (e.g., ceremonial masks)* *Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects) Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events (e.g., Native American totem poles, cave and wall paintings)* *Functional - artistic objects used in everyday life (e.g., pottery, quilts, baskets)*	**AH-04-3.4.1** **Students will identify how art fulfills a variety of purposes.** **DOK 2** **Purposes of art: (different roles of art)** **Ceremonial - ritual, celebration, artworks created to support worship ceremonies (e.g., ceremonial masks)** **Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events (e.g., Native American totem poles, cave and wall paintings)** **Functional - artistic objects used in everyday life (e.g., pottery, quilts, baskets.)**	**AH-05-3.4.1** **Students will describe or explain how art fulfills a variety of purposes.** **DOK 2** **Purposes of art: (different roles of art)** **Ceremonial - ritual, celebration, artworks created to support worship ceremonies (e.g., ceremonial masks)** **Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events (e.g., Native American totem poles, cave and wall paintings)** **Functional - artistic objects used in everyday life (e.g., pottery, quilts, baskets.)**

Processes in the Arts

There are three distinctive processes involved in the arts. These processes are creating new works, performing works for expressive purposes and responding to artworks. Each process is critical and relies on others for completion. Artists create works to express ideas, feelings or beliefs. The visual arts capture a moment in time while the performing arts (music, dance, drama/theatre) are performed for a live audience. The audience responds to the artistic expressions emotionally and intellectually based on the meaning of the work. Each process enhances understanding, abilities and appreciation of others. Students involved in these processes over time will gain a great appreciation for the arts, for artists past and present and for the value of artistic expression.

End of Primary	4th Grade	5th Grade
Music		
	AH-04-4.1.1 *Students will create and notate short, simple melodies that demonstrate melodic shape/contour and meter.*	*AH-05-4.1.1* *Students will create and notate short, simple melodies that demonstrate melodic shape/contour and meter.*
	AH-04-4.1.2 *Students will create and perform simple melodic or rhythmic accompaniments to given melodies.*	*AH-05-4.1.2* *Students will create and perform simple melodic or rhythmic accompaniments to given melodies.*
	AH-04-4.1.3 *Students will improvise answers in similar style to given rhythmic and/or melodic phrases.*	*AH-05-4.1.3* *Students will improvise answers in similar style to given rhythmic and/or melodic phrases.*
AH-EP-4.1.4 *Students will sing and play alone simple rhythmic or tonal patterns by reading simple music notation.*	*AH-04-4.1.4* *Students will sing and play alone simple rhythmic or tonal patterns by reading music notation; be able to sustain own part in an ensemble.*	*AH-05-4.1.4* *Students will sing and play alone simple rhythmic or tonal patterns by reading music notation; be able to sustain own part in an ensemble.*
AH-EP-4.1.5 *Students will sing alone and with others a varied repertoire of music.*	*AH-04-4.1.5* *Students will sing alone and with others a varied repertoire of music.*	*AH-05-4.1.5* *Students will sing alone and with others a varied repertoire of music.*

Dance		
AH-EP-4.2.1 *With a partner or in a small group, students will perform dances using the elements of dance and various movements.*	*AH-04-4.2.1* *Students will create patterns of movement incorporating the elements of dance (space, time and force).*	*AH-05-4.2.1* *Students will create patterns of movement incorporating the elements of dance (space, time and force).*
	AH-04-4.2.2 *Students will create a movement sequence with a beginning, middle and end.*	*AH-05-4.2.2* *Students will create a movement sequence with a beginning, middle and end.*
AH-EP-4.2.3 *Students will perform traditional folk dances, square dances and social dances of ethnic groups. (Native American, West African, African-American, American folk)*	*AH-04-4.2.3* *Students will perform traditional folk dances, square dances and ethnic dances. (Native American, West African/African-American, Early American and folk)*	*AH-05-4.2.3* *Students will perform traditional folk dances, square dances and ethnic dances. (Native American, West African/African-American, Early American and folk)*
Drama/Theatre		
AH-EP-4.3.1 *Students will perform in dramatic situations that incorporate Literary, Technical and Performance elements.*	*AH-04-4.3.1* *Students will create and perform using elements of drama (Literary, Technical, Performance)*	*AH-05-4.3.1* *Students will create and perform using elements of drama (Literary, Technical, Performance)*
	AH-04-4.3.2 *Students will improvise to tell stories that show action and have a clear beginning, middle and end. (Literary elements)*	*AH-05-4.3.2* *Students will improvise to tell stories that show action and have a clear beginning, middle and end. (Literary elements)*

Visual Arts		
	AH-04-4.4.1 *Students will create artwork using the elements of art and principles of design.*	*AH-05-4.4.1* *Students will create artwork using the elements of art and principles of design.*
AH-EP-4.4.2 *Students will choose media to create artworks with a basic understanding of how to use the media.*	*AH-04-4.4.2* *Students will use a variety of media and art processes to produce two-dimensional (2-D) and three-dimensional (3-D) artwork.*	*AH-05-4.4.2* *Students will use a variety of media and art processes to produce two-dimensional (2-D) and three-dimensional (3-D) artwork.*

Structures in the Arts

Understanding of the various structural components of the arts is critical to the development of other larger concepts in the arts. Structures that artists use include elements and principles of each art form, tools, media and subject matter that impact artistic products and specific styles and genre that provide a context for creating works. It is the artist's choice of these in the creative process that results in a distinctively expressive work. Students make choices about how to use structural organizers to create meaningful works of their own. The more students understand, the greater their ability to produce, interpret or critique artworks from other artists, cultures and historical periods.

6th Grade	7th Grade	8th Grade
Music		
AH-06-1.1.1 **Students will identify or describe the use of elements in a variety of music.** **DOK 2** **Elements of music:** **Rhythm - syncopation, time signature (2/4, 3/4, 4/4, 6/8), rhythmic durations (whole, half, quarter, eighth, sixteenth notes and rests, dotted half note and dotted quarter note)** **Tempo - Allegro, Moderato, Largo, Presto** **Melody - melodic phrase, treble and bass clef signs, pitch notation: letter names on grand staff, natural sign, sharp sign, flat sign** **Harmony - triads (chords)** **Form - AB, ABA, call and response** **Timbre (tone color) - distinctive sounds of instruments, instrument families and voice parts (soprano, alto, tenor, bass)** **Dynamics - crescendo, decrescendo, dynamic markings/symbols: *pp, p, mp, mf, f, ff*, <, >**	**AH-07-1.1.1** **Students will analyze the use of elements in a variety of music.** **DOK 3** **Elements of music:** **Rhythm - syncopation, time signature (2/4, 3/4, 4/4, 6/8), rhythmic durations (whole, half, quarter, eighth, sixteenth notes and rests, dotted half note and dotted quarter note)** **Tempo - Allegro, Moderato, Largo, Presto** **Melody - melodic phrase, treble and bass clef signs, pitch notation: letter names on grand staff, natural sign, sharp sign, flat sign** **Harmony - triads (chords)** **Form - AB, ABA, call and response** **Timbre (tone color) - distinctive sounds of instruments, instrument families and voice parts (soprano, alto, tenor, bass)** **Dynamics - crescendo, decrescendo, dynamic markings/symbols: *pp, p, mp, mf, f, ff*, <, >**	**AH-08-1.1.1** **Students will compare or evaluate the use of elements in a variety of music.** **DOK 3** **Elements of music:** **Rhythm - syncopation, time signature (2/4, 3/4, 4/4, 6/8), rhythmic durations (whole, half, quarter, eighth, sixteenth notes and rests, dotted half note and dotted quarter note)** **Tempo - Allegro, Moderato, Largo, Presto** **Melody - melodic phrase, treble and bass clef signs, pitch notation: letter names on grand staff, natural sign, sharp sign, flat sign** **Harmony - triads (chords)** **Form - AB, ABA, call and response** **Timbre (tone color) - distinctive sounds of instruments, instrument families and voice parts (soprano, alto, tenor, bass)** **Dynamics - crescendo, decrescendo, dynamic markings/symbols: *pp, p, mp, mf, f, ff*, <, >**

AH-06-1.1.2 *Students will identify instruments according to classifications.* *Family - brass, woodwind, string, percussion* *Voices - soprano, alto, tenor, bass* *Folk - instruments used in folk music* *Orchestral - instruments used in contemporary orchestral settings*	*AH-07-1.1.2* *Students will identify instruments according to classifications.* *Family - brass, woodwind, string, percussion* *Voices - soprano, alto, tenor, bass* *Folk - instruments used in folk music* *Orchestral - instruments used in contemporary orchestral settings*	*AH-08-1.1.2* *Students will identify instruments according to classifications.* *Family - brass, woodwind, string, percussion* *Voices - soprano, alto, tenor, bass* *Folk - instruments used in folk music* *Orchestral - instruments used in contemporary orchestral settings*
AH-06-1.1.3 *Students will identify or explain various styles of music (gospel, Broadway musicals, blues, jazz, popular, marches, ballads).*	*AH-07-1.1.3* *Students will identify or explain various styles of music (gospel, Broadway musicals, blues, jazz, popular, marches, ballads).*	*AH-08-1.1.3* *Students will identify or compare various styles of music (gospel, Broadway musicals, blues, jazz, popular, marches, ballads).*
Dance		
AH-06-1.2.1 **Students will identify or describe the use of elements in a variety of dances.** **DOK 2** **Elements of dance:** **<u>Space</u> - direction (forward, backward, right, left, up, down, diagonal), pathway (straight, curved), levels (high, middle, low), shape (individual or group)** **Focus - audience (where viewer's eye is drawn), dancer (single focus - looking in the direction of movement, multi focus - changing head/eye focus during movements)** **Size - use of size in given space, or range of motion** **<u>Time (Tempo)</u> - accent, rhythmic pattern, duration** **<u>Force</u> - heavy/light, sharp/smooth, tension/relaxation, bound/flowing**	**AH-07-1.2.1** **Students will analyze the use of elements in a variety of dances.** **DOK 3** **Elements of dance:** **<u>Space</u> - direction (forward, backward, right, left, up, down, diagonal), pathway (straight, curved), levels (high, middle, low), shape (individual or group)** **Focus - audience (where viewer's eye is drawn), dancer (single focus - looking in the direction of movement, multi focus - changing head/eye focus during movements)** **Size - use of size in given space, or range of motion** **<u>Time (Tempo)</u> - accent, rhythmic pattern, duration** **<u>Force</u> - heavy/light, sharp/smooth, tension/relaxation, bound/flowing**	**AH-08-1.2.1** **Students will compare or evaluate the use of elements in a variety of dances.** **DOK 3** **Elements of dance:** **<u>Space</u> - direction (forward, backward, right, left, up, down, diagonal), pathway (straight, curved), levels (high, middle, low), shape (individual or group)** **Focus - audience (where viewer's eye is drawn), dancer (single focus - looking in the direction of movement, multi focus – changing head/eye focus during movements)** **Size - use of big/small size in a given space, or range of motion** **<u>Time (Tempo)</u> - accent, rhythmic pattern, duration** **<u>Force</u> - heavy/light, sharp/smooth, tension/relaxation, bound/flowing**

Choreographic Forms -AB, ABA, call and response, narrative	**Choreographic Forms -AB, ABA, call and response, narrative**	**Choreographic Forms -AB, ABA, call and response, narrative**

AH-06-1.2.2 *Students will identify dances by: identifying theme (story), dance styles (e.g., ballet, jazz, tap, modern), characteristics of the style (e.g., tap - feet as rhythmic instrument, ballroom - partnering), and the use of the elements of dance.*	*AH-07-1.2.2* *Students will identify and/or describe dances by: identifying or describing theme (story), dance styles (e.g., ballet, jazz, tap, modern), characteristics of the style (e.g., tap - feet as rhythmic instrument, ballroom - partnering), and the use of the elements of dance.*	*AH-08-1.2.2* *Students will compare and contrast dances by: comparing theme (story), dance styles (e.g., ballet, jazz, tap, modern), characteristics of the style (e.g., tap - feet as rhythmic instrument, ballroom - partnering), and the use of the elements of dance.*
Drama/Theatre		
AH-06-1.3.1 **Students will identify or describe the use of elements of drama in dramatic works.** **DOK 2** **Elements of drama:** **<u>Literary elements</u> – Script, Plot structures (exposition, rising action, climax or turning point, falling action, resolution), Suspense, Theme, Setting, Language (word choice/style used to create character, dialect, point of view), Monologue, Dialogue, Empathy** **<u>Technical elements</u> -** **Scenery (set), Sound, Lights, Make-up, Props, Costumes, Design** **<u>Performance elements</u> -** **Acting (e.g. character motivation and analysis),** **Speaking (e.g., breath control, projection, vocal expression, diction),** **Nonverbal expression (e.g., gestures, body alignment, facial expression, character blocking and movement, stage directions - stage left, stage right, center stage, upstage, downstage)**	**AH-07-1.3.1** **Students will analyze the use of elements of drama in dramatic works.** **DOK 3** **Elements of drama:** **<u>Literary elements</u> – Script, Plot structures (exposition, rising action, climax or turning point, falling action, resolution), Suspense, Theme, Setting, Language (word choice/style used to create character, dialect, point of view), Monologue, Dialogue, Empathy** **<u>Technical elements</u> -** **Scenery (set), Sound, Lights, Make-up, Props, Costumes, Design** **<u>Performance elements</u> -** **Acting (e.g. character motivation and analysis),** **Speaking (e.g., breath control, projection, vocal expression, diction),** **Nonverbal expression (e.g., gestures, body alignment, facial expression, character blocking and movement, stage directions - stage left, stage right, center stage, upstage, downstage)**	**AH-08-1.3.1** **Students will compare or evaluate the use of elements of drama in dramatic works.** **DOK 3** **Elements of drama:** **<u>Literary elements</u> – Script, Plot structures (exposition, rising action, climax or turning point, falling action, resolution), Suspense, Theme, Setting, Language (word choice/style used to create character, dialect, point of view), Monologue, Dialogue, Empathy** **<u>Technical elements</u> -** **Scenery (set), Sound, Lights, Make-up, Props, Costumes, Design** **<u>Performance elements</u> -** **Acting (e.g. character motivation and analysis),** **Speaking (e.g., breath control, projection, vocal expression, diction),** **Nonverbal expression (e.g., gestures, body alignment, facial expression, character blocking and movement, stage directions - stage left, stage right, center stage, upstage, downstage)**

AH-06-1.3.2 *Students will describe how the technical elements (scenery, props, costumes, make-up, lighting, sound) communicate setting and mood.*	*AH-07-1.3.2* *Students will describe how the technical elements (scenery, props, lighting, sound, costumes, make-up) communicate setting and mood.*	*AH-08-1.3.2* *Students will describe how the technical elements (scenery, props, costumes, make-up, lighting, sound) communicate setting and mood.*
AH-06-1.3.3 *Students will explain how performance elements (e.g., acting, speaking, movement) can create a believable character.*	*AH-07-1.3.3* *Students will explain how performance elements (e.g., acting, speaking, movement) can create a believable character.*	*AH-08-1.3.3* *Students will explain how performance elements (e.g., acting, speaking, movement) can create a believable character.*
AH-06-1.3.4 *Students will identify and describe the types of stages (arena, thrust, proscenium).*	*AH-07-1.3.4* *Students will identify and describe the types of stages (arena, thrust, proscenium).*	*AH-08-1.3.4* *Students will identify and describe the types of stages (arena, thrust, proscenium).*
Visual Arts		
AH-06-1.4.1 **Students will describe works of art using elements of art and principles of design.** **DOK 2** **<u>Elements of art:</u>** **Line, Shape, Color properties (hue, value, intensity) and color schemes/groups (monochromatic), Form, Texture, Space (positive/negative, perspective (e.g., 1 point linear perspective), value (darkness or lightness, tints or shades)** **<u>Principles of design:</u>** **Repetition, Pattern, Balance (symmetrical/asymmetrical), Emphasis (focal point), Contrast (e.g., black/white, rough/smooth), Rhythm, Proportion, Movement**	**AH-07-1.4.1** **Students will analyze works of art using elements of art and principles of design.** **DOK 3** **<u>Elements of art:</u>** **Line, Shape, Color properties (hue, value, intensity) and color schemes/groups (monochromatic), Form, Texture, Space (positive/negative, perspective (e.g., 1 point linear perspective), value (darkness or lightness, tints or shades)** **<u>Principles of design:</u>** **Repetition, Pattern, Balance (symmetrical/asymmetrical), Emphasis (focal point), Contrast (e.g., black/white, rough/smooth), Rhythm, Proportion, Movement**	**AH-08-1.4.1** **Students will compare or evaluate works of art using elements of art and principles of design.** **DOK 3** **<u>Elements of art:</u>** **Line, Shape, Color properties (hue, value, intensity) and color schemes/groups (monochromatic), Form, Texture, Space (positive/negative, perspective (e.g., 1 point linear perspective), value (darkness or lightness, tints or shades)** **<u>Principles of design:</u>** **Repetition, Pattern, Balance (symmetrical/asymmetrical), Emphasis (focal point), Contrast (e.g., black/white, rough/smooth), Rhythm, Proportion, Movement**

AH-06-1.4.2 **Students will identify a variety of art media and art processes.** **DOK 1** **Media (plural)/Medium (singular):** **(Properties of media need to be known in order to respond to artworks)** **Two-dimensional - crayon, pencil, fabric, yarn, paint (tempera, watercolor), ink, pastel** **Three-dimensional - clay, papier-mâché, found objects (assemblages)** **Art Processes:** **Two-dimensional - drawing, painting, fiber art (e.g., fabric printing, stamping, tie-dye), printmaking** **Three-dimensional - ceramics, sculpture, fiber art (e.g., constructing with fiber, weaving, knitting, quilting)** **Subject matter: representational (e.g., landscape, portrait, still life) nonrepresentational (e.g., abstract, non-objective)**	**AH-07-1.4.2** **Students will describe a variety of art media and art processes.** **DOK 2** **Media (plural)/Medium (singular):** **(Properties of media need to be known in order to respond to artworks)** **Two-dimensional - crayon, pencil, fabric, yarn, paint (tempera, watercolor), ink, pastel** **Three-dimensional - clay, papier-mâché, found objects (assemblages)** **Art Processes:** **Two-dimensional - drawing, painting, fiber art (e.g., fabric printing, stamping, tie-dye), printmaking** **Three-dimensional - ceramics, sculpture, fiber art (e.g., constructing with fiber, weaving, knitting, quilting)** **Subject matter: representational (e.g., landscape, portrait, still life) nonrepresentational (e.g., abstract, non-objective)**	**AH-08-1.4.2** **Students will compare or evaluate a variety of art media and art processes.** **DOK 3** **Media (plural)/Medium (singular):** **(Properties of media need to be known in order to respond to artworks)** **Two-dimensional - crayon, pencil, fabric, yarn, paint (tempera, watercolor), ink, pastel** **Three-dimensional - clay, papier-mâché, found objects (assemblages)** **Art Processes:** **Two-dimensional - drawing, painting, fiber art (e.g., fabric printing, stamping, tie-dye), printmaking** **Three-dimensional - ceramics, sculpture, fiber art (e.g., constructing with fiber, weaving, knitting, quilting)** **Subject matter: representational (e.g., landscape, portrait, still life) nonrepresentational (e.g., abstract, non-objective)**

Humanity in the Arts

The arts reflect the beliefs, feelings and ideas of those who create them. Experiencing the arts allows one to experience time, place and/or personality. By experiencing the arts of various cultures, students can actually gain insight into the beliefs, feelings and ideas of those cultures. Students also have the opportunity to experience how the arts can influence society through analysis of arts in their own lives and the arts of other cultures and historical periods. Studying the historical and cultural stylistic periods in the arts offers students an opportunity to understand the world past and present and to learn to appreciate their own cultural heritage. Looking at the interrelationships of multiple arts disciplines across cultures and historical periods is the focus of humanities in the arts.

6th Grade	7th Grade	8th Grade
Music		
AH-06-2.1.1 **Students will analyze or explain how diverse cultures and time periods are reflected in music.** **DOK 3** **Cultures:** **Latin American –** **Blending of cultural traditions can create new traditions reflecting multiple cultures** **Latin American characteristics reflected in music of United States (e.g., clave rhythm, the popularity of Latin musical styles, such as samba, salsa, cha-cha, etc.,) in the U.S.** **Spanish influence on Mexican music (e.g., Mexican use of traditional Spanish musical instruments)** **Asian –** **Isolation of culture or region results in a unique musical tradition (e.g., unique and distinctive sounds of traditional Asian music and instruments, e.g., Japanese koto, Indian sitar)**	**AH-07-2.1.1** **Students will analyze or explain how diverse cultures and time periods are reflected in music.** **DOK 3** **Periods:** **Classical Greece –** **Presents the universal ideal of beauty through logic, order, reason and moderation. (Pythagorean – music theory based on mathematical logic)** **Medieval –** **Appeals to the emotions and stresses the importance of religion. (Gregorian chant)**	**AH-08-2.1.1** **Students will analyze or explain how diverse cultures and time periods are reflected in music.** **DOK 3** **Cultures/Period:** **Early American through Civil War –** **European influence on American music (e.g., Baroque [Bach, Handel], Classical [Mozart, Beethoven] their influence on Early American music) (e.g., European folk/Early American folk, common musical instruments, etc.)** **African influence in American music resulting from the importation of slaves from West Africa** **African American work songs, gospel and spirituals, the use of elements of music to create new styles (e.g., call and response, polyrhythms, improvisation), the development of new American instruments such as the banjo**

Dance		
AH-06-2.2.1 **Students will analyze or explain how diverse cultures and time periods are reflected in dance.** **DOK 3** **Cultures:** **Latin American –** **Blending of cultural traditions can create new traditions** **Latin American dance characteristics reflected in American dance (e.g., clave rhythm, samba, salsa, cha-cha, Tango)** **Asian –** **Isolation of culture or region results in a unique dance tradition (e.g., classical dance forms from India - bharata natyam, kathak)**	**AH-07-2.2.1** **Students will analyze or explain how diverse cultures and time periods are reflected in dance.** **DOK 3** **Periods:** **Medieval –** **Appeals to the emotions and stresses the importance of religion (e.g., development and history of tarantella)**	**AH-08-2.2.1** **Students will analyze or explain how diverse cultures and time periods are reflected in dance.** **DOK 3** **Cultures/Period:** **Early American through Civil War --** **Folk/social dances based on European traditions (e.g., traditional folk and social dances, jig, reel, square dance, waltz)** **African American dances in the United States through the Civil War (e.g., plantation dances, dances performed by slaves based on West African traditions)**
Drama/Theatre		
AH-06-2.3.1 **Students will analyze or explain how diverse cultures and time periods are reflected in drama/theatre.** **DOK 3** **Cultures:** **Bunraku (also called Banraku) - Japanese puppet theatre (Historical development and characteristics - developed as an art by late 1600s, characteristics of music, storytelling and sophisticated puppeteering)** **Native American and African influences on American storytelling**	**AH-07-2.3.1** **Students will analyze or explain how diverse cultures and time periods are reflected in drama/theatre.** **DOK 3** **Periods:** **Classical Greece and Rome –** **Presents the universal ideal of beauty through logic, order, reason and moderation. (Development and characteristics of Ancient Greek theatre and the continuation of Greek stories and styles in the Roman theatre)**	**AH-08-2.3.1** **Students will analyze or explain how diverse cultures and time periods are reflected in drama/theatre.** **DOK 3** **Cultures/Period:** **Early American through Civil War –** **Starting in the early 1700's entertainers from England performed in large cities; during the Revolutionary War many colonies banned theatrical performances to focus on the war;** **In the early 1800's well known stars toured the country; development and**

	Medieval – **Appeals to the emotions and stresses the importance of religion. (Morality plays - characters are personification of good and evil in a struggle for man's soul)**	**characteristics of melodrama in America; development of a distinct American tone using American stories and characters (e.g., Uncle Tom's Cabin)**
Visual Arts		
AH-06-2.4.1 **Students will analyze or explain how diverse cultures and time periods are reflected in visual arts.** **DOK 3** **Cultures:** **Latin American – mural art (e.g., Diego Rivera and his influence on other mural artists)** **Asian – China (the evolution of ceramics)**	**AH-07-2.4.1** **Students will analyze or explain how diverse cultures and time periods are reflected in visual arts.** **DOK 3** **Periods:** **Classical Greece –** **Presents the universal ideal of beauty through logic, order, reason and moderation. Western civilization was heavily influenced by Classical Greece. (architecture, sculpture, pottery)** **Ancient Rome –** **Continuation of Classical Greek traditions in the arts, advancement of architecture (Pantheon, Coliseum, arch, vault, dome)** **Ancient Egypt –** **Monumental structures (e.g., pyramids, sphinx), visual arts reflect religion and belief in immortality** **Medieval –** **Appeals to emotions and stresses the importance of religion. (Gothic and Romanesque architecture, basic characteristics and influence of**	**AH-08-2.4.1** **Students will analyze or explain how diverse cultures and time periods are reflected in visual arts.** **DOK 3** **Cultures/Period:** **Early American through Civil War -** **European Neo-classical influences (architecture)** **Painting – inspired by the natural beauty of America, painters began to develop their own unique styles rather than borrow from Europe (Wildlife – e.g., John James Audubon, Landscapes – e.g., Thomas Cole, Native American subjects – e.g., George Catlin)** **The development of photography as a new medium that impacted visual art (e.g., Mathew Brady)**

	Roman techniques)	

Purposes for Creating the Arts

The arts have played a major role throughout the history of humans. As the result of the power of the arts to communicate on a basic human level, they continue to serve a variety of purposes in society. The arts are used for artistic expression to portray specific emotions or feelings, to tell stories in a narrative manner, to imitate nature and to persuade others. The arts bring meaning to ceremonies, rituals, celebrations and commemorations. Additionally, they are used for recreation and to support recreational activities. Students experience the arts in a variety of roles through their own creations and performances and through those of others. Through their activities and observations, students learn to create arts and use them for a variety of purposes in society.

6th Grade	7th Grade	8th Grade
Music		
AH-06-3.1.1 **Students will identify or explain how music fulfills a variety of purposes.** **DOK 2** **Purposes of music: (different roles of music)** **<u>Ceremonial</u> - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)** **<u>Recreational</u> - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)** **<u>Artistic Expression</u> - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**	**AH-07-3.1.1** **Students will identify or explain how music fulfills a variety of purposes.** **DOK 2** **Purposes of music: (different roles of music)** **<u>Ceremonial</u> - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)** **<u>Recreational</u> - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)** **<u>Artistic Expression</u> - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**	**AH-08-3.1.1** **Students will compare or explain how music fulfills a variety of purposes.** **DOK 2** **Purposes of music: (different roles of music)** **<u>Ceremonial</u> - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)** **<u>Recreational</u> - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)** **<u>Artistic Expression</u> - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**

Dance		
AH-06-3.2.1 **Students will identify or explain how dance fulfills a variety of purposes.** **DOK 2** **Purposes of dance: (different roles of dance)** **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)** **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)** **<u>Artistic expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**	**AH-07-3.2.1** **Students will identify or explain how dance fulfills a variety of purposes.** **DOK 2** **Purposes of dance: (different roles of dance)** **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)** **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)** **<u>Artistic expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**	**AH-08-3.2.1** **Students will compare or explain how dance fulfills a variety of purposes.** **DOK 2** **Purposes of dance: (different roles of dance)** **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)** **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)** **<u>Artistic expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**

Drama/Theatre		
AH-06-3.3.1 **Students will identify or explain how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of Drama/Theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., social change, express or communicate universal themes, to interpret and recreate information, ideas and emotions)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, religious ritual and ceremony)** **<u>Recreational</u> - drama as recreation and for recreational events (e.g., for entertainment, diversion, festivals)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed in a theatrical setting for an audience)**	**AH-07-3.3.1** **Students will identify or explain how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of Drama/Theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., social change, express or communicate universal themes, to interpret and recreate information, ideas and emotions)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, religious ritual and ceremony)** **<u>Recreational</u> - drama as recreation and for recreational events (e.g., for entertainment, diversion, festivals)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed in a theatrical setting for an audience)**	**AH-08-3.3.1** **Students will compare or explain how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of Drama/Theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., social change, express or communicate universal themes, to interpret and recreate information, ideas and emotions)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, religious ritual and ceremony)** **<u>Recreational</u> - drama as recreation and for recreational events (e.g., for entertainment, diversion, festivals)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed in a theatrical setting for an audience)**

Visual Arts		
AH-06-3.4.1 **Students will identify or explain how art fulfills a variety of purposes.** **DOK 2** **Purposes of Art: (different roles of art)** **Ceremonial - ritual, celebration, artworks created to support worship ceremonies** **Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events** **Functional - artistic objects used in everyday life** **Persuasive - artworks that promote ideas, philosophies, or products (e.g., advertising, marketing, propaganda, ideology, etc.)**	**AH-07-3.4.1** **Students will identify or explain how art fulfills a variety of purposes.** **DOK 2** **Purposes of Art: (different roles of art)** **Ceremonial - ritual, celebration, artworks created to support worship ceremonies** **Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events** **Functional - artistic objects used in everyday life** **Persuasive - artworks that promote ideas, philosophies, or products (e.g., advertising, marketing, propaganda, ideology, etc.)**	**AH-08-3.4.1** **Students will compare or explain how art fulfills a variety of purposes.** **DOK 2** **Purposes of Art: (different roles of art)** **Ceremonial - ritual, celebration, artworks created to support worship ceremonies** **Artistic expression - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **Narrative - artworks that tell stories, describe and illustrate experiences, or communicate ideas or information, art to document important or historical events** **Functional - artistic objects used in everyday life** **Persuasive - artworks that promote ideas, philosophies, or products (e.g., advertising, marketing, propaganda, ideology, etc.)**

Processes in the Arts

There are three distinctive processes involved in the arts. These processes are creating new works, performing works for expressive purposes and responding to artworks. Each process is critical and relies on others for completion. Artists create works to express ideas, feelings or beliefs. The visual arts capture a moment in time while the performing arts (music, dance, drama/theatre) are performed for a live audience. The audience responds to the artistic expressions emotionally and intellectually based on the meaning of the work. Each process enhances understanding, abilities and appreciation of others. Students involved in these processes over time will gain a great appreciation for the arts, for artists past and present and for the value of artistic expression.

6th Grade	7th Grade	8th Grade
Music		
AH-06-4.1.1 *Students will create and notate in similar style answers to musical phrases.*	*AH-07-4.1.1* *Students will create and notate in similar style answers to musical phrases.*	*AH-08-4.1.1* *Students will create and notate in similar style answers to musical phrases.*
AH-06-4.1.2 *Students will improvise variations on given melodies.*	*AH-07-4.1.2* *Students will improvise variations on given rhythms or melodies.*	*AH-08-4.1.2* *Students will improvise variations on given melodies.*
AH-06-4.1.3 *Students will compose and notate short pieces of music demonstrating unity/variety, tension/release and balance.*	*AH-07-4.1.3* *Students will compose and notate short pieces of music demonstrating unity/variety, tension/release and balance.*	*AH-08-4.1.3* *Students will compose and notate short pieces of music demonstrating unity/variety, tension/release and balance.*
AH-06-4.1.4 *Students will use a variety of sound sources to create and perform music.*	*AH-07-4.1.4* *Students will use a variety of musical sound sources to create and perform music.*	*AH-08-4.1.4* *Students will use a variety of sound sources to create and perform music.*
AH-06-4.1.5 *Students will sing or play alone and sustain own part in an ensemble, a given piece of music with increasingly complex melodies and rhythmic patterns in treble and bass clef (with practice).*	*AH-07-4.1.5* *Students will sing or play alone and sustain own part in an ensemble, a given piece of music with increasingly complex melodies and rhythmic patterns in treble and bass clef (with practice).*	*AH-08-4.1.5* *Students will sing or play alone and sustain own part in an ensemble, a given piece of music with increasingly complex melodies and rhythmic patterns in treble and bass clef (with practice).*

Dance		
AH-06-4.2.1 *Students will create an individual or a group dance with 2-3 other people using dance elements (space, time and force) that incorporates one of the following compositional forms: AB, ABA, call and response or narrative.*	*AH-07-4.2.1* *Students will create an individual or a group dance with 2-3 other people using dance elements (space, time and force) that incorporates one of the following compositional forms: AB, ABA, call and response or narrative.*	*AH-08-4.2.1* *Students will create an individual or a group dance with 2-3 other people using dance elements (space, time and force) that incorporates one of the following compositional forms: AB, ABA, call and response or narrative.*
AH-06-4.2.2 *Students will create an improvisational dance with complex movements (beginning, middle and end).*	*AH-07-4.2.2* *Students will create an improvisational dance with complex movements (beginning, middle and end).*	*AH-08-4.2.2* *Students will create an improvisational dance with complex movements (beginning, middle and end).*
Drama/Theatre		
AH-06-4.3.1 *Students will create and perform using elements of drama. (Literary, Technical, Performance)*	*AH-07-4.3.1* *Students will create and perform using elements of drama. (Literary, Technical, Performance)*	*AH-08-4.3.1* *Students will create and perform using elements of drama. (Literary, Technical, Performance)*
AH-06-4.3.2 *Students will improvise short dialogues and monologues.*	*AH-07-4.3.2* *Students will improvise short dialogues and monologues.*	*AH-08-4.3.2* *Students will improvise short dialogues and monologues.*
AH-06-4.33 *Students will engage in dramatic activities that reflect historical times and cultures.*	*AH-07-4.3.3* *Students will engage in dramatic activities that reflect historical times and cultures.*	*AH-08-4.3.3* *Students will engage in dramatic activities that reflect historical times and cultures.*
AH-06-4.3.4 *Students will identify the skills necessary for jobs associated with theatre (playwright, director, actor, actress, designers, scenery, props, lighting, sounds, costume, make-up)*	*AH-07-4.3.4* *Students will identify the skills necessary for jobs associated with theatre (playwright, director, actor, actress, designers, scenery, props, lighting, sounds, costume, make-up)*	*AH-08-4.3.4* *Students will identify the skills necessary for jobs associated with theatre (playwright, director, actor, actress, designers, scenery, props, lighting, sounds, costume, make-up)*

Visual Arts		
AH-06-4.4.1 *Students will create art for specific purposes using the elements of art and principles of design to communicate ideas.*	*AH-07-4.4.1* *Students will create art for specific purposes using the elements of art and principles of design to communicate ideas.*	*AH-08-4.4.1* *Students will create art for specific purposes using the elements of art and principles of design to communicate ideas.*
AH-06-4.4.2 *Students will use a variety of art media, processes and subject matter to communicate ideas, feelings and experiences.*	*AH-07-4.4.2* *Students will use a variety of art media, processes and subject matter to communicate ideas, feelings and experiences.*	*AH-08-4.4.2* *Students will use a variety of art media, processes and subject matter to communicate ideas, feelings and experiences.*

Structures in the Arts

Understanding of the various structural components of the arts is critical to the development of other larger concepts in the arts. Structures that artists use include elements and principles of each art form, tools, media and subject matter that impact artistic products and specific styles and genre that provide a context for creating works. It is the artist's choice of these in the creative process that results in a distinctively expressive work. Students make choices about how to use structural organizers to create meaningful works of their own. The more students understand, the greater their ability to produce, interpret or critique artworks from other artists, cultures and historical periods.

High School

Music

AH-HS-1.1.1
Students will analyze or evaluate the use of elements of music in musical compositions.

DOK 3

(Incorporates prior knowledge about elements from primary through 8th grade)
Elements of music:

Rhythm, Melody, Form (rondo, theme and variations, musical forms of opera: overture, aria, recitative, movements of the classical symphony - four movements in typical sequence: movement 1-fast dramatic movement, movement 2-lyrical slow movement, movement 3-a dance-like movement [e.g., minuet or scherzo], movement 4-a brilliant or heroic fast movement), Timbre, Harmony, Tempo, Dynamics

Dance

AH-HS-1.2.1
Students will analyze or evaluate how choreographers and dancers use the elements of dance, forms and styles to communicate ideas and feelings through creating and performing.

DOK 3

(Incorporates prior knowledge about elements from primary through 8th grade.)
Elements: Space, Time, Force
Choreographic Forms: Theme and Variations, Rondo, Narrative
Styles: (characteristics of)
Ballet – standardized dance movements, specialized leaps and lifts, French terminology to describe each standardized movement (*actual terms not to be assessed*), pointe shoes for women, slippers for men, costumes – tights, tutu, root is court dances
Tap – emphasis on rhythm, tap shoes, costumes – formal to street wear, improvisation, roots in recreational dance (e.g., Irish step dance, jig, and African steps)
Jazz – stylized movement, accents in hands, head, hips, feet, English/French terminology to describe movements (*actual terms not to be assessed*), jazz shoes or boots, costume related to theme of dance, improvisation, root in social dances and early musical theatre dance
Modern – freedom in movement, English/French/new words to describe movements (actual terms not to be assessed), usually barefoot but can use shoes based on theme, costume related to dance theme, improvisation used in the development of choreography

AH-HS-1.2.2 **Students will describe or analyze the relationship among music, costumes, lighting, props/scenery and choreography.** **DOK 3**
Drama/Theatre
AH-HS-1.3.1 **Students will analyze or evaluate the use of technical elements, literary elements and performance elements in a variety of dramatic works.** **DOK 3** **(Incorporates prior knowledge about elements from primary through 8th grade)** **Elements of drama:** **<u>Literary elements</u> – Script, Plot structures (exposition, rising action, climax or turning point, falling action, resolution), Suspense, Theme, Setting, Language (word choice/style used to create character, dialect, point of view), Monologue, Dialogue, Empathy** **<u>Technical elements</u> - Scenery, Sound, Lights, Make-up, Props, Costumes, Design** **<u>Performance elements</u> - Acting (e.g., character motivation and analysis),** **Speaking (e.g., breath control, projection, vocal expression, diction), Nonverbal expression (e.g., gestures, body alignment, facial expression, character blocking and movement, stage directions - stage left, stage right, center stage, upstage, downstage)**
Visual Arts
AH-HS-1.4.1 **Students will analyze or evaluate the use of the elements of art and principles of design in a variety of artworks.** **DOK 3** **(Incorporates knowledge about elements of art and principles of design from primary through 8th grade)** **Elements of art:** **Line, Shape, Form, Texture, Space (perspective: aerial or atmospheric, two-point linear perspective), Value (lightness and darkness, tints and shades), Color (color theory - primary, secondary, intermediate hues, intensity - brightness and dullness, color schemes/groups - triadic, complementary, analogous)** **Principles of design:** **Repetition, Pattern, Rhythm, Movement, Contrast, Proportion, Balance (symmetrical, asymmetrical, radial), Emphasis (focal point), Variety, Unity**

AH-HS-1.4.2
Students will analyze or evaluate the use of media and art processes in creating artworks.

DOK 3

Media (plural)/Medium (singular)
(Properties of media need to be known in order to respond to artworks)
Two-dimensional: paint (watercolor, tempera, oil, acrylic), fabric, yarn, paper, ink, pastel (oil and chalk), fiber, photography, computer-generated design/art
Three-dimensional: clay, wood, glass, metal, stone, plaster

Art processes:
Two-dimensional: drawing, painting, fiber art (e.g., fabric printing, stamping, batik, tie-dye), printmaking, photography
Three-dimensional: textiles, fiber art (e.g., constructing with fiber, weaving, rugs, crocheting, knitting, quilting), ceramics, sculpture, architecture
Subject matter: representational (e.g., landscape, portrait, still life), nonrepresentational (e.g., abstract, non-objective)

Humanity in the Arts

The arts reflect the beliefs, feelings and ideas of those who create them. Experiencing the arts allows one to experience time, place and/or personality. By experiencing the arts of various cultures, students can actually gain insight into the beliefs, feelings and ideas of those cultures. Students also have the opportunity to experience how the arts can influence society through analysis of arts in their own lives and the arts of other cultures and historical periods. Studying the historical and cultural stylistic periods in the arts offers students an opportunity to understand the world past and present and to learn to appreciate their own cultural heritage. Looking at the interrelationships of multiple arts disciplines across cultures and historical periods is the focus of humanities in the arts.

High School

Music

AH-HS-2.1.1
Students will analyze or evaluate how factors such as time, place and ideas are reflected in music.

DOK 3

Historical Periods in European Music: (in chronological order)
(Basic understanding of society in the time period, influence of geographic location and philosophical beliefs of each historical period is necessary to meet this standard)

- **Renaissance (Palestrina, polyphony and counterpoint [multiple melodic lines played simultaneously] are prominent in music, the rise of instrumental and secular music)**
- **Baroque (Bach and the fugue, Handel and oratorio)**
- **Classical (Mozart & Haydn - true classical style, Beethoven - transition from Classical to Romantic)**
- **Romantic (Tchaikovsky - influence on ballet, Wagner - influence on opera)**
- **20th Century (Impressionism/Post-Impressionism, Debussy, Ravel - symbolism in music)**
- **Modern (Stravinsky - influence on Russian ballet)**
- **Contemporary (this refers to music being composed today)**

Recent Styles in American Music:
Modern American music consists of diverse musical styles (e.g., Latin and Caribbean influences in American music); many emerged from a blending of distinct musical styles.
Contributions of some prominent American composers:

- **Gershwin - jazz in classical musical forms, Copland - integrated national American idioms into his music, Ellington - led and shaped jazz styles in American music**
- **Other styles are rooted in American culture (e.g., folk, popular, country, blues)**

Dance
AH-HS-2.2.1 **Students will analyze or evaluate how factors such as time, place and ideas are reflected in dance.** **DOK 3** **European Culture and Periods: (in chronological order)** **(Basic understanding of society in the time period, influence of geographic location and philosophical beliefs of each historical period is necessary to meet this standard)** **Renaissance (court dances)** **Baroque (development of ballet, Louis XIV)** **Romantic (Golden Age of ballet)** **Modern (Fokine – the revitalization and 20th century prominence of Russian ballet, Balanchine, Baryshnikov)** **Recent Styles in American Culture:** **Popular dance (includes Early American dance, folk and social dance, [e.g., square dance, swing, waltz])** **Martha Graham - abandoning traditional steps of ballet, portrayed characters in woman's viewpoint)** **Modern dance (important figures include: Alvin Ailey - acclaimed African American choreographer, incorporation of traditional African roots, African-American themes,**
Drama/Theatre
AH-HS-2.3.1 **Students will analyze or evaluate how factors such as time, place and ideas are reflected in drama.** **DOK 3** **Japanese Culture (history and characteristics of Kabuki theatre)** **Historical Periods: (in chronological order)** **(Basic understanding of society in the time period, influence of geographic location and philosophical beliefs of each historical period is necessary to meet this standard)** **Renaissance (commedia dell'arte, Shakespeare and Elizabethan theatre)** **Neo-Classicism/"Classical" (satire)** **Romantic (melodrama)** **Realism (Henrik Ibsen, George Bernard Shaw)** **American Culture:** **American playwrights' role with realism in theatre (Tennessee Williams, Arthur Miller)** **Modern & Contemporary (impact of technology on drama/theatre, the development of American musical theatre)**

Visual Arts
AH-HS-2.4.1 **Students will analyze or evaluate how factors such as time, place and ideas are reflected in visual art.** **DOK 3** **Middle Eastern and Asian temple architecture, characteristics of temples (Islamic – e.g., Dome of the Rock - geometric patterns for decoration such as arabesques, minaret tower to call Muslims to prayer, Hindu – e.g., Pampapati Temple– temple city complex with towers, Buddhist – e.g., Liurong Temple/pagoda or called a stupa in India, part of a temple city complex)** **Unique visual arts in Asian cultures (Japanese printmaking, Chinese and Japanese ink and brush paintings, calligraphy)** **Historical Periods and Styles: (in chronological order)** **(Basic understanding of society in the time period, influence of geographic location and philosophical beliefs of each historical period is necessary to meet this standard)** **Renaissance (Leonardo Da Vinci - painting, Michelangelo – sculpture, painting, architecture – build on the innovative architectural techniques of Ancient Greece and Rome ([e.g., the arch, vault, dome, principles of stress and counter stress, atrium-style houses, etc.])** **Baroque (Rembrandt – Dutch Baroque, use of chiaroscuro, a bold contrast of light and dark, Caravaggio – Italian Baroque painter, captured realistic depictions using chiaroscuro)** **Neo-Classical (Jacques-Louis David – distinctive Neo-Classical style associated with French revolution, Jefferson –Neo-Classical architecture with Ancient Greek and Roman architectural influences, reflects ideas of newly independent United States)** **Romantic (John Constable – British landscapes, Francisco Goya – Spanish Court painter examined violence, greed and foolishness of society)** **Realism - (Gustave Courbet – attention on the common man, Edouard Manet – focused on industrial-age city and people, bridged the gap between Realism and Impressionism)** **Impressionism/Post-Impressionism (Claude Monet - tried to capture light as a moment of time, Vincent Van Gogh – used bright colors and line to express emotion, Mary Cassatt – domestic social scenes of women and children, Auguste Rodin – sculptor who used impressionistic style in his work)** **Modern and Contemporary European (Salvador Dali – surrealism, Pablo Picasso – multiple styles including cubism)** **Modern & Contemporary American (Andy Warhol – Pop Art, focused on celebrities and everyday objects of mass production, Georgia O'Keeffe – large scale abstraction of natural form, Frank Lloyd Wright – American architecture, Dorothea Lange – photography of the Depression era, Jacob Lawrence – reflects the African American experience)**

Purposes for Creating the Arts

The arts have played a major role throughout the history of humans. As the result of the power of the arts to communicate on a basic human level, they continue to serve a variety of purposes in society. The arts are used for artistic expression to portray specific emotions or feelings, to tell stories in a narrative manner, to imitate nature and to persuade others. The arts bring meaning to ceremonies, rituals, celebrations and commemorations. Additionally, they are used for recreation and to support recreational activities. Students experience the arts in a variety of roles through their own creations and performances and through those of others. Through their activities and observations, students learn to create arts and use them for a variety of purposes in society.

High School

Music

AH-HS-3.1.1
Students will explain how music fulfills a variety of purposes.

DOK 2

Purposes of music: (different roles of music)

- **<u>Ceremonial</u> - music created or performed for rituals or celebrations (e.g., patriotic music, music for worship)**
- **<u>Recreational</u> - music for entertainment (e.g., music for play such as game songs, music for dances and social events, music for physical activities, music as a hobby)**
- **<u>Artistic expression</u> - music created with the intent to express or communicate one's emotions, feelings, ideas, experience (e.g., music created and performed in a concert setting for an audience)**

Dance

AH-HS-3.2.1
Students will explain how dance fulfills a variety of purposes.

DOK 2

Purposes of dance: (different roles of dance)

- **<u>Ceremonial</u> - dances created or performed for rituals or celebrations (e.g., dances of Native Americans and West Africans to celebrate life events such as harvest, ritual dances associated with worship)**
- **<u>Recreational</u> - dancing for entertainment, to support recreational activities (e.g., ballroom, line dancing, aerobic dance, dance as a hobby)**
- **<u>Artistic expression</u> - dance created with the intent to express or communicate emotion, feelings, ideas (e.g., ballet, tap dance, modern dance, dance created and performed in a concert and/or theatrical setting for an audience)**

Drama/Theatre
AH-HS-3.3.1 **Students will explain how drama/theatre fulfills a variety of purposes.** **DOK 2** **Purposes of drama/theatre: (different roles of drama)** **<u>Sharing the human experience</u> - to express or communicate emotion, feelings, ideas, information through dramatic works (e.g., social change, express or communicate universal themes, to interpret and recreate information, ideas and emotions)** **<u>Passing on tradition and culture</u> - to express or communicate feelings, ideas, information (e.g., narrative, storytelling, folktales, religious ritual and ceremony)** **<u>Recreational</u> - drama as recreation and for recreational events (e.g., for entertainment, diversion, festivals)** **<u>Artistic expression</u> - drama created with the intent to express or communicate emotion, feelings, ideas, information (e.g., dramatic works created and performed in a theatrical setting for an audience)**
Visual Arts
AH-HS-3.4.1 **Students will explain how art fulfills a variety of purposes.** **DOK 2** **Purposes of visual arts: (different roles of art)** **<u>Ceremonial</u> - ritual, celebration, artworks created to support worship ceremonies** **<u>Artistic expression</u> - artwork to express or communicate emotions, ideas, feelings (e.g., for self-expression, to decorate or beautify objects)** **<u>Narrative</u> - artworks that tell stories, describe and illustrate experiences, or communicate information, art to document important or historical events (e.g., Lange's photography of the Depression era)** **<u>Functional</u> - artistic objects used in everyday life (e.g., pottery, quilts, baskets, etc.)** **<u>Persuasive</u> - artworks that promote ideas, philosophies, or products (e.g., advertising, marketing, propaganda, ideology, etc.)**
Music
AH-HS-4.1.1 *Students will create and notate music.*
AH-HS-4.1.2 *Students will improvise rhythmic and/or melodic embellishments and variations on given melodies.*

AH-HS-4.1.3 *Students will sing or perform on instruments, alone or with others, by reading basic music notation (with practice).*
AH-HS-4.1.4 *Students will identify skills and training necessary for a variety of careers related to music.*
Dance
AH-HS-4.2.1 *Students will create an individual or a group dance using dance elements (space, time and force) that communicates thoughts, ideas and/or feelings.*
AH-HS-4.2.2 *Students will demonstrate appropriate alignment, strength and flexibility while performing dance movement.*
AH-HS-4.2.3 *Students will perform dances utilizing various forms. (choreographic forms: theme and variation, rondo, narrative)*
AH-HS-4.2.4 *Students will perform social, recreational and artistic dances from various historical periods and cultures.*
AH-HS-4.2.5 *Students will identify skills and training for a variety of careers related to dance.*

Processes in the Arts There are three distinctive processes involved in the arts. These processes are creating new works, performing works for expressive purposes and responding to artworks. Each process is critical and relies on others for completion. Artists create works to express ideas, feelings or beliefs. The visual arts capture a moment in time while the performing arts (music, dance, drama/theatre) are performed for a live audience. The audience responds to the artistic expressions emotionally and intellectually based on the meaning of the work. Each process enhances understanding, abilities and appreciation of others. Students involved in these processes over time will gain a great appreciation for the arts, for artists past and present and for the value of artistic expression.
High School
Drama/Theatre
AH-HS-4.3.1 *Students will create and perform using elements of drama. (Literary - script writing, Technical - designing and directing, Performance- acting)*
AH-HS-4.3.2 *Students will identify skills and training necessary for a variety of careers related to drama.*
Visual Arts
AH-HS-4.4.1 *Students will incorporate the elements of art and principles of design to generate several solutions to a variety of visual art situations.*
AH-HS-4.4.2 *Students will use media and processes, subject matter, symbols, ideas and themes to communicate cultural and aesthetic values.*
AH-HS-4.4.3 *Students will identify skills and training necessary for a variety of careers in visual arts.*

Interrelationships Among the Arts The arts share commonalities in structures, purposes, creative processes and their ability to express ideas, feelings and emotions. Studying interrelationships among the arts enables students to get a broad view of the expressiveness of the art forms as a whole and helps to develop a full appreciation of the arts as a mirror of human kind.
Interrelationships Among the Arts
AH-HS-5.5.1 *Students will compare one art form (e.g. music) to another (e.g. visual arts) from the same stylistic period in another arts discipline (e.g., Impressionism: Monet to Debussy).*
AH-HS-5.5.2 *Students will analyze and/or explain how ideas and emotions expressed in one art form (e.g. theatre) are similar or different to ideas and emotions expressed in another art form (e.g. dance).*

Core Content for Mathematics

Version 4.1

August 2006

Kentucky Department of Education

Introduction
Core Content for Mathematics Assessment

What is the *Core Content for Mathematics Assessment*?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Mathematics Assessment Version 4.1* represents the mathematics content from Kentucky's Academic Expectations and *Program of Studies* that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Mathematics Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the *Kentucky Core Content Test* (KCCT) beginning in 2007.

The *Core Content for Mathematics Assessment* is not intended to represent the comprehensive local curriculum for mathematics assessment and instruction. It is also not the comprehensive *Program of Studies for Mathematics*, which specifies the minimum content for the required credits for high school graduation, and the primary, intermediate and middle level programs leading to these requirements.

Kentucky Academic Expectations for Mathematics

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment*.

Goal 1: *Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.*

1.5 - 1.9 Students use mathematical ideas and procedures to communicate, reason, and solve problems.

1.16 Students use computers and other types of technology to collect, organize, and communicate information and ideas.

Goal 2: *Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.*

2.7 Students understand number concepts and use numbers appropriately and accurately.

2.11 Students understand mathematical change concepts and use them appropriately and accurately.

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

2.9 Students understand space and dimensionality concepts and use them appropriately and accurately.

2.10 Students understand measurement concepts and use measurements appropriately and accurately.

2.12 Students understand mathematical structure concepts including the properties and logic of various mathematical systems.

2.13 Students understand and appropriately use statistics and probability.

How is the *Core Content for the Mathematics Assessment* organized?

The *Core Content for Mathematics Assessment Version 4.1* is organized by grade level (end of primary, fourth, fifth, sixth, seventh, eighth and high school) in order to ensure continuity and conceptual development. This is different from Version 3.0, which was organized in grade spans. Students are assessed in Mathematics at grades three through eight (3-8) and eleventh (11th).

The Core Content for Mathematics Assessment Version 4.1 *is organized using the 2005 Mathematics Framework for Assessment for the National Assessment of Educational Progress (NAEP). The NAEP framework consists of five subdomains, with organizers within each subdomain. The* Core Content for Mathematics Assessment Version 4.1 *is organized into the five subdomains as follows:*

- Number Properties and Operations
- Measurement
- Geometry
- Data Analysis and Probability
- Algebraic Thinking

While the NAEP framework was used as the *Core Content for Mathematics Assessment Version 4.1* basis for organization, the National Council of Teachers of Mathematics process standards of problem solving, reasoning and proof, communication, connections and representation were also embedded in the core content standards.

The Core Content for Assessment includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed

content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items inside the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Mathematics Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

What do the codes for the *Core Content for Mathematics Assessment* mean?

Each content standard is preceded by a code. The code begins with MA for mathematics and is then followed by a grade level designation and then a 3-digit number that indicates subdomain, organizer and sequential standard, respectively. The codes used are listed below.

Grade Level Codes	Subdomain	Organizer
EP – end of primary	1 = Number Properties and Operations	1 = Number Sense
04 – fourth grade		2 = Estimation
05 – fifth grade		3 = Number Operations
06 – sixth grade		4 = Ratios and Proportional Reading
07 – seventh grade		5 = Properties of Numbers and Operations

Grade Level Codes	Subdomain	Organizer
08 – eighth grade	2 = Measurement	1 = Measuring Physical Attributes
HS– eleventh grade		2 = Systems of Measurement
	3 = Geometry	1 = Shapes and Relationships
		2 = Transformations of Shapes
		3 = Coordinate Geometry
	4 = Data Analysis and Probability	1 = Data Representations
		2 = Characteristics of Data Sets
		3 = Experiments and Samples
		4 = Probability
	5 = Algebraic Thinking	1 = Patterns, Relations and Functions
		2 = Variables, Expressions and Operations
		3 = Equations and Inequalities

The alpha-numeric codes represent the domain, grade level, subdomain, organizer and number of each standard. For example, MA-04-3.2.1 identifies the first standard in the second organizer (Transformations of Shapes) of the third subdomain (Geometry) for fourth grade.

MA-04-3.2.1
MA Mathematics (domain)
04 Fourth Grade
3 Geometry (subdomain)
2 Transformations of Shapes (organizer)
1 (first standard)

The high school core content also contains standards that are in plain text. These standards align the *Core Content for Mathematics Assessment Version 4.1* with the American Diploma Project mathematics benchmarks. These standards assist schools in understanding the mathematics that will be needed to prepare students for both postsecondary education and the workplace in the 21st Century.

Number Properties and Operations

Whole number sense, addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Computational fluency with whole numbers, relationships among decimals and fractions and techniques for reasonable estimations represent elementary number.

End of Primary	4th Grade	5th Grade
Number Sense		
MA-EP-1.1.1 **Students will:** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999):** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths);** • **apply these numbers to represent real-world problems and** • **explain how the base 10 number system relates to place value.** **DOK 2**	**MA-04-1.1.1** **Students will:** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999):** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly used fractions through tenths and decimals through hundredths;** • **apply these numbers to represent real-world problems and** • **explain how the base 10 number system relates to place value.** **DOK 2**	**MA-05-1.1.1** **Students will:** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999,999);** • **apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe commonly-used fractions, mixed numbers and decimals through thousandths;** • **apply these numbers to represent real-world problems and** • **explain how the base-10 number system relates to place value.** **DOK 2**
MA-EP-1.1.2 *Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.*	*MA-04-1.1.2* *Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.*	*MA-05-1.1.2* *Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.*

MA-EP-1.1.3 **Students will compare (<, >, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations).** **DOK 2**	**MA-04-1.1.3** **Students will compare (<, >, =) and order whole numbers, commonly used fractions and decimals, and explain the relationships (equivalence, order) between and among them.** **DOK 2**	**MA-05-1.1.3** **Students will compare (<, >, =) and order whole numbers), fractions and decimals, and explain the relationships (equivalence, order) between and among them.** **DOK 2**
Estimation		
MA-EP-1.2.1 **Students will apply and describe appropriate strategies for estimating quantities of objects and computational results (limited to addition and subtraction).** **DOK 2**	**MA-04-1.2.1** **Students will apply and describe appropriate strategies for estimating quantities of objects and computational results.** **DOK 2**	**MA-05-1.2.1** **Students will apply and describe appropriate strategies for estimating quantities of objects and computational results in real-world problems.** **DOK 2**
Number Operations		
MA-EP-1.3.1 **Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:** • **add and subtract whole numbers with three digits or less;** • **multiply whole numbers of 10 or less;** • **add and subtract fractions with like denominators less than or equal to four and** • **add and subtract decimals related to money.** **DOK 2**	**MA-04-1.3.1** **Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:** • **add and subtract whole numbers with four digits or less;** • **multiply whole numbers with two digits or less;** • **divide whole numbers with three digits or less by single-digit divisors (with or without remainders);** • **add and subtract fractions with like denominators less than or equal to 10 and** • **add and subtract decimals through hundredths.** **DOK 2**	**MA-05-1.3.1** **Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:** • **add, subtract, multiply, and divide whole numbers (less than 100,000,000), using technology where appropriate;** • **add and subtract fractions with like denominators through 16, with sums less than or equal to one and** • **add and subtract decimals through hundredths.** **DOK 2**

MA-EP-1.3.2 *Students will skip-count forward and backward by 2s, 5s, 10s and 100s.*	*MA-04-1.3.2* *Students will skip-count forward and backward by 2s, 3s, 4s, 5s, 10s, 20s, 25s, 50s, 100s, 1,000, and 10,000s.*	*MA-05-1.3.2* *Students will skip-count forward and backward.*
MA-EP-1.3.3 *Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.*		*MA-05-1.3.3* *Students will multiply decimals through tenths.*
Ratios and Proportional Reasoning (not assessed at the elementary level)		
Properties of Numbers and Operations		
MA-EP-1.5.1 **Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems.** **DOK 2**	**MA-04-1.5.1** **Students will identify and determine odd numbers, even numbers, multiples of a number and factors of a number, and will apply these numbers to solve real-world problems.** **DOK 2**	**MA-05-1.5.1** **Students will identify and determine composite numbers, prime numbers, multiples of a number, factors of a number and least common multiples (LCM), and will apply these numbers to solve real-world problems.** **DOK 2**
MA-EP-1.5.2 *Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.*	*MA-04-1.5.2* *Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.*	*MA-05-1.5.2* *Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.*

Measurement

Students progress from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.

End of Primary	4th Grade	5th Grade
Measuring Physical Attributes		
MA-EP-2.1.1 **Students will apply standard units to measure length (to the nearest half-inch or the nearest centimeter) and to determine:** • **weight (nearest pound);** • **time (nearest quarter hour); and** • **money (identify coins and bills by value) and** • **temperature (Fahrenheit).** **DOK 1**	**MA-04-2.1.1** **Students will apply standard units to measure length (to the nearest quarter-inch or the nearest centimeter) and to determine:** • **weight (ounce, pound; gram, kilogram);** • **perimeter;** • **area (figures that can be divided into rectangular shapes);** • **time (nearest five minutes) and** • **temperature (Fahrenheit and Celsius).** **DOK 2**	**MA-05-2.1.1** **Students will apply standard units to measure length (to the nearest eighth-inch or the nearest centimeter) and to determine:** • **weight (ounce, pound; gram, kilogram);** • **perimeter;** • **area (figures that can be divided into rectangular shapes);** • **time (nearest minute);** • **temperature (Fahrenheit and Celsius) and** • **angle measures (nearest degree).** **DOK 2**
MA-EP-2.1.2 *Students will use standard units to measure temperature in Fahrenheit and Celsius to the nearest degree.*	*MA-04-2.1.2* *Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, meter stick, yardstick, ruler) for specific measurement tasks.*	*MA-05-2.1.2* *Students will choose and use appropriate tools (e.g., protractor, meter stick, ruler) for specific tasks and apply skills to solve real-world and mathematical problems.*
MA-EP-2.1.3 *Students will choose and use appropriate tools (e.g., thermometer, scales, balances, clock, ruler) for specific measurement tasks.*	*MA-04-2.1.3* *Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length and width) using appropriate units of measurement.*	*MA-05-2.1.3* *Students will use measurements to identify, describe, sort and compare attributes of objects and apply these to solve real-world and mathematical problems.*

MA-EP-2.1.4 *Students will use nonstandard and standard units of measurement to identify measurable attributes of an object (length – in, cm; weight – oz, lb) and make an estimate using appropriate units of measurement.*	*MA-04-2.1.4* *Students will use measurements to describe and compare attributes of objects to include length (in, ft, yd, mile; cm, m, km), width, height, money (cost), temperature and weight (oz, lb, ton; g, kg); sort objects and compare attributes of objects.*	*MA-05-2.1.4* *Students will measure volume of rectangular prisms, liquid capacity, and money using standard units and apply these skills to solve real-world and mathematical problems.*
MA-EP-2.1.5 *Students will use units of measurement to describe and compare attributes of objects to include length (in, cm), width, height, money (cost), temperature (F) and weight (oz, lb), and sort objects and compare attributes by shape, size and color.*	*MA-04-2.1.5* *Students will use nonstandard and standard units to measure angles (as compared to 90º).*	
MA-EP-2.1.6 *Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.*	*MA-04-2.1.6* *Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.*	**MA-05-2.1.6** **Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.** **DOK 2**

Systems of Measurement		
MA-EP-2.2.1 *Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement to include length (in., cm.), time, money, temperature (Fahrenheit) and weight (oz., lb).*	*MA-04-2.2.1* *Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement (e.g., weight - oz., lbs., tons, g, kg; length – in., ft., yd., mile, cm, m, km; area in square units) and money.*	**MA-05-2.2.1** **Students will determine elapsed time.** **DOK 3**
MA-EP-2.2.2 *Students will determine elapsed time by half hours.*	*MA-04-2.2.2* *Students will determine elapsed time to the nearest quarter hour.*	*MA-05-2.2.2* *Students will describe, define, give examples of and use to solve real-world and mathematical problems nonstandard and standard (U.S. Customary, metric) units of measurement.*
MA-EP-2.2.3 *Students will convert units within the same measurement system including money (dollars, cents), time (minutes, hours, days, weeks, months), weight (ounce, pound) and length (inch, foot).*	**MA-04-2.2.3** **Students will convert units within the same measurement system, including money, time (seconds, minutes, hours, days, weeks, months, years), weight (ounces, pounds) and length (inches, feet, yards).** **DOK 1**	**MA-05-2.2.3** **Students will convert units within the same measurement system [U.S. customary (inches, feet, yards, miles; ounces, pounds, tons), metric (millimeters, centimeters, meters, kilometers; grams, kilograms), money, or time] and use the units to solve problems.** **DOK 2**

Geometry

Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.

End of Primary	4th Grade	5th Grade
Shapes and Relationships		
MA-EP-3.1.1 **Students will describe and provide examples of basic geometric elements and terms (sides, edges, faces, bases, vertices, angles) and will apply these elements to solve real-world and mathematical problems.** **DOK 2**	**MA-04-3.1.1** **Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices] and will apply these elements to solve real-world and mathematical problems.** **DOK 2**	**MA-05-3.1.1** **Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices, radius, diameter] and will apply these elements to solve real-world and mathematical problems.** **DOK 2**
MA-EP-3.1.2 **Students will describe and provide examples of basic two-dimensional shapes (circles, triangles, squares, rectangles, trapezoids, rhombuses, hexagons) and will apply these shapes to solve real-world and mathematical problems.** **DOK 2**	**MA-04-3.1.2** **Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems.** **DOK 2**	**MA-05-3.1.2** **Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), all quadrilaterals, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems.** **DOK 2**

MA-EP-3.1.3 **Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes) and will apply the attributes to solve real-world and mathematical problems.** **DOK 1**	**MA-04-3.1.3** **Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply the attributes to solve real-world and mathematical problems.** **DOK 2**	**MA-05-3.1.3** **Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms), will identify three-dimensional objects from two-dimensional representations (nets) and will apply the attributes to solve real-world and mathematical problems.** **DOK 2**
	MA-04-3.1.4 *Students will explore two-dimensional representations of three-dimensional objects (nets).*	
MA-EP-3.1.5 *Students will identify and describe congruent figures in real-world and mathematical problems.*	*MA-04-3.1.5* *Students will identify and describe congruent and similar figures in real-world and mathematical problems.*	**MA-05-3.1.5** **Students will identify and describe congruent and similar figures in real-world and mathematical problems.** **DOK 2**
Transformations of Shapes		
MA-EP-3.2.1 **Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design.** **DOK 2**	**MA-04-3.2.1** **Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one or two lines of symmetry to construct a simple geometric design.** **DOK 2**	**MA-05-3.2.1** **Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply line symmetry to construct a geometric design.** **DOK 3**
	MA-04-3.2.2 *Students will identify basic two-dimensional shapes in different orientations using 90º rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane.*	**MA-05-3.2.2** **Students will identify 90º rotations, reflections or translations of basic shapes within a plane.** **DOK 1**

Coordinate Geometry		
MA-EP-3.3.1 *Students will locate points on a grid representing a positive coordinate system.*	**MA-04-3.3.1** **Students will identify and graph ordered pairs on a positive coordinate system scaled by ones or locate points on a grid.** **DOK 2**	**MA-05-3.3.1** **Students will identify and graph ordered pairs on a positive coordinate system scaled by ones, twos, threes, fives or tens; locate points on a grid; and apply graphing in the coordinate system to solve real-world problems.** **DOK 2**

Data Analysis and Probability

Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.

End of Primary	4th Grade	5th Grade
Data Representations		
MA-EP-4.1.1 **Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs with two or three sectors, line plots, two-circle Venn diagrams).** **DOK 3**	**MA-04-4.1.1** **Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams).** **DOK 3**	**MA-05-4.1.1** **Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs).** **DOK 3**
MA-EP-4.1.2 *Students will collect data.*	*MA-04-4.1.2* *Students will collect data.*	*MA-05-4.1.2* *Students will collect data (e.g., tallies, surveys) and explain how the skills apply in real-world and mathematical problems.*
MA-EP-4.1.3 *Students will organize and display data.*	**MA-04-4.1.3** **Students will construct data displays (pictographs, bar graphs, line plots, Venn diagrams, tables).** **DOK 2**	**MA-05-4.1.3** **Students will construct data displays (pictographs, bar graphs, line plots, line graphs, Venn diagrams, tables).** **DOK 2**
Characteristics of Data Sets		
MA-EP-4.2.1 *Students will determine the mode (of a set of data with no more than one mode) and the range of a set of data.*	*MA-04-4.2.1* *Students will determine the median, mode (for a data set with no more than one mode) and range of a set of data.*	**MA-05-4.2.1** **Students will determine and apply the mean, median, mode and range of a set of data.** **DOK 2**

Experiments and Samples		
MA-EP-4.3.1 *Students will pose questions that can be answered by collecting data.*	*MA-04-4.3.1* *Students will pose questions that can be answered by collecting data.*	*MA-05-4.3.1* *Students will describe and give examples of the process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer questions).*
Probability		
	MA-04-4.4.1 **Students will determine all possible outcomes of an activity/event with up to six possible outcomes.** **DOK 2**	**MA-05-4.4.1** **Students will determine all possible outcomes of an activity/event with up to 12 possible outcomes.** **DOK 2**
	MA-04-4.4.2 **Students will determine the likelihood of an event and the probability of an event (expressed as a fraction).** **DOK 1**	**MA-05-4.4.2** **Students will determine the likelihood of an event and the probability of an event (expressed as a fraction).** **DOK 2**
MA-EP-4.4.3 *Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).*	*MA-04-4.4.3* *Students will describe and give examples of the probability of an unlikely event (near zero) and a likely event (near one).*	

Algebraic Thinking

Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. They use ordered pairs and plot points in the first quadrant of the Cartesian plane. Students use number sentences with missing values.

End of Primary	4th Grade	5th Grade
Patterns, Relations and Functions		
MA-EP-5.1.1 **Students will extend simple patterns (e.g., 2,4,6,8, …; ◊Δ◊Δ …).** **DOK 2**	**MA-04-5.1.1** **Students will extend patterns (e.g., 108, 208, 308, 408, …; □OOΔ□OOΔ …) from real-world and mathematical problems; compare simple patterns (numbers, pictures, words; e.g., Δ□Δ□Δ□ ; ΔOOΔOO); and describe rules for simple number patterns (e.g., 1, 3, 5, 7, …; 5, 10, 15, 20, …; 30, 27, 24, 21, …).** **DOK 3**	**MA-05-5.1.1** **Students will extend patterns, find the missing term(s) in a pattern or describe rules for patterns (numbers, pictures, tables, words) from real-world and mathematical problems.** **DOK 3**
MA-EP-5.1.2 **Students will describe functions (input-output) through pictures and words.** **DOK 2**	**MA-04-5.1.2** **Students will describe functions (input-output) through pictures, tables, and words; and will analyze functions from a table based on real-world and mathematical problems.** **DOK 2**	**MA-05-5.1.2** **Students will describe functions (input-output) through pictures, tables, or words and will construct tables to analyze functions based on real-world or mathematical problems.** **DOK 2**
MA-EP-5.1.3 *Students will determine the value of an output given a function rule and an input value.*	**MA-04-5.1.3** **Students will determine the value of an output given a function rule and an input value.** **DOK 2**	**MA-05-5.1.3** **Students will determine an output value or an input value for a function rule given the other value.** **DOK 2**

Variables, Expressions and Operations		
		MA-05-5.2.1 **Students will model verbal descriptions of real-world and mathematical problems using a variable or a missing value in an expression.** **DOK 2**
Equations and Inequalities		
MA-EP-5.3.1 **Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a missing value (e.g., 2 + ? = 7, ___< 6) and apply simple number sentences to solve mathematical and real-world problems.** **DOK 2**	**MA-04-5.3.1** **Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or a missing value (e.g., 4 = 7 – ___, N + 5 > 14, $\frac{1}{2}$ + N = 1) and apply simple number sentences to solve mathematical and real-world problems.** **DOK 2**	**MA-05-5.3.1** **Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or missing value (e.g., 4 = 2 x N, ___+ 5 > 14) and apply simple number sentences to solve mathematical and real-world problems.** **DOK 2**

Number Properties and Operations

Middle grades students understand fractions, decimals, percents and integers, compare them and locate their relative positions on a number line. They develop and use proportional reasoning to solve problems. They work with large numbers and small numbers. They use factors, multiples and prime factorizations. They perform arithmetic operations with fractions, decimals and integers, use properties in computation, develop fluency and develop strategies to estimate the result of operations on rational numbers.

6th Grade	7th Grade	8th Grade
Number Sense		
MA-06-1.1.1 **Students will provide examples of and identify fractions, decimals and percents.** **DOK 1**	**MA-07-1.1.1** **Students will provide examples of and identify integers, fractions, decimals, percents and π.** **DOK 1**	**MA-08-1.1.1** **Students will provide examples of and identify rational numbers and irrational numbers (square roots and π only).** **DOK 1**
MA-06-1.1.2 *Students will describe and provide examples of representations of numbers (whole numbers, fractions in simplest form, mixed numbers, decimals, percents) and operations in a variety of equivalent forms using models, diagrams, and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences), based on real-world and mathematical problems.*	*MA-07-1.1.2* *Students will describe and provide examples of representations of numbers (whole numbers, fractions, decimals, percents, integers, square roots, and π) and operations in a variety of equivalent forms using models, diagrams, and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences), based on real-world and mathematical problems.*	*MA-08-1.1.2* *Students will describe and provide examples of representations of numbers (rational, square roots, and π) and operations in a variety of equivalent forms using models, diagrams and symbols (e.g., number lines, 10 by 10 grids, rectangular arrays, number sentences) based on real-world and mathematical problems.*
MA-06-1.1.3 **Students will convert between any two of the following numbers: fractions, decimals, and percents (less than or equal to 100%); and will compare and order these numbers.** **DOK 2**	**MA-07-1.1.3** **Students will convert among whole numbers, fractions, decimals, percents and π, and will compare and order these numbers.** **DOK 2**	**MA-08-1.1.3** **Students will convert, compare and order multiple numerical representations (e.g., fractions, decimals, percentages) of rational numbers and irrational numbers (square roots and π only).** **DOK 2**

Estimation		
MA-06-1.2.1 **Students will estimate to solve real-world and mathematical problems with whole numbers, fractions, decimals and percents, checking for reasonable and appropriate computational results.** **DOK 2**	**MA-07-1.2.1** **Students will estimate to solve real-world and mathematical problems with fractions, decimals and percents, checking for reasonable and appropriate computational results.** **DOK 2**	**MA-08-1.2.1** **Students will estimate to solve real-world and mathematical problems with rational numbers, checking for reasonable and appropriate computational results.** **DOK 2**
Number Operations		
MA-06-1.3.1 **Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations to simplify numerical expressions.** **DOK 2**	**MA-07-1.3.1** **Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations (including positive whole number exponents) to simplify numerical expressions.** **DOK 2**	**MA-08-1.3.1** **Students will add, subtract, multiply and divide rational numbers to solve real-world problems and apply order of operations (including positive whole number exponents) to simplify numerical expressions.** **DOK 2**
MA-06-1.3.2 *Students will explain how operations (addition and subtraction; multiplication and division) are inversely related.*	*MA-07-1.3.2* *Students will explain how operations (addition and subtraction; multiplication and division) are inversely related.*	*MA-08-1.3.2* *Students will explain how operations (additions and subtraction; multiplication and division; squaring and taking the square root of a number) are inversely related.*
	MA-07-1.3.3 *Students will add and subtract integers.*	
Ratios and Proportional Reasoning		
MA-06-1.4.1 **Students will describe and apply ratios to solve real-world problems.** **DOK 2**	**MA-07-1.4.1** **Students will apply ratios and proportional reasoning to solve real-world problems (e.g., percents, sales tax, discounts, rate).** **DOK 3**	**MA-08-1.4.1** **Students will apply ratios and proportional reasoning to solve real-world problems (e.g., percents, constant rate of change, unit pricing, percent of increase or decrease).** **DOK 3**

Properties of Numbers and Operations		
MA-06-1.5.1 **Students will identify and apply prime numbers, composite numbers, prime factorization, factors, multiples and divisibility to solve real-world and mathematical problems (e.g., prime factorization to determine a least common multiple [LCM] or greatest common factor [GCF]).** **DOK 2**	**MA-07-1.5.1** **Students will identify and apply prime numbers, composite numbers, prime factorization, factors, multiples and divisibility to solve real-world and mathematical problems (e.g., prime factorization to determine a least common multiple [LCM] or greatest common factor [GCF]).** **DOK 2**	
MA-06-1.5.2 **Students will identify the use of properties (commutative properties of addition and multiplication, the associative properties of addition and multiplication and the identity properties for addition and multiplication) to simplify numerical expressions.** **DOK 1**	**MA-07-1.5.2** **Students will identify the use of properties (commutative properties of addition and multiplication, the associative properties of addition and multiplication and the identity properties for addition and multiplication) to justify a given step in solving problems.** **DOK 1**	**MA-08-1.5.2** **Students will identify the use of properties (commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties for addition and multiplication, inverse properties and the distributive property of multiplication over addition and subtraction) to justify a given step in solving problems.** **DOK 1**

Measurement

Students continue to measure and estimate measurements including fractions and decimals. They use formulas to find perimeter, area, circumference and volume. They use rulers and protractors. They use US Customary and metric units of measurement.

6th Grade	7th Grade	8th Grade
Measuring Physical Attributes		
MA-06-2.1.1 **Students will measure lengths (to the nearest eighth of an inch or the nearest centimeter) and will determine and use in real-world and mathematical problems:** • **area and perimeter of triangles;** • **area and perimeter of quadrilaterals (rectangles, squares); (using the Pythagorean theorem will not be required as a strategy) and** • **area and perimeter of compound figures composed of triangles and quadrilaterals.** **DOK 2**	**MA-07-2.1.1** **Students will measure lengths (to the nearest eighth of an inch or the nearest centimeter) and will determine and use in real-world and mathematical problems:** • **area and perimeter of triangles;** • **area and perimeter of quadrilaterals (rectangles, squares, trapezoids) (using the Pythagorean theorem will not be required as a strategy);** • **area and circumference of circles and** • **area and perimeter of compound figures composed of triangles, quadrilaterals and circles.** **DOK 2**	**MA-08-2.1.1** **Students will measure lengths (to the nearest sixteenth of an inch or the nearest millimeter) and will determine and use in real-world or mathematical problems:** • **area and perimeter of triangles and quadrilaterals;** • **area and circumference of circles;** • **area and perimeter of compound figures composed of triangles, quadrilaterals and circles;** • **area from circumference or perimeter and** • **circumference or perimeter from area.** **DOK 3**
MA-06-2.1.2 *Students will estimate measurements in standard units including fractions and decimals.*	*MA-07-2.1.2* *Students will estimate measurements of regular and irregular polygons and circles in standard units.*	*MA-08-2.1.2* *Students will estimate measurements in standard units in real-world and mathematical problems.*
MA-06-2.1.3 *Students will explain how measurements and measurement formulas are related or different (perimeter and area of rectangles).*	*MA-07-2.1.3* *Students will explain how measurements and measurement formulas are related or different (e.g., perimeter and area of rectangles).*	**MA-08-2.1.3** **Students will evaluate the measures of angles by estimation, measurement with a protractor or angle ruler and determine angle measures in mathematical and/or real-world situations (e.g., supplementary, exterior, vertical).** **DOK 2**

	MA-07-2.1.4 *Students will find the measures of angles by estimation and measurement with a protractor or angle ruler.*	**MA-08-2.1.4** **Students will apply formulas to determine the volume of right rectangular prisms in real-world problems.** **DOK 2**
		MA-08-2.1.5 *Students will use formulas to find surface area of right rectangular prisms in real-world and mathematical problems.*
		MA-08-2.1.6 **Students will apply the Pythagorean theorem to determine the length of a hypotenuse.** **DOK 2**
Systems of Measurement		
MA-06-2.2.1 *Students will convert units within the same measurement system and use these units to solve real-world problems.*	*MA-07-2.2.1* *Students will convert units within the same measurement system and use these units to solve real-world problems.*	**MA-08-2.2.1** **Students will convert units within the same measurement system and use these units to solve real-world problems.** **DOK 2**

Geometry

Middle grades students expand analysis of two-dimensional shapes and three-dimensional shapes. They translate shapes in a coordinate plane. They extend work with congruent and similar figures, including proportionality. They use the Pythagorean theorem.

6th Grade	7th Grade	8th Grade
Shapes and Relationships		
MA-06-3.1.1 **Students will describe and provide examples of the basic geometric elements (points, rays, lines, segments, angles [acute, right, obtuse], planes, radius, diameter, circumference).** **DOK 2**	*MA-07-3.1.1* *Students will describe, provide examples of and identify (using correct notation, label and name) the basic geometric elements (e.g., points, segments, rays, lines, angles and planes), in real-world and mathematical problems.*	*MA-08-3.1.1* *Students will describe and provide examples of basic geometric elements that include points, segments, rays, lines, angles, and planes and will use these elements in real-world and mathematical problems.*
MA-06-3.1.2 **Students will describe, and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles, quadrilaterals, regular polygons), and will apply these elements and figures to solve real-world and mathematical problems.** **DOK 2**	**MA-07-3.1.2** **Students will describe and provide examples of the elements (e.g., sides, vertices, angles, congruent parts) of two-dimensional figures (circles, triangles [acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular polygons), and will apply these elements and figures to solve real-world and mathematical problems.** **DOK 2**	**MA-08-3.1.2** **Students will identify and compare properties of two-dimensional figures (circles, triangles acute, right, obtuse, scalene, isosceles, equilateral], quadrilaterals [square, rectangle, rhombus, parallelogram, trapezoid], regular/irregular polygons), and will apply these properties and figures to solve real-world and mathematical problems.** **DOK 2**
MA-06-3.1.3 *Students will describe, provide examples of, and identify elements (e.g., vertices, angles, faces, edges, congruent parts) of common three-dimensional figures (spheres, cones, cylinders, prisms, and pyramids).*	*MA-07-3.1.3* *Students will describe, provide examples of, and identify elements (e.g., vertices, angles, faces, edges, congruent parts) of common three-dimensional figures (spheres, cones, cylinders, prisms, and pyramids).*	**MA-08-3.1.3** **Students will compare properties of three-dimensional figures (spheres, cones, cylinders, prisms, pyramids), and will apply these properties and figures to solve real-world and mathematical problems.** **DOK 2**

MA-06-3.1.4 **Students will identify and describe congruent figures, and will apply congruent figures to solve real-world and mathematical problems.** **DOK 2**	**MA-07-3.1.4** **Students will describe and provide examples of congruent and similar figures, and will apply congruent and similar figures to solve real-world and mathematical problems.** **DOK 2**	**MA-08-3.1.4** **Students will:** • **provide examples of congruent and similar figures;** • **apply congruent and similar figures to solve real-world and mathematical problems and** • **apply proportional reasoning to solve problems involving scale drawings and proportional figures.** **DOK 3**
MA-06-3.1.5 *Students will identify similar figures and apply similar figures to solve real-world and mathematical problems.*		
Transformations of Shapes		
MA-06-3.2.1 *Students will describe, provide examples of, and apply line symmetry to real-world and mathematical problems.*		*MA-08-3.2.1* *Students will describe, provide examples of, and apply to real-world and mathematical problems rotational symmetry (90º, 180º, 360º).*
MA-06-3.2.2 **Students will:** • **reflect figures across a horizontal or vertical line in the first quadrant;** • **translate figures in a plane in the first quadrant and** • **determine the coordinates of the image after transformation in the first quadrant.** **DOK 2**	*MA-07-3.2.2* *Students will translate (slide) and reflect (flip) figures in a coordinate plane.*	**MA-08-3.2.2** **Students will transform (translations, reflections, and dilations with the center of dilation at the origin) figures in a coordinate plane and determine the new coordinates of the image after the transformation.** **DOK 2**

MA-06-3.2.3 *Students will identify rotations of figures in the plane (90˚ and 180˚).*	*MA-07-3.2.3* *Students will identify rotations (clockwise or counterclockwise) of figures about the origin in the plane (90˚, 180˚, 270˚).*	*MA-08-3.2.3* *Students will identify rotations (clockwise or counterclockwise) of figures about the origin in a coordinate plane.*
Coordinate Geometry		
MA-06-3.3.1 **Students will identify and graph ordered pairs on a positive coordinate system (Quadrant I), correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems.** **DOK 2**	**MA-07-3.3.1** **Students will identify and graph ordered pairs on a coordinate system, correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems.** **DOK 2**	**MA-08-3.3.1** **Students will identify and graph ordered pairs on a coordinate system, correctly identifying the origin, axes and ordered pairs; and will apply graphing in the coordinate system to solve real-world and mathematical problems.** **DOK 2**

Data Analysis and Probability

Middle grades students extend the early development of data representations and examine the appropriateness of graphs and representations of data. They examine central tendencies and dispersion. They develop organized approaches to counting and use experimental and theoretical probabilities.

6th Grade	7th Grade	8th Grade
Representations of Data Sets		
MA-06-4.1.1 **Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots).** **DOK 3**	**MA-07-4.1.1** **Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots, scatter plots).** **DOK 3**	**MA-08-4.1.1** **Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots, scatter plots, histograms, box-and-whiskers plots).** **DOK 3**
MA-06-4.1.2 *Students will explain how different representations of data (e.g., tables, graphs, diagrams, plots) are related.*	*MA-07-4.1.2* *Students will explain how different representations of data (e.g., tables, graphs, diagrams, plots) are related.*	*MA-08-4.1.2* *Students will explain how different representations of data (e.g., tables, graphs, diagrams, plots) are related.*
	MA-07-4.1.3 *Students will read/interpret, analyze and make inferences from box and whisker plots of data and make predictions and draw conclusions from the data.*	

MA-06-4.1.4 **Students will determine and construct appropriate data displays (bar graphs, line plots, Venn diagrams, tables, line graphs), and will explain why the type of display is appropriate for the data.** **DOK 2**	**MA-07-4.1.4** **Students will determine and construct appropriate data displays (bar graphs, line plots, Venn diagrams, tables, line graphs, stem-and-leaf plots), and will explain why the type of display is appropriate for the data.** **DOK 2**	**MA-08-4.1.4** **Students will:** • **construct data displays (Venn diagrams, tables, line graphs, stem-and-leaf plots, circle graphs, scatter plots);** • **explain why the type of display is appropriate for the data and** • **explain how misleading representations affect interpretations and conclusions about data (e.g., changing the scale on a graph).** **DOK 2**
	MA-07-4.1.5 *Students will make decisions about how misleading representations affect interpretations and conclusions about data (e.g., changing the scale on a graph).*	*MA-08-4.1.5* *Students will construct box-and-whiskers plots.*
Characteristics of Data Sets		
MA-06-4.2.1 **Students will determine and apply the mean, median, mode and range of a set of data.** **DOK 2**	**MA-07-4.2.1** **Students will determine the mean, median, mode and range of a set of data, and will identify clusters, gaps and outliers within the data.** **DOK 2**	**MA-08-4.2.1** **Students will:** • **determine the mean, median, mode, and range of a set of data;** • **identify clusters, gaps, and outliers and** • **apply these concepts to compare sets of data.** **DOK 2**

Experiments and Samples		
		MA-08-4.3.1 *Students will explain how data gathering, bias issues, and faulty data analysis can affect the results of data collection.*
Probability		
MA-06-4.4.1 **Students will describe or determine (e.g., tables, tree diagrams) the sample space of an event for a real-world or mathematical situation.** **DOK 2**	**MA-07-4.4.1** **Students will apply counting techniques to determine the size of a sample space for a real-world or mathematical situation.** **DOK 2**	**MA-08-4.4.1** **Students will apply counting techniques to determine the size of a sample space for a real-world or mathematical situation.** **DOK 2**
MA-06-4.4.2 **Students will determine single event probabilities based on the results of an experiment and will make inferences based on the data.** **DOK 3**	**MA-07-4.4.2** **Students will:** • **determine theoretical probabilities of simple events;** • **determine probabilities based on the results of an experiment and** • **make inferences from probability data.** **DOK 3**	**MA-08-4.4.2** **Students will:** • **determine theoretical probabilities of simple events;** • **determine probabilities based on the results of an experiment and** • **make inferences from probability data.** **DOK 3**
MA-06-4.4.3 *Students will explore the theoretical probability of simple events.*	*MA-07-4.4.3* *Students will tabulate experimental results from simulations and explain how theoretical and experimental probabilities are related.*	*MA-08-4.4.3* *Students will tabulate experimental results from simulations and explain how theoretical and experimental probabilities are related.*
		MA-08-4.4.4 *Students will determine theoretical probabilities and represent them using area models.*

Algebraic Thinking

Middle grades students extend pattern work to include arithmetic sequences. They use linear functions and linear equations. They plot rational number pairs in the Cartesian plane. They simplify algebraic and numeric expressions. They explore the effects of change on related variables. They use and solve two-step single variable equations and inequalities.

6th Grade	7th Grade	8th Grade
Patterns, Relations and Functions		
MA-06-5.1.1 **Students will extend, describe rules for patterns and find a missing term in a pattern from real-world and mathematical problems.** **DOK 3**	**MA-07-5.1.1** **Students will extend, describe rules for patterns and find a missing term in a pattern from real-world and mathematical problems.** **DOK 3**	*MA-08-5.1.1* *Students will use variables to describe numerical patterns based on arithmetic sequences in real-world and mathematical problems (e.g., $f(N) = 2N+3$).*
MA-06-5.1.2 **Students will create tables for functions and will apply the tables to solve real-world problems.** **DOK 2**	**MA-07-5.1.2** **Students will represent, analyze, and generalize first degree relationships using tables, graphs and words, and will apply the relationships to solve real-world and mathematical problems.** **DOK 2**	**MA-08-5.1.2** **Students will represent, analyze and generalize simple first and second degree relationships using tables, graphs, words and algebraic notations, and will apply the relationships to solve real-world and mathematical problems.** **DOK 2**
MA-06-5.1.3 *Students will describe, define, provide examples of, and apply to real-world and mathematical problems functions using tables, graphs and verbal rules.*	*MA-07-5.1.3* *Students will explain how tables, graphs, patterns, verbal rules and equations relate to each other.*	
MA-06-5.1.4 *Students will explain how tables, graphs and patterns relate to each other.*		

MA-06-5.1.5 *Students will explain how the change in one quantity affects change in another quantity (e.g., in tables or graphs, input/output tables).*	**MA-07-5.1.5** **Students will explain how the change in one quantity affects the change in another quantity (e.g., in tables or graphs).** **DOK 2**	**MA-08-5.1.5** **Students will explain how the change in one variable affects the change in another variable (e.g., if rate remains constant, an increase in time results in an increase in distance).** **DOK 2**
Variables, Expressions and Operations		
MA-06-5.2.1 **Students will substitute values for variables (up to two different variables) and evaluate algebraic expressions.** **DOK 2**	**MA-07-5.2.1** **Students will substitute values for variables (up to three different variables) and evaluate algebraic expressions.** **DOK 2**	**MA-08-5.2.1** **Students will evaluate and simplify algebraic expressions applying the order of operations.** **DOK 2**
MA-06-5.2.2 *Students will describe, define and provide examples of variables and expressions with a missing value based on real-world and mathematical problems.*	*MA-07-5.2.2* *Students will describe, define and provide examples of variables and expressions with a missing value based on real-world and mathematical problems.*	*MA-08-5.2.2* *Students will describe, define and provide examples of variables and expressions with a missing value based on real-world and mathematical problems.*
Equations and Inequalities		
MA-06-5.3.1 **Students will model and solve real-world and mathematical problems with simple equations and inequalities (e.g., 8x = 4, x+2 > 5).** **DOK 2**	**MA-07-5.3.1** **Students will model and solve real-world and mathematical problems with one- or two-step single variable, first-degree equations or inequalities (e.g., 2x+1 = 9, 3x+3 < 9). (Statements and solutions use only non-negative numbers.)** **DOK 2**	**MA-08-5.3.1** **Students will model and solve single variable, first-degree real-world and mathematical problems (e.g., 5x+2 = x+22, x-4 < -60).** **DOK 2**

Number Properties and Operations

High school students should enter high school with a strong background in rational numbers and numerical operations and expand this to real numbers. This becomes the foundation for algebra and working with algebraic symbols. They understand large and small numbers and their representations, powers and roots. They compare and contrast properties of numbers and number systems and develop strategies to estimate the results of operations on real numbers. Students will use, and understand the limitations of, graphing calculators and computer spreadsheets appropriately as learning tools.

High School
Number Sense
MA-HS-1.1.1 *Students will compare real numbers using order relations (less than, greater than, equal to) and represent problems using real numbers.*
MA-HS-1.1.2 *Students will demonstrate the relationships between different subsets of the real number system.*
MA-HS-1.1.3 *Students will use scientific notation to express very large or very small quantities.*
Estimation
MA-HS-1.2.1 *Students will estimate solutions to problems with real numbers (including very large and very small quantities) in both real-world and mathematical problems, and use the estimations to check for reasonable computational results.*
Number Operations
MA-HS-1.3.1 **Students will solve real-world and mathematical problems to specified accuracy levels by simplifying expressions with real numbers involving addition, subtraction, multiplication, division, absolute value, integer exponents, roots (square, cube) and factorials.** **DOK 2**

MA-HS-1.3.2 **Students will:** • **describe and extend arithmetic and geometric sequences;** • **determine a specific term of a sequence given an explicit formula;** • **determine an explicit rule for the nth term of an arithmetic sequence and** • **apply sequences to solve real-world problems.** **DOK 3**
MA-HS-1.3.3 *Students will write an explicit rule for the nth term of a geometric sequence.*
MA-HS-1.3.4 Students will recognize and solve problems that can be modeled using a finite geometric series, such as home mortgage problems and other compound interest problems.
Ratios and Proportional Reasoning
MA-HS-1.4.1 **Students will apply ratios, percents and proportional reasoning to solve real-world problems (e.g., those involving slope and rate, percent of increase and decrease) and will explain how slope determines a rate of change in linear functions representing real-world problems.** **DOK 2**
Properties of Numbers and Operations
MA-HS-1.5.1 *Students will identify real number properties (commutative properties of addition and multiplication, associative properties of addition and multiplication, distributive property of multiplication over addition and subtraction, identity properties of addition and multiplication and inverse properties of addition and multiplication) when used to justify a given step in simplifying an expression or solving an equation.*
MA-HS-1.5.2 *Students will use equivalence relations (reflexive, symmetric, transitive).*

Measurement

High school students continue to measure and estimate measurements including fractions and decimals. They use formulas to find surface area and volume. They use US Customary and metric units of measurement. They use the Pythagorean theorem and other right triangle relationships to solve real-world problems.

High School
Measuring Physical Attributes
MA-HS-2.1.1 **Students will determine the surface area and volume of right rectangular prisms, pyramids, cylinders, cones and spheres in real-world and mathematical problems.** **DOK 2**
MA-HS-2.1.2 **Students will describe how a change in one or more dimensions of a geometric figure affects the perimeter, area and volume of the figure.** **DOK 3**
MA-HS-2.1.3 **Students will apply definitions and properties of right triangle relationships (right triangle trigonometry and the Pythagorean theorem) to determine length and angle measures to solve real-world and mathematical problems.** **DOK 3**
MA-HS-2.1.4 Students will apply special right triangles and the converse of the Pythagorean theorem to solve real-world problems.
Systems of Measurements
MA-HS-2.2.1 *Students will continue to apply to both real-world and mathematical problems U.S. customary and metric systems of measurement.*

Geometry

High school students expand analysis of two-dimensional shapes and three-dimensional shapes. They translate shapes in a coordinate plane. They extend work with congruent and similar figures, including proportionality.

High School
Shapes and Relationships
MA-HS-3.1.1 **Students will analyze and apply spatial relationships (not using Cartesian coordinates) among points, lines and planes (e.g., betweenness of points, midpoint, segment length, collinear, coplanar, parallel, perpendicular, skew).** **DOK 2**
MA-HS-3.1.2 Students will use spatial relationships to prove basic theorems.
MA-HS-3.1.3 **Students will analyze and apply angle relationships (e.g., linear pairs, vertical, complementary, supplementary, corresponding and alternate interior angles) in real-world and mathematical problems.** **DOK 2**
MA-HS-3.1.4 Students will use angle relationships to prove basic theorems.
MA-HS-3.1.5 **Students will classify and apply properties of two-dimensional geometric figures (e.g., number of sides, vertices, length of sides, sum of interior and exterior angle measures).** **DOK 2**
MA-HS-3.1.6 Students will know the definitions and basic properties of a circle and will use them to prove basic theorems and solve problems.
MA-HS-3.1.7 **Students will solve real-world and mathematical problems by applying properties of triangles (e.g., Triangle Sum theorem and Isosceles Triangle theorems).** **DOK 2**

MA-HS-3.1.8 Students will use the properties of triangles to prove basic theorems.
MA-HS-3.1.9 **Students will classify and apply properties of three-dimensional geometric figures.** **DOK 2**
MA-HS-3.1.10 *Students will describe the intersection of a plane with a three-dimensional figure.*
MA-HS-3.1.11 Students will visualize solids and surfaces in three-dimensional space when given two-dimensional representations (e.g., nets, multiple views) and create two-dimensional representations for the surfaces of three-dimensional objects.
MA-HS-3.1.12 **Students will apply the concepts of congruence and similarity to solve real-world and mathematical problems.** **DOK 3**
MA-HS-3.1.13 Students will prove triangles congruent and similar.
Transformations of Shapes
MA-HS-3.2.1 **Students will identify and describe properties of and apply geometric transformations within a plane to solve real-world and mathematical problems.** **DOK 3**
Coordinate Geometry
MA-HS-3.3.1 **Students will apply algebraic concepts and graphing in the coordinate plane to analyze and solve problems (e.g., finding the final coordinates for a specified polygon, midpoints, betweenness of points, parallel and perpendicular lines, the distance between two points, the slope of a segment).** **DOK 2**

Foundational Statements
MA-HS-3.4.1 Students will identify definitions, axioms and theorems, explain the necessity for them and give examples of them.
MA-HS-3.4.2 Students will recognize that there are geometries, other than Euclidean geometry, in which the parallel postulate is not true.
MA-HS-3.4.3 *Students will be able to perform constructions such as a line parallel to a given line through a point not on the line, the perpendicular bisector of a line segment and the bisector of an angle.*

Data Analysis and Probability

High school students extend data representations, interpretations and conclusions. They describe data distributions in multiple ways and connect data gathering issues with data interpretation issues. They relate curve of best fit with two-variable data and determine line of best fit for a given set of data. They distinguish between combinations and permutations and compare and contrast theoretical and experimental probability.

High School
Data Representations
MA-HS-4.1.1 **Students will analyze and make inferences from a set of data with no more than two variables, and will analyze problems for the use and misuse of data representations.** **DOK 3**
MA-HS-4.1.2 **Students will construct data displays for data with no more than two variables.** **DOK 2**
MA-HS-4.1.3 *Students will represent real-world data using matrices and will use matrix addition, subtraction, multiplication (with matrices no larger than 2x2) and scalar multiplication to solve real-world problems.*
Characteristics of Data Sets
MA-HS-4.2.1 **Students will describe and compare data distributions and make inferences from the data based on the shapes of graphs, measures of center (mean, median, mode) and measures of spread (range, standard deviation).** **DOK 2**
MA-HS-4.2.2 Students will know the characteristics of the Gaussian normal distribution (bell-shaped curve).
MA-HS-4.2.3 **Students will:** • **identify an appropriate curve of best fit (linear, quadratic, exponential) for a set of two-variable data;** • **determine a line of best fit equation for a set of linear two-variable data and** • **apply a line of best fit to make predictions within and beyond a given set of two-variable data.** **DOK 3**

MA-HS-4.2.4 Students will recognize when arguments based on data confuse correlation and causation.
Experiments and Samples
MA-HS-4.3.1 **Students will recognize potential for bias resulting from the misuse of sampling methods (e.g., non-random sampling, polling only a specific group of people, using limited or extremely small sample sizes) and explain why these samples can lead to inaccurate inferences.** **DOK 2**
MA-HS-4.3.2 Students will design simple experiments or investigations to collect data to answer questions of interest.
MA-HS-4.3.3 Students will explain the differences between randomized experiments and observational studies.
Probability
MA-HS-4.4.1 **Students will:** • **determine theoretical and experimental (from given data) probabilities;** • **make predictions and draw inferences from probabilities;** • **compare theoretical and experimental probabilities and** • **determine probabilities involving replacement and non-replacement.** **DOK 3**
MA-HS-4.4.2 *Students will recognize and identify the differences between combinations and permutations and use them to count discrete quantities.*
MA-HS-4.4.3 *Students will represent probabilities in multiple ways, such as fractions, decimals, percentages and geometric area models.*
MA-HS-4.4.4 Students will explain how the law of large numbers can be applied in simple examples.

Algebraic Thinking

High school students extend analysis and use of functions and focus on linear, quadratic, absolute value and exponential functions. They explore parametric changes on graphs of functions. They use rules and properties to simplify algebraic expressions. They combine simple rational expressions and combine simple polynomial expressions. They factor polynomial expressions and quadratics of the form 1x^2 + bx +c.

High School
Patterns, Relations and Functions
MA-HS-5.1.1 **Students will identify multiple representations (tables, graphs, equations) of functions (linear, quadratic, absolute value, exponential) in real-world or mathematical problems.** **DOK 2**
MA-HS-5.1.2 *Students will identify, relate and apply representations (graphs, equations, tables) of a piecewise function (such as long distance telephone rates) from mathematical or real-world information.*
MA-HS-5.1.3 *Students will demonstrate how equations and graphs are models of the relationship between two real-world quantities (e.g., the relationship between degrees Celsius and degrees Fahrenheit).*
MA-HS-5.1.4 Students will recognize and solve problems that can be modeled using an exponential function, such as compound interest problems.
MA-HS-5.1.5 **Students will:** • **determine if a relation is a function;** • **determine the domain and range of a function (linear and quadratic);** • **determine the slope and intercepts of a linear function;** • **determine the maximum, minimum, and intercepts (roots/zeros) of a quadratic function and** • **evaluate a function written in function notation for a specified rational number.** **DOK 2**
MA-HS-5.1.6 *Students will find the domain and range for absolute value functions.*

MA-HS-5.1.7 *Students will apply and use direct and inverse variation to solve real-world and mathematical problems.*
MA-HS-5.1.8 **Students will identify the changes and explain how changes in parameters affect graphs of functions (linear, quadratic, absolute value, exponential) (e.g., compare $y = x^2$, $y = 2x^2$, $y = (x-4)^2$, and $y = x^2+3$).** **DOK 2**
Variables, Expressions, and Operations
MA-HS-5.2.1 **Students will apply order of operations, real number properties (identity, inverse, commutative, associative, distributive, closure) and rules of exponents (integer) to simplify algebraic expressions.** **DOK 1**
MA-HS-5.2.2 Students will evaluate polynomial and rational expressions and expressions containing radicals and absolute values at specified values of their variables.
MA-HS-5.2.3 **Students will:** • **add, subtract and multiply polynomial expressions;** • **factor polynomial expressions using the greatest common monomial factor and** • **factor quadratic polynomials of the form $ax^2 + bx + c$, when a = 1 and b and c are integers.** **DOK 2**
MA-HS-5.2.4 *Students will factor quadratic polynomials, such as perfect square trinomials and quadratic polynomials of the form $ax^2 + bx + c$ when a ≠ 1 and b and c are integers.*
MA-HS-5.2.5 **Students will add, subtract, multiply and divide simple rational expressions with monomial first-degree denominators and integer numerators (e.g., $\frac{3}{5x}+\frac{4}{3y}$; $\frac{9}{2a}-\frac{-7}{4b}$; $\frac{3}{-5x}\times\frac{-4}{7y}$; $\frac{5}{2c}\div\frac{9}{-11d}$), and will express the results in simplified form.** **DOK 1**

Equations and Inequalities
MA-HS-5.3.1 **Students will model, solve and graph first degree, single variable equations and inequalities, including absolute value, based in real-world and mathematical problems and graph the solutions on a number line.** **DOK 2**
MA-HS-5.3.2 *Students will solve for a specified variable in a multivariable equation.*
MA-HS-5.3.3 **Students will model, solve and graph first degree, two-variable equations and inequalities in real-world and mathematical problems.** **DOK 2**
MA-HS-5.3.4 **Students will model, solve and graph systems of two linear equations in real-world and mathematical problems.** **DOK 3**
MA-HS-5.3.5 *Students will write, graph, and solve systems of two linear inequalities based on real-world or mathematical problems and interpret the solution.*
MA-HS-5.3.6 **Students will model, solve and graph quadratic equations in real-world and mathematical problems.** **DOK 2**

Core Content for Practical Living/Vocational Studies

Version 4.1

August 2006

Kentucky Department of Education

Introduction
Core Content for Practical Living/Vocational Studies Assessment

What is the Core Content for Practical Living/Vocational Studies Assessment?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Practical Living/Vocational Studies Assessment Version 4.1* represents the health, physical education, consumerism and vocational Studies content from Kentucky's Academic Expectations and *Program of Studies* that are essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Practical Living/Vocational Studies Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the Kentucky Core Content Test (KCCT) beginning in 2007.

The *Core Content for Practical Living/Vocational Studies* Assessment is not intended to represent the comprehensive local curriculum for health, physical education, consumerism and vocational studies assessment and instruction. It is also not the comprehensive *Program of Studies for Health and Physical Education*, which specifies the minimum content for high school graduation and the primary, intermediate and middle level programs leading to these requirements.

Kentucky's Academic Expectations for Practical Living and Vocational Studies
The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment*.

Goal 2*: Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies and vocational studies to what they will encounter throughout their lives.*

Practical Living

2.29 Students demonstrate skills that promote individual well-being and healthy family relationships.

2.30 Students evaluate consumer products and services and make effective consumer decisions.

2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.

2.34 Students perform physical movement skills effectively in a variety of settings.

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.

2.32 Students demonstrate strategies for becoming and remaining mentally and emotionally healthy.

2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout lives.

Vocational Studies

2.36 Students use strategies for choosing and preparing for a career.

2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.

2.38 Students demonstrate skills such as interviewing, writing resumes, and completing applications that are needed to be accepted into college or other postsecondary training or to get a job.

How is the Core Content for the Practical Living/Vocational Studies Assessment organized?

The *Practical Living and Vocational Studies Core Content for Assessment Version 4.1* is organized by grade levels (end of primary-3rd, 4th, 5th, 6th, 7th, 8th, and high school) in order to ensure continuity and conceptual development even though the current state assessment varies for those grade levels based on the content area. This is different from the 3.0 Version, which was organized in grade spans. This version of the *Core Content for Practical Living and Vocational Studies Assessment* includes 'off year' content standards as well as content for the assessed grades (four, seven, and ten).

The Core Content for Practical Living and Vocational Studies is organized into four subdomains: health education, physical education, consumerism, and vocational studies. These subdomains are further defined within the *Core Content for Assessment*. Instruction supports student growth, development, and achievement in these four areas. The Health and Physical Education subdomains address the knowledge necessary for students to develop and maintain behaviors that enhance physical, social, mental and emotional well being throughout one's lifetime. Consumerism and Vocational Studies address the knowledge and skills necessary to make appropriate consumer decisions in dealing with authentic life issues and making the transition from high school to post secondary education or the workplace. The content is structured using organizers beginning with primary through high school.

SUBDOMAINS with related ORGANIZERS

Subdomain	Organizers	Subdomain	Organizers
Health Education	Personal Wellness Nutrition Safety	**Physical Education**	Psychomotor Skills Lifetime Physical Wellness
Consumerism	Consumer Decisions Financial Literacy	**Vocational Studies**	Career Awareness, Exploration and Planning Employability Skills Communication/Technology

The format on the following pages shows how concepts introduced in the primary years progress in difficulty and complexity through high school. The content standards are aligned to show this progression; however, specific content is not always included at the elementary level because some topics are not appropriate for assessment at that level.

While assessment of certain content may not be appropriate at the elementary level, an awareness of the concepts should be developed as a foundation for the middle level. During the middle grades, content should lead to more application and investigation for the world of work. At the high school, more practical, direct relationships to the world or work and life should be present.

The Core Content for Assessment includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items within the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Practical Living and Vocational Studies Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

What do the codes for the *Core Content for the Practical Living/Vocational Studies Assessment* mean?
Each content standard is preceded by a code. The code begins with PL for practical living/vocational studies and is then followed by a grade level designation and then a 3-digit number that indicates subdomain, organizer and sequential standard, respectively. The codes used are listed below.

Grade Level Codes	Subdomain	Organizer
EP = end of primary	1 = Health Education	1 = Personal Wellness
04 = fourth grade		2 = Nutrition
05 = fifth grade		3 = Safety
06 = sixth grade	2 = Physical Education	1 = Psychomotor Skills
07 = seventh grade		2 = Lifetime Physical Wellness
08 = eighth grade	3 = Consumerism	1 = Consumer Decisions
HS = high school		2 = Financial Literacy
	4 = Vocational Studies	1 = Career Awareness, Exploration and Planning
		2 = Employability Skills
		3 = Communication/Technology

The numeric codes represent the domain, grade level, subdomain, organizer and standard for each content standard. For Example, PL-04-1.3.2 would stand for the second standard in the third organizer of the first subdomain for fourth grade.

PL-04.1.3.2

PL Practical Living (Domain)
- 04 Fourth Grade (Grade Level)
  - 1 Health Education (Subdomain)
    - 3 Safety (Organizer)
      - 2 Standard number (Standard)

Health Education

Basic to health education is a foundation of knowledge, attitudes, skills and behaviors impacting healthy lifestyles. Healthy family relationships are critical to maintaining the family unit that historically has been considered the fabric of society. While parents are the primary source from which children learn skills to act responsibly in relationships, the community and school play supportive roles. Health literacy includes an understanding of how the body functions as well as behaviors and decisions that will foster life-long health. It is assuming responsibility for personal health throughout the life cycle and fostering behaviors and practices that will enhance family health.

End of Primary	4th Grade	5th Grade
Personal Wellness		
PL-EP-1.1.1 **Students will identify effective social interaction skills (e.g., identifying emotions, listening, cooperation, etiquette, politeness, communication, sharing, empathy, following directions and making friends) that promote responsible and respectful behavior.** **DOK 1**	**PL-04-1.1.1** **Students will describe effective social interaction skills (e.g., identifying emotions, listening, cooperation, communication, sharing, empathy, following directions and making friends) that promote responsible and respectful behavior.** **DOK 2**	**PL-05-1.1.1** **Students will describe effective social interaction skills (e.g., identifying emotions, listening, cooperation, communication, sharing, empathy, following directions and making friends) that promote responsible and respectful behavior.** **DOK 2**
PL-EP-1.1.2 **Students will identify strategies for stress management, problem solving, conflict resolution and communication (e.g., self-control, work and play collaboration, caring, reconciling, asking for help, active listening).** **DOK 1**	**PL-04-1.1.2** **Students will describe strategies for stress management, problem solving, conflict resolution and communication (e.g., self-esteem, self-control, empathy, asking for help, forgiveness/reconciliation, how to apologize, active listening, anger management, standing up for one's rights).** **DOK 2**	**PL-05-1.1.2** **Students will recommend effective strategies for responding to stress, conflict, peer pressure and bullying (e.g., fairness, compromise, standing up for one's rights, anger management, problem-solving, refusal skills, verbal/nonverbal communication).** **DOK 2**
PL-EP-1.1.3 *Students will identify ways that growth and development are unique to each person.*	*PL-04-1.1.3* *Students will describe how physical, social and emotional changes occur during preadolescence.*	*PL-05-1.1.3* *Students will describe how physical, social and emotional changes occur during preadolescence.*
PL-EP-1.1.4 *Begins in 6th Grade*	*PL-04-1.1.4* *Begins in 6th Grade*	*PL-05-1.1.4* *Begins in 6th Grade*

PL-EP- 1.1.5 *Begins in 6th Grade*	*PL- 04-1.1.5* *Begins in 6th Grade*	*PL-05-1.1.5* *Begins in 6th Grade*
PL-EP-1.1.6 **Students will describe how an individual's behavior and choices of diet, exercise and rest affect the body.** **DOK 1**	**PL-04-1.1.6** **Students will describe how an individual's behavior and choices relating to diet, exercise and rest affect body systems (e.g., circulatory, respiratory, digestive).** **DOK 2**	**PL-05-1.1.6** **Students will describe how an individual's behavior choices and habits relating to diet, exercise, rest and other choices (e.g., tobacco, alcohol, illegal drugs) affect body systems (e.g., circulatory, respiratory, digestive).** **DOK 2**
PL-EP-1.1.7 **Students will identify strategies (e.g., diet exercise, rest, immunizations) and good hygiene practices (e.g., hand washing, brushing teeth, using tissues) that promote good health and prevent diseases.** **DOK 1**	**PL-04-1.1.7** **Students will explain how strategies (e.g., diet, exercise, rest, immunizations) and good hygiene practices (e.g., hand washing, brushing teeth, using tissues, not sharing personal items, adequate protection from ultraviolet rays) promote good health and prevent communicable (cold, flu/influenza, measles, strep throat, lice) and non-communicable (heart disease, diabetes, obesity, cancer, asthma) diseases.** **DOK 2**	**PL-05-1.1.7** **Students will explain how strategies (e.g., diet exercise, rest, immunizations) and good hygiene practices (e.g., hand washing, brushing teeth, using tissues, not sharing personal items, adequate protection from ultraviolet rays) promote good health and prevent communicable (cold, flu/influenza, measles, strep throat) and non-communicable (heart disease, diabetes, obesity, cancer, asthma) diseases.** **DOK 2**
PL-EP-1.1.8 **Students will identify behavior choices (tobacco, alcohol) that result in negative consequences.** **DOK 1**	**PL-04-1.1.8** **Students will identify behavior choices (tobacco, alcohol, illegal drug use) that result in negative consequences.** **DOK 1**	**PL-05-1.1.8** **Students will explain risks associated with unhealthy habits and behaviors (tobacco, alcohol, illegal drug use).** **DOK 2**
PL-EP-1.1.9 **Students will describe social (e.g., getting along with others, serving as team members) and emotional (e.g., expressing feelings, self-concept) health.** **DOK 1**	**PL-04-1.1.9** **Students will describe symptoms of common social and emotional problems (aggression, anxiety, depression).** **DOK 2**	**PL-05-1.1.9** **Students will explain the importance of social and emotional health and the symptoms of common social and emotional problems (aggression, anxiety, depression).** **DOK 2**

	PL-04-1.1.10 *Begins in 6th Grade*	*PL-05-1.1.10* *Students will identify resources (e.g. guidance counselors, drug counselors, parents, teachers) that are helpful for individuals seeking treatment or counseling for negative behaviors or addictions (e.g. drug addiction, eating disorders).*
	PL-04-1.1.11 **Students will identify self-management and coping strategies (goal setting, decision making and time management).** **DOK 1**	**PL-05-1.1.11** **Students will recommend self-management and coping strategies (goal setting, decision making and time management) for maintaining mental and emotional health.** **DOK 2.**
Nutrition		
PL-EP-1.2.1 *Students will identify nutrients (protein, carbohydrates, fats), which are important in the growth and development of healthy bodies.*	*PL-04-1.2.1* *Students will identify foods containing nutrients (protein, carbohydrates, fats), which are important in the growth and development of healthy bodies.*	*PL-05-1.2.1* *Students will identify the role of nutrients (protein, carbohydrates, fats, minerals, vitamins, water), which are important in the growth, and development of healthy bodies (e.g., strong bones and muscles, energy).*
PL-EP-1.2.2 **Students will describe the overall purpose of the *Dietary Guidelines for Americans*.** **DOK 1**	**PL-04-1.2.2** **Students will describe key recommendations made in the *Dietary Guidelines for Americans (weight management, physical activity, food groups to encourage)* and the overall purpose of these guidelines.** **DOK 2**	**PL-05-1.2.2** **Students will explain key recommendations made in the *Dietary Guidelines for Americans (weight management, physical activity, food groups to encourage)* and the overall purpose of these guidelines.** **DOK 2**

Safety		
PL-EP-1.3 .1 *Students will identify safety practices (e.g., use of seatbelts/helmets/life vests) for dealing with a variety of health hazards (e.g., crossing the street, talking to strangers) while at school, home and play.*	*PL-04-1.3.1* *Students will identify safety practices (e.g., use of seatbelts/helmets/life vests) for dealing with a variety of health hazards (e.g., crossing the street, talking to strangers, dealing with threatening situations) while at home, school and play.*	*PL-05-1.3.1* *Students will describe safety practices (e.g., use of seatbelts/helmets/life vests) for dealing with a variety of health hazards (e.g., crossing the street, talking to strangers, dealing with threatening situations) while at home, school and play.*
PL-EP-1.3.2 **Students will identify proper procedures to access emergency assistance (calling 911).** **DOK 1**	**PL-04-1.3.2** **Students will identify proper procedures (calling 911, Heimlich maneuver, stop, drop & roll, apply pressure) for dealing with emergency situations (choking, bleeding, burns).** **DOK 1**	**PL-05-1.3.2** **Students will identify proper procedures (e.g., calling 911, Heimlich maneuver, first aid) for dealing with emergency situations (choking, bleeding, burns, broken bones).** **DOK 1**

Physical Education

Addresses both health-related and skill-related components that promote enhanced health behaviors and increase responsible decision-making. Physical Education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being.

Psychomotor Skills

PL-EP-2.1.1 *Students will apply fundamental motor skills:* *Locomotor:* • *Walking* • *Running* • *Skipping* • *Hopping* • *Galloping* • *Sliding* • *Leaping* • *Jumping* *Nonlocomotor:* • *Turning* • *Twisting* • *Bending* • *Stretching* • *Swinging* • *Swaying* • *Balancing* *Fundamental manipulative skills:* • *Hitting* • *Kicking* • *Throwing* • *Catching* • *Striking* • *Dribbling*	*PL-04-2.1.1* *Students will apply fundamental motor skills:* *Locomotor:* • *Walking* • *Running* • *Skipping* • *Hopping* • *Galloping* • *Sliding* • *Leaping* • *Jumping* *Nonlocomotor:* • *Turning* • *Twisting* • *Bending* • *Stretching* • *Swinging* • *Swaying* • *Balancing* *Fundamental manipulative skills:* • *Hitting* • *Kicking* • *Throwing* • *Catching* • *Striking* • *Dribbling*	*PL-05-2.1.1* *Students will apply fundamental motor skills:* *Locomotor:* • *Walking* • *Running* • *Skipping* • *Hopping* • *Galloping* • *Sliding* • *Leaping* • *Jumping* *Nonlocomotor:* • *Turning* • *Twisting* • *Bending* • *Stretching* • *Swinging* • *Swaying* • *Balancing* *Fundamental manipulative skills:* • *Hitting* • *Kicking* • *Throwing* • *Catching* • *Striking* • *Dribbling*

PL-EP-2.1.2 *Students will identify the fundamental movement concepts:* • *Body awareness - what the body is doing* • *Space awareness - where the body moves* • *Time - how quickly the body moves* • *Effort - how the body moves* • *Relationship - relationships that occur while the body moves*	*PL-04-2.1.2* *Students will explain the fundamental movement concepts:* • *Body awareness - what the body is doing* • *Space awareness - where the body moves* • *Time - how quickly the body moves* • *Effort - how the body moves* • *Relationship - relationships that occur while the body moves*	*PL-05-2.1.2* Students will apply fundamental movement concepts: • *Body awareness - What the body is doing* • *Space awareness - Where the body moves* • *Time - How quickly the body moves* • *Effort - How the body moves* • *Relationship - Relationships that occur while the body moves*
Lifetime Physical Wellness		
PL-EP-2.2.1 **Students will identify physical and social benefits that result from regular and appropriate participation in physical activities:** • **physical benefits (e.g., weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements)** • **social benefits (e.g., positive interaction with others, respect for self and others, enjoyment, self-expression)** **DOK 1**	**PL-04-2.2.1** **Students will describe physical and social benefits that result from regular and appropriate participation in physical activities:** • **physical benefits (e.g., weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction)** • **social benefits (e.g., positive interaction with others, respect for self and others, enjoyment, self-expression)** **DOK 1**	**PL-05-2.2.1** **Students will explain how physical and social benefits that result from regular and appropriate participation in physical activities:** • **physical benefits (e.g, weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction)** • **social benefits: (e.g., positive interaction with others, respect for self and others, enjoyment, self-expression)** **DOK 2**
PL-EP-2.2.2 *Students will explain the importance of practice for improving performance in games and sports.*	*PL-04-2.2.2* *Students will explain the importance of practice for improving performance in games and sports.*	*PL-05-2.2.2* *Students will explain the importance of practice for improving performance in games and sports.*

PL-EP-2.2.3 **Students will identify the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and the FITT Principle (Frequency, Intensity, Type, Time).** **DOK 1**	**PL-04-2.2.3** **Students will describe the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and the FITT Principle (Frequency, Intensity, Type, Time).** **DOK 1**	**PL-05-2.2.3** **Students will describe the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and the FITT Principle (Frequency, Intensity, Type, Time).** **DOK 1**
PL-EP-2.2.4 *Students will identify basic rules for participating in simple games and activities needed to make games fair.*	*PL-04-2.2.4* *Students will explain basic rules for participating in simple games and activities needed to make games fair.*	*PL-05-2.2.4* *Students will explain why basic rules for participating in recreational games (e.g., four-square, horseshoes, table tennis) are needed to make games fair and enjoyable.*
PL-EP-2.2. 5 *Students will identify rules of play and sportsmanship for spectators and participants during games and/or activities that make them safe and enjoyable.*	*PL-04-2.2.5* *Students will explain how rules of play and sportsmanship for spectators and participants during games and/or activities make them safe and enjoyable.*	*PL-05-2.2.5* *Students will explain how rules of play and sportsmanship for spectators and participants during games and/or activities make them safe and enjoyable.*

Consumerism

Consumer skills are essential for individuals and families due to the availability of numerous products and services on the market, multiple advertising techniques, the need to make responsible financial management decisions, and to utilize resources impacting the community and environment. These skills can provide a foundation for becoming consumer literate and responsible citizens.

Consumer Decisions		
PL-EP-3.1.1 *Students will identify the difference between wants and needs as it relates to consumer decisions.*	*PL-04-3.1.1* *Students will explain the difference between wants and needs as it relates to consumer decisions.*	*PL-05-3.1.1* *Students will explain the difference between wants and needs as it relates to consumer decisions.*
PL-EP-3.1.2 **Students will identify major factors (price, quality, features) to consider when making consumer decisions.** **DOK 1**	**PL-04-3.1.2** **Students will identify major factors (price, quality, features) to consider when making consumer decisions and will compare and evaluate products and services based on these factors.** **DOK 2**	**PL-05-3.1.2** **Students will identify major factors (price, quality, features) to consider when making consumer decisions and will compare and evaluate products and services based on these factors.** **DOK 2**
PL-EP-3.1.3 **Students will identify ways consumer's buying practices are influenced by peer pressure.** **DOK 1**	**PL-04-3.1.3** **Students will explain ways consumer's buying practices are influenced by peer pressure and desire for status.** **DOK 2**	**PL-05-3.1.3** **Students will identify and explain ways consumer's buying practices are influenced by peer pressure, desire for status and advertising techniques (bandwagon, facts and figures, emotional appeal, endorsement, testimonial).** **DOK 2**
PL- EP-3.1.4 **Students will identify consumer actions (reusing, reducing, recycling) that impact the environment.** **DOK 1**	**PL-04-3.1.4** **Students will identify and describe consumer actions (reusing, reducing, recycling) that impact the environment.** **DOK 2**	**PL-05-3.1.4** **Students will describe consumer actions (reusing, reducing, recycling) and identify ways these actions impact the environment (e.g., conserving resources, reducing pollution, reducing solid waste).** **DOK 2**

PL-EP-3.1.5 *Students will identify the available health and safety agencies in a community that provide services:* • *Health department* • *Fire department* • *Sanitation* • *Police* • *Ambulance services*	*PL-04-3.1.5* *Students will identify and explain the available health and safety agencies in a community that provide services:* • *Health department* • *Fire department* • *Sanitation* • *Police* • *Ambulance services*	*PL-05-3.1.5* *Students will identify and describe the available health and safety agencies in a community that provide services:* • *Health department* • *Fire department* • *Sanitation* • *Police* • *Ambulance services*
Financial Literacy		
PL-EP-3.2.1 **Students will describe different ways to save money (e.g., piggy bank, local bank, savings bonds).** **DOK 1**	**PL-04-3.2.1** **Students will explain the purpose of a budget and define the basic components (income, expenses, savings).** **DOK 2**	**PL-05-3.2.1** **Students will describe various types of expenses (e.g., food, clothing, entertainment) and savings (e.g., piggy bank, bank account, savings bonds) and develop a simple savings plan that would achieve a specific goal.** **DOK 3**

Vocational Studies

Awareness of careers starts in the primary grades and progresses at the middle level to more specific exploration of careers. The total experience through high school allows students to determine a career path that matches their interests, aptitude and abilities, while providing strategies to prepare for a career. The basic skills, knowledge and positive work habits for successful transition from school to postsecondary experiences and to life are addressed throughout a student's educational experience.

Career Awareness, Exploration and Planning		
PL-EP-4.1.1 *Students will identify reasons why people work (food, clothing, shelter).*	*PL-04-4.1.1* *Students will explain why people need to work (e.g., chores, jobs, employment) to meet basic needs (food, clothing, shelter).*	*PL-05-4.1.1* *Students will identify and explain why people need to work (e.g., to earn money, to work with other people) to meet basic needs (food, clothing, shelter) and to provide self-satisfaction and enjoyment.*
PL-EP-4.1.2 *Students will identify jobs (e.g., teacher, police officer) relating to Kentucky's Career Clusters and describe these jobs/careers.*	*PL-04-4.1.2* *Students will identify jobs (e.g., farmer, nurse, truck driver) relating to Kentucky's Career Clusters and describe these jobs/careers.*	*PL-05-4.1.2* *Students will identify jobs (e.g., art/music teacher, carpenter, factory worker, engineer) relating to Kentucky's Career Clusters and describe these jobs/careers.*
PL-EP-4.1.3 **Students will identify how academic classes (e.g., reading and writing) relate to various jobs.** **DOK 1**	**PL-04-4.1.3** **Students will describe how academic classes (e.g., reading and writing) relate to various jobs/careers.** **DOK 1**	**PL-05-4.1.3** **Students will identify a range of academic skills acquired in school (e.g., mathematics, reading, writing) and explain their importance in the workplace.** **DOK 2**
		PL-05-4.1.4 **Students will describe how knowing one's own interests and abilities is helpful when selecting and preparing for a career path.** **DOK 2**

		PL-05-4.1.5 *Students will identify resources (e.g., Career Day, guest speakers, field trips, informal personal surveys) that can be used to obtain career information.*
		PL-05-4.1.6 *Students will identify information that is important to include in the Individual Learning Plan (ILP):* • *Club/organizations* • *Recognition/honors* • *Interest/hobbies*
Employability Skills		
PL-EP-4.2.1 **Students will identify how personal responsibility and good work habits (e.g., attendance, work done on time, follow directions) are important at home, school and work.** **DOK 1**	**PL-04-4.2.1** **Students will describe how personal responsibility and good work habits (e.g., attendance, work done on time, follow directions) are important at home, school and work.** **DOK 2**	**PL-05-4.2.1** **Students will explain how and why personal responsibility and good work habits (e.g., school attendance, honesty, cooperation) are important at home, school and work.** **DOK 2**
PL-EP-4.2.2 **Students will describe team skills (e.g., cooperation, communication) used to compete tasks more efficiently at home, school and work.** **DOK 1**	**PL-04-4.2.2** **Students will describe team skills (e.g., cooperation, communication) and explain how these skills are used to complete tasks more efficiently at home, school and work.** **DOK 2**	**PL-05-4.2.2** **Students will describe team skills (e.g., cooperation, communication) and explain how these skills are used to complete tasks more efficiently at home, school and work.** **DOK 2**

Communication/Technology		
PL-EP-4.3.1 **Students will identify technology tools (e.g., electronic games, phones, computers) that are used in homes and schools.** **DOK 1**	**PL-04-4.3.1** **Students will explain how technology tools (e.g., computer programs, Internet, email, cell phones) are used in homes, schools and jobs.** **DOK 2**	**PL-05-4.3.1** **Students will explain the purposes of technology tools (e.g., computer programs, Internet, email, cell phones) and how these impact productivity in homes, schools and jobs.** **DOK 2**

Health Education

Basic to health education is a foundation of knowledge, attitudes, skills and behaviors impacting healthy lifestyles. Healthy family relationships are critical to maintaining the family unit that historically has been considered the fabric of society. While parents are the primary source from which children learn skills to act responsibly in relationships, the community and school play supportive roles. Health literacy includes an understanding of how the body functions as well as behaviors and decisions that will foster life-long health. It is assuming responsibility for personal health throughout the life cycle and fostering behaviors and practices that will enhance family health.

6th Grade	7th Grade	8th Grade
Personal Wellness		
PL-06-1.1.1 **Students will describe the importance of effective social interaction skills (e.g., respect, self-advocacy, cooperation, communication, identifying and being open to different perspectives and points of view, empathy, friendship).** **DOK 2**	**PL-07-1.1.1** **Students will explain the importance of effective social interaction skills (e.g., respect, self-advocacy, cooperation, communication, identifying and being open to different perspectives and points of view, empathy, friendship).** **DOK 2**	**PL-08-1.1.1** **Students will explain the importance of effective social interaction skills (e.g., respect, self-advocacy, cooperation, communication, identifying and being open to different perspectives and points of view, empathy, friendship).** **DOK 2**
PL-06-1.1.2 **Students will recommend effective strategies (e.g., communication, problem solving, decision-making, refusal skills, anger management, conflict resolution) for responding to stress, conflict, peer pressure and bullying.** **DOK 2**	**PL-07-1.1.2** **Students will recommend and justify effective strategies (e.g., communication, problem solving, decision-making, refusal skills, anger management, conflict resolution) for responding to stress, conflict, peer pressure and bullying.** **DOK 2**	**PL-08-1.1.2** **Students will recommend and justify effective strategies (e.g., communication, problem solving, decision-making, refusal skills, anger management, conflict resolution, relaxation techniques, time management) for responding to stress, conflict, peer pressure and bullying.** **DOK 2**
PL-06-1.1.3 *Students will identify the physical, social and emotional changes (e.g., growth spurts, peer influence, self-confidence, mood swings) that occur during adolescence.*	*PL-07-1.1.3* *Students will describe physical, social and emotional changes (e.g., growth spurts, peer influence, self-confidence, mood swings) that occur during adolescence.*	*PL-08-1.1.3* *Students will explain how physical, social and emotional changes (e.g., growth spurts, peer influence, self-confidence, mood swings) occur during adolescence.*

PL-06-1.1.4 *Students will explain basic structures and function of the reproductive system.*	*PL-07-1.1.4* *Students will explain basic structures and function of the reproductive system as it relates to the human life cycle.*	*PL-08-1.1.4* *Students will explain basic structures and function of the reproductive system and its impact on an individual's well being.*
PL-06-1.1.5 *Students will identify abstinence as the only sure means of preventing pregnancy.*	*PL-07-1.1.5* *Students will identify the benefits (e.g., preventing pregnancy, preventing STDs, maintaining self-esteem) of abstaining from sexual activity.*	*PL-08-1.1.5* *Students will identify the risks (e.g., STD's unwanted pregnancies, HIV/AIDS) to being sexually active and strategies for delaying sexual activity (e.g., using refusal skills, talking with parents, doctors, counselors).*
PL-06-1.1.6 **Students will describe how individual behavior choices and habits relating to diet, exercise, rest and other choices (e.g., tobacco, alcohol, illegal drugs) affect body systems (e.g., circulatory, respiratory, digestive).** **DOK 2**	**PL-07-1.1.6** **Students will describe how individual behavior choices and habits relating to diet, exercise, rest and other choices (e.g., tobacco, alcohol, illegal drugs) affect body systems (e.g., circulatory, respiratory, nervous, digestive).** **DOK 2**	**PL-08-1.1.6** **Students will explain how individual behavior choices and habits relating to diet, exercise, rest and other choices (e.g., tobacco, alcohol, illegal drugs) affect body systems (e.g., circulatory, respiratory, nervous, digestive).** **DOK 2**
PL-06-1.1.7 **Students will describe symptoms, causes, patterns of transmission, prevention and treatments of communicable (colds, flu/influenza, mononucleosis, hepatitis, HIV/AIDS/STD, tuberculosis) and non-communicable diseases (cancer, cardiovascular disease, diabetes, obesity, asthma, emphysema).** **DOK 2**	**PL-07-1.1.7** **Students will describe symptoms, causes, patterns of transmission, prevention and treatments of communicable (colds, flu/influenza, mononucleosis, hepatitis, HIV/AIDS/STD, tuberculosis) and non-communicable diseases (cancer, cardiovascular disease, diabetes, obesity, asthma, emphysema).** **DOK 2**	**PL-08-1.1.7** **Students will explain symptoms, causes, patterns of transmission, prevention and treatments of communicable (colds, flu/influenza, mononucleosis, hepatitis, HIV/AIDS/STD, tuberculosis) and non-communicable diseases (cancer, cardiovascular disease, diabetes, obesity, asthma, emphysema).** **DOK 3**

PL-06-1.1.8 **Students will explain risks associated with unhealthy habits and behaviors (e.g., substance use/abuse of tobacco, alcohol, illegal drugs, prescription drugs, dietary habits/eating disorders, irregular exercise habits, sexual activity).** **DOK 2**	**PL-07-1.1.8** **Students will explain risks associated with unhealthy habits and behaviors (e.g., substance use/abuse of tobacco, alcohol, inhalants, illegal drugs, prescription drugs, dietary habits/eating disorders, irregular exercise habits, sexual activity).** **DOK 2**	**PL-08-1.1.8** **Students will explain risks associated with unhealthy habits and behaviors (e.g., substance use/abuse of tobacco, alcohol, inhalants, illegal drugs, prescription drugs, dietary habits/eating disorders, irregular exercise habits, sexual activity).** **DOK 2**
PL-06-1.1.9 **Students will explain causes, symptoms and prevention of social (e.g., not getting along with others, disagreeable, being uncooperative), mental and emotional problems (e.g., depression, anxiety, eating disorders).** **DOK 2**	**PL-07-1.1.9** **Students will explain causes, symptoms and prevention of social (e.g., not getting along with others, disagreeable, being uncooperative), mental and emotional problems (e.g., depression, anxiety, eating disorders).** **DOK 2**	**PL-08-1.1.9** **Students will explain causes, symptoms and prevention of social (e.g., not getting along with others, disagreeable, being uncooperative) mental and emotional problems (e.g., depression, anxiety, eating disorders).** **DOK 2**
PL-06-1.1.10 *Students will identify resources (e.g. guidance counselors, drug counselors, parents, teachers) that are helpful for individuals seeking treatment or counseling for negative behaviors or addictions (e.g. drug addiction, eating disorders).*	*PL-07-1.1.10* *Students will describe resources (e.g. guidance counselors, drug counselors, parents, teachers) that are helpful for individuals seeking treatment or counseling for negative behaviors or addictions (e.g. drug addiction, eating disorders).*	*PL-08-1.1.10* *Students will describe resources (e.g. guidance counselors, drug counselors, parents, teachers) that are helpful for individuals seeking treatment or counseling for negative behaviors or addictions (e.g. drug addiction, eating disorders).*
PL.06.1.1.11 **Students will recommend effective self-management and coping strategies (e.g., goal-setting, time-management, personal learning styles and preferences, decision-making) for maintaining mental and emotional health.** **DOK 2**	**PL-07-1.1.11** **Students will recommend effective self-management and coping strategies (e.g., goal-setting, time-management, personal learning styles and preferences, decision-making) for maintaining mental and emotional health.** **DOK 2**	**PL-08-1.1. 11** **Students will recommend effective self-management and coping strategies (e.g., goal-setting, time-management, personal learning styles and preferences, and decision-making) for maintaining mental and emotional health.** **DOK 2**

Nutrition		
PL-06-1.2.1 *Students will describe how foods containing nutrients (proteins, carbohydrates, fats, minerals, vitamins, water) are important for the growth and development of healthy bodies (e.g., strong bones and muscles, energy, healthy organs).*	*PL-07-1.2.1* *Students will explain how nutrients (protein, carbohydrates, fats, minerals, vitamins, water) are important for the growth and development of healthy bodies (e.g., strong bones and muscles, energy, healthy organs).*	*PL-08-1.2.1* *Students will explain how nutrients (protein, carbohydrates, fats, minerals, vitamins, water) are important for the growth and development of healthy bodies (e.g., strong bones and muscles, energy, healthy organs).*
PL-06-1.2.2 **Students will explain the importance of key recommendations for good health made in the *Dietary Guidelines for Americans*.** **DOK 2**	**PL-07-1.2.2** **Students will describe key recommendations made in the *Dietary Guidelines for Americans* and explain how these recommendations contribute to good health.** **DOK 2**	**PL-08-1.2.2** **Students will explain why key recommendations made in the *Dietary Guidelines for Americans* contribute to good health.** **DOK 2**
Safety		
PL-06-1.3.1 *Students will describe safety practices (e.g., walking in opposite direction of violence, staying calm in dangerous situations) for dealing with a variety of health hazards (e.g., firearms, motorized vehicles or potentially unsafe or threatening situations) encountered by adolescents.*	*PL-07-1.3.1* *Students will explain how health hazards (e.g., firearms, motorized vehicles, or potentially unsafe or threatening situations) and safety practices (e.g., walking in opposite direction of violence, staying calm in dangerous situations, wearing protective gear, notifying appropriate authority) may influence their personal health.*	*PL-08-1.3.1* *Students will explain how health hazards (e.g., firearms, motorized vehicles, all terrain vehicles, personal water craft, potentially unsafe or threatening situations) and safety practices (e.g., walking in opposite direction of violence, staying calm in dangerous situations, wearing protective gear, notifying appropriate authority) may influence their personal health.*
PL-06-1.3.2 **Students will identify basic first-aid procedures for responding to a variety of life-threatening emergencies (e.g., choking, broken bones, shock, poisons, burns, allergic reactions, bleeding).** **DOK 1**	**PL-07-1.3.2** **Students will describe basic first-aid procedures for responding to a variety of life-threatening emergencies (e.g., choking, broken bones, shock, poisons, burns, allergic reactions, bleeding).** **DOK 2**	**PL-08-1.3.2** **Students will explain how basic first-aid procedures for responding to a variety of life-threatening emergencies (e.g., falls, drowning, choking, bleeding, shock, poisons, burns, temperature-related emergencies, allergic reactions, broken bones) can help reduce the severity of injuries and save lives.** **DOK 3**

Physical Education Addresses both health-related and skill-related components that promote enhanced health behaviors and increase responsible decision-making. Physical Education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being.		
Psychomotor Skills		
PL-06-2.1.1 *Students will apply a combination techniques of locomotor and nonlocomotor skills which are necessary for the improvement of transitional motor skills (e.g., punting, serving, dribbling):* • *locomotor - moving from one place to another (e.g., running, skipping, hopping)* • *nonlocomotor – stationary (e.g., bending, stretching, twisting) movements*	*PL-07-2.1.1* *Students will apply a combination techniques of locomotor and nonlocomotor skills which are necessary for the improvement of transitional motor skills (e.g., punting, serving, dribbling):* • *locomotor - moving from one place to another (e.g., running, skipping, hopping)* • *nonlocomotor - stationary (e.g., bending, stretching, twisting) movements*	*PL-08-2.1.1* *Students will apply a combination techniques of locomotor and nonlocomotor skills which are necessary for the improvement of transitional motor skills (e.g., punting, serving, dribbling):* • *locomotor - moving from one place to another (e.g., running, skipping, hopping)* • *nonlocomotor – stationary (e.g., bending, stretching, twisting) movements*
PL-06-2.1.2 *Students will identify principles of motor skill refinements (e.g., accuracy, technique, movement) that are necessary for skill development.*	*PL-07-2.1.2* *Students will interpret the role that principles of motor skill refinements (e.g., accuracy, technique, movement) have in skill development.*	*PL-08-2.1.2* *Students will analyze the principles of motor skill refinements (e.g., accuracy, technique, movement).*

Lifetime Physical Wellness		
PL-06-2.2.1 **Students will describe the physical, emotional/mental and social benefits gained from regular participation in leisure/recreational, or competitive physical activities:** • **physical benefits (e.g., Weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction body composition, decreased resting heart rate, reduced cholesterol levels)** • **social benefits (e.g., positive interactions with others, respect for self and others, enjoyment, self-expression, group interaction)** • **emotional/mental benefits (e.g., improved confidence, increased self-esteem, stress reduction, self-expression).** **DOK 1** *PL-06-2.2.2* *Students will identify and access techniques (e.g., practice, lessons, videos, drills, peer/teacher review, self-evaluation) for improving performance in games and sports.*	**PL-07-2.2.1** **Students will describe the physical, emotional/mental and social benefits gained from regular participation in leisure/recreational, or competitive physical activities:** • **physical benefits (e.g., Weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction, body composition, decreased resting heart rate, reduced cholesterol levels)** • **social benefits (e.g., positive interactions with others, respect for self and others, enjoyment, self-expression, group interaction)** • **emotional/mental benefits (e.g., improved confidence, increased self-esteem, stress reduction, self-expression).** **DOK 2** *PL-07-2.2.2* *Students will access and describe techniques (e.g., practice, lessons, videos, drills, peer/teacher review, self-evaluation) are used for improving performance in games and sports.*	**PL-08-2.2.1** **Students will explain how physical, emotional/mental and social benefits result from regular participation in leisure/recreational, or competitive physical activities:** • **physical benefits (e.g., Weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction, body composition, decreased resting heart rate, reduced cholesterol levels)** • **social benefits (e.g., positive interactions with others, respect for self and others, enjoyment, self-expression, group interaction)** • **emotional/mental benefits (e.g., improved confidence, increased self-esteem, stress reduction, self-expression).** **DOK 2** *PL-08-2.2.2* *Students will recommend and access techniques (e.g., practice, lessons, videos, drills, peer/teacher review, self-evaluation) for improving performance in games and sports.*

PL-06-2.2.3 **Students will describe the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and the FITT Principle (Frequency, Intensity, Type, Time).** **DOK 1**	**PL-07-2.2.3** **Students will explain the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and how the FITT Principle (Frequency, Intensity, Type, Time) can be used to maintain and improve fitness.** **DOK 2**	**PL-08-2.2.3** **Students will explain the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and how the FITT Principle (Frequency, Intensity, Type, Time) can be used to maintain and improve fitness.** **DOK 2**
PL-06-2.2.4 *Students will identify offensive and defensive strategies in games and sports.*	*PL-07-2.2.4* *Students will describe how offensive and defensive strategies are used in games and sports.*	*PL-08-2.2.4* *Students will describe how offensive and defensive strategies in games and sports make them interesting and enjoyable.*
PL-06-2.2.5 *Students will identify rules of behavior and fair play (e.g., accepting authoritative decisions, assessing one's own performance level, accepting skills and abilities of others through verbal and nonverbal actions for spectators and/or participants) that are necessary during games and sports.*	*PL-07-2.2.5* *Students will identify rules of behavior and fair play (e.g., accepting authoritative decisions, assessing one's own performance level, accepting skills and abilities of others through verbal and nonverbal actions for spectators and/or participants) that are necessary during games and sports.*	*PL-08-2.2.5* *Students will analyze the value of rules of behavior and fair play (e.g., accepting authoritative decisions, assessing one's own performance level, accepting skills and abilities of others through verbal and nonverbal actions for spectators and/or participants) during games and sports.*

Consumerism

Consumer skills are essential for individuals and families due to the availability of numerous products and services on the market, multiple advertising techniques, the need to make responsible financial management decisions and to utilize resources impacting the community and environment. These skills can provide a foundation for becoming consumer literate and responsible citizens.

Consumer Decisions		
PL-06-3.1.1 *Students will identify how wants and needs influence consumer decisions.*	*PL-07-3.1.1* *Students will describe how wants and needs influence consumer decisions.*	*PL-08-3.1.1* *Students will explain and give examples of wants and needs that influence consumer decisions.*
PL-06-3.1.2 **Students will describe factors (brand name, price, quality, features, availability) to consider when making consumer decisions and will compare and evaluate products and services based on these factors.** **DOK 2**	**PL-07-3.1.2** **Students will describe factors (brand name, price, quality, features, availability) to consider when making consumer decisions and will compare and evaluate products and services based on these factors.** **DOK 3**	**PL-08-3.1.2** **Students will explain factors (brand name, price, quality, features, availability) to consider when making consumer decisions and will compare and evaluate products and services based on these factors.** **DOK 3**
PL-06-3.1.3 **Students will describe various factors that influence consumer decisions, such as peer pressure, impulses, desire for status and advertising techniques (facts and figures, glittering generalities, jingles/slogans, endorsement, testimonial, bandwagon, emotional appeal, free gifts/rewards) and explain why they are influential.** **DOK 2**	**PL-07-3.1.3** **Students will describe various factors that influence consumer decisions, such as peer pressure, impulses, desire for status and advertising techniques (facts and figures, glittering generalities, jingles/slogans, endorsement, testimonial, bandwagon, emotional appeal, free gifts/rewards) and explain why they are influential.** **DOK 2**	**PL-08-3.1.3** **Students will describe various factors that influence consumer decisions, such as peer pressure, impulses, desire for status and advertising techniques (facts and figures, glittering generalities, jingles/slogans, endorsement, testimonial, bandwagon, emotional appeal, free gifts/rewards) and explain why they are influential.** **DOK 2**
PL-06-3.1.4 **Students will describe consumer actions (reuse, reduce, recycle) and explain how these actions impact the environment (e.g., conserving resources, reducing pollution, reducing solid waste, conserving energy).** **DOK 2**	**PL-07-3.1.4** **Students will describe consumer actions (reuse, reduce, recycle) and explain how these actions impact the environment (e.g., conserving resources, reducing pollution, reducing solid waste, conserving energy).** **DOK 2**	**PL-08-3.1.4** **Students will describe consumer actions (reuse, reduce, recycle) and explain how these actions impact the environment (e.g., conserving resources, reducing pollution, reducing solid waste, conserving energy).** **DOK 2**

PL-06-3.1.5 *Students will identify and describe a range of resources and services provided by community agencies:* • *Public health department* • *Fire department* • *Police department* • *Family resource center*	*PL-07-3.1.5* Students will identify and describe resources and services provided by community agencies: • *Public health department* • *Fire department* • *Police department* • *Family resource center*	*PL-08-3.1.5* *Students will identify and explain the importance of resources and services provided by community agencies and how these resources benefit the overall community.* • *Public health department* • *Fire department* • *Police department* • *Family resource center*
Financial Literacy		
PL-06-3.2.1 **Students will identify and describe basic components of a budget (e.g., income, fixed and flexible expenses and savings) and develop a savings plan to achieve a specific goal.** **DOK 2**	**PL-07-3.2.1** **Students will identify financial management practices and the purposes of budgeting, savings, banking services (e.g., checking and saving accounts, debit/credit, certificate of deposit), general types of investments (stocks, bonds, mutual funds) and explain why these practices are important in achieving personal financial goals.** **DOK 2**	**PL-08-3.2.1** **Students will identify financial management practices and the purposes of budgeting, savings, banking services (e.g., checking and saving accounts, debit/credit, certificate of deposit), general types of investments (stocks, bonds, mutual funds) and develop a short-tem financial plan.** **DOK 3**

Vocational Studies

Awareness of careers start in the primary grades and progresses at the middle level to more specific exploration of careers. The total experience through high school allows students to determine a career path, which matches their interests, aptitude, and abilities, while providing strategies to prepare for a career. The basic skills, knowledge and positive work habits for successful transition from school to postsecondary experiences and to life itself are addressed throughout a student's educational experience.

Career Awareness, Exploration and Planning		
PL-06-4.1.1 *Students will identify and explain why people need to work (e.g., earn money, contribute to the community, enhance self-esteem) to meet basic needs (food clothing, shelter) and for personal satisfaction and enjoyment.*	*PL-07-4.1.1* *Students will identify and explain why people need to work (e.g., social contacts, make purchases for necessities, expand knowledge, develop skills to meet basic needs (food, clothing, shelter) and for personal satisfaction and enjoyment.*	*PL-08-4.1.1* *Students will identify and summarize why people need to work (e.g., earn money, contribute to society, develop an identity as a worker, enhance self-esteem) to meet basic needs (food, clothing, shelter) and for personal satisfaction and enjoyment.*
PL-06-4.1.2 *Students will identify several job and career opportunities (e.g., sales associate, radio/television broadcaster, child care worker, parks recreation director, computer repair person) in Kentucky's Career Clusters that vary within and among community and regions.*	*PL-07-4.1.2* *Students will identify and describe how job and career opportunities (e.g., veterinarian, sales associate, interior designer, meteorologist, physical therapist) in each of Kentucky's Career Clusters (Agriculture, Arts & Humanities, Business & Marketing, Communications, Construction, Education, Health Science, Human Services, Information Technology, Manufacturing, Public Services, Science & Mathematics, Social Sciences, Transportation) vary within and among communities and regions.*	*PL-08-4.1.2* *Students will identify and explain how jobs and career opportunities in each of Kentucky's) Career Clusters (Agriculture, Arts & Humanities, Business & Marketing, Communications, Construction, Education, Health Science, Human Services, Information Technology, Manufacturing, Public Services, Science & Mathematics, Social Sciences, Transportation) vary within and among communities and regions.*

PL-06-4.1.3 **Students will describe a range of academic skills acquired in school (e.g., verbal and nonverbal communication, computer/technical, mathematical) and explain how these skills impact job success and future career opportunities.** **DOK 2**	**PL-07-4.1.3** **Students will describe a range of academic skills acquired in school (e.g., verbal and nonverbal communication, computer/technical, mathematical, inquiry skills) and explain how these skills impact job success and future career opportunities.** **DOK 2**	**PL-08-4.1.3** **Students will describe a range of academic skills acquired in school (e.g., verbal and nonverbal communication, computer/technical, mathematical, inquiry skills) and explain how these skills impact job success and future career opportunities.** **DOK 2**
PL-06-4.1.4 **Students will describe how informal assessments, work place visits, and guest speakers are used in determining individual traits (e.g., interests, abilities, learning styles) and explain how knowledge of such traits is helpful in developing career goals for an Individual Learning Plan (ILP).** **DOK 2**	**PL-07-4.1.4** **Students will describe how a Career Interest Inventory, Learning Styles Inventory, and other formal assessments, job fairs, job shadowing, academic experiences/grades and hobbies are used in determining individual traits (e.g., interests, abilities, learning styles) and explain how knowledge of such traits is helpful in developing career goals for an Individual Learning Plan (ILP).** **DOK 2**	**PL-08-4.1.4** **Students will describe how a Career Interest Inventory, Learning Styles Inventory, and other formal assessments, job fairs, job shadowing, academic experiences/grades and hobbies are used in determining individual traits (e.g., interests, abilities, learning styles) and explain how knowledge of such traits is helpful in developing career goals for an Individual Learning Plan (ILP).** **DOK 3**
PL-06-4.1.5 *Students will identify resources (e.g., Internet, newspapers, magazines, counselors) and experiences (e.g., shadowing, mentoring) that can be used for locating job and career information.*	*PL-07-4.1.5* *Students will describe how resources (e.g., Internet, government publications, newspapers, magazines, counselors) and experiences (e.g., shadowing, mentoring) can be used for locating job and career information.*	*PL-08-4.1.5* *Students will explain and evaluate resources (e.g., Internet, newspapers, magazines, family members, counselors, employers) and experiences (e.g., shadowing, mentoring) that can be used for locating job and career information.*

PL-06-4.1.6 *Students will identify how the components of the Individual Learning Plan (ILP) can be used as a career planning tool:* • *Academic & career assessments* • *Career goals* • *Four year high school plan* • *Interest/hobbies* • *School and community activities* • *Work experiences*	*PL-07-4.1.6* *Students will explain how the components of the Individual Learning Plan (ILP) can be used as a career planning tool:* • *Academic & career assessments* • *Career goals* • *Four year high school plan* • *Interest/hobbies* • *School and community activities* • *Work experiences*	*PL-08-4.1.6* *Students will explain and give examples of how the components of the Individual Learning Plan (ILP) can be used as tools in career planning:* • *Academic & career assessments* • *Career goals* • *Four year high school plan* • *Interest/hobbies* • *School and community activities* • *Work experiences*
PL-06-4.1.7 *Students will identify available postsecondary options (e.g., community and technical colleges, 4-year colleges, military service) used when developing career goals that are included in the Individual Learning Plan (ILP).*	*PL-07-4.1.7* *Students will describe available postsecondary options (e.g., community technical colleges, 4-year colleges, military service) used when developing career goals that are included in the Individual Learning Plan (ILP).*	*PL-08-4.1.7* *Students will describe how postsecondary choices (e.g., community technical colleges, 4-year colleges, military service) impact attaining career goals that are included in the Individual Learning Plan (ILP)*
Employability Skills		
PL-06-4.2.1 **Students will identify individual work habits/ethics (e.g., respect, time management, problem solving) and explain their importance in the workplace.** **DOK 2**	**PL-07-4.2.1** **Students will describe individual work habits/ethics (e.g., loyalty, problem solving, communication skills, initiative, teamwork, responsibility) and explain their importance in the workplace.** **DOK 2**	**PL-08-4.2.1** **Students will describe individual work habits/ethics (e.g., following directions, problem-solving, time management, respect, self-discipline, punctuality) and explain their importance in the workplace.** **DOK 2**
PL-06-4.2.2 **Students will describe team skills (e.g., goal setting, listening, following directions, communicating, questioning, problem-solving) and explain why they are important in the workplace.** **DOK 2**	**PL-07-4.2.2** **Students will describe team skills (e.g., goal setting, listening, following directions, communicating, questioning, problem-solving, dividing work) and explain why they are important in the workplace.** **DOK 2**	**PL-08-4.2.2** **Students will describe team skills (e.g., goal setting, listening, following directions, communicating, questioning, problem-solving, dividing work) and explain why they are important in the workplace.** **DOK 2**

Communication/Technology		
PL-06-4.3.1 *Students will identify careers that are impacted by scientific and technological changes (e.g., nursing, meteorologist, radio & television broadcaster, journalist).*	*PL-07-4.3.1* *Students will explain how scientific and technological changes impact specific careers (e.g., construction worker, automotive technician, meteorologist, food service industry).*	*PL-08-4.3.1* *Students will explain how jobs/careers (e.g., physical therapist, meteorologist, radio & television broadcaster, web designer) have been created as a result of scientific and technological advancements.*
PL-06-4.3.2 **Students will explain the purposes of technology tools (e.g., robots, cell phones, computer techniques, scanners, personal digital assistant (PDA), laptop computers) and analyze how these impact productivity in homes, schools, and jobs.** **DOK 3**	**PL-07-4.3.2** **Students will explain the purposes of technology tools (e.g., word processing, data bases, spreadsheets, Internet, email, automated phone systems) and analyze how these impact productivity in homes, schools, and jobs.** **DOK 3**	**PL-08-4.3.2** **Students will explain the purposes of technology tools (e.g., multi-media, Internet, digital camera, teleconferencing, debit/credit cards) and analyze how these impact productivity in homes, schools, and jobs.** **DOK 3**
PL-06-4.3.3 **Students will identify communication skills important in the classroom and the workplace:** • **letter writing** • **nonverbal communication skills (e.g., body language, facial expression, posture, dress)** • **verbal skills** **DOK 1**	**PL-07-4.3.3** **Students will explain how certain communication skills are related to the workplace:** • **letter writing (business letter)** • **nonverbal communication skills (e.g., body language, personal appearance, facial expression, posture, dress)** • **verbal skills** • **interview skills (e.g., friendly greeting, maintain eye contact, show enthusiasm about the job, respond positively and honestly, plan questions to ask, listen carefully, thank interviewer)** **DOK 2**	**PL-08-4.3.3** **Students will identify and explain skills used to seek, obtain, maintain, and change jobs/careers:** • **Written communication (e.g., preparing résumé, writing a business letter)** • **Nonverbal communication skills (e.g., making eye contact, listening, smiling, body language, facial expression, posture, dress)** • **Verbal skills (e.g., speaking, giving responses, expressing appreciation, questioning, greeting)** • **Interview skills (e.g., friendly greeting, maintain eye contact, show enthusiasm about the job, respond positively and honestly, plan questions to ask, listen carefully, thank interviewer)** **DOK 2**

Health Education

Basic to health education is a foundation of knowledge, attitudes, skills and behaviors impacting healthy lifestyles. Healthy family relationships are critical to maintaining the family unit, which historically has been considered the fabric of society. While parents are the primary source from which children learn skills to act responsibly in relationships, the community and school play supportive roles. Health literacy includes an understanding of how the body functions as well as behaviors and decisions that will foster life-long health. It is assuming responsibility for personal health throughout the life cycle and fostering behaviors and practices that will enhance family health.

Personal Wellness

PL-HS-1.1.1
Students will explain the importance of effective social interaction skills (e.g., respect, self-advocacy, cooperation, communication, identifying, different perspectives and points of view, empathy, personal growth, relationship building, fulfilling commitments).
DOK 2

PL-HS-1.1.2
Students will apply and justify effective strategies for responding to stress, conflict, peer pressure, bullying and harassment (e.g., problem-solving, decision-making, relaxation techniques, communication, conflict resolution, anger management, time management, refusal skills, self-advocacy).
DOK 3

PL-HS-1.1.3
Students will identify and explain changes in roles, responsibilities and skills needed to effectively work in groups throughout life (e.g., setting realistic goals, time and task management, planning, decision- making process, perseverance).

PL.HS.1.1.4
Students will explain the process of human reproduction and development (e.g., conception, birth, childhood, adolescence, adulthood) and its impact on an individual's well being.

PL-HS-1.1.5
Students will identify and evaluate the risks (e.g., STDs, unwanted pregnancies, HIV/AIDS) of being sexually active, and the strategies (e.g., abstinence, using refusal skills, talking with parents, doctors, counselors) for delaying sexual activity.

PL-HS-1.1.6
Students will analyze the effect of individual behavior choices and habits relating to diet, exercise, rest and other choices (e.g., tobacco, alcohol, and other drug use) on various body systems (e.g., circulatory, respiratory, nervous, digestive).
DOK 3

PL-HS-1.1.7 **Students will describe symptoms, causes, patterns of transmission, prevention and treatments of communicable diseases (hepatitis, tuberculosis, STD/HIV/AIDS) and non-communicable diseases (cancer, diabetes, obesity, cardiovascular disease, arthritis, osteoporosis).** **DOK 2**
PL-HS-1.1.8 **Students will explain risks associated with unhealthy habits and behaviors (e.g., dietary, physical activity, tobacco, alcohol, steroids, other substance abuse, sexual activity, violent/aggressive behavior).** **DOK 2**
PL-HS-1.1.9 **Students will compare causes, symptoms, consequences and treatments of mental and emotional problems (e.g., depression, anxiety, drug abuse, addictions, eating disorders, aggressive behaviors) for individuals and families.** **DOK 2**
PL-HS-1.1.10 *Students will recommend interventions (e.g., cease enabling activities), treatments (e.g., AA, outpatient therapy, group therapy) and other strategies (e.g., enhancing self esteem, building skills for success) as forms of help for negative behaviors or addictions (e.g., drug addictions, eating disorders).*
PL-HS-1.1.11 **Students will recommend and justify effective self-management and coping strategies (e.g., setting realistic goals, time, task and stress management, decision making, learning style preference, perseverance) for maintaining mental and emotional health.** **DOK 3**
Nutrition
PL-HS-1.2.1 *Students will evaluate the positive and negative impact of food selections that contain essential nutrients (proteins, carbohydrates, fats, minerals, vitamins, water) on maintaining and promoting health.*
PL-HS-1.2.2 **Students will explain key recommendations made in the *Dietary Guidelines for Americans*, including recommendations for specific population groups and how these recommendations contribute to good health.** **DOK 2**

Safety
PL-HS-1.3.1 *Students will analyze how responsible use of machinery; motorized vehicles (e.g., all terrain vehicles, motorcycle, automobile, personal watercraft) and firearms reduce the risk of accidents and save lives.*
PL-HS-1.3.2 **Students will explain how proper first-aid procedures (e.g., CPR/rescue breathing) for responding to emergency situations (falls, drowning, choking, bleeding, shock, poisons, burns, temperature-related emergencies, allergic reactions, broken bones, overdose, heart attacks, seizures) can help reduce the severity of injuries and save lives.** **DOK 2**

Physical Education

Addresses both health-related and skill-related components that promote enhanced health behaviors and increase responsible decision-making. Physical Education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being.

Psychomotor Skills

PL-HS-2.1.1
Students will analyze the principles for motor skills (e.g., accuracy, technique, physics, mechanics) and make applications for improving these skills (locomotor, nonlocomotor, transitional).

PL-HS-2.1.2
Students will infer how an analysis of specialized movement patterns (e.g., swinging golf clubs, shooting basketballs) and sequence evaluation (e.g., positioning, performing, following through) can be used to make recommendations for the improvement of skills used in individual, dual, and team sports (e.g., golf, racket sports, softball, volleyball, basketball).

Lifetime Physical Wellness

PL-HS-2.2.1
Students will explain how physical, emotional/mental and social benefits result from regular participation in leisure/recreational or competitive physical activities:

- **physical benefits (e.g., disease prevention, weight management, muscular strength, muscular endurance, flexibility, cardio-respiratory/cardiovascular endurance, control of body movements, stress reduction, increased metabolism, reduction of body fat, decrease in cholesterol, decrease in heart rate)**
- **social benefits (e.g., opportunity for interaction with others, cooperation, friendship, teamwork, respect for others and tolerance)**
- **mental/emotional benefits (e.g., reduces anxiety/stress, depression, provides better body image, improves self-discipline and self-respect)**

DOK 2

PL-HS-2.2.2
Students will apply techniques (e.g., practice, peer/teacher evaluation, individualized coaching) to achieve performance consistency in games and sports.

PL-HS-2.2.3
Students will describe the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory/cardiovascular endurance) and apply the FITT Principle (Frequency, Intensity, Type, Time) to create a comprehensive exercise plan.

DOK 3

PL-HS-2.2.4 *Students will compare offensive and defensive strategies and basic rules of play for a variety of games and sports.*
PL-HS-2.2.5 *Students will analyze the value and role of rules, fair play, cooperation and sportsmanship for spectators/participants during games and sports.*

Consumerism

Consumer skills are essential for individuals and families due to the availability of numerous products and services on the market, multiple advertising techniques, the need to make responsible financial management decisions, and to utilize resources impacting the community and environment. These skills can provide a foundation for becoming consumer literate and responsible citizens.

Consumer Decisions

PL-HS-3.1.1
Students will explain ways to make responsible buying decisions in relation to wants (e.g., technology, name-brand clothing, jewelry, electronics) and needs (food, clothing, housing).

PL-HS-3.1.2
Students will compare products and services based on various factors (e.g., price, quality, features, availability, warranties, comparison shopping,) to consider when making consumer decisions.

DOK 3

PL-HS-3.1.3
Students will explain why various factors that influence consumer decisions, such as peer pressure, impulses, desire for status and advertising techniques (jingles/slogans, facts and figures, glittering generalities, endorsement, testimonial, bandwagon, snob appeal, emotional appeal, free gifts/rewards) are influential.

DOK 2

PL-HS-3.1.4
Students will compare consumer actions (reuse, reduce, recycle, choosing renewable energy sources, using biodegradable packaging materials, composting) and analyze how these actions impact the environment (e.g., conserving resources; reducing water, air, and land pollution; reducing solid waste; conserving energy).

DOK 3

PL-HS-3.1.5
Students will describe the relationship among private, public and nonprofit health agencies and compare the services provided by each agency:

- *private health care facilities (e.g., private physicians, nursing homes, rehabilitation facilities)*
- *hospitals*
- *public health departments and clinics*
- *DES (Disaster and Emergency Services)*
- *Family Resource Centers*
- *Medicare/Medicaid*
- *nonprofit health organizations (e.g., American Heart Association, American Red Cross, American Cancer Society)*

Financial Literacy
PL-HS-3.2.1 **Students will apply financial management practices, including budgeting, banking (e.g., check writing, balancing a checking account), savings and investments (e.g., advantages and disadvantages of savings accounts, stocks, bonds, mutual funds, certificates of deposit, IRAs, 401Ks) and credit (e.g., responsible use of debit and credit cards, establishing and maintaining good credit, cause and effect of bankruptcy) and explain their importance in achieving short and long-term financial goals.** **DOK 3**

Vocational Studies

Awareness of careers starts in the primary grades and progresses at the middle level to more specific exploration of careers. The total experience through high school allows students to determine a career path that matches their interests, aptitude and abilities, while providing strategies to prepare for a career. The basic skills, knowledge, and positive work habits for successful transition from school to postsecondary experiences and to life are addressed throughout a student's educational experience.

Career Awareness, Exploration and Planning

PL-HS-4.1.1
Students will analyze and evaluate why people need to work and how a person's career choice impacts life long earning potential, career opportunities and job satisfaction.

PL-HS-4.1.2
Students will identify and explain how job and career opportunities vary at the local, state and national levels and how components of the Individual Learning Plan (ILP) (e.g., interest inventories, personality test, community service, résumé, awards/recognition) can be a valuable resource for career research, selection, and preparation.

PL-HS-4.1.3
Students will describe academic and non-academic benefits (e.g., communication skills, computer/technical skills, mathematical skills, scientific observation and inquiry skills, teamwork skills, work experience, professional references, insight into tasks and work environments) acquired from a range of education and training options (e.g., college, apprenticeships, internships, on-the-job training military) and interpret ways education and training can impact life-long earning potential and future career opportunities.
DOK 3

PL-HS-4.1.4
Students will analyze information (e.g., personality, values, interests, aptitudes and abilities, learning styles) from a variety of sources (e.g., Career Interest Inventory, Learning Styles Inventory, Career Aptitude Assessment, other formal assessments, job shadowing, academic experiences/grades, extra curricular activities) and explain how the information can be used to develop career goals in an Individual Learning Plan (ILP).
DOK 3

PL-HS-4.1.5
Students will analyze and evaluate a variety of resources (e.g., Internet, print materials, guest speakers, mentors) that could be used to determine advantages and disadvantages (e.g., preparation, salary, benefits, demands of job, location, work environment) of various occupations.

PL-HS-4.1.6
Students will identify and describe supporting documentation that would be needed for the career portfolio/Individual Learning Plan (ILP):

- *business letters (application, recommendation, follow-up)*
- *assessment data (e.g., interest, learning styles, aptitudes and abilities)*
- *résumé*
- *certifications/awards*
- *samples of work (e.g., videos, artwork, portfolio entries)*
- *records of work experiences*
- *transcripts*

PL-HS-4.1.7
Students will compare post-secondary options (e.g., community technical colleges, 4-year colleges, military service) that would be the most appropriate preparation for a specific career path.

Employability Skills

PL-HS-4.2.1
Students will identify individual work habits/ethics (e.g., individual/team responsibilities, willingness to learn, integrity, respect, confidentiality, self-discipline, problem-solving, punctuality, communication skills) and explain their importance in the workplace.
DOK 2

PL-HS-4.2.2
Students will describe team skills (e.g., setting goals, listening, following directions, questioning, communicating, problem-solving, dividing work, conflict resolution, mediation) and evaluate the role of team skills in today's workplace.
DOK 3

Communication/Technology

PL-HS-4.3.1
Students will describe how job market changes have resulted from scientific advancements and the increased use of technology in the global economy.

PL-HS-4.3.2
Students will explain the purposes of technology tools (e.g., satellite, automated phone systems, on-line courses, computer aided drafting (CAD), graphing calculators, spreadsheets, data bases, Internet, on-line-banking) and analyze how these impact productivity in homes, schools, and jobs.
DOK 3

PL-HS-4.3.3
Students will explain and apply skills that are used to seek, obtain, and change jobs/careers and postsecondary opportunities:

- **conducting a job search**
- **writing letters**
- **networking**
- **completing an application**
- **securing a letter of reference**
- **preparing a résumé**
- **applying interview techniques (e.g., learn about employer/job, questions to ask, materials to take, answers to questions you may be asked, verbal and nonverbal communication)**
- **using proper procedures when changing jobs (e.g., give advance notice, write a letter of resignation)**

DOK 3

Core Content for Reading Assessment

Version 4.1
August 2006

Kentucky Department of Education

Introduction
Core Content for Reading Assessment

What is the *Core Content for Reading Assessment*?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Reading Assessment Version 4.1* represents the reading content from Kentucky's Academic Expectations and *Program of Studies* that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Reading Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the *Kentucky Core Content Test* (KCCT) beginning in 2007.

Students should have exposure to various kinds of texts in order to fully understand how to apply the appropriate skills, strategies and concepts outlined in the *Core Content for Reading Assessment*. The *Core Content for Reading Assessment* will include passage selections that are multicultural and from various genres (literary and informational—including expository, persuasive and procedural texts and documents).

The *Core Content for Reading Assessment* is not intended to represent the comprehensive local curriculum for reading assessment and instruction. It is also not the comprehensive *Program of Studies for Reading*, which specifies the minimum content for the required credits for high school graduation, and the primary, intermediate and middle level programs leading to these requirements.

Kentucky *Academic Expectations* for Reading

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment*.

Goal 1: *Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.*

1.2 Students make sense of the variety of materials they read.

How is the *Core Content for Reading Assessment* organized?

The *Reading Core Content for Assessment, Version 4.1*, is organized by grade level (end of primary, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th) in order to ensure continuity and conceptual development. This is different from Version 3.0, which was organized in grade spans. Students are assessed in Reading at grades three through eight (3-8) and tenth (10th).

The *Core Content for Reading Assessment* is organized into five subdomains which are further defined with the *Core Content for Assessment*. The five subdomains for Reading are:

- Forming a Foundation for Reading
- Developing an Initial Understanding
- Interpreting Text
- Reflecting and Responding to Text
- Demonstrating a Critical Stance

The *Core Content for Assessment* includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items inside the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Reading Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding

as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

What do the codes for the *Core Content for Reading Assessment* mean?

The Reading Core Content for Assessment is addressed at each of the grade levels from end of primary through Grade 12. The RD in the code stands for reading, and the next portion of the code represents the grade level. The next number represents the subdomain, and the number after the zero represents the standard. The zero serves as a placeholder only. The codes used are listed below:

Grade Level Codes	Subdomain
EP = end of primary	1 = Forming a Foundation for Reading
04 = fourth grade	2 = Developing an Initial Understanding
05 = fifth grade	3 = Interpreting Text
06 = sixth grade	4 = Reflecting and Responding to Text
07 = seventh grade	5 = Demonstrating a Critical Stance
08 = eighth grade	
09 = ninth grade	
10 = tenth grade	
11 = eleventh grade	
12 = twelfth grade	

A typical code may look like RD-04-2.0.1. This means 4th grade reading content in the subdomain of developing an initial understanding. Since reading does not have organizers, the 0 represents a placeholder and the 1 means the first standard in that subdomain at that grade level.

RD-04-2.0.1
RD Reading (domain)
04 Elementary, fourth grade
2 (Subdomain) Developing an Initial Understanding
1 (first standard)

Forming a Foundation for Reading

Requires readers to develop and apply basic reading skills and strategies across genres to read and understand texts at the appropriate grade level. This involves reading at the word, sentence and connected text levels across content areas that include multicultural texts.

End of Primary	4th Grade	5th Grade
RD-EP-1.0.1 **Students will apply word recognition strategies (e.g., phonetic principles, context clues, structural analysis) to determine pronunciations or meanings of words in passages.** **DOK 2**	**RD-04-1.0.1** **Students will apply word recognition strategies (e.g., phonetic principles, context clues, structural analysis) to determine pronunciations or meanings of words in passages.** **DOK 2**	**RD-05-1.0.1** **Students will apply word recognition strategies (e.g., context clues, structural analysis) to determine pronunciations or meanings of words in passages.** **DOK 2**
RD-EP-1.0.2 **Students will apply knowledge of synonyms, antonyms or compound words for comprehension.** **DOK 2**	**RD-04-1.0.2** **Students will apply knowledge of synonyms, antonyms or compound words for comprehension.** **DOK 2**	**RD-05-1.0.2** **Students will apply knowledge of synonyms, antonyms or compound words to comprehend a passage.** **DOK 2**
RD-EP-1.0.3 **Students will know that some words have multiple meanings and identify the correct meaning as the word is used.** **DOK 2**	**RD-04-1.0.3** **Students will know that some words have multiple meanings and identify the correct meaning as the word is used.** **DOK 2**	**RD-05-1.0.3** **Students will identify words that have multiple meanings and select the appropriate meaning for the context.** **DOK 2**
RD-EP-1.0.4 **Students will apply the meanings of common prefixes or suffixes to comprehend unfamiliar words.** **DOK 2**	**RD-04-1.0.4** **Students will apply the meanings of common prefixes or suffixes to comprehend unfamiliar words.** **DOK 2**	**RD-05-1.0.4** **Students will apply the meanings of common prefixes or suffixes to comprehend unfamiliar words.** **DOK 2**
RD-EP-1.0.5 **Students will identify the purpose of capitalization, punctuation, boldface type, italics or indentations to make meaning of the text.** **DOK 1**	**RD-04-1.0.5** **Students will identify the purpose of capitalization, punctuation, boldface type, italics or indentations to make meaning of the text.** **DOK 1**	**RD-05-1.0.5** **Students will identify the purpose of capitalization, punctuation, boldface type, italics or indentations to make meaning of the text.** **DOK 1**

RD-EP-1.0.6 *Students will formulate questions to guide reading.*	*RD-04-1.0.6* *Students will formulate questions to guide reading.*	*RD-05-1.0.6* *Students will formulate questions to guide reading.*
	RD-04-1.0.7 *Students will scan to find key information.*	*RD-05-1.0.7* *Students will scan to find key information.*
	RD-04-1.0.8 *Students will skim to get the general meaning of a passage.*	*RD-05-1.0.8* *Students will skim to get the general meaning of a passage.*

Developing an Initial Understanding

Requires readers to consider the text as a whole or in a broader perspective to develop an initial understanding.

End of Primary	4th Grade	5th Grade
RD-EP-2.0.1 *Students will distinguish between fiction and non-fiction texts.*	**RD-04-2.0.1** **Students will identify and describe the characteristics of fiction, nonfiction, poetry or plays.** **DOK 2**	**RD-05-2.0.1** **Students will identify and describe the characteristics of fiction, nonfiction, poetry or plays.** **DOK 2**
RD-EP-2.0.2 **Students will describe characters, plot, setting or problem/solution of a passage.** **DOK 3**	**RD-04-2.0.2** **Students will describe characters, plot, setting or problem/solution of a passage.** **DOK 3**	**RD-05-2.0.2** **Students will identify or explain literary elements (e.g., characterization, setting, plot, theme, point of view) in a passage.** **DOK 3**
RD-EP-2.0.3 **Students will locate key ideas or information in a passage.** **DOK 1**	**RD-04-2.0.3** **Students will locate key ideas or information in a passage.** **DOK 1**	**RD-05-2.0.3** **Students will locate key ideas or information in a passage.** **DOK 1**
RD-EP-2.0.4 **Students will interpret specialized vocabulary (words and terms specific to understanding the content).** **DOK 2**	**RD-04-2.0.4** **Students will interpret the meaning of specialized vocabulary (words and terms specific to understanding the content).** **DOK 2**	*RD-05-2.0.4* *Students will interpret the meaning of specialized vocabulary (words and terms specific to understanding the content).*
RD-EP-2.0.5 **Students will identify the correct sequence.** **DOK 1**	**RD-04-2.0.5** **Students will identify and explain the sequence of activities needed to carry out a procedure.** **DOK 2**	**RD-05-2.0.5** **Students will identify and explain the sequence of activities needed to carry out a procedure.** **DOK 2**
	RD-04-2.0.6 *Students will summarize information from a passage.*	RD-05-2.0.6 Students will summarize information from a passage.

RD-EP-2.0.7 **Students will make inferences or draw conclusions based on what is read.** **DOK 3**	**RD-04-2.0.7** **Students will make inferences or draw conclusions based on what is read.** **DOK 3**	**RD-05-2.0.7** **Students will make inferences or draw conclusions based on what is read.** **DOK 3**

Interpreting Text

Requires readers to extend their initial impressions to develop a more complete understanding of what is read. This involves linking information across parts of a text as well as focusing on specific information.

End of Primary	4th Grade	5th Grade
RD-EP-3.0.1 **Students will explain a character's or speaker's actions based on a passage.** **DOK 3**	**RD-04-3.0.1** **Students will explain a character's or speaker's actions based on a passage.** **DOK 3**	**RD-05-3.0.1** **Students will explain a character's or speaker's actions based on a passage.** **DOK 3**
RD-EP-3.0.2 *Students will explain how a conflict in a passage is resolved.*	**RD-04-3.0.2** **Students will explain how a conflict in a passage is resolved.** **DOK 3**	**RD-05-3.0.2** **Students will explain how a conflict in a passage is resolved.** **DOK 3**
RD-EP-3.0.3 *Students will identify an author's purpose in a passage.*	**RD-04-3.0.3** **Students will identify an author's purpose in a passage.** **DOK 2**	**RD-05-3.0.3** **Students will identify an author's purpose in a passage.** **DOK 2**
RD-EP-3.0.4 **Students will identify main ideas or details that support them.** **DOK 3**	**RD-04-3.0.4** **Students will identify main ideas and details that support them.** **DOK 3**	**RD-05-3.0.4** **Students will identify main ideas and details that support them.** **DOK 3**
RD-EP-3.0.5 **Students will identify fact or opinion from a passage.** **DOK 2**	**RD-04-3.0.5** **Students will identify fact or opinion from a passage.** **DOK 2**	*RD-05-3.0.5* *Students will identify fact or opinion from a passage.*
RD-EP-3.0.6 **Students will identify information in a passage that is supported by fact.** **DOK 2**	**RD-04-3.0.6** **Students will identify information in a passage that is supported by fact.** **DOK 2**	**RD-05-3.0.6** **Students will identify the argument and supporting evidence.** **DOK 2**

RD-EP-3.0.7 *Students will identify an author's opinion about a subject.*	**RD-04-3.0.7** **Students will identify an author's opinion about a subject.** **DOK 2**	**RD-05-3.0.7** **Students will identify an author's opinion (bias, misinformation) about a subject.** **DOK 2**
RD-EP-3.0.8 *Students will identify informative or persuasive passages.*	*RD-04-3.0.8* *Students will identify informative or persuasive passages.*	*RD-05-3.0.8* *Students will identify informative or persuasive passages.*
RD-EP-3.0.9 *Students will identify commonly used persuasive techniques (emotional appeal and testimonial) used in a passage.*	*RD-04-3.0.9* *Students will identify commonly used persuasive techniques (bandwagon, emotional appeal, testimonial, expert opinion) used in a passage.*	**RD-05-3.0.9** **Students will identify commonly used persuasive techniques (bandwagon, emotional appeal, testimonial, expert opinion) used in a passage.** **DOK 2**

Reflecting and Responding to Text Requires readers to connect knowledge from the text with their own background knowledge. The focus is on how the text relates to personal knowledge.		
End of Primary	**4th Grade**	**5th Grade**
RD-EP-4.0.1 *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) or other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*	*RD-04-4.0.1* *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) or other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*	*RD-05-4.0.1* *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) or other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*

Demonstrating a Critical Stance

Requires readers to consider the text objectively. It involves a range of tasks, including critical evaluation, comparing and contrasting, and understanding the impact of features such as irony, humor and organization.

End of Primary	4th Grade	5th Grade
RD-EP-5.0.1 *Students will evaluate what is read based on the author's word choice, content or use of literary elements.*	*RD-04-5.0.1* *Students will evaluate what is read based on the author's word choice, content or use of literary elements.*	**RD-05-5.0.1** **Students will evaluate what is read based on the author's word choice, content or use of literary elements.** **DOK 3**
RD-EP-5.0.2 *Students will identify literary devices such as foreshadowing, imagery or figurative language (similes and personification).*	*RD-04-5.0.2* Students will identify literary devices such as foreshadowing, imagery or figurative language (similes, metaphors, and personification).	**RD-05-5.0.2** **Students will identify literary devices such as foreshadowing, imagery or figurative language (similes, metaphors, personification, hyperbole).** **DOK 2**
RD-EP-5.0.3 **Students will apply knowledge of text features (e.g., pictures, lists, charts, graphs, tables of contents, indexes, glossaries, captions, headings) to answer questions about a passage.** **DOK 2**	**RD-04-5.0.3** **Students will apply knowledge of text features (e.g., pictures, lists, charts, graphs, tables of contents, indexes, glossaries, captions, diagrams, headings) to answer questions about a passage.** **DOK 2**	**RD-05-5.0.3** **Students will apply knowledge of text features (e.g., pictures, lists, charts, graphs, tables of contents, indexes, glossaries, captions, diagrams, headings) to answer questions about a passage.** **DOK 2**
RD-EP-5.0.4 *Students will identify the organizational pattern, used (e.g., sequence, cause and effect, or comparison and contrast) to understand the passage.*	**RD-04-5.0.4** **Students will identify the organizational pattern used (e.g., sequence, cause and effect, or comparison and contrast) to understand the passage.** **DOK 2**	**RD-05-5.0.4** **Students will identify the organizational pattern used (e.g., sequence, cause and effect, or comparison and contrast) to understand the passage.** **DOK 2**

Forming a Foundation for Reading

Requires readers to develop and apply basic reading skills and strategies across genres to read and understand texts at the appropriate grade level. This involves reading at the word, sentence and connected text levels across content areas that include multicultural texts.

6th Grade	7th Grade	8th Grade
RD-O6-1.0.1 **Students will apply knowledge of synonyms or antonyms to comprehend a passage.** **DOK 2**	*RD-O7-1.0.1* *Students will apply knowledge of synonyms or antonyms to comprehend a passage.*	*RD-O8-1.0.1* *Students will apply knowledge of synonyms or antonyms to comprehend a passage.*
RD-06-1.0.2 **Students will select, based on context, the appropriate meaning for a word that has multiple meanings.** **DOK 2**	**RD-07-1.0.2** **Students will select, based on context, the appropriate meaning for a word that has multiple meanings.** **DOK 2**	**RD-O8-1.0.2** **Students will select, based on context, the appropriate meaning for a word that has multiple meanings.** **DOK 2**
RD-06-1.0.3 **Students will apply the meanings of word parts (prefixes, suffixes, roots) to comprehend unfamiliar words in a passage.** **DOK 2**	*RD-O7-1.0.3* *Students will apply the meanings of word parts (prefixes, suffixes, roots) to comprehend unfamiliar words in a passage.*	*RD-O8-1.0.3* *Students will apply the meanings of word parts (prefixes, suffixes, roots) to comprehend unfamiliar words in a passage.*
RD-O6-1.0.4 *Students will formulate questions to guide reading.*	*RD-O7-1.0.4* *Students will formulate questions to guide reading.*	*RD-O8-1.0.4* *Students will formulate questions to guide reading.*
RD-O6-1.0.5 *Students will scan to find key information.*	*RD-O7-1.0.5* *Students will scan to find key information.*	*RD-O8-1.0.5* *Students will scan to find key information.*
RD-O6-1.0.6 *Students will skim to get the general meaning of a passage.*	*RD-O7-1.0.6* *Students will skim to get the general meaning of a passage.*	RD-O8-1.0.6 *Students will skim to get the general meaning of a passage.*

RD-O6-1.0.7 **Students will interpret literal and non-literal meanings of words or phrases, based on context.** **DOK 2**	**RD-O7-1.0.7** **Students will interpret literal and non-literal meanings of words or phrases, based on context.** **DOK 2**	**RD-O8-1.0.7** **Students will interpret literal and non-literal meanings of words or phrases, based on context.** **DOK 2**
	RD-O7-1.0.8 **Students will interpret the meaning of jargon, dialect or specialized vocabulary used in a passage.** **DOK 2**	**RD-O8-1.0.8** **Students will interpret the meaning of jargon, dialect or specialized vocabulary used in a passage.** **DOK 2**

Developing an Initial Understanding

Requires readers to consider the text as a whole or in a broader perspective to develop an initial understanding.

6th Grade	7th Grade	8th Grade
RD-O6-2.0.1 **Students will identify or explain the main idea of a passage.** **DOK 3**	**RD-O7-2.0.1** **Students will identify or explain the main idea of a passage.** **DOK 3**	**RD-O8-2.0.1** **Students will explain the main idea of a passage.** **DOK 3**
RD-O6-2.0.2 **Students will identify and describe characteristics of short stories, novels, poetry or plays.** **DOK 2**	**RD-O7-2.0.2** **Students will identify and explain the characteristics of short stories, novels, poetry or plays.** **DOK 2**	**RD-O8-2.0.2** **Students will identify and explain the characteristics of short stories, novels, poetry or plays.** **DOK 2**
RD-O6-2.0.3 **Students will identify or explain the use of literary elements (e.g., characterization, setting, plot, theme, point of view) in a passage.** **DOK 3**	**RD-O7-2.0.3** **Students will identify or explain the use of literary elements (e.g., characterization, setting, plot, theme, point of view) in a passage.** **DOK 3**	
RD-O6-2.0.4 **Students will locate key ideas or information in a passage.** **DOK 1**	**RD-O7-2.0.4** **Students will locate key ideas or information in a passage.** **DOK 1**	**RD-O8-2.0.4** **Students will locate key ideas or information in a passage.** **DOK 1**
RD-O6-2.0.5 **Students will summarize information from a paragraph, a section of a passage or the entire passage.** **DOK 2**	**RD-O7-2.0.5** **Students will summarize information from a paragraph, a section of a passage or an entire passage.** **DOK 2**	**RD-O8-2.0.5** **Students will paraphrase information from a paragraph, a section of a passage or an entire passage.** **DOK 2**
RD-O6-2.0.6 *Students will apply the information contained in a passage to accomplish a task/procedure or answer questions about a passage.*	*RD-O7-2.0.6* *Students will apply the information contained in a passage to accomplish a task/procedure or answer questions about a passage.*	*RD-O8-2.0.6* *Students will apply the information contained in a passage to accomplish a task/procedure or answer questions about a passage.*

RD-O6-2.0.7 **Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.** **DOK 3**	**RD-O7-2.0.7** **Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.** **DOK 3**	**RD-O8-2.0.7** **Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.** **DOK 3**
RD-O6-2.0.8 **Students will explain the meaning of concrete or abstract terms, based on the context from a passage (e.g., "loaded" words, connotation and denotation).** **DOK 2**	**RD-O7-2.0.8** **Students will explain the meaning of concrete and abstract terms, based on the context from a passage (e.g., "loaded" words, connotation and denotation).** **DOK 2**	**RD-O8-2.0.8** **Students will interpret the meaning of concrete and abstract terms, based on the context from a passage (e.g., "loaded" words, connotation and denotation).** **DOK 2**

Interpreting Text

Requires readers to extend their initial impressions to develop a more complete understanding of what is read. This involves linking information across parts of a text as well as focusing on specific information.

6th Grade	7th Grade	8th Grade
RD-O6-3.0.1 **Students will explain the relationship between events in a story and a character's behavior.** **DOK 3**	**RD-O7-3.0.1** **Students will analyze the relationship between events in a story and a character's behavior.** **DOK 3**	**RD-O8-3.0.1** **Students will analyze the relationship between a speaker's or character's motivation and behavior in a passage, as revealed by the dilemmas.** **DOK 3**
RD-O6-3.0.2 **Students will identify an author's purpose in a passage.** **DOK 2**	**RD-O7-3.0.2** **Students will identify or explain an author's purpose in a passage.** **DOK 2**	**RD-O8-3.0.2** **Students will identify or explain an author's purpose in a passage.** **DOK 2**
RD-O6-3.0.3 **Students will explain or analyze how a conflict in a passage is resolved.** **DOK 3**	**RD-O7-3.0.3** **Students will explain or analyze how a conflict in a passage is resolved.** **DOK 3**	**RD-O8-3.0.3** **Students will explain or analyze how a conflict in a passage is resolved.** **DOK 3**
RD-O6-3.0.4 **Students will identify details that support the main idea or explain their importance in a passage.** **DOK 3**	**RD-O7-3.0.4** **Students will identify details that support the main idea or explain their importance in a passage.** **DOK 3**	**RD-O8-3.0.4** **Students will analyze the use of details that support the main idea or explain their importance in a passage.** **DOK 3**
RD-O6-3.0.5 *Students will distinguish between informative and persuasive passages.*	*RD-O7-3.0.5* *Students will distinguish between informative and persuasive passages.*	
RD-O6-3.0.6 *Students will distinguish between fact or opinion.*	*RD-O7-3.0.6* *Students will distinguish between fact or opinion.*	

RD-O6-3.0.7 **Students will identify an author's opinion about a subject.** **DOK 2**	*RD-O7-3.0.7* *Students will identify or explain an author's opinion about a subject.*	*RD-O8-3.0.7* *Students will identify or explain an author's position based on evidence in a passage.*
RD-O6-3.0.8 **Students will identify the argument or supporting evidence from a passage.** **DOK 2**	**RD-O7-3.0.8** **Students will identify the argument or supporting evidence from a passage.** **DOK 2**	**RD-O8-3.0.8** **Students will explain an author's argument or identify evidence from the passage to support the author's argument.** **DOK 3**
RD-O6-3.0.9 **Students will identify persuasive techniques (e.g., expert opinion, emotional appeal, logical appeal, repetition) or propaganda techniques (e.g., testimonial, bandwagon).** **DOK 2**	**RD-O7-3.0.9** **Students will identify persuasive techniques (e.g., expert opinion, logical/emotional/ethical appeal, repetition, rhetorical question) or propaganda techniques (e.g., testimonial, bandwagon).** **DOK 2**	**RD-O8-3.0.9** **Students will identify persuasive techniques (e.g., expert opinion, logical/emotional/ ethical appeal, repetition, rhetorical question, allusion) or propaganda techniques (e.g., testimonial, bandwagon, personal attack) or explain how each is used.** **DOK 2**

Reflecting and Responding to Text Requires readers to connect knowledge from the text with their own background knowledge. The focus is on how the text relates to personal knowledge.		
6th Grade	**7th Grade**	**8th Grade**
RD-O6-4.0.1 *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) and other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*	*RD-O7-4.0.1* *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) and other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*	*RD-O8-4.0.1* *Students will connect information from a passage to students' lives (text-to-self), real world issues (text-to-world) and other texts (text-to-text - e.g., novel, short story, song, film, website, etc.).*
	RD-O7-4.0.2 *Students will use evidence from a passage to formulate opinions in response to a reading passage.*	*RD-O8-4.0.2* *Students will use evidence from a passage to formulate opinions in response to a reading passage.*

Demonstrating a Critical Stance

Requires readers to consider the text objectively. It involves a range of tasks, including critical evaluation, comparing and contrasting and understanding the impact of features such as irony, humor and organization.

6th Grade	**7th Grade**	**8th Grade**
RD-O6-5.0.1 *Students will identify the ways in which similar themes, ideas and concepts are developed in more than one literary work.*	*RD-O7-5.0.1* *Students will identify the interrelationships (themes, ideas, concepts) that are developed in more than one literary work.*	*RD-O8-5.0.1* *Students will explain the interrelationships (themes, ideas, concepts) that are developed in more than one literary work.*
		RD-O8-5.0.2 **Students will interpret the use of literary elements (e.g., characterization, setting, plot, theme, point of view) in a passage.** **DOK 3**
RD-O6-5.0.3 **Students will identify literary devices (e.g., symbolism, irony, analogies, imagery, foreshadowing, figurative language).** **DOK 2**	**RD-O7-5.0.3** **Students will identify and explain the use of literary devices (e.g., symbolism, irony, analogies, imagery, foreshadowing, figurative language).** **DOK 3**	**RD-O8-5.0.3** **Students will identify and explain the use of literary devices (e.g., symbolism, irony, analogies, imagery, foreshadowing, figurative language).** **DOK 3**
		RD-O8-5.0.4 *Students will analyze the author's use of literary devices in a passage (e.g., symbolism, irony, analogies, imagery, figurative language).*
RD-O6-5.0.5 *Students will evaluate the author's word choice, style, content, or use of literary elements.*	*RD-O7-5.0.5* *Students will evaluate the author's word choice, style, content, or use of literary elements.*	**RD-O8-5.0.5** **Students will evaluate the author's word choice, style, content, or use of literary elements.** **DOK 3**

	RD-O7-5.0.6 *Students will compare and contrast elements, views, ideas, or events presented in one or more passages.*	*RD-O8-5.0.6* *Students will compare and contrast elements, views, ideas, or events presented in one or more passages.*
	RD-O7-5.0.7 *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*	*RD-O8-5.0.7* *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*
RD-O6-5.0.8 **Students will explain or analyze how the use of text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures and captions) enhances the reader's understanding of a passage.** **DOK 3**	**RD-O7-5.0.8** **Students will explain or analyze how the use of text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures and captions) enhances the reader's understanding of a passage.** **DOK 3**	**RD-O8-5.0.8** **Students will explain or analyze how the use of text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures and captions) enhances the reader's understanding of a passage.** **DOK 3**
RD-O6-5.0.9 **Students will identify organizational patterns (e.g., cause and effect, comparison, contrast, sequence) to understand a passage.** **DOK 2**	**RD-O7-5.0.9** **Students will apply knowledge of organizational patterns (e.g., cause and effect, comparison, contrast, sequence) to understand a passage.** **DOK 2**	*RD-O8-5.0.9* *Students will analyze the organizational patterns (cause and effect, comparison or contrast, sequence, generalizations) in a passage.*

Forming a Foundation for Reading

Requires readers to develop and apply basic reading skills and strategies across genres to read and understand texts at the appropriate grade level. This involves reading at the word, sentence and connected text levels across content areas that include multicultural texts.

Grade 9	Grade 10	Grade 11	Grade 12
RD-09-1.0.1 *Students will interpret literal or non-literal meanings of words in a passage.*	**RD-10-1.0.1** **Students will interpret literal or non-literal meanings of words in a passage.** **DOK 2**	*RD-11-1.0.1* *Students will interpret literal or non-literal meanings of words in a passage.*	*RD-12-1.0.1* *Students will interpret literal or non-literal meanings of words in a passage.*
RD-09-1.0.2 *Students will make predictions based on what is read.*	**RD-10-1.0.2** **Students will make predictions based on what is read.** **DOK 2**	*RD-11-1.0.2* *Students will make predictions based on what is read.*	*RD-12-1.0.2* *Students will make predictions based on what is read.*
RD-09-1.0.3 *Students will formulate questions to guide reading.*	*RD-10-1.0.3* *Students will formulate questions to guide reading.*	*RD-11-1.0.3* *Students will formulate questions to guide reading.*	*RD-12-1.0.3* *Students will formulate questions to guide reading.*
RD-09-1.0.4 *Students will interpret the meaning of jargon, dialect or specialized vocabulary found in a passage.*	**RD-10-1.0.4** **Students will interpret the meaning of jargon, dialect or specialized vocabulary found in a passage.** **DOK 2**	*RD-11-10.0.4* *Students will interpret the meaning of jargon, dialect or specialized vocabulary found in a passage.*	*RD-12-1.0.4* *Students will interpret the meaning of jargon, dialect or specialized vocabulary found in a passage.*

Developing an Initial Understanding

Requires readers to consider the text as a whole or in a broader perspective to develop an initial understanding.

Grade 9	Grade 10	Grade 11	Grade 12
RD-09-2.0.1 *Students will paraphrase information in a passage.*	**RD-10-2.0.1** **Students will paraphrase information in a passage.** **DOK 2**	*RD-11-2.0.1* *Students will paraphrase information in a passage.*	*RD-12-2.0.1* *Students will paraphrase information in a passage.*
RD-09-2.0.2 *Students will identify essential information from a passage needed to accomplish a task.*	**RD-10-2.0.2** **Students will identify essential information from a passage needed to accomplish a task.** **DOK 1**	*RD-11-2.0.2* *Students will identify essential information from a passage needed to accomplish a task.*	*RD-12-2.0.2* Students will identify essential information from a passage needed to accomplish a task.
RD-09-2.0.3 *Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.*	**RD-10-2.0.3** **Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.** **DOK 2**	*RD-11-2.0.3* *Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.*	*RD-12-2.0.3* *Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.*
RD-09-2.0.4 *Students will follow the sequence of information from a passage.*	*RD-10-2.0.4* *Students will follow the sequence of information from a passage.*	*RD-11-2.0.4* *Students will follow the sequence of information from a passage.*	*RD-12-2.0.4* *Students will follow the sequence of information from a passage.*
RD-09-2.0.5 *Students will interpret concrete or abstract terms using context from the passage.*	**RD-10-2.0.5** **Students will interpret concrete or abstract terms using context from the passage.** **DOK 2**	*RD-11-2.0.5* *Students will interpret concrete or abstract terms using context from the passage.*	*RD-12-2.0.5* *Students will interpret concrete or abstract terms using context from the passage.*

RD-09-2.0.6 *Students will explain the main ideas of a passage and identify the key ideas or information that support them.*	**RD-10-2.0.6** **Students will explain the main ideas of a passage and identify the key ideas or information that support them.** **DOK 3**	*RD-11-2.0.6* *Students will explain the main ideas of a passage and identify the key ideas or information that support them.*	*RD-12-2.0.6* *Students will explain the main ideas of a passage and identify the key ideas or information that support them.*
RD-09-2.0.7 *Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.*	**RD-10-2.0.7** **Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.** **DOK 3**	*RD-11-2.0.7* *Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.*	*RD-12-2.0.7* *Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.*

Interpreting Text

Requires readers to extend their initial impressions to develop a more complete understanding of what is read. This involves linking information across parts of a text as well as focusing on specific information.

Grade 9	Grade 10	Grade 11	Grade 12
RD-09-3.0.1 *Students will explain or analyze how a conflict in a passage is resolved.*	**RD-10-3.0.1** **Students will explain or analyze how a conflict in a passage is resolved.** **DOK 3**	*RD-11-3.0.1* *Students will analyze how a conflict in a passage is resolved.*	*RD-12-3.0.1* *Students will analyze how a conflict in a passage is resolved.*
RD-09-3.0.2 *Students will identify or explain an author's purpose in a passage.*	**RD-10-3.0.2** **Students will identify or explain an author's purpose in a passage.** **DOK 2**	*RD-11-3.0.2* *Students will analyze an author's purpose in a passage.*	*RD-12-3.0.2* *Students will analyze an author's purpose in a passage.*
RD-09-3.0.3 *Students will explain an author's position based on evidence in a passage.*	**RD-10-3.0.3** **Students will explain an author's position based on evidence in a passage.** **DOK 2**	*RD-11-3.0.3* *Students will explain an author's position based on evidence in a passage.*	*RD-12-3.0.3* *Students will explain an author's position based on evidence in a passage.*
RD-09-3.0.4 *Students will accept or reject an argument, giving supporting evidence from the passage.*	**RD-10-3.0.4** **Students will accept or reject an argument, giving supporting evidence from the passage.** **DOK 3**	*RD-11-3.0.4* *Students will accept or reject an argument, giving supporting evidence from the passage.*	*RD-12-3.0.4* *Students will accept or reject an argument, giving supporting evidence from the passage.*
RD-09-3.0.5 *Students will analyze an argument, giving supporting evidence from the passage.*	**RD-10-3.0.5** **Students will analyze an argument, giving supporting evidence from the passage.** **DOK 3**	*RD-11-3.0.5* *Students will evaluate an argument, giving supporting evidence from the passage.*	*RD-12-3.0.5* *Students will evaluate an argument, giving supporting evidence from the passage.*

RD-09-3.0.6 *Students will analyze the relationship between a speaker's or character's motivation and behavior in a passage, as revealed by the dilemmas.*	**RD-10-3.0.6** **Students will analyze the relationship between a speaker's or character's motivation and behavior in a passage, as revealed by the dilemmas.** **DOK 3**	*RD-11-3.0.6* *Students will analyze the relationship between a speaker's or character's motivation and behavior in a passage, as revealed by the dilemmas.*	*RD-12-3.0.6* *Students will analyze the relationship between a speaker's or character's motivation and behavior in a passage, as revealed by the dilemmas.*
RD-09-3.0.7 *Students will analyze or evaluate the use of supporting details as they relate to the author's message.*	**RD-10-3.0.7** **Students will analyze or evaluate the use of supporting details as they relate to the author's message.** **DOK 3**	*RD-11-3.0.7* *Students will analyze or evaluate the use of supporting details as they relate to the author's message.*	*RD-12-3.0.7* *Students will analyze or evaluate the use of supporting details as they relate to the author's message.*
RD-09-3.0.8 *Students will analyze or evaluate the use of persuasive or propaganda techniques within a passage.*	**RD-10-3.0.8** **Students will analyze or evaluate the use of persuasive or propaganda techniques within a passage.** **DOK 3**	*RD-11-3.0.8* *Students will analyze or evaluate the use of persuasive or propaganda techniques within a passage.*	*RD-12-3.0.8* *Students will analyze or evaluate the use of persuasive or propaganda techniques within a passage.*
RD-09-3.0.9 *Students will explain the appropriateness of the author's content for an intended audience.*	**RD-10-3.0.9** **Students will explain the appropriateness of the author's content for an intended audience.** **DOK 3**	*RD-11-3.0.9* *Students will explain the appropriateness of the author's content for an intended audience.*	*RD-12-3.0.9* *Students will explain the appropriateness of the author's content for an intended audience.*

Reflecting and Responding to Text

Requires readers to connect knowledge from the text with their own background knowledge. The focus is on how the text relates to personal knowledge.

Grade 9	Grade 10	Grade 11	Grade 12
RD-09-4.0.1 *Students will analyze the content or make connections as it applies to students' lives (text-to-self), real-world issues (text-to-world) or other texts (text-to-text).*	*RD-10-4.0.1* *Students will analyze the content or make connections as it applies to students' lives (text-to-self), real-world issues (text-to-world) or other texts (text-to-text).*	*RD-11-4.0.1* *Students will evaluate the content or make connections as it applies to students' lives (text-to-self), real-world issues (text-to-world) or other texts (text-to-text).*	*RD-12-4.0.1* *Students will evaluate the content or make connections as it applies to students' lives (text-to-self), real-world issues (text-to-world) or other texts (text-to-text).*
RD-09-4.0.2 *Students will use evidence from a passage to formulate opinions in response to a reading passage.*	*RD-10-4.0.2* *Students will use evidence from a passage to formulate opinions in response to a reading passage.*	*RD-11-4.0.2* *Students will use evidence from a passage to formulate opinions in response to a reading passage.*	*RD-12-4.0.2* *Students will use evidence from a passage to formulate opinions in response to a reading passage.*

Demonstrating a Critical Stance

Requires readers to consider the text objectively. It involves a range of tasks, including critical evaluation, comparing and contrasting and understanding the impact of features such as irony, humor and organization.

Grade 9	Grade 10	Grade 11	Grade 12
RD-09-5.0.1 *Students will compare and contrast the characteristics of a variety of literary genres.*	**RD-10-5.0.1** **Students will compare and contrast the characteristics of a variety of literary genres.** **DOK 3**	*RD-11-5.0.1* *Students will compare and contrast the characteristics of a variety of literary genres.*	*RD-12-5.0.1* *Students will compare and contrast the characteristics of a variety of literary genres.*
RD-09-5.0.2 *Students will analyze or evaluate the effectiveness of literary elements (e.g., theme, characterization, setting, point of view, conflict and resolution, plot, structure) within a passage.*	**RD-10-5.0.2** **Students will analyze or evaluate the effectiveness of literary elements (e.g., theme, characterization, setting, point of view, conflict and resolution, plot, structure) within a passage.** **DOK 3**	*RD-11-5.0.2* *Students will analyze or evaluate the effectiveness of literary elements (e.g., theme, characterization, setting, point of view, conflict and resolution, plot, structure) within a passage.*	*RD-12-5.0.2* *Students will analyze or evaluate the effectiveness of literary elements (e.g., theme, characterization, setting, point of view, conflict and resolution, plot, structure) within a passage.*
RD-09-5.0.3 *Students will analyze the author's use of literary devices in a passage (e.g., symbolism, irony, analogies, imagery, figurative language).*	**RD-10-5.0.3** **Students will analyze the author's use of literary devices in a passage (e.g., symbolism, irony, analogies, imagery, figurative language).** **DOK 3**	*RD-11-5.0.3* *Students will analyze the author's use of literary devices in a passage (e.g., symbolism, irony, analogies, imagery, figurative language).*	*RD-12-5.0.3* *Students will analyze the author's use of literary devices in a passage (e.g., symbolism, irony, analogies, imagery, figurative language).*
RD-09-5.0.4 *Students will critique the author's word choice, style, tone or content.*	**RD-10-5.0.4** **Students will critique the author's word choice, style, tone or content.** **DOK 3**	*RD-11-5.0.4* *Students will critique the author's word choice, style, tone or content.*	*RD-12-5.0.4* *Students will critique the author's word choice, style, tone or content.*

RD-09-5.0.5 *Students will compare or contrast elements, views, ideas or events presented in one or more passages.*	**RD-10-5.0.5** **Students will compare or contrast elements, views, ideas or events presented in one or more passages** **DOK 4**	*RD-11-5.0.5* *Students will compare or contrast elements, views, ideas or events presented in one or more passages.*	*RD-12-5.0.5* *Students will compare or contrast elements, views, ideas or events presented in one or more passages.*
RD-09-5.0.6 *Students will analyze the ways in which similar themes or ideas are developed in more than one text.*	**RD-10-5.0.6** **Students will analyze the ways in which similar themes or ideas are developed in more than one text.** **DOK 4**	*RD-11-5.0.6* *Students will analyze the ways in which similar themes or ideas are developed in more than one text.*	*RD-12-5.0.6* *Students will analyze the ways in which similar themes or ideas are developed in more than one text.*
RD-09-5.0.7 *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*	*RD-10-5.0.7* *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*	*RD-11-5.0.7* *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*	*RD-12-5.0.7* *Students will evaluate the effectiveness of organization or format in fulfilling the purpose of a passage.*
RD-09-5.0.8 *Students will explain how the use of text features (e.g., illustrations, charts, lists, tables, graphs, tables of contents, indexes, glossaries, headings, captions), format or layout enhances the reader's understanding of a passage.*	**RD-10-5.0.8** **Students will explain how the use of text features (e.g., illustrations, charts, lists, tables, graphs, tables of contents, indexes, glossaries, headings, captions), format or layout enhances the reader's understanding of a passage.** **DOK 3**	*RD-11-5.0.8* *Students will explain how the use of text features (e.g., illustrations, charts, lists, tables, graphs, tables of contents, indexes, glossaries, headings, captions), format or layout enhances the reader's understanding of a passage.*	*RD-12-5.0.8* *Students will explain how the use of text features (e.g., illustrations, charts, lists, tables, graphs, tables of contents, indexes, glossaries, headings, captions), format or layout enhances the reader's understanding of a passage.*

RD-09-5.0.9 *Students will analyze the effectiveness of the organizational patterns in a passage (e.g., cause and effect, repetition, comparison and contrast, sequence, generalizations) for fulfilling the purpose of the passage.*	**RD-10-5.0.9** **Students will analyze the effectiveness of the organizational patterns in a passage (e.g., cause and effect, repetition, comparison and contrast, sequence, generalizations) for fulfilling the purpose of the passage.** **DOK 3**	*RD-11-5.0.9* *Students will analyze the effectiveness of the organizational patterns in a passage (e.g., cause and effect, repetition, comparison and contrast, sequence, generalizations) for fulfilling the purpose of the passage.*	*RD-12-5.0.9* *Students will analyze the effectiveness of the organizational patterns in a passage (e.g., cause and effect, repetition, comparison and contrast, sequence, generalizations) for fulfilling the purpose of the passage.*

Core Content for Science Assessment

Version 4.1
August 2006

Kentucky Department of Education

Introduction
Core Content for Science Assessment

What is the *Core Content for Science Assessment*?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Science Assessment*, Version 4.1, represents the science content from Kentucky's Academic Expectations and *Program of Studies* that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Science Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the Kentucky Core Content Test (KCCT) beginning in 2007.

The *Core Content for Science Assessment* is not intended to represent the comprehensive local curriculum for science assessment and instruction. It is also not the comprehensive *Program of Studies for Science,* which specifies the minimum content for the required credits for high school graduation, and the primary, intermediate and middle level programs leading to these requirements.

Kentucky Academic Expectations for Science

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment*.

Goal 2: *Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.*

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

2.5 Students understand that under certain conditions nature tends to remain the same or move toward a balance.

2.6 Students understand how living and nonliving things change over time and the factors that influence the changes.

How is the *Core Content for Science Assessment* organized?
The *Science Core Content for Assessment, Version 4.1* is organized by grade level (end of primary – 3rd, 4th, 5th, 6th, 7th, 8th, and high school) in order to ensure continuity and conceptual development even though the current state assessment varies for those grade levels based on the content area. This is different from Version 3.0, which was organized in grade spans. This version of the *Core Content for Science Assessment* includes 'off year' content standards as well as content for the assessed grades (four, seven and eleven).

This version of the *Core Content for Science Assessment* has been structured using organizers based on those found in the *ATLAS of Science Literacy (American Association for the Advancement of Science, 2001)*. Other national research-based resources used to make the determinations for content placement included *Benchmarks for Science Literacy* and *Science for All Americans,* which also were published by the American Association for the Advancement of Science *(http://www.aaas.org) and the National Science Education Standards (National Research Council, 1996).*

SUBDOMAINS with related ORGANIZERS

Subdomain	Organizers	Subdomain	Organizers
Physical Science	• Structure and Transformation of Matter • Motion and Forces	**Earth/Space Science**	• The Earth and the Universe
Biological Science	• Unity and Diversity • Biological Change	**Unifying Concepts**	• Energy Transformations • Interdependence

Each section has a narrative describing the organizer showing how the conceptual development of key concepts should spiral through the K-12 grades, and highlighting the unifying themes (Academic Expectations) and process skills that will provide rigor and help students to understand the content.

The *Core Content for Science Assessment Version 4.1* includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students

to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items inside the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Science Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

What do the codes for the *Core Content for Science Assessment* mean?

Each content standard is preceded by a code. The code begins with SC for science and is then followed by a grade level designation and then a 3-digit number that indicates subdomain, organizer, and sequential standard, respectively. The codes used are listed below.

Grade Level Codes
EP = end of primary
04 = fourth grade
05 = fifth grade
06 = sixth grade
07 = seventh grade
08 = eighth grade

Subdomain
1 = Physical Science
2 = Earth/Space Science
3 = Biological Science
4 = Unifying Concepts

Organizer
1 = Structure and Transformation of Matter
2 = Motion and Forces
3 = The Earth and The Universe
4 = Unity and Diversity
5 = Biological Change
6 = Energy Transformations

HS = High school

7 = Interdependence

A typical code may look like SC-06-1.2.1. This means 6th grade science content in the subdomain of physical science, under the organizer of Motion and Forces, and it is the first standard listed for that organizer at that grade level.

SC-06-1.2.1
SC Science (domain)
06 Sixth Grade
1 Physical Science (subdomain)
2 Motion and Forces (organizer)
1 (first standard)

Structure and Transformation of Matter

A basic understanding of matter is essential to the conceptual development of other big ideas in science. In the elementary years of conceptual development, students will be studying properties of matter and physical changes of matter at the macro level through direct observations, forming the foundation for subsequent learning. During the middle years, physical and chemical changes in matter are observed and students begin to relate these changes to the smaller constituents of matter—namely, atoms and molecules. By high school, students will be dealing with evidence from both direct and indirect observations (microscopic level and smaller) to consider theories related to change and conservation of matter. The use of models (and an understanding of their scales and limitations) is an effective means of learning about the structure of matter. Looking for patterns in properties is also critical to comparing and explaining differences in matter.

End of Primary	4th Grade	5th Grade
Physical Science		
SC-EP-1.1.1 **Students will classify material objects by their properties providing evidence to support their classifications.** **Objects are made of one or more materials such as paper, wood and metal. Objects can be described by the properties of the materials from which they are made. Those properties and measurements of the objects can be used to separate or classify objects or materials.** **DOK 3**		**SC-05-1.1.1** **Students will describe the physical properties of substances (e.g., boiling point, solubility, density).** **A substance has characteristic physical properties (e.g., boiling point, solubility, density) that are independent of the amount of the sample.** **DOK 2**
SC-EP-1.1.2 *Students will understand that objects have many observable properties such as size, mass, shape, color, temperature, magnetism and the ability to interact and/or to react with other substances. Some properties can be measured using tools such as metric rulers, balances and thermometers.*		

SC-EP-1.1.3 **Students will describe the properties of water as it occurs as a solid, liquid or gas.** **Matter (water) can exist in different states--solid, liquid and gas. Properties of those states of matter can be used to describe and classify them.** **DOK 2**	**SC-04-1.1.1** **Students will explain how matter, including water, can be changed from one state to another.** **Materials can exist in different states--solid, liquid and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling. Resulting cause and effect relationships should be explored, described and predicted.** **DOK 3**	

Motion and Forces

Whether observing airplanes, baseballs, planets or people, the motion of all bodies is governed by the same basic rules. In the elementary years of conceptual development, students need multiple opportunities to experience, observe and describe (in words and pictures) motion, including factors (pushing and pulling) that affect motion. At the middle level, qualitative descriptions of the relationship between forces and motion will provide the foundation for quantitative applications of Newton's Laws. These ideas are more fully developed at the high school level along with the use of models to support evidence of motion in abstract or invisible phenomena such as electromagnetism.

End of Primary	4th Grade	5th Grade
Physical Science		
SC-EP-1.2.1 **Students will describe and make inferences about the interactions of magnets with other magnets and other matter (e.g., magnets can make some things move without touching them).** **Magnets have observable properties that allow them to attract and repel each other and attract certain kinds of other materials (e.g., iron). Based on the knowledge of the basic properties of magnets, predictions can be made and conclusions drawn about their interactions with other common objects.** **DOK 3**	**SC-04-1.2.1** **Students will interpret or represent data related to an object's straight-line motion in order to make inferences and predictions of changes in position and/or time.** **An object's motion can be described by measuring its change in position over time such as rolling different objects (e.g., spheres, toy cars) down a ramp. Collecting and representing data related to an object's motion provides the opportunity to make comparisons and draw conclusions.** **DOK 3**	**SC-05-1.2.1** **Students will interpret data in order to make qualitative (e.g., fast, slow, forward, backward) and quantitative descriptions and predictions about the straight-line motion of an object.** **The motion of an object can be described by its relative position, direction of motion and speed. That motion can be measured and represented on a graph.** **DOK 3**

SC-EP-1.2.2 **Students will describe the change in position over time (motion) of an object.** **An object's motion can be observed, described, compared and graphed by measuring its change in position over time.** **DOK 2**	**SC-04-1.2.2** **Students will infer causes and effects of pushes and pulls (forces) on objects based on representations or interpretations of straight-line movement/motion in charts, graphs and qualitative comparisons.** **The position and motion of objects can be changed by pushing or pulling. The amount of change is related to the force (defined as the strength of the push or pull) and the mass of the object(s) used. The force with which a ball is hit illustrates this principle. Cause and effect relationships, along with predicted consequences related to the strength of pushes and pulls (force) on an object's position and motion should be explored and qualitatively compared.** **DOK 3**	*SC-05-1.2.2* *Students will understand that forces are pushes and pulls, and that these pushes and pulls may be invisible (e.g., gravity, magnetism) or visible (e.g., friction, collisions).*
SC-EP-1.2.3 **Students will describe the position and motion of objects and predict changes in position and motion as related to the strength of pushes and pulls.** **The position and motion of objects can be changed by pushing or pulling, and can be explored in a variety of ways (such as rolling different objects down different ramps). The amount of change in position and motion is related to the strength of the push or pull (force). The force with which a ball is hit illustrates this principle. By examining cause and effect relationships related to forces and motions, consequences of change can be predicted.** **DOK 2**		

SC-EP-1.2.4 *Students will understand that the position of an object can be described by locating it relative to another object or the background. The position can be described using phrases such as to the right, to the left, 50 cm from the other object.*		
	SC-04-1.2.3 **Students will:** • **explain that sound is a result of vibrations, a type of motion;** • **describe pitch (high, low) as a difference in sounds that are produced and relate that to the rate of vibration.** **Vibration is a type of motion that can be observed, described, measured and compared. Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of vibration. The relationship between rates of vibration and produced sounds can be described and graphed.** **DOK 3**	

The Earth and the Universe

The Earth system is in a constant state of change. These changes affect life on earth in many ways. Development of conceptual understandings about processes that shape the Earth begin at the elementary level with understanding what Earth materials are and that change occurs. At the middle level, students investigate how these changes occur. Finally, at the high school level, most of the emphasis is on why these changes occur. An understanding of systems and their interacting components will enable students to evaluate supporting theories of earth changes.

At the heart of elementary students' initial understanding of the Earth's place in the universe is direct observation of the earth-sun-moon system. Students can derive important conceptual understandings about the system as they describe interactions resulting in shadows, moon phases and day and night. The use of models and observance of patterns to explain common phenomena is essential to building a conceptual foundation and supporting ideas with evidence at all levels. In middle school, students begin to look beyond what can be directly observed as they explore the earth-sun-moon system, as well as the rest of our solar system, employing the concept of scale within their models. Patterns play an important role as students seek to develop a conceptual understanding of gravity in their world and in the universe. High school is the time to bring all of the ideas together to look at the universe as a whole. Students will use evidence to evaluate and analyze theories related to the origin of the universe and all components of the universe.

End of Primary	4th Grade	5th Grade
Earth/Space Science		
SC-EP-2.3.1 **Students will describe earth materials (solid rocks, soils, water and gases of the atmosphere) using their properties.** **Earth materials include solid rocks and soils, water and the gases of the atmosphere. Minerals that make up rocks have properties of color, luster and hardness. Soils have properties of color, texture, the capacity to retain water and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid or gas.** **DOK 2**	**SC-04-2.3.1** **Students will:** • **classify earth materials by the ways that they are used;** • **explain how their properties make them useful for different purposes.** **Earth materials provide many of the resources humans use. The varied materials have different physical properties that can be used to describe, separate, sort and classify them. Inferences about the unique properties of the earth materials yield ideas about their usefulness. For example, some are useful as building materials (e.g., stone, clay, marble), some as sources of fuel (e.g., petroleum, natural gas), or some for growing the plants we use as food.** **DOK 2**	**SC-05-2.3.1** **Students will:** • **describe the circulation of water (evaporation and condensation) from the surface of the Earth, through the crust, oceans and atmosphere (water cycle);** • **explain how matter is conserved in this cycle.** **Water, which covers the majority of the Earth's surface, circulates through the crust, oceans and atmosphere in what is known as the water cycle. This cycle maintains the world's supply of fresh water. Students should have experiences that contribute to the understanding of evaporation, condensation and the conservation of matter.** **DOK 2**

SC-EP-2.3.2 **Students will describe patterns in weather and weather data in order to make simple predictions based on those patterns discovered.** **Weather changes from day to day and over seasons. Weather can be described using observations and measurable quantities such as temperature, wind direction, wind speed and precipitation. Simple predictions can be made by analyzing collected data for patterns.** **DOK 2**	**SC-04-2.3.2** **Students will describe and explain consequences of changes to the surface of the Earth, including some common fast changes (e.g., landslides, volcanic eruptions, earthquakes), and some common slow changes (e.g., erosion, weathering).** **The surface of the Earth changes. Some changes are due to slow processes such as erosion or weathering. Some changes are due to rapid processes such as landslides, volcanic eruptions and earthquakes. Analyzing the changes to identify cause and effect relationships helps to define and understand the consequences.** **DOK 3**	**SC-05-2.3.2** **Students will explain interactions of water with Earth materials and results of those interactions (e.g., dissolving minerals, moving minerals and gases).** **Water dissolves minerals and gases and may carry them to the oceans.** **DOK 3**

	SC-04-2.3.3 **Students will make generalizations and/or predictions about weather changes from day to day and over seasons based on weather data.** **Weather changes from day to day and over seasons. Weather can be described by observations and measurable quantities such as temperature, wind direction, wind speed and precipitation. Data can be displayed and used to make predictions.** **DOK 3**	**SC-05-2.3.3** **Students will:** • **describe Earth's atmosphere as a relatively thin blanket of air consisting of a mixture of nitrogen, oxygen and trace gases, including water vapor;** • **analyze atmospheric data in order to draw conclusions about real life phenomena related to atmospheric changes and conditions.** **Earth is surrounded by a relatively thin blanket of air called the atmosphere. The atmosphere is a mixture of nitrogen, oxygen and trace gases that include water vapor. The atmosphere has different properties at different elevations. Conclusions based on the interpretation of atmospheric data can be used to explain real life phenomena (e.g., pressurized cabins in airplanes, mountain-climber's need for oxygen).** **DOK 3**

SC-EP-2.3.3 **Students will describe the properties, locations and real or apparent movements of objects in the sky (Sun, moon).** **Objects in the sky have properties, locations and real or apparent movements that can be observed and described. Observational data, patterns and models should be used to describe real or apparent movements.** **DOK 2**	**SC-04-2.3.4** **Students will identify patterns, recognize relationships and draw conclusions about the Earth-Sun system by interpreting a variety of representations/models (e.g., diagrams, sundials, distance of sun above horizon) of the sun's apparent movement in the sky.** **Changes in movement of objects in the sky have patterns that can be observed, described and modeled. The Sun appears to move across the sky in the same way every day, but the Sun's apparent path changes slowly over seasons. Data collected can be used to identify patterns, recognize relationships and draw conclusions about the Earth and Sun system.** **DOK 3**	**SC-05-2.3.4** **Students will:** • **analyze global patterns of atmospheric movement;** • **explain the basic relationships of patterns of atmospheric movement to local weather.** **Global patterns of atmospheric movement can be observed and/or analyzed by interpreting patterns within data. Atmospheric movements influence local weather. Oceans have a major effect on climate, because water in the oceans holds a large amount of heat. Related data can be used to predict change in weather and climate.** **DOK 3**

SC-EP-2.3.4 **Students will describe the movement of the sun in the sky using evidence of interactions of the sun with the earth (e.g., shadows, position of sun relative to horizon) to identify patterns of movement.** **Changes in movement of objects in the sky have patterns that can be observed and described. The Sun appears to move across the sky in the same way every day, but the Sun's apparent path changes slowly over seasons. Recognizing relationships between movements of objects and resulting phenomena, such as shadows, provides information that can be used to make predictions and draw conclusions about those movements.** **DOK 2**	*SC-04-2.3.5* *Students will understand that the moon appears to move across the sky on a daily basis much like the Sun. The observable shape of the moon can be described as it changes from day to day in a cycle that lasts about a month.*	**SC-05-2.3.5** **Students will compare components of our solar system, including using models/representations that illustrate the system.** **Earth is the third planet from the Sun in a system that includes the moon, the Sun, eight other planets and their moons, and smaller objects. The Sun, an average star, is the central and largest body in the solar system. Models/diagrams provide understanding of scale within the solar system.** **DOK 2**
SC-EP-2.3.5 *Students will understand that the moon appears to move across the sky on a daily basis much like the Sun. The observable shape of the moon can be described as it changes from day to day in a cycle that lasts about a month.*		

Unity and Diversity

All matter is comprised of the same basic elements, goes through the same kinds of energy transformations, and uses the same kinds of forces to move. Living organisms are no exception. Elementary students begin to observe the macroscopic features of organisms in order to make comparisons and classifications based upon likenesses and differences. Looking for patterns in the appearance and behavior of an organism leads to the notion that offspring are much like the parents, but not exactly alike. In middle school, students begin to compare, contrast and classify the microscopic features of organisms—the cells, as well as investigate reproduction as the essential process to the continuation of all species. Expected patterns of genetic traits are predicted. Distinctions are made between learned behaviors and inherited traits. At the high school level, an in-depth study of the specialization and chemical changes occurring at the cellular level builds upon the foundational ideas developed earlier to investigate DNA and effects of alterations in DNA for an individual organism as well as for a species. Emphasis at every level should be placed upon the understanding that while every living thing is composed of similar small constituents that combine in predictable ways, it is the subtle variations within these small building blocks that account for both the likenesses and differences in form and function that create the diversity of life.

End of Primary	4th Grade	5th Grade
Biological Science		
SC-EP-3.4.1 **Students will explain the basic needs of organisms.** **Organisms have basic needs. For example, animals need air, water and food; plants need air, water, nutrients and light. Organisms can survive only in environments in which their needs can be met.** **DOK 2**	**SC-04-3.4.1** **Students will:** • **compare the different structures and functions of plants and animals that contribute to the growth, survival and reproduction of the organisms;** • **make inferences about the relationship between structure and function in organisms.** **Each plant or animal has structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. Evidence about the relationship between structure and function should be used to make inferences and draw conclusions.** **DOK 3**	**SC-05-3.4.1** **Students will describe and compare living systems to understand the complementary nature of structure and function.** **Observations and comparisons of living systems at all levels of organization illustrate the complementary nature of structure and function. Important levels of organization for structure and function include cells, tissues, organs, organ systems, organisms (e.g., bacteria, protists, fungi, plants, animals), and ecosystems. Examining the relationship between structure and function provides a basis for comparisons and classification schemes.** **DOK 2**

SC-EP-3.4.2 *Students will understand that things in the environment are classified as living, nonliving and once living. Living things differ from nonliving things. Organisms are classified into groups by using various characteristics (e.g., body coverings, body structures).*	*SC-04-3.4.2* *Students will understand that things in the environment are classified as living, nonliving and once living. Living things differ from nonliving things. Organisms are classified into groups by using various characteristics (e.g., body coverings, body structures).*	**SC-05-3.4.2** **Students will explain the essential functions of cells necessary to sustain life.** **Cells carry on the many functions needed to sustain life. Models of cells, both physical and analogical, promote understanding of their structures and functions. Cells grow and divide, thereby producing more cells. This requires that they take in nutrients, which provide energy for the work that cells do and make the materials that a cell needs.** **DOK 2**
SC-EP-3.4.3 **Students will describe the basic structures and related functions of plants and animals that contribute to growth, reproduction and survival.** **Each plant or animal has observable structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare and describe organisms.** **DOK 2**	**SC-04-3.4.3** **Students will compare a variety of life cycles of plants and animals in order to classify and make inferences about an organism.** **Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Models of organisms' life cycles should be used to classify and make inferences about an organism.** **DOK 3**	*SC-05-3.4.3* *Students will understand that all organisms are composed of cells, the fundamental unit of life. Most organisms are single cells; other organisms, including plants and animals are multicellular.*

SC-EP-3.4.4 **Students will describe a variety of plant and animal life cycles to understand patterns of the growth, development, reproduction and death of an organism.** **Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Observations of different life cycles should be made in order to identify patterns and recognize similarities and differences.** **DOK 2**	**SC-04-3.4.4** **Students will identify some characteristics of organisms that are inherited from the parents and others that are learned from interactions with the environment.** **Observations of plants and animals yield the conclusion that organisms closely resemble their parents at some time in their life cycle. Some characteristics (e.g., the color of flowers, the number of appendages) are passed to offspring. Other characteristics are learned from interactions with the environment, such as the ability to ride a bicycle, and these cannot be passed on to the next generation. Explorations related to inherited versus learned characteristics should offer opportunities to collect data and draw conclusions about various groups of organisms.** **DOK 2**	

Biological Change

The only thing certain is that everything changes. Elementary students build a foundational knowledge of change by observing slow and fast changes caused by nature in their own environment, noting changes that humans and other organisms cause in their environment and observing fossils found in or near their environment. At the middle school level, students study relationships among populations and ecosystems that contribute to the success or demise of a specific population or species. Students construct basic explanations that can account for the great diversity among organisms. The stage is set for high school students to evaluate the role natural selection plays in the diversity of species. Modern ideas of evolution provide a scientific explanation for three main sets of observable facts about life on earth: the enormous number of different life forms we see about us, the systematic similarities in anatomy and molecular chemistry we see within that diversity and the sequence of changes in fossils found in successive layers of rock that have been formed over more than a billion years (*Science for All Americans, p. 67)*.

End of Primary	4th Grade	5th Grade
Biological Science		
SC-EP-3.5.1 **Students will describe fossils as evidence of organisms that lived long ago, some of which may be similar to others that are alive today.** **Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time. Representations of fossils provide the basis for describing and drawing conclusions about the organisms and basic environments represented by them.** **DOK 3**	**SC-04-3.5.1** **Students will use representations of fossils to:** • **draw conclusions about the nature of the organisms and the basic environments that existed at the time;** • **make inferences about the relationships to organisms that are alive today.** **Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time. Representations of fossils provide the basis for describing and drawing conclusions about the organisms and basic environments represented by them.** **DOK 3**	**SC-05-3.5.1** **Students will describe cause and effect relationships between enhanced survival/reproductive success and particular biological adaptations (e.g., changes in structures, behaviors, and/or physiology) to generalize about the diversity of populations of organisms.** **Biological change over time accounts for the diversity of populations developed through gradual processes over many generations. Examining cause and effect relationships between enhanced survival/reproductive success and biological adaptations (e.g., changes in structures, behaviors, and/or physiology), based on evidence gathered, creates the basis for explaining diversity.** **DOK 2**

		SC-05-3.5.2 *Students will understand that all organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.*

Energy Transformations

Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels). Students in high school expand their understanding of constancy through the study of a variety of phenomena. Conceptual understanding and application of the laws of thermodynamics connect ideas about matter with energy transformations within all living, physical and earth systems.

End of Primary	4th Grade	5th Grade
Unifying Concepts		
SC-EP-4.6.1 **Students will describe basic relationships of plants and animals in an ecosystem (food chains).** **Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. Basic relationships and connections between organisms in food chains can be used to discover patterns within ecosystems.** **DOK 2**	**SC-04-4.6.1** **Students will analyze patterns and make generalizations about the basic relationships of plants and animals in an ecosystem (food chain).** **Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. Basic relationships and connections between organisms in food chains, including the flow of energy, can be used to discover patterns within ecosystems.** **DOK 2**	**SC-05-4.6.1** **Students will:** • **classify energy phenomena as kinetic or potential;** • **describe the transfer of energy occurring in simple systems or related data.** **Energy can be classified as kinetic or potential. Energy is a property of many substances and energy can be found in several different forms. For example, chemical energy as found in food we eat or in the gasoline we burn in our car. Heat, light (solar), sound, electrical energy and the energy associated with motion (called kinetic energy) are examples of other forms of energy. Objects can have energy simply by virtue of their position, called potential energy. Energy is transferred in many ways. Analyzing simple systems can provide the basis for describing the transfer of energy occurring within the system.** **DOK 2**

SC-EP-4.6.2 **Students will describe evidence of the sun providing light and heat to the Earth.** **Simple observations and investigations begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth. Based on those experiences, the conclusion can be drawn that the Sun's light and heat are necessary to sustain life on Earth.** **DOK 2**	**SC-04-4.6.2** **Students will:** • **analyze data/evidence of the Sun providing light and heat to earth;** • **use data/evidence to substantiate the conclusion that the Sun's light and heat are necessary to sustaining life on Earth.** **Simple observations, experiments and data collection begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth. Evidence collected and analyzed should be used to substantiate the conclusion that the sun's light and heat are necessary to sustain life on Earth.** **DOK 3**	*SC-05-4.6.2* *Students will understand that the Sun is a major source of energy for changes on Earth's surface. The Sun loses energy by emitting light. A tiny fraction of that light reaches Earth, transferring energy from the Sun to Earth.*
SC-EP-4.6.3 **Students will analyze models of basic electrical circuits using batteries, bulbs and wires, in order to determine whether a simple circuit is open or closed.** **Electricity in circuits can produce light. Describing and comparing models demonstrates basic understanding of circuits.** **DOK 2**	**SC-04-4.6.3** **Students will evaluate a variety of models/representations of electrical circuits (open, closed, series, and/or parallel) to:** • **make predictions related to changes in the system;** • **compare the properties of conducting and non-conducting materials.** **Electricity in circuits can produce light, heat and sound. Electrical circuits require a complete conducting path through which an electrical current can pass. Analysis of a variety of circuit models creates an opportunity to make predictions about circuits, as well as to demonstrate an understanding of the concepts of open and closed circuits and basic conducting and non-conducting materials.** **DOK 3**	**SC-05-4.6.3** **Students will:** • **draw conclusions about the transfer of energy within models/representations of electrical circuits as evidenced by the heat, light, sound and magnetic effects that are produced;** • **describe changes within the system that would affect the transfer of energy.** **Electrical circuits provide a means of transferring electrical energy. This transfer can be observed and described as heat, light, sound and magnetic effects are produced. Models and diagrams can be used to support conclusions and predict consequences of change within an electrical circuit.** **DOK 3**

SC-EP-4.6.4 **Students will describe light as traveling in a straight line until it strikes an object.** **Light can be observed and described as it travels in a straight line until it strikes an object.** **DOK 2**	**SC-04-4.6.4** **Students will:** • **analyze models/representations of light in order to generalize about the behavior of light;** • **represent the path of light as it interacts with a variety of surfaces (reflecting, refracting, absorbing).** **Light can be observed as traveling in a straight line until it strikes an object. Light can be reflected by a shiny object (e.g., mirror, spoon), refracted by a lens (e.g., magnifying glass, eyeglasses), or absorbed by an object (e.g., dark surface).** **DOK 3**	**SC-05-4.6.4** **Students will identify predictable patterns and make generalizations about light and matter interactions using data/evidence.** **Light energy interacts with matter by transmission (including refraction), absorption, or scattering (including reflection.** **DOK 3**
	SC-04-4.6.5 **Students will:** • **identify ways that heat can be produced (e.g. burning, rubbing) and properties of materials that conduct heat better than others;** • **describe the movement of heat between objects.** **Heat can be produced in many ways such as burning or rubbing. Heat moves from a warmer object to a cooler one by contact (conduction) or at a distance. Some materials absorb and conduct heat better than others. Simple investigations can illustrate that metal objects conduct heat better than wooden objects.** **DOK 2**	*SC-05-4.6.5* *Students will understand that heat energy moves in predictable ways, flowing from warmer objects to cooler ones, until both objects reach the same temperature. By examining cause and effect relationships, consequences of heat movement and conduction can be predicted and inferred.*

Interdependence

It is not difficult for students to grasp the general notion that species depend on one another and on the environment for survival. But their awareness must be supported by knowledge of the kinds of relationships that exist among organisms, the kinds of physical conditions that organisms must cope with, the kinds of environments created by the interaction of organisms with one another and their physical surroundings and the complexity of such systems. Elementary learners need to become acquainted with ecosystems that are easily observable to them by beginning to study the habitats of many types of local organisms. Students begin to investigate the survival needs of different organisms and how the environment affects optimum conditions for survival. In middle school, students should be guided from specific examples of the interdependency of organisms to a more systematic view of the interactions that take place among organisms and their surroundings. At the high school level, the concept of an ecosystem should bring coherence to the complex array of relationships among organisms and environments that students have encountered. Students growing understanding of systems in general will reinforce the concept of ecosystems. Stability and change in ecosystems can be considered in terms of variables such as population size, number and kinds of species, productivity and the effect of human intervention (*adapted from Benchmarks for Science Literacy, 1993).*

End of Primary	4th Grade	5th Grade
Unifying Concepts		
SC-EP-4.7.1 **Students will describe the cause and effect relationships existing between organisms and their environments.** **The world has many different environments. Organisms require an environment in which their needs can be met. When the environment changes some plants and animals survive and reproduce and others die or move to new locations.** **DOK 2**	**SC-04-4.7.1** **Students will make predictions and/or inferences based on patterns of evidence related to the survival and reproductive success of organisms in particular environments.** **The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes some plants and animals survive and reproduce and others die or move to new locations. Examples of environmental changes resulting in either increase or decrease in numbers of a particular organism should be explored in order to discover patterns and resulting cause and effect relationships between organisms and their environments (e.g., structures and behaviors that make an organism suited to a particular environment). Connections and**	**SC-05-4.7.1** **Students will:** • **describe and categorize populations of organisms according to the function they serve in an ecosystem (e.g., producers, consumers, decomposers);** • **draw conclusions about the effects of changes to populations in an ecosystem.** **Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some microorganisms are producers because they make their own food. All animals, including humans, are consumers, and obtain their food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships**

	conclusions should be made based on the data. **DOK 3**	**among producers, consumers and decomposers in an ecosystem. Using data gained from observing interacting components within an ecosystem, the effects of changes can be predicted.** **DOK 3**
	SC-04-4.7.2 **Students will:** • **describe human interactions in the environment where they live;** • **classify the interactions as beneficial or harmful to the environment using data/evidence to support conclusions.** **All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams benefit some aquatic organisms but are detrimental to others). By evaluating the consequences of change using cause and effect relationships, solutions to real life situations/dilemmas can be proposed.** **DOK 3**	*SC-05-4.7.2* *Students will understand that a population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.*

Structure and Transformation of Matter

A basic understanding of matter is essential to the conceptual development of other big ideas in science. In the elementary years of conceptual development, students will be studying properties of matter and physical changes of matter at the macro level through direct observations, forming the foundation for subsequent learning. During the middle years, physical and chemical changes in matter are observed, and students begin to relate these changes to the smaller constituents of matter—namely, atoms and molecules. By high school, students will be dealing with evidence from both direct and indirect observations (microscopic level and smaller) to consider theories related to change and conservation of matter. The use of models (and an understanding of their scales and limitations) is an effective means of learning about the structure of matter. Looking for patterns in properties is also critical to comparing and explaining differences in matter.

6th Grade	7th Grade	8th Grade
Physical Science		
SC-M6 1.1.1 **Students will explain how or why mixtures can be separated using physical properties.** **A mixture of substances often can be separated into the original substances by using one or more of its characteristic physical properties.** **DOK 2**	**SC-07-1.1.1** **Students will:** • **classify substances according to their chemical/reactive properties;** • **infer real life applications for substances based on chemical/reactive properties.** **In chemical reactions, the total mass is conserved. Substances are often classified into groups if they react in similar ways. The patterns, which allow classification, can be used to infer or understand real life applications for those substances.** **DOK 3**	**SC-08-1.1.1** **Students will:** • **interpret models/representations of elements;** • **classify elements based upon patterns in their physical (e.g., density, boiling point, solubility) and chemical (e.g., flammability, reactivity) properties.** **Models enhance understanding that an element is composed of a single type of atom. Organization/interpretation of data illustrates that when elements are listed according to the number of protons, repeating patterns of physical (e.g., density, boiling point, solubility) and chemical properties (e.g., flammability, reactivity), can be used to identify families of elements with similar properties.** **DOK 2**

SC-06-1.1.2 **Students will identify and describe evidence of chemical and physical changes in matter.** **In chemical reactions, the total mass is conserved. Substances are often classified into groups if they react in similar ways. The patterns that allow classification can be used to infer or understand real life applications for those substances.** **DOK 2**	**SC-07-1.1.2** **Students will:** • **classify elements and compounds according to their properties;** • **compare properties of different combinations of elements.** **Observations of simple experiments illustrate that the atoms of chemical elements do not break down during normal laboratory reactions such as heating, exposure to electric currents, or reaction with acids. Elements combine in many ways to produce compounds. Common patterns emerge when comparing and contrasting the properties of compounds to the elements from which they are made. Understanding of these patterns allows for evidence- based predictions of new or different combinations of elements/compounds.** **DOK 2**	*SC-08-1.1.2* *Students will understand that matter is made of minute particles called atoms, and atoms are composed of even smaller components. The components of an atom have measurable properties such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and the electrons holds the atom together.*
		SC-08-1.1.3 *Students will understand that the atom's nucleus is composed of protons and neutrons that are much more massive than electrons.*

		SC-08-1.1.4 **Students will describe interactions which cause the movement of each element among the solid Earth, oceans, atmosphere and organisms (biogeochemical cycles).** **Earth is a system containing essentially a fixed amount of each stable chemical atom or element that can exist in several different reservoirs. The interactions within the earth system cause the movement of each element among reservoirs in the solid Earth, oceans, atmosphere and organisms as part of biogeochemical cycles.** **DOK 2**

Motion and Forces

Whether observing airplanes, baseballs, planets, or people, the motion of all bodies is governed by the same basic rules. In the elementary years of conceptual development, students need multiple opportunities to experience, observe and describe (in words and pictures) motion, including factors (pushing and pulling) that affect motion. At the middle level, qualitative descriptions of the relationship between forces and motion will provide the foundation for quantitative applications of Newton's Laws. These ideas are more fully developed at the high school level along with the use of models to support evidence of motion in abstract or invisible phenomena such as electromagnetism.

6th Grade	7th Grade	8th Grade
Physical Science		
SC-06-1.2.1 **Students will describe friction and make inferences about its effects on the motion of an object.** **When an unbalanced force (friction) acts on an object, the change in speed or direction depends on the size and direction of the force.** **DOK 3**	**SC-07-1.2.1** **Students will explain the cause and effect relationship between simple observable motion and unbalanced forces.** **An object remains at rest or maintains a constant speed and direction of motion unless an unbalanced force acts on it (e.g., gravity). When an unbalanced force acts on an object, the change in speed or direction depends on the size and direction of the force.** **DOK 3**	**SC-08-1.2.1** **Students will describe and explain the effects of balanced and unbalanced forces on motion as found in real-life phenomena.** **Objects change their motion only when a net force is applied. Newton's Laws of Motion are used to describe the effects of forces on the motion of objects.** **DOK 3**

The Earth and the Universe

The Earth system is in a constant state of change. These changes affect life on earth in many ways. Development of conceptual understandings about processes that shape the Earth begin at the elementary level with understanding *what* Earth materials are and that change occurs. At the middle level, students investigate *how* these changes occur. Finally, at the high school level, most of the emphasis is on *why* these changes occur. An understanding of systems and their interacting components will enable students to evaluate supporting theories of earth changes.

At the heart of elementary students' initial understanding of the Earth's place in the universe is direct observation of the earth-sun-moon system. Students can derive important conceptual understandings about the system as they describe interactions resulting in shadows, moon phases and day and night. The use of models and observance of patterns to explain common phenomena is essential to building a conceptual foundation and supporting ideas with evidence at all levels. In middle school, students begin to look beyond what can be directly observed as they explore the earth-sun-moon system, as well as the rest of our solar system, employing the concept of scale within their models. Patterns play an important role as students seek to develop a conceptual understanding of gravity in their world and in the universe. High school is the time to bring all of the ideas together to look at the universe as a whole. Students will use evidence to evaluate and analyze theories related to the origin of the universe and all components of the universe.

6th Grade	7th Grade	8th Grade
Earth/Space Science		
SC-06-2.3.1 **Students will explain and predict phenomena (e.g., day, year, moon phases, eclipses) based on models/representations or data related to the motion of objects in the solar system (e.g., earth, sun, moon).** **Observations and investigations of patterns indicate that most objects in the solar system are in regular and predictable motion. Evaluation of this data explains such phenomena as the day, the year, phases of the moon and eclipses.** **DOK 3**	**SC-07-2.3.1** **Students will make inferences and predictions related to changes in the Earth's surface or atmosphere based on data/evidence.** **The Earth's processes we see today, including erosion, movement of lithospheric plates and changes in atmospheric composition, are predictable and similar to those that occurred in the past. Analysis of evidence from Earth's history substantiates the conclusion that the planet has also been influenced by occasional catastrophes such as the impact of an asteroid or comet.** **DOK 3**	**SC-08-2.3.1** **Students will describe various techniques for estimating geological time (radioactive dating, observing rock sequences, comparing fossils).** **Techniques used to estimate geological time include using radioactive dating, observing rock sequences and comparing fossils to correlate the rock sequences at various locations. Deductions can be made based on available data and observation of models as to the age of rocks/fossils.** **DOK 2**

SC-06-2.3.2 **Students will explain cause and effect relationships in the Rock cycle.** **Materials found in the lithosphere and mantle are changed in a continuous process called the rock cycle, which can be investigated using a variety of models.** **DOK 2**	**SC-07-2.3.2** **Students will explain the layers of the Earth and their interactions.** **The use of models/diagrams/graphs helps illustrate that the Earth is layered. The lithosphere is the thin crust and the upper part of the mantle. Lithospheric plates move slowly in response to movements in the mantle. There is a dense core at the center of the Earth.** **DOK 2**	*SC-08-2.3.2* *Students will understand that earthquakes and volcanic eruptions can be observed on a human time scale, but many processes, such as mountain building and plate movements, take place over hundreds of millions of years.*
SC-06-2.3.3 **Students will compare constructive and destructive forces on Earth in order to make predictions about the nature of landforms.** **Landforms are a result of a combination of constructive and destructive forces. Collection and analysis of data indicates that constructive forces include crustal deformation, faulting, volcanic eruption and deposition of sediment, while destructive forces include weathering and erosion.** **DOK 2**	**SC-07-2.3.3** **Students will describe the concept of gravity and the effect of gravitational force between the sun, moon and Earth.** **The gravitational pull of the Sun and moon on Earth's oceans as the major cause of tides can be understood from generalizations based on evidence.** **DOK 2**	**SC-08-2.3.3** **Students will:** • **explain the transfer of Earth's internal heat in the mantle (crustal movement, hotspots, geysers);** • **describe the interacting components (convection currents) within the Earth's system.** **The outward transfer of Earth's internal heat drives convection circulation in the mantle. This causes the crustal plates to move on the face of the Earth.** **DOK 2**
		SC-08-2.3.4 *Students will understand that the Sun, Earth and the rest of the solar system formed approximately 4.6 billion years ago.*

Unity and Diversity

All matter is comprised of the same basic elements, goes through the same kinds of energy transformations, and uses the same kinds of forces to move. Living organisms are no exception. Elementary students begin to observe the macroscopic features of organisms in order to make comparisons and classifications based upon likenesses and differences. Looking for patterns in the appearance and behavior of an organism leads to the notion that offspring are much like the parents, but not exactly alike. In middle school, students begin to compare, contrast and classify the microscopic features of organisms—the cells, as well as investigate reproduction as the essential process to the continuation of all species. Expected patterns of genetic traits are predicted. Distinctions are made between learned behaviors and inherited traits. At the high school level, an in-depth study of the specialization and chemical changes occurring at the cellular level builds upon the foundational ideas developed earlier to investigate DNA and effects of alterations in DNA for an individual organism as well as for a species. Emphasis at every level should be placed upon the understanding that while every living thing is composed of similar small constituents that combine in predictable ways, it is the subtle variations within these small building blocks that account for both the likenesses and differences in form and function that create the diversity of life.

6th Grade	7th Grade	8th Grade
Biological Science		
SC-06-3.4.1 **Students will describe the relationship between cells, tissues and organs in order to explain their function in multicellular organisms.** **Specialized cells perform specialized functions in multicellular organisms. Groups of specialized cells cooperate to form tissues. Different tissues are, in turn, grouped together to form larger functional units called organs. Examination of cells, tissues and organs reveals that each type has a distinct structure and set of functions that serve the organism.** **DOK 3**	**SC-07-3.4.1** **Students will:** • **describe the role of genes/chromosomes in the passing of information from one generation to another (heredity);** • **compare inherited and learned traits.** **Every organism requires a set of instructions for specifying its traits. This information is contained in genes located in the chromosomes of each cell that can be illustrated through the use of models. Heredity is the passage of these instructions from one generation to another and should be distinguished from learned traits.** **DOK 2**	**SC-08-3.4.1** **Students will explain the relationship between structure and function of the cell components using a variety of representations.** **Observations of cells and analysis of cell representations point out that cells have particular structures that underlie their function. Every cell is surrounded by a membrane that separates it from the outside world. Inside the cell is a concentrated mixture of thousands of different molecules that form a variety of specialized structures. These structures carry out specific cell functions.** **DOK 3**

	SC-07-3.4.2 **Students will describe and compare sexual and asexual reproduction.** **Reproduction is a characteristic of all living systems and is essential to the continuation of every species as evidenced through observable patterns. A distinction should be made between organisms that reproduce asexually and those that reproduce sexually. In species that reproduce sexually, including humans and plants, male and female sex cells carrying genetic information unite to begin the development of a new individual.** **DOK 2**	*SC-08-3.4.2* *Students will understand that in the development of multicellular organisms, cells multiply (mitosis) and differentiate to form many specialized cells, tissues and organs. This differentiation is regulated through the expression of different genes.*
SC-06-3.4.2 **Students will make inferences about the factors influencing behavior based on data/evidence of various organism's behaviors.** **Behavior is one kind of response an organism may make to an internal or environmental stimulus. Observations of organisms, data collection/analysis, support generalizations/conclusions that a behavioral response is a set of actions determined in part by heredity and in part from experience. A behavioral response requires coordination and communication at many levels including cells, organ systems and organisms.** **DOK 2**		**SC-08-3.4.3** **Students will form or justify conclusions as to whether a response is innate or learned using data/evidence on behavioral responses to internal and external stimuli.** **Behavioral responses to internal changes and external stimuli can be innate or learned. Responses to external stimuli can result from interactions with the organism's own species or other species, as well as environmental changes.** **DOK 3**

		SC-08-3.4.4 **Students will describe and explain patterns found within groups of organisms in order to make biological classifications of those organisms.** **Observations and patterns found within groups of organisms allow for biological classifications based on how organisms are related.** **DOK 2**
		SC-08-3.4.5 *Students will understand that multicellular animals have nervous systems that generate behavior. Nerve cells communicate with each other by secreting specific molecules.*

Biological Change

The only thing certain is that everything changes. Elementary students build a foundational knowledge of change by observing slow and fast changes caused by nature in their own environment, noting changes that humans and other organisms cause in their environment and observing fossils found in or near their environment. At the middle school level, students study relationships among populations and ecosystems that contribute to the success or demise of a specific population or species. Students construct basic explanations that can account for the great diversity among organisms. The stage is set for high school students to evaluate the role natural selection plays in the diversity of species. Modern ideas of evolution provide a scientific explanation for three main sets of observable facts about life on earth: the enormous number of different life forms we see about us, the systematic similarities in anatomy and molecular chemistry we see within that diversity and the sequence of changes in fossils found in successive layers of rock that have been formed over more than a billion years (*Science for All Americans, p. 67)*.

6th Grade	7th Grade	8th Grade
Biological Science		
SC-06-3.5.1 **Students will explain that biological change over time accounts for the diversity of species developed through gradual processes over many generations.** **Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.** **DOK 2**	**SC-07-3.5.1** **Students will:** • **describe the usefulness of fossil information to make conclusions about past life forms and environmental conditions;** • **explain the cause and effect relationship of the extinction of a species and environmental changes.** **Extinction of species is common and occurs when the adaptive characteristics of a species are insufficient to allow its survival. Most of the species that have lived on Earth no longer exist. Fossils provide evidence of how environmental conditions and life have changed.** **DOK 3**	**SC-08-3.5.1** **Students will draw conclusions and make inferences about the consequences of change over time that can account for the similarities among diverse species.** **The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms.** **DOK 3**
SC-06-3.5.2 *Students will understand that regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required to survive. Maintaining a stable internal environment is essential for an organism's survival.*		

Energy Transformations

Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels). Students in high school expand their understanding of constancy through the study of a variety of phenomena. Conceptual understanding and application of the laws of thermodynamics connect ideas about matter with energy transformations within all living, physical and earth systems.

6th Grade	7th Grade	8th Grade
Unifying Concepts		
SC-06-4.6.1 **Students will describe or explain the cause and effect relationships between oceans and climate.** **Oceans have a major effect on climate, because water in the oceans holds a large amount of heat.** **DOK 2**	SC-07-4.6.1 Students will understand that Earth systems have sources of energy that are internal and external to the Earth. The Sun is the major external source of energy.	**SC-08-4.6.1** **Students will:** • **explain the cause and effect relationships between global climate and energy transfer;** • **use evidence to make inferences or predictions about global climate issues.** **Global climate is determined by energy transfer from the Sun at and near Earth's surface.** **DOK 3**
SC-06-4.6.2 **Students will describe:** • **the effect of the Suns' energy on the Earth system;** • **the connection/relationship between the Sun's energy and seasons.** **The Sun is the major source of energy for Earth. The water cycle, winds, ocean currents and growth of plants are affected by the Sun's energy. Seasons result from variations in the amount of the Sun's energy hitting Earth's surface.** **DOK 3**	**SC-07-4.6.2** **Students will:** • **describe the transfer and/or transformations of energy which occur in examples that involve several different forms of energy (e.g., heat, electrical, light, motion of objects and chemical).** • **Explain, qualitatively or quantitatively, that heat lost by hot object equals the heat gained by cold object.** **The transfer and transformation of energy can be examined in a variety of**	**SC-08-4.6.2** **Students will:** • **describe or explain energy transfer and energy conservation;** • **evaluate alternative solutions to energy problems.** **Energy can be transferred in many ways, but it can neither be created nor destroyed.** **DOK 3**

	real life examples. Models are an appropriate way to convey the abstract/invisible transfer of energy in a system. **Heat energy is the disorderly motion of molecules. Heat can be transferred through materials by the collisions of atoms or across space by radiation. If the material is fluid, currents will be set up in it that aid the transfer of heat. To change something's speed, to bend or stretch things, to heat or cool them, to push things together, to expand or contract them or tear them apart all require transfers (and some transformations) of energy. Heat lost by hot object equals the heat gained by cold object. This is an energy conservation statement. Whenever hot and cold objects are put in contact, heat energy always transfers from the hot object to the cold object and this continues until all the mass is at the same temperature. Students should understand that heat produced by burning comes from the release of chemical energy of the substance.** **DOK 3**	

SC-06-4.6.3 *Students will understand that, on its own, heat travels only from higher temperature object/region to lower temperature object or region. Heat will continue to flow in this manner until the objects reach the same temperature. For example, a cup of hot water will continue to cool down until it comes to the same temperature as the surrounding area. Usually when heat is transferred to or from an object, the temperature changes. The temperature increases if heat is added and the temperature decreases if the heat is removed.*		*SC-08-4.6.3* *Students will understand that all energy can be considered to be kinetic energy, potential energy, or energy contained by a field (e.g., electric, magnetic, gravitational).*
	SC-07-4.6.3 *Students will understand that waves are one way that energy is transferred. Types of waves include sound, light, earthquake, ocean and electromagnetic.*	**SC-08-4.6.4** **Students will:** • **analyze information/data about waves and energy transfer;** • **describe the transfer of energy via waves in real life phenomena.** **Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter.** **DOK 2**
	SC-07-4.6.4 **Students will describe or represent the flow of energy in ecosystems, using data to draw conclusions about the role of organisms in an ecosystem.** **For most ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism in food webs.** **DOK 3**	**SC-08-4.6.5** **Students will:** • **describe the relationships between organisms and energy flow in ecosystems (food chains and energy pyramids);** • **explain the effects of change to any component of the ecosystem.** **Energy flows through ecosystems in one direction from photosynthetic organisms to herbivores to carnivores and decomposers.** **DOK 2**

Interdependence

It is not difficult for students to grasp the general notion that species depend on one another and on the environment for survival. But their awareness must be supported by knowledge of the kinds of relationships that exist among organisms, the kinds of physical conditions that organisms must cope with, the kinds of environments created by the interaction of organisms with one another and their physical surroundings and the complexity of such systems. Elementary learners need to become acquainted with ecosystems that are easily observable to them by beginning to study the habitats of many types of local organisms. Students begin to investigate the survival needs of different organisms and how the environment affects optimum conditions for survival. In middle school, students should be guided from specific examples of the interdependency of organisms to a more systematic view of the interactions that take place among organisms and their surroundings. At the high school level, the concept of an ecosystem should bring coherence to the complex array of relationships among organisms and environments that students have encountered. Students growing understanding of systems in general will reinforce the concept of ecosystems. Stability and change in ecosystems can be considered in terms of variables such as population size, number and kinds of species, productivity and the effect of human intervention (*adapted from Benchmarks for Science Literacy, 1993).*

6th Grade	7th Grade	8th Grade
Unifying Concepts		
SC-06-4.7.1 **Students will describe the consequences of change in one or more abiotic factors on a population within an ecosystem.** **The number of organisms an ecosystem can support depends on the resources available and abiotic factors (e.g., quantity of light and water, range of temperatures, soil composition).** **DOK 2**	**SC-07-4.7.1** **Students will compare abiotic and biotic factors in an ecosystem in order to explain consequences of change in one or more factors.** **The number of organisms an ecosystem can support depends on the resources available and abiotic factors (e.g., quantity of light and water, range of temperatures, soil composition). Given adequate biotic and abiotic resources and no diseases or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.** **DOK 3**	**SC-08-4.7.1** **Students will describe the interrelationships and interdependencies within an ecosystem and predict the effects of change on one or more components within an ecosystem.** **Organisms both cooperate and compete in ecosystems. Often changes in one component of an ecosystem will have effects on the entire system that are difficult to predict. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.** **DOK 3**

		SC-08-4.7.2 **Students will:** • **explain the interactions of the components of the Earth system (e.g., solid Earth, oceans, atmosphere, living organisms);** • **propose solutions to detrimental interactions.** **Interactions among the solid Earth, the oceans, the atmosphere and living things have resulted in the ongoing development of a changing Earth system.** **DOK 3**

Structure and Transformation of Matter

A basic understanding of matter is essential to the conceptual development of other big ideas in science. In the elementary years of conceptual development, students will be studying properties of matter and physical changes of matter at the macro level through direct observations, forming the foundation for subsequent learning. During the middle years, physical and chemical changes in matter are observed and students begin to relate these changes to the smaller constituents of matter—namely, atoms and molecules. By high school, students will be dealing with evidence from both direct and indirect observations (microscopic level and smaller) to consider theories related to change and conservation of matter. The use of models (and an understanding of their scales and limitations) is an effective means of learning about the structure of matter. Looking for patterns in properties is also critical to comparing and explaining differences in matter.

High School

Physical Science

SC-HS-1.1.1
Students will classify or make generalizations about elements from data of observed patterns in atomic structure and/or position on the periodic table.
The periodic table is a consequence of the repeating pattern of outermost electrons.

DOK 2

SC-HS-1.1.2
Students will understand that the atom's nucleus is composed of protons and neutrons that are much more massive than electrons. When an element has atoms that differ in the number of neutrons, these atoms are called different isotopes of the element.

SC-HS-1.1.3
Students will understand that solids, liquids and gases differ in the distances between molecules or atoms and therefore the energy that binds them together. In solids, the structure is nearly rigid; in liquids, molecules or atoms move around each other but do not move apart; and in gases, molecules or atoms move almost independently of each other and are relatively far apart. The behavior of gases and the relationship of the variables influencing them can be described and predicted.

SC-HS-1.1.4
Students will understand that in conducting materials, electrons flow easily; whereas, in insulating materials, they can hardly flow at all. Semiconducting materials have intermediate behavior. At low temperatures, some materials become superconductors and offer no resistance to the flow of electrons.

SC-HS-1.1.5
Students will explain the role of intermolecular or intramolecular interactions on the physical properties (solubility, density, polarity, conductivity, boiling/melting points) of compounds.
The physical properties of compounds reflect the nature of the interactions among molecules. These interactions are determined by the structure of the molecule including the constituent atoms.

DOK 2

SC-HS-1.1.6
Students will:
- **identify variables that affect reaction rates;**
- **predict effects of changes in variables (concentration, temperature, properties of reactants, surface area and catalysts) based on evidence/data from chemical reactions.**

Rates of chemical reactions vary. Reaction rates depend on concentration, temperature and properties of reactants. Catalysts speed up chemical reactions.

DOK 3

SC-HS-1.1.7
Students will:
- **construct diagrams to illustrate ionic or covalent bonding;**
- **predict compound formation and bond type as either ionic or covalent (polar, nonpolar) and represent the products formed with simple chemical formulas.**

Bonds between atoms are created when outer electrons are paired by being transferred (ionic) or shared (covalent). A compound is formed when two or more kinds of atoms bind together chemically.

DOK 2

SC-HS-1.1.8
Students will:
- **explain the importance of chemical reactions in a real-world context;**
- **justify conclusions using evidence/data from chemical reactions.**

Chemical reactions (e.g., acids and bases, oxidation, combustion of fuels, rusting, tarnishing) occur all around us and in every cell in our bodies. These reactions may release or absorb energy.

DOK 3

Motion and Forces

Whether observing airplanes, baseballs, planets or people, the motion of all bodies is governed by the same basic rules. In the elementary years of conceptual development, students need multiple opportunities to experience, observe and describe (in words and pictures) motion, including factors (pushing and pulling) that affect motion. At the middle level, qualitative descriptions of the relationship between forces and motion will provide the foundation for quantitative applications of Newton's Laws. These ideas are more fully developed at the high school level along with the use of models to support evidence of motion in abstract or invisible phenomena such as electromagnetism.

High School

Physical Science

SC-HS-1.2.1
Students will:

- **select or construct accurate and appropriate representations for motion (visual, graphical and mathematical);**
- **defend conclusions/explanations about the motion of objects and real-life phenomena from evidence/data.**

Objects change their motion only when a net force is applied. Newton's Laws of motion are used to describe the effects of forces on the motion of objects. Conservation of mechanical energy and conservation of momentum may also be used to predict motion.

DOK 3

SC-HS-1.2.2
Students will:

- **explain the relationship between electricity and magnetism;**
- **propose solutions to real life problems involving electromagnetism.**

Electricity and magnetism are two aspects of a single electromagnetic force. Moving electric charges produce magnetic forces or "fields" and moving magnets produce electric forces or "fields". This idea underlies the operation of electric motors and generators.

DOK 3

SC-HS-1.2.3
Students will understand that the electric force is a universal force that exists between any two charged objects. Opposite charges attract while like charges repel.

The Earth and the Universe

The Earth system is in a constant state of change. These changes affect life on earth in many ways. Development of conceptual understandings about processes that shape the Earth begin at the elementary level with understanding *what* Earth materials are and that change occurs. At the middle level, students investigate *how* these changes occur. Finally, at the high school level, most of the emphasis is on *why* these changes occur. An understanding of systems and their interacting components will enable students to evaluate supporting theories of earth changes. At the heart of elementary students' initial understanding of the Earth's place in the universe is direct observation of the earth-sun-moon system. Students can derive important conceptual understandings about the system as they describe interactions resulting in shadows, moon phases and day and night. The use of models and observance of patterns to explain common phenomena is essential to building a conceptual foundation and supporting ideas with evidence at all levels. In middle school, students begin to look beyond what can be directly observed as they explore the earth-sun-moon system, as well as the rest of our solar system, employing the concept of scale within their models. Patterns play an important role as students seek to develop a conceptual understanding of gravity in their world and in the universe. High school is the time to bring all of the ideas together to look at the universe as a whole. Students will use evidence to evaluate and analyze theories related to the origin of the universe and all components of the universe.

High School

Earth/Space Science

SC-HS-2.3.1
Students will:
- **explain phenomena (falling objects, planetary motion, satellite motion) related to gravity;**
- **describe the factors that affect gravitational force.**

Gravity is a universal force that each mass exerts on every other mass.

DOK 3

SC-HS-2.3.2
Students will:
- **describe the current scientific theory of the formation of the universe (Big Bang) and its evidence;**
- **explain the role of gravity in the formation of the universe and it's components.**

The current and most widely accepted scientific theory of the mechanism of formation of the universe (Big Bang) places the origin of the universe at a time between 10 and 20 billion years ago, when the universe began in a hot dense state. According to this theory, the universe has been expanding since then. Early in the history of the universe, the first atoms to form were mainly hydrogen and helium. Over time, these elements clump together by gravitational attraction to form trillions of stars.

DOK 2

SC-HS-2.3.3 **Students will explain the origin of the heavy elements in planetary objects (planets, stars).** **Some stars explode at the end of their lives, and the heavy elements they have created are blasted out into space to form the next generation of stars and planets.** **DOK 2**
SC-HS-2.3.4 *Students will understand that stars have life cycles of birth through death that are analogous to those of living organisms. During their lifetimes, stars generate energy from nuclear fusion reactions that create successively heavier chemical elements.*
SC-HS-2.3.5 *Students will understand that the Sun, Earth and the rest of the solar system formed approximately 4.6 billion years ago from a nebular cloud of dust and gas.*
SC-HS-2.3.6 **Students will:** • **compare the limitations/benefits of various techniques (radioactive dating, observing rock sequences and comparing fossils) for estimating geological time;** • **justify deductions about age of geologic features.** **Techniques used to estimate geological time include using radioactive dating, observing rock sequences and comparing fossils to correlate the rock sequences at various locations.** **DOK 3**
SC-HS-2.3.7 **Students will:** • **explain real-life phenomena caused by the convection of the Earth's mantle;** • **predict the consequences of this motion on humans and other living things on the planet.** **The outward transfer of Earth's internal heat drives convection circulation in the mantle. This causes the crustal plates to move on the face of the Earth.** **DOK 3**
SC-HS-2.3.8 **Students will predict consequences of both rapid (volcanoes, earthquakes) and slow (mountain building, plate movement) earth processes from evidence/data and justify reasoning.** **The Earth's surface is dynamic; earthquakes and volcanic eruptions can be observed on a human time scale, but many processes, such as mountain building and plate movements, take place over hundreds of millions of years.** **DOK 3**

Unity and Diversity

All matter is comprised of the same basic elements, goes through the same kinds of energy transformations, and uses the same kinds of forces to move. Living organisms are no exception. Elementary students begin to observe the macroscopic features of organisms in order to make comparisons and classifications based upon likenesses and differences. Looking for patterns in the appearance and behavior of an organism leads to the notion that offspring are much like the parents, but not exactly alike. In middle school, students begin to compare, contrast and classify the microscopic features of organisms—the cells, as well as investigate reproduction as the essential process to the continuation of all species. Expected patterns of genetic traits are predicted. Distinctions are made between learned behaviors and inherited traits. At the high school level, an in-depth study of the specialization and chemical changes occurring at the cellular level builds upon the foundational ideas developed earlier to investigate DNA and effects of alterations in DNA for an individual organism as well as for a species. Emphasis at every level should be placed upon the understanding that while every living thing is composed of similar small constituents that combine in predictable ways, it is the subtle variations within these small building blocks that account for both the likenesses and differences in form and function that create the diversity of life.

High School

Biological Science

SC-HS-3.4.1
Students will explain the role of DNA in protein synthesis.
Cells store and use information to guide their functions. The genetic information stored in DNA directs the synthesis of the thousands of proteins that each cell requires. Errors that may occur during this process may result in mutations that may be harmful to the organism.

DOK 3

SC-HS-3.4.2
Students will understand that most cell functions involve chemical reactions. Food molecules taken into cells react to provide the chemical constituents needed to synthesize other molecules. Both breakdown and synthesis are made possible by a large set of protein catalysts, called enzymes. The breakdown of some of the food molecules enables the cell to store energy in specific chemicals that are used to carry out the many functions of the cell.

SC-HS-3.4.3
Students will:

- **describe cell regulation (enzyme function, diffusion, osmosis, homeostasis);**
- **predict consequences of internal/external environmental change on cell function/regulation.**

Cell functions are regulated. Regulation occurs both through changes in the activity of the functions performed by proteins and through selective expression of individual genes. This regulation allows cells to respond to their internal and external environments and to control and coordinate cell growth and division.

DOK 2

SC-HS-3.4.4 *Students will understand that plant cells contain chloroplasts, the site of photosynthesis. Plants and many microorganisms (e.g., Euglena) use solar energy to combine molecules of carbon dioxide and water into complex, energy-rich organic compounds and release oxygen to the environment. This process of photosynthesis provides a vital link between the Sun and energy needs of living systems.*
SC-HS-3.4.5 **Students will:** • **explain the relationship between sexual reproduction (meiosis) and the transmission of genetic information;** • **draw conclusions/make predictions based on hereditary evidence/data (pedigrees, punnet squares).** **Multicellular organisms, including humans, form from cells that contain two copies of each chromosome. This explains many features of heredity. Transmission of genetic information through sexual reproduction to offspring occurs when male and female gametes, that contain only one representative from each chromosome pair, unite.** **DOK 3**
SC-HS-3.4.6 *Students will understand that in all organisms and viruses, the instructions for specifying the characteristics are carried in nucleic acids. The chemical and structural properties of nucleic acids determine how the genetic information that underlies heredity is both encoded in genes and replicated.*
SC-HS-3.4.7 **Students will:** • **classify organisms into groups based on similarities;** • **infer relationships based on internal and external structures and chemical processes.** **Biological classifications are based on how organisms are related. Organisms are classified into a hierarchy of groups and subgroups based on similarities that reflect their relationships. Species is the most fundamental unit of classification. Different species are classified by the comparison and analysis of their internal and external structures and the similarity of their chemical processes.** **DOK 2**
SC-HS-3.4.8 *Students will understand that multicellular animals have nervous systems that generate behavior. Nerve cells communicate with each other by secreting specific molecules. Specialized cells in sense organs detect light, sound and specific chemicals enabling animals to monitor what is going on in the world around them.*

Biological Change

The only thing certain is that everything changes. Elementary students build a foundational knowledge of change by observing slow and fast changes caused by nature in their own environment, noting changes that humans and other organisms cause in their environment and observing fossils found in or near their environment. At the middle school level, students study relationships among populations and ecosystems that contribute to the success or demise of a specific population or species. Students construct basic explanations that can account for the great diversity among organisms. The stage is set for high school students to evaluate the role natural selection plays in the diversity of species. Modern ideas of evolution provide a scientific explanation for three main sets of observable facts about life on earth: the enormous number of different life forms we see about us, the systematic similarities in anatomy and molecular chemistry we see within that diversity and the sequence of changes in fossils found in successive layers of rock that have been formed over more than a billion years (*Science for All Americans, p. 67)*.

High School

Biological Science

SC-HS-3.5.1
Students will:

- **predict the impact on species of changes to 1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, or (4) natural selection;**
- **propose solutions to real-world problems of endangered and extinct species.**

Species change over time. Biological change over time is the consequence of the interactions of (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life and (4) natural selection. The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms. Changes in DNA (mutations) occur spontaneously at low rates. Some of these changes make no difference to the organism, whereas others can change cells and organisms. Only mutations in germ cells have the potential to create the variation that changes an organism's future offspring.

DOK 3

SC-HS-3.5.2
Students will:

- **predict the success of patterns of adaptive behaviors based on evidence/data;**
- **justify explanations of organism survival based on scientific understandings of behavior.**

The broad patterns of behavior exhibited by organisms have changed over time through natural selection to ensure reproductive success. Organisms often live in unpredictable environments, so their behavioral responses must be flexible enough to deal with uncertainty and change. Behaviors often have an adaptive logic.

DOK 3

Energy Transformations

Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels). Students in high school expand their understanding of constancy through the study of a variety of phenomena. Conceptual understanding and application of the laws of thermodynamics connect ideas about matter with energy transformations within all living, physical and earth systems.

High School

Unifying Concepts

SC-HS-4.6.1
Students will:

- **explain the relationships and connections between matter, energy, living systems and the physical environment;**
- **give examples of conservation of matter and energy.**

As matter and energy flow through different organizational levels (e.g., cells, organs, organisms, communities) and between living systems and the physical environment, chemical elements are recombined in different ways. Each recombination results in storage and dissipation of energy into the environment as heat. Matter and energy are conserved in each change.

DOK 3

SC-HS-4.6.2
Students will:

- **predict wave behavior and energy transfer;**
- **apply knowledge of waves to real life phenomena/investigations.**

Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter. Apparent changes in frequency can provide information about relative motion.

DOK 3

SC-HS-4.6.3
Students will understand that electromagnetic waves, including radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, x-rays and gamma rays result when a charged object is accelerated.

SC-HS-4.6.4
Students will:
- **describe the components and reservoirs involved in biogeochemical cycles (water, nitrogen, carbon dioxide and oxygen);**
- **explain the movement of matter and energy in biogeochemical cycles and related phenomena.**

The total energy of the universe is constant. Energy can change forms and/or be transferred in many ways, but it can neither be created nor destroyed. Movement of matter between reservoirs is driven by Earth's internal and external sources of energy. These movements are often accompanied by a change in physical and chemical properties of the matter. Carbon, for example, occurs in carbonate rocks such as limestone, in the atmosphere as carbon dioxide gas, in water as dissolved carbon dioxide and in all organisms as complex molecules that control the chemistry of life.

DOK 3

SC-HS-4.6.5
Students will describe and explain the role of carbon-containing molecules and chemical reactions in energy transfer in living systems. Living systems require a continuous input of energy to maintain their chemical and physical organization since the universal tendency is toward more disorganized states. The energy for life primarily derives from the Sun. Plants capture energy by absorbing light and using it to break weaker bonds in reactants (such as carbon dioxide and water) in chemical reactions that result in the formation of carbon-containing molecules. These molecules can be used to assemble larger molecules (e.g., DNA, proteins, sugars, fats). In addition, the energy released when these molecules react with oxygen to form very strong bonds can be used as sources of energy for life processes.

DOK 3

SC-HS-4.6.6
Students will understand that heat is the manifestation of the random motion and vibrations of atoms.

SC-HS-4.6.7
Students will:
- **explain real world applications of energy using information/data;**
- **evaluate explanations of mechanical systems using current scientific knowledge about energy.**

The universe becomes less orderly and less organized over time. Thus, the overall effect is that the energy is spread out uniformly. For example, in the operation of mechanical systems, the useful energy output is always less than the energy input; the difference appears as heat.

DOK 2

SC-HS-4.6.8
Students will:
- **describe the connections between the functioning of the Earth system and its sources of energy (internal and external);**
- **predict the consequences of changes to any component of the Earth system.**

Earth systems have sources of energy that are internal and external to the Earth. The Sun is the major external source of energy. Two primary sources of internal energy are the decay of radioactive isotopes and the gravitational energy from Earth's original formation.

DOK 3

SC-HS-4.6.9
Students will:
- **explain the cause and effect relationship between global climate and weather patterns and energy transfer (cloud cover, location of mountain ranges, oceans);**
- **predict the consequences of changes to the global climate and weather patterns.**

Global climate is determined by energy transfer from the Sun at and near Earth's surface. This energy transfer is influenced by dynamic processes such as cloud cover and the Earth's rotation and static conditions such as the position of mountain ranges and oceans.

DOK 3

SC-HS-4.6.10
Students will:
- **identify the components and mechanisms of energy stored and released from food molecules (photosynthesis and respiration);**
- **apply information to real-world situations.**

Energy is released when the bonds of food molecules are broken and new compounds with lower energy bonds are formed. Cells usually store this energy temporarily in the phosphate bonds of adenosine triphosphate (ATP). During the process of cellular respiration, some energy is lost as heat.

DOK 3

SC-HS-4.6.11
Students will:
- **explain the difference between alpha and beta decay, fission and fusion;**
- **identify the relationship between nuclear reactions and energy.**

Nuclear reactions convert a fraction of the mass of interacting particles into energy, and they can release much greater amounts of energy than atomic interactions. Fission is the splitting of a large nucleus into smaller pieces. Fusion is the joining of two nuclei at extremely high temperature and pressure. Fusion is the process responsible for the energy of the Sun and other stars.

DOK 2

SC-HS-4.6.12
Students will understand that the forces that hold the nucleus together, at nuclear distances, are usually stronger than the forces that would make it fly apart.

Interdependence

It is not difficult for students to grasp the general notion that species depend on one another and on the environment for survival. But their awareness must be supported by knowledge of the kinds of relationships that exist among organisms, the kinds of physical conditions that organisms must cope with, the kinds of environments created by the interaction of organisms with one another and their physical surroundings and the complexity of such systems. Elementary learners need to become acquainted with ecosystems that are easily observable to them by beginning to study the habitats of many types of local organisms. Students begin to investigate the survival needs of different organisms and how the environment affects optimum conditions for survival. In middle school, students should be guided from specific examples of the interdependency of organisms to a more systematic view of the interactions that take place among organisms and their surroundings. At the high school level, the concept of an ecosystem should bring coherence to the complex array of relationships among organisms and environments that students have encountered. Students growing understanding of systems in general will reinforce the concept of ecosystems. Stability and change in ecosystems can be considered in terms of variables such as population size, number and kinds of species, productivity and the effect of human intervention (*adapted from Benchmarks for Science Literacy, 1993).*

High School

Unifying Concepts

SC-HS-4.7.1
Students will:
- **analyze relationships and interactions among organisms in ecosystems;**
- **predict the effects on other organisms of changes to one or more components of the ecosystem.**

Organisms both cooperate and compete in ecosystems. Often changes in one component of an ecosystem will have effects on the entire system that are difficult to predict. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.

DOK 3

SC-HS-4.7.2
Students will:
- **evaluate proposed solutions from multiple perspectives to environmental problems caused by human interaction;**
- **justify positions using evidence/data.**

Human beings live within the world's ecosystems. Human activities can deliberately or inadvertently alter the dynamics in ecosystems. These activities can threaten current and future global stability and, if not addressed, ecosystems can be irreversibly affected.

DOK 3

SC-HS-4.7.3
Students will:
- **predict the consequences of changes to any component (atmosphere, solid Earth, oceans, living things) of the Earth System;**
- **propose justifiable solutions to global problems.**

Interactions among the solid Earth, the oceans, the atmosphere and living things have resulted in the ongoing development of a changing Earth system.

DOK 3

SC-HS-4.7.4 *Students will understand that evidence for one-celled forms of life, the bacteria, extends back more than 3.5 billion years. The changes in life over time caused dramatic changes in the composition of the Earth's atmosphere, which did not originally contain oxygen.*
SC-HS-4.7.5 **Students will:** • **predict the consequences of changes in resources to a population;** • **select or defend solutions to real-world problems of population control.** **Living organisms have the capacity to produce populations of infinite size. However, behaviors, environments and resources influence the size of populations. Models (e.g., mathematical, physical, conceptual) can be used to make predictions about changes in the size or rate of growth of a population.** **DOK 3**

Core Content for Social Studies Assessment

Version 4.1

August 2006

Kentucky Department of Education

Introduction
Core Content for Social Studies Assessment

What is the Core Content for Social Studies Assessment?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Social Studies Assessment Version 4.1* represents the social studies content from Kentucky's Academic Expectations and *Program of Studies* that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Social Studies Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the Kentucky Core Content Test (KCCT) beginning in 2007.

The *Core Content for Social Studies Assessment* is not intended to represent the comprehensive local curriculum for social studies assessment and instruction. It is also not the comprehensive *Program of Studies for Social Studies*, which specifies the minimum content for the required credits for high school graduation, and the primary, intermediate and middle level programs leading to these requirements.

The goal of social studies education is to help students become contributing, participating, and knowledgeable citizens. To achieve this goal, students must know, understand, and apply the content and concepts of the various subdomains of social studies (Government and Civics, Cultures and Societies, Economics, Geography, Historical Perspective).

Kentucky Academic Expectations for Social Studies

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These large goals were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment*.

Goal 2: *Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living and vocational studies to what they will encounter throughout their lives.*

2.14 Students understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real-life situations.

2.18 Students understand economic principles and are able to make economic decisions that have consequences in daily living.

2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and among groups.

2.17 Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.

2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

2.21 (Incorporated into 2.16)

How is the Core Content for Social Studies Assessment organized?

The *Social Studies Core Content for Assessment Version 4.1* is organized by grade levels (end of primary, 4th, 5th, 6th, 7th, 8th, and high school) in order to ensure continuity and conceptual development even though the current state assessment varies for those grade levels based on the content area. This is different from the 3.0 Version, which was organized in grade spans. This version of the *Core Content for Social Studies Assessment* includes 'off year' content standards as well as content for the assessed grades (five, eight, and eleven).

Each of the five subdomains (Government/Civics, Cultures/Societies, Economics, Geography, Historical Perspective) is further divided into "organizers" that reflect the conceptual nature of social studies. These organizers are used across grades/levels (elementary--assessment at grade 5, middle level--assessment at grade 8, and high school--assessment at grade 11).

SUBDOMAINS with related ORGANIZERS

Subdomain	Organizers
Government & Civics	• Formation of Governments • Constitutional Principles • Rights and Responsibilities
Geography	• The Use of Geographic Tools • Regions • Patterns • Human-Environment Interaction

Subdomain	Organizers
Cultures & Societies	• Elements of Culture • Social Institutions • Interactions Among Individuals and Groups
Economics	• Scarcity • Economic Systems and Institutions • Markets • Production, Distributions, and Consumption
Historical Perspective	• The Factual and Interpretive Nature of History • The History of the United States • The History of the World

Core Content standards under each organizer highlight the grade level differences. The Core Content standards are usually aligned across grade levels to show the spiraling curriculum of social studies where a concept is introduced in elementary school and further developed in middle and high school. The numbers may be different but the concept usually spirals.

The Core Content for Assessment includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items within the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Social Studies Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

Note to sixth grade teachers: It is very important when studying geography for students to understand the organizers and be able to apply them across world regions (e.g., Europe, Russia, Middle East, Asia, South Pacific, Africa, and the Americas). When teachers are studying Asia, for example, they should look for examples in Asia of the geographic organizers and not focus on every country within Asia. For example, consider the organizer, “Regions.” When applying this organizer to the study of Asia, students should explore the human and physical characteristics that help to define Asia as a world region. It would be impossible for teachers to explore every country within Asia, apply each core content standard, and accomplish anything but a superficial study of the region. However, a deep study of the organizers supported by the core content standards is recommended. The application of the organizers should be focused on the present day.

As teachers use the *Core Content for Social Studies Assessment* to make curricular decisions, they need to incorporate all five subdomains of the social studies.

What do the codes for the Core Content for Social Studies Assessment mean?
Each content standard is preceded by a code. The code begins with SS for Social Studies and is then followed by a grade level designation and then a 3-digit number that indicates subdomain, organizer, and sequential standard, respectively. The grade level codes used are listed below.

Grade Level Codes	Subdomains	Organizers
EP = end of primary	1 = Government & Civics	1 = Formation of Governments
04 = fourth grade		2 = Constitutional Principles
05 = fifth grade		3 = Rights and Responsibilities
06 = sixth grade	2 = Cultures & Societies	1 = Elements of Culture
07 = seventh grade		2 = Social Institutions
08 = eighth grade		3 = Interactions Among Individuals and Groups
HS = high school	3 = Economics	1 = Scarcity
		2 = Economic Systems and Institutions
		3 = Markets
		4 = Production, Distributions and Consumption
	4 = Geography	1 = The Use of Geographic Tools
		2 = Regions
		3 = Patterns
		4 = Human-Environment Interaction
	5 = Historical Perspective	1 = The Factual and Interpretive Nature of History
		2 = The History of the United States
		3 = The History of the World

The numbers in the code indicate the subdomain of social studies and its relationship to the organizers within a subdomain. For example, the first content standard of the first subdomain under the first organizer is numbered SS-08-1.3.2.

SS-08-1.3.2
SS = Social Studies (domain)
08 = Eighth Grade
1 = Government and Civics (first subdomain)
3 = Rights and Responsibilities (third organizer)
2 = (second standard)

Government and Civics

The study of government and civics equips students to understand the nature of government and the unique characteristics of representative democracy in the United States, including its fundamental principles, structure and the role of citizens. Understanding the historical development of structures of power, authority and governance and their evolving functions in contemporary U.S. society and other parts of the world is essential for developing civic competence. An understanding of civic ideals and practices of citizenship is critical to full participation in society and is a central purpose of the social studies.

End of Primary	4th Grade	5th Grade
Formation of Governments		
SS-EP-1.1.1 *Students will identify the basic purposes of local government (to establish order, provide security and accomplish common goals); give examples of services local governments provide (e.g., police and fire protection roads and snow removal, garbage pick-up,) and identify how they pay for these services taxes).*	**SS-04-1.1.1** **Students will describe the basic purposes of Kentucky government (to establish order, provide security and accomplish common goals); give examples of the services that state governments provide (e.g., state police, state highways, state parks, public schools) and identify how the government of Kentucky pays for these services (e.g., sales taxes, state income taxes).** **DOK 2**	**SS-05-1.1.1** **Students will describe the basic purposes of the U.S. Government as defined in the Preamble to the U.S. Constitution (to establish justice, to ensure domestic tranquility, to provide for the common defense, to promote the general welfare, to secure the blessings of liberty); give examples of services the U.S. Government provides (e.g., armed forces, interstate highways, national parks) and analyze the importance of these services to citizens today.** **DOK 3**
SS-EP-1.1.2 **Students will identify and explain the purpose of rules within organizations (e.g., school, clubs, teams) and compare rules with laws.** **DOK 2**	**SS-04-1.1.2** **Students will explain how state governments function (by making, enacting and enforcing laws) to protect the rights and property of citizens.** **DOK 2**	**SS-05-1.1.2** **Students will explain and give examples of how democratic governments function (by making, enacting and enforcing laws) to promote the "common good" (e.g., public smoking ban, speed limits, seat belt requirements).** **DOK 3**

Constitutional Principles		
SS-EP-1.2.1 *Students will describe how their local government is structured (e.g., mayor, city council, judge-executive, fiscal court, local courts) and compare their local government to other community governments in Kentucky.*	**SS-04-1.2.1** **Students will identify the three branches of Kentucky government, explain the basic duties of each branch (executive-enforce the laws, legislative-make the laws, judicial-interpret the laws) and identify important state offices/ leaders, (Governor, Lieutenant Governor, General Assembly, Senate, House, representatives, senators, Kentucky Supreme Court, judges) associated with each branch.** **DOK 2**	**SS-05-1.2.1** **Students will identify the three branches of the U.S. Government, explain the basic duties of each branch (executive-enforce the laws, legislative-make the laws, judicial-interpret the laws) and identify important national/federal offices/leaders, (President, Vice-President, Congress, House, Senate, U.S. Senators, U.S. Representatives, U.S. Supreme Court, judges) associated with each branch.** **DOK 2**
	SS-04-1.2.2 *Students will explain how power is shared among the different branches (executive, legislative, judicial) of state government.*	**SS-05-1.2.2** **Students will explain why the framers of the Constitution felt it was important to establish a government where powers are shared across different levels (local, state, national/federal) and branches (executive, legislative, judicial).** **DOK 2**

Rights and Responsibilities		
SS-EP-1.3.1 *Students will define basic democratic ideas (e.g., liberty, justice, equality, rights, responsibility) and explain why they are important today.*	**SS-04-1.3.1** **Students will identify the basic principles of democracy (e.g., justice, equality, responsibility, freedom) found in Kentucky's Constitution and explain why they are important to citizens today.** **DOK 2**	**SS-05-1.3.1** **Students will explain the basic principles of democracy (e.g., justice, equality, responsibility, freedom) found in significant U.S. historical documents (Declaration of Independence, U. S. Constitution, Bill of Rights) and analyze why they are important to citizens today.** **DOK 3**
SS-EP-1.3.2 **Students will identify and give examples of good citizenship at home, at school and in the community (e.g., helping with chores, obeying rules, participating in community service projects such as recycling, conserving natural resources, donating food/supplies) and explain why civic engagement in the community is important.** **DOK 2**	**SS-04-1.3.2** **Students will describe specific rights and responsibilities individuals have as citizens of Kentucky (e.g., voting in statewide elections, participating in state service projects, obeying state laws) and explain why civic engagement is necessary to preserve a democratic society.** **DOK 2**	**SS-05-1.3.2** **Students will describe specific rights and responsibilities individuals have as citizens of the United States (e.g., voting in national elections) and explain why civic engagement is necessary to preserve a democratic society.** **DOK 3**

Cultures & Societies

Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals (e.g., food, clothing, shelter, communication) connecting all cultures. Culture influences viewpoints, rules and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World, and that issues and challenges unite and divide them.

End of Primary	4th Grade	5th Grade
Elements of Culture		
SS-EP-2.1.1 **Students will describe cultural elements (e.g., beliefs, traditions, languages, skills, literature, the arts).** **DOK 1**	**SS-04-2.1.1** **Students will identify early cultures (Native American, Appalachian, pioneers) in Kentucky and explain their similarities and differences.** **DOK 2**	**SS-05-2.1.1** **Students will identify early cultures (e.g., English, Spanish, French, West African) in the United States and analyze their similarities and differences.** **DOK 2**
SS-EP-2.1.2 *Students will study a variety of diverse cultures locally and in the world today and explain the importance of appreciating and understanding other cultures.*		
Social Institutions		
SS-EP-2.2.1 *Students will identify social institutions (government, economy, education, religion, family) and explain how they help the community.*	*SS-04-2.2.1* *Students will describe social institutions (government, economy, education, religion, family) in Kentucky and how they respond to the needs of the people.*	*SS-05-2.2.1* *Students will describe social institutions (government, economy, education, religion, family) in the United States and explain their role in the growth and development of the nation.*

Interactions Among Individuals and Groups		
SS-EP-2.3.1 **Students will describe various forms of interactions (compromise, cooperation, conflict, competition) that occur between individuals/ groups at home and at school.** **DOK 2**	**SS-04-2.3.1** **Students will describe various forms of interactions (compromise, cooperation, conflict) that occurred during the early settlement of Kentucky between diverse groups (Native Americans, early settlers).** **DOK 2**	**SS-05-2.3.1** **Students will describe various forms of interactions (compromise, cooperation, conflict) that occurred between diverse groups (e.g., Native Americans, European Explorers, English colonists, British Parliament) in the history of the United States.** **DOK 2**
SS-EP-2.3.2 *Students will identify appropriate conflict resolution strategies (e.g., compromise, cooperation, communication).*	*SS-04-2.3.2* *Students will give examples of conflicts between individuals or groups today and describe appropriate conflict resolution strategies (e.g., compromise, cooperation, communication) to use.*	**SS-05-2.3.2** **Students will give examples of conflicts between individuals or groups and describe appropriate conflict resolution strategies (e.g., compromise, cooperation, communication).** **DOK 2**

Economics

Economics includes the study of production, distribution and consumption of goods and services. Students need to understand how their economic decisions affect them, others, the nation and the world. The purpose of economic education is to enable individuals to function effectively both in their own personal lives and as citizens and participants in an increasingly connected world economy. Students need to understand the benefits and costs of economic interaction and interdependence among people, societies and governments.

End of Primary	4th Grade	5th Grade
Scarcity		
SS-EP-3.1.1 **Students will define basic economic terms related to scarcity (e.g., opportunity cost, wants and needs, limited productive resources-natural, human, capital) and explain that scarcity requires people to make economic choices and incur opportunity costs.** **DOK 2**	**SS-04-3.1.1** **Students will describe scarcity and explain how scarcity requires people in Kentucky to make economic choices (e.g., use of productive resources - natural, human, capital) and incur opportunity costs.** **DOK 2**	**SS-05-3.1.1** **Students will describe scarcity and explain how scarcity required people in different periods in the U.S. (Colonization, Expansion, Twentieth Century to Present) to make economic choices (e.g., use of productive resources- natural, human, capital) and incur opportunity costs.** **DOK 2**
Economic Systems and Institutions		
SS-EP-3.2.1 *Students will identify and give examples of economic institutions (banks) and explain how they help people deal with the problem of scarcity (e.g., loan money, save money) in today's market economy.*	*SS-04-3.2.1* *Students will explain how profit motivates individuals/businesses to take risks in producing goods and services.*	*SS-05-3.2.1* *Students will explain how profits motivated individuals/businesses in the U.S. (Expansion, Industrialization) to take risks in producing goods and services.*

Markets		
SS-EP-3.3.1 **Students will define basic economic terms related to markets (e.g., market economy, markets, wants and needs, goods and services, profit, consumer, producer, supply and demand, barter, money, trade, advertising).** **DOK 2**	**SS-04-3.3.1** **Students will give examples of markets; explain how they function and how the prices of goods and services are determined by supply and demand.** **DOK 2**	**SS-05-3.3.1** **Students will give examples of markets in different periods of U.S. History (Colonization, Expansion, Industrialization, Twentieth Century to Present) and explain similarities and differences.** **DOK 2**
SS-EP-3.3.2 *Students will explain different ways that people acquire goods and services (by trading/bartering goods and services for other goods and services or by using money).*	*SS-04-3.3.2* *Students will explain how competition among buyers and sellers influences the price of goods and services in our state, nation and world.*	*SS-05-3.3.2* *Students will explain how competition among buyers and sellers influences the price of goods and services in our state, nation and world.*

Production, Distribution, and Consumption		
SS-EP-3.4.1 **Students will define basic economic terms related to production, distribution and consumption (e.g., goods and services, wants and needs, supply and demand, specialization, entrepreneur) and describe various ways goods and services are distributed (e.g., by price, first-come-first-served, sharing equally).** **DOK 2**	**SS-04-3.4.1** **Students will describe production, distribution and consumption of goods and services in regions of Kentucky and the U.S.** **DOK 2**	**SS-05-3.4.1** **Students will describe production, distribution and consumption of goods and services in the history of the U.S. (Colonization, Industrialization, Twentieth Century to Present).** **DOK 3**
SS-EP-3.4.2 *Students will describe how new knowledge, technology/tools, and specialization increases productivity in our community, state, nation and world.*	*SS-04-3.4.2* *Students will describe how new knowledge, technology/tools and specialization increases productivity and promotes trade between regions of Kentucky and the United States (e.g., Midwest – corn, South - citrus).*	**SS-05-3.4.2** **Students will describe how new knowledge, technology/tools and specialization increase/increased productivity in the U.S. (Colonization, Industrialization, Twentieth Century to Present).** **DOK 3**
SS-EP-3.4.3 *Students will define interdependence and give examples of how people in our communities, states, nation and world depend on each other for goods and services.*	*SS-04-3.4.3* *Students will define interdependence and give examples of how people in our communities, states, nation and world depend on each other for goods and services.*	*SS-05-3.4.3* *Students will define interdependence and give examples of how people in our communities, states, nation and world depend on each other for goods and services.*

Geography

Geography includes the study of the five fundamental themes of location, place, regions, movement and human/environmental interaction. Students need geographic knowledge to analyze issues and problems to better understand how humans have interacted with their environment over time, how geography has impacted settlement and population, and how geographic factors influence climate, culture, the economy and world events. A geographic perspective also enables students to better understand the past and present and to prepare for the future.

End of Primary	4th Grade	5th Grade
The Use of Geographic Tools		
SS-EP-4.1.1 *Students will use geographic tools (e.g., maps, globes, mental maps, charts, graphs) to locate and describe familiar places at home, school and the community.*	**SS-04-4.1.1** **Students will use geographic tools (e.g., maps, charts, graphs) to identify and describe natural resources and other physical characteristics (e.g., major landforms, major bodies of water, weather, climate, roads, bridges) in regions of Kentucky and the United States.** **DOK 2**	**SS-05-4.1.1** **Students will use geographic tools (e.g., maps, charts, graphs) to identify natural resources and other physical characteristics (e.g., major landforms, major bodies of water, weather, climate, roads, bridges) and analyze patterns of movement and settlement in the United States.** **DOK 3**
SS-EP-4.1.2 *Students will use geographic tools to identify major landforms (e.g., continents, mountain ranges), bodies of water (e.g., oceans, major rivers) and natural resources on Earth's surface and use relative location.*	*SS-04-4.1.2* *Students will use geographic tools to locate major landforms, bodies of water, places and objects in Kentucky by their absolute and relative locations.*	**SS-05-4.1.2** **Students will use geographic tools to locate and describe major landforms, bodies of water, places and objects in the United States by their absolute location.** **DOK 2**
SS-EP-4.1.3 *Students will describe how different factors (e.g. rivers, mountains) influence where human activities are located in the community.*	*SS-04-4.1.3* *Students will describe how different factors (e.g. rivers, mountains) influence where human activities were/are located in Kentucky.*	*SS-05-4.1.3* *Students will describe how different factors (e.g. rivers, mountains) influence where human activities were/are located in the United States.*
		SS-05-4.1.4 *Students explain how factors in one location can impact other locations (e.g., natural disasters, building dams).*

Regions		
SS-EP-4.2.1 *Students will describe places on Earth's surface by their physical characteristics (e.g., climate, landforms, bodies of water).*	**SS-04-4.2.1** **Students will compare regions in Kentucky and the United States by their human characteristics (e.g., language, settlement patterns, beliefs) and physical characteristics (e.g., climate, landforms, bodies of water).** **DOK 2**	
Patterns		
SS-EP-4.3.1 *Students will describe patterns of human settlement in places and regions on the Earth's surface.*	**SS-04-4.3.1** **Students will describe patterns of human settlement in regions of Kentucky and explain how these patterns were/are influenced by physical characteristics (e.g., climate, landforms, bodies of water).** **DOK 2**	**SS-05-4.3.1** **Students will explain patterns of human settlement in the early development of the United States and explain how these patterns were influenced by physical characteristics (e.g., climate, landforms, bodies of water).** **DOK 2**
SS-EP-4.3.2 *Students will describe how technology helps us move, settle and interact in the modern world.*	**SS-04-4.3.2** **Students will describe how advances in technology (e.g., dams, reservoirs, roads, irrigation) allow people to settle in places previously inaccessible in Kentucky.** **DOK 2**	**SS-05-4.3.2** **Students will describe how advances in technology (e.g., dams, reservoirs, roads, irrigation) allow people to settle in places previously inaccessible in the United States.** **DOK 2**

Human-Environment Interaction		
SS-EP-4.4.1 **Students will describe ways people adapt to/modify the physical environment to meet their basic needs (food, shelter, clothing).** **DOK 1**	**SS-04-4.4.1** **Students will explain and give examples of how people adapted to/modified the physical environment (e.g., natural resources, physical geography, natural disasters) to meet their needs during the history of Kentucky and explain its impact on the environment today.** **DOK 3**	**SS-05-4.4.1** **Students will explain and give examples of how people adapted to/modified the physical environment (e.g., natural resources, physical geography, natural disasters) to meet their needs during the history of the U.S. (Colonization, Expansion) and analyze the impact on their environment.** **DOK 3**
SS-EP-4.4.2 *Students will describe how the physical environment can both promote and restrict human activities.*	**SS-04-4.4.2** **Students will describe how the physical environment (e.g., mountains as barriers for protection, rivers as barriers of transportation) both promoted and restricted human activities during the early settlement of Kentucky.** **DOK 2**	**SS-05-4.4.2** **Students will describe how the physical environment (e.g., mountains as barriers for protection, rivers as barriers of transportation) both promoted and restricted human activities during the early settlement of the U.S. (Colonization, Expansion).** **DOK 2**
		SS-05-4.4.3 *Students will describe how individuals/groups may have different perspectives about the use of land (e.g., farming, industrial, residential, recreational).*

Historical Perspective

History is an account of events, people, ideas and their interaction over time that can be interpreted through multiple perspectives. In order for students to understand the present and plan for the future, they must understand the past. Studying history engages students in the lives, aspirations, struggles, accomplishments and failures of real people. Students need to think in an historical context in order to understand significant ideas, beliefs, themes, patterns and events, and how individuals and societies have changed over time in Kentucky, the United States and the World.

End of Primary	4th Grade	5th Grade
The Factual and Interpretive Nature of History		
SS-EP-5.1.1 *Students will use a variety of primary and secondary sources (e.g., artifacts, diaries, timelines) to interpret the past.*	**SS-04-5.1.1** **Students will use a variety of primary and secondary sources (e.g., artifacts, diaries, timelines) to describe significant events in the history of Kentucky and interpret different perspectives.** **DOK 2**	**SS-05-5.1.1** **Students will use a variety of primary and secondary sources (e.g., artifacts, diaries, maps, timelines) to describe significant events in the history of the U.S. and interpret different perspectives.** **DOK 3**
The History of the United States		
SS-EP-5.2.1 **Students will identify significant patriotic and historical songs, symbols, monuments/landmarks (e.g.*, The Star-Spangled Banner*, the Underground Railroad, the Statue of Liberty) and patriotic holidays (e.g., Veteran's Day, Martin Luther King's birthday, Fourth of July) and explain their historical significance.** **DOK 2**	**SS-04-5.2.1** **Students will identify significant historical documents, symbols, songs and selected readings (e.g., state flag, United We Stand, Divided We Fall, My Old Kentucky Home,) specific to Kentucky and explain their historical significance.** **DOK 2**	**SS-05-5.2.1** **Students will identify historical documents, selected readings and speeches (e.g., Mayflower Compact, Emancipation Proclamation, Dr. Martin Luther King's speech*: I Have a Dream*) and explain their historical significance.** **DOK 3**

SS-EP-5.2.2 **Students will identify and compare the early cultures of diverse groups of Native Americans (e.g., Northwest, Southwest, Plains, Eastern Woodlands) and explain why they settled in what is now the United States.** **DOK 2**	**SS-04-5.2.2** **Students will identify and compare the cultures of diverse groups and explain why people explored and settled in Kentucky.** **DOK 2**	**SS-05-5.2.2** **Students will explain reasons (e.g., freedoms, opportunities, fleeing negative situations) immigrants came to America long ago (Colonization and Settlement, Industrialization and Immigration, Twentieth Century to Present) and compare with why immigrants come to America today.** **DOK 2**
SS-EP-5.2.3 *Students will describe change over time in communication, technology, transportation and education in the community.*	**SS-04-5.2.3** **Students will compare change over time in communication, technology, transportation and education in Kentucky.** **DOK 3**	**SS-05-5.2.3** **Students will compare change over time (Colonization, Industrialization, Twentieth Century to Present) in communication, technology, transportation and education.** **DOK 3**
		SS-05-5.2.4 **Students will describe significant historical events in each of the broad historical periods and eras in U.S. history (Colonization and Settlement, Revolution and a New Nation, Expansion and Conflict, Industrialization and Immigration, Twentieth Century to Present) and explain cause and effect relationships.** **DOK 3**

Government & Civics

The study of government and civics equips students to understand the nature of government and the unique characteristics of representative democracy in the United States, including its fundamental principles, structure and the role of citizens. Understanding the historical development of structures of power, authority, and governance and their evolving functions in contemporary U.S. society and other parts of the world is essential for developing civic competence. An understanding of civic ideals and practices of citizenship is critical to full participation in society and is a central purpose of the social studies.

6th Grade	7th Grade	8th Grade
Formation of Governments		
SS-06-1.1.1 **Students will compare purposes and sources of power in the most common forms of government (monarchy, democracy, republic, dictatorship) in the present day.** **DOK 2**	**SS-07-1.1.1** **Students will compare purposes and sources of power in the most common forms of government (monarchy, democracy, republic, dictatorship) in early civilizations prior to 1500 A.D.** **DOK 2**	**SS-08-1.1.1** **Students will compare purposes and sources of power in the most common forms of government (monarchy, democracy, republic).** **DOK 2**
SS-06-1.1.2 **Students will describe and give examples to support how present day democratic governments function to preserve and protect the rights (e.g., voting), liberty and property of their citizens by making, enacting and enforcing appropriate rules and laws.** **DOK 3**	**SS-07-1.1.2** **Students will describe and give examples to support how some early civilizations (Greece, Rome) practiced democratic principles (e.g., justice, equality, responsibility, freedom).** **DOK 3**	**SS-08-1.1.2** **Students will describe and give examples to support how democratic government in the United States prior to Reconstruction functioned to preserve and protect the rights (e.g., voting), liberty and property of their citizens by making, enacting and enforcing appropriate rules and laws (e.g., constitutions, laws, statutes).** **DOK 3**
		SS-08-1.1.3 **Students will describe and give examples of the ways the Constitution of the United States is a document that can be changed from time to time through both formal and informal processes (e.g., amendments, court cases, executive actions) to meet the needs of its citizens.** **DOK 2**

Constitutional Principles		
		SS-08-1.2.1 **Students will identify the three branches of government, describe their functions and analyze and give examples of the ways the U.S. Constitution separates power among the legislative, executive and judicial branches to prevent the concentration of political power and to establish a system of checks and balances.** **DOK 3**
		SS-08-1.2.2 **Students will explain the reasons why the powers of the state and national/federal governments are sometimes shared and sometimes separate (federalism) and give examples of shared and separate powers.** **DOK 2**

Rights and Responsibilities		
		SS-08-1.3.1 **Students will explain and give examples of how significant United States documents (Declaration of Independence, Constitution, Bill of Rights) established democratic principles and guaranteed certain rights for all citizens.** **DOK 2**
		SS-08-1.3.2 **Students will explain and give examples of how, in order for the U.S. government to function as a democracy, citizens must assume responsibilities (e.g., participating in community activities, voting in elections) and duties (e.g., obeying the law, paying taxes, serving on a jury, registering for the military).** **DOK 2**

Cultures & Societies

Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals (e.g., food, clothing, shelter, communication) connecting all cultures. Culture influences viewpoints, rules and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World, and that issues and challenges unite and divide them.

6th Grade	7th Grade	8th Grade
Elements of Culture		
SS-06-2.1.1 **Students will explain how elements of culture (e.g., language, the arts, customs, beliefs, literature) define specific groups in the global world of the present day and may result in unique perspectives.** **DOK 2**	**SS-07-2.1.1** **Students will explain how elements of culture (e.g., language, the arts, customs, beliefs, literature) defined specific groups in the early civilizations prior to 1500 A.D. and resulted in unique perspectives.** **DOK 2**	**SS-08-2.1.1** **Students will explain how elements of culture (e.g., language, the arts, customs, beliefs, literature) defined specific groups in the United States prior to Reconstruction and resulted in unique perspectives.** **DOK 2**
Social Institutions		
SS-06-2.2.1 *Students will compare how cultures (present day) develop social institutions (family, religion, education, government, economy) to respond to human needs, structure society and influence behavior.*	*SS-07-2.2.1* *Students will compare how cultures (early civilizations prior to 1500 A.D.) developed social institutions (family, religion, education, government, economy) to respond to human needs, structure society and influence behavior.*	*SS-08-2.2.1* *Students will compare how cultures (United States prior to Reconstruction) developed social institutions (family, religion, education, government, economy) to respond to human needs, structure society and influence behavior.*

Interactions Among Individuals and Groups		
SS-06-2.3.1 **Students will explain how conflict and competition (e.g., political, economic, religious, ethnic) occur among individuals and groups in the present day.** **DOK 2**	**SS-07-2.3.1** **Students will explain how conflict and competition (e.g., political, economic, religious, ethnic) occurred among individuals and groups in early civilizations prior to 1500 A.D.** **DOK 2**	**SS-08-2.3.1** **Students will explain how conflict and competition (e.g., political, economic, religious, ethnic) occurred among individuals and groups in the United States prior to Reconstruction.** **DOK 2**
SS-06-2.3.2 **Students will explain how compromise and cooperation are possible choices to resolve conflict among individuals and groups in the present day.** **DOK 2**	**SS-07-2.3.2** **Students will explain how compromise and cooperation were possible choices to resolve conflict among individuals and groups in early civilizations prior to 1500 A.D.** **DOK 2**	**SS-08-2.3.2** **Students will explain how compromise and cooperation were possible choices to resolve conflict among individuals and groups in the United States prior to Reconstruction.** **DOK 2**

Economics

Economics includes the study of production, distribution and consumption of goods and services. Students need to understand how their economic decisions affect them, others, the nation and the world. The purpose of economic education is to enable individuals to function effectively both in their own personal lives and as citizens and participants in an increasingly connected world economy. Students need to understand the benefits and costs of economic interaction and interdependence among people, societies and governments.

6th Grade	7th Grade	8th Grade
Scarcity		
SS-06-3.1.1 **Students will explain and give examples of how scarcity requires individuals, groups and governments in the present day to make decisions about how productive resources (natural resources, human resources capital goods) are used.** **DOK 2**	**SS-07-3.1.1** **Students will explain and give examples of how scarcity required individuals, groups and governments in early civilizations prior to 1500 A.D. to make decisions about how productive resources (natural resources, human resources, capital goods) were used.** **DOK 2**	**SS-08-3.1.1** **Students will explain and give examples of how scarcity required individuals, groups and the government in the United States prior to Reconstruction to make decisions about how productive resources (natural resources, human resources, capital goods) were used.** **DOK 2**
		SS-08-3.1.2 *Students will identify how financial decisions (considering finance and opportunity cost) by individuals and groups impacted historical events in U.S. History prior to Reconstruction.*

Economic Systems and Institutions		
SS-06-3.2.1 **Students will compare present day economic systems (traditional, command, market, mixed).** **DOK 2**		**SS-08-3.2.1** **Students will describe the economic system that developed in the United States prior to Reconstruction.** **DOK 2**
		SS-08-3.2.2 *Students will explain how profit motivated individuals and groups to take risks in producing goods and services in the early United States prior to Reconstruction and influenced the growth of a free enterprise system.*
Markets		
SS-06-3.3.1 **Students will explain how in present day market economies, the prices of goods and services are determined by supply and demand.** **DOK 2**		**SS-08-3.3.1** **Students will explain how in the United States prior to Reconstruction, the prices of goods and services were determined by supply and demand.** **DOK 2**
SS-06-3.3.2 *Students will explain how money (unit of account) can be used to express the market value of goods and services and how money makes it easier to trade, borrow, invest and save in the present day.*		*SS-08-3.3.2* *Students will explain how money (unit of account) was used to express the market value of goods and services and how money made it easier to trade, borrow, invest and save in the United States prior to Reconstruction.*
SS-06-3.3.3 *Students will explain how competition among buyers and sellers impacts the price of goods and services in the present day.*		*SS-08-3.3.3* *Students will explain how competition among buyers and sellers impacted the price of goods and services in the United States prior to Reconstruction.*

Production, Distribution, and Consumption		
SS-06-3.4.1 *Students will explain ways in which the basic economic questions about the production, distribution and consumption of goods and services are addressed in the present day.*	**SS-07-3.4.1** **Students will explain ways in which the basic economic questions about the production, distribution and consumption of goods and services were addressed in early civilizations prior to 1500 A.D.** **DOK 2**	**SS-08-3.4.1** **Students will explain ways in which the basic economic questions about the production, distribution and consumption of goods and services were addressed in the United States prior to Reconstruction.** **DOK 2**
SS-06-3.4.2 **Students will describe how new knowledge, technology/tools and specialization increase human productivity in the present day.** **DOK 2**	**SS-07-3.4.2** **Students will describe how new knowledge, technology/tools and specialization increased productivity in early civilizations prior to 1500 A.D.** **DOK 2**	**SS-08-3.4.2** **Students will describe how new knowledge, technology/tools and specialization increased productivity in the United States prior to Reconstruction.** **DOK 2**
SS-06-3.4.3 **Students will explain how international economic activities are interdependent in the present day.** **DOK 2**		**SS-08-3.4.3** **Students will explain how personal, national and international economic activities were interdependent in the United States prior to Reconstruction.** **DOK 2**

Geography

Geography includes the study of the five fundamental themes of location, place, regions, movement and human/environmental interaction. Students need geographic knowledge to analyze issues and problems to better understand how humans have interacted with their environment over time, how geography has impacted settlement and population, and how geographic factors influence climate, culture, the economy and world events. A geographic perspective also enables students to better understand the past and present and to prepare for the future.

6th grade	7th Grade	8th grade
The Use of Geographic Tools		
SS-06-4.1.1 **Students will use a variety of geographic tools (maps, photographs, charts, graphs, databases, satellite images) to interpret patterns and locations on Earth's surface in the present day.** **DOK 3**	**SS-07-4.1.1** **Students will use a variety of geographic tools (maps, photographs, charts, graphs, databases) to interpret patterns and locations on Earth's surface in early civilizations prior to 1500 A.D.** **DOK 3**	**SS-08-4.1.1** **Students will use a variety of geographic tools (maps, photographs, charts, graphs, databases) to interpret patterns and locations on Earth's surface in United States history prior to Reconstruction.** **DOK 3**
SS-06-4.1.2 *Students will describe how different factors (e.g., rivers, mountains, plains) affect where human activities are located in the present day.*	*SS-07-4.1.2* *Students will describe how different factors (e.g., rivers, mountains, plains) affected where human activities were located in early civilizations prior to 1500 A.D.*	*SS-08-4.1.2* *Students will describe how different factors (e.g., rivers, mountains, plains, harbors) affected where human activities were located in the United States prior to Reconstruction.*

Regions		
SS-06-4.2.1 **Students will describe how regions in the present day are made distinctive by human characteristics (e.g., dams, roads, urban centers) and physical characteristics (e.g., mountains, bodies of water, valleys) that create advantages and disadvantages for human activities (e.g., exploration, migration, trade, settlement, development).** **DOK 2**	**SS-07-4.2.1** **Students will describe how regions in early civilizations prior to 1500 A.D. were made distinctive by human characteristics (e.g., dams, irrigation, roads) and physical characteristics (e.g., mountains, bodies of water, valleys) that created advantages and disadvantages for human activities (e.g., exploration, migration, trade, settlement).** **DOK 2**	**SS-08-4.2.1** **Students will describe how regions in the U.S. prior to Reconstruction were made distinctive by human characteristics (e.g., dams, roads, urban centers) and physical characteristics (e.g., mountains, bodies of water) that created advantages and disadvantages for human activities (e.g., exploration, migration, trade, settlement).** **DOK 2**
SS-06-4.2.2 **Students will describe and give examples of how places and regions in the present day change over time as technologies, resources and knowledge become available.** **DOK 2**	**SS-07-4.2.2** **Students will describe and give examples of how places and regions in early civilizations prior to 1500 A.D changed over time as technologies, resources and knowledge became available.** **DOK 2**	**SS-08-4.2.2** **Students will describe how places and regions in United States history prior to Reconstruction changed over time as technologies, resources and knowledge became available.** **DOK 2**

Patterns		
SS-06-4.3.1 **Students will describe patterns of human settlement in the present day and explain how these patterns are influenced by human needs.** **DOK 2**	**SS-07-4.3.1** **Students will describe patterns of human settlement in early civilizations prior to 1500 A.D. and explain how these patterns were influenced by human needs.** **DOK 2**	**SS-08-4.3.1** **Students will describe patterns of human settlement in the United States prior to Reconstruction and explain how these patterns were influenced by human needs.** **DOK 2**
SS-06-4.3.2 **Students will explain why and give examples of how human populations may change and/or migrate because of factors such as war, famine, disease, economic opportunity and technology in the present day.** **DOK 3**	**SS-07-4.3.2** **Students will explain why and give examples of how human populations changed and/or migrated because of factors such as war, disease, economic opportunity and technology in early civilizations prior to 1500 A.D.** **DOK 3**	**SS-08-4.3.2** **Students will explain why and give examples of how human populations changed and/or migrated because of factors such as war, disease, economic opportunity and technology in the United States prior to Reconstruction.** **DOK 3**

Human-Environment Interaction		
SS-06-4.4.1 **Students will explain how technology in the present day assists human modification (e.g., irrigation, clearing land, building roads) of the physical environment in regions.** **DOK 2**	**SS-07-4.4.1** **Students will explain how technology in early civilizations prior to 1500 A.D. assisted human modification (e.g., irrigation, clearing land, building roads) of the physical environment.** **DOK 2**	*SS-08-4.4.1* *Students will explain how technology in the United States prior to Reconstruction assisted human modification (e.g., irrigation, clearing land, building roads) of the physical environment.*
SS-06-4.4.2 **Students will describe ways in which the physical environment (e.g., natural resources, physical geography, natural disasters) both promotes and limits human activities (e.g., exploration, migration, trade, settlement, development) in the present day.** **DOK 2**	**SS-07-4.4.2** **Students will describe ways in which the physical environment (e.g., natural resources, physical geography, natural disasters) both promoted and limited human activities (e.g., exploration, migration, trade, settlement, development) in early civilizations prior to 1500 A.D.** **DOK 2**	*SS-08-4.4.2* *Students will describe ways in which the physical environment (e.g., natural resources, physical geography, natural disasters) both promoted and limited human activities (e.g., exploration, migration, trade, settlement, development) in the United States prior to Reconstruction.*
SS-06-4.4.3 *Students will explain how the natural resources of a place or region impact its political, social and economic development in the present day.*	*SS-07-4.4.3* *Students will explain how the natural resources of a place or region impact its political, social and economic development in early civilizations prior to 1500 A.D.*	*SS-08-4.4.3* *Students will explain how the natural resources of a place or region impact its political, social and economic development in the United States prior to Reconstruction.*
SS-06-4.4.4 *Students will explain how individual and group perspectives impact the use of natural resources (e.g., urban development, recycling) in the present day.*		*SS-08-4.4.4* *Students will compare and contrast different perspectives (viewpoints) that people have about how to use land (e.g., farming, industrial, residential, recreational) in the United States prior to Reconstruction.*

Historical Perspective

History is an account of events, people, ideas and their interaction over time that can be interpreted through multiple perspectives. In order for students to understand the present and plan for the future, they must understand the past. Studying history engages students in the lives, aspirations, struggles, accomplishments and failures of real people. Students need to think in an historical context in order to understand significant ideas, beliefs, themes, patterns and events, and how individuals and societies have changed over time in Kentucky, the United States and the World.

6th Grade	7th Grade	8th Grade
The Factual and Interpretive Nature of History		
SS-06-5.1.1 *Students will use a variety of tools (e.g., primary and secondary sources) to describe and explain historical events and conditions and to analyze the perspectives of different individuals and groups (e.g., gender, race, region, ethnic group, age, economic status, religion, political group) in present day regions.*	**SS-07-5.1.1** **Students will use a variety of tools (e.g. primary and secondary sources) to describe and explain historical events and conditions and to analyze the perspectives of different individuals and groups (e.g., gender, race, region, ethnic group, age, economic status, religion, political group) in early civilizations prior to 1500 A.D.** **DOK 3**	**SS-08-5.1.1** **Students will use a variety of tools (e.g., primary and secondary sources) to describe and explain historical events and conditions and to analyze the perspectives of different individuals and groups (e.g., gender, race, region, ethnic group, age, economic status, religion, political group) in U.S. history prior to Reconstruction.** **DOK 3**
	SS-07-5.1.2 **Students will explain how history is a series of connected events shaped by multiple cause-and-effect relationships and give examples of those relationships.** **DOK 3**	**SS-08-5.1.2** **Students will explain how history is a series of connected events shaped by multiple cause-and-effect relationships and give examples of those relationships.** **DOK 3**

The History of the United States		
		SS-08-5.2.1 **Students will explain events and conditions that led to the "Great Convergence" of European, African and Native American people beginning in the late 15th century, and analyze how America's diverse society developed as a result of these events.** **DOK 3**
		SS-08-5.2.2 **Students will explain and give examples of how the ideals of equality and personal liberty (rise of individual rights, economic freedom, religious diversity) that developed during the colonial period, were motivations for the American Revolution and proved instrumental in the development of a new nation.** **DOK 3**
		SS-08-5.2.3 **Students will explain how the growth of democracy and geographic expansion occurred and were significant to the development of the United States prior to Reconstruction.** **DOK 3**

		SS-08-5.2.4 **Students will describe the political, social, economic and cultural differences (e.g., slavery, tariffs, industrialism vs. agrarianism, federal vs. states' rights) among sections of the U.S. and explain how these differences resulted in the American Civil War.** **DOK 3**

The History of the World		
	SS-07-5.3.1 **Students will explain and give examples of how early hunters and gatherers (Paleolithic and Neolithic) developed new technologies as they settled into organized civilizations.** **DOK 2**	
	SS-07-5.3.2 **Students will describe the rise of classical civilizations and empires (Greece and Rome) and explain how these civilizations had lasting impacts on the world in government, philosophy, architecture, art, drama and literature.** **DOK 3**	
	SS-07-5.3.3 **Students will describe the rise of non-Western cultures (e.g., Egyptian, Chinese, Indian, Persian) and explain ways in which these cultures influenced government, philosophy, art, drama and literature in the present day.** **DOK 3**	
	SS-07-5.3.4 **Students will describe developments during the Middle Ages (feudalism, nation states, monarchies, religious institutions, limited government, trade, trade associations, capitalism) and give examples of how these developments influenced modern societies.** **DOK 3**	
	SS-07-5.3.5 *Students will explain how the Age of Exploration (early civilizations prior to 1500 A.D.) produced extensive contact among isolated cultures and explain the impact of this contact.*	

Government & Civics

The study of government and civics equips students to understand the nature of government and the unique characteristics of representative democracy in the United States, including its fundamental principles, structure and the role of citizens. Understanding the historical development of structures of power, authority and governance and their evolving functions in contemporary U.S. society and other parts of the world is essential for developing civic competence. An understanding of civic ideals and practices of citizenship is critical to full participation in society and is a central purpose of the social studies.

High School
Formation of Governments
SS-HS-1.1.1 **Students will compare and contrast (purposes, sources of power) various forms of government in the world (e.g., monarchy, democracy, republic, dictatorship) and evaluate how effective they have been in establishing order, providing security and accomplishing common goals.** **DOK 3**
SS-HS-1.1.2 **Students will explain and give examples of how democratic governments preserve and protect the rights and liberties of their constituents through different sources (e.g., U.N. Charter, Declaration of the Rights of Man, U.N. Declaration of Human Rights, U.S. Constitution).** **DOK 2**
SS-HS-1.1.3 *Students will evaluate how the U.S. government's response to contemporary issues and societal problems (e.g., education, welfare system, health insurance, childcare, crime) reflects the needs, wants and demands of its citizens (e.g., individuals, political action committees, special interest groups, political parties).*

Constitutional Principles
SS-HS-1.2.1 **Students will analyze how powers of government are distributed and shared among levels and branches and evaluate how this distribution of powers protects the "common good" (e.g., Congress legislates on behalf of the people; the President represents the people as a nation; the Supreme Court acts on behalf of the people as a whole when it interprets the Constitution).** **DOK 3**
SS-HS-1.2.2 **Students will interpret the principles of limited government (e.g., rule of law, federalism, checks and balances, majority rule, protection of minority rights, separation of powers) and evaluate how these principles protect individual rights and promote the "common good."** **DOK 3**

Rights and Responsibilities
SS-HS-1.3.1 **Students will explain and give examples how the rights of one individual (e.g., smoking in public places, free speech) may, at times, be in conflict (e.g., slander, libel) with the rights of another.** **DOK 2**
SS-HS-1.3.2 **Students will explain how the rights of an individual (e.g., Freedom of information Act, privacy) may, at times, be in conflict with the responsibility of the government to protect the "common good" (e.g., homeland security issues, environmental regulations, censorship, search and seizure).** **DOK 2**
SS-HS-1.3.3 **Students will evaluate the impact citizens have on the functioning of a democratic government by assuming responsibilities (e.g., seeking and assuming leadership positions, voting) and duties (e.g., serving as jurors, paying taxes, complying with local, state and federal laws, serving in the armed forces).** **DOK 3**

Cultures & Societies

Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals (e.g., food, clothing, shelter, communication) connecting all cultures. Culture influences viewpoints, rules and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World, and that issues and challenges unite and divide them.

High School

Elements of Culture

SS-HS-2.1.1
Students will explain how belief systems, knowledge, technology and behavior patterns define cultures and help to explain historical perspectives and events in the modern world (1500 A.D. to present) and United States (Reconstruction to present).
DOK 2

Social Institutions

SS-HS-2.2.1
Students will explain how various human needs are met through interaction in and among social institutions (e.g., family, religion, education, government, economy) in the modern world (1500 A.D. to present) and the United States (Reconstruction to present).

Interactions Among Individuals and Groups

SS-HS-2.3.1
Students will explain the reasons why conflict and competition (e.g., violence, difference of opinion, stereotypes, prejudice, discrimination, genocide) may develop as cultures emerge in the modern world (1500 A.D. to present) and the United States (Reconstruction to present).
DOK 2

SS-HS-2.3.2
Students will explain and give examples of how compromise and cooperation are characteristics that influence interaction (e.g., peace studies, treaties, conflict resolution) in the modern world (1500 A.D. to present) and the United States (Reconstruction to present).
DOK 2

Economics

Economics includes the study of production, distribution and consumption of goods and services. Students need to understand how their economic decisions affect them, others, the nation and the world. The purpose of economic education is to enable individuals to function effectively both in their own personal lives and as citizens and participants in an increasingly connected world economy. Students need to understand the benefits and costs of economic interaction and interdependence among people, societies and governments.

High School
Scarcity
SS-HS-3.1.1 **Students will give examples of and explain how scarcity of resources necessitates choices at both the personal and societal levels in the modern world (1500 A.D. to present) and the United States (Reconstruction to present) and explain the impact of those choices.** **DOK 2**
SS-HS-3.1.2 *Students will explain how governments have limited budgets, so they must compare revenues to costs and consider opportunity cost when planning public projects.*
Economic Systems and Institutions
SS-HS-3.2.1 **Students will compare and contrast economic systems (traditional, command, market, mixed) based on their abilities to achieve broad social goals such as freedom, efficiency, equity, security and growth in the modern world.** **DOK 2**
SS-HS-3.2.2 *Students will describe economic institutions such as corporations, labor unions, banks, stock markets, cooperatives and partnerships.*
SS-HS-3.2.3 **Students will explain how, in a free enterprise system, individuals attempt to maximize their profits based on their role in the economy (e.g., producers try to maximize resources, entrepreneurs try to maximize profits, workers try to maximize income, savers and investors try to maximize return).** **DOK 2**

Markets
SS-HS-3.3.1 **Students will explain and give examples of how numerous factors influence the supply and demand of products (e.g., supply—technology, cost of inputs, number of sellers: demand—income, utility, price of similar products, consumers' preferences).** **DOK 2**
SS-HS-3.3.2 *Students will describe how specific financial and non-financial incentives often influence individuals differently (e.g., discounts, sales promotions, trends, personal convictions).*
SS-HS-3.3.3 *Students will explain how the level of competition in a market is largely determined by the number of buyers and sellers.*
SS-HS-3.3.4 *Students will explain how laws and government mandates (e.g., anti-trust legislation, tariff policy, regulatory policy) have been adopted to maintain competition in the United States and in the global marketplace.*
Production, Distribution, and Consumption
SS-HS-3.4.1 **Students will analyze the changing relationships among business, labor and government (e.g., unions, anti-trust laws, tariff policy, price controls, subsidies, tax incentives) and how each has affected production, distribution and consumption in the United States or the world.** **DOK 3**
SS-HS-3.4.2 **Students will describe and give examples of how factors such as technological change, investments in capital goods and human capital/resources have increased productivity in the world.** **DOK 2**
SS-HS-3.4.3 **Students will explain and give examples of how interdependence of personal, national and international economic activities often results in international issues and concerns (e.g., natural resource dependencies, economic sanctions, environmental and humanitarian issues) in the modern world (1500 A.D. to present) and the United States (Reconstruction to present).** **DOK 2**

Geography

Geography includes the study of the five fundamental themes of location, place, regions, movement and human/environmental interaction. Students need geographic knowledge to analyze issues and problems to better understand how humans have interacted with their environment over time, how geography has impacted settlement and population, and how geographic factors influence climate, culture, the economy and world events. A geographic perspective also enables students to better understand the past and present and to prepare for the future.

High School

The Use of Geographic Tools

SS-HS-4.1.1
Students will use a variety of geographic tools (e.g., maps, globes, photographs, models, satellite images, charts, graphs, databases) to explain and analyze the reasons for the distribution of physical and human features on Earth's surface.
DOK 3

SS-HS-4.1.2
Students will explain how mental maps, the mental image a person has of an area including knowledge of features and spatial relationships, become more complex as experience, study and the media bring new geographic information.

SS-HS-4.1.3
Students will use geographic tools (e.g., maps, globes, photographs, models, satellite images) to interpret the reasoning patterns (e.g., available transportation, location of resources and markets, individual preference, centralization versus dispersion) on which the location and distribution of Earth's human features is based.

Regions
SS-HS-4.2.1 *Students will interpret how places and regions serve as meaningful symbols for individuals and societies (e.g., Jerusalem, Vietnam Memorial, Ellis Island, the Appalachian region).*
SS-HS-4.2.2 **Students will explain how physical (e.g., climate, mountains, rivers) and human characteristics (e.g., interstate highways, urban centers, workforce) of regions create advantages and disadvantages for human activities in a specific place.** **DOK 2**
SS-HS-4.2.3 *Students will explain how people can develop stereotypes about places and regions (e.g., all cities are dangerous and dirty; rural areas are poor).*
SS-HS-4.2.4 *Students will explain how people from different cultures with different perspectives view regions (e.g., Middle East, Balkans) in different ways, sometimes resulting in conflict in the modern world (1500 A.D. to present) and United States (Reconstruction to present).*
Patterns
SS-HS-4.3.1 **Students will describe the movement and settlement patterns of people in various places and analyze the causes of that movement and settlement (e.g., push factors such as famines or military conflicts; pull factors such as climate or economic opportunity) and the impacts in the modern world (1500 A.D. to present) and United States (Reconstruction to present).** **DOK 3**
SS-HS-4.3.2 **Students will explain how technology (e.g., computers, telecommunications) has facilitated the movement of goods, services and populations, increased economic interdependence at all levels and influenced development of centers of economic activity.** **DOK 2**

Human-Environment Interaction
SS-HS-4.4.1 *Students will explain how humans develop strategies (e.g., transportation, communication, technology) to overcome limits of their physical environment.*
SS-HS-4.4.2 **Students will explain how human modifications to the physical environment (e.g., deforestation, mining), perspectives on the use of natural resources (e.g., oil, water, land), and natural disasters (e.g., earthquakes, tsunamis, floods) may have possible global effects (e.g., global warming, destruction of the rainforest, acid rain) in the modern world (1500 A.D. to present) and United States (Reconstruction to present).** **DOK 2**
SS-HS-4.4.3 *Students will explain how group and individual perspectives impact the use of natural resources (e.g., mineral extraction, land reclamation).*

Historical Perspective

History is an account of events, people, ideas, and their interaction over time that can be interpreted through multiple perspectives. In order for students to understand the present and plan for the future, they must understand the past. Studying history engages students in the lives, aspirations, struggles, accomplishments and failures of real people. Students need to think in an historical context in order to understand significant ideas, beliefs, themes, patterns and events, and how individuals and societies have changed over time in Kentucky, the United States and the World.

High School
The Factual and Interpretive Nature of History
SS-HS-5.1.1 **Students will use a variety of tools (e.g., primary and secondary sources, data, artifacts) to analyze perceptions and perspectives (e.g., gender, race, region, ethnic group, nationality, age, economic status, religion, politics, geographic factors) of people and historical events in the modern world (1500 A.D. to present) and United States History (Reconstruction to present).** **DOK 3**
SS-HS-5.1.2 **Students will analyze how history is a series of connected events shaped by multiple cause and effect relationships, tying past to present.** **DOK 3**

The History of the United States
SS-HS-5.2.1 **Students will compare and contrast the ways in which various Reconstruction plans were approached and evaluate the outcomes of Reconstruction.** **DOK 2**
SS-HS-5.2.2 **Students will explain how the rise of big business, factories, mechanized farming and the labor movement impacted the lives of Americans.** **DOK 2**
SS-HS-5.2.3 **Students will explain the impact of massive immigration (e.g., new social patterns, conflicts in ideas about national unity amid growing cultural diversity) after the Civil War.** **DOK 2**
SS-HS-5.2.4 **Students will explain and evaluate the impact of significant social, political and economic changes during the Progressive Movement (e.g., industrial capitalism, urbanization, political corruption, initiation of reforms), World War I (e.g., imperialism to isolationism, nationalism) and the Twenties (e.g., economic prosperity, consumerism, women's suffrage).** **DOK 3**
SS-HS-5.2.5 **Students will evaluate how the Great Depression, New Deal policies and World War II transformed America socially and politically at home (e.g., stock market crash, relief, recovery, reform initiatives, increased role of government in business, influx of women into workforce, rationing) and reshaped its role in world affairs (e.g., emergence of the U.S. as economic and political superpower).** **DOK 3**
SS-HS-5.2.6 **Students will explain and give examples of how after WWII, America experienced economic growth (e.g., suburban growth), struggles for racial and gender equality (e.g., Civil Rights Movement), the extension of civil liberties (e.g., desegregation, Civil Rights Acts) and conflict over political issues (e.g., McCarthyism, U.S. involvement in Vietnam).** **DOK 3**

SS-HS-5.2.7
Students will analyze how the United States participates with the global community to maintain and restore world peace (e.g., League of Nations, United Nations, Cold War politics, Persian Gulf War) and evaluate the impact of these efforts.

DOK 3

The History of the World
SS-HS-5.3.1 **Students will explain how humans began to rediscover the ideas of the Classical Age (e.g., humanism, developments in art and architecture, literature, political theories) and to question their place in the universe during the Renaissance and Reformation.** **DOK 2**
SS-HS-5.3.2 **Students will explain and give examples of how new ideas and technologies led to an Age of Exploration by Europeans that brought great wealth to the absolute monarchies and caused significant political, economic and social changes (disease, religious ideas, technologies, new plants/animals, forms of government) to the other regions of the world.** **DOK 2**
SS-HS-5.3.3 **Students will analyze how an Age of Revolution brought about changes in science, thought, government and industry (e.g., Newtonian physics, free trade principles, rise of democratic principles, development of the modern state) that shaped the modern world, and evaluate the long range impact of these changes on the modern world.** **DOK 3**
SS-HS-5.3.4 **Students will analyze how nationalism, militarism and imperialism led to world conflicts and the rise of totalitarian governments (e.g., European imperialism in Africa, World War I, the Bolshevik Revolution, Nazism, World War II).** **DOK 3**
SS-HS-5.3.5 **Students will explain the rise of both the United States and the Soviet Union to superpower status following World War II, the subsequent development of the Cold War, and the formation of new nations in Africa, Asia, Eastern Europe and the Middle East, and evaluate the impact of these events on the global community.** **DOK 3**
SS-HS-5.3.6 **Students will explain how the second half of the 20th century was characterized by rapid social, political and economic changes that created new challenges (e.g., population growth, diminishing natural resources, environmental concerns, human rights issues, technological and scientific advances, shifting political alliances, globalization of the economy) in countries around the world, and give examples of how countries have addressed these challenges.** **DOK 2**

Core Content for Writing Assessment

Version 4.1

August 2006

Kentucky Department of Education

Introduction
Core Content for Writing Assessment

What is the *Core Content for Writing Assessment*?
The Core Content for Assessment 4.1 (CCA 4.1) is a subset of the content standards in *Kentucky's Program of Studies for Grades Primary – 12*. It represents the content standards that will be assessed beginning with the spring 2007 state assessment. The *Core Content for Writing Assessment Version 4.1* represents the writing content from Kentucky's Academic Expectations and *Program of Studies* that is the culminating product of a school-wide writing program that is essential for all students to know and the content that is eligible for inclusion on the state assessment. Version 4.1 *Core Content for Writing Assessment* and the Academic Expectations provide the parameters for test developers as they design the state assessment items. These content standards provide focus for the development of the Kentucky Core Content Test (KCCT) and the writing portfolio for test administration beginning in 2007.

The *Core Content for Writing Assessment* represents components of the comprehensive local curriculum for writing assessment and instruction. The comprehensive *Program of Studies for Writing* specifies that students should use the writing process and criteria for effective writing in pieces developed over time, as well as in on-demand writing situations, to compile a collection of writing for a variety of authentic purposes and audiences and in a variety of forms, including personal, literary, transactive and reflective pieces.

Writing can show learning across content areas and serve as an effective learning tool. Writing in schools consists of three broad types: writing to learn, writing to demonstrate learning to the teacher and writing to communicate ideas to authentic audiences for authentic purposes (writing for publication). To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.

Kentucky Academic Expectations for Writing

The Kentucky Academic Expectations define what students should know and be able to do upon graduation from high school. These expectations were used as a basis for developing the *Program of Studies* and the *Core Content for Assessment.*

The academic expectation for writing is listed below:

Goal 1: *Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.*

1.11: Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

How is the *Core Content for Writing Assessment* organized?

The *Core Content for Writing Assessment*, Version 4.1 is organized by grade level (end of primary, 4th, 5th, 6th, 7th, 8th and high school) in order to ensure vertical alignment. *Core Content for Writing Assessment* is divided into four subdomains:

- Writing Content
- Writing Structure
- Writing Conventions
- Writing Process

The *Core Content for Assessment* includes state assessed standards and supporting content standards. Supporting content standards are not used for state assessment. Supporting content, however, is critical to the student's deep understanding of the overall content and is to be used by schools to build a foundation of knowledge, skills, and processes that will enable students to be successful on the *Kentucky Core Content Test*. In order for students to reach proficiency and beyond on the KCCT, students need to master the supporting content as well as the state assessed content. Supporting content standards are proposed for local instruction and assessment and appear in *italics* in the Core Content document. The content standards for the state assessment are in **bold print**.

Some Core Content standards contain additional information in parentheses. A list preceded by an e.g., means the examples included are meant to be just that, examples and may be on the state assessment. Other examples not included may also be on the state assessment. However, if the list is not preceded by an e.g., the list is to be considered exhaustive and the items inside the parentheses are the only ones that will be assessed.

A new aspect of the refined *Core Content for Writing Assessment Version 4.1* is Depth of Knowledge (DOK). Version 4.1 reflects the depth of knowledge and cognitive complexity for the content standard that is appropriate for each grade level for the state assessment.

Each of the state-assessed standards in the Core Content has a ceiling DOK level indicated. This means that an item on the state assessment cannot be written higher than the ceiling for that standard. An item could be written at a lower level. When writing an assessment item, developers need to make sure that the assessment item is as cognitively demanding as the expectation of the content standard in order to assure alignment of the test items and the standards. The DOK indicated for the state assessment is not meant to limit the cognitive complexity for instruction in the classroom. Classroom instruction needs to extend beyond the depth of knowledge and cognitive complexity that can be assessed on the state assessment so that students have the opportunities and experiences they need in order to reach proficiency and beyond. The levels for DOK are based on the research of Norman Webb from the University of Wisconsin-Madison. More information about DOK levels can be found at the Kentucky Department of Education website.

Version 4.1 differs from the previous Version 3.0 in the elaboration of the organizer for each standard of writing (i.e., Reflective, Personal Expressive/Literary, Transactive) across grade levels. Version 4.1 also defines stages of the writing process including skills for revising and editing.

What do the codes for the *Core Content for the Writing Assessment* mean?

Each content standard is preceded by a code. The code begins with WR for Writing and is then followed by a grade level designation and then a 3-digit number that indicates the reporting category. The codes used are listed below.

Grade Level Codes
EP = End of Primary
E = Elementary
04 = Fourth Grade
05 = Fifth Grade
M = Middle School
06 = Sixth Grade
07 = Seventh Grade
08 = Eight Grade
HS= High School

Subdomains
1 = Writing Content
2 = Writing Structure
3 = Writing Conventions
4 = Writing Process

Organizers
1 = Purpose/Audience
2 = Idea Development/Support
3 = Organization
4 = Sentences
5 = Language
6 = Correctness
7 = Focusing
8 = Prewriting
9 = Drafting
10 = Revising
11 = Editing
12 = Publishing
13 = Reflecting

Standards
1 = Reflective
2 = Personal/ Literary
3 = Transactive
4 - 41 = Skills that apply to all Categories

A typical code may look like WR-04-1.1.1. This means the following:

WR-04-1.1.1
WR- Writing (Domain)
04- Fourth Grade (Grade Level)
1. Writing Content (Subdomain)
1. Purpose/Audience (Organizer)
1- Reflective (Standard)

Writing Content

To communicate effectively, students should be able to write for a variety of authentic purposes and audiences in a variety of forms connecting to prior knowledge and the students' understanding of the content. In their writing, students should be able to create a focused purpose and controlling idea and develop ideas adequately considering the purpose, audience and form.

End of Primary	4th Grade	5th Grade
WR-E-1.1.0 **Purpose/Audience: Students will establish and maintain a focused purpose to communicate with an authentic audience by** • **Narrowing the topic to create a specific purpose for writing** • **Establishing a controlling idea, theme, or conclusion about the topic** • **Choosing a perspective authentic to the writer** • **Analyzing and addressing the needs of the intended audience** • **Adhering to the characteristics of the form** • **Applying a suitable tone** • **Allowing voice to emerge when appropriate** **DOK 4**		
WR-EP-1.1.1 *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will recognize needs of the intended audience.* • *Students will use a suitable tone or appropriate voice.*	*WR-04-1.1.1* *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will analyze and address needs of the intended audience.* • *Students will use a suitable tone or appropriate voice.*	*WR-05-1.1.1* *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will analyze and address needs of the intended audience.* • *Students will sustain a suitable tone or appropriate voice.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)

Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-1.1.2 *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's experience by focusing on life events or relationships.* • *Students will apply characteristics of the selected form (e.g., personal narrative, personal memoir).* • *Students will create a point of view.* • *Students will use a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary.* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).* • *Students will use a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*	*WR-04-1.1.2* *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's experience by narrating about life events or relationships.* • *Students will apply characteristics of the selected form (e.g., personal narrative, personal memoir).* • *Students will create a point of view.* • *Students will use a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary.* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).* • *Students will create a point of view.* • *Students will use a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*	*WR-05-1.1.2* *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's experience by narrating about life events or relationships.* • *Students will apply characteristics of the selected form (e.g., personal narrative, personal memoir, personal essay).* • *Students will create a point of view.* • *Students will sustain a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary.* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem.)* • *Students will create a point of view.* • *Students will sustain a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-1.1.3 *In Transactive Writing,* • *Students will communicate a purpose through informing or persuading.* • *Students will develop an angle.* • *Students will communicate what the reader. should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article).* • *Students will use a suitable tone.* • *Students will allow voice to emerge when appropriate.*	*WR-04-1.1.3* *In Transactive Writing,* • *Students will communicate a purpose through informing or persuading.* • *Students will develop an effective angle to achieve purpose.* • *Students will communicate as an informed writer to clarify what the reader should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article).* • *Students will use a suitable tone.* • *Students will allow voice to emerge when appropriate.*	*WR-05-1.1.3* *In Transactive Writing,* • *Students will communicate a purpose through informing, persuading or analyzing.* • *Students will develop an effective angle to achieve purpose.* • *Students will communicate as an informed writer to clarify what the reader should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article)* • *Students will sustain a suitable tone.* • *Students will allow voice to emerge when appropriate.*
WR-E-1.2.0 **Idea Development/Support: Students will support main ideas and deepen the audience's understanding of purpose by** • **Developing logical, justified and suitable explanations** • **Providing relevant elaboration** • **Explaining related connections or reflections** • **Applying idea development strategies appropriate for the form** **DOK 4**		
WR-EP-1.2.1 *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies or processes.* • *Students will explain own decisions about literacy goals.* • *Students will identify own strengths and areas for growth.*	*WR-04-1.2.1* *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies, processes or areas of growth.* • *Students will explain own decisions about literacy goals.* • *Students will identify own strengths and areas for growth.* • *Students will support claims about self.*	*WR-05-1.2.1* *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies, processes or areas of growth.* • *Students will explain own decisions about literacy goals.* • *Students will identify own strengths and areas for growth.* • *Students will support claims about self.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-1.2.2
In Personal Expressive/Literary Writing,
• *Students will communicate main idea through use of literary elements appropriate to the genre:*
  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
  o *Students will develop plot/story line appropriate to the form.*
  o *Students will develop setting, mood, scene, image or feeling.*
• *Students will apply literary or poetic devices (e.g., simile, personification) when appropriate.*
• *Students will incorporate reflection when appropriate.*
	WR-04-1.2.2
	In Personal Expressive/Literary Writing,
	• *Students will communicate main idea through use of literary elements appropriate to the genre.*
	  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
	  o *Students will develop plot/story line appropriate to the form.*
	  o *Students will develop an appropriate setting, mood, scene, image or feeling.*
	• *Students will apply literary or poetic devices (e.g., simile, metaphor, personification) when appropriate.*
	• *Students will incorporate reflection, insight and analysis when appropriate.*
		WR-05-1.2.2
		In Personal Expressive/Literary Writing,
		• *Students will communicate main idea through use of literary elements appropriate to the genre.*
		  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
		  o *Students will develop plot/story line appropriate to the form.*
		  o *Students will develop an appropriate setting, mood, scene, image or feeling.*
		• *Students will apply literary or poetic devices (e.g., simile, metaphor, personification) when appropriate.*
		• *Students will incorporate reflection, insight and analysis when appropriate.*

WR-EP-1.2.3 *In Transactive Writing,* • *Students will communicate relevant information.* • *Students will develop an angle with support (e.g., facts, examples, reasons, visuals).* • *Students will apply research to support ideas with facts and opinions.*	*WR-04-1.2.3* *In Transactive Writing,* • *Students will communicate relevant information to clarify a specific purpose.* • *Students will develop an angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).* • *Students will develop explanations to support the writer's purpose.* • *Students will apply research to support ideas with facts and opinions.* • *Students will incorporate persuasive techniques when appropriate (e.g., bandwagon, emotional appeal, testimonial, expert opinion).*	*WR-05-1.2.3* *In Transactive Writing,* • *Students will communicate relevant information to clarify a specific purpose.* • *Students will develop an angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).* • *Students will develop explanations to support the writer's purpose.* • *Students will apply research to support ideas with facts and opinions.* • *Students will incorporate persuasive techniques when appropriate (e.g., bandwagon, emotional appeal, testimonial, expert opinion).*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Writing Structure

To communicate effectively, students should be able to apply knowledge of language and genre structures to organize sentences, paragraphs and whole pieces logically and coherently.

WR-E-2.3.0
Organization: Students will create unity and coherence to accomplish the focused purpose by

- **Engaging the audience**
- **Establishing a context for reading when appropriate**
- **Communicating ideas and support in a meaningful order**
- **Applying transitions and transitional elements to guide the reader through the piece**
- **Developing effective closure**

DOK 3

WR-EP-2.3.1 *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will use transitions or transitional elements between ideas to guide the reader.* • *Students will create paragraphs.* • *Students will create conclusions effectively.*	*WR-04-2.3.1* *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will create conclusions effectively.*	*WR-05-2.3.1* *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will create conclusions effectively.*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-2.3.2 *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in a meaningful order.* • *Students will use transitions or transitional elements between ideas to guide the reader.* • *Students will create paragraphs.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively*	*WR-04-2.3.2* *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in a meaningful order.* • *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively.*	*WR-05-2.3.2* *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in a meaningful order.* • *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively.*

WR-EP-2.3.3 *In Transactive Writing,* • *Students will establish a context for reading.* • *Students will apply the accepted format of the genre.* • *Students will develop text structure (e.g., problem/ solution, question/answer, description, sequence) to achieve purpose.* • *Students will arrange ideas in a logical, meaningful order by using transitions or transitional elements between ideas and details.* • *Students will create paragraphs.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*	*WR-04-2.3.3* *In Transactive Writing,* • *Students will establish a context for reading* • *Students will apply the accepted format of the genre.* • *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.* • *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details.* • *Students will apply paragraphing effectively.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*	*WR-05-2.3.3* *In Transactive Writing,* • *Students will establish a context for reading.* • *Students will apply the accepted format of the genre.* • *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.* • *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details.* • *Students will apply paragraphing effectively.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*
WR-E-2.4.0 **Sentence Structure: Students will create effective sentences by** • **Applying a variety of structures and lengths** • **Developing complete and correct sentences unless using unconventional structures for an intentional effect when appropriate** **DOK 3**		
WR-EP-2.4.1 *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece* • *Students will develop complete and correct sentences.*	*WR-04-2.4.1* *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures when appropriate.*	*WR-05-2.4.1* *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-2.4.2 *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths.* • *Students will develop complete and correct sentences.* • *Students will arrange poetic language in a meaningful order.* • *Students will use poetic line breaks effectively.*	*WR-04-2.4.2* *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths.* • *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.* • *Students will arrange poetic language in a meaningful order.* • *Students will apply poetic line breaks effectively.*	*WR-05-2.4.2* *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths.* • *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.* • *Students will arrange poetic language in a meaningful order.* • *Students will apply poetic line breaks effectively.*
WR-EP-2.4.3 *In Transactive Writing,* • *Students will develop complete sentences or apply unconventional structures when appropriate.*	*WR-04-2.4.3* *In Transactive Writing,* • *Students will develop complete, concise sentences or apply unconventional structures when appropriate.*	*WR-05-2.4.3* *In Transactive Writing,* • *Students will develop complete, concise sentences or apply unconventional structures when appropriate.*

Writing Conventions

To communicate effectively, students should be able to apply knowledge of language conventions and have control over standard grammar and usage. Students should be able to choose precise language appropriate to the purpose.

WR-E-3.5.0
Language: Students will exemplify effective language choices by

- **Applying correct grammar and usage**
- **Applying concise use of language**
- **Incorporating strong verbs, precise nouns, concrete details and sensory details**
- **Applying language appropriate to the content, purpose and audience**

DOK 2

WR-EP-3.5.1 *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage.* • *Students will use language concisely.* • *Students will incorporate language to address the content, purpose and audience.*	*WR-04-3.5.1* *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage.* • *Students will apply language concisely.* • *Students will incorporate language appropriate to the content, purpose and audience.*	*WR-05-3.5.1* *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage* • *Students will apply language concisely.* • *Students will incorporate language appropriate to the content, purpose and audience.*
WR-EP-3.5.2 *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard when appropriate for effect.* • *Students will incorporate language based on economy or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*	*WR-04-3.5.2* *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard when appropriate for effect.* • *Students will incorporate language based on economy, precision, richness or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*	*WR-05-3.5.2* *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard when appropriate for effect.* • *Students will incorporate language based on economy, precision, richness or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-EP-3.5.3 *In Transactive Writing,* • *Students will adhere to standard guidelines for grammar and usage.* • *Students will use precise word choice.* • *Students will use the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*	*WR-04-3.5.3* *In Transactive Writing,* • *Students will adhere to standard guidelines for grammar and usage.* • *Students will apply precise word choice.* • *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*	*WR-05-3.5.3* *In Transactive Writing,* • *Students will adhere to standard guidelines for grammar and usage.* • *Students will apply precise word choice.* • *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*
WR-E-3.6.0 **Correctness: Students will communicate clearly by** • **Applying correct spelling** • **Applying correct punctuation** • **Applying correct capitalization** • **Incorporating acceptable departure from standard correctness to enhance meaning when appropriate** • **Incorporating appropriate documentation of ideas and information from outside sources (e.g., citing authors or titles within the text, listing sources)** **DOK 2**		

Writing Process To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.	
WR-E-4.7.0 ***Focusing***	• *Connecting to content knowledge* • *Connecting with prior learning and experience* • *Initiating an authentic reason to write* • *Thinking about a subject, an experience, a question, an issue or a problem to determine a meaningful reason to write*
WR-E-4.8.0 ***Prewriting***	• *Selecting/narrowing a topic* • *Establishing a purpose and central/controlling idea or focus* • *Identifying and analyzing the audience* • *Determining the most appropriate form to meet the needs of purpose and audience* • *Generating ideas (e.g., reading, journaling, mapping, webbing, note-taking, interviewing, researching, other writing-to-learn activities)* • *Organizing ideas – examining other models of good writing and appropriate text structures to match purpose and organize information*
WR-E-4.9.0 ***Drafting***	• *Writing draft(s) for an intended audience* • *Developing topic, elaborating, exploring sentence variety and language use* • *Organizing writing*
WR-E-4.10.0 **Revising** **(Content/Ideas)**	• **Reflecting to determine where to add, delete, rearrange, define/redefine or elaborate content** • *Conferencing with teacher or peer(s) to help determine where to add, delete, rearrange, define/redefine or elaborate content* • *Checking for accuracy of content* • **Considering voice, tone, style, intended audience, coherence, transitions** • *Comparing with rubric criteria and anchor papers/models* • **Considering effectiveness of language usage and sentences to communicate ideas**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Revising Skills	Revising Skills	Revising Skills
Idea Development *WR-EP-4.10.4* *Students will identify the topic sentence/main idea of a paragraph.* *WR-EP-4.10.5* *Students will select appropriate supporting details.* *WR-EP-4.10.6* *Students will identify extraneous material.*	*Idea Development* *WR-04-4.10.4* *Students will identify the topic sentence/main idea of a paragraph.* *WR-04-4.10.5* *Students will select appropriate supporting details.* *WR-04-4.10.6* *Students will identify extraneous material.*	Idea Development **WR-05-4.10.4** **Students will identify the topic sentence/main idea of a paragraph.** **DOK 2** **WR-05-4.10.5** **Students will select appropriate supporting details.** **DOK 2** **WR-05-4.10.6** **Students will identify extraneous material.** **DOK 2**
Organization *WR-EP-4.10.7* *Students will correct sentences that are out of chronological/sequential order.* *WR-EP-4.10.8* *Students will identify transitions.* *WR-EP-4.10.9* *Students will develop introductions and closures for writing.*	Organization *WR-04-4.10.7* *Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.* *WR-04-4.10.8* *Students will identify the most effective transitions.* *WR-04-4.10.9* *Students will develop effective introductions and closures for writing.*	Organization **WR-05-4.10.7** **Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.** **DOK 2** **WR-05-4.10.8** **Students will identify the most effective transitions.** **DOK 2** **WR-05-4.10.9** **Students will develop effective introductions and closures for writing.** **DOK 2**

(e.g. – suggestions, not a comprehensive list)

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Word Choice *WR-EP-4.10.10* *Students will eliminate redundant words.* *WR-EP-4.10.11* *Students will choose the most specific word for use in a sentence.*	Word Choice *WR-04-4.10.10* *Students will eliminate redundant words and phrases.* *WR-04-.4.10.11* *Students will choose the most specific word for use in a sentence.*	Word Choice **WR-05-4.10.10** **Students will eliminate redundant words and phrases.** **DOK 2** **WR-05-4.10.11** **Students will choose the most specific word for use in a sentence.** **DOK 2**
WR-E-4.11.0 **Editing** **(Conventions and Mechanics)**	• **Checking for correctness with self, teacher or peer (s)** ▪ **- Language usage** ▪ **- Sentence structure** ▪ **- Spelling** ▪ **- Capitalization** ▪ **- Punctuation** ▪ **- Documentation of sources** • *Using resources to support editing (e.g., spellcheck, dictionaries, thesauri, handbooks)*	

Editing Skills	Editing Skills	Editing Skills
Language Usage *WR-EP-4.11.12* *Students will apply knowledge of subject/verb agreement with both singular and plural subjects.* *WR-EP-4.11.13* *Students will apply knowledge of present and past verb tenses.* *WR-EP-4.11.14* *Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.* *WR-EP-4.11.15* *Students will apply knowledge of special problems in usage (e.g., a/ an, to/ two/ too, their/ there/ they're) and pronoun references.*	Language Usage *WR-04-4.11.12-* *Students will apply knowledge of subject/verb agreement with both singular and plural subjects.* *WR-04-4.11.13* *Students will apply knowledge of present, past, and future verb tenses.* *WR-04-4.11.14* *Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.* *WR-04-4.11.15* *Students will apply knowledge of special problems in usage (e.g., a/an, to/ two/ too, their/ there/ they're), pronoun references and double negatives.*	Language Usage **WR-05-4.11.12** **Students will apply knowledge of subject/verb agreement with both singular and plural subjects.** **DOK 1** **WR-05-4.11.13** **Students will apply knowledge of present, past and future verb tenses.** **DOK 1** **WR-05-4.11.14** **Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.** **DOK 1** **WR-05-4.11.15** **Students will apply knowledge of special problems in usage (e.g., a/an, to/two/too, their/there/they're), pronoun references and double negatives.** **DOK 1**
Sentence Structure *WR-EP-4.11.16* *Students will correct run-on sentences.* *WR-EP-4.11.17* *Students will correct sentence fragments.*	Sentence Structure *WR-04-4.11.16* *Students will correct run-on or awkward sentences.* *WR-04-4.11.17* *Students will correct sentence fragments.* *WR-04-4.11.18* *Students will combine short, choppy sentences effectively.*	Sentence Structure **WR-05-4.11.16** **Students will correct run-on or awkward sentences.** **DOK 1** **WR-05-4.11.17** **Students will correct sentence fragments.** **DOK 1** **WR-05-4.11.18** **Students will combine short, choppy sentences**

(e.g. – suggestions, not a comprehensive list)

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		effectively. **DOK 2**
Spelling *WR-EP-4.11.18* *Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words* *WR-EP-4.11.19* *Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.* *WR-EP-4.11.20* *Students will apply knowledge of spelling patterns, generalizations and rules to contractions.* *WR-EP-4.11.21* *Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.*	Spelling *WR-04-4.11.19* *Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words* *WR-04-4.11.20* *Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.* *WR-04-4.11.21* *Students will apply knowledge of spelling patterns, generalizations and rules to contractions.* *WR-04-4.11.22* *Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.*	Spelling **WR-05-4.11.19** **Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words DOK 1** **WR-05-4.11.20** **Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.** **DOK 1** **WR-05-4.11.21** **Students will apply knowledge of spelling patterns, generalizations and rules to contractions.** **DOK 1** **WR-05-4.11.22** **Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.** **DOK 1**

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Capitalization *WR-EP-4.11.22* *Students will capitalize proper nouns (e.g., names, days, months).* *WR-EP-4.11.23* *Students will capitalize the beginning of sentences.* *WR-EP-4.11.24* *Students will capitalize the pronoun "I".* *WR-EP-4.11.25* *Students will capitalize first word in a quote when appropriate.* *WR-EP-4.11.26* *Students will capitalize words in a title.*	Capitalization *WR-04-4.11.23* *Students will capitalize proper nouns (e.g., names, days, months).* *WR-04-4.11.24* *Students will capitalize the beginning of sentences.* *WR-04-4.11.25* *Students will capitalize the pronoun "I".* *WR-04-4.11.26* *Students will capitalize proper adjectives.* *WR-04-4.11.27* *Students will capitalize first word in a quote when appropriate.* *WR-04-4.11.28* *Students will capitalize the first word and every succeeding main word in a title.*	Capitalization **WR-05-4.11.23** **Students will capitalize proper nouns (e.g., names, days, months).** **DOK 1** **WR-05-4.11.24** **Students will capitalize the beginning of sentences.** **DOK 1** **WR-05-4.11.25** **Students will capitalize the pronoun "I".** **DOK 1** **WR-05-4.11.26** **Students will capitalize proper adjectives.** **DOK 1** **WR-05-4.11.27** **Students will capitalize first word in a quote when appropriate.** **DOK 1** **WR-05-.4.11.28** **Students will capitalize the first word and every succeeding main word in a title.** **DOK 1**

(e.g. – suggestions, not a comprehensive list)
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Punctuation *WR-EP-4.11.27* *Students will correctly punctuate nearly all of the time declarative, exclamatory, interrogative and imperative sentences.* *WR-EP-4.11.28* *Students will approximate the use of commas in a series, a date, a compound sentence and the greeting and closing of a letter.* *W-.EP-4.11.29* *Students will approximate the use of beginning and ending quotation marks in dialogue.*	Punctuation *WR-04-4.11.29* *Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.* *WR-04-4.11.30* *Students will use commas in a series, a date, a compound sentence and the greeting and closing of a letter.* *WR-04-4.11.31* *Students will use beginning and ending quotation marks in dialogue and titles.* *WR-04.4.11.32* *Students will use apostrophes in possessives and contractions.* *WR-04.4.11.33* *Students will use periods in abbreviations and acronyms.*	Punctuation **WR-05-4.11.29** **Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.** **DOK 1** **WR-05-4.11.30** **Students will use commas in a series, a date, a compound sentence and the greeting and closing of a letter.** **DOK 1** **WR-05-4.11.31** **Students will use beginning and ending quotation marks in dialogue and titles.** **DOK 1** **WR-05-4.11.32** **Students will use apostrophes in possessives and contractions.** **DOK 1** **WR-05-4.11.33** **Students will use periods in abbreviations and acronyms.** **DOK 1**
Documentation *WR-EP-4.11.30* *Students will identify the need for documentation.*	*Documentation* *WR-04-4.11.34* *Students will document use of sources.*	*Documentation* *WR-05-4.11.34* *Students will document use of sources.*
WR-E-4.12.00 *Publishing*	*Sharing final piece with intended audience*	

(e.g. – suggestions, not a comprehensive list)

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WR-E-4.13.00 Reflecting	*Reflecting upon* • *- Progress, growth and goals as a writer* • *-Literacy skills* • *- Who or what has influenced progress and growth* • *- Approaches used when composing (e.g., free-writing, mental composing, researching, drawing, webbing)*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Writing Content

To communicate effectively, students should be able to write for a variety of authentic purposes and audiences in a variety of forms connecting to prior knowledge and the students' understanding of the content. In their writing, students should be able to create a focused purpose and controlling idea and develop ideas adequately considering the purpose, audience and form.

6th Grade	7th Grade	8th Grade
WR-M-1.1.0 **Purpose/Audience: Students will establish and maintain a focused purpose to communicate with an authentic audience by** • **Narrowing the topic to create a specific purpose for writing** • **Establishing a controlling idea, theme or conclusion about the topic** • **Choosing a perspective authentic to the writer** • **Analyzing and addressing the needs of the intended audience** • **Adhering to the characteristics of the form.** • **Applying a suitable tone** • **Allowing voice to emerge when appropriate** **DOK 4**		
WR-06-1.1.1 *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will analyze and address needs of the intended audience.* • *Students will sustain a suitable tone or appropriate voice.*	*WR-07-1.1.1* *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will analyze and address needs of the intended audience.* • *Students will sustain a suitable tone or appropriate voice.*	*WR-08-1.1.1* *In Reflective Writing,* • *Students will evaluate personal progress toward meeting goals in literacy skills.* • *Students will analyze and address needs of the intended audience.* • *Students will sustain a suitable tone or appropriate voice.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-1.1.2 *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's life experience by narrating about life events, relationships or central ideas.* • *Students will apply the characteristics of the selected form (e.g., personal narrative, personal memoir, personal essay).* • *Students will create point of view.* • *Students will sustain a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition (e.g., by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary).* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).* • *Students will create point of view.* • *Students will sustain a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*	*WR-07-1.1.2* *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's life experience by narrating about life events, relationship or central ideas.* • *Students will apply the characteristics of the selected form (e.g., personal narrative, personal memoir, personal essay).* • *Students will sustain point of view.* • *Students will sustain a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition (e.g., by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary).* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).* • *Students will sustain point of view.* • *Students will sustain a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*	*WR-08-1.1.2* *In Personal Expressive Writing,* • *Students will communicate the significance of the writer's life experience by narrating about life events, relationships or central ideas.* • *Students will apply the characteristics of the selected form (e.g., personal narrative, personal memoir, personal essay).* • *Students will sustain point of view.* • *Students will sustain a suitable tone or appropriate voice.* *In Literary Writing,* • *Students will communicate to an audience about the human condition (e.g., by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary).* • *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).* • *Students will sustain point of view.* • *Students will sustain a suitable tone or appropriate voice.* • *Students will apply a fictional perspective in literary writing when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-1.1.3 *In Transactive Writing,* Students will communicate a purpose through informing, persuading or analyzing. Students will develop an effective angle to achieve purpose. • *Students will communicate as an informed writer to clarify what the reader should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article, editorial, speech).* • *Students will sustain a suitable tone.* • *Students will allow voice to emerge when appropriate.*	*WR-07-1.1.3* *In Transactive Writing,* Students will communicate a purpose through informing, persuading or analyzing. Students will develop an effective angle to achieve purpose. • *Students will communicate as an informed writer to clarify what the reader should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article, editorial, speech).* • *Students will sustain a suitable tone.* • *Students will allow voice to emerge when appropriate.*	*WR-08-1.1.3* *In Transactive Writing,* Students will communicate a purpose through informing, persuading or analyzing. Students will develop an effective angle to achieve purpose. • *Students will communicate as an informed writer to clarify what the reader should know, do or believe as a result of reading the piece.* • *Students will apply characteristics of the selected form (e.g., letter, feature article, editorial, speech).* • *Students will sustain a suitable tone.* • *Students will allow voice to emerge when appropriate.*
WR-M-1.2.0 **Idea Development/Support: Students will support main ideas and deepen the audience's understanding of purpose by** • **Developing logical, justified and suitable explanations** • **Providing relevant elaboration** • **Explaining related connections or reflections** • **Applying idea development strategies appropriate to the form** **DOK 4**		

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-1.2.1 *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies, processes or areas of growth.* • *Students will analyze own decisions about literacy goals.* • *Students will evaluate own strengths and areas for growth.* • *Students will support claims about self.*	*WR-07-1.2.1* *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies, processes or areas of growth.* • *Students will analyze own decisions about literacy goals.* • *Students will evaluate own strengths and areas for growth.* • *Students will support claims about self.*	*WR-08-1.2.1* *In Reflective Writing,* • *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.* • *Students will describe own literacy skills, strategies, processes or areas of growth.* • *Students will analyze own decisions about literacy goals.* • *Students will evaluate own strengths and areas for growth.* • *Students will support claims about self.*

WR-06-1.2.2
In Personal Expressive/Literary Writing,
• *Students will communicate theme/main idea through use of literary elements appropriate to the genre:*
  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
  o *Students will develop plot/story line appropriate to the form.*
  o *Students will develop an appropriate setting, mood, scene, image, or feeling.*
• *Students will apply literary or poetic devices (e.g., simile, metaphor, personification) when appropriate.*
• *Students will incorporate reflection, insight and analysis when appropriate.*
	WR-07-1.2.2
	In Personal Expressive/Literary Writing,
	• *Students will communicate theme/main idea through use of literary elements appropriate to the genre:*
	  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
	  o *Students will develop plot/story line appropriate to the form.*
	  o *Students will develop an appropriate setting, mood, scene, image, or feeling.*
	• *Students will incorporate literary or poetic devices (e.g., simile, metaphor, personification) when appropriate.*
	• *Students will incorporate reflection, insight and analysis when appropriate.*
		WR-08-1.2.2
		In Personal Expressive/Literary Writing,
		• *Students will communicate theme/main idea through use of literary elements appropriate to the genre:*
		  o *Students will develop characters (fictional/non-fictional) through thoughts, emotions, actions, descriptions or dialogue when appropriate.*
		  o *Students will develop plot/story line appropriate to the form.*
		  o *Students will develop an appropriate setting, mood, scene, image, or feeling.*
		• *Students will incorporate literary or poetic devices (e.g., simile, metaphor, personification) when appropriate.*
		• *Students will incorporate reflection, insight and analysis when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-1.2.3 *In Transactive Writing,* • *Students will communicate relevant information to clarify and justify a specific purpose.* • *Students will develop a deliberate angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).* • *Students will develop explanations to support the writer's purpose.* • *Students will apply research to support ideas with facts and opinions.* • *Students will incorporate persuasive techniques (e.g., expert opinion, emotional/logical appeal, repetition) or propaganda techniques (e.g., testimonial, bandwagon) when appropriate.*	*WR-07-1.2.3* *In Transactive Writing,* • *Students will communicate relevant information to clarify and justify a specific purpose.* • *Students will develop a deliberate angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).* • *Students will develop explanations to support the writer's purpose.* • *Students will apply research to support ideas with facts and opinions.* • *Students will incorporate persuasive techniques (e.g., expert opinion, emotional/logical/ethical appeal, repetition, rhetorical question) or propaganda techniques (e.g., testimonial, bandwagon) when appropriate.*	*WR-08-1.2.3* *In Transactive Writing,* • *Students will communicate relevant information to clarify and justify a specific purpose.* • *Students will develop a deliberate angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).* • *Students will develop explanations to support the writer's purpose.* • *Students will apply research to support ideas with facts and opinions.* • *Students will incorporate persuasive techniques (e.g., expert opinion, emotional/logical/ethical appeal, repetition, rhetorical question) or propaganda techniques (e.g., testimonial, bandwagon, personal attacks) when appropriate.*

(e.g. – suggestions, not a comprehensive list)

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Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Writing Structure

To communicate effectively, students should be able to apply knowledge of language and genre structures to organize sentences, paragraphs and whole pieces logically and coherently.

WR-M-2.3.0
Organization: Students will create unity and coherence to accomplish the focused purpose by

- **Engaging the audience**
- **Establishing a context for reading when appropriate**
- **Communicating ideas and support in a meaningful order**
- **Applying transitions and transitional elements to guide the reader through the piece**
- **Developing effective closure**

DOK 3

WR-06-2.3.1 *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will create conclusions effectively.*	*WR-07-2.3.1* *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will create conclusions effectively.*	*WR-08-2.3.1* *In Reflective Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will create conclusions effectively.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-2.3.2 *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively.*	*WR-07-2.3.2* *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively.*	*WR-08-2.3.2* *In Personal Expressive/Literary Writing,* • *Students will engage the interest of the reader.* • *Students will communicate ideas and details in meaningful order.* • *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.* • *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.* • *Students will apply paragraphing effectively.* • *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.* • *Students will create conclusions effectively.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-2.3.3 *In Transactive Writing,* • *Students will establish a context for reading.* • *Students will apply the accepted format of the genre.* • *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.* • *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details.* • *Students will apply paragraphing effectively.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*	*WR-07-2.3.3* *In Transactive Writing,* • *Students will establish a context for reading.* • *Students will apply the accepted format of the genre.* • *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.* • *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details.* • *Students will apply paragraphing effectively.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*	*WR-08-2.3.3* *In Transactive Writing,* • *Students will establish a context for reading.* • *Students will apply the accepted format of the genre.* • *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.* • *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details.* • *Students will apply paragraphing effectively.* • *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.* • *Students will create conclusions effectively.*
WR-M-2.4.0 **Sentence Structure: Students will create effective sentences by** • **Applying a variety of structures and lengths** • **Developing complete and correct sentences unless using unconventional structures for an intentional effect when appropriate** **DOK 3**		
WR-06-2.4.1 *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures when appropriate.*	*WR-07-2.4.1* *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures when appropriate.*	*WR-08-2.4.1* *In Reflective Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-2.4.2 *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.* • *Students will arrange poetic language in meaningful order.* • *Students will apply poetic line breaks effectively.*	*WR-07-2.4.2* *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.* • *Students will arrange poetic language in meaningful order.* • *Students will apply poetic line breaks effectively.*	*WR-08-2.4.2* *In Personal Expressive/Literary Writing,* • *Students will develop sentences of various structures and lengths throughout the piece.* • *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.* • *Students will arrange language in meaningful order.* • *Students will apply poetic line breaks effectively.*
WR-06-2.4.3 *In Transactive Writing,* • *Students will develop complete, concise sentences or apply unconventional structures when appropriate.*	*WR-07-2.4.3* *In Transactive Writing,* • *Students will develop complete, concise sentences or apply unconventional structures when appropriate.*	*WR-08-2.4.3* *In Transactive Writing,* • *Students will develop complete, concise sentences or apply unconventional structures when appropriate.*

Writing Conventions

To communicate effectively, students should be able to able to apply knowledge of language conventions and have control over standard grammar and usage. Students should be able to choose precise language appropriate to the purpose.

WR-M-3.5.0
Language: Students will exemplify effective language choices by

- **Applying correct grammar and usage**
- **Applying concise use of language**
- **Incorporating strong verbs, precise nouns, concrete details and sensory details**
- **Applying language appropriate to the content, purpose and audience**

DOK 2

WR-06-3.5.1 *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will apply language concisely.* • *Students will incorporate language appropriate to the content, purpose and audience.*	*WR-07-3.5.1* *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will apply language concisely.* • *Students will incorporate language appropriate to the content, purpose and audience.*	*WR-08-3.5.1* *In Reflective Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will apply language concisely.* • *Students will incorporate language appropriate to the content, purpose and audience.*
WR-06-3.5.2 *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will incorporate language based on economy, precision, richness or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*	*WR-07-3.5.2* *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will incorporate language based on economy, precision, richness or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*	*WR-08-3.5.2* *In Personal Expressive/Literary Writing,* • *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for effect.* • *Students will incorporate language based on economy, precision, richness or impact on the reader.* • *Students will develop ideas through descriptive or figurative language.*

WR-06-3.5.3 *In Transactive Writing,* • *Students will adhere to standard guidelines for usage and grammar.* • *Students will apply precise word choice.* • *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*	*WR-07-3.5.3* *In Transactive Writing,* • *Students will adhere to standard guidelines for usage and grammar.* • *Students will apply precise word choice.* • *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*	*WR-08-3.5.3* *In Transactive Writing,* • *Students will adhere to standard guidelines for usage and grammar.* • *Students will apply precise word choice.* • *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*
WR-M-3.6.0 **Correctness: Students will communicate clearly by** • **Applying correct spelling** • **Applying correct punctuation** • **Applying correct capitalization** • **Incorporating acceptable departure from standard correctness to enhance meaning when appropriate** • **Incorporating appropriate documentation of ideas and information from outside sources (e.g., citing authors or titles within the text, listing sources)** **DOK 2**		

Writing Process To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.	
WR-M-4.7.0 *Focusing*	• *Connecting to content knowledge* • *Connecting with prior learning and experience* • *Initiating an authentic reason to write* • *Thinking about a subject, an experience, a question, an issue or a problem to determine a meaningful reason to write*
WR-M-4.8.0 *Prewriting*	• *Selecting/narrowing topic* • *Establishing a purpose and central/controlling idea or focus* • *Identifying and analyzing the audience* • *Determining the most appropriate form to meet the needs of purpose and audience* • *Generating ideas (e.g., reading, journaling, mapping, webbing, note taking, interviewing, researching, writing-to-learn activities)* • *Organizing ideas – examining other models of good writing and appropriate text structures to match purpose and organize information*
WR-M-4.9.0 *Drafting*	• *Writing draft(s) for an intended audience* • *Developing topic, elaborating ideas, exploring sentence variety and language use* • *Organizing writing*
WR-M-4.10.0 *Revising* *(Content/Ideas)*	• *Reflecting to determine where to add, delete rearrange, define/redefine, or elaborate content* • *Conferencing with teacher or peer(s) to help determine where to add, delete, rearrange, define/redefine or elaborate content* • *Checking for accuracy of content* • *Considering voice, tone, style, intended audience, coherence, transitions* • *Comparing with rubric criteria and anchor papers/models* • *Considering effectiveness of language usage and sentences to communicate ideas*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Revising Skills	*Revising Skills*	***Revising Skills***
Idea Development *WR-06-4.10.4* *Students will narrow topic for selected writing.* *WR-06-4.10.5* *Students will identify topic sentence of a paragraph.* *WR-06-4.10.6* *Students will select appropriate supporting details.* *WR-06-4.10.7* *Students will identify extraneous/irrelevant materials.*	*Idea Development* *WR-07-4.10.4* *Students will narrow topic for selected writing.* *WR-07-4.10.5* *Students will identify and compose a topic sentence of a paragraph.* *WR-07-4.10.6* *Students will select appropriate supporting details.* *WR-07-4.10.7* *Students will identify extraneous/irrelevant materials.*	Idea Development *WR-08-4.10.4* *Students will narrow topic for selected writing.* **WR-08-4.10.5** **Students will identify and compose a topic sentence of a paragraph.** **D0K 2** **WR-08-4.10.6** **Students will select appropriate supporting details.** **DOK 2** **WR-08-4.10.7** **Students will identify extraneous/irrelevant materials.** **DOK 2**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
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Organization *WR-06-4.10.8* *Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.* *WR-06-4.10.9* *Students will apply the most effective transitions.* *WR-06-4.10.10* *Students will develop effective introductions and closures for writing.*	*Organization* *WR-07-4.10.8* *Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.* *WR-07-4.10.9* *Students will apply the most effective transitions.* *WR-07-4.10.10* *Students will develop effective introductions and closures for writing.*	Organization **WR-08-4.10.8** **Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.** **DOK 2** **WR-08-.4.10.9** **Students will apply the most effective transitions.** **DOK 2** **WR-08-4.10.10** **Students will develop effective introductions and closures for writing.** **DOK 2**
Word Choice *WR-06-4.10.11* *Students will eliminate redundant words and phrases.* *WR-06-4.10.12* *Students will choose the most specific word for use in a sentence.*	*Word Choice* *WR-07-4.10.11* *Students will eliminate redundant words and phrases.* *WR-07-4.10.12-* *Students will choose the most specific word for use in a sentence.*	Word Choice **WR-08-4.10.11** **Students will eliminate redundant words and phrases.** **DOK 2** **WR-08-4.10.12** **Students will choose the most specific word for use in a sentence.** **DOK 2**
WR-M-4.11.0 *Editing* *(Conventions and Mechanics)*	• *Checking for correctness with self, teacher or peer(s)* ▪ *Language usage* ▪ *Sentence structure* ▪ *Spelling* ▪ *Capitalization* ▪ *Punctuation* ▪ *Documentation of sources* • *Using resources to support editing (e.g., spell check, dictionaries, thesauri, handbooks)*	

(e.g. – suggestions, not a comprehensive list)

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Editing Skills	*Editing Skills*	Editing Skills
Language Usage *WR-06-4.11.13* *Students will apply knowledge of subject/verb agreement with both singular and plural subjects.* *WR-06-4.11.14* *Students will apply knowledge of present, past and future verb tenses.* *WR-06-4.11-15* *Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.* *WR-06-4.11.16* *Students will apply knowledge of special problems in usage (e.g., a/an, to/two/too, their/ there/ they're), pronoun references and double negatives.* *WR-06-4.11.17* *Students will apply knowledge of idiomatic expressions.*	*Language Usage* *WR-07-4.11.13* *Students will apply knowledge of subject/verb agreement with both singular and plural subjects.* *WR-07-4.11.14* *Students will apply knowledge of present, past and future verb tenses.* *WR-07-4.11.15* *Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.* *WR-07-4.11.16* *Students will apply knowledge of special problems in usage (e.g., a/an, to/two/too, their/ there/ they're), pronoun references and double negatives.* *WR-07-4.11.17* *Students will apply knowledge of idiomatic expressions.*	Language Usage **WR-08-4.11.13** **Students will apply knowledge of subject/verb agreement with both singular and plural subjects.** **DOK 1** **WR-08-4.11.14** **Students will apply knowledge of present, past and future verb tenses.** **DOK 1** **WR-08-4.11.15** **Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.** **DOK 1** **WR-08-4.11.16** **Students will apply knowledge of special problems in usage *(e.g., a/an, to/two/too, their/ there/ they're), pronoun references and double negative.*** **DOK 1** **WR-08-4.11.17** **Students will apply knowledge of idiomatic expressions.** **DOK 1**

Sentence Structure *WR-06-4.11.18* *Students will correct run-on and awkward sentences.* *WR-06-4.11.19* *Students will correct sentence fragments.* *WR-06-4.11.20* *Students will combine short choppy sentences effectively.* *WR-06-4.11.21* *Students will combine simple sentences by using subordination and coordination.* *WR-06-4.11.22* *Students will correct sentences with misplaced/and or dangling modifiers.*	*Sentence Structure* *WR-07-4.11.18* *Students will correct run-on and awkward sentences.* *WR-07-4.11.19* *Students will correct sentence fragments.* *WR-07-4.11.20* *Students will combine short choppy sentences effectively.* *WR-07-4.11.21* *Students will combine simple sentences by using subordination and coordination.* *WR-07-4.11.22* *Students will correct sentences with misplaced/and or dangling modifiers.*	Sentence Structure **WR-08-4.11.18** **Students will correct run-on and awkward sentences.** **DOK 1** **WR-08-4.11.19** **Students will correct sentence fragments.** **DOK 1** **WR-08-4.11.20** **Students will combine short choppy sentences effectively.** **DOK 2** **WR-08-4.11.21** **Students will combine simple sentences by using subordination and coordination.** **DOK 2** **WR-08-4.11.22** **Students will correct sentences with misplaced/and or dangling modifiers.** **DOK 2**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
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Spelling *WR-06-4.11.23* *Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words.* *WR-06-4.11.24* *Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.* *WR-06-.4.11.25* *Students will apply knowledge of spelling patterns, generalizations and rules to contractions.* *WR-06-4.11.26* *Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.*	*Spelling* *WR-07-4.11.23* *Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words.* *WR-07-4.11.24* *Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.* *WR-07-4.11.25* *Students will apply knowledge of spelling patterns, generalizations and rules to contractions.* *WR-07-4.11.26* *Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.*	Spelling **WR-08-4.11.23** **Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words.** **DOK 1** **WR-08-4.11.24** **Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.** **DOK 1** **WR-08-4.11.25** **Students will apply knowledge of spelling patterns, generalizations and rules to contractions.** **DOK 1** **WR-08-4.11.26** **Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.** **DOK 1**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
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Capitalization *WR-06-4.11.27* *Students will capitalize proper nouns (e.g., names, days, months).* *WR-06-4.11.28* *Students will capitalize the beginning of sentences.* *WR-06-4.11.29* *Students will capitalize the pronoun "I".* *WR-06-4.11.30* *Students will capitalize proper adjectives.* *WR-06-4.11.31* *Students will capitalize first word in a quote when appropriate.* *WR-06-4.11.32* *Students will capitalize the first word and every succeeding main word in a title.*	*Capitalization* *WR-07-4.11.27* *Students will capitalize proper nouns (e.g., names, days, months).* *WR-07-4.11.28* *Students will capitalize the beginning of sentences.* *WR-07-4.11.29* *Students will capitalize the pronoun "I".* *WR-07-4.11.30* *Students will capitalize proper adjectives.* *WR-07-4.11.31* *Students will capitalize first word in a quote when appropriate.* *WR-07-4.11.32* *Students will capitalize the first word and every succeeding main word in a title.*	Capitalization **WR-08-4.11.27** **Students will capitalize proper nouns *(e.g., names, days, months).*** **DOK 1** **WR-08-4.11.28** **Students will capitalize the beginning of sentences.** **DOK 1** **WR-08-4.11.29** **Students will capitalize the pronoun "I".** **DOK 1** **WR-08-4.11.30** **Students will capitalize proper adjectives.** **DOK 1** **WR-08-4.11.31** **Students will capitalize first word in a quote when appropriate.** **DOK 1** **WR-08-4.11.32** **Students will capitalize the first word and every succeeding main word in a title.** **DOK 1**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Punctuation *WR-06-4.11.33* *Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.* *WR-06-4.11.34* *Students will use commas in a series, a date, a compound sentence and the greeting and closing of a letter.* *WR-06-4.11.35* *Students will correctly apply the rules of punctuation for commas in appositives, direct address, and introductory phrases and clauses.* *WR-06-4.11.36* *Students will correctly apply the rules of punctuation for apostrophes in possessives and contractions.* *WR-06-4.11.37* *Students will correctly apply the rules of punctuation for periods in abbreviations and acronyms.* *WR-06-4.11.38* *Students will correctly apply the rules of punctuation for semi-colons in items in a series and in correcting combined sentences.* *WR-06-4.11.39* *Students will correctly apply the rules of punctuation for colons in introducing a list and the business letter greeting.*	*Punctuation* *WR-07-4.11.33* *Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.* *WR-07-4.11.34* *Students will use commas in a series, a date, a compound sentence and the greeting and closing of a letter.* *WR-07-4.11.35* *Students will correctly apply the rules of punctuation for commas in appositives, direct address, and introductory phrases and clauses.* *WR-07-4.11.36* *Students will correctly apply the rules of punctuation for apostrophes in possessives and contractions.* *WR-07-4.11.37* *Students will correctly apply the rules of punctuation for periods in abbreviations and acronyms.* *WR-07-4.11.38* *Students will correctly apply the rules of punctuation for semi-colons in items in a series and in correcting combined sentences.* *WR-07-4.11.39* *Students will correctly apply the rules of punctuation for colons in introducing a list and the business letter greeting.*	Punctuation **WR-08-4.11.33** **Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.** **DOK 1** **WR-08-4.11.34** **Students will use commas in a series, a date, a compound sentence and the greeting and closing of a letter.** **DOK 1** **WR-08-4.11.35** **Students will correctly apply the rules of punctuation for commas in appositives, direct address, and introductory phrases and clauses.** **DOK 1** **WR-08-4.11.36** **Students will correctly apply the rules of punctuation for apostrophes in possessives and contractions.** **DOK 1** **WR-08-4.11.37** **Students will correctly apply the rules of punctuation for periods in abbreviations and acronyms.** **DOK 1** **WR-08-4.11.38** **Students will correctly apply the rules of punctuation for semi-colons in items in a series and in correcting combined sentences.** **DOK 1**

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-06-4.11.40 *Students will correctly apply the rules of punctuation for quotation marks in dialogue, titles and direct/indirect quotes.*	*WR-07-4.11.40* *Students will correctly apply the rules of punctuation for quotation marks in dialogue, titles and direct/indirect quotes.*	**WR-08-4.11.39** **Students will correctly apply the rules of punctuation for colons in introducing a list and the business letter greeting.** **DOK 1** **WR-08-4.11.40** **Students will correctly apply the rules of punctuation for quotation marks in dialogue, titles and direct/indirect quotes.** **DOK 1**
Documentation *WR-06-4.11.41* *Students will document use of sources.*	*Documentation* *WR.07-4.11.41* *Students will document use of sources.*	*Documentation* *WR-08-4.11.41* *Students will document use of sources.*
WR-M-4.12.0 *Publishing*	*Sharing final piece with intended audience*	
WR-M-4.13.0 *Reflecting*	*Reflecting upon* *- Progress, growth and goals as a writer* *- Literacy skills* *- Who or what has influenced progress and growth* *- Approaches used when composing (e.g., free-writing, mental composing, researching, drawing, webbing)*	

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Writing Content

To communicate effectively, students should be able to write for a variety of authentic purposes and audiences in a variety of forms connecting to prior knowledge and the students' understanding of the content. In their writing, students should be able to create a focused purpose and controlling idea and develop ideas adequately considering the purpose, audience and form.

High School

WR-HS-1.1.0
Purpose/Audience: Students will establish and maintain a focused purpose to communicate with an authentic audience by

- **Narrowing the topic to create a specific purpose for writing**
- **Establishing a controlling idea, theme or thesis about the topic**
- **Choosing a perspective authentic to the writer**
- **Analyzing and addressing the needs of the intended audience**
- **Adhering to the characteristics of the form**
- **Applying a suitable tone**
- **Allowing voice to emerge when appropriate**

DOK 4

WR-HS-1.1.1
In Reflective Writing,

- *Students will evaluate personal progress toward meeting goals in literacy skills.*
- *Students will analyze and address needs of the intended audience.*
- *Students will sustain suitable tone or appropriate voice.*

WR-HS-1.1.2
In Personal Expressive Writing,

- *Students will communicate the significance of the writer's life experience by narrating about life events, relationships or central ideas.*
- *Students will apply the characteristics of the selected form (e.g., personal narrative, personal memoir, personal essay).*
- *Students will sustain point of view.*
- *Students will sustain a suitable tone or appropriate voice.*

In Literary Writing,

- *Students will communicate to an audience about the human condition (e.g., by painting a picture, recreating a feeling, telling a story, capturing a moment, evoking an image or showing an extraordinary perception of the ordinary).*
- *Students will apply characteristics of the selected form (e.g., short story, play/script, poem).*
- *Students will sustain point of view.*
- *Students will sustain a suitable tone or appropriate voice.*
- *Students will apply a fictional perspective in literary writing when appropriate.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-HS-1.1.3
In Transactive Writing,
- *Students will communicate as an informed writer to provide new insight through informing, persuading or analyzing.*
- *Students will develop an effective angle to achieve a justifiable purpose.*
- *Students will justify what the reader should know, do, or believe as a result of reading the piece.*
- *Students will apply characteristics of the selected form (e.g., letter, feature article, editorial, speech, analytical lab report, historical journal article, literary analysis) for an intentional effect.*
- *Students will sustain a suitable tone.*
- *Students will allow voice to emerge when appropriate.*

WR-HS-1.2.0
Idea Development/Support: Students will support main ideas and deepen the audience's understanding of purpose by
- **Developing logical, justified and suitable explanations**
- **Providing relevant elaboration**
- **Explaining related connections or reflections**
- **Applying idea development strategies appropriate to the form**

DOK 4

WR-HS-1.2.1
In Reflective Writing,
- *Students will develop the connection between literacy skills (reading and writing) and understanding of content knowledge.*
- *Students will describe own literacy skills, strategies, processes or areas of growth.*
- *Students will analyze own decisions about literacy goals.*
- *Students will evaluate own strengths and areas for growth.*
- *Students will support claims about self.*

WR-HS-1.2.2
In Personal Expressive/Literary Writing,
- *Students will communicate theme/main idea through use of literary elements appropriate to the genre:*
    - *Students will develop characters (fictional /non-fictional) through emotions, actions, reactions, descriptions, thoughts, or dialogue when appropriate.*
    - *Students will develop plot/story line appropriate to the form.*
- *Students will develop an appropriate setting, mood, scene, image or feeling.*
- *Students will incorporate literary or poetic devices (e.g., simile, metaphor, personification) for an intentional effect.*
- *Students will incorporate reflection, insight and analysis when appropriate.*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-HS-1.2.3
In Transactive Writing,

- *Students will communicate relevant information to clarify and justify a specific purpose.*
- *Students will develop a deliberate angle with support (e.g., facts, examples, reasons, comparisons, diagrams, charts, other visuals).*
- *Students will develop explanations to support the writer's purpose.*
- *Students will synthesize research to support ideas when appropriate.*
- *Students will incorporate persuasive techniques (e.g., expert opinion, repetition, rhetorical question, logical/emotional/ethical appeal, allusion) or propaganda techniques (e.g., testimonial, bandwagon, personal attacks) when appropriate.*

Writing Structure

To communicate effectively, students should be able to apply knowledge of language and genre structures to organize sentences, paragraphs and whole pieces logically and coherently.

WR-HS-2.3.0
Organization: Students will create unity and coherence to accomplish the focused purpose by

- **Engaging the audience**
- **Establishing a context for reading when appropriate**
- **Communicating ideas and support in a meaningful order**
- **Applying transitions and transitional elements to guide the reader through the piece**
- **Developing effective closure**

DOK 3

WR-HS-2.3.1
In Reflective Writing,

- *Students will engage the interest of the reader.*
- *Students will establish a context for the reader.*
- *Students will communicate ideas and details in a logical, meaningful order.*
- *Students will apply the acceptable format of the genre.*
- *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.*
- *Students will apply effective paragraphing.*
- *Students will create effective conclusions.*

WR-HS-2.3.2
In Personal Expressive/Literary Writing,

- *Students will engage the interest of the reader.*
- *Students will communicate ideas and details in meaningful order.*
- *Students will apply organizational devices (e.g., foreshadowing, flashback) when appropriate.*
- *Students will apply a variety of transitions or transitional elements between ideas and details to guide the reader.*
- *Students will apply effective paragraphing.*
- *Students will arrange poetic stanzas in a way that enhances the meaning through the use of white space, line breaks and shape.*
- *Students will create effective conclusions.*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-HS-2.3.3
In Transactive Writing,
- *Students will establish a context for reading.*
- *Students will apply the accepted format of the genre.*
- *Students will develop an appropriate text structure (e.g., cause/effect, problem/solution, question/answer, comparison/contrast, description, sequence) to achieve purpose.*
- *Students will arrange ideas and details in a logical, meaningful order by using a variety of transitions or transitional elements between ideas and details to guide the reader.*
- *Students will apply effective paragraphing.*
- *Students will incorporate text features (e.g., subheadings, bullets, fonts, white space, layout, charts, diagrams, labels, pictures, captions) when appropriate.*
- *Students will create effective conclusions.*

WR-HS-2.4.0
Sentence Structure: Students will create effective sentences by
- **Applying a variety of structures and lengths**
- **Maintaining parallel structure**
- **Developing complete and correct sentences unless using unconventional structures for an intentional effect when appropriate**

DOK 3

WR-HS-2.4.1
In Reflective Writing,
- *Students will develop sentences of various structures and lengths for effect.*
- *Students will maintain parallel structure.*
- *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.*

WR-HS-2.4.2
In Personal Expressive/Literary Writing,
- *Students will develop sentences of various structures and lengths for effect.*
- *Students will maintain parallel structure.*
- *Students will develop complete sentences or apply unconventional structures for an intentional effect when appropriate.*
- *Students will arrange poetic language in a meaningful order.*
- *Students will apply poetic line breaks effectively.*

WR-HS-2.4.3
In Transactive Writing,
- *Students will develop complete, concise sentences or apply unconventional structures for an intentional effect when appropriate.*
- *Students will maintain parallel structure.*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Writing Conventions

To communicate effectively, students should be able to apply knowledge of language conventions and have control over standard grammar and usage. Students should be able to choose precise language appropriate to the purpose.

WR-HS-3.5.0
Language: Students will exemplify effective language choices by

- **Applying correct grammar and usage**
- **Applying concise use of language**
- **Incorporating strong verbs, precise nouns, concrete details and sensory details**
- **Applying language appropriate to the content, purpose and audience**

DOK 2

WR-HS-3.5.1
In Reflective Writing,

- *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for an intentional effect.*
- *Students will apply language concisely.*
- *Students will incorporate language appropriate to the content, purpose and audience.*

WR-HS-3.5.2
In Personal Expressive/Literary Writing,

- *Students will adhere to standard guidelines for grammar and usage or apply nonstandard for an intentional effect.*
- *Students will incorporate language based on economy, precision, richness or impact on the reader.*
- *Students will develop ideas through descriptive or figurative language.*

WR-HS-3.5.3
In Transactive Writing,

- *Students will adhere to standard guidelines for grammar and usage.*
- *Students will apply precise word choice.*
- *Students will incorporate the specialized vocabulary of the discipline/content appropriate to the purpose and audience.*

WR-HS-3.6.0
Correctness: Students will communicate clearly by

- **Applying correct spelling**
- **Applying correct punctuation**
- **Applying correct capitalization**
- **Incorporating acceptable departure from standard correctness to enhance meaning when appropriate**
- **Incorporating appropriate documentation of ideas and information from outside sources (e.g., citing authors or titles within the text, listing sources, documenting sources in text and/or on a Works Cited page)**

DOK 2

Writing Process To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing, and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.	
WR-E-4.7.0 *Focusing*	• *Connecting to content knowledge* • *Connecting with prior learning and experience* • *Initiating an authentic reason to write* • *Thinking about a subject, an experience, a question, an issue or a problem to determine a meaningful reason to write*
WR-HS-4.8.0 *Prewriting*	• *Establishing a purpose and central/controlling idea or focus* • *Identifying and analyzing the audience* • *Determining the most appropriate form to meet the needs of purpose and audience* • *Generating ideas (e.g., mapping, webbing, note taking, interviewing, researching and other writing-to-learn activities)* • *Organizing ideas – examining other models of good writing and appropriate text structures to match purpose and organize information*
WR-HS-4.9.0 *Drafting*	• *Writing draft(s) for an intended audience* • *Developing topic, elaborating, exploring sentence variety and language use* • *Organizing writing*
WR-HS-4.10.0 *Revising* *(Content/Ideas)*	• *Reflecting to determine where to add, delete, rearrange, define/redefine or elaborate content* • *Conferencing with teacher or peer(s) to help determine where to add, delete, rearrange, define/redefine or elaborate content* • *Checking for accuracy of content* • *Considering voice, tone, style, intended audience, coherence, transitions, pacing* • *Comparing with rubric criteria and anchor papers/models* • *Considering effectiveness of language usage and sentences to communicate ideas*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)

Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Revising Skills *WR-HS-4.10.0*	*Idea Development* • *Students will narrow topic for selected writing.* • *Students will compose a topic sentence of a paragraph that is purposefully placed to enhance reader awareness.* • *Students will select appropriate supporting details relevant to a specific writing category (e.g., dialogue, predictions, findings from research, needed definitions, causes and effects, comparisons, contrasts, reference to concepts).* • *Students will delete extraneous/irrelevant materials.* *Organization* • *Students will correct sentences that are out of chronological/sequential order or insert new sentences in the correct chronological/sequential position.* • *Students will compose effective and subtle transitions.* • *Students will develop effective introductions and closures for writing.* • *Students will apply appropriate usage of parallelism (e.g., word forms, lists, phrases, clauses, sentences, organization, idea development).* *Word Choice* • *Students will eliminate redundant words and phrases.* • *Students will apply the most specific word for use in a sentence.*

WR-HS-4.11.0
Editing
(Conventions and Mechanics)
	• *Checking for correctness with self, teacher or peer(s)*
	  o *Language usage*
	  o *Sentence structure*
	  o *Spelling*
	  o *Capitalization*
	  o *Punctuation*
	  o *Documentation of sources*
	• *Using resources to support editing (e.g., spell check, dictionaries, thesauri, handbooks)*

Editing Skills *WR-HS-4.11.0*	*Language Usage* • *Students will apply knowledge of subject/verb agreement with both singular and plural subjects.* • *Students will apply knowledge of present, past and future tenses.* • *Students will apply knowledge of comparative and superlative forms of adjectives and adverbs.* • *Students will apply knowledge of special problems in usage, (e.g., a/an, to/two/ too, their/ there/ they're), pronoun references and double negatives.* • *Students will apply knowledge of idiomatic expressions.*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

	Sentence Structure • *Students will correct run-on and awkward sentences.* • *Students will correct sentence fragments.* • *Students will combine short, choppy sentences effectively.* • *Students will combine simple sentences by using subordination and coordination.* • *Students will correct sentences with misplaced and/or dangling modifiers.*
	Spelling • *Students will apply knowledge of spelling patterns, generalizations and rules to commonly used words.* • *Students will apply knowledge of spelling patterns, generalizations and rules to plural forms of words.* • *Students will apply knowledge of spelling patterns, generalizations and rules to contractions.* • *Students will apply knowledge of spelling patterns, generalizations and rules to change verb endings.*
	Capitalization • *Students will capitalize proper nouns (e.g., names, days, months).* • *Students will capitalize the beginning of sentences.* • *Students will capitalize the pronoun "I".* • *Students will capitalize proper adjectives.* • *Students will capitalize first word in a quote when appropriate.* • *Students will capitalize the first word and every succeeding main word in a title.*
	Punctuation • *Students will correctly punctuate declarative, exclamatory, interrogative and imperative sentences.* • *Students will use commas in a series, a date, a compound sentence, the greeting and closing of a letter.* • *Students will correctly apply the rules of punctuation for commas in appositives, direct address and introductory phrases and clauses.* • *Students will correctly apply the rules of punctuation for apostrophes in possessives and letters and numbers of omission.* • *Students will correctly apply the rules of punctuation for periods in abbreviations and acronyms.* • *Students will correctly apply the rules of punctuation for semi-colons in items in a series and in correcting combined sentences.* • *Students will correctly apply the rules of punctuation for colons in introducing a list and in a business letter greeting.* • *Students will correctly apply the rules of punctuation for quotation marks in dialogue, titles and direct/indirect quotes.*
	Documentation • *Students will document use of sources with a format acceptable to the discipline (e.g., MLA, APA).*

(e.g. – suggestions, not a comprehensive list)

Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

WR-HS-4.12.0 Publishing	• *Sharing final piece with intended audience*
WR-HS-4.13.0 Reflecting	• *Reflecting upon* o *Progress, growth and goals as a writer* o *Literacy skills* o *Who or what has influenced progress and growth* o *Approaches used when composing (e.g., free-writing, mental composing, researching, drawing, webbing, outlining)*

(e.g. – suggestions, not a comprehensive list)
Bold-State Assessment Content Standard (These criteria are assessed in the portfolio and on-demand or multiple choice.)
Italics- Supporting Content Standard (These indicators form the foundation for instruction of the writing criteria.)

Appendix B—Standard Test Accommodations

KCCT Approved Accommodations List

The following accommodations are allowed for use on the KCCT if the accommodation(s) is included in a student's IEP or 504 Plan, or PSP for LEP students, the accommodation is consistent with normal ongoing delivery of classroom instruction, and the accommodation does not inappropriately affect the content being measured.

Most accommodations typically used in the instructional program for a student with disabilities and LEP students with a PSP are allowable for testing. For example, if a student normally works while using noise buffers, this accommodation can be used during testing.

There are a variety of assessment accommodations that may be appropriately used for students with disabilities, including:

Paraphrasing or repeating directions
Interpreters for students with deafness or hearing impairments (signing)
Prompting or cueing
Reader (oral accommodation)
Use of typed response form
Use of assistive technology
Scribe (student dictates)
Extended time
Large-print test forms for students with visual impairments
Braille test forms for students with visual impairments
Audiotape version for students with visual impairments
Designated test form for students with deafness or hearing impairments
Reinforcement and behavioral modification strategies
Manipulatives
Additional pages

Assessment accommodations used appropriately by LEP students with a PSP on the KCCT include:

Simplifying language with extended time (directions, questions, multiple-choice options, but not reading passages)
Oral native language support with extended time
Dictionaries (bilingual or English) in print or electronic version with extended time
Student-generated glossary (bilingual or English) with extended time
Prompting or cueing system
Reading text to the student in English with extended time
Assistive technology (e.g., text-to-speech software, grammar-check, or spell-check systems) with extended time
Scribe
Extended time
Administering assessments to small groups of LEP students to enable simplified language and/or native language support
Administering a single form of the test to a small group of LEP students receiving oral native language support because a limited number of bilingual staff is available

Appendix C—Item Level Classical Statistics

Table C-1. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 3

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
47191	MC	0.80	0.48	0
93164	MC	0.93	0.21	0
140628	MC	0.93	0.39	0
76632	MC	0.80	0.56	0
47194	MC	0.64	0.46	0
52128	MC	0.83	0.39	0
140630	MC	0.69	0.38	0
76637	MC	0.78	0.25	0
140638	MC	0.93	0.28	0
52296	MC	0.85	0.40	0
47133	MC	0.90	0.44	0
47149	MC	0.85	0.42	0
93166	MC	0.78	0.52	0
140674	MC	0.81	0.51	0
47257	MC	0.58	0.53	0
76635	MC	0.86	0.43	0
52299	MC	0.74	0.46	0
47153	MC	0.93	0.34	0
140681	MC	0.70	0.52	0
47233	MC	0.95	0.33	0
140683	MC	0.58	0.50	0
140685	MC	0.89	0.51	0
93160	MC	0.77	0.35	0
94337	MC	0.81	0.48	1
47245	MC	0.66	0.40	0
47260	MC	0.85	0.33	1
93158	MC	0.83	0.48	1
93162	MC	0.88	0.37	1
47160	MC	0.82	0.33	1
52300	MC	0.81	0.37	1
94237	MC	0.36	0.25	1
47253	MC	0.89	0.31	1
52181	MC	0.74	0.57	0
52261	MC	0.91	0.34	0
47247	MC	0.77	0.31	0
47256	MC	0.68	0.46	0
47236	MC	0.83	0.19	0
52290	MC	0.41	0.22	0
52186	MC	0.64	0.31	0
94299	MC	0.97	0.22	0
94217	MC	0.92	0.26	0
52182	MC	0.71	0.46	1
52062	MC	0.83	0.39	2
52063	MC	0.79	0.43	1
94322	MC	0.61	0.35	1
94234	MC	0.71	0.43	0
52072	MC	0.52	0.43	0
52130	MC	0.67	0.29	0
94311	MC	0.74	0.50	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
52226	MC	0.94	0.26	0
94278	MC	0.53	0.25	1
94334	MC	0.90	0.35	0
94297	MC	0.53	0.42	0
52065	MC	0.68	0.46	0
52179	MC	0.61	0.43	0
52263	MC	0.90	0.29	2
52223	MC	0.75	0.33	0
52222	MC	0.82	0.41	0
52187	MC	0.69	0.23	0
94339	MC	0.51	0.45	0
94291	MC	0.53	0.37	1
94325	MC	0.85	0.42	0
94302	MC	0.61	0.25	0
94345	MC	0.86	0.32	1
52225	MC	0.76	0.37	0
52123	MC	0.90	0.39	0
94215	MC	0.86	0.41	0
94319	MC	0.95	0.29	0
52127	MC	0.61	0.36	0
52124	MC	0.94	0.21	0
52228	MC	0.66	0.38	0
94238	MC	0.84	0.29	1
76638	OR	0.39	0.66	0
52301	OR	0.35	0.57	0
52081	OR	0.71	0.75	0
52189	OR	0.49	0.56	0
47264	OR	0.46	0.53	0
94329	OR	0.58	0.43	0
94308	OR	0.33	0.44	0
94349	OR	0.54	0.63	0
52144	OR	0.62	0.65	0

Table C-2. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 3

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
47264	4	25	16	23	21	14
52081	4	9	9	18	19	46
52144	4	10	15	17	36	23
52189	4	10	28	29	21	12
52301	4	23	28	39	4	6
76638	4	15	43	21	14	7
94308	4	19	55	6	16	4
94329	4	3	25	37	5	29
94349	4	24	5	30	15	26

Table C-3. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 4

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
137563	MC	0.88	0.38	0
93767	MC	0.65	0.47	0
52856	MC	0.61	0.36	0
51046	MC	0.65	0.48	0
50282	MC	0.58	0.51	0
137566	MC	0.83	0.39	0
138301	MC	0.94	0.28	0
137568	MC	0.84	0.48	0
93756	MC	0.57	0.60	0
137571	MC	0.81	0.40	0
52734	MC	0.57	0.42	0
76267	MC	0.76	0.44	0
52510	MC	0.76	0.32	0
76263	MC	0.59	0.49	0
50267	MC	0.91	0.31	0
52512	MC	0.71	0.56	0
51045	MC	0.68	0.53	0
93752	MC	0.79	0.39	0
52440	MC	0.75	0.54	0
51053	MC	0.53	0.33	1
76264	MC	0.66	0.54	1
52435	MC	0.71	0.51	0
93768	MC	0.73	0.32	0
52438	MC	0.64	0.54	0
137743	MC	0.67	0.44	0
137744	MC	0.75	0.31	0
50275	MC	0.84	0.37	0
50251	MC	0.66	0.46	0
50272	MC	0.79	0.44	0
50278	MC	0.77	0.26	0
51048	MC	0.83	0.39	1
137745	MC	0.57	0.39	0
50283	MC	0.88	0.35	0
76265	MC	0.75	0.36	0
93745	MC	0.51	0.28	0
50273	MC	0.76	0.36	0
52729	MC	0.79	0.31	0
50253	MC	0.74	0.18	0
149980	MC	0.83	0.37	1
52505	MC	0.65	0.42	0
52436	MC	0.71	0.35	0
52439	MC	0.62	0.23	0
52731	MC	0.79	0.36	0
93906	MC	0.76	0.32	0
93907	MC	0.46	0.31	1
93856	MC	0.57	0.45	0
52736	MC	0.94	0.28	0
93851	MC	0.69	0.44	0
93818	MC	0.60	0.30	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
93847	MC	0.82	0.36	0
93926	MC	0.87	0.36	0
93932	MC	0.38	0.40	0
93962	MC	0.51	0.43	0
52732	MC	0.77	0.43	0
93819	MC	0.56	0.39	0
52585	MC	0.71	0.30	1
93843	MC	0.71	0.45	0
52739	MC	0.71	0.38	0
52742	MC	0.49	0.37	0
52581	MC	0.48	0.29	0
52446	MC	0.49	0.29	1
93861	MC	0.54	0.41	0
52583	MC	0.80	0.32	1
93910	MC	0.69	0.35	0
93879	MC	0.54	0.48	0
93850	MC	0.54	0.42	0
93877	MC	0.50	0.38	0
52863	MC	0.83	0.35	0
52735	MC	0.70	0.43	0
52858	MC	0.48	0.37	0
52442	MC	0.84	0.40	0
93822	MC	0.75	0.39	0
52748	OR	0.55	0.65	0
50263	OR	0.68	0.63	0
50285	OR	0.55	0.57	0
52519	OR	0.52	0.57	0
52865	OR	0.49	0.60	0
93969	OR	0.34	0.51	0
52741	OR	0.35	0.58	0
93916	OR	0.48	0.46	0
51057	OR	0.39	0.61	0

Table C-4. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 4

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
50263	4	9	14	16	18	43
50285	4	4	24	33	25	14
51057	4	41	13	10	21	15
52519	4	11	28	23	22	17
52741	4	33	29	15	8	14
52748	4	8	18	36	19	18
52865	4	6	39	22	20	13
93916	4	6	34	29	24	7
93969	4	25	41	16	8	10

Table C-5. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 5

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
57577	MC	0.71	0.50	0
77107	MC	0.67	0.50	0
142882	MC	0.65	0.29	0
93384	MC	0.63	0.49	0
142884	MC	0.55	0.46	0
150963	MC	0.59	0.45	0
93534	MC	0.77	0.41	0
57122	MC	0.73	0.47	0
142886	MC	0.75	0.36	0
142888	MC	0.77	0.43	0
142889	MC	0.85	0.36	0
142891	MC	0.82	0.41	0
144117	MC	0.74	0.46	0
51425	MC	0.67	0.37	0
144118	MC	0.61	0.49	0
144147	MC	0.61	0.42	0
57411	MC	0.58	0.48	0
57580	MC	0.55	0.52	0
77096	MC	0.60	0.53	0
57571	MC	0.45	0.27	0
57438	MC	0.51	0.44	0
144152	MC	0.78	0.39	0
144154	MC	0.70	0.47	0
144157	MC	0.85	0.31	0
77106	MC	0.75	0.39	0
142903	MC	0.68	0.47	0
142904	MC	0.75	0.40	0
142905	MC	0.80	0.35	0
142906	MC	0.64	0.43	0
142908	MC	0.60	0.37	0
142909	MC	0.60	0.39	0
144107	MC	0.58	0.43	0
144171	MC	0.77	0.40	0
144173	MC	0.48	0.42	0
55263	MC	0.70	0.20	0
144199	MC	0.42	0.44	0
57066	MC	0.49	0.43	0
144201	MC	0.83	0.35	0
77099	MC	0.72	0.35	0
57054	MC	0.78	0.43	0
57464	MC	0.85	0.39	0
55258	MC	0.46	0.34	0
58020	MC	0.64	0.29	0
57514	MC	0.73	0.30	0
93865	MC	0.77	0.43	0
93779	MC	0.82	0.25	0
57391	MC	0.86	0.40	0
93753	MC	0.67	0.37	0
93889	MC	0.46	0.13	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
57690	MC	0.40	0.35	0
57058	MC	0.72	0.42	0
57178	MC	0.78	0.48	0
57028	MC	0.75	0.32	0
93751	MC	0.48	0.38	0
57492	MC	0.50	0.33	0
57695	MC	0.63	0.49	0
93898	MC	0.81	0.36	0
93674	MC	0.45	0.26	0
57182	MC	0.67	0.33	0
57424	MC	0.79	0.35	0
93858	MC	0.76	0.33	0
57070	MC	0.49	0.46	0
93909	MC	0.59	0.30	0
93761	MC	0.50	0.45	0
93853	MC	0.70	0.38	0
93893	MC	0.79	0.47	0
58042	MC	0.72	0.43	0
57442	MC	0.65	0.54	0
57422	MC	0.59	0.41	0
93778	MC	0.80	0.40	0
57678	MC	0.79	0.27	0
57449	MC	0.85	0.29	0
142893	OR	0.71	0.67	0
142896	OR	0.58	0.63	0
144160	OR	0.55	0.58	0
55354	OR	0.33	0.54	0
144219	OR	0.47	0.61	0
93769	OR	0.45	0.51	0
93875	OR	0.42	0.55	0
93918	OR	0.55	0.52	0
57539	OR	0.63	0.59	0

Table C-6. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 5

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
142893	4	3	13	15	32	37
142896	4	19	16	13	19	33
144160	4	6	23	29	27	14
144219	4	38	9	10	14	29
55354	4	40	23	13	11	13
57539	4	12	14	21	16	37
93769	4	5	44	29	9	13
93875	4	15	28	37	15	5
93918	4	1	28	37	16	17

Table C-7. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 6

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
144467	MC	0.91	0.36	0
93139	MC	0.56	0.45	0
47517	MC	0.82	0.25	0
76667	MC	0.66	0.49	0
93134	MC	0.69	0.55	0
76668	MC	0.71	0.46	0
144471	MC	0.46	0.29	0
93142	MC	0.55	0.52	0
144473	MC	0.42	0.44	0
47538	MC	0.42	0.39	0
51953	MC	0.41	0.49	0
51981	MC	0.61	0.50	0
93148	MC	0.75	0.48	0
47549	MC	0.69	0.42	0
144503	MC	0.39	0.48	0
47145	MC	0.58	0.35	0
93135	MC	0.81	0.46	0
76671	MC	0.66	0.48	0
93116	MC	0.67	0.43	0
47619	MC	0.65	0.51	0
52006	MC	0.43	0.43	0
47627	MC	0.61	0.50	0
76669	MC	0.52	0.41	0
47631	MC	0.77	0.43	0
51963	MC	0.74	0.26	0
47516	MC	0.72	0.41	0
47540	MC	0.39	0.35	0
47617	MC	0.62	0.49	0
144487	MC	0.83	0.27	0
47137	MC	0.69	0.38	0
144490	MC	0.80	0.13	0
47139	MC	0.62	0.36	0
47140	MC	0.76	0.30	0
51996	MC	0.77	0.35	0
93436	MC	0.92	0.24	0
47141	MC	0.56	0.51	0
93348	MC	0.71	0.42	0
76672	MC	0.65	0.44	0
47519	MC	0.52	0.39	0
144516	MC	0.46	0.20	0
51954	MC	0.65	0.47	0
93354	MC	0.49	0.38	0
51877	MC	0.44	0.31	0
93223	MC	0.76	0.34	0
93359	MC	0.69	0.50	0
51947	MC	0.51	0.42	0
93405	MC	0.40	0.42	0
93327	MC	0.69	0.25	0
93429	MC	0.67	0.38	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
52017	MC	0.51	0.31	0
51961	MC	0.66	0.35	0
51974	MC	0.73	0.22	0
51964	MC	0.75	0.40	0
51958	MC	0.68	0.16	0
93362	MC	0.77	0.56	0
51984	MC	0.83	0.34	0
93423	MC	0.60	0.45	0
93400	MC	0.51	0.35	0
51957	MC	0.58	0.41	0
51968	MC	0.81	0.36	0
51949	MC	0.51	0.20	0
93328	MC	0.73	0.48	0
52019	MC	0.78	0.41	0
51977	MC	0.66	0.44	0
93387	MC	0.62	0.47	0
93149	MC	0.50	0.35	0
52015	MC	0.71	0.31	0
93393	MC	0.44	0.35	0
51942	MC	0.65	0.30	0
93226	MC	0.69	0.41	0
93443	MC	0.43	0.34	0
51970	MC	0.67	0.35	0
76673	OR	0.67	0.70	0
93455	OR	0.65	0.67	0
51966	OR	0.35	0.54	0
51983	OR	0.38	0.50	0
93146	OR	0.37	0.61	0
51975	OR	0.38	0.64	0
52020	OR	0.58	0.52	0
93379	OR	0.60	0.53	0
93417	OR	0.50	0.55	0

Table C-8. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 6

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
51966	4	10	61	11	14	3
51975	4	22	37	13	20	7
51983	4	24	32	24	8	12
52020	4	5	32	16	18	29
76673	4	6	16	14	31	32
93146	4	17	38	27	15	3
93379	4	9	18	22	26	24
93417	4	12	23	24	33	7
93455	4	3	16	21	37	22

Table C-9. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 7

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
52334	MC	0.74	0.44	0
76479	MC	0.64	0.44	0
50473	MC	0.52	0.40	0
138161	MC	0.66	0.41	0
94461	MC	0.64	0.40	0
138163	MC	0.68	0.50	0
54609	MC	0.57	0.27	0
76467	MC	0.73	0.52	0
76478	MC	0.41	0.33	0
138166	MC	0.71	0.48	0
52326	MC	0.65	0.50	0
54646	MC	0.91	0.36	0
138337	MC	0.72	0.35	0
52330	MC	0.48	0.30	0
94451	MC	0.75	0.39	0
52321	MC	0.77	0.54	0
138231	MC	0.60	0.53	0
50480	MC	0.70	0.35	0
94467	MC	0.78	0.51	0
138232	MC	0.52	0.54	0
94453	MC	0.57	0.58	0
52332	MC	0.64	0.41	0
94470	MC	0.74	0.50	0
50474	MC	0.57	0.52	0
76471	MC	0.65	0.37	0
54602	MC	0.73	0.44	0
52320	MC	0.72	0.40	0
138321	MC	0.57	0.46	0
52329	MC	0.49	0.45	0
50477	MC	0.59	0.43	0
50476	MC	0.63	0.38	0
50478	MC	0.77	0.39	0
94468	MC	0.83	0.41	0
50457	MC	0.70	0.29	0
50448	MC	0.61	0.37	0
54978	MC	0.64	0.19	0
54653	MC	0.55	0.41	0
152764	MC	0.72	0.49	0
50454	MC	0.52	0.51	0
53516	MC	0.80	0.34	0
53507	MC	0.49	0.32	0
95589	MC	0.74	0.32	0
95540	MC	0.69	0.38	0
95591	MC	0.37	0.38	0
53520	MC	0.82	0.31	0
53500	MC	0.66	0.29	0
54640	MC	0.58	0.29	0
95542	MC	0.56	0.54	0
95590	MC	0.54	0.32	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
54967	MC	0.58	0.40	0
55311	MC	0.89	0.34	0
55340	MC	0.64	0.35	0
55301	MC	0.66	0.31	0
54973	MC	0.86	0.33	0
95575	MC	0.54	0.38	0
95594	MC	0.72	0.38	0
95536	MC	0.76	0.46	0
95463	MC	0.77	0.43	0
95571	MC	0.51	0.39	0
95468	MC	0.81	0.52	0
55347	MC	0.53	0.49	0
95572	MC	0.71	0.50	0
95576	MC	0.49	0.39	0
95473	MC	0.48	0.36	0
95569	MC	0.41	0.35	0
53970	MC	0.84	0.32	0
95588	MC	0.50	0.40	0
53528	MC	0.67	0.33	0
52336	MC	0.78	0.48	0
95553	MC	0.60	0.43	0
95470	MC	0.66	0.35	0
95557	MC	0.68	0.41	0
50464	OR	0.76	0.71	0
138168	OR	0.58	0.69	0
138233	OR	0.61	0.74	0
54983	OR	0.35	0.61	0
94472	OR	0.37	0.63	0
95577	OR	0.56	0.69	0
55360	OR	0.42	0.59	0
95562	OR	0.45	0.62	0
95523	OR	0.47	0.60	0

Table C-10. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 7

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
138168	4	7	22	13	49	10
138233	4	13	14	18	24	31
50464	4	6	7	13	25	49
54983	4	43	17	12	13	15
55360	4	10	34	39	9	7
94472	4	21	27	39	10	4
95523	4	6	38	27	21	8
95562	4	29	10	32	7	21
95577	4	10	24	19	23	23

Table C-11. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 8

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
86430	MC	0.86	0.41	0
58420	MC	0.46	0.20	0
58691	MC	0.58	0.36	0
151447	MC	0.74	0.53	0
58438	MC	0.77	0.48	0
94216	MC	0.77	0.49	0
51773	MC	0.65	0.56	0
151462	MC	0.59	0.44	0
58500	MC	0.74	0.19	0
151791	MC	0.59	0.35	0
86421	MC	0.69	0.51	0
151795	MC	0.82	0.44	0
151903	MC	0.73	0.39	0
151910	MC	0.52	0.51	0
58802	MC	0.65	0.52	0
151915	MC	0.65	0.46	0
86440	MC	0.57	0.49	0
58554	MC	0.62	0.50	0
151934	MC	0.55	0.43	0
151937	MC	0.77	0.38	0
94214	MC	0.50	0.46	0
58521	MC	0.65	0.43	0
94220	MC	0.78	0.42	0
151943	MC	0.72	0.45	0
151841	MC	0.67	0.36	0
151842	MC	0.60	0.53	0
51800	MC	0.60	0.32	0
86457	MC	0.76	0.33	0
86460	MC	0.63	0.51	0
58421	MC	0.77	0.45	0
151844	MC	0.47	0.18	0
58816	MC	0.79	0.45	0
151958	MC	0.59	0.40	0
151965	MC	0.80	0.38	0
151972	MC	0.85	0.31	0
58523	MC	0.67	0.55	0
51823	MC	0.41	0.28	0
151973	MC	0.62	0.43	0
151977	MC	0.85	0.46	0
151979	MC	0.57	0.29	0
94403	MC	0.57	0.28	0
94402	MC	0.56	0.42	0
58689	MC	0.58	0.48	0
58442	MC	0.43	0.32	0
58609	MC	0.63	0.34	0
94409	MC	0.66	0.25	0
94330	MC	0.82	0.46	0
58809	MC	0.69	0.37	0
94355	MC	0.54	0.31	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
58436	MC	0.55	0.35	0
58508	MC	0.70	0.40	0
58549	MC	0.74	0.36	0
58620	MC	0.70	0.46	0
94430	MC	0.71	0.31	0
94382	MC	0.69	0.32	0
58747	MC	0.65	0.57	0
94404	MC	0.54	0.32	0
58528	MC	0.68	0.30	0
58590	MC	0.48	0.43	0
94406	MC	0.79	0.49	0
94379	MC	0.77	0.39	0
94407	MC	0.51	0.35	0
94428	MC	0.65	0.40	0
94372	MC	0.74	0.43	0
58795	MC	0.66	0.47	0
94412	MC	0.50	0.38	0
94357	MC	0.67	0.40	0
58426	MC	0.62	0.22	0
58585	MC	0.71	0.31	0
58431	MC	0.59	0.49	0
94328	MC	0.59	0.35	0
58825	MC	0.50	0.44	0
151798	OR	0.74	0.70	0
58618	OR	0.44	0.75	0
153214	OR	0.51	0.68	0
58430	OR	0.49	0.68	0
151992	OR	0.43	0.59	0
58839	OR	0.49	0.53	0
58622	OR	0.41	0.68	0
58621	OR	0.40	0.63	0
94431	OR	0.36	0.64	0

Table C-12. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 8

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
151798	4	6	8	15	25	45
151992	4	10	39	29	13	9
153214	4	20	11	32	19	17
58430	4	17	20	26	22	15
58618	4	17	36	16	11	18
58621	4	23	38	11	12	16
58622	4	29	25	9	25	11
58839	4	2	19	62	12	4
94431	4	15	42	31	10	2

Table C-13. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Mathematics Grade 11

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
130610	MC	0.70	0.36	0
51215	MC	0.48	0.43	0
130612	MC	0.74	0.53	0
51546	MC	0.32	0.42	0
130613	MC	0.74	0.44	0
51553	MC	0.55	0.47	0
130614	MC	0.71	0.57	0
51208	MC	0.77	0.45	0
130616	MC	0.64	0.25	0
130619	MC	0.63	0.51	0
130621	MC	0.45	0.46	0
49785	MC	0.60	0.48	1
130649	MC	0.53	0.33	1
130650	MC	0.30	0.44	1
130652	MC	0.47	0.50	1
49781	MC	0.58	0.46	1
51198	MC	0.52	0.36	1
130654	MC	0.64	0.51	1
130655	MC	0.39	0.53	1
130656	MC	0.72	0.44	1
130657	MC	0.69	0.50	1
130659	MC	0.62	0.46	1
51551	MC	0.51	0.45	1
130661	MC	0.47	0.46	1
130631	MC	0.76	0.46	1
130634	MC	0.53	0.24	1
51191	MC	0.57	0.46	1
130636	MC	0.62	0.39	0
130637	MC	0.52	0.35	1
130639	MC	0.45	0.52	1
130641	MC	0.67	0.50	1
130642	MC	0.42	0.40	1
152071	MC	0.76	0.35	0
152072	MC	0.85	0.26	0
152073	MC	0.55	0.43	1
51213	MC	0.74	0.21	0
152077	MC	0.42	0.33	0
152081	MC	0.65	0.40	0
152084	MC	0.46	0.26	0
152086	MC	0.57	0.38	0
51534	MC	0.74	0.40	0
51536	MC	0.62	0.39	0
51095	MC	0.38	0.34	0
51099	MC	0.44	0.24	1
51111	MC	0.41	0.12	0
51105	MC	0.41	0.43	0
51119	MC	0.68	0.42	0
51117	MC	0.44	0.23	0
51317	MC	0.64	0.45	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
51540	MC	0.58	0.45	0
51343	MC	0.64	0.40	0
51349	MC	0.57	0.33	0
51114	MC	0.44	0.29	0
51547	MC	0.71	0.46	0
51555	MC	0.75	0.38	0
51391	MC	0.49	0.37	0
51085	MC	0.71	0.31	0
51094	MC	0.59	0.43	0
51096	MC	0.31	0.27	1
51110	MC	0.63	0.50	0
51557	MC	0.62	0.47	1
51090	MC	0.46	0.39	1
51380	MC	0.40	0.26	0
51378	MC	0.64	0.43	0
51538	MC	0.67	0.46	0
51355	MC	0.49	0.32	0
51541	MC	0.49	0.35	1
51081	MC	0.62	0.28	0
51103	MC	0.81	0.42	0
51120	MC	0.78	0.34	0
51550	MC	0.59	0.43	0
51102	MC	0.31	0.40	0
130623	OR	0.35	0.67	1
51106	OR	0.50	0.79	2
51216	OR	0.26	0.60	1
51554	OR	0.37	0.68	2
152097	OR	0.28	0.66	1
51568	OR	0.33	0.62	1
51109	OR	0.29	0.61	1
51400	OR	0.31	0.68	2
51124	OR	0.57	0.70	1

Table C-14. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Mathematics Grade 11

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
130623	4	9	58	18	11	3
152097	4	37	33	13	9	7
51106	4	17	18	29	16	19
51109	4	47	18	12	15	7
51124	4	2	20	38	21	18
51216	4	31	43	18	3	4
51400	4	37	29	14	8	11
51554	4	39	8	27	13	12
51568	4	27	42	12	11	8

Table C-15. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 3

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
76644	MC	0.93	0.33	0
76643	MC	0.83	0.47	0
93992	MC	0.76	0.59	0
76645	MC	0.95	0.42	0
94005	MC	0.86	0.45	1
94007	MC	0.84	0.52	0
76646	MC	0.86	0.50	0
47103	MC	0.68	0.55	0
47104	MC	0.67	0.52	0
47101	MC	0.84	0.55	0
47100	MC	0.51	0.48	0
47102	MC	0.68	0.49	0
47106	MC	0.90	0.54	1
47105	MC	0.90	0.49	0
94144	MC	0.93	0.40	0
94165	MC	0.88	0.37	0
94151	MC	0.74	0.24	0
94152	MC	0.66	0.37	0
94162	MC	0.62	0.35	0
94175	MC	0.83	0.48	0
94156	MC	0.72	0.48	0
94174	MC	0.75	0.33	0
52054	MC	0.86	0.40	0
52104	MC	0.93	0.39	0
52105	MC	0.85	0.39	0
52052	MC	0.78	0.34	0
52108	MC	0.73	0.33	0
52056	MC	0.87	0.33	0
140523	MC	0.92	0.42	0
52109	MC	0.87	0.46	0
94117	MC	0.69	0.44	0
94093	MC	0.78	0.37	0
94121	MC	0.81	0.46	0
94099	MC	0.75	0.41	0
94100	MC	0.91	0.41	1
94125	MC	0.88	0.44	0
94107	MC	0.87	0.45	0
94127	MC	0.72	0.42	0
47071	MC	0.88	0.32	0
47072	MC	0.69	0.41	0
47073	MC	0.95	0.37	0
47079	MC	0.87	0.28	0
76650	MC	0.73	0.21	0
47077	MC	0.91	0.40	1
47075	MC	0.73	0.29	0
47078	MC	0.88	0.30	0
94310	MC	0.74	0.40	0
94313	MC	0.80	0.49	0
94356	MC	0.83	0.43	1

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
94373	MC	0.59	0.30	1
94374	MC	0.78	0.46	1
94323	MC	0.60	0.28	0
94348	MC	0.88	0.37	0
94347	MC	0.79	0.39	1
52049	MC	0.76	0.13	0
52053	MC	0.93	0.36	0
52050	MC	0.90	0.44	0
52236	MC	0.93	0.30	0
52055	MC	0.94	0.42	0
52069	MC	0.64	0.29	0
153717	MC	0.92	0.44	0
95477	MC	0.92	0.41	0
52199	MC	0.88	0.39	0
52193	MC	0.92	0.25	0
52247	MC	0.83	0.34	0
153720	MC	0.80	0.35	0
52201	MC	0.93	0.35	0
52253	MC	0.68	0.40	0
52255	MC	0.51	0.35	0
153721	MC	0.95	0.43	0
52157	MC	0.92	0.29	0
52156	MC	0.88	0.42	0
52173	MC	0.76	0.33	0
52175	MC	0.85	0.34	0
52159	MC	0.89	0.38	0
52176	MC	0.81	0.44	0
95484	MC	0.96	0.40	0
52172	MC	0.93	0.22	0
46977	MC	0.96	0.40	0
46983	MC	0.63	0.28	1
46984	MC	0.83	0.43	0
46985	MC	0.87	0.33	0
153740	MC	0.60	0.15	0
46980	MC	0.84	0.45	1
153737	MC	0.85	0.36	0
153734	MC	0.83	0.31	0
47094	MC	0.77	0.33	0
93770	MC	0.71	0.26	0
47083	MC	0.89	0.31	0
47092	MC	0.61	0.31	0
47086	MC	0.70	0.33	1
47085	MC	0.82	0.40	0
47088	MC	0.74	0.33	0
47089	MC	0.90	0.40	0
52198	MC	0.92	0.29	0
52203	MC	0.95	0.33	0
52206	MC	0.89	0.34	0
52218	MC	0.93	0.29	0
52214	MC	0.89	0.36	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
52207	MC	0.91	0.38	0
52217	MC	0.84	0.47	0
153722	MC	0.57	0.30	0
94253	MC	0.96	0.30	0
94200	MC	0.92	0.40	0
94206	MC	0.92	0.38	0
94260	MC	0.92	0.41	0
94207	MC	0.87	0.32	0
94246	MC	0.74	0.32	1
94265	MC	0.87	0.36	0
94262	MC	0.75	0.34	0
52096	MC	0.85	0.40	0
52087	MC	0.75	0.39	0
52088	MC	0.79	0.47	0
52089	MC	0.83	0.42	0
52099	MC	0.53	0.32	0
153725	MC	0.87	0.38	1
153724	MC	0.84	0.44	0
52086	MC	0.84	0.47	0
47036	MC	0.75	0.33	0
47037	MC	0.68	0.18	0
47042	MC	0.86	0.33	0
47040	MC	0.71	0.38	0
47043	MC	0.91	0.28	0
47044	MC	0.71	0.42	0
47047	MC	0.87	0.36	0
47048	MC	0.73	0.37	0
94010	OR	0.43	0.60	0
47108	OR	0.48	0.65	0

Table C-16. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 3

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
47108	4	4	16	65	13	2
94010	4	8	31	43	16	2

Table C-17. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 4

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
153630	MC	0.77	0.34	0
95380	MC	0.66	0.31	0
95382	MC	0.65	0.30	1
152736	MC	0.77	0.33	0
152737	MC	0.63	0.34	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
95384	MC	0.79	0.40	0
95388	MC	0.86	0.42	0
95400	MC	0.48	0.32	0
95413	MC	0.89	0.34	0
95415	MC	0.75	0.33	0
95439	MC	0.89	0.36	0
95453	MC	0.92	0.20	0
95458	MC	0.58	0.30	0
95423	MC	0.68	0.30	0
95424	MC	0.69	0.34	0
95232	MC	0.87	0.32	0
95158	MC	0.88	0.27	0
95163	MC	0.81	0.36	0
95233	MC	0.60	0.31	0
95167	MC	0.56	0.29	0
95237	MC	0.72	0.39	0
95229	MC	0.62	0.29	0
52699	MC	0.71	0.43	0
52690	MC	0.91	0.37	0
52700	MC	0.82	0.42	0
52702	MC	0.65	0.34	0
52703	MC	0.89	0.38	0
153318	MC	0.92	0.33	0
153323	MC	0.55	0.26	0
52750	MC	0.77	0.45	0
52753	MC	0.45	0.34	0
52754	MC	0.83	0.42	0
52757	MC	0.69	0.43	0
52758	MC	0.88	0.44	0
52761	MC	0.76	0.48	0
52763	MC	0.66	0.26	0
152745	MC	0.81	0.31	0
152747	MC	0.92	0.32	0
152748	MC	0.77	0.39	0
152750	MC	0.70	0.42	0
152751	MC	0.56	0.21	0
152754	MC	0.82	0.32	0
152758	MC	0.83	0.37	0
52567	MC	0.71	0.32	0
52568	MC	0.82	0.37	0
52569	MC	0.91	0.37	0
52570	MC	0.92	0.35	0
52572	MC	0.51	0.38	0
153643	MC	0.77	0.31	0
52573	MC	0.72	0.36	0
95493	MC	0.60	0.24	0
95528	MC	0.66	0.13	1
95495	MC	0.63	0.24	1
95535	MC	0.52	0.30	0
95496	MC	0.89	0.36	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
95513	MC	0.87	0.33	0
95516	MC	0.84	0.41	0
95054	MC	0.71	0.33	0
95055	MC	0.86	0.34	1
95056	MC	0.40	0.11	0
95057	MC	0.52	0.30	0
152765	MC	0.89	0.36	0
95087	MC	0.72	0.35	0
95082	MC	0.71	0.38	0
76329	MC	0.85	0.32	0
76330	MC	0.75	0.34	0
76336	MC	0.86	0.40	0
76337	MC	0.67	0.35	0
152770	MC	0.86	0.34	0
76339	MC	0.83	0.39	0
153669	MC	0.86	0.30	0
52672	MC	0.87	0.35	0
52631	MC	0.53	0.32	0
52633	MC	0.83	0.36	0
52674	MC	0.71	0.39	0
52634	MC	0.85	0.35	0
52676	MC	0.73	0.35	0
52636	MC	0.88	0.40	0
52716	MC	0.54	0.35	0
52717	MC	0.61	0.33	0
52718	MC	0.74	0.32	0
52719	MC	0.67	0.37	0
95122	MC	0.85	0.37	0
52721	MC	0.56	0.26	0
52722	MC	0.89	0.38	0
152775	MC	0.76	0.30	0
52658	MC	0.62	0.34	0
52663	MC	0.58	0.32	0
52660	MC	0.86	0.39	0
52665	MC	0.93	0.32	0
52667	MC	0.89	0.36	0
52669	MC	0.90	0.41	0
138299	OR	0.47	0.61	0
137724	OR	0.48	0.71	0
94962	OR	0.40	0.53	0
95052	OR	0.46	0.51	0
95475	OR	0.48	0.48	0
52767	OR	0.54	0.57	0
95524	OR	0.43	0.48	0
52678	OR	0.51	0.53	0
52550	MC	0.93	0.32	0
52554	MC	0.75	0.51	0
52542	MC	0.37	0.44	0
52546	MC	0.86	0.46	0
138296	MC	0.73	0.44	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
138297	MC	0.74	0.48	0
52422	MC	0.80	0.47	0
52424	MC	0.78	0.49	0
52425	MC	0.80	0.46	0
52427	MC	0.62	0.39	0
52420	MC	0.72	0.46	0
52421	MC	0.69	0.51	0
76342	MC	0.88	0.38	0
94950	MC	0.85	0.36	0
94952	MC	0.81	0.43	0
94954	MC	0.81	0.40	0
76344	MC	0.88	0.38	1
76346	MC	0.79	0.40	0
76347	MC	0.78	0.42	0
137792	MC	0.76	0.29	0
137793	MC	0.75	0.40	0
137795	MC	0.46	0.28	0
137797	MC	0.90	0.33	0
137800	MC	0.76	0.26	0
137802	MC	0.51	0.26	0
137807	MC	0.81	0.32	0
52431	MC	0.70	0.27	0
52428	MC	0.83	0.28	0
52430	MC	0.72	0.48	0
52401	MC	0.80	0.24	0
52404	MC	0.75	0.35	0
52432	MC	0.94	0.32	0
138300	MC	0.62	0.27	0
95038	MC	0.52	0.18	0
95044	MC	0.51	0.16	0
95046	MC	0.83	0.36	0
95048	MC	0.81	0.25	1
95050	MC	0.58	0.31	0
152735	MC	0.54	0.30	0
95051	MC	0.79	0.31	0
52389	MC	0.70	0.30	0
52390	MC	0.85	0.30	1
52402	MC	0.56	0.32	0
52403	MC	0.78	0.37	0
52392	MC	0.58	0.38	1
52408	MC	0.86	0.30	0

Table C-18. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 4

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
137724	4	5	26	45	20	4
138299	4	2	25	57	14	2
52678	4	3	16	59	19	3
52767	4	2	24	36	32	6
94962	4	7	37	46	9	1
95052	4	3	28	54	14	2
95475	4	3	24	51	19	2
95524	4	4	34	49	11	2

Table C-19. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 5

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
57180	MC	0.75	0.31	0
57194	MC	0.84	0.43	0
57199	MC	0.96	0.31	0
57215	MC	0.80	0.48	0
57208	MC	0.92	0.33	0
57211	MC	0.81	0.53	0
95802	MC	0.85	0.47	0
95801	MC	0.87	0.44	0
95808	MC	0.61	0.40	0
95809	MC	0.84	0.46	0
95897	MC	0.63	0.46	0
95811	MC	0.72	0.43	0
77593	MC	0.65	0.40	0
77598	MC	0.47	0.35	0
77594	MC	0.70	0.33	0
77597	MC	0.85	0.36	0
95771	MC	0.83	0.30	0
95777	MC	0.76	0.31	0
95781	MC	0.87	0.35	0
77610	MC	0.85	0.30	0
77611	MC	0.94	0.27	0
77603	MC	0.85	0.36	0
77605	MC	0.85	0.34	0
77606	MC	0.91	0.33	0
77613	MC	0.88	0.35	0
142436	MC	0.79	0.14	0
57348	MC	0.90	0.31	0
57351	MC	0.91	0.33	0
57354	MC	0.91	0.36	0
57362	MC	0.73	0.25	0
57367	MC	0.88	0.36	0
95826	MC	0.51	0.09	0
151390	MC	0.74	0.35	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
96102	MC	0.87	0.35	0
96106	MC	0.90	0.36	0
96107	MC	0.80	0.38	0
96089	MC	0.89	0.39	0
96091	MC	0.66	0.31	0
96094	MC	0.72	0.27	0
96109	MC	0.81	0.40	0
57388	MC	0.81	0.35	0
57390	MC	0.89	0.33	0
57409	MC	0.89	0.30	0
57413	MC	0.79	0.34	0
57417	MC	0.76	0.37	0
57416	MC	0.61	0.32	0
57400	MC	0.89	0.29	0
77581	MC	0.68	0.32	0
51406	MC	0.93	0.30	0
51403	MC	0.76	0.32	0
51404	MC	0.79	0.36	0
51405	MC	0.81	0.25	0
51402	MC	0.78	0.35	0
77584	MC	0.72	0.28	0
96069	MC	0.74	0.32	0
96061	MC	0.86	0.29	0
96064	MC	0.65	0.18	0
96077	MC	0.82	0.33	0
96065	MC	0.73	0.35	0
96083	MC	0.83	0.27	0
96066	MC	0.72	0.35	0
57352	MC	0.80	0.24	0
57353	MC	0.83	0.38	0
57356	MC	0.88	0.35	0
57363	MC	0.74	0.21	0
57366	MC	0.79	0.26	0
151452	MC	0.77	0.36	0
151455	MC	0.82	0.32	0
143886	MC	0.67	0.12	0
143887	MC	0.72	0.35	0
143888	MC	0.76	0.42	0
143889	MC	0.61	0.29	0
143898	MC	0.87	0.34	0
143899	MC	0.57	0.31	0
143900	MC	0.86	0.33	0
96140	MC	0.71	0.33	0
96148	MC	0.73	0.32	0
96150	MC	0.55	0.33	0
96151	MC	0.86	0.39	0
96153	MC	0.47	0.31	0
96155	MC	0.71	0.36	0
96145	MC	0.70	0.39	0
51411	MC	0.70	0.32	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
51414	MC	0.38	0.19	0
95910	MC	0.84	0.39	0
51412	MC	0.57	0.34	0
95911	MC	0.87	0.37	0
51415	MC	0.72	0.38	0
51416	MC	0.61	0.29	0
57335	MC	0.84	0.38	0
57254	MC	0.81	0.34	0
57364	MC	0.78	0.32	0
57263	MC	0.86	0.36	0
57368	MC	0.76	0.29	0
57274	MC	0.80	0.31	0
57294	MC	0.88	0.35	0
96033	MC	0.90	0.27	0
96034	MC	0.57	0.13	0
95931	MC	0.88	0.33	0
95933	MC	0.86	0.23	0
96036	MC	0.74	0.32	0
95934	MC	0.65	0.21	0
96038	MC	0.82	0.26	0
57021	MC	0.81	0.27	0
57022	MC	0.55	0.21	0
57015	MC	0.75	0.34	0
57023	MC	0.75	0.30	0
57016	MC	0.84	0.35	0
57025	MC	0.48	0.18	0
151460	MC	0.57	0.32	0
57423	MC	0.92	0.36	0
57265	MC	0.90	0.36	0
57269	MC	0.89	0.38	0
57430	MC	0.64	0.38	0
151461	MC	0.59	0.30	0
151464	MC	0.82	0.26	0
57429	MC	0.75	0.42	0
57503	MC	0.80	0.24	0
57461	MC	0.73	0.30	0
57509	MC	0.73	0.32	0
57402	MC	0.83	0.31	0
57545	MC	0.83	0.35	0
57554	MC	0.71	0.31	0
57485	MC	0.71	0.36	0
95860	MC	0.81	0.35	0
95862	MC	0.80	0.36	0
95864	MC	0.88	0.29	0
95865	MC	0.91	0.34	0
95873	MC	0.68	0.34	0
95876	MC	0.73	0.24	0
95881	MC	0.81	0.32	0
57140	MC	0.87	0.35	0
57155	MC	0.83	0.33	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
57145	MC	0.90	0.35	0
151467	MC	0.80	0.31	0
57157	MC	0.63	0.25	0
151468	MC	0.88	0.31	0
151471	MC	0.81	0.28	0
151562	OR	0.54	0.62	0
95905	OR	0.52	0.60	0
95793	OR	0.49	0.53	0
96096	OR	0.56	0.53	0
96067	OR	0.51	0.51	0
96156	OR	0.46	0.54	0
96027	OR	0.56	0.50	0
57563	OR	0.44	0.48	0

Table C-20. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 5

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
151562	4	3	18	46	26	6
57563	4	9	25	51	12	3
95793	4	4	18	58	15	4
95905	4	4	16	56	19	5
96027	4	2	15	47	28	7
96067	4	4	21	50	19	6
96096	4	11	12	31	35	11
96156	4	7	29	41	18	4

Table C-21. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 6

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
51854	MC	0.92	0.33	0
51891	MC	0.71	0.43	0
51892	MC	0.68	0.42	0
51861	MC	0.65	0.35	0
152166	MC	0.79	0.44	0
152168	MC	0.81	0.41	0
95783	MC	0.88	0.47	0
95807	MC	0.77	0.51	0
95794	MC	0.66	0.53	0
95799	MC	0.68	0.43	0
95805	MC	0.79	0.53	0
95796	MC	0.64	0.43	0
96015	MC	0.76	0.28	0
96023	MC	0.56	0.36	0
96012	MC	0.87	0.35	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
96013	MC	0.78	0.38	0
96014	MC	0.85	0.37	0
96025	MC	0.56	0.34	0
96016	MC	0.86	0.41	0
47737	MC	0.90	0.37	0
47746	MC	0.69	0.30	0
76701	MC	0.92	0.31	0
47741	MC	0.88	0.33	0
47743	MC	0.75	0.35	0
47734	MC	0.73	0.38	0
47739	MC	0.79	0.36	0
51935	MC	0.59	0.18	0
51931	MC	0.54	0.33	0
51929	MC	0.83	0.34	0
51909	MC	0.93	0.31	0
51933	MC	0.89	0.39	0
51910	MC	0.87	0.33	0
51941	MC	0.90	0.40	0
51906	MC	0.73	0.30	0
51946	MC	0.87	0.22	0
51937	MC	0.87	0.28	0
51924	MC	0.71	0.43	0
51912	MC	0.67	0.28	0
51940	MC	0.81	0.25	0
51951	MC	0.85	0.35	0
95712	MC	0.79	0.37	0
76689	MC	0.60	0.16	0
95725	MC	0.77	0.38	0
76690	MC	0.77	0.41	0
76691	MC	0.89	0.36	0
76696	MC	0.87	0.39	0
76695	MC	0.78	0.43	0
51922	MC	0.63	0.37	0
51900	MC	0.56	0.30	0
51913	MC	0.63	0.30	0
51904	MC	0.71	0.40	0
51907	MC	0.77	0.44	0
51902	MC	0.64	0.25	0
152171	MC	0.85	0.42	0
47671	MC	0.81	0.33	0
95848	MC	0.86	0.29	0
47676	MC	0.92	0.26	0
47673	MC	0.86	0.36	0
47672	MC	0.85	0.39	0
47674	MC	0.85	0.36	0
47675	MC	0.88	0.39	0
95943	MC	0.83	0.24	0
95932	MC	0.91	0.35	0
95936	MC	0.89	0.31	0
95944	MC	0.91	0.30	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
95945	MC	0.76	0.30	0
95946	MC	0.56	0.14	0
95940	MC	0.48	0.29	0
47679	MC	0.71	0.28	0
47682	MC	0.86	0.41	0
47683	MC	0.53	0.35	0
47680	MC	0.71	0.30	0
76698	MC	0.83	0.39	0
76699	MC	0.48	0.30	0
47685	MC	0.75	0.34	0
95820	MC	0.59	0.27	0
147118	MC	0.68	0.31	0
95822	MC	0.84	0.35	0
95823	MC	0.74	0.39	0
95833	MC	0.73	0.28	0
95841	MC	0.80	0.29	0
95834	MC	0.91	0.36	0
95989	MC	0.92	0.30	0
96004	MC	0.82	0.31	0
95991	MC	0.65	0.38	0
96005	MC	0.81	0.30	0
95992	MC	0.73	0.36	0
96007	MC	0.68	0.22	0
96008	MC	0.51	0.28	0
47693	MC	0.84	0.27	0
47690	MC	0.79	0.38	0
47688	MC	0.80	0.33	0
47689	MC	0.82	0.36	0
95916	MC	0.81	0.38	0
47691	MC	0.69	0.32	1
152179	MC	0.90	0.38	0
147119	MC	0.77	0.41	0
76682	MC	0.65	0.46	0
76683	MC	0.86	0.40	0
76684	MC	0.67	0.42	0
76685	MC	0.84	0.36	0
76686	MC	0.89	0.33	0
147120	MC	0.57	0.36	0
95886	MC	0.51	0.30	0
95888	MC	0.87	0.34	0
95900	MC	0.91	0.32	0
95889	MC	0.91	0.35	0
95892	MC	0.78	0.35	0
95896	MC	0.48	0.25	0
95909	MC	0.63	0.33	0
51871	MC	0.84	0.34	0
51867	MC	0.83	0.20	0
51869	MC	0.81	0.39	0
51850	MC	0.84	0.30	0
51851	MC	0.78	0.31	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
152181	MC	0.59	0.33	0
152185	MC	0.75	0.32	0
52001	MC	0.91	0.32	0
51863	MC	0.88	0.37	0
51870	MC	0.84	0.34	0
52003	MC	0.85	0.42	0
52007	MC	0.78	0.40	0
51873	MC	0.51	0.19	0
152187	MC	0.91	0.37	0
152169	OR	0.56	0.65	0
95813	OR	0.52	0.62	0
96028	OR	0.40	0.56	0
51952	OR	0.41	0.53	0
76697	OR	0.61	0.47	0
95941	OR	0.43	0.58	0
95995	OR	0.65	0.54	0
95914	OR	0.40	0.58	0

Table C-22. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 6

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
152169	4	1	12	56	24	6
51952	4	13	24	49	12	2
76697	4	2	16	38	25	19
95813	4	4	24	38	29	5
95914	4	14	27	47	10	3
95941	4	8	28	51	10	2
95995	4	5	10	26	39	21
96028	4	13	29	44	12	2

Table C-23. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 7

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
95303	MC	0.74	0.42	0
95329	MC	0.71	0.45	0
95336	MC	0.92	0.30	0
95315	MC	0.90	0.42	0
95317	MC	0.83	0.46	0
95341	MC	0.88	0.36	0
138330	MC	0.72	0.43	0
138331	MC	0.75	0.47	0
138332	MC	0.89	0.39	0
138333	MC	0.77	0.46	0
138334	MC	0.44	0.38	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
138335	MC	0.83	0.39	1
95506	MC	0.82	0.40	0
95507	MC	0.60	0.26	0
138323	MC	0.64	0.24	0
95508	MC	0.43	0.29	0
95509	MC	0.49	0.29	0
95510	MC	0.41	0.26	0
95511	MC	0.47	0.34	0
95498	MC	0.65	0.37	0
95500	MC	0.49	0.28	0
95499	MC	0.75	0.37	0
138324	MC	0.48	0.20	0
138325	MC	0.70	0.33	0
138326	MC	0.83	0.37	0
95502	MC	0.52	0.26	0
55144	MC	0.87	0.27	0
55146	MC	0.81	0.42	0
55153	MC	0.90	0.28	0
55148	MC	0.71	0.33	0
55143	MC	0.94	0.30	0
55156	MC	0.75	0.36	0
55158	MC	0.87	0.33	0
94529	MC	0.82	0.41	0
76448	MC	0.85	0.38	0
94540	MC	0.72	0.30	0
76450	MC	0.91	0.34	0
76451	MC	0.72	0.42	0
76452	MC	0.49	0.23	0
94542	MC	0.82	0.29	0
95526	MC	0.83	0.44	0
95529	MC	0.77	0.38	0
95530	MC	0.72	0.43	0
95531	MC	0.72	0.32	0
95532	MC	0.64	0.18	0
152022	MC	0.57	0.32	0
152023	MC	0.74	0.40	0
52313	MC	0.80	0.37	0
52314	MC	0.77	0.31	0
52315	MC	0.71	0.33	0
52316	MC	0.87	0.33	0
52317	MC	0.88	0.39	0
52318	MC	0.86	0.27	0
52319	MC	0.52	0.27	0
53314	MC	0.78	0.33	0
53363	MC	0.81	0.40	0
53367	MC	0.83	0.34	0
53318	MC	0.64	0.28	0
53375	MC	0.62	0.30	0
53384	MC	0.77	0.33	0
53325	MC	0.60	0.30	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
54536	MC	0.79	0.28	0
54537	MC	0.87	0.36	0
54538	MC	0.77	0.27	0
54540	MC	0.89	0.33	0
54542	MC	0.81	0.38	0
54557	MC	0.73	0.39	0
54561	MC	0.70	0.32	0
53464	MC	0.91	0.36	0
53457	MC	0.75	0.36	0
53471	MC	0.78	0.35	0
152039	MC	0.81	0.38	0
53474	MC	0.93	0.29	0
95973	MC	0.80	0.33	0
53467	MC	0.82	0.41	0
95014	MC	0.72	0.34	0
94991	MC	0.72	0.36	0
95022	MC	0.92	0.35	0
95027	MC	0.76	0.37	0
95000	MC	0.91	0.36	0
95037	MC	0.70	0.31	0
95006	MC	0.89	0.36	0
53114	MC	0.82	0.32	0
52147	MC	0.90	0.32	0
52149	MC	0.70	0.37	0
52148	MC	0.75	0.41	0
52150	MC	0.79	0.30	0
53109	MC	0.74	0.26	0
153563	MC	0.86	0.36	0
95546	MC	0.89	0.33	0
95548	MC	0.78	0.34	0
95551	MC	0.92	0.33	0
95555	MC	0.79	0.31	0
95559	MC	0.87	0.30	0
95561	MC	0.89	0.33	0
95564	MC	0.60	0.28	0
94891	MC	0.90	0.26	0
94893	MC	0.77	0.22	0
94919	MC	0.90	0.30	0
94895	MC	0.76	0.28	0
94896	MC	0.84	0.31	0
94899	MC	0.85	0.35	0
94934	MC	0.70	0.31	0
54996	MC	0.83	0.38	0
55010	MC	0.69	0.22	0
152068	MC	0.90	0.32	0
55013	MC	0.68	0.27	0
55016	MC	0.81	0.31	0
55019	MC	0.69	0.40	0
55020	MC	0.89	0.36	0
152078	MC	0.66	0.31	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
152080	MC	0.96	0.32	0
152083	MC	0.72	0.33	0
152085	MC	0.71	0.35	0
152087	MC	0.72	0.36	0
152089	MC	0.72	0.34	0
152091	MC	0.55	0.26	0
54882	MC	0.65	0.25	0
54868	MC	0.90	0.33	0
54885	MC	0.89	0.26	0
54873	MC	0.76	0.32	0
54886	MC	0.83	0.38	0
54874	MC	0.75	0.42	0
54893	MC	0.77	0.36	0
50499	MC	0.93	0.32	0
50500	MC	0.88	0.29	0
50502	MC	0.73	0.31	0
50503	MC	0.70	0.35	0
50504	MC	0.78	0.38	0
50501	MC	0.75	0.36	0
152098	MC	0.77	0.21	0
54466	MC	0.52	0.34	0
54479	MC	0.78	0.40	0
54506	MC	0.91	0.31	0
54508	MC	0.84	0.31	0
54500	MC	0.89	0.38	0
153565	MC	0.79	0.34	0
153567	MC	0.93	0.34	0
95346	OR	0.55	0.68	0
138336	OR	0.52	0.67	0
95512	OR	0.50	0.56	0
94543	OR	0.51	0.47	0
53408	OR	0.51	0.55	0
95040	OR	0.55	0.54	0
94902	OR	0.51	0.53	0
54877	OR	0.54	0.57	0

Table C-24. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 7

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
138336	4	3	21	49	21	6
53408	4	1	20	56	17	5
54877	4	1	18	50	26	4
94543	4	2	11	69	15	3
94902	4	2	22	50	20	5
95040	4	2	12	52	29	4
95346	4	4	14	49	24	8
95512	4	6	17	49	23	4

Table C-25. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 8

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
95670	MC	0.77	0.49	0
95652	MC	0.82	0.46	0
95673	MC	0.86	0.45	0
95672	MC	0.59	0.41	0
95659	MC	0.65	0.30	0
95662	MC	0.77	0.49	0
58181	MC	0.80	0.54	0
58173	MC	0.64	0.51	0
58184	MC	0.57	0.53	0
58179	MC	0.68	0.53	0
58168	MC	0.83	0.49	0
58187	MC	0.82	0.49	0
95607	MC	0.82	0.39	0
95617	MC	0.74	0.35	0
95609	MC	0.71	0.46	0
95606	MC	0.64	0.39	0
95621	MC	0.71	0.44	0
95610	MC	0.77	0.42	0
95622	MC	0.70	0.47	0
51755	MC	0.76	0.44	0
51756	MC	0.81	0.44	0
51758	MC	0.70	0.41	0
51759	MC	0.72	0.41	0
51757	MC	0.72	0.41	0
51760	MC	0.73	0.46	0
94910	MC	0.72	0.41	0
94871	MC	0.72	0.35	0
86678	MC	0.69	0.28	0
94875	MC	0.70	0.34	0
94880	MC	0.62	0.38	0
86686	MC	0.80	0.45	0
94878	MC	0.75	0.22	0
86698	MC	0.89	0.41	0
58731	MC	0.88	0.34	0
58713	MC	0.82	0.41	0
58746	MC	0.82	0.31	0
58707	MC	0.87	0.37	0
58720	MC	0.75	0.34	0
58740	MC	0.88	0.32	0
58748	MC	0.66	0.25	0
58755	MC	0.89	0.38	0
58756	MC	0.85	0.32	0
58786	MC	0.62	0.37	0
58783	MC	0.61	0.36	0
58790	MC	0.65	0.32	0
58792	MC	0.49	0.32	0
58766	MC	0.83	0.43	0
58454	MC	0.76	0.35	0
58435	MC	0.90	0.34	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
58445	MC	0.67	0.25	0
58434	MC	0.88	0.38	0
58473	MC	0.90	0.40	0
153706	MC	0.51	0.22	0
58477	MC	0.93	0.30	0
58259	MC	0.78	0.36	0
58262	MC	0.88	0.33	0
58274	MC	0.81	0.33	0
58264	MC	0.65	0.30	0
58281	MC	0.65	0.30	0
58268	MC	0.87	0.42	0
58278	MC	0.85	0.41	0
94853	MC	0.73	0.31	0
94858	MC	0.65	0.25	0
94937	MC	0.67	0.34	0
94940	MC	0.79	0.41	0
94933	MC	0.92	0.35	0
94862	MC	0.57	0.26	0
94946	MC	0.82	0.36	0
58159	MC	0.45	0.29	0
58098	MC	0.84	0.39	0
58166	MC	0.71	0.31	0
58103	MC	0.68	0.32	0
58101	MC	0.81	0.41	0
58104	MC	0.82	0.44	0
58171	MC	0.75	0.31	0
58896	MC	0.82	0.32	0
58492	MC	0.85	0.29	0
58496	MC	0.83	0.21	0
58499	MC	0.87	0.30	0
58502	MC	0.62	0.31	0
58905	MC	0.76	0.42	1
58505	MC	0.61	0.37	0
94993	MC	0.70	0.27	0
95032	MC	0.86	0.33	0
95004	MC	0.67	0.36	0
95008	MC	0.74	0.41	0
95049	MC	0.57	0.32	0
95013	MC	0.60	0.29	0
95016	MC	0.53	0.30	0
58348	MC	0.81	0.36	0
58346	MC	0.89	0.39	0
58351	MC	0.75	0.40	0
58349	MC	0.71	0.34	0
95745	MC	0.69	0.34	0
58356	MC	0.74	0.42	0
58353	MC	0.70	0.35	0
95116	MC	0.52	0.17	0
95118	MC	0.67	0.23	0
95127	MC	0.79	0.36	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
95134	MC	0.76	0.37	0
95597	MC	0.78	0.29	0
95598	MC	0.76	0.33	0
95600	MC	0.53	0.25	0
95741	MC	0.59	0.36	0
95717	MC	0.81	0.41	0
95754	MC	0.80	0.32	0
95719	MC	0.87	0.42	0
95762	MC	0.75	0.33	0
95769	MC	0.63	0.38	0
95774	MC	0.87	0.34	0
51763	MC	0.86	0.30	0
51765	MC	0.92	0.33	0
51764	MC	0.91	0.36	0
86711	MC	0.83	0.33	0
51766	MC	0.75	0.35	0
51767	MC	0.91	0.40	0
86713	MC	0.69	0.29	0
58220	MC	0.90	0.33	0
58380	MC	0.68	0.45	0
58383	MC	0.84	0.37	0
58381	MC	0.81	0.39	0
58226	MC	0.80	0.39	0
58239	MC	0.65	0.39	0
58235	MC	0.82	0.46	0
95664	OR	0.62	0.64	0
58188	OR	0.59	0.65	0
95612	OR	0.50	0.59	0
58752	OR	0.52	0.58	0
153709	OR	0.55	0.60	0
58176	OR	0.44	0.49	0
95019	OR	0.56	0.52	0
95735	OR	0.49	0.57	0

Table C-26. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 8

Item Number	Total Possible Points	Percent of Students at Score Point				
		0	1	2	3	4
153709	4	4	16	41	31	7
58176	4	19	15	41	20	5
58188	4	2	10	46	34	8
58752	4	8	16	43	28	5
95019	4	1	14	50	29	5
95612	4	5	20	47	24	4
95664	4	2	7	43	39	10
95735	4	6	22	45	22	4

Table C-27. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Reading Grade 10

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
92855	MC	0.62	0.43	0
92854	MC	0.85	0.31	0
92856	MC	0.80	0.47	0
92860	MC	0.93	0.42	0
92857	MC	0.94	0.42	0
92859	MC	0.94	0.46	0
49028	MC	0.69	0.44	1
49033	MC	0.68	0.50	1
49032	MC	0.87	0.51	1
49029	MC	0.76	0.57	1
49027	MC	0.78	0.55	1
49030	MC	0.61	0.50	1
50802	MC	0.84	0.41	0
50804	MC	0.57	0.37	1
50805	MC	0.74	0.44	1
50806	MC	0.67	0.26	0
50807	MC	0.78	0.39	0
50813	MC	0.69	0.39	1
50814	MC	0.86	0.40	1
48987	MC	0.78	0.39	1
48988	MC	0.77	0.36	1
48989	MC	0.82	0.47	1
48990	MC	0.80	0.44	1
48993	MC	0.72	0.36	1
48995	MC	0.55	0.28	1
48996	MC	0.55	0.32	1
50642	MC	0.44	0.33	1
50643	MC	0.76	0.47	1
50644	MC	0.74	0.45	1
50645	MC	0.36	0.26	1
50646	MC	0.86	0.43	1
50647	MC	0.53	0.18	1
50648	MC	0.78	0.43	1
50866	MC	0.90	0.40	0
50870	MC	0.88	0.37	0
50873	MC	0.62	0.26	0
50875	MC	0.62	0.33	0
50880	MC	0.82	0.40	0
50891	MC	0.62	0.35	1
50882	MC	0.82	0.43	1
110821	MC	0.52	0.22	1
110822	MC	0.73	0.35	1
110823	MC	0.64	0.41	1
110824	MC	0.71	0.33	1
110825	MC	0.80	0.45	1
110826	MC	0.79	0.43	1
110827	MC	0.72	0.43	1
50635	MC	0.55	0.36	0
50638	MC	0.76	0.35	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
50636	MC	0.81	0.39	0
49003	MC	0.76	0.38	0
50637	MC	0.70	0.40	0
49007	MC	0.81	0.42	1
50639	MC	0.85	0.48	1
50857	MC	0.89	0.37	1
50858	MC	0.95	0.37	0
50859	MC	0.77	0.32	1
50860	MC	0.84	0.37	1
50861	MC	0.87	0.39	1
50862	MC	0.77	0.45	1
50863	MC	0.77	0.39	1
50757	MC	0.76	0.37	0
50753	MC	0.82	0.41	0
50754	MC	0.78	0.35	1
50751	MC	0.53	0.23	0
50759	MC	0.83	0.44	0
110846	MC	0.68	0.39	1
50761	MC	0.88	0.37	1
92934	MC	0.88	0.35	0
92933	MC	0.61	0.21	1
92940	MC	0.85	0.45	1
92932	MC	0.75	0.44	0
92929	MC	0.72	0.38	1
92930	MC	0.79	0.16	1
92942	MC	0.82	0.27	1
50791	MC	0.86	0.39	1
50869	MC	0.61	0.31	1
50793	MC	0.89	0.41	1
50794	MC	0.86	0.42	1
50796	MC	0.89	0.42	1
50798	MC	0.83	0.40	1
50799	MC	0.66	0.37	1
93195	MC	0.78	0.34	0
49034	MC	0.57	0.28	0
49035	MC	0.79	0.43	1
49036	MC	0.76	0.34	0
49037	MC	0.78	0.40	0
49038	MC	0.45	0.26	1
49039	MC	0.86	0.45	1
93285	MC	0.71	0.15	1
93278	MC	0.68	0.46	0
93283	MC	0.72	0.37	1
93288	MC	0.53	0.33	0
93281	MC	0.48	0.35	1
93290	MC	0.46	0.23	1
93280	MC	0.60	0.41	1
50816	MC	0.81	0.34	0
50733	MC	0.70	0.21	0
50822	MC	0.85	0.35	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
50839	MC	0.84	0.36	0
50843	MC	0.62	0.34	0
50846	MC	0.62	0.28	0
50849	MC	0.75	0.36	0
50694	MC	0.70	0.35	0
50695	MC	0.90	0.38	0
50697	MC	0.82	0.44	1
50698	MC	0.80	0.36	0
50699	MC	0.79	0.36	0
50700	MC	0.64	0.32	1
50701	MC	0.59	0.39	1
110893	MC	0.74	0.44	0
74110	MC	0.95	0.34	0
74112	MC	0.84	0.45	0
74111	MC	0.90	0.40	0
74109	MC	0.82	0.45	0
74113	MC	0.86	0.27	0
74114	MC	0.83	0.41	0
50723	MC	0.94	0.24	0
50724	MC	0.70	0.24	1
50725	MC	0.66	0.38	1
50726	MC	0.80	0.44	0
50727	MC	0.66	0.34	1
50728	MC	0.70	0.43	1
50729	MC	0.91	0.39	1
50771	MC	0.61	0.32	1
50773	MC	0.76	0.42	1
50774	MC	0.86	0.41	1
50776	MC	0.74	0.31	1
50777	MC	0.83	0.40	1
50779	MC	0.74	0.39	1
50781	MC	0.81	0.38	1
50704	MC	0.30	0.15	1
50705	MC	0.81	0.42	0
50706	MC	0.63	0.43	1
50707	MC	0.75	0.33	1
50708	MC	0.74	0.22	1
50709	MC	0.55	0.33	1
50936	MC	0.90	0.40	1
92861	OR	0.61	0.72	0
110802	OR	0.60	0.75	1
110781	OR	0.52	0.62	1
50884	OR	0.62	0.61	1
50864	OR	0.57	0.63	1
50800	OR	0.65	0.62	1
50851	OR	0.52	0.63	1
50730	OR	0.54	0.58	1

Table C-28. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Reading Grade 10

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
110781	4	7	20	40	23	10
110802	4	3	11	39	35	12
50730	4	3	21	42	24	10
50800	4	1	9	39	31	20
50851	4	6	20	40	26	8
50864	4	6	14	35	33	11
50884	4	1	8	42	36	12
92861	4	2	10	43	32	13

Table C-29. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Science Grade 4

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
138046	MC	0.96	0.34	0
93675	MC	0.89	0.36	0
50212	MC	0.77	0.48	0
93679	MC	0.87	0.33	0
52452	MC	0.72	0.33	0
50207	MC	0.82	0.46	0
138047	MC	0.64	0.41	0
50206	MC	0.88	0.43	0
76370	MC	0.77	0.39	0
93683	MC	0.88	0.40	0
93614	MC	0.66	0.41	0
138048	MC	0.77	0.36	0
52523	MC	0.85	0.46	0
50222	MC	0.76	0.48	0
138105	MC	0.86	0.34	0
76369	MC	0.54	0.43	0
52813	MC	0.61	0.42	0
52608	MC	0.89	0.46	0
138114	MC	0.83	0.45	0
138108	MC	0.93	0.42	0
50200	MC	0.78	0.45	0
50205	MC	0.70	0.36	0
52497	MC	0.71	0.50	0
52637	MC	0.75	0.35	0
76385	MC	0.81	0.38	0
50221	MC	0.73	0.38	0
138080	MC	0.80	0.42	0
76313	MC	0.75	0.43	0
138084	MC	0.57	0.39	0
51064	MC	0.85	0.29	0
76374	MC	0.88	0.44	0
138085	MC	0.76	0.33	0
76375	MC	0.83	0.28	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
51063	MC	0.69	0.38	0
150329	MC	0.78	0.40	0
93618	MC	0.77	0.38	0
150333	MC	0.56	0.22	1
76368	MC	0.89	0.36	0
76312	MC	0.77	0.41	0
50223	MC	0.82	0.27	0
93806	MC	0.76	0.43	0
52870	MC	0.85	0.40	0
52495	MC	0.92	0.29	0
52464	MC	0.87	0.30	1
93755	MC	0.52	0.26	0
93811	MC	0.79	0.40	0
52484	MC	0.50	0.28	0
93792	MC	0.85	0.24	0
93802	MC	0.84	0.35	0
52777	MC	0.75	0.35	0
93719	MC	0.86	0.26	0
52785	MC	0.89	0.28	0
52897	MC	0.87	0.26	0
93810	MC	0.48	0.36	0
93730	MC	0.70	0.16	0
93748	MC	0.85	0.43	0
52613	MC	0.81	0.31	0
52918	MC	0.88	0.31	0
52606	MC	0.88	0.45	0
52493	MC	0.71	0.25	0
52770	MC	0.63	0.16	0
93793	MC	0.84	0.36	0
93734	MC	0.77	0.36	0
52775	MC	0.70	0.27	0
52913	MC	0.76	0.14	0
93785	MC	0.68	0.37	0
52759	MC	0.77	0.44	0
52747	MC	0.80	0.43	0
52485	MC	0.81	0.36	1
52874	MC	0.91	0.35	0
93757	MC	0.63	0.24	0
52815	MC	0.87	0.23	0
93714	OR	0.53	0.69	0
138050	OR	0.64	0.66	0
138120	OR	0.56	0.59	0
138098	OR	0.61	0.54	0
150341	OR	0.47	0.54	0
52923	OR	0.45	0.55	0
93765	OR	0.47	0.56	0
93798	OR	0.45	0.45	0
52819	OR	0.53	0.31	0

Table C-30. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Science Grade 4

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
138050	4	1	8	36	48	8
138098	4	3	12	31	49	6
138120	4	2	16	47	26	9
150341	4	18	21	28	25	9
52819	4	1	20	53	18	7
52923	4	8	20	58	12	2
93714	4	10	15	34	35	6
93765	4	10	19	46	21	3
93798	4	15	15	48	16	5

Table C-31. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Science Grade 7

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
55027	MC	0.71	0.32	0
76427	MC	0.77	0.30	0
138099	MC	0.70	0.41	0
54701	MC	0.49	0.44	0
138101	MC	0.67	0.36	0
138102	MC	0.67	0.46	0
55035	MC	0.42	0.14	0
138107	MC	0.75	0.47	0
54694	MC	0.48	0.36	0
138109	MC	0.75	0.39	0
50609	MC	0.49	0.39	0
50599	MC	0.51	0.44	0
55034	MC	0.60	0.49	0
138155	MC	0.50	0.35	0
138154	MC	0.52	0.38	0
52360	MC	0.66	0.43	0
138151	MC	0.66	0.49	1
138138	MC	0.63	0.40	0
138140	MC	0.66	0.42	0
138141	MC	0.57	0.32	0
138147	MC	0.63	0.41	0
138150	MC	0.44	0.31	0
138156	MC	0.63	0.49	0
138152	MC	0.59	0.48	0
54691	MC	0.67	0.38	0
94458	MC	0.51	0.31	0
138126	MC	0.69	0.30	0
50621	MC	0.76	0.36	0
138130	MC	0.45	0.25	0
76422	MC	0.81	0.41	0
138131	MC	0.57	0.45	0
52338	MC	0.45	0.39	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
153012	MC	0.86	0.26	0
76423	MC	0.84	0.32	0
94362	MC	0.40	0.25	0
153014	MC	0.82	0.44	0
153015	MC	0.60	0.37	0
153016	MC	0.72	0.29	0
53649	MC	0.41	0.19	0
50611	MC	0.58	0.37	0
55399	MC	0.66	0.35	0
54698	MC	0.66	0.35	0
94517	MC	0.82	0.38	0
54718	MC	0.44	0.24	0
54997	MC	0.42	0.33	0
94487	MC	0.39	0.16	0
94608	MC	0.47	0.25	0
54387	MC	0.83	0.39	0
94626	MC	0.73	0.41	0
53611	MC	0.82	0.32	0
54690	MC	0.52	0.31	0
94479	MC	0.63	0.34	0
53585	MC	0.74	0.38	0
53617	MC	0.66	0.36	0
94486	MC	0.37	0.19	0
94636	MC	0.49	0.19	0
94598	MC	0.56	0.38	0
94624	MC	0.65	0.30	0
94518	MC	0.38	0.21	0
54988	MC	0.68	0.40	0
55386	MC	0.67	0.41	0
53620	MC	0.75	0.38	0
94629	MC	0.64	0.34	0
54352	MC	0.52	0.37	0
54709	MC	0.64	0.33	0
53599	MC	0.87	0.35	0
53604	MC	0.69	0.34	0
53614	MC	0.62	0.26	0
54283	MC	0.49	0.42	0
55403	MC	0.49	0.34	0
55447	MC	0.50	0.41	0
94524	MC	0.65	0.39	0
138115	OR	0.47	0.60	0
55040	OR	0.45	0.54	0
138157	OR	0.51	0.67	0
50605	OR	0.51	0.60	0
153021	OR	0.41	0.49	0
94527	OR	0.39	0.61	0
94644	OR	0.46	0.56	0
94610	OR	0.38	0.57	0
55478	OR	0.32	0.54	0

Table C-32. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Science Grade 7

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
138115	4	6	31	40	15	8
138157	4	7	10	58	20	5
153021	4	17	26	35	16	5
50605	4	10	22	31	27	9
55040	4	5	36	41	10	8
55478	4	33	32	17	12	6
94527	4	27	24	20	24	5
94610	4	22	28	31	16	3
94644	4	3	36	40	14	7

Table C-33. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Science Grade 11

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
50581	MC	0.65	0.50	1
50577	MC	0.68	0.40	1
130671	MC	0.60	0.48	1
130672	MC	0.72	0.45	1
130674	MC	0.53	0.40	1
50578	MC	0.32	0.38	1
49716	MC	0.42	0.45	1
49743	MC	0.36	0.34	1
130675	MC	0.35	0.38	1
130676	MC	0.65	0.37	1
130677	MC	0.44	0.40	1
51218	MC	0.60	0.39	1
130697	MC	0.51	0.38	1
130698	MC	0.47	0.37	1
130699	MC	0.55	0.44	1
130700	MC	0.38	0.32	1
130702	MC	0.48	0.37	1
75082	MC	0.81	0.40	1
130694	MC	0.72	0.41	1
49719	MC	0.56	0.35	1
130695	MC	0.44	0.28	1
130696	MC	0.49	0.43	1
75098	MC	0.60	0.41	1
49749	MC	0.57	0.41	1
75109	MC	0.70	0.36	1
130684	MC	0.43	0.08	1
49715	MC	0.50	0.40	1
50579	MC	0.55	0.42	1
130686	MC	0.38	0.38	1
92916	MC	0.42	0.25	1
50580	MC	0.57	0.25	1
130687	MC	0.41	0.36	1

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
75107	MC	0.60	0.20	1
152638	MC	0.41	0.30	1
152640	MC	0.50	0.33	1
152642	MC	0.62	0.35	1
152649	MC	0.61	0.40	1
75065	MC	0.68	0.38	1
152658	MC	0.50	0.12	1
75072	MC	0.40	0.10	1
51311	MC	0.65	0.29	0
51586	MC	0.28	0.32	0
51577	MC	0.47	0.26	1
51450	MC	0.41	0.33	0
51583	MC	0.48	0.20	1
51580	MC	0.34	0.22	1
51592	MC	0.61	0.35	0
51587	MC	0.64	0.32	1
51298	MC	0.40	0.14	1
51438	MC	0.56	0.26	1
51443	MC	0.65	0.23	1
51299	MC	0.74	0.39	1
51467	MC	0.41	0.25	1
51179	MC	0.52	0.25	1
51182	MC	0.46	0.37	1
51474	MC	0.39	0.10	1
51173	MC	0.63	0.28	1
51169	MC	0.42	0.30	1
51435	MC	0.80	0.31	1
51464	MC	0.39	0.12	1
51448	MC	0.39	0.21	1
51303	MC	0.50	0.37	1
51306	MC	0.64	0.38	1
51172	MC	0.41	0.15	1
51441	MC	0.60	0.45	1
51574	MC	0.75	0.29	1
51454	MC	0.58	0.42	1
51181	MC	0.37	0.06	1
51318	MC	0.48	0.39	1
51591	MC	0.55	0.39	1
51313	MC	0.50	0.28	1
51174	MC	0.40	0.23	1
130678	OR	0.23	0.68	1
130703	OR	0.29	0.53	1
49736	OR	0.46	0.71	1
130691	OR	0.45	0.54	2
152666	OR	0.37	0.44	1
51596	OR	0.39	0.55	1
51479	OR	0.39	0.55	1
51321	OR	0.55	0.49	1
51325	OR	0.39	0.56	2

Table C-34. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Science Grade 11

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
130678	4	41	35	15	6	3
130691	4	11	23	42	18	4
130703	4	10	67	19	3	0
152666	4	13	40	35	8	3
49736	4	11	18	49	16	5
51321	4	9	11	39	28	11
51325	4	29	13	30	18	7
51479	4	12	34	38	11	3
51596	4	21	32	23	12	11

Table C-35. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Social Studies Grade 5

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
142426	MC	0.83	0.25	0
57546	MC	0.80	0.38	0
57187	MC	0.72	0.50	0
57201	MC	0.71	0.37	0
57179	MC	0.71	0.38	0
51658	MC	0.57	0.40	0
142429	MC	0.76	0.34	0
77125	MC	0.84	0.38	0
77144	MC	0.70	0.50	0
77149	MC	0.63	0.36	0
93174	MC	0.55	0.40	0
57609	MC	0.68	0.36	0
142507	MC	0.67	0.36	0
142510	MC	0.71	0.49	0
142514	MC	0.70	0.33	0
57611	MC	0.63	0.42	0
51514	MC	0.74	0.45	0
57597	MC	0.76	0.47	0
142522	MC	0.69	0.44	0
142518	MC	0.84	0.21	0
93201	MC	0.57	0.49	0
77147	MC	0.56	0.43	0
142525	MC	0.50	0.33	0
93181	MC	0.70	0.49	0
142447	MC	0.74	0.36	0
57181	MC	0.65	0.33	0
57477	MC	0.70	0.44	0
142451	MC	0.61	0.28	0
51505	MC	0.77	0.28	0
142459	MC	0.66	0.43	0
142470	MC	0.38	-0.01	0
77150	MC	0.66	0.37	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
77145	MC	0.82	0.30	0
51652	MC	0.59	0.37	0
142546	MC	0.68	0.39	0
142551	MC	0.66	0.42	0
77139	MC	0.54	0.23	0
142554	MC	0.66	0.40	0
57741	MC	0.60	0.34	0
57473	MC	0.38	0.18	0
93450	MC	0.65	0.32	0
57226	MC	0.62	0.40	0
57456	MC	0.70	0.38	0
57540	MC	0.62	0.42	0
57530	MC	0.67	0.31	0
93402	MC	0.64	0.31	0
57227	MC	0.66	0.32	0
93441	MC	0.41	0.27	0
57185	MC	0.64	0.35	0
57176	MC	0.79	0.40	0
57238	MC	0.65	0.31	0
93434	MC	0.55	0.33	0
57451	MC	0.62	0.40	0
57235	MC	0.67	0.46	0
57603	MC	0.56	0.45	0
57536	MC	0.57	0.30	0
93270	MC	0.50	0.30	0
93453	MC	0.50	0.20	0
57443	MC	0.70	0.39	0
57542	MC	0.71	0.18	0
58065	MC	0.60	0.34	0
57221	MC	0.64	0.42	0
58068	MC	0.64	0.31	0
93368	MC	0.55	0.17	0
57177	MC	0.57	0.30	0
57534	MC	0.75	0.36	0
93413	MC	0.71	0.34	0
57236	MC	0.77	0.40	0
57529	MC	0.91	0.34	0
93347	MC	0.56	0.42	0
57224	MC	0.59	0.31	0
93438	MC	0.66	0.29	0
57487	OR	0.41	0.66	0
93447	OR	0.39	0.50	0
57258	OR	0.41	0.57	0
142498	OR	0.44	0.53	0
142577	OR	0.53	0.40	0
93373	OR	0.38	0.52	0
57202	OR	0.47	0.47	0
57481	OR	0.45	0.52	0
93480	OR	0.39	0.50	0

Table C-36. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Social Studies Grade 5

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
142498	4	9	28	45	13	5
142577	4	0	12	62	24	2
57202	4	6	23	55	13	4
57258	4	4	42	41	10	2
57481	4	9	29	38	20	3
57487	4	11	34	39	13	4
93373	4	14	36	35	12	3
93447	4	6	42	43	7	1
93480	4	6	47	36	9	2

Table C-37. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Social Studies Grade 8

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
51743	MC	0.82	0.44	0
151181	MC	0.90	0.36	0
51745	MC	0.66	0.52	0
87263	MC	0.51	0.48	0
94112	MC	0.76	0.45	0
51738	MC	0.63	0.26	0
58587	MC	0.68	0.49	0
58083	MC	0.58	0.50	0
87254	MC	0.57	0.48	0
51749	MC	0.68	0.47	0
151182	MC	0.69	0.60	0
58070	MC	0.69	0.46	0
151232	MC	0.84	0.46	0
51740	MC	0.76	0.46	0
58125	MC	0.75	0.42	0
151237	MC	0.62	0.54	0
151263	MC	0.64	0.56	0
151264	MC	0.61	0.28	0
151252	MC	0.75	0.43	0
87274	MC	0.60	0.34	0
94080	MC	0.46	0.35	0
94084	MC	0.52	0.42	0
58055	MC	0.79	0.50	0
58715	MC	0.77	0.46	0
58561	MC	0.70	0.45	0
151204	MC	0.71	0.33	0
151206	MC	0.73	0.49	0
151208	MC	0.43	0.28	0
151211	MC	0.78	0.51	0
153242	MC	0.53	0.37	0
58624	MC	0.52	0.26	0
58113	MC	0.48	0.44	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
94074	MC	0.73	0.41	0
151275	MC	0.69	0.34	0
151277	MC	0.56	0.32	0
58832	MC	0.69	0.33	0
58142	MC	0.51	0.40	0
58655	MC	0.75	0.37	0
151279	MC	0.75	0.49	0
151283	MC	0.61	0.47	0
94274	MC	0.80	0.42	0
58630	MC	0.46	0.30	0
94159	MC	0.63	0.29	0
58778	MC	0.58	0.35	0
58831	MC	0.69	0.41	0
58796	MC	0.45	0.41	0
58700	MC	0.55	0.28	0
58926	MC	0.59	0.36	0
94131	MC	0.44	0.28	0
94123	MC	0.50	0.36	0
58869	MC	0.56	0.28	0
58897	MC	0.76	0.51	0
153254	MC	0.60	0.36	0
94189	MC	0.52	0.34	0
94288	MC	0.59	0.40	0
94145	MC	0.52	0.29	0
94202	MC	0.66	0.32	0
94204	MC	0.52	0.29	0
94126	MC	0.57	0.43	0
58863	MC	0.64	0.39	0
58860	MC	0.78	0.51	0
58901	MC	0.62	0.43	0
58867	MC	0.65	0.37	0
58911	MC	0.61	0.44	0
58866	MC	0.66	0.33	0
58653	MC	0.85	0.49	0
58663	MC	0.69	0.47	0
58665	MC	0.61	0.46	0
94228	MC	0.51	0.25	0
58871	MC	0.55	0.36	0
94231	MC	0.57	0.36	0
58873	MC	0.60	0.40	0
151185	OR	0.55	0.57	0
151188	OR	0.49	0.61	0
151265	OR	0.54	0.56	1
151226	OR	0.49	0.60	0
59017	OR	0.47	0.61	0
58729	OR	0.54	0.51	0
58899	OR	0.52	0.53	0
94301	OR	0.46	0.51	0
58845	OR	0.48	0.52	0

Table C-38. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Social Studies Grade 8

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
151185	4	3	12	53	23	9
151188	4	3	21	57	16	3
151226	4	8	18	51	19	4
151265	4	2	14	53	26	4
58729	4	1	19	53	20	8
58845	4	4	23	53	15	4
58899	4	3	19	50	21	6
59017	4	7	23	48	18	4
94301	4	4	27	52	13	4

Table C-39. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Social Studies Grade 11

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
132318	MC	0.77	0.33	1
49587	MC	0.69	0.44	1
132340	MC	0.60	0.44	1
132343	MC	0.79	0.51	1
132346	MC	0.46	0.35	1
49593	MC	0.62	0.49	1
75021	MC	0.72	0.33	1
51581	MC	0.57	0.42	1
132368	MC	0.57	0.50	1
132404	MC	0.62	0.40	1
51578	MC	0.67	0.40	1
132448	MC	0.64	0.41	1
134032	MC	0.40	0.32	1
134030	MC	0.46	0.44	1
134031	MC	0.63	0.54	1
51264	MC	0.57	0.33	1
134029	MC	0.65	0.41	1
134042	MC	0.72	0.52	1
134044	MC	0.74	0.26	1
51572	MC	0.55	0.44	1
134033	MC	0.49	0.30	1
51262	MC	0.47	0.35	1
134045	MC	0.42	0.35	1
134038	MC	0.52	0.55	1
132557	MC	0.60	0.41	1
50556	MC	0.76	0.41	1
132640	MC	0.65	0.47	1
133557	MC	0.70	0.41	1
51496	MC	0.40	0.30	1
50560	MC	0.35	0.34	1
51154	MC	0.66	0.38	1
133687	MC	0.54	0.34	1

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
152476	MC	0.78	0.38	1
51268	MC	0.41	0.33	1
51265	MC	0.75	0.45	1
152480	MC	0.49	0.32	1
152481	MC	0.71	0.49	1
152483	MC	0.40	0.19	1
152484	MC	0.69	0.36	1
152498	MC	0.73	0.50	1
51493	MC	0.54	0.25	1
51484	MC	0.80	0.39	1
51334	MC	0.65	0.35	1
51347	MC	0.40	0.30	1
51606	MC	0.63	0.35	1
51617	MC	0.40	0.33	1
51499	MC	0.64	0.43	1
51500	MC	0.79	0.40	1
51485	MC	0.74	0.38	1
51152	MC	0.73	0.39	1
51602	MC	0.74	0.45	1
51498	MC	0.61	0.21	1
51497	MC	0.58	0.38	1
51157	MC	0.57	0.40	1
51609	MC	0.62	0.41	1
51159	MC	0.67	0.39	1
51151	MC	0.52	0.29	1
51611	MC	0.76	0.37	1
51331	MC	0.45	0.09	1
51608	MC	0.65	0.34	1
51487	MC	0.70	0.37	1
51613	MC	0.74	0.41	1
51610	MC	0.71	0.36	1
51353	MC	0.61	0.44	1
51494	MC	0.54	0.24	1
51491	MC	0.68	0.44	1
51148	MC	0.81	0.40	1
51486	MC	0.76	0.48	1
51156	MC	0.63	0.41	1
51153	MC	0.47	0.37	1
51490	MC	0.67	0.43	1
51616	MC	0.79	0.43	1
51585	OR	0.48	0.63	1
132449	OR	0.37	0.66	1
134049	OR	0.43	0.68	2
134025	OR	0.31	0.55	2
152511	OR	0.33	0.53	2
51619	OR	0.25	0.52	3
51163	OR	0.31	0.58	2
51162	OR	0.40	0.47	2
51503	OR	0.49	0.57	2

Table C-40. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Social Studies Grade 11

Item Number	*Total Possible Points*	*Percent of Students at Score Point*				
		0	*1*	*2*	*3*	*4*
132449	4	9	44	34	8	2
134025	4	30	23	35	8	1
134049	4	18	18	37	20	4
152511	4	20	34	35	7	1
51162	4	23	21	32	16	7
51163	4	26	33	28	8	2
51503	4	9	18	45	20	7
51585	4	6	23	47	19	4
51619	4	32	39	20	5	1

Table C-41. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Writing Grade 5

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
30536	MC	0.95	0.43	0
32394	MC	0.90	0.50	0
30560	MC	0.51	0.72	0
30558	MC	0.86	0.58	0
30508	MC	0.71	0.11	0
30509	MC	0.81	0.13	0
30511	MC	0.68	0.13	0
30507	MC	0.80	0.26	0
30445	MC	0.75	0.25	0
30447	MC	0.75	0.22	0
30448	MC	0.78	0.22	0
32318	MC	0.75	0.23	0
30420	MC	0.84	0.18	0
32310	MC	0.78	0.20	0
30423	MC	0.67	0.19	0
30419	MC	0.59	0.18	0
30521	MC	0.88	0.20	0
30523	MC	0.85	0.23	0
30524	MC	0.78	0.17	0
30525	MC	0.50	0.16	0
32306	MC	0.67	0.16	0
30411	MC	0.86	0.21	0
30410	MC	0.71	0.21	0
30408	MC	0.92	0.22	0
30364	MC	0.86	0.20	0
30361	MC	0.82	0.25	0
30363	MC	0.72	0.26	0
30360	MC	0.55	0.17	0
30309	MC	0.49	0.16	0
30310	MC	0.56	0.14	0
30313	MC	0.83	0.21	0
30312	MC	0.56	0.12	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
30372	MC	0.83	0.24	0
30375	MC	0.64	0.17	0
30374	MC	0.39	0.14	0
30376	MC	0.69	0.25	0
30393	MC	0.65	0.20	0
30395	MC	0.58	0.19	0
30396	MC	0.83	0.17	0
30397	MC	0.80	0.17	0
30494	MC	0.53	0.18	0
30495	MC	0.71	0.16	0
30493	MC	0.70	0.20	0
30497	MC	0.75	0.17	0
30348	MC	0.93	0.20	0
32298	MC	0.87	0.19	0
30350	MC	0.67	0.20	0
30347	MC	0.73	0.12	0
32319	MC	0.58	0.10	0
30442	MC	0.75	0.16	0
30438	MC	0.48	0.12	0
30436	MC	0.46	0.15	0
37875C	WP	0.52	0.35	0
37875S	WP	0.49	0.36	0
37875V	WP	0.50	0.35	0
30334C	WP	0.58	0.24	0
30334S	WP	0.54	0.24	0
30334V	WP	0.55	0.24	0
30414C	WP	0.50	0.30	0
30414S	WP	0.49	0.32	0
30414V	WP	0.51	0.32	0
30580C	WP	0.51	0.27	0
30580S	WP	0.48	0.27	0
30580V	WP	0.50	0.26	0
38134C	WP	0.49	0.33	0
38134S	WP	0.46	0.33	0
38134V	WP	0.48	0.31	0
30272C	WP	0.51	0.25	0
30272S	WP	0.50	0.27	0
30272V	WP	0.51	0.26	0
30298C	WP	0.51	0.34	0
30298S	WP	0.49	0.36	0
30298V	WP	0.50	0.34	0
30583C	WP	0.53	0.26	0
30583S	WP	0.48	0.27	0
30583V	WP	0.51	0.26	0
32312C	WP	0.50	0.27	0
32312S	WP	0.47	0.28	0
32312V	WP	0.48	0.27	0
38129C	WP	0.51	0.24	0
38129S	WP	0.48	0.24	0
38129V	WP	0.50	0.24	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
30512C	WP	0.53	0.29	0
30512S	WP	0.49	0.30	0
30512V	WP	0.51	0.28	0
30582C	WP	0.52	0.26	0
30582S	WP	0.48	0.27	0
30582V	WP	0.50	0.25	0

Table C-42. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Writing Grade 5

Item Number	Total Possible Points	Percent of Students at Score Point								
		0	1	2	3	4	5	6	7	8
30272C	8	2	2	8	9	48	18	12	1	0
30272S	8	2	3	8	10	49	17	10	1	0
30272V	8	0	0	11	10	49	18	11	1	0
30298C	8	2	2	9	9	47	18	11	2	1
30298S	8	3	3	9	12	47	16	8	1	1
30298V	8	0	0	13	12	46	17	9	1	1
30334C	8	1	0	4	4	39	24	24	3	1
30334S	8	1	1	6	8	47	22	14	2	0
30334V	8	0	0	6	9	45	22	15	2	0
30414C	8	3	2	8	12	43	18	13	1	0
30414S	8	3	2	8	9	52	16	10	1	0
30414V	8	0	0	11	10	49	16	11	1	0
30512C	8	1	1	11	10	38	20	17	1	0
30512S	8	3	3	10	13	38	19	12	1	0
30512V	8	0	0	14	12	41	20	12	1	0
30580C	8	1	2	10	12	39	20	13	2	1
30580S	8	4	4	10	14	37	19	11	2	0
30580V	8	0	0	16	14	38	19	11	1	0
30582C	8	1	1	9	11	43	20	14	1	0
30582S	8	2	2	9	13	52	14	8	0	0
30582V	8	0	0	11	13	48	17	10	0	0
30583C	8	0	1	12	10	37	21	17	2	0
30583S	8	2	3	13	12	42	17	10	1	0
30583V	8	0	0	15	13	39	20	12	1	0
32312C	8	1	1	14	13	36	20	13	1	1
32312S	8	3	4	13	14	39	17	10	1	0
32312V	8	1	0	17	15	41	16	10	0	0
37875C	8	2	2	9	9	40	19	16	1	1
37875S	8	4	3	8	10	45	16	12	1	0
37875V	8	0	0	14	13	42	16	12	1	1
38129C	8	3	3	11	13	34	17	14	3	1
38129S	8	4	3	12	14	34	17	12	2	1
38129V	8	0	0	18	15	34	17	13	3	1
38134C	8	3	3	11	12	41	17	11	2	1
38134S	8	4	4	12	14	39	15	8	1	1
38134V	8	0	0	20	14	39	16	9	1	1

Table C-43. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Writing Grade 8

Item Number	*Item Type*	*Difficulty*	*Discrimination*	*Percent Omitted*
31259	MC	0.71	0.58	0
31260	MC	0.61	0.63	0
31261	MC	0.80	0.54	0
32391	MC	0.69	0.64	0
31497	MC	0.47	0.14	0
31493	MC	0.76	0.33	0
31495	MC	0.78	0.30	0
31491	MC	0.79	0.27	0
32397	MC	0.85	0.28	0
31227	MC	0.71	0.30	0
31229	MC	0.68	0.29	0
31228	MC	0.77	0.27	0
31104	MC	0.70	0.27	0
31105	MC	0.82	0.29	0
68893	MC	0.67	0.25	0
31109	MC	0.66	0.25	0
31219	MC	0.87	0.26	0
31218	MC	0.57	0.24	0
31220	MC	0.80	0.33	0
32419	MC	0.76	0.24	0
31208	MC	0.67	0.23	0
31209	MC	0.89	0.29	0
51736	MC	0.77	0.30	0
31213	MC	0.70	0.33	0
31265	MC	0.51	0.21	0
31267	MC	0.41	0.20	0
31268	MC	0.67	0.33	0
31275	MC	0.80	0.31	0
32426	MC	0.58	0.20	0
31444	MC	0.79	0.30	0
68894	MC	0.79	0.28	0
31453	MC	0.57	0.23	0
31278	MC	0.77	0.28	0
31281	MC	0.76	0.25	0
31279	MC	0.66	0.26	0
31280	MC	0.79	0.31	0
31432	MC	0.82	0.25	0
32418	MC	0.80	0.15	0
31434	MC	0.78	0.28	0
31436	MC	0.83	0.18	0
31112	MC	0.61	0.20	0
31113	MC	0.75	0.30	0
31116	MC	0.78	0.31	0
31117	MC	0.49	0.17	0
37890	MC	0.69	0.21	0
31405	MC	0.65	0.11	0
36559	MC	0.59	0.26	0
31408	MC	0.50	0.19	0
31194	MC	0.80	0.29	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
31195	MC	0.87	0.23	0
31196	MC	0.86	0.26	0
31197	MC	0.62	0.15	0
31581C	WP	0.45	0.40	1
31581S	WP	0.44	0.41	1
31581V	WP	0.46	0.40	1
31199C	WP	0.51	0.38	0
31199S	WP	0.50	0.39	0
31199V	WP	0.52	0.38	0
32348C	WP	0.52	0.38	1
32348S	WP	0.51	0.40	1
32348V	WP	0.53	0.40	1
37679C	WP	0.49	0.33	0
37679S	WP	0.47	0.34	0
37679V	WP	0.49	0.34	0
32364C	WP	0.59	0.38	0
32364S	WP	0.57	0.38	0
32364V	WP	0.58	0.39	0
31585C	WP	0.48	0.36	0
31585S	WP	0.47	0.38	0
31585V	WP	0.48	0.37	0
31574C	WP	0.46	0.39	1
31574S	WP	0.45	0.39	1
31574V	WP	0.46	0.38	1
31428C	WP	0.54	0.34	0
31428S	WP	0.52	0.36	0
31428V	WP	0.53	0.34	0
31230C	WP	0.53	0.31	1
31230S	WP	0.53	0.33	1
31230V	WP	0.54	0.33	1
31501C	WP	0.53	0.36	0
31501S	WP	0.52	0.37	0
31501V	WP	0.54	0.37	0
37719C	WP	0.56	0.36	0
37719S	WP	0.55	0.38	0
37719V	WP	0.57	0.37	0
31118C	WP	0.51	0.37	0
31118S	WP	0.50	0.38	0
31118V	WP	0.52	0.37	0

Table C-44. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Writing Grade 8

Item Number	Total Possible Points	Percent of Students at Score Point								
		0	1	2	3	4	5	6	7	8
31118C	8	2	3	12	12	36	18	14	3	1
31118S	8	3	3	10	12	40	17	12	2	1
31118V	8	0	0	14	12	39	19	13	2	1

continued

Item Number	Total Possible Points	Percent of Students at Score Point								
		0	1	2	3	4	5	6	7	8
31199C	8	4	2	11	11	36	16	15	3	1
31199S	8	4	3	10	12	36	17	15	2	1
31199V	8	0	0	15	11	39	17	14	2	1
31230C	8	2	2	10	10	33	20	17	4	1
31230S	8	2	2	8	11	35	20	17	3	1
31230V	8	0	0	10	11	36	21	17	2	1
31428C	8	2	1	7	8	45	17	15	3	1
31428S	8	2	2	7	10	46	17	14	2	1
31428V	8	0	0	10	9	47	18	14	1	1
31501C	8	2	2	10	13	30	20	18	4	2
31501S	8	2	3	8	11	37	20	15	3	1
31501V	8	0	0	11	11	37	21	17	3	1
31574C	8	3	4	14	13	45	10	8	1	1
31574S	8	5	5	13	15	42	10	8	1	1
31574V	8	0	0	21	15	43	11	8	1	1
31581C	8	4	3	16	14	40	12	9	2	1
31581S	8	6	4	15	15	39	11	8	1	0
31581V	8	0	0	24	15	40	11	9	1	0
31585C	8	4	4	13	13	36	16	12	2	1
31585S	8	4	5	12	14	36	15	11	1	1
31585V	8	0	0	21	14	37	15	11	1	1
32348C	8	2	2	10	12	39	17	15	3	1
32348S	8	3	3	9	12	36	17	16	3	2
32348V	8	0	0	13	12	38	17	15	3	2
32364C	8	1	1	6	6	27	22	29	5	2
32364S	8	1	1	7	6	31	24	25	3	1
32364V	8	0	0	9	6	31	24	26	3	1
37679C	8	2	3	12	14	39	15	12	2	1
37679S	8	3	4	12	16	37	14	10	2	1
37679V	8	0	0	18	15	40	14	11	2	1
37719C	8	3	3	6	9	28	19	23	6	3
37719S	8	2	2	8	8	34	19	21	4	2
37719V	8	0	0	10	8	35	20	22	4	1

Table C-45. 2010–11 KCCT: Item Level Classical Test Theory Statistics—Writing Grade 12

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
31675C	WP	0.57	0.97	0
31675S	WP	0.54	0.98	0
31675V	WP	0.56	0.97	0
31807C	WP	0.50	0.70	1
31807S	WP	0.48	0.71	1
31807V	WP	0.50	0.70	1
31824C	WP	0.59	0.67	0
31824S	WP	0.57	0.68	0
31824V	WP	0.58	0.67	0

continued

Item Number	Item Type	Difficulty	Discrimination	Percent Omitted
32383C	WP	0.52	0.68	1
32383S	WP	0.50	0.69	1
32383V	WP	0.52	0.68	1
31664C	WP	0.53	0.65	0
31664S	WP	0.51	0.65	0
31664V	WP	0.53	0.64	0
31817C	WP	0.55	0.63	1
31817S	WP	0.54	0.65	1
31817V	WP	0.55	0.65	1
102645C	WP	0.57	0.58	0
102645S	WP	0.55	0.58	0
102645V	WP	0.57	0.57	0
44524C	WP	0.53	0.68	1
44524S	WP	0.51	0.69	1
44524V	WP	0.53	0.68	1
31825C	WP	0.56	0.63	0
31825S	WP	0.55	0.65	0
31825V	WP	0.57	0.63	0
44520C	WP	0.56	0.66	1
44520S	WP	0.54	0.66	1
44520V	WP	0.55	0.66	1
31668C	WP	0.54	0.64	0
31668S	WP	0.53	0.65	0
31668V	WP	0.54	0.64	0
32378C	WP	0.53	0.64	1
32378S	WP	0.52	0.66	1
32378V	WP	0.55	0.64	1
32365C	WP	0.54	0.66	0
32365S	WP	0.53	0.66	0
32365V	WP	0.55	0.64	0

Table C-46. 2010–11 KCCT: Item Level Score Distributions for Constructed-Response Items—Writing Grade 12

Item Number	Total Possible Points	Percent of Students at Score Point								
		0	1	2	3	4	5	6	7	8
102645C	8	0	1	5	7	39	22	21	4	1
102645S	8	1	2	5	9	42	21	17	3	1
102645V	8	0	0	6	7	42	22	18	3	1
31664C	8	1	1	10	11	40	18	15	4	1
31664S	8	1	3	10	13	42	17	12	2	1
31664V	8	0	0	10	13	42	18	13	3	1
31668C	8	1	1	7	10	43	16	18	3	1
31668S	8	1	1	7	10	44	17	16	2	0
31668V	8	0	0	9	10	44	17	16	2	0
31675C	8	0	1	7	8	39	20	18	5	2
31675S	8	1	2	7	10	39	21	15	4	1
31675V	8	0	0	8	10	39	21	16	4	2

continued

Item Number	Total Possible Points	Percent of Students at Score Point								
		0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
31807C	8	2	3	10	12	40	14	14	2	1
31807S	8	3	3	11	13	41	15	12	1	0
31807V	8	0	0	16	12	43	15	12	2	0
31817C	8	1	1	6	8	45	18	16	4	1
31817S	8	1	1	6	9	46	18	13	4	1
31817V	8	0	0	7	9	46	19	14	4	1
31824C	8	1	1	6	6	34	18	24	7	3
31824S	8	1	2	6	8	34	21	21	6	2
31824V	8	0	0	8	7	34	21	21	6	2
31825C	8	0	1	6	8	42	21	18	4	2
31825S	8	1	1	6	9	45	19	15	4	1
31825V	8	0	0	5	7	44	22	17	4	1
32365C	8	1	2	8	10	40	17	15	5	2
32365S	8	1	3	8	11	40	19	12	4	2
32365V	8	0	0	9	11	40	20	14	4	2
32378C	8	1	1	9	11	41	17	17	3	1
32378S	8	1	1	9	11	42	17	14	3	0
32378V	8	0	0	8	9	40	22	17	3	0
32383C	8	1	1	10	10	44	16	13	3	1
32383S	8	2	3	9	12	44	15	12	3	1
32383V	8	0	0	11	10	46	17	12	3	1
44520C	8	0	1	7	9	38	20	18	5	1
44520S	8	1	2	7	10	40	19	16	4	1
44520V	8	0	0	8	9	41	20	16	4	1
44524C	8	0	1	10	13	39	19	14	3	1
44524S	8	2	3	8	13	41	17	12	3	1
44524V	8	0	0	9	12	42	19	14	3	1

Appendix D—Differential Item Functioning Results

Table D-1. 2010–11 KCCT: Number of Items Classified as "Low" or "High" DIF Overall and by Group Favored—Mathematics

Grade	*Reference Group*	*Focal Group*	*Item Type*	*Number of Items*	*Number "Low"*			*Number "High"*		
					Total	*Favoring Reference*	*Favoring Focal*	*Total*	*Favoring Reference*	*Favoring Focal*
3	Male	Female	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	4	4	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	1	0	1	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	5	5	0	0	0	0
			OR	9	1	0	1	0	0	0
	Not low-income	Low-income	MC	72	1	1	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	3	3	0	1	1	0
			OR	9	0	0	0	0	0	0
4	Male	Female	MC	72	1	1	0	0	0	0
			OR	9	1	0	1	0	0	0
	White	Black	MC	72	5	4	1	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	3	1	2	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	6	6	0	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	5	5	0	1	1	0
			OR	9	0	0	0	0	0	0
5	Male	Female	MC	72	1	1	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	4	3	1	0	0	0
			OR	9	0	0	0	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
5	White	Hispanic	MC	72	1	1	0	1	1	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	5	1	4	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	9	9	0	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	3	3	0	1	1	0
			OR	9	0	0	0	0	0	0
6	Male	Female	MC	72	6	3	3	0	0	0
			OR	9	1	0	1	0	0	0
	White	Black	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	4	1	3	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	5	4	1	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	2	2	0	3	3	0
			OR	9	0	0	0	0	0	0
7	Male	Female	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	1	1	0	0	0	0
			OR	9	1	1	0	0	0	0
	White	Hispanic	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	5	2	3	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	1	1	0	0	0	0
			OR	9	1	1	0	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
7	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	5	5	0	0	0	0
			OR	9	1	1	0	0	0	0
8	Male	Female	MC	72	3	3	0	0	0	0
			OR	9	1	0	1	0	0	0
	White	Black	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	4	2	2	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	4	2	2	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	3	2	1	4	4	0
			OR	9	0	0	0	0	0	0
11	Male	Female	MC	72	5	2	3	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	5	4	1	1	0	1
			OR	9	1	1	0	0	0	0
	White	Hispanic	MC	72	6	3	3	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	9	4	5	4	1	3
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	13	9	4	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	10	6	4	6	3	3
			OR	9	1	1	0	1	1	0

Table D-2. 2010–11 KCCT: Number of Items Classified as "Low" or "High" DIF Overall and by Group Favored—Reading

Grade	*Reference Group*	*Focal Group*	*Item Type*	*Number of Items*	*Number "Low"*			*Number "High"*		
					Total	*Favoring Reference*	*Favoring Focal*	*Total*	*Favoring Reference*	*Favoring Focal*
3	Male	Female	MC	126	2	2	0	0	0	0
			OR	2	0	0	0	0	0	0
	White	Black	MC	126	3	3	0	0	0	0
			OR	2	0	0	0	0	0	0
	White	Hispanic	MC	126	3	3	0	0	0	0
			OR	2	0	0	0	0	0	0
	White	Asian	MC	126	1	0	1	0	0	0
			OR	2	0	0	0	0	0	0
	Non-IEP	IEP	MC	126	0	0	0	1	1	0
			OR	2	0	0	0	0	0	0
	Not low-income	Low-income	MC	126	2	2	0	0	0	0
			OR	2	0	0	0	0	0	0
	Non-LEP	LEP	MC	126	6	6	0	1	1	0
			OR	2	0	0	0	0	0	0
4	Male	Female	MC	138	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Black	MC	138	1	1	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Hispanic	MC	138	4	4	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	138	0	0	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-IEP	IEP	MC	138	3	2	1	0	0	0
			OR	8	0	0	0	0	0	0
	Not low-income	Low-income	MC	138	0	0	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	138	4	4	0	2	2	0
			OR	8	0	0	0	0	0	0
5	Male	Female	MC	138	0	0	0	0	0	0
			OR	8	1	0	1	0	0	0
	White	Black	MC	138	1	1	0	1	1	0
			OR	8	0	0	0	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
5	White	Hispanic	MC	138	3	3	0	1	1	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	138	2	1	1	0	0	0
			OR	8	0	0	0	0	0	0
	Non-IEP	IEP	MC	138	0	0	0	1	1	0
			OR	8	0	0	0	0	0	0
	Not low-income	Low-income	MC	138	1	1	0	1	1	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	138	5	5	0	2	2	0
			OR	8	0	0	0	0	0	0
6	Male	Female	MC	124	0	0	0	0	0	0
			OR	8	1	0	1	0	0	0
	White	Black	MC	124	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Hispanic	MC	124	3	3	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	124	1	1	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-IEP	IEP	MC	124	4	3	1	0	0	0
			OR	8	0	0	0	0	0	0
	Not low-income	Low-income	MC	124	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	124	16	15	1	2	2	0
			OR	8	0	0	0	0	0	0
7	Male	Female	MC	138	1	1	0	0	0	0
			OR	8	2	0	2	0	0	0
	White	Black	MC	138	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Hispanic	MC	138	0	0	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	138	1	0	1	0	0	0
			OR	8	1	0	1	0	0	0
	Non-IEP	IEP	MC	138	16	4	12	0	0	0
			OR	8	1	1	0	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
7	Not Low-income	Low-income	MC	138	0	0	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	138	8	8	0	2	2	0
			OR	8	0	0	0	0	0	0
8	Male	Female	MC	124	3	3	0	0	0	0
			OR	8	2	0	2	0	0	0
	White	Black	MC	124	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Hispanic	MC	124	1	1	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	124	2	1	1	0	0	0
			OR	8	0	0	0	0	0	0
	Non-IEP	IEP	MC	124	1	1	0	0	0	0
			OR	8	1	1	0	0	0	0
	Not low-income	Low-income	MC	124	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	124	13	13	0	5	5	0
			OR	8	0	0	0	0	0	0
11	Male	Female	MC	138	2	2	0	0	0	0
			OR	8	2	0	2	0	0	0
	White	Black	MC	138	4	4	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Hispanic	MC	138	2	2	0	0	0	0
			OR	8	0	0	0	0	0	0
	White	Asian	MC	138	2	2	0	0	0	0
			OR	8	2	0	2	0	0	0
	Non-IEP	IEP	MC	138	21	2	19	0	0	0
			OR	8	2	2	0	0	0	0
	Not low-income	Low-income	MC	138	1	1	0	0	0	0
			OR	8	0	0	0	0	0	0
	Non-LEP	LEP	MC	138	23	16	7	5	5	0
			OR	8	0	0	0	0	0	0

Table D-3. 2010–11 KCCT: Number of Items Classified as "Low" or "High" DIF Overall and by Group Favored—Science

Grade	*Reference Group*	*Focal Group*	*Item Type*	*Number of Items*	*Number "Low"*			*Number "High"*		
					Total	*Favoring Reference*	*Favoring Focal*	*Total*	*Favoring Reference*	*Favoring Focal*
4	Male	Female	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	4	4	0	1	1	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	2	2	0	1	1	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	3	1	2	1	1	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	1	1	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	3	3	0	3	3	0
			OR	9	0	0	0	0	0	0
7	Male	Female	MC	72	6	6	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	4	1	3	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	4	3	1	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	1	1	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	8	7	1	4	4	0
			OR	9	1	1	0	0	0	0
11	Male	Female	MC	72	3	2	1	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
11	White	Hispanic	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	2	1	1	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	6	3	3	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	11	6	5	5	5	0
			OR	9	0	0	0	1	1	0

Table D-4. 2010–11 KCCT: Number of Items Classified as "Low" or "High" DIF Overall and by Group Favored—Social Studies

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
5	Male	Female	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Black	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	1	1	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	3	2	1	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	5	4	1	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	8	7	1	0	0	0
			OR	9	0	0	0	0	0	0
8	Male	Female	MC	72	4	4	0	1	1	0
			OR	9	2	0	2	0	0	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
8	White	Black	MC	72	3	3	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Hispanic	MC	72	4	4	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	0	0	0	3	1	2
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	1	0	1	0	0	0
			OR	9	0	0	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	9	8	1	3	3	0
			OR	9	1	1	0	0	0	0
11	Male	Female	MC	72	7	5	2	1	1	0
			OR	9	1	0	1	0	0	0
	White	Black	MC	72	3	3	0	0	0	0
			OR	9	1	0	1	0	0	0
	White	Hispanic	MC	72	2	2	0	0	0	0
			OR	9	0	0	0	0	0	0
	White	Asian	MC	72	7	4	3	0	0	0
			OR	9	0	0	0	0	0	0
	Non-IEP	IEP	MC	72	11	4	7	0	0	0
			OR	9	1	1	0	0	0	0
	Not low-income	Low-income	MC	72	0	0	0	0	0	0
			OR	9	0	0	0	0	0	0
	Non-LEP	LEP	MC	72	11	8	3	4	4	0
			OR	9	1	1	0	0	0	0

Table D-5. 2010–11 KCCT: Number of Items Classified as "Low" or "High" DIF Overall and by Group Favored—Writing

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
5	Male	Female	MC	52	0	0	0	0	0	0
			WP	36	0	0	0	0	0	0
	White	Black	MC	52	1	1	0	0	0	0
			WP	36	0	0	0	0	0	0
	White	Hispanic	MC	52	1	1	0	0	0	0
			WP	36	0	0	0	0	0	0
	White	Asian	MC	52	1	0	1	0	0	0
			WP	36	0	0	0	0	0	0
	Non-IEP	IEP	MC	52	1	1	0	1	1	0
			WP	36	0	0	0	0	0	0
	Not low-income	Low-income	MC	52	1	1	0	0	0	0
			WP	36	0	0	0	0	0	0
	Non-LEP	LEP	MC	52	3	3	0	1	1	0
			WP	36	0	0	0	0	0	0
8	Male	Female	MC	52	3	0	3	0	0	0
			WP	36	0	0	0	0	0	0
	White	Black	MC	52	2	2	0	0	0	0
			WP	36	0	0	0	0	0	0
	White	Hispanic	MC	52	1	1	0	0	0	0
			WP	36	0	0	0	0	0	0
	White	Asian	MC	52	0	0	0	1	0	1
			WP	36	0	0	0	0	0	0
	Non-IEP	IEP	MC	52	1	1	0	3	3	0
			WP	36	0	0	0	0	0	0
	Not low-income	Low-income	MC	52	2	2	0	1	1	0
			WP	36	0	0	0	0	0	0
	Non-LEP	LEP	MC	52	2	2	0	3	3	0
			WP	36	0	0	0	0	0	0
12	Male	Female	WP	39	3	0	3	0	0	0
	White	Black	WP	39	0	0	0	0	0	0
	White	Hispanic	WP	39	0	0	0	0	0	0
	White	Asian	WP	39	0	0	0	0	0	0
	Non-IEP	IEP	WP	39	0	0	0	3	3	0

continued

Grade	Reference Group	Focal Group	Item Type	Number of Items	Number "Low"			Number "High"		
					Total	Favoring Reference	Favoring Focal	Total	Favoring Reference	Favoring Focal
11	Not low-income	Low-income	WP	39	3	3	0	0	0	0
	Non-LEP	LEP	WP	39	1	1	0	2	2	0

Appendix E—Item Response Theory Calibration Results

Table E-1. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 3

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
47191	1.26086	0	-0.33336	0	0.27760	0
93164	0.42648	0	-3.30457	0	0.11337	0
140628	0.99656	0	-1.67656	0	0.02695	0
76632	1.39133	0	-0.49665	0	0.10934	0
47194	0.67019	0	-0.25552	0	0.00000	0
52128	0.70404	0	-1.39746	0	0.05511	0
140630	0.78170	0	0.06417	0	0.28688	0
76637	0.39575	0	-1.11870	0	0.24028	0
140638	0.67796	0	-2.35573	0	0.08028	0
52296	0.83873	0	-0.96075	0	0.21201	0
47133	1.08138	0	-1.36101	0	0.01967	0
47149	0.76888	0	-1.29816	0	0.04058	0
93166	1.26458	0	-0.36952	0	0.15284	0
140674	1.42804	0	-0.37636	0	0.27700	0
47257	1.18556	0	0.18277	0	0.09687	0
76635	0.87211	0	-1.13807	0	0.03545	0
52299	0.77533	0	-0.69245	0	0.03521	0
47153	0.79494	0	-1.88635	0	0.05399	0
140681	1.06905	0	-0.33221	0	0.06736	0
47233	1.00079	0	-1.88177	0	0.12351	0
140683	1.51023	0	0.40684	0	0.21451	0
140685	1.42829	0	-0.99905	0	0.11622	0
93160	0.51748	0	-0.91328	0	0.16711	0
94337	1.20187	0	-0.42883	0	0.28003	0
47245	0.90828	0	-0.00909	0	0.17957	0
47260	0.74146	0	-1.11146	0	0.13793	0
93158	1.23469	0	-0.84119	0	0.05538	0
93162	1.06323	0	-1.19386	0	0.08511	0
47160	0.96113	0	-0.42214	0	0.33248	0
52300	0.98872	0	-0.55184	0	0.24751	0
94237	0.80813	0	1.43059	0	0.16428	0
47253	0.76438	0	-1.47717	0	0.13234	0
52181	1.68846	0	-0.21651	0	0.11166	0
52261	0.99914	0	-1.43830	0	0.18161	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
47247	0.64415	0	-0.68267	0	0.18039	0
47256	1.04075	0	-0.11034	0	0.07264	0
47236	0.32527	0	-2.56831	0	0.00000	0
52290	0.57085	0	1.18601	0	0.13683	0
52186	0.55768	0	-0.48856	0	0.12991	0
94299	0.93383	0	-2.19091	0	0.15932	0
94217	0.73304	0	-1.80174	0	0.16297	0
52182	1.24869	0	-0.11606	0	0.15526	0
52062	0.93003	0	-0.83377	0	0.13730	0
52063	1.11667	0	-0.57448	0	0.09830	0
94322	0.97732	0	0.42750	0	0.27526	0
94234	1.09068	0	-0.14668	0	0.17411	0
52072	1.43043	0	0.45639	0	0.14044	0
52130	0.96027	0	0.46029	0	0.41288	0
94311	1.10214	0	-0.45578	0	0.05172	0
52226	0.71193	0	-2.05179	0	0.24648	0
94278	0.56312	0	0.47538	0	0.17724	0
94334	0.86876	0	-1.47876	0	0.12686	0
94297	1.10587	0	0.57220	0	0.13618	0
52065	1.31556	0	0.13153	0	0.20967	0
52179	1.00097	0	0.11095	0	0.09635	0
52263	0.80675	0	-1.64567	0	0.22202	0
52223	0.70413	0	-0.47084	0	0.17052	0
52222	0.83940	0	-0.94986	0	0.08945	0
52187	0.44600	0	0.38510	0	0.28031	0
94339	1.25055	0	0.52256	0	0.13987	0
94291	0.84100	0	0.49066	0	0.15260	0
94325	0.97361	0	-1.03575	0	0.14497	0
94302	0.53520	0	0.35020	0	0.17942	0
94345	0.72420	0	-1.31239	0	0.12588	0
52225	0.73517	0	-0.59822	0	0.13686	0
52123	0.93719	0	-1.36156	0	0.10113	0
94215	0.97642	0	-1.06916	0	0.10066	0
94319	0.85555	0	-1.99642	0	0.17870	0
52127	0.83151	0	0.19001	0	0.16763	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52124	0.63838	0	-2.46694	0	0.17653	0
52228	0.69292	0	-0.13033	0	0.12385	0
94238	0.60371	0	-1.42115	0	0.09118	0

Table E-2. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 3

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
76638	0.62813	0	0.74600	0	0	0	1.85585	0	-0.33825	0	-0.43856	0	-1.07904	0
52301	0.44823	0	1.02617	0	0	0	1.41086	0	0.88431	0	-2.48902	0	0.19385	0
52081	0.61976	0	-0.31898	0	0	0	0.71259	0	0.27209	0	-0.17965	0	-0.80503	0
52189	0.57184	0	0.27882	0	0	0	1.63235	0	0.22730	0	-0.64359	0	-1.21606	0
47264	0.43637	0	0.39899	0	0	0	0.31721	0	1.00565	0	-0.24279	0	-1.08008	0
94329	0.32536	0	-0.68173	0	0	0	2.35689	0	0.65255	0	-4.28747	0	1.27803	0
94308	0.45757	0	0.97655	0	0	0	2.49243	0	-2.48563	0	1.60838	0	-1.61518	0
94349	0.60564	0	0.24140	0	0	0	-0.86839	0	1.85316	0	-0.92632	0	-0.05845	0
52144	0.73076	0	-0.13644	0	0	0	1.04555	0	0.02143	0	0.10184	0	-1.16882	0

Table E-3. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 4

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
137563	1.01706	0	-0.94835	0	0.29281	0
93767	1.01530	0	0.11666	0	0.22789	0
52856	0.48451	0	0.10923	0	0.13253	0
51046	0.90632	0	0.01813	0	0.13843	0
50282	1.09729	0	0.29798	0	0.14641	0
137566	0.98721	0	-0.51773	0	0.39950	0
138301	0.81421	0	-1.82380	0	0.29683	0
137568	1.02949	0	-0.91263	0	0.06287	0
93756	1.35419	0	0.15018	0	0.03850	0
137571	0.71276	0	-1.02300	0	0.12813	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52734	0.72305	0	0.37685	0	0.16132	0
76267	1.19353	0	-0.17442	0	0.36547	0
52510	0.63395	0	-0.14160	0	0.38932	0
76263	0.99196	0	0.15190	0	0.12913	0
50267	0.66428	0	-1.85495	0	0.11268	0
52512	1.49047	0	-0.12152	0	0.20018	0
51045	1.08716	0	-0.08821	0	0.09215	0
93752	0.66437	0	-1.05544	0	0.05121	0
52440	1.13620	0	-0.50806	0	0.05743	0
51053	1.01463	0	1.11773	0	0.32971	0
76264	1.06932	0	-0.22903	0	0.08451	0
52435	1.13911	0	-0.18502	0	0.21419	0
93768	1.06405	0	0.58727	0	0.52154	0
52438	1.22481	0	-0.02862	0	0.12182	0
137743	0.86156	0	-0.37500	0	0.09401	0
137744	0.85377	0	0.08342	0	0.37914	0
50275	0.81337	0	-1.10156	0	0.12815	0
50251	1.38287	0	0.19381	0	0.24973	0
50272	1.05820	0	-0.44832	0	0.21332	0
50278	0.54254	0	-0.83887	0	0.25750	0
51048	0.99570	0	-0.77646	0	0.23243	0
137745	1.36351	0	0.69856	0	0.31094	0
50283	0.97617	0	-1.33031	0	0.16351	0
76265	0.84024	0	-0.41178	0	0.23489	0
93745	0.89477	0	0.99268	0	0.29724	0
50273	0.69320	0	-0.53148	0	0.17263	0
52729	0.56093	0	-1.08016	0	0.14711	0
50253	0.35275	0	-1.28246	0	0.12890	0
149980	0.91375	0	-0.50931	0	0.31099	0
52505	0.88465	0	-0.16649	0	0.14687	0
52436	0.88319	0	-0.02329	0	0.28799	0
52439	0.49953	0	-0.02941	0	0.13059	0
52731	0.81631	0	-0.51121	0	0.24371	0
93906	0.72176	0	-0.54886	0	0.25351	0
93907	0.84558	0	0.73017	0	0.17332	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
93856	0.95324	0	0.19703	0	0.08206	0
52736	0.92691	0	-1.75545	0	0.19972	0
93851	1.06741	0	-0.05229	0	0.24547	0
93818	0.73692	0	0.38523	0	0.24681	0
93847	0.86715	0	-0.76634	0	0.20193	0
93926	0.94303	0	-1.19768	0	0.15925	0
93932	1.02099	0	0.89002	0	0.08111	0
93962	0.97849	0	0.55462	0	0.16739	0
52732	1.05040	0	-0.50658	0	0.23548	0
93819	0.93361	0	0.40224	0	0.16989	0
52585	0.90283	0	0.42249	0	0.39538	0
93843	1.02555	0	-0.23951	0	0.21663	0
52739	0.76191	0	-0.38878	0	0.14753	0
52742	0.79719	0	0.70640	0	0.12897	0
52581	1.02146	0	1.01256	0	0.26508	0
52446	0.95509	0	1.10601	0	0.27272	0
93861	1.04940	0	0.51062	0	0.19111	0
52583	0.71237	0	-0.88566	0	0.21582	0
93910	0.88712	0	0.07071	0	0.24752	0
93879	1.09215	0	0.36065	0	0.09060	0
93850	1.00195	0	0.36902	0	0.12361	0
93877	1.12151	0	0.54297	0	0.18736	0
52863	0.89809	0	-0.68810	0	0.24118	0
52735	1.00162	0	-0.13768	0	0.19922	0
52858	0.72649	0	0.60121	0	0.09917	0
52442	0.98764	0	-0.72758	0	0.24312	0
93822	1.15590	0	-0.06642	0	0.29899	0

Table E-4. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 4

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
52748	0.48920	0	0.07318	0	0	0	1.62986	0	0.84888	0	-0.98039	0	-1.49834	0
50263	0.31147	0	-0.51077	0	0	0	0.66208	0	-0.33606	0	-0.48609	0	0.16007	0

continued

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
50285	0.34825	0	-0.21311	0	0	0	3.41800	0	0.16597	0	-1.01602	0	-2.56794	0
52519	0.53174	0	-0.00743	0	0	0	2.07326	0	-0.23452	0	-0.57206	0	-1.26668	0
52865	0.57301	0	0.23465	0	0	0	2.48694	0	-0.66546	0	-0.31949	0	-1.50200	0
93969	0.49806	0	0.83240	0	0	0	1.95935	0	-0.85893	0	-0.69915	0	-0.40126	0
52741	0.56436	0	0.75374	0	0	0	0.79532	0	-0.28387	0	-0.73056	0	0.21911	0
93916	0.35270	0	0.19458	0	0	0	3.76184	0	-0.27833	0	-0.65762	0	-2.82590	0
51057	0.56525	0	0.77303	0	0	0	-0.31453	0	0.22972	0	0.81157	0	-0.72676	0

Table E-5. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 5

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
57577	1.15385	0	-0.19252	0	0.19941	0
77107	1.15247	0	-0.01242	0	0.25490	0
142882	0.73335	0	0.75825	0	0.45503	0
93384	1.19933	0	0.17842	0	0.24445	0
142884	0.76908	0	0.20631	0	0.10084	0
150963	0.85802	0	0.19110	0	0.15422	0
93534	0.65380	0	-0.97747	0	0.13427	0
57122	0.85610	0	-0.49430	0	0.16080	0
142886	0.53138	0	-1.00180	0	0.07447	0
142888	0.79649	0	-0.71837	0	0.14999	0
142889	0.63512	0	-1.45549	0	0.15900	0
142891	0.83286	0	-0.93842	0	0.18691	0
144117	0.80511	0	-0.68892	0	0.10448	0
51425	0.63534	0	-0.11281	0	0.24887	0
144118	1.01169	0	0.15980	0	0.19656	0
144147	0.57444	0	-0.33819	0	0.00000	0
57411	1.00560	0	0.19633	0	0.15370	0
57580	1.08909	0	0.21227	0	0.10342	0
77096	1.24679	0	0.16211	0	0.16437	0
57571	0.71224	0	1.39752	0	0.29726	0
57438	0.76775	0	0.34512	0	0.10828	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
144152	0.85308	0	-0.48451	0	0.36567	0
144154	1.00628	0	-0.19080	0	0.22023	0
144157	0.56852	0	-1.50860	0	0.19002	0
77106	0.89466	0	-0.30228	0	0.23445	0
142903	1.20349	0	-0.14355	0	0.13513	0
142904	0.85798	0	-0.56797	0	0.17396	0
142905	0.72271	0	-1.08075	0	0.12941	0
142906	0.83226	0	-0.19798	0	0.06474	0
142908	0.79705	0	0.23555	0	0.21587	0
142909	1.02534	0	0.25316	0	0.28371	0
144107	0.87995	0	0.12972	0	0.12592	0
144171	0.87511	0	-0.82368	0	0.13700	0
144173	1.02317	0	0.55377	0	0.13069	0
55263	0.51630	0	0.32868	0	0.40373	0
144199	1.23731	0	0.66066	0	0.09953	0
57066	1.01751	0	0.49808	0	0.12915	0
144201	0.72254	0	-1.23031	0	0.22239	0
77099	0.96030	0	-0.01830	0	0.39479	0
57054	0.95441	0	-0.91817	0	0.10819	0
57464	0.91313	0	-1.34600	0	0.08630	0
55258	0.81930	0	0.81731	0	0.17265	0
58020	0.61781	0	0.30893	0	0.28461	0
57514	0.77101	0	-0.27896	0	0.32182	0
93865	1.04599	0	-0.51345	0	0.22531	0
93779	0.50737	0	-1.44483	0	0.17624	0
57391	0.89068	0	-1.03290	0	0.14432	0
93753	0.63538	0	-0.24766	0	0.13339	0
93889	1.26844	0	1.53789	0	0.36587	0
57690	1.04233	0	1.07374	0	0.17953	0
57058	1.08336	0	-0.16024	0	0.23604	0
57178	1.31042	0	-0.37734	0	0.24040	0
57028	0.65522	0	-0.48879	0	0.20283	0
93751	1.26877	0	0.66551	0	0.23712	0
57492	0.94940	0	0.83634	0	0.25142	0
57695	1.38647	0	0.12809	0	0.20313	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
93898	0.74404	0	-1.07518	0	0.16147	0
93674	0.94633	0	1.07933	0	0.28429	0
57182	0.62726	0	-0.27209	0	0.16826	0
57424	0.77369	0	-0.53334	0	0.26735	0
93858	0.63469	0	-0.80141	0	0.18415	0
57070	1.17144	0	0.50027	0	0.14084	0
93909	1.17672	0	0.74161	0	0.40070	0
93761	0.94479	0	0.41514	0	0.10173	0
93853	0.75129	0	-0.23459	0	0.20683	0
93893	1.22066	0	-0.62933	0	0.15783	0
58042	1.01186	0	-0.37002	0	0.16989	0
57442	1.30339	0	-0.09862	0	0.08321	0
57422	1.24243	0	0.41156	0	0.25235	0
93778	0.90218	0	-0.80737	0	0.19739	0
57678	0.51192	0	-1.29973	0	0.11034	0
57449	0.60539	0	-1.15844	0	0.27672	0

Table E-6. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 5

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
142893	0.47213	0	-0.90934	0	0	0	1.74248	0	-0.53920	0	0.01924	0	-1.22252	0
142896	0.28523	0	-0.43252	0	0	0	0.42571	0	-0.67607	0	-0.24613	0	0.49648	0
144160	0.32977	0	-0.23195	0	0	0	2.53157	0	0.30789	0	-0.65419	0	-2.18528	0
55354	0.47293	0	0.86048	0	0	0	0.77974	0	-0.49127	0	-0.11423	0	-0.17424	0
144219	0.44839	0	0.17158	0	0	0	-1.23813	0	0.48338	0	0.36653	0	0.38821	0
93769	0.54740	0	0.19453	0	0	0	3.14217	0	-0.39820	0	-1.88092	0	-0.86305	0
93875	0.60301	0	0.58786	0	0	0	2.18256	0	0.68610	0	-0.87898	0	-1.98967	0
93918	0.47643	0	-0.69350	0	0	0	4.04396	0	-0.31379	0	-2.12836	0	-1.60181	0
57539	0.42971	0	-0.40051	0	0	0	0.54667	0	0.22859	0	-0.79170	0	0.01643	0

Table E-7. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 6

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
144467	0.84255	0	-1.67895	0	0.10630	0
93139	1.37720	0	0.73549	0	0.29899	0
47517	0.35351	0	-2.08305	0	0.12015	0
76667	1.01972	0	-0.02742	0	0.16564	0
93134	1.14193	0	-0.05131	0	0.15236	0
76668	1.03671	0	-0.05827	0	0.26055	0
144471	0.84509	0	1.47226	0	0.30500	0
93142	1.02225	0	0.39067	0	0.10042	0
144473	1.64986	0	0.97626	0	0.20378	0
47538	0.91015	0	1.02078	0	0.18098	0
51953	1.34331	0	0.81113	0	0.13315	0
51981	1.11429	0	0.20833	0	0.20005	0
93148	0.82280	0	-0.69504	0	0.04291	0
47549	0.61981	0	-0.48455	0	0.09986	0
144503	1.39131	0	0.91350	0	0.14263	0
47145	0.73548	0	0.67402	0	0.31165	0
93135	0.93001	0	-0.80056	0	0.13356	0
76671	0.91591	0	-0.03908	0	0.14201	0
93116	0.61109	0	-0.43670	0	0.03069	0
47619	1.01812	0	0.05099	0	0.13443	0
52006	0.93850	0	0.94640	0	0.15624	0
47627	1.06812	0	0.25839	0	0.21874	0
76669	0.98507	0	0.80340	0	0.24785	0
47631	0.73973	0	-0.72512	0	0.09765	0
51963	0.55235	0	-0.80184	0	0.17502	0
47516	0.76527	0	-0.57932	0	0.10406	0
47540	1.29709	0	1.05549	0	0.18515	0
47617	1.32431	0	0.15572	0	0.15981	0
144487	0.50323	0	-1.54611	0	0.19211	0
47137	0.92579	0	0.01008	0	0.26415	0
144490	0.19611	0	-3.96153	0	0.00000	0
47139	0.60719	0	-0.19117	0	0.06822	0
47140	0.65094	0	-0.66569	0	0.16443	0
51996	0.83681	0	-0.28643	0	0.25964	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
93436	0.68942	0	-1.99349	0	0.13502	0
47141	1.30104	0	0.32364	0	0.12033	0
93348	0.96589	0	-0.36570	0	0.12526	0
76672	1.25889	0	0.26226	0	0.23528	0
47519	1.56227	0	0.79256	0	0.28322	0
144516	0.48867	0	1.73406	0	0.23234	0
51954	0.96036	0	0.09272	0	0.13167	0
93354	1.14725	0	0.86666	0	0.22015	0
51877	1.02709	0	1.13066	0	0.23062	0
93223	0.68291	0	-0.56510	0	0.23189	0
93359	1.25453	0	-0.04336	0	0.17141	0
51947	1.44633	0	0.88032	0	0.23580	0
93405	1.22783	0	0.89998	0	0.11614	0
93327	0.44247	0	-0.28517	0	0.18018	0
93429	0.87146	0	0.14659	0	0.21251	0
52017	0.78290	0	0.97987	0	0.25631	0
51961	0.68026	0	-0.15479	0	0.15398	0
51974	0.36076	0	-0.96743	0	0.17586	0
51964	1.08331	0	-0.11209	0	0.30998	0
51958	0.26050	0	-1.44978	0	0.00000	0
93362	1.73636	0	-0.41160	0	0.09441	0
51984	0.76199	0	-1.10928	0	0.10689	0
93423	0.80464	0	0.12761	0	0.05245	0
93400	1.05576	0	0.89210	0	0.27678	0
51957	0.92951	0	0.34589	0	0.16282	0
51968	0.79454	0	-0.86726	0	0.10766	0
51949	0.61192	0	1.12004	0	0.27545	0
93328	1.21049	0	-0.20453	0	0.21889	0
52019	0.92453	0	-0.63326	0	0.17297	0
51977	0.96071	0	0.06802	0	0.20063	0
93387	1.03979	0	0.04137	0	0.12056	0
93149	0.76460	0	0.53857	0	0.15876	0
52015	0.64588	0	-0.51993	0	0.10471	0
93393	1.18404	0	0.98940	0	0.21334	0
51942	0.60290	0	0.00224	0	0.22915	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
93226	0.85819	0	-0.22156	0	0.18536	0
93443	1.00807	0	1.11858	0	0.20516	0
51970	0.72568	0	0.19069	0	0.27140	0

Table E-8. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 6

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
76673	0.57633	0	-0.45459	0	0	0	1.36350	0	0.02096	0	-0.13730	0	-1.24715	0
93455	0.53687	0	-0.39539	0	0	0	1.98293	0	0.08422	0	-0.21933	0	-1.84782	0
51966	0.39340	0	1.34709	0	0	0	2.66797	0	-1.38321	0	0.83757	0	-2.12232	0
51983	0.35938	0	0.52071	0	0	0	1.42575	0	-0.18357	0	-2.15807	0	0.91590	0
93146	0.75816	0	1.04323	0	0	0	1.82919	0	0.09601	0	-0.31870	0	-1.60649	0
51975	0.71348	0	0.76165	0	0	0	1.50964	0	-0.53380	0	0.42221	0	-1.39805	0
52020	0.35703	0	-0.37182	0	0	0	2.74082	0	-1.33469	0	-0.92624	0	-0.47988	0
93379	0.44278	0	-0.16364	0	0	0	1.07691	0	0.19069	0	-0.36326	0	-0.90433	0
93417	0.52830	0	0.41338	0	0	0	1.52003	0	0.66715	0	0.16046	0	-2.34765	0

Table E-9. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 7

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52334	0.78875	0	-0.48547	0	0.13891	0
76479	0.82050	0	0.25091	0	0.20981	0
50473	0.78780	0	0.82954	0	0.20860	0
138161	0.86826	0	0.29564	0	0.29463	0
94461	0.79206	0	0.31892	0	0.27764	0
138163	1.08495	0	-0.00698	0	0.17005	0
54609	1.61471	0	1.28915	0	0.46296	0
76467	0.95498	0	-0.43451	0	0.07240	0
76478	1.04444	0	1.44191	0	0.24456	0
138166	1.00649	0	-0.13348	0	0.25826	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52326	1.01134	0	0.11084	0	0.17920	0
54646	0.83510	0	-1.69328	0	0.15437	0
138337	0.47505	0	-0.69832	0	0.12701	0
52330	0.61540	0	1.14978	0	0.25307	0
94451	0.60734	0	-1.01526	0	0.06350	0
52321	1.35709	0	-0.31937	0	0.24431	0
138231	1.15478	0	0.21800	0	0.15821	0
50480	0.58548	0	-0.19286	0	0.25442	0
94467	1.27054	0	-0.36959	0	0.22855	0
138232	1.28877	0	0.50612	0	0.12562	0
94453	1.56383	0	0.35778	0	0.15825	0
52332	0.74901	0	0.19589	0	0.22044	0
94470	1.15855	0	-0.10092	0	0.27375	0
50474	1.48629	0	0.54197	0	0.21208	0
76471	0.84282	0	0.26697	0	0.25769	0
54602	0.95569	0	-0.49055	0	0.16601	0
52320	0.72544	0	-0.56562	0	0.16127	0
138321	1.09797	0	0.35609	0	0.17271	0
52329	1.09963	0	0.53515	0	0.12569	0
50477	1.38640	0	0.50779	0	0.28751	0
50476	1.08288	0	0.45602	0	0.33281	0
50478	0.72769	0	-0.86981	0	0.12377	0
94468	0.91024	0	-0.88093	0	0.13878	0
50457	0.60543	0	-0.04543	0	0.28804	0
50448	1.47333	0	0.49656	0	0.33737	0
54978	0.27541	0	-1.02193	0	0.00000	0
54653	0.90446	0	0.32890	0	0.11239	0
152764	1.07348	0	-0.28139	0	0.10829	0
50454	1.23841	0	0.40694	0	0.07566	0
53516	0.76854	0	-0.63030	0	0.29346	0
53507	0.78743	0	1.03305	0	0.20596	0
95589	0.49504	0	-0.47145	0	0.16588	0
95540	0.67057	0	-0.50444	0	0.05804	0
95591	1.61564	0	1.13660	0	0.15582	0
53520	0.63051	0	-1.05089	0	0.12395	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
53500	0.48847	0	-0.26097	0	0.14446	0
54640	1.01055	0	0.91898	0	0.37093	0
95542	1.51698	0	0.38579	0	0.12698	0
95590	0.94949	0	0.95393	0	0.27404	0
54967	1.06306	0	0.53603	0	0.20741	0
55311	0.87445	0	-1.16980	0	0.18017	0
55340	0.69641	0	0.16337	0	0.16385	0
55301	0.52714	0	-0.55330	0	0.00000	0
54973	0.76095	0	-1.36833	0	0.16237	0
95575	0.72368	0	0.41340	0	0.10287	0
95594	0.95977	0	0.11733	0	0.34956	0
95536	1.20596	0	-0.28170	0	0.19944	0
95463	1.12857	0	-0.18522	0	0.25171	0
95571	0.85875	0	0.70186	0	0.15872	0
95468	1.62413	0	-0.50451	0	0.15548	0
55347	0.97206	0	0.44353	0	0.06581	0
95572	1.01698	0	-0.23923	0	0.09834	0
95576	1.02019	0	0.94537	0	0.21685	0
95473	0.78018	0	0.81032	0	0.15498	0
95569	0.92952	0	1.13761	0	0.13901	0
53970	0.80959	0	-1.29308	0	0.12990	0
95588	0.96937	0	0.66072	0	0.18446	0
53528	0.54668	0	-0.44734	0	0.07042	0
52336	1.12156	0	-0.55532	0	0.09446	0
95553	1.25829	0	0.52033	0	0.29057	0
95470	0.67637	0	-0.23376	0	0.16480	0
95557	1.16469	0	0.09111	0	0.27863	0

Table E-10. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 7

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
50464	0.61834	0	-0.75898	0	0	0	0.37152	0	0.22668	0	0.02711	0	-0.62529	0
138168	0.54970	0	-0.14885	0	0	0	1.44825	0	-0.78495	0	0.84715	0	-1.51044	0

continued

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
138233	0.54963	0	-0.11250	0	0	0	0.35520	0	0.24571	0	-0.24939	0	-0.35151	0
54983	0.52965	0	0.87581	0	0	0	-0.21673	0	0.16762	0	0.40059	0	-0.35149	0
94472	0.73473	0	1.10022	0	0	0	1.06442	0	1.14296	0	-0.93173	0	-1.27564	0
95577	0.71574	0	0.18894	0	0	0	1.44489	0	0.10677	0	-0.48697	0	-1.06469	0
55360	0.70586	0	0.57975	0	0	0	2.06112	0	0.44966	0	-1.70264	0	-0.80814	0
95562	0.41221	0	0.48152	0	0	0	-0.80893	0	1.77368	0	-2.73590	0	1.77116	0
95523	0.67436	0	0.50809	0	0	0	2.30793	0	-0.25010	0	-0.39277	0	-1.66507	0

Table E-11. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 8

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
86430	0.82387	0	-1.41814	0	0.00000	0
58420	0.46575	0	2.10083	0	0.32449	0
58691	0.58389	0	0.42811	0	0.16975	0
151447	1.17433	0	-0.41550	0	0.13096	0
58438	0.96186	0	-0.53879	0	0.17901	0
94216	1.20561	0	-0.07761	0	0.32073	0
51773	1.18002	0	-0.09780	0	0.11303	0
151462	1.03852	0	0.51363	0	0.26224	0
58500	1.36332	0	1.36772	0	0.67419	0
151791	0.85215	0	0.68457	0	0.35025	0
86421	1.04826	0	-0.17510	0	0.15091	0
151795	1.04120	0	-0.56358	0	0.28928	0
151903	1.07550	0	0.19497	0	0.43608	0
151910	1.45035	0	0.53722	0	0.17744	0
58802	1.37095	0	0.15986	0	0.24500	0
151915	0.78414	0	-0.27669	0	0.06772	0
86440	1.26279	0	0.51019	0	0.24607	0
58554	1.44334	0	0.34686	0	0.26058	0
151934	0.82111	0	0.50511	0	0.18385	0
151937	0.56299	0	-1.15683	0	0.08730	0
94214	1.21679	0	0.70667	0	0.21878	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
58521	1.06680	0	0.32338	0	0.33589	0
94220	1.24350	0	0.00345	0	0.49044	0
151943	0.86819	0	-0.16621	0	0.28310	0
151841	0.75190	0	-0.10955	0	0.22212	0
151842	1.25806	0	0.09515	0	0.13880	0
51800	0.57675	0	0.51251	0	0.20555	0
86457	0.70222	0	-0.51102	0	0.25048	0
86460	1.72851	0	0.15286	0	0.25720	0
58421	0.88327	0	-0.80264	0	0.05246	0
151844	0.68729	0	1.34401	0	0.35152	0
58816	0.92405	0	-0.80248	0	0.10506	0
151958	1.28185	0	0.53250	0	0.28787	0
151965	0.83142	0	-0.76663	0	0.22514	0
151972	0.70100	0	-1.28123	0	0.18140	0
58523	1.45967	0	-0.10975	0	0.09769	0
51823	0.89400	0	1.13561	0	0.22777	0
151973	0.90139	0	0.12303	0	0.11881	0
151977	1.18078	0	-0.90233	0	0.13434	0
151979	0.95381	0	0.71135	0	0.31110	0
94403	0.58508	0	0.68145	0	0.22183	0
94402	0.85677	0	0.19415	0	0.05573	0
58689	1.94897	0	0.47346	0	0.26459	0
58442	0.73373	0	0.76792	0	0.11479	0
58609	0.90051	0	0.44880	0	0.30581	0
94409	0.39659	0	-0.60240	0	0.11199	0
94330	1.06676	0	-0.84511	0	0.10498	0
58809	0.73735	0	-0.19008	0	0.20510	0
94355	0.90074	0	0.79171	0	0.28886	0
58436	0.90018	0	0.51840	0	0.20497	0
58508	0.75261	0	-0.04956	0	0.16000	0
58549	1.01992	0	0.19480	0	0.37774	0
58620	1.29073	0	-0.04703	0	0.26083	0
94430	0.81717	0	0.19985	0	0.39474	0
94382	0.59370	0	-0.41908	0	0.15017	0
58747	1.52228	0	-0.18480	0	0.09018	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
94404	0.99806	0	0.74541	0	0.28270	0
58528	1.28678	0	0.49345	0	0.47265	0
58590	0.91151	0	0.41390	0	0.09211	0
94406	1.40734	0	-0.59462	0	0.09048	0
94379	0.96108	0	-0.32389	0	0.30164	0
94407	0.84725	0	0.63578	0	0.19289	0
94428	1.40944	0	0.44173	0	0.38503	0
94372	1.13864	0	-0.30166	0	0.24883	0
58795	1.48157	0	0.10828	0	0.22423	0
94412	1.71773	0	0.89382	0	0.23981	0
94357	1.15591	0	0.11352	0	0.29792	0
58426	0.34176	0	0.02864	0	0.16070	0
58585	0.61692	0	-0.59541	0	0.10189	0
58431	1.26129	0	0.12661	0	0.11845	0
94328	1.00572	0	0.52369	0	0.30325	0
58825	1.58360	0	0.64009	0	0.19411	0

Table E-12. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 8

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
151798	0.58635	0	-0.63375	0	0	0	0.26189	0	0.54938	0	-0.25522	0	-0.55604	0
58618	0.87326	0	0.20800	0	0	0	1.52768	0	-0.16143	0	-0.80958	0	-0.55667	0
153214	0.47678	0	0.35589	0	0	0	0.09927	0	1.64887	0	-1.02795	0	-0.72019	0
58430	0.72387	0	0.17740	0	0	0	0.99977	0	0.42130	0	-0.50861	0	-0.91246	0
151992	0.73952	0	0.44413	0	0	0	2.09351	0	-0.12756	0	-0.76522	0	-1.20074	0
58839	0.82930	0	0.18699	0	0	0	2.48854	0	1.10219	0	-1.70018	0	-1.89055	0
58622	0.76505	0	0.60934	0	0	0	0.77885	0	-0.40070	0	0.48183	0	-0.85999	0
58621	0.63426	0	0.59464	0	0	0	1.24043	0	-0.74189	0	-0.14611	0	-0.35245	0
94431	0.95822	0	0.93038	0	0	0	1.90927	0	0.38489	0	-0.74092	0	-1.55323	0

Table E-13. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Mathematics Grade 11

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
130610	0.52590	0	-1.06680	0	0.00000	0
51215	0.61135	0	0.26704	0	0.04235	0
130612	1.27442	0	-0.55853	0	0.18444	0
51546	1.30610	0	1.12957	0	0.14304	0
130613	0.72791	0	-1.03236	0	0.00000	0
51553	0.92415	0	0.17486	0	0.16819	0
130614	1.49745	0	-0.22456	0	0.15950	0
51208	1.00597	0	-0.49510	0	0.28973	0
130616	0.29244	0	-1.14337	0	0.00000	0
130619	1.19061	0	0.06012	0	0.19724	0
130621	1.40864	0	0.71601	0	0.22412	0
49785	1.01496	0	0.13201	0	0.22071	0
130649	0.77437	0	0.75461	0	0.29742	0
130650	1.52043	0	1.14204	0	0.13806	0
130652	1.64088	0	0.67506	0	0.21041	0
49781	0.90031	0	0.16249	0	0.19743	0
51198	1.62670	0	0.94989	0	0.37226	0
130654	1.61068	0	0.24480	0	0.31414	0
130655	1.42162	0	0.77673	0	0.12547	0
130656	0.91659	0	-0.35337	0	0.26714	0
130657	0.85657	0	-0.63789	0	0.06144	0
130659	1.14052	0	0.24403	0	0.29732	0
51551	0.85801	0	0.39915	0	0.16563	0
130661	1.50159	0	0.74469	0	0.22241	0
130631	1.19808	0	-0.60583	0	0.20631	0
130634	0.47506	0	0.44698	0	0.18686	0
51191	1.23766	0	0.23513	0	0.24478	0
130636	0.68671	0	-0.23411	0	0.11944	0
130637	0.87571	0	0.62648	0	0.26168	0
130639	1.85418	0	0.52603	0	0.17589	0
130641	1.20868	0	-0.18849	0	0.16369	0
130642	1.02592	0	0.76205	0	0.16111	0
152071	1.02181	0	-0.10492	0	0.41201	0
152072	0.58127	0	-1.51613	0	0.19292	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
152073	0.80248	0	0.06767	0	0.10903	0
51213	0.39681	0	-1.16307	0	0.13924	0
152077	1.15155	0	0.95859	0	0.25562	0
152081	1.29015	0	0.23297	0	0.35483	0
152084	1.16585	0	1.13321	0	0.28673	0
152086	1.26884	0	0.43720	0	0.29462	0
51534	1.04122	0	-0.29648	0	0.27058	0
51536	1.13577	0	0.07658	0	0.29427	0
51095	1.13439	0	1.09354	0	0.19960	0
51099	1.42723	0	1.27357	0	0.32267	0
51111	0.32576	0	2.10880	0	0.23204	0
51105	1.24741	0	0.69186	0	0.13563	0
51119	0.98853	0	-0.20865	0	0.19717	0
51117	1.04924	0	1.27356	0	0.33565	0
51317	0.85524	0	-0.32293	0	0.09329	0
51540	1.43243	0	0.40357	0	0.26485	0
51343	0.86753	0	-0.24327	0	0.15099	0
51349	0.55500	0	0.04383	0	0.12540	0
51114	1.87324	0	1.09827	0	0.30018	0
51547	1.32677	0	-0.21507	0	0.27556	0
51555	0.93644	0	-0.44343	0	0.30617	0
51391	1.85239	0	0.84877	0	0.32789	0
51085	0.59835	0	-0.51936	0	0.16628	0
51094	0.77340	0	-0.09981	0	0.10776	0
51096	1.45811	0	1.38260	0	0.18998	0
51110	1.12280	0	-0.25120	0	0.08398	0
51557	1.46408	0	0.15420	0	0.21951	0
51090	1.49045	0	0.83229	0	0.25081	0
51380	1.49437	0	1.39250	0	0.29832	0
51378	1.01453	0	-0.07191	0	0.21246	0
51538	0.89261	0	-0.41251	0	0.10003	0
51355	0.97890	0	0.76770	0	0.24444	0
51541	1.02685	0	0.77858	0	0.24105	0
51081	0.50122	0	-0.25653	0	0.09890	0
51103	1.11561	0	-0.79813	0	0.19513	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
51120	0.70938	0	-1.09167	0	0.10030	0
51550	0.84421	0	0.16425	0	0.13832	0
51102	1.79420	0	1.03500	0	0.14546	0

Table E-14. 2010–11 KCCT: IRT Parameters for Polytomous Items—Mathematics Grade 11

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
130623	0.90002	0	0.60152	0	0	0	2.28143	0	-0.41410	0	-0.45435	0	-1.41297	0
51106	0.90321	0	0.10115	0	0	0	0.78453	0	0.50614	0	-0.73625	0	-0.55441	0
51216	0.51181	0	1.12817	0	0	0	1.64616	0	-0.43155	0	-1.57393	0	0.35932	0
51554	0.68365	0	0.59495	0	0	0	-0.40583	0	1.55214	0	-0.69139	0	-0.45493	0
152097	0.81762	0	0.90526	0	0	0	1.35895	0	-0.27645	0	-0.32481	0	-0.75770	0
51568	0.77476	0	0.76796	0	0	0	1.25969	0	-0.50658	0	-0.15231	0	-0.60079	0
51109	0.59684	0	0.94794	0	0	0	0.23012	0	0.12687	0	0.61020	0	-0.96718	0
51400	0.80026	0	0.71295	0	0	0	0.67160	0	-0.15232	0	-0.46468	0	-0.05459	0
51124	1.01729	0	-0.36985	0	0	0	1.92511	0	0.35549	0	-0.99278	0	-1.28783	0

Table E-15. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 3

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
76644	0.69481	0	-2.34292	0	0.07528	0
76643	0.97963	0	-1.04901	0	0.18942	0
93992	1.48009	0	-0.57955	0	0.16692	0
76645	1.36411	0	-1.66100	0	0.20797	0
94005	1.01412	0	-0.98852	0	0.28592	0
94007	1.38575	0	-0.77526	0	0.20048	0
76646	1.13073	0	-1.21675	0	0.12454	0
47103	1.09695	0	-0.41556	0	0.13850	0
47104	1.13663	0	-0.26948	0	0.17752	0
47101	1.49636	0	-0.78277	0	0.23937	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
47100	0.99438	0	0.25268	0	0.14247	0
47102	1.00893	0	-0.46311	0	0.17393	0
47106	1.50366	0	-1.25045	0	0.14164	0
47105	1.32551	0	-1.30631	0	0.19499	0
94144	1.31140	0	-1.64243	0	0.09015	0
94165	0.92611	0	-1.51164	0	0.08249	0
94151	0.56014	0	-0.66716	0	0.26282	0
94152	1.29619	0	0.06558	0	0.32189	0
94162	1.18961	0	0.11794	0	0.26451	0
94175	1.88933	0	-0.59231	0	0.26264	0
94156	1.42802	0	-0.36856	0	0.20647	0
94174	0.73621	0	-0.86316	0	0.11921	0
52054	0.98293	0	-1.30573	0	0.08493	0
52104	1.16228	0	-1.65538	0	0.08227	0
52105	0.93918	0	-1.26430	0	0.08805	0
52052	0.75929	0	-0.94412	0	0.16843	0
52108	0.72760	0	-0.78117	0	0.10200	0
52056	0.78767	0	-1.56366	0	0.08637	0
140523	1.34149	0	-1.47998	0	0.14419	0
52109	1.45629	0	-1.14376	0	0.13134	0
94117	1.09999	0	-0.44956	0	0.10366	0
94093	0.73349	0	-1.20628	0	0.05381	0
94121	1.15157	0	-0.97746	0	0.07448	0
94099	0.91532	0	-0.62638	0	0.14926	0
94100	1.22380	0	-1.51484	0	0.04837	0
94125	1.39583	0	-1.16484	0	0.22136	0
94107	1.99685	0	-0.70683	0	0.32733	0
94127	1.13572	0	-0.40786	0	0.15976	0
94310	1.03138	0	-0.56640	0	0.15472	0
94313	1.56359	0	-0.67244	0	0.18705	0
94356	1.38520	0	-0.85253	0	0.21945	0
94373	0.82560	0	0.14809	0	0.22967	0
94374	1.40852	0	-0.59414	0	0.19243	0
94323	0.66990	0	0.05008	0	0.16549	0
94348	1.20793	0	-1.01979	0	0.36378	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
94347	0.93062	0	-1.01067	0	0.10758	0
52049	0.24340	0	-2.62115	0	0.00000	0
52053	1.13020	0	-1.77196	0	0.00000	0
52050	1.41578	0	-1.21434	0	0.14730	0
52236	1.02631	0	-1.89498	0	0.08241	0
52055	1.57485	0	-1.51763	0	0.14177	0
52069	1.01615	0	0.36010	0	0.34911	0
153717	1.49188	0	-1.48732	0	0.11855	0
95477	1.27313	0	-1.55672	0	0.14595	0
52199	1.14396	0	-1.19853	0	0.23093	0
52193	0.83930	0	-1.98031	0	0.14789	0
52247	0.78463	0	-1.33676	0	0.11191	0
153720	0.88815	0	-0.93926	0	0.19006	0
52201	1.23191	0	-1.61025	0	0.13997	0
52253	0.95637	0	-0.50367	0	0.09899	0
52255	1.47572	0	0.40539	0	0.21469	0
153721	1.78892	0	-1.65315	0	0.17231	0
47094	0.78106	0	-0.67134	0	0.24308	0
93770	0.60327	0	-0.78850	0	0.13410	0
47083	0.82242	0	-1.73815	0	0.15459	0
47092	0.77527	0	0.06578	0	0.22764	0
47086	1.04452	0	-0.09994	0	0.31224	0
47085	0.98031	0	-0.86085	0	0.20273	0
47088	0.65285	0	-0.92846	0	0.07283	0
47089	1.06608	0	-1.43579	0	0.13999	0
52198	1.09333	0	-1.42111	0	0.36223	0
52203	1.39272	0	-1.69108	0	0.19966	0
52206	0.88008	0	-1.51948	0	0.14054	0
52218	1.28498	0	-1.33123	0	0.45094	0
52214	1.21767	0	-1.27239	0	0.16460	0
52207	1.52111	0	-1.15878	0	0.33516	0
52217	1.30790	0	-0.96836	0	0.13330	0
153722	1.16579	0	0.30898	0	0.26694	0
94253	1.33863	0	-1.93973	0	0.21881	0
94200	1.31287	0	-1.63438	0	0.06836	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
94206	1.13687	0	-1.69236	0	0.07017	0
94260	1.37795	0	-1.55916	0	0.07843	0
94207	0.77950	0	-1.53209	0	0.15382	0
94246	0.84027	0	-0.33460	0	0.32003	0
94265	0.88649	0	-1.19447	0	0.20153	0
94262	1.16612	0	-0.23090	0	0.35701	0
52096	1.12700	0	-1.06154	0	0.20595	0
52087	1.02176	0	-0.48250	0	0.25280	0
52088	1.38457	0	-0.64009	0	0.22337	0
52089	1.10794	0	-0.92173	0	0.17526	0
52099	0.81787	0	0.23993	0	0.15156	0
153725	1.12742	0	-1.07772	0	0.23699	0
153724	1.08774	0	-1.06463	0	0.14237	0
52086	1.60787	0	-0.68909	0	0.30826	0
47036	0.78471	0	-0.61290	0	0.20251	0
47037	0.30570	0	-1.28464	0	0.00000	0
47042	0.90383	0	-1.34161	0	0.18145	0
47040	0.91234	0	-0.45558	0	0.18372	0
47043	0.74608	0	-1.90983	0	0.18043	0
47044	1.12904	0	-0.40735	0	0.19458	0
47047	0.97868	0	-1.39614	0	0.15874	0
47048	0.90336	0	-0.50518	0	0.20459	0
52157	0.75498	0	-2.07006	0	0.10407	0
52156	1.21352	0	-1.17245	0	0.11295	0
52173	0.85648	0	-0.46365	0	0.26391	0
52175	0.82357	0	-1.30231	0	0.08634	0
52159	0.93904	0	-1.47235	0	0.11814	0
52176	1.40882	0	-0.63886	0	0.30689	0
95484	1.97290	0	-1.62385	0	0.15910	0
52172	0.64575	0	-2.65526	0	0.00000	0
46977	1.87032	0	-1.60983	0	0.26073	0
46983	0.57588	0	-0.46622	0	0.07240	0
46984	1.13607	0	-1.00993	0	0.19928	0
46985	0.78212	0	-1.65031	0	0.09894	0
153740	0.26640	0	-0.83916	0	0.00000	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
46980	1.25164	0	-1.01141	0	0.12690	0
153737	0.72157	0	-1.39675	0	0.09230	0
153734	0.70070	0	-1.45393	0	0.12246	0
47071	0.82931	0	-1.61607	0	0.14789	0
47072	1.03524	0	-0.24631	0	0.20614	0
47073	1.35276	0	-1.86192	0	0.13625	0
47079	0.71298	0	-1.77772	0	0.14111	0
76650	0.36664	0	-1.47721	0	0.00000	0
47077	1.39547	0	-1.43780	0	0.15260	0
47075	0.59331	0	-0.99223	0	0.09488	0
47078	0.76255	0	-1.68032	0	0.10120	0

Table E-16. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 3

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
94010	0.43234	0	0.90984	0	0	0	3.01805	0	0.93869	0	-1.22851	0	-2.72824	0
47108	0.55732	0	0.41659	0	0	0	2.12480	0	1.37315	0	-1.08498	0	-2.41298	0

Table E-17. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 4

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
52550	0.75351	0	-2.29956	0	0.10121	0
52554	1.04424	0	-0.63513	0	0.18876	0
52542	0.74184	0	0.84970	0	0.08992	0
52546	0.98601	0	-1.19403	0	0.21842	0
138296	0.71869	0	-0.52821	0	0.25091	0
138297	0.98962	0	-0.49404	0	0.21666	0
52422	0.86287	0	-1.10839	0	0.12718	0
52424	0.84712	0	-1.14409	0	0.06664	0
52425	0.72131	0	-1.29812	0	0.05566	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52427	0.54847	0	-0.02884	0	0.26308	0
52420	0.75403	0	-0.61200	0	0.20191	0
52421	0.99110	0	-0.24560	0	0.23921	0
76342	1.23562	0	-1.15916	0	0.26836	0
94950	1.02667	0	-0.97312	0	0.26542	0
94952	1.20836	0	-0.81309	0	0.16949	0
94954	1.03721	0	-0.88572	0	0.16973	0
76344	1.28293	0	-0.94730	0	0.27787	0
76346	1.02111	0	-0.79750	0	0.20237	0
76347	1.32749	0	-0.61547	0	0.23899	0
137792	0.64702	0	-1.05549	0	0.12543	0
137793	0.99785	0	-0.62246	0	0.14357	0
137795	1.01452	0	0.75515	0	0.23835	0
137797	0.95664	0	-1.43433	0	0.27854	0
137800	0.58605	0	-0.93243	0	0.18987	0
137802	0.61300	0	0.71537	0	0.18857	0
137807	0.79928	0	-1.17462	0	0.17583	0
52431	0.53258	0	-0.63044	0	0.19509	0
52428	0.65776	0	-1.39823	0	0.08983	0
52430	1.47758	0	-0.45724	0	0.17988	0
52401	0.69574	0	-0.65654	0	0.35860	0
52404	0.74898	0	-0.75801	0	0.15378	0
52432	1.23519	0	-1.76867	0	0.16205	0
138300	0.53987	0	0.01467	0	0.18398	0
95038	0.34996	0	-0.32868	0	0.00000	0
95044	0.42968	0	0.67902	0	0.17904	0
95046	0.87244	0	-1.24215	0	0.13129	0
95048	0.56505	0	-1.59478	0	0.13898	0
95050	0.75771	0	0.19126	0	0.19941	0
152735	0.91023	0	0.31705	0	0.22786	0
95051	0.69726	0	-1.13033	0	0.11977	0
52389	0.86388	0	-0.10625	0	0.33227	0
52390	0.74198	0	-1.58235	0	0.09506	0
52402	0.73550	0	0.03606	0	0.14175	0
52403	0.90154	0	-0.97371	0	0.10917	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52392	1.06519	0	0.05000	0	0.18715	0
52408	0.60348	0	-1.69570	0	0.18860	0
153630	0.63099	0	-0.95709	0	0.10415	0
95380	0.75197	0	-0.21075	0	0.21004	0
95382	0.57711	0	-0.38859	0	0.14674	0
152736	0.72512	0	-1.04689	0	0.13769	0
152737	0.71828	0	-0.54556	0	0.08786	0
95384	1.03961	0	-0.83671	0	0.23007	0
95388	1.36947	0	-1.12827	0	0.21804	0
95400	1.06393	0	0.74387	0	0.23523	0
95413	1.13942	0	-1.39773	0	0.23728	0
95415	0.85999	0	-0.81839	0	0.17735	0
95439	1.47082	0	-1.15565	0	0.26571	0
95453	0.63146	0	-2.35626	0	0.14026	0
95458	0.58754	0	-0.27652	0	0.06654	0
95423	1.03351	0	-0.12882	0	0.28735	0
95424	0.89789	0	-0.20322	0	0.30162	0
95232	0.73300	0	-1.60362	0	0.14065	0
95158	0.75600	0	-1.72013	0	0.16775	0
95163	1.11677	0	-0.81646	0	0.27169	0
95233	0.80523	0	0.21099	0	0.26933	0
95167	0.75988	0	0.37822	0	0.27193	0
95237	0.94256	0	-0.49555	0	0.18790	0
95229	0.56045	0	-0.24352	0	0.15277	0
52699	1.05809	0	-0.58802	0	0.03681	0
52690	1.37269	0	-1.40046	0	0.23214	0
52700	1.25077	0	-0.87070	0	0.23436	0
52702	0.86004	0	-0.48723	0	0.15922	0
52703	1.23867	0	-1.45573	0	0.22455	0
153318	1.12234	0	-1.67506	0	0.29081	0
153323	0.61940	0	0.40919	0	0.21482	0
52750	1.51674	0	-0.59169	0	0.21762	0
52753	0.97962	0	0.58989	0	0.17638	0
52754	1.30832	0	-0.84718	0	0.24487	0
52757	1.16052	0	-0.36944	0	0.18166	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
52758	1.57809	0	-1.20293	0	0.22419	0
52761	1.45004	0	-0.71208	0	0.12692	0
52763	0.43167	0	-0.80662	0	0.09414	0
152745	0.75363	0	-1.37493	0	0.14594	0
152747	1.00548	0	-1.79135	0	0.16800	0
152748	1.15977	0	-0.75766	0	0.17865	0
152750	1.20559	0	-0.41182	0	0.16692	0
152751	0.34553	0	0.21080	0	0.13721	0
152754	0.76358	0	-1.37143	0	0.18097	0
152758	1.01163	0	-1.21694	0	0.13093	0
52567	0.70573	0	-0.86407	0	0.10308	0
52568	1.00551	0	-1.00194	0	0.22761	0
52569	1.41857	0	-1.27727	0	0.26796	0
52570	1.20697	0	-1.66465	0	0.17068	0
52572	0.76317	0	0.14306	0	0.07566	0
153643	0.55447	0	-1.38368	0	0.00000	0
52573	0.93421	0	-0.56562	0	0.26549	0
95493	0.46825	0	0.28907	0	0.22880	0
95528	0.25710	0	-1.83548	0	0.00000	0
95495	0.48615	0	-0.36734	0	0.14308	0
95535	0.69982	0	0.10606	0	0.09637	0
95496	1.08615	0	-1.45842	0	0.22943	0
95513	0.87909	0	-1.51339	0	0.13277	0
95516	1.18725	0	-0.94806	0	0.19852	0
95054	0.69172	0	-0.55654	0	0.14037	0
95055	0.88901	0	-1.18604	0	0.22832	0
95056	0.96904	0	1.92659	0	0.32399	0
95057	0.57778	0	0.47701	0	0.11779	0
152765	1.14874	0	-1.35695	0	0.17029	0
95087	0.86650	0	-0.56875	0	0.15257	0
95082	0.91283	0	-0.17044	0	0.28982	0
76329	0.87091	0	-1.38805	0	0.14518	0
76330	1.07820	0	-0.37290	0	0.34982	0
76336	1.51288	0	-1.06879	0	0.24043	0
76337	0.86359	0	-0.18242	0	0.20796	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
152770	1.11617	0	-1.21235	0	0.13044	0
76339	1.18918	0	-0.96057	0	0.16893	0
153669	0.71801	0	-1.45809	0	0.21182	0
52672	1.21736	0	-1.14265	0	0.26040	0
52631	0.73513	0	0.32093	0	0.15547	0
52633	1.05629	0	-0.91518	0	0.28295	0
52674	1.20144	0	-0.37439	0	0.25719	0
52634	1.08404	0	-1.01720	0	0.31542	0
52676	0.97624	0	-0.57538	0	0.24819	0
52636	1.22695	0	-1.17627	0	0.14204	0
52716	0.89425	0	-0.01255	0	0.13245	0
52717	0.95624	0	-0.11835	0	0.24529	0
52718	1.10330	0	-0.38098	0	0.35779	0
52719	0.92422	0	-0.31891	0	0.21439	0
95122	1.16706	0	-1.06437	0	0.31094	0
52721	0.52743	0	0.02084	0	0.14455	0
52722	1.53339	0	-1.07954	0	0.32632	0
152775	0.72524	0	-0.74349	0	0.24026	0
52658	0.63726	0	-0.29166	0	0.08390	0
52663	0.74725	0	-0.20145	0	0.07330	0
52660	1.40047	0	-1.10054	0	0.24126	0
52665	1.38171	0	-1.64010	0	0.26561	0
52667	1.19560	0	-1.21483	0	0.29254	0
52669	1.31852	0	-1.58940	0	0.07680	0

Table E-18. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 4

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
138299	0.63661	0	0.00512	0	0	0	3.13859	0	1.03129	0	-1.40595	0	-2.76393	0
137724	0.68877	0	-0.16213	0	0	0	1.75545	0	0.78728	0	-0.55919	0	-1.98354	0
94962	0.73905	0	0.51801	0	0	0	2.22619	0	0.65673	0	-1.04820	0	-1.83473	0
95052	0.60206	0	-0.00308	0	0	0	2.73866	0	0.74245	0	-1.38887	0	-2.09224	0

continued

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
95475	0.58170	0	-0.16744	0	0	0	2.28433	0	1.11874	0	-1.04117	0	-2.36190	0
52767	0.71596	0	-0.52663	0	0	0	2.54326	0	0.29545	0	-0.48187	0	-2.35684	0
95524	0.56727	0	0.04456	0	0	0	2.70234	0	0.70553	0	-1.29459	0	-2.11329	0
52678	0.62258	0	0.12631	0	0	0	2.27151	0	1.52852	0	-1.20651	0	-2.59351	0

Table E-19. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 5

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
57180	0.34017	0	-2.06422	0	0.10256	0
57194	0.97910	0	-0.93916	0	0.34082	0
57199	1.03836	0	-2.47793	0	0.13726	0
57215	1.03938	0	-0.92282	0	0.21404	0
57208	0.68172	0	-2.18256	0	0.24889	0
57211	1.20924	0	-0.89867	0	0.16969	0
95802	0.86438	0	-1.49925	0	0.03714	0
95801	0.81164	0	-1.66310	0	0.07173	0
95808	0.56539	0	-0.14341	0	0.19003	0
95809	0.89750	0	-1.39544	0	0.09139	0
95897	0.97548	0	0.00346	0	0.22215	0
95811	0.79135	0	-0.53715	0	0.24776	0
77593	1.28118	0	-0.27295	0	0.12071	0
77598	1.22352	0	0.39589	0	0.14157	0
77594	0.79587	0	-0.75451	0	0.11229	0
77597	1.27376	0	-1.07127	0	0.24707	0
95771	0.78333	0	-1.42040	0	0.08862	0
95777	0.74987	0	-0.49546	0	0.23588	0
95781	1.13274	0	-1.38966	0	0.16860	0
77610	0.84304	0	-1.58809	0	0.15576	0
77611	0.76550	0	-2.42038	0	0.22408	0
77603	1.05885	0	-1.34788	0	0.11975	0
77605	0.92669	0	-1.41070	0	0.09627	0
77606	1.08799	0	-1.69791	0	0.14901	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
77613	1.13919	0	-1.43619	0	0.19379	0
142436	0.27933	0	-2.67867	0	0.00000	0
57348	0.80134	0	-1.95263	0	0.11809	0
57351	1.06407	0	-1.74356	0	0.13261	0
57354	1.37994	0	-1.58849	0	0.20778	0
57362	0.54888	0	-1.12741	0	0.11509	0
57367	1.16650	0	-1.33213	0	0.25823	0
95826	0.50956	0	2.05533	0	0.44081	0
151390	1.02018	0	-0.59741	0	0.21696	0
96102	1.07833	0	-1.34778	0	0.18191	0
96106	1.05502	0	-1.59752	0	0.19450	0
96107	0.93480	0	-1.14988	0	0.08102	0
96089	1.34940	0	-1.29360	0	0.31046	0
96091	0.64355	0	-0.48933	0	0.10389	0
96094	0.58488	0	-0.99866	0	0.10812	0
96109	1.35401	0	-0.67859	0	0.32713	0
57388	1.03756	0	-0.99547	0	0.30717	0
57390	0.72753	0	-1.92464	0	0.15750	0
57409	0.80258	0	-1.82233	0	0.17081	0
57413	0.79026	0	-1.21937	0	0.14599	0
57417	0.85221	0	-0.81827	0	0.17493	0
57416	0.66977	0	-0.41517	0	0.07878	0
57400	0.78017	0	-1.97300	0	0.19434	0
77581	0.75443	0	-0.52728	0	0.12208	0
51406	0.92517	0	-2.06058	0	0.12660	0
51403	0.95482	0	-0.77642	0	0.20621	0
51404	0.93144	0	-0.84256	0	0.20357	0
51405	0.63128	0	-1.51188	0	0.18176	0
51402	0.77473	0	-0.94713	0	0.14957	0
77584	0.60938	0	-0.77040	0	0.16426	0
96069	0.85786	0	-0.37296	0	0.23494	0
96061	0.79974	0	-1.39700	0	0.21361	0
96064	0.34305	0	-1.31535	0	0.00000	0
96077	0.94247	0	-1.00896	0	0.24019	0
96065	0.84793	0	-0.35430	0	0.19978	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
96083	0.54339	0	-1.62078	0	0.15575	0
96066	0.99979	0	-0.53515	0	0.19422	0
57352	0.49885	0	-1.03401	0	0.16829	0
57353	1.17534	0	-1.13990	0	0.13310	0
57356	1.01033	0	-1.33075	0	0.15899	0
57363	0.47962	0	-1.46792	0	0.00000	0
57366	0.71947	0	-1.04619	0	0.12890	0
151452	0.96207	0	-0.57522	0	0.27614	0
151455	0.82295	0	-1.23478	0	0.10430	0
143886	0.18245	0	-2.22797	0	0.00000	0
143887	0.82040	0	-0.80121	0	0.11095	0
143888	1.11333	0	-0.64583	0	0.18934	0
143889	0.79521	0	-0.04273	0	0.24041	0
143898	0.98101	0	-1.43298	0	0.15501	0
143899	0.99589	0	0.09699	0	0.20674	0
143900	0.80098	0	-1.38879	0	0.22450	0
96140	0.82683	0	-0.45136	0	0.20922	0
96148	0.84322	0	-0.51171	0	0.25594	0
96150	1.31920	0	0.18379	0	0.24005	0
96151	1.18164	0	-1.23498	0	0.22623	0
96153	1.01000	0	0.48876	0	0.16562	0
96155	0.97654	0	-0.44509	0	0.26742	0
96145	0.99402	0	-0.50315	0	0.16887	0
51411	0.72318	0	-0.76906	0	0.14799	0
51414	0.71210	0	0.90939	0	0.19917	0
95910	1.45015	0	-1.06426	0	0.26559	0
51412	0.87927	0	-0.01628	0	0.15636	0
95911	1.02098	0	-1.45423	0	0.14358	0
51415	1.00602	0	-0.69968	0	0.13987	0
51416	0.74790	0	-0.22470	0	0.17054	0
57335	1.03221	0	-1.19760	0	0.13903	0
57254	0.88081	0	-1.10297	0	0.15853	0
57364	0.64995	0	-1.26809	0	0.00000	0
57263	1.13770	0	-1.33318	0	0.13120	0
57368	0.66055	0	-1.28499	0	0.08296	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
57274	0.67396	0	-0.98667	0	0.13707	0
57294	0.91255	0	-1.70003	0	0.10457	0
96033	0.77240	0	-1.76564	0	0.16438	0
96034	0.86152	0	0.99477	0	0.45697	0
95931	0.92034	0	-1.38202	0	0.23243	0
95933	0.55887	0	-1.87254	0	0.14136	0
96036	0.95200	0	-0.59906	0	0.25325	0
95934	0.49577	0	-0.41662	0	0.20239	0
96038	0.78038	0	-1.06920	0	0.28777	0
57021	0.76056	0	-0.94224	0	0.31682	0
57022	0.65392	0	0.44767	0	0.22646	0
57015	0.98079	0	-0.66575	0	0.22890	0
57023	0.72839	0	-0.87462	0	0.19478	0
57016	1.12438	0	-1.03500	0	0.21297	0
57025	0.44040	0	1.04827	0	0.23120	0
151460	0.81808	0	0.18611	0	0.19247	0
57423	1.55088	0	-1.36434	0	0.35546	0
57265	1.52760	0	-1.26729	0	0.23557	0
57269	1.45519	0	-1.32110	0	0.20476	0
57430	1.20037	0	-0.27513	0	0.16843	0
151461	0.84146	0	0.01114	0	0.17705	0
151464	0.96070	0	-0.74218	0	0.36453	0
57429	1.09549	0	-0.74032	0	0.14307	0
57503	0.63758	0	-1.44058	0	0.13758	0
57461	0.82056	0	-0.57992	0	0.23413	0
57509	0.96960	0	-0.37321	0	0.26366	0
57402	0.94455	0	-1.17502	0	0.11995	0
57545	1.18022	0	-1.03744	0	0.20627	0
57554	1.01125	0	-0.38463	0	0.22360	0
57485	0.80264	0	-0.65060	0	0.13266	0
95860	0.96500	0	-1.00339	0	0.21839	0
95862	1.22791	0	-0.92019	0	0.21535	0
95864	1.06299	0	-1.12276	0	0.35953	0
95865	1.14500	0	-1.59094	0	0.21638	0
95873	0.76115	0	-0.47933	0	0.15786	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
95876	0.52777	0	-1.24003	0	0.13516	0
95881	0.80334	0	-0.94112	0	0.25642	0
57140	0.84347	0	-1.64686	0	0.07859	0
57155	0.78546	0	-1.20854	0	0.13960	0
57145	1.01542	0	-1.69479	0	0.12787	0
151467	0.62098	0	-1.49627	0	0.09377	0
57157	0.46067	0	-0.15623	0	0.14660	0
151468	0.87023	0	-1.35739	0	0.21523	0
151471	0.71629	0	-1.40850	0	0.13662	0

Table E-20. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 5

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
151562	0.33162	0	-0.28101	0	0	0	3.26373	0	1.45924	0	-1.43351	0	-3.28946	0
95905	0.43597	0	0.21373	0	0	0	3.09252	0	1.73781	0	-1.75364	0	-3.07669	0
95793	0.64310	0	0.17043	0	0	0	2.74670	0	1.25508	0	-1.83895	0	-2.16284	0
96096	0.48514	0	0.04694	0	0	0	1.46745	0	1.74681	0	-0.87470	0	-2.33956	0
96067	0.57250	0	-0.05600	0	0	0	2.61022	0	1.15202	0	-1.49753	0	-2.26470	0
96156	0.58160	0	0.19810	0	0	0	2.46968	0	0.70658	0	-0.96718	0	-2.20909	0
96027	0.56252	0	-0.28747	0	0	0	3.11782	0	1.35592	0	-1.54920	0	-2.92453	0
57563	0.55700	0	0.54710	0	0	0	2.55880	0	0.99668	0	-1.44329	0	-2.11220	0

Table E-21. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 6

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
51854	0.62419	0	-2.40396	0	0.10716	0
51891	0.71712	0	-0.30729	0	0.27314	0
51892	1.03448	0	0.21348	0	0.42686	0
51861	0.49718	0	0.19761	0	0.33745	0
152166	0.81387	0	-0.80040	0	0.25110	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
152168	0.73231	0	-1.05320	0	0.25863	0
95783	1.11864	0	-1.40672	0	0.19956	0
95807	0.92963	0	-0.85975	0	0.15197	0
95794	0.94234	0	-0.30628	0	0.14418	0
95799	0.50128	0	-0.57325	0	0.04135	0
95805	1.02446	0	-0.95718	0	0.10924	0
95796	0.53800	0	-0.43884	0	0.07683	0
96015	0.52583	0	-1.44848	0	0.12424	0
96023	0.87660	0	0.01232	0	0.13922	0
96012	0.97585	0	-1.58562	0	0.09678	0
96013	0.99866	0	-1.13869	0	0.10396	0
96014	0.99479	0	-1.39698	0	0.12466	0
96025	0.73491	0	0.48347	0	0.20397	0
96016	1.39860	0	-1.07460	0	0.29257	0
47737	1.16632	0	-1.64982	0	0.13636	0
47746	0.63736	0	-0.61278	0	0.13534	0
76701	1.11632	0	-1.86432	0	0.11515	0
47741	1.18679	0	-1.22464	0	0.24672	0
47743	0.79634	0	-0.90191	0	0.12387	0
47734	0.72240	0	-0.94192	0	0.06616	0
47739	0.85565	0	-1.08155	0	0.13283	0
51935	0.29204	0	-0.89483	0	0.00000	0
51931	0.83193	0	0.31499	0	0.21467	0
51929	0.85348	0	-1.47648	0	0.07893	0
51909	1.12071	0	-1.98008	0	0.12677	0
51933	1.29441	0	-1.45116	0	0.16058	0
51910	0.78183	0	-1.67857	0	0.05468	0
51941	1.31476	0	-1.47414	0	0.13668	0
95712	0.81011	0	-1.08226	0	0.14704	0
76689	0.30096	0	-0.89975	0	0.00000	0
95725	0.79306	0	-0.84705	0	0.10459	0
76690	1.17315	0	-0.60433	0	0.26721	0
76691	1.05023	0	-1.51935	0	0.17645	0
76696	1.21699	0	-1.22514	0	0.19202	0
76695	1.21103	0	-0.73356	0	0.21620	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
51922	0.94549	0	-0.08183	0	0.20213	0
51900	0.90654	0	0.24329	0	0.25782	0
51913	0.69735	0	-0.12100	0	0.22473	0
51904	1.25879	0	-0.42825	0	0.22942	0
51907	1.26717	0	-0.69623	0	0.22124	0
51902	0.45107	0	-0.63322	0	0.07019	0
152171	1.53989	0	-0.91626	0	0.28020	0
47671	0.60104	0	-1.40962	0	0.12102	0
95848	0.62767	0	-1.69645	0	0.11641	0
47676	0.76413	0	-2.17517	0	0.13739	0
47673	0.97528	0	-1.39951	0	0.11218	0
47672	1.08350	0	-1.29610	0	0.15781	0
47674	0.92966	0	-1.26456	0	0.13907	0
47675	1.21892	0	-1.24151	0	0.16696	0
95943	0.47773	0	-2.16679	0	0.00000	0
95932	1.22337	0	-1.74336	0	0.09960	0
95936	0.82113	0	-1.82148	0	0.09722	0
95944	0.95034	0	-1.87791	0	0.12057	0
95945	0.59803	0	-1.02543	0	0.16820	0
95946	0.18432	0	-0.71518	0	0.00000	0
95940	0.64828	0	0.81940	0	0.13785	0
47679	0.61620	0	-0.48742	0	0.19218	0
47682	1.21949	0	-1.10340	0	0.25591	0
47683	0.93431	0	0.51750	0	0.17805	0
47680	0.60809	0	-0.91401	0	0.11096	0
76698	1.10697	0	-1.07217	0	0.18147	0
76699	0.75472	0	0.41964	0	0.12650	0
47685	0.77120	0	-0.71766	0	0.22361	0
95820	0.68314	0	0.19296	0	0.22018	0
147118	0.57088	0	-0.67512	0	0.13158	0
95822	1.02001	0	-0.91637	0	0.32301	0
95823	1.02431	0	-0.69443	0	0.17455	0
95833	0.58678	0	-0.84571	0	0.20506	0
95841	0.75998	0	-1.10016	0	0.23973	0
95834	1.11555	0	-1.61042	0	0.18861	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
95989	0.97741	0	-1.99108	0	0.11334	0
96004	0.76275	0	-1.16608	0	0.22446	0
95991	0.95280	0	-0.19195	0	0.21084	0
96005	0.61955	0	-1.43875	0	0.13484	0
95992	0.85587	0	-0.67831	0	0.14377	0
96007	0.47279	0	-0.50993	0	0.22685	0
96008	0.79733	0	0.67102	0	0.21917	0
47693	0.64615	0	-1.61063	0	0.13103	0
47690	1.04949	0	-0.90214	0	0.24999	0
47688	0.71157	0	-1.36811	0	0.11383	0
47689	0.89135	0	-1.15510	0	0.18064	0
95916	0.89921	0	-1.23226	0	0.12396	0
47691	0.74614	0	-0.59843	0	0.17709	0
152179	1.20586	0	-1.45723	0	0.21774	0
147119	1.33362	0	-0.65598	0	0.24143	0
76682	1.45983	0	-0.18678	0	0.17283	0
76683	1.46855	0	-1.06444	0	0.24991	0
76684	1.15955	0	-0.43271	0	0.13249	0
76685	1.03862	0	-1.26517	0	0.11769	0
76686	0.84805	0	-1.64975	0	0.14246	0
147120	1.05021	0	0.20384	0	0.25493	0
95886	0.72765	0	0.35524	0	0.12975	0
95888	0.93280	0	-1.46824	0	0.15566	0
95900	1.12412	0	-1.51826	0	0.17175	0
95889	1.20171	0	-1.59396	0	0.13803	0
95892	0.97480	0	-0.68740	0	0.27684	0
95896	0.73594	0	0.94166	0	0.25878	0
95909	0.60519	0	-0.15123	0	0.16217	0
51871	0.83186	0	-1.50722	0	0.07839	0
51867	0.41303	0	-2.21759	0	0.14810	0
51869	1.02549	0	-0.98926	0	0.15522	0
51850	0.82060	0	-1.41184	0	0.12415	0
51851	0.71595	0	-1.17693	0	0.13628	0
152181	0.91121	0	0.44117	0	0.21136	0
152185	0.67927	0	-0.88576	0	0.09905	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
52001	1.10095	0	-1.72350	0	0.14791	0
51863	1.08327	0	-1.35766	0	0.18080	0
51870	0.76601	0	-1.32965	0	0.18305	0
52003	1.26573	0	-0.95095	0	0.24818	0
52007	1.05782	0	-0.81147	0	0.17321	0
51873	0.32771	0	0.39626	0	0.12718	0
152187	1.25186	0	-1.51436	0	0.19219	0
51906	0.68741	0	-0.32188	0	0.28653	0
51946	0.50059	0	-2.27876	0	0.14054	0
51937	0.74883	0	-1.68542	0	0.17234	0
51924	1.08215	0	-0.56368	0	0.13219	0
51912	0.68861	0	-0.41734	0	0.21616	0
51940	0.62003	0	-1.42975	0	0.15939	0
51951	0.98880	0	-1.07192	0	0.22572	0

Table E-22. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 6

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
152169	0.60610	0	-0.14273	0	0	0	2.65507	0	1.07967	0	-1.47682	0	-2.25792	0
95813	0.38815	0	-0.06870	0	0	0	3.36149	0	1.37265	0	-1.73456	0	-2.99958	0
96028	0.60401	0	0.30500	0	0	0	2.39679	0	1.13749	0	-1.16052	0	-2.37377	0
76697	0.39265	0	-1.08252	0	0	0	2.80987	0	1.27414	0	-1.39023	0	-2.69379	0
95941	0.73404	0	0.41819	0	0	0	2.16901	0	1.23342	0	-1.42064	0	-1.98180	0
95995	0.44732	0	-0.74898	0	0	0	1.23584	0	1.19528	0	-0.50039	0	-1.93072	0
95914	0.62441	0	0.57618	0	0	0	1.77572	0	1.27544	0	-1.37000	0	-1.68116	0
51952	0.60156	0	0.51642	0	0	0	2.08359	0	1.40167	0	-1.15622	0	-2.32905	0

Table E-23. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 7

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
95303	0.67671	0	-0.60778	0	0.24480	0
95329	0.71053	0	-0.45714	0	0.20787	0
95336	0.57244	0	-2.92983	0	0.00000	0
95315	0.97148	0	-1.61181	0	0.20669	0
95317	0.88332	0	-1.32097	0	0.15305	0
95341	0.59398	0	-2.31324	0	0.06232	0
138330	0.54609	0	-1.09568	0	0.07870	0
138331	0.97579	0	-0.50764	0	0.31488	0
138332	0.78065	0	-2.01018	0	0.12679	0
138333	0.65297	0	-1.18149	0	0.10071	0
138334	0.77427	0	1.04201	0	0.21001	0
138335	0.53021	0	-2.01030	0	0.00000	0
95506	0.94346	0	-0.97919	0	0.18160	0
95507	0.63650	0	0.19379	0	0.23290	0
138323	0.39762	0	-0.82684	0	0.10016	0
95508	0.75158	0	0.67823	0	0.14479	0
95509	0.83749	0	0.46180	0	0.21451	0
95510	0.66816	0	0.72492	0	0.16054	0
95511	0.89757	0	0.40207	0	0.15762	0
95498	1.08845	0	-0.14849	0	0.26504	0
95500	0.74527	0	0.62364	0	0.21452	0
95499	0.91179	0	-1.00820	0	0.16510	0
138324	0.67714	0	0.86808	0	0.28361	0
138325	0.68621	0	-0.83704	0	0.08040	0
138326	0.89214	0	-1.35304	0	0.16001	0
95502	0.51719	0	0.20357	0	0.16057	0
55144	0.79545	0	-1.97158	0	0.08495	0
55146	1.23712	0	-1.06541	0	0.17874	0
55153	0.93913	0	-1.93581	0	0.11243	0
55148	0.85237	0	-0.82782	0	0.10571	0
55143	1.28166	0	-1.95055	0	0.18359	0
55156	1.03524	0	-0.79443	0	0.20160	0
55158	1.14218	0	-1.42931	0	0.19930	0
94529	1.32347	0	-0.92778	0	0.22162	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
76448	1.13676	0	-1.07871	0	0.21530	0
94540	0.80049	0	-0.32319	0	0.29627	0
76450	1.37044	0	-1.28820	0	0.37075	0
76451	1.45192	0	-0.28588	0	0.22872	0
76452	0.70261	0	0.97155	0	0.26204	0
94542	0.74816	0	-1.03450	0	0.36268	0
95526	1.46278	0	-0.90421	0	0.17777	0
95529	1.25092	0	-0.52910	0	0.27970	0
95530	1.39099	0	-0.42155	0	0.22488	0
95531	0.74414	0	-0.71935	0	0.12289	0
95532	0.40027	0	-1.16341	0	0.00000	0
152022	0.79125	0	0.05624	0	0.15897	0
152023	0.99869	0	-0.63732	0	0.15856	0
52313	0.81927	0	-0.95220	0	0.22297	0
52314	0.67825	0	-1.12337	0	0.12098	0
52315	0.65273	0	-0.71321	0	0.13421	0
52316	0.89879	0	-1.57147	0	0.14243	0
52317	1.20983	0	-1.40606	0	0.20237	0
52318	0.72376	0	-1.61625	0	0.17554	0
52319	0.71958	0	0.28712	0	0.20161	0
53314	0.79306	0	-1.21249	0	0.10744	0
53363	1.13107	0	-1.02296	0	0.17318	0
53367	0.97801	0	-1.24290	0	0.18061	0
53318	0.60246	0	-0.24587	0	0.16716	0
53375	0.80142	0	0.04365	0	0.26623	0
53384	0.99590	0	-0.72346	0	0.26118	0
53325	0.78009	0	0.12294	0	0.26885	0
54536	0.53917	0	-1.66338	0	0.14018	0
54537	1.00178	0	-1.42516	0	0.16904	0
54538	0.61851	0	-1.37406	0	0.11388	0
54540	0.89533	0	-1.83397	0	0.11489	0
54542	0.95696	0	-1.20280	0	0.09134	0
54557	1.05141	0	-0.51229	0	0.20790	0
54561	0.54969	0	-0.88054	0	0.10123	0
53464	1.04256	0	-1.63181	0	0.16854	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
53457	0.87438	0	-0.99513	0	0.11504	0
53471	0.92187	0	-1.06616	0	0.12441	0
152039	1.02250	0	-1.07368	0	0.15407	0
53474	1.30964	0	-1.62321	0	0.28879	0
95973	0.63760	0	-1.20794	0	0.13939	0
53467	1.25653	0	-0.89997	0	0.32488	0
95014	0.79012	0	-0.51527	0	0.15685	0
94991	0.94051	0	-0.75527	0	0.17141	0
95022	1.24776	0	-1.70985	0	0.17178	0
95027	0.82523	0	-1.04994	0	0.12161	0
95000	1.11415	0	-1.55659	0	0.27250	0
95037	0.56194	0	-0.46333	0	0.15268	0
95006	0.94362	0	-1.34526	0	0.20293	0
53114	0.87795	0	-1.30691	0	0.13205	0
52147	0.93152	0	-1.77027	0	0.20761	0
52149	1.03959	0	-0.49008	0	0.21053	0
52148	1.16468	0	-0.88146	0	0.15830	0
52150	0.72843	0	-1.34850	0	0.08850	0
53109	0.43233	0	-1.23728	0	0.09749	0
153563	1.02854	0	-1.29794	0	0.19023	0
95546	1.04300	0	-1.63207	0	0.18169	0
95548	0.78845	0	-0.99475	0	0.17356	0
95551	0.93423	0	-2.01383	0	0.14018	0
95555	0.73976	0	-1.28819	0	0.13219	0
95559	0.75577	0	-1.88921	0	0.16179	0
95561	0.89691	0	-1.83298	0	0.17406	0
95564	0.54686	0	-0.22007	0	0.10377	0
94891	0.79305	0	-2.03014	0	0.13614	0
94893	0.40163	0	-1.75791	0	0.10889	0
94919	0.86139	0	-1.84663	0	0.14767	0
94895	0.63018	0	-1.06036	0	0.19587	0
94896	0.78563	0	-1.41496	0	0.20440	0
94899	0.90560	0	-1.32502	0	0.16519	0
94934	0.58722	0	-0.67582	0	0.10389	0
54996	1.14883	0	-1.13748	0	0.10856	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
55010	0.43622	0	-0.78411	0	0.16055	0
152068	0.98197	0	-1.68727	0	0.13388	0
55013	0.68896	0	-0.35385	0	0.26859	0
55016	0.72045	0	-1.14530	0	0.16223	0
55019	1.11057	0	-0.27376	0	0.17497	0
55020	1.10128	0	-1.41028	0	0.16280	0
152078	0.69692	0	0.05245	0	0.24607	0
152080	1.40923	0	-2.10354	0	0.12939	0
152083	0.69133	0	-0.85116	0	0.11989	0
152085	0.75385	0	-0.40114	0	0.23494	0
152087	0.87302	0	-0.47658	0	0.25839	0
152089	0.59848	0	-0.78610	0	0.12921	0
152091	0.51401	0	-0.02093	0	0.09842	0
54882	0.50268	0	-0.25470	0	0.19347	0
54868	1.01070	0	-1.72405	0	0.13983	0
54885	0.72210	0	-1.86216	0	0.16962	0
54873	0.63035	0	-1.02104	0	0.13558	0
54886	1.05064	0	-1.13379	0	0.21487	0
54874	1.26767	0	-0.67424	0	0.21124	0
54893	0.82947	0	-0.63632	0	0.23342	0
50499	1.14727	0	-1.83722	0	0.21672	0
50500	0.76729	0	-1.82391	0	0.13564	0
50502	0.83965	0	-0.69541	0	0.25598	0
50503	0.79575	0	-0.44432	0	0.21341	0
50504	1.06425	0	-0.71045	0	0.22312	0
50501	0.79519	0	-0.93163	0	0.12181	0
152098	0.47161	0	-1.55739	0	0.17564	0
54466	0.63325	0	0.22889	0	0.06034	0
54479	1.02841	0	-0.90811	0	0.10064	0
54506	0.94375	0	-1.77381	0	0.11869	0
54508	0.76768	0	-1.48713	0	0.12753	0
54500	1.65311	0	-1.21683	0	0.27198	0
153565	0.80855	0	-0.80544	0	0.17130	0
153567	1.35689	0	-1.67436	0	0.26052	0

Table E-24. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 7

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
95346	0.46795	0	-0.09166	0	0	0	2.32444	0	1.53480	0	-1.73364	0	-2.12561	0
138336	0.44123	0	-0.40068	0	0	0	2.42600	0	1.11827	0	-1.40167	0	-2.14261	0
95512	0.54007	0	-0.05732	0	0	0	2.00595	0	1.71895	0	-1.19919	0	-2.52570	0
94543	0.55027	0	-0.17819	0	0	0	2.59903	0	2.07740	0	-2.31409	0	-2.36234	0
53408	0.68024	0	-0.52183	0	0	0	2.82332	0	1.03160	0	-1.71154	0	-2.14339	0
95040	0.56559	0	-0.27485	0	0	0	2.59890	0	1.37130	0	-1.21847	0	-2.75173	0
94902	0.56664	0	-0.15913	0	0	0	2.88460	0	1.01038	0	-1.42173	0	-2.47326	0
54877	0.81824	0	-0.29341	0	0	0	2.58216	0	0.80049	0	-1.12516	0	-2.25748	0

Table E-25. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 8

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
95670	0.88420	0	-0.61510	0	0.22116	0
95652	0.80193	0	-1.02411	0	0.18446	0
95673	0.98784	0	-1.09022	0	0.26967	0
95672	0.69415	0	0.32887	0	0.25783	0
95659	0.25925	0	-0.83851	0	0.08360	0
95662	1.10870	0	-0.45771	0	0.25198	0
58181	1.24957	0	-0.68595	0	0.18761	0
58173	0.91535	0	-0.09434	0	0.15708	0
58184	1.16636	0	0.34134	0	0.19688	0
58179	1.05826	0	-0.17553	0	0.20992	0
58168	0.90731	0	-1.10841	0	0.10653	0
58187	1.08984	0	-0.83232	0	0.21538	0
95607	0.90033	0	-1.17563	0	0.13119	0
95617	0.59158	0	-1.02159	0	0.11206	0
95609	1.01543	0	-0.39796	0	0.17710	0
95606	1.00247	0	-0.03761	0	0.21892	0
95621	1.10225	0	-0.44631	0	0.21924	0
95610	0.94703	0	-0.65153	0	0.20214	0
95622	1.21894	0	-0.24142	0	0.18256	0
51755	1.39210	0	-0.46011	0	0.22563	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
51756	1.64111	0	-0.58927	0	0.29650	0
51758	1.19656	0	-0.17100	0	0.20356	0
51759	1.09906	0	-0.38079	0	0.21446	0
51757	1.10283	0	-0.34970	0	0.25220	0
51760	1.60632	0	-0.32601	0	0.23372	0
94910	1.27958	0	-0.22242	0	0.26130	0
94871	0.73560	0	-0.56040	0	0.18033	0
86678	0.47471	0	-1.03964	0	0.00000	0
94875	0.68125	0	-0.80036	0	0.07310	0
94880	1.06597	0	0.12698	0	0.24297	0
86686	1.23584	0	-0.84722	0	0.14314	0
94878	0.36881	0	-1.80988	0	0.00000	0
86698	1.24709	0	-1.32628	0	0.20423	0
58454	0.77056	0	-0.67133	0	0.11427	0
58435	1.10953	0	-1.47238	0	0.10004	0
58445	0.52570	0	-0.44969	0	0.11859	0
58434	1.09128	0	-1.45786	0	0.09083	0
58473	1.27283	0	-1.41250	0	0.09218	0
153706	0.57909	0	1.24142	0	0.26687	0
58477	0.95643	0	-2.00403	0	0.11250	0
58259	0.92417	0	-0.70057	0	0.15263	0
58262	0.92191	0	-1.35893	0	0.21747	0
58274	0.92601	0	-0.93861	0	0.20325	0
58264	0.72566	0	-0.19002	0	0.18749	0
58281	0.66303	0	-0.03176	0	0.23753	0
58268	1.28979	0	-1.11411	0	0.22308	0
58278	1.18939	0	-0.95272	0	0.22088	0
94853	0.71056	0	-0.54252	0	0.15367	0
94858	0.46480	0	-0.44465	0	0.07892	0
94937	0.79224	0	-0.29046	0	0.15988	0
94940	1.17404	0	-0.67620	0	0.18518	0
94933	0.97088	0	-1.74059	0	0.09763	0
94862	0.43998	0	-0.23412	0	0.00000	0
94946	0.91019	0	-1.23193	0	0.06713	0
94993	0.53746	0	-0.63230	0	0.16196	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
95032	0.74769	0	-1.53926	0	0.11930	0
95004	0.71415	0	-0.31164	0	0.13284	0
95008	0.99330	0	-0.50735	0	0.18710	0
95049	0.83086	0	0.27515	0	0.18445	0
95013	0.64760	0	0.05708	0	0.17793	0
95016	0.75792	0	0.35068	0	0.15288	0
58348	0.93078	0	-0.94394	0	0.15183	0
58346	1.47261	0	-1.17567	0	0.21958	0
58351	1.07195	0	-0.58702	0	0.15419	0
58349	0.85922	0	-0.48579	0	0.15213	0
95745	0.76295	0	-0.38746	0	0.16165	0
58356	1.41809	0	-0.26990	0	0.28204	0
58353	0.98276	0	-0.27060	0	0.25021	0
95116	0.95066	0	1.20786	0	0.40734	0
95118	0.38980	0	-0.65713	0	0.10105	0
95127	0.94064	0	-0.82746	0	0.18536	0
95134	0.87164	0	-0.67873	0	0.17036	0
95597	0.62930	0	-1.17046	0	0.08740	0
95598	0.67418	0	-0.79577	0	0.12583	0
95600	0.51988	0	0.66957	0	0.18673	0
95741	0.90768	0	0.42996	0	0.14064	0
95717	1.01001	0	-0.75590	0	0.15340	0
95754	0.70291	0	-1.20559	0	0.10767	0
95719	1.24608	0	-1.08134	0	0.19753	0
95762	0.77782	0	-0.48129	0	0.25056	0
95769	0.74708	0	0.18811	0	0.12504	0
95774	0.86937	0	-1.34746	0	0.16622	0
51763	0.73339	0	-1.54235	0	0.15252	0
51765	1.15219	0	-1.68961	0	0.11884	0
51764	1.40861	0	-1.46560	0	0.15716	0
86711	0.85126	0	-1.19224	0	0.11411	0
51766	0.65553	0	-0.89453	0	0.10547	0
51767	1.47960	0	-1.41779	0	0.20812	0
86713	0.48553	0	-0.36759	0	0.07425	0
58220	0.83438	0	-1.64720	0	0.10253	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
58380	1.15647	0	-0.30232	0	0.10951	0
58383	0.96417	0	-1.10188	0	0.19445	0
58381	0.93597	0	-0.80733	0	0.19058	0
58226	0.93028	0	-0.87858	0	0.24154	0
58239	0.80955	0	-0.00360	0	0.18483	0
58235	1.32243	0	-0.63106	0	0.26447	0
58159	0.78158	0	0.80701	0	0.13037	0
58098	1.14728	0	-1.01216	0	0.18012	0
58166	0.76009	0	-0.37266	0	0.21955	0
58103	0.71195	0	-0.15800	0	0.22176	0
58101	1.18016	0	-0.75967	0	0.21053	0
58104	1.23284	0	-0.82757	0	0.19487	0
58171	0.98215	0	-0.27969	0	0.34708	0
58896	0.82708	0	-0.83179	0	0.27135	0
58492	0.76736	0	-1.34009	0	0.21873	0
58496	0.48525	0	-1.65525	0	0.12422	0
58499	0.79223	0	-1.36725	0	0.19410	0
58502	0.58668	0	-0.08012	0	0.11746	0
58905	1.01248	0	-0.38694	0	0.17480	0
58505	0.96218	0	0.08932	0	0.15469	0
58731	1.15908	0	-1.42415	0	0.11532	0
58713	1.12756	0	-1.04012	0	0.08269	0
58746	0.82552	0	-1.24437	0	0.09058	0
58707	1.40967	0	-0.97316	0	0.29510	0
58720	0.76580	0	-0.28097	0	0.22399	0
58740	1.04072	0	-1.48985	0	0.14222	0
58748	0.56382	0	-0.43294	0	0.16394	0
58755	1.09128	0	-1.33929	0	0.11134	0
58756	0.69914	0	-1.32563	0	0.19551	0
58786	0.87538	0	-0.04804	0	0.16038	0
58783	1.04347	0	0.11868	0	0.23091	0
58790	0.91636	0	-0.03682	0	0.23009	0
58792	1.05565	0	0.68488	0	0.19320	0
58766	1.52673	0	-0.67264	0	0.27940	0

Table E-26. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 8

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
95664	0.49013	0	-0.42155	0	0	0	2.10732	0	1.78764	0	-0.98819	0	-2.90676	0
58188	0.50716	0	-0.65042	0	0	0	2.30437	0	1.58483	0	-1.14839	0	-2.74082	0
95612	0.54710	0	0.09110	0	0	0	2.48123	0	0.99907	0	-0.97118	0	-2.50912	0
153709	0.66381	0	-0.22763	0	0	0	1.83889	0	1.36674	0	-1.18772	0	-2.01791	0
95019	0.55550	0	-0.24757	0	0	0	3.09190	0	1.21857	0	-1.43291	0	-2.87756	0
95735	0.63416	0	0.01781	0	0	0	2.37944	0	1.13528	0	-1.21604	0	-2.29869	0
58176	0.34774	0	0.80470	0	0	0	-0.15121	0	2.85245	0	-0.91474	0	-1.78650	0
58752	0.64052	0	-0.02387	0	0	0	1.69030	0	1.38504	0	-0.94812	0	-2.12721	0

Table E-27. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Reading Grade 10

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
92855	0.59098	0	-0.22645	0	0.06543	0
92854	0.43338	0	-2.41350	0	0.00000	0
92856	0.83575	0	-0.94282	0	0.15189	0
92860	1.06482	0	-1.88558	0	0.02824	0
92857	1.18241	0	-1.89730	0	0.03273	0
92859	1.44609	0	-1.70423	0	0.03706	0
49028	0.59311	0	-0.89828	0	0.00000	0
49033	0.95840	0	-0.31455	0	0.15444	0
49032	1.23138	0	-1.09818	0	0.18963	0
49029	1.23241	0	-0.63945	0	0.14881	0
49027	1.25599	0	-0.67794	0	0.17701	0
49030	0.79585	0	-0.36459	0	0.03500	0
50802	1.25132	0	-1.00132	0	0.25969	0
50804	0.93091	0	0.10246	0	0.16962	0
50805	0.99990	0	-0.84845	0	0.09086	0
50806	0.52546	0	-0.71793	0	0.07225	0
50807	0.94021	0	-0.94930	0	0.13155	0
50813	0.93016	0	-0.47020	0	0.14432	0
50814	0.98819	0	-1.43588	0	0.08041	0
48987	0.95889	0	-0.97424	0	0.05793	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
48988	0.74598	0	-1.18101	0	0.00000	0
48989	1.26793	0	-1.09293	0	0.10962	0
48990	1.43692	0	-0.70514	0	0.19159	0
48993	0.75405	0	-0.80558	0	0.04589	0
48995	0.82278	0	0.60887	0	0.27542	0
48996	1.22007	0	0.46347	0	0.27027	0
50642	1.50997	0	0.55985	0	0.15761	0
50643	1.34055	0	-0.67575	0	0.17265	0
50644	1.17993	0	-0.57178	0	0.19417	0
50645	1.09743	0	0.93041	0	0.16823	0
50646	1.19978	0	-1.29529	0	0.14302	0
50647	0.64836	0	0.71563	0	0.31230	0
50648	0.86523	0	-1.08793	0	0.04552	0
50866	1.28344	0	-1.37871	0	0.09221	0
50870	0.95488	0	-1.58722	0	0.09106	0
50873	0.60845	0	0.17722	0	0.20046	0
50875	0.70711	0	-0.33191	0	0.05087	0
50880	0.97748	0	-0.97007	0	0.16779	0
50891	0.75555	0	-0.26949	0	0.06168	0
50882	1.20441	0	-0.83751	0	0.17870	0
110821	0.65154	0	0.79068	0	0.27751	0
110822	0.87549	0	-0.70734	0	0.10379	0
110823	1.38444	0	-0.03209	0	0.20439	0
110824	0.67023	0	-0.87926	0	0.06725	0
110825	1.44217	0	-0.64862	0	0.22092	0
110826	1.16479	0	-0.79322	0	0.11439	0
110827	1.35248	0	-0.28547	0	0.22595	0
50635	0.97750	0	0.23172	0	0.17165	0
50638	0.73005	0	-0.99572	0	0.08446	0
50636	0.95640	0	-1.08786	0	0.07984	0
49003	0.98555	0	-0.82955	0	0.09860	0
50637	1.12968	0	-0.26097	0	0.20828	0
49007	1.00429	0	-0.96325	0	0.07729	0
50639	1.59597	0	-0.94437	0	0.14226	0
50857	1.04398	0	-1.49830	0	0.06192	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
50858	1.45373	0	-1.72412	0	0.08479	0
50859	0.71402	0	-0.97604	0	0.13188	0
50860	0.89839	0	-1.09835	0	0.15882	0
50861	1.05934	0	-1.12970	0	0.19255	0
50862	1.41606	0	-0.59578	0	0.14858	0
50863	0.89177	0	-0.82470	0	0.10626	0
50757	0.99057	0	-0.67694	0	0.14209	0
50753	1.15607	0	-0.82585	0	0.20712	0
50754	1.04682	0	-0.66094	0	0.20776	0
50751	0.66871	0	0.91030	0	0.26548	0
50759	1.54301	0	-0.74048	0	0.24886	0
110846	1.13024	0	-0.31485	0	0.16052	0
50761	1.11173	0	-1.35644	0	0.06181	0
92934	0.98006	0	-1.57875	0	0.06554	0
92933	0.36395	0	-0.80603	0	0.00000	0
92940	1.37015	0	-0.97276	0	0.19860	0
92932	1.22531	0	-0.59477	0	0.16763	0
92929	0.77916	0	-0.65301	0	0.11304	0
92930	0.31061	0	-2.42078	0	0.00000	0
92942	0.54723	0	-1.45520	0	0.08103	0
50791	0.93534	0	-1.29143	0	0.11032	0
50869	0.81267	0	-0.05004	0	0.18745	0
50793	1.04546	0	-1.67416	0	0.07863	0
50794	1.06275	0	-1.35140	0	0.09683	0
50796	1.09751	0	-1.45149	0	0.08313	0
50798	0.98010	0	-1.04963	0	0.10387	0
50799	0.74524	0	-0.44486	0	0.12351	0
93195	0.80610	0	-0.93165	0	0.17295	0
49034	0.54497	0	-0.08285	0	0.08324	0
49035	1.19148	0	-0.71561	0	0.17800	0
49036	0.70920	0	-0.73538	0	0.17781	0
49037	1.15879	0	-0.65982	0	0.22130	0
49038	0.74332	0	0.69532	0	0.14646	0
49039	1.41983	0	-0.97087	0	0.18714	0
93285	0.30275	0	-1.69320	0	0.00000	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
93278	1.62462	0	-0.17444	0	0.18614	0
93283	0.97048	0	-0.34201	0	0.22371	0
93288	1.06179	0	0.45316	0	0.24538	0
93281	1.41321	0	0.45794	0	0.16837	0
93290	0.65159	0	1.14849	0	0.20124	0
93280	1.69994	0	0.17077	0	0.22680	0
50816	0.75888	0	-1.14324	0	0.17586	0
50733	0.35363	0	-1.37436	0	0.00000	0
50822	0.94120	0	-1.21713	0	0.09329	0
50839	0.96653	0	-1.22610	0	0.06361	0
50843	0.81407	0	-0.14479	0	0.12504	0
50846	0.57284	0	-0.16854	0	0.10051	0
50849	0.83025	0	-0.66577	0	0.16318	0
50694	0.84291	0	-0.44725	0	0.14198	0
50695	1.17463	0	-1.46068	0	0.07099	0
50697	1.37694	0	-0.87046	0	0.18413	0
50698	0.79641	0	-1.07800	0	0.09805	0
50699	0.82006	0	-1.02913	0	0.08521	0
50700	0.66672	0	-0.36671	0	0.10661	0
50701	0.91683	0	0.01321	0	0.14181	0
110893	1.22939	0	-0.45404	0	0.13936	0
74110	1.62293	0	-1.75958	0	0.14284	0
74112	1.37614	0	-0.95577	0	0.09876	0
74111	1.21464	0	-1.41391	0	0.11430	0
74109	1.42150	0	-0.64556	0	0.25939	0
74113	0.73212	0	-1.57281	0	0.06815	0
74114	0.97982	0	-1.10442	0	0.11794	0
50723	0.75787	0	-2.44618	0	0.11074	0
50724	0.54501	0	-0.64419	0	0.19062	0
50725	1.02781	0	-0.31614	0	0.14794	0
50726	1.41523	0	-0.62320	0	0.28486	0
50727	0.80251	0	-0.52788	0	0.07658	0
50728	1.16431	0	-0.45453	0	0.13879	0
50729	1.20444	0	-1.57805	0	0.08564	0
50771	1.04508	0	0.25826	0	0.29409	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
50773	1.58222	0	-0.35143	0	0.27708	0
50774	1.30279	0	-0.99171	0	0.24353	0
50776	0.73130	0	-0.63310	0	0.21343	0
50777	1.23846	0	-1.04017	0	0.07552	0
50779	1.13555	0	-0.59331	0	0.14310	0
50781	1.08634	0	-0.91541	0	0.14566	0
50704	0.46078	0	1.86024	0	0.12697	0
50705	0.91351	0	-1.03894	0	0.07573	0
50706	1.26755	0	-0.06490	0	0.18821	0
50707	0.82322	0	-0.72783	0	0.15201	0
50708	0.44505	0	-1.47513	0	0.00000	0
50709	0.78757	0	0.21846	0	0.14851	0
50936	1.10044	0	-1.55091	0	0.11059	0

Table E-28. 2010–11 KCCT: IRT Parameters for Polytomous Items—Reading Grade 10

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
92861	0.73733	0	-0.49009	0	0	0	2.22573	0	1.01138	0	-1.08509	0	-2.15203	0
110802	0.83472	0	-0.48805	0	0	0	1.71017	0	1.03743	0	-0.88526	0	-1.86235	0
110781	0.74171	0	-0.22081	0	0	0	1.58904	0	1.01016	0	-0.82386	0	-1.77533	0
50884	0.71987	0	-0.73767	0	0	0	1.45261	0	1.31398	0	-0.74254	0	-2.02404	0
50864	0.64013	0	-0.18810	0	0	0	1.45828	0	1.06541	0	-0.78320	0	-1.74050	0
50800	0.68925	0	-0.67115	0	0	0	1.78227	0	1.20680	0	-1.25584	0	-1.73322	0
50851	0.77836	0	-0.06395	0	0	0	1.51638	0	0.90962	0	-0.76242	0	-1.66358	0
50730	0.63186	0	-0.00584	0	0	0	2.18086	0	0.62692	0	-1.07318	0	-1.73460	0

Table E-29. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Science Grade 4

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
138046	1.01754	0	-2.26992	0	0.08215	0
93675	0.73986	0	-1.80776	0	0.12359	0
50212	1.14012	0	-0.54519	0	0.28723	0
93679	0.56232	0	-2.14296	0	0.06043	0
52452	0.58608	0	-0.13613	0	0.33777	0
50207	1.02704	0	-0.86178	0	0.26810	0
138047	0.62967	0	-0.24456	0	0.14894	0
50206	0.96283	0	-1.40336	0	0.24603	0
76370	0.59648	0	-1.13277	0	0.10444	0
93683	0.82748	0	-1.71136	0	0.06201	0
93614	0.67993	0	-0.30020	0	0.16405	0
138048	0.51277	0	-1.38246	0	0.05037	0
52523	0.91002	0	-1.26429	0	0.06922	0
50222	0.87909	0	-0.91991	0	0.05554	0
138105	0.59262	0	-1.86508	0	0.06599	0
76369	0.84005	0	0.34346	0	0.17715	0
52813	0.85579	0	0.10885	0	0.23793	0
52608	1.27974	0	-1.28438	0	0.22382	0
138114	1.10568	0	-0.85348	0	0.20112	0
138108	1.24675	0	-1.51862	0	0.14505	0
50200	0.86702	0	-1.05958	0	0.10937	0
50205	0.53983	0	-0.79037	0	0.15423	0
52497	0.91958	0	-0.73088	0	0.07093	0
52637	0.52372	0	-1.23794	0	0.04694	0
76385	0.90535	0	-0.82645	0	0.39710	0
50221	0.69262	0	-0.75217	0	0.10517	0
138080	1.14401	0	-0.58460	0	0.31173	0
76313	0.92509	0	-0.60772	0	0.12304	0
138084	0.93362	0	0.07445	0	0.14029	0
51064	0.59568	0	-1.60571	0	0.13653	0
76374	1.11202	0	-1.34227	0	0.14974	0
138085	0.61664	0	-0.99195	0	0.11929	0
76375	0.59365	0	-1.80971	0	0.12022	0
51063	1.19139	0	0.00442	0	0.32569	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
150329	1.04874	0	-0.62426	0	0.28124	0
93618	0.75183	0	-0.85576	0	0.17379	0
150333	0.59613	0	0.86652	0	0.27293	0
76368	0.91491	0	-1.60076	0	0.14182	0
76312	1.02436	0	-0.83096	0	0.15664	0
50223	0.50382	0	-1.74590	0	0.13925	0
93806	1.04595	0	-0.63042	0	0.23981	0
52870	1.01535	0	-0.96722	0	0.30642	0
52495	0.84994	0	-1.97243	0	0.17250	0
52464	0.59757	0	-1.97718	0	0.12779	0
93755	0.58538	0	0.59898	0	0.20376	0
93811	0.73202	0	-1.07369	0	0.07149	0
52484	0.59952	0	0.65315	0	0.17217	0
93792	0.37313	0	-2.25265	0	0.15740	0
93802	0.79073	0	-1.24299	0	0.27438	0
52777	0.69007	0	-0.99810	0	0.12332	0
93719	0.65825	0	-1.41984	0	0.28839	0
52785	0.59349	0	-1.85979	0	0.15077	0
52897	0.58302	0	-1.95200	0	0.15247	0
93810	0.77722	0	0.61976	0	0.14750	0
93730	0.23534	0	-2.24910	0	0.00000	0
93748	0.90032	0	-1.34529	0	0.12825	0
52613	0.70997	0	-1.48004	0	0.16127	0
52918	0.67953	0	-1.92393	0	0.13892	0
52606	1.22783	0	-1.15419	0	0.28759	0
52493	0.47682	0	-0.31591	0	0.29024	0
52770	0.28134	0	-1.23423	0	0.00000	0
93793	0.91540	0	-0.97326	0	0.30776	0
93734	0.67468	0	-0.79892	0	0.16317	0
52775	0.41478	0	-1.08782	0	0.09422	0
52913	0.26777	0	-2.28915	0	0.00000	0
93785	0.73890	0	-0.12879	0	0.21662	0
52759	0.97696	0	-0.96426	0	0.11406	0
52747	1.11448	0	-0.77928	0	0.18668	0
52485	0.76586	0	-1.05437	0	0.15927	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
52874	0.84060	0	-1.83267	0	0.12812	0
93757	0.44763	0	-0.27595	0	0.19132	0
52815	0.58514	0	-1.63061	0	0.31243	0

Table E-30. 2010–11 KCCT: IRT Parameters for Polytomous Items—Science Grade 4

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
93714	0.47053	0	0.62893	0	0	0	1.80092	0	1.12173	0	-0.31189	0	-2.61077	0
138050	0.76447	0	-0.78216	0	0	0	2.16148	0	0.93467	0	-0.29483	0	-2.80133	0
138120	0.50963	0	-0.65348	0	0	0	2.05975	0	0.88368	0	-0.85441	0	-2.08902	0
138098	0.49685	0	-0.62253	0	0	0	2.20461	0	0.53200	0	0.29147	0	-3.02808	0
150341	0.47689	0	0.44710	0	0	0	1.34090	0	1.03255	0	-0.22464	0	-2.14881	0
52923	0.64264	0	0.48129	0	0	0	1.83920	0	1.47449	0	-0.96087	0	-2.35284	0
93765	0.48643	0	0.38856	0	0	0	1.68747	0	1.05798	0	-0.71675	0	-2.02869	0
93798	0.35340	0	0.74546	0	0	0	1.14834	0	2.56011	0	-2.55007	0	-1.15837	0
52819	0.27346	0	-1.11683	0	0	0	5.66889	0	0.93509	0	-3.81195	0	-2.79203	0

Table E-31. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Science Grade 7

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
55027	0.42563	0	-0.91697	0	0.16377	0
76427	0.41329	0	-1.15340	0	0.20795	0
138099	0.74844	0	0.02519	0	0.34892	0
54701	0.69340	0	0.55124	0	0.11513	0
138101	0.43279	0	-0.99800	0	0.00000	0
138102	0.86015	0	-0.11837	0	0.20883	0
55035	0.05768	0	4.16798	0	0.00000	0
138107	0.88454	0	-0.57136	0	0.16309	0
54694	0.56448	0	1.06044	0	0.20236	0
138109	0.48915	0	-0.95177	0	0.10134	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
50609	0.75422	0	1.03755	0	0.24465	0
50599	0.98388	0	0.66090	0	0.23420	0
55034	0.85327	0	0.15614	0	0.13772	0
138155	0.74713	0	1.31525	0	0.25990	0
138154	0.56935	0	0.68048	0	0.17101	0
52360	0.89315	0	0.21949	0	0.29965	0
138151	0.91481	0	-0.22783	0	0.12938	0
138138	0.60200	0	0.04269	0	0.17995	0
138140	0.82594	0	0.14728	0	0.28923	0
138141	0.38129	0	-0.42890	0	0.00000	0
138147	0.82299	0	0.31789	0	0.31867	0
138150	0.37286	0	0.70579	0	0.06667	0
138156	1.06371	0	0.16659	0	0.21721	0
138152	0.89399	0	-0.00895	0	0.11580	0
54691	0.56893	0	-0.61175	0	0.11406	0
94458	0.68417	0	0.96506	0	0.25511	0
138126	0.51877	0	-0.35698	0	0.21722	0
50621	0.73242	0	-0.96917	0	0.12245	0
138130	0.46090	0	0.92563	0	0.14017	0
76422	0.86044	0	-0.96263	0	0.14180	0
138131	1.02204	0	0.28382	0	0.19476	0
52338	0.82947	0	0.62268	0	0.14115	0
153012	0.66109	0	-0.56251	0	0.54644	0
76423	0.75397	0	-1.16381	0	0.22189	0
94362	0.71334	0	1.55663	0	0.23221	0
153014	1.16994	0	-0.93283	0	0.14423	0
153015	0.92879	0	0.28779	0	0.25654	0
153016	0.51620	0	-0.71701	0	0.12932	0
53649	1.22243	0	1.48456	0	0.30262	0
50611	0.93512	0	0.41645	0	0.24486	0
55399	0.64692	0	-0.41762	0	0.11727	0
54698	0.71862	0	-0.20195	0	0.17338	0
94517	0.80184	0	-1.06763	0	0.12849	0
54718	0.73726	0	1.19397	0	0.22229	0
54997	0.89879	0	1.20931	0	0.18070	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
94487	0.30185	0	1.78588	0	0.14841	0
94608	0.79780	0	1.20551	0	0.31038	0
54387	1.05937	0	-0.98675	0	0.18656	0
94626	1.07561	0	-0.39828	0	0.28087	0
53611	0.59764	0	-1.57065	0	0.12212	0
54690	0.72677	0	0.87920	0	0.29636	0
94479	0.88863	0	0.33410	0	0.29419	0
53585	0.71351	0	-0.71635	0	0.12975	0
53617	0.90646	0	0.36123	0	0.34650	0
94486	0.82586	0	1.70068	0	0.23843	0
94636	0.59754	0	1.66095	0	0.32422	0
94598	0.95271	0	0.51005	0	0.24878	0
94624	0.47348	0	-0.60463	0	0.10984	0
94518	1.08615	0	1.74675	0	0.28738	0
54988	0.86694	0	-0.32483	0	0.23594	0
55386	0.83405	0	-0.48706	0	0.12145	0
53620	0.58036	0	-0.78402	0	0.12448	0
94629	0.57492	0	-0.27070	0	0.11381	0
54352	0.68076	0	0.53219	0	0.14477	0
54709	0.65354	0	-0.10754	0	0.25244	0
53599	0.82502	0	-1.56784	0	0.11258	0
53604	0.51863	0	-0.80016	0	0.07610	0
53614	0.49622	0	-0.00225	0	0.20096	0
54283	1.14974	0	0.71020	0	0.21176	0
55403	0.99062	0	0.51663	0	0.19890	0
55447	1.09368	0	0.62964	0	0.17893	0
94524	0.78599	0	-0.30672	0	0.08930	0

Table E-32. 2010–11 KCCT: IRT Parameters for Polytomous Items—Science Grade 7

IREF	Parameters and Measures of Standard Error													
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*	*D4*	*SE(D4)*
138115	0.44488	0	0.03807	0	0	0	2.86994	0	0.41904	0	-1.47165	0	-1.81733	0
55040	0.32118	0	0.38752	0	0	0	4.05307	0	0.05802	0	-2.95085	0	-1.16024	0
138157	0.74591	0	0.00331	0	0	0	1.68534	0	0.98338	0	-0.78238	0	-1.88635	0
50605	0.48578	0	-0.03578	0	0	0	1.77957	0	0.56523	0	-1.23871	0	-1.10609	0
153021	0.41897	0	0.74496	0	0	0	1.84216	0	1.36772	0	-0.95421	0	-2.25567	0
94527	0.53111	0	0.89847	0	0	0	0.98358	0	0.51270	0	0.05684	0	-1.55312	0
94644	0.64695	0	0.19188	0	0	0	3.14902	0	-0.07637	0	-1.50533	0	-1.56732	0
94610	0.52939	0	0.86741	0	0	0	1.93861	0	0.37896	0	-0.34367	0	-1.97391	0
55478	0.48162	0	1.21849	0	0	0	0.63042	0	0.15050	0	0.52536	0	-1.30628	0

Table E-33. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Science Grade 11

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
50581	0.83777	0	-0.47571	0	0.07804	0
50577	0.89225	0	-0.01987	0	0.35461	0
130671	0.93568	0	-0.12291	0	0.17334	0
130672	0.88967	0	-0.41598	0	0.23447	0
130674	0.48567	0	-0.08615	0	0.00000	0
50578	1.13961	0	1.32474	0	0.19376	0
49716	1.26294	0	0.80829	0	0.21247	0
49743	0.89548	0	1.33312	0	0.20054	0
130675	1.04861	0	1.32044	0	0.19497	0
130676	0.50316	0	-0.57923	0	0.07723	0
130677	1.14632	0	1.09280	0	0.27696	0
51218	0.60136	0	0.13969	0	0.23259	0
130697	0.45136	0	0.18253	0	0.06894	0
130698	0.60702	0	0.57691	0	0.16037	0
130699	0.86063	0	0.62972	0	0.24511	0
130700	1.19090	0	1.36959	0	0.27921	0
130702	0.72960	0	0.96706	0	0.24689	0
75082	0.74334	0	-1.27986	0	0.05966	0
130694	0.86585	0	-0.33003	0	0.30184	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
49719	0.46008	0	-0.62459	0	0.00000	0
130695	0.28605	0	0.56323	0	0.06503	0
130696	0.97723	0	0.67526	0	0.22874	0
75098	0.74661	0	0.29468	0	0.27659	0
49749	0.66547	0	0.05599	0	0.17484	0
75109	0.57374	0	-1.13375	0	0.00000	0
130684	1.51017	0	2.09505	0	0.39048	0
49715	0.83149	0	0.33117	0	0.18066	0
50579	1.18480	0	0.35926	0	0.24336	0
130686	1.17646	0	0.76946	0	0.16576	0
92916	0.57451	0	1.06668	0	0.22597	0
50580	0.32040	0	-0.69473	0	0.00000	0
130687	0.70260	0	0.55013	0	0.12284	0
75107	0.34861	0	0.78831	0	0.23079	0
152638	0.60136	0	0.82257	0	0.10773	0
152640	0.74697	0	0.74700	0	0.19787	0
152642	0.85738	0	0.44512	0	0.31113	0
152649	0.77671	0	-0.16927	0	0.16208	0
75065	0.70648	0	-0.59436	0	0.07431	0
152658	0.17119	0	0.11753	0	0.00000	0
75072	0.12688	0	1.66271	0	0.00000	0
51311	0.69869	0	0.41826	0	0.48968	0
51586	0.82181	0	1.29915	0	0.09277	0
51577	0.53969	0	0.29074	0	0.08306	0
51450	0.97292	0	0.85403	0	0.21303	0
51583	0.30308	0	0.69398	0	0.14805	0
51580	0.62600	0	1.49700	0	0.16125	0
51592	0.67975	0	-0.27680	0	0.09301	0
51587	0.56633	0	-0.42682	0	0.14817	0
51298	1.52308	0	1.97057	0	0.34955	0
51438	0.48373	0	-0.24627	0	0.08953	0
51443	0.32901	0	-0.72583	0	0.12518	0
51299	0.78244	0	-1.01909	0	0.06536	0
51467	0.73113	0	1.30825	0	0.26790	0
51179	0.43728	0	0.34164	0	0.17486	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
51182	1.55908	0	0.92435	0	0.28269	0
51474	0.16619	0	1.59639	0	0.00000	0
51173	0.44211	0	-0.51832	0	0.10822	0
51169	0.91924	0	1.24626	0	0.28915	0
51435	0.59498	0	-1.36645	0	0.14031	0
51464	1.09026	0	2.26717	0	0.36978	0
51448	1.18223	0	1.52803	0	0.28703	0
51303	0.73415	0	0.41150	0	0.16831	0
51306	0.67306	0	-0.27098	0	0.15988	0
51172	0.85275	0	2.05527	0	0.30201	0
51441	1.20067	0	0.03445	0	0.22855	0
51574	0.54182	0	-0.94465	0	0.18972	0
51454	0.93502	0	0.27513	0	0.20608	0
51181	0.06938	0	4.91695	0	0.00000	0
51318	0.89047	0	-0.00896	0	0.14935	0
51591	1.01519	0	0.58768	0	0.20010	0
51313	0.40073	0	-0.07240	0	0.00000	0
51174	0.75903	0	1.71235	0	0.27220	0

Table E-34. 2010–11 KCCT: IRT Parameters for Polytomous Items—Science Grade 11

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
130678	0.75917	0	1.27972	0	0	0	1.24895	0	0.08834	0	-0.37418	0	-0.96311	0
130703	0.74196	0	1.02120	0	0	0	2.90988	0	-0.14923	0	-1.08059	0	-1.68005	0
49736	0.74685	0	0.21666	0	0	0	1.32362	0	0.80799	0	-0.36431	0	-1.76730	0
130691	0.53031	0	0.37590	0	0	0	1.61831	0	0.92808	0	-0.62099	0	-1.92539	0
152666	0.40457	0	0.35529	0	0	0	2.55721	0	0.91902	0	-2.23205	0	-1.24419	0
51596	0.49112	0	0.32421	0	0	0	1.62570	0	-0.12588	0	-0.83226	0	-0.66756	0
51479	0.63112	0	0.55597	0	0	0	1.87956	0	0.84811	0	-1.25156	0	-1.47612	0
51321	0.43425	0	-0.28828	0	0	0	1.13763	0	1.06359	0	-0.28294	0	-1.91828	0
51325	0.43570	0	0.82129	0	0	0	0.30348	0	1.26014	0	-0.38227	0	-1.18134	0

Table E-35. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Social Studies Grade 5

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
142426	0.49907	0	-0.36625	0	0.52242	0
57546	0.59675	0	-1.34991	0	0.18409	0
57187	1.24962	0	-0.42825	0	0.33104	0
57201	0.51069	0	-0.87999	0	0.13277	0
57179	0.51298	0	-0.87789	0	0.17076	0
51658	0.91092	0	0.34984	0	0.28973	0
142429	0.56421	0	-0.51265	0	0.39700	0
77125	0.69413	0	-1.65593	0	0.08788	0
77144	1.12340	0	-0.38504	0	0.24149	0
77149	0.44542	0	-0.55664	0	0.10021	0
93174	0.60740	0	-0.00451	0	0.11031	0
57609	0.47855	0	-1.12044	0	0.00000	0
142507	0.41225	0	-1.53100	0	0.00000	0
142510	0.95540	0	-0.58485	0	0.18920	0
142514	0.42083	0	-1.11224	0	0.07696	0
57611	0.57422	0	-0.60911	0	0.06927	0
51514	0.82731	0	-0.78642	0	0.11784	0
57597	1.01084	0	-0.63511	0	0.20984	0
142522	0.79553	0	-0.45121	0	0.20362	0
142518	0.32346	0	-3.07648	0	0.00000	0
93201	0.98289	0	0.07459	0	0.18421	0
77147	0.90612	0	0.31707	0	0.25409	0
142525	0.56986	0	0.99897	0	0.23813	0
93181	1.04720	0	-0.46843	0	0.20096	0
142447	0.70337	0	-0.59905	0	0.30393	0
57181	0.87893	0	0.23157	0	0.34118	0
57477	1.03140	0	-0.44565	0	0.21000	0
142451	0.76361	0	0.33799	0	0.37904	0
51505	0.47084	0	-1.61927	0	0.10414	0
142459	1.01292	0	-0.37014	0	0.17058	0
142470	0.06307	0	3.19811	0	0.00000	0
77150	0.83274	0	-0.38808	0	0.23251	0
77145	0.59517	0	-1.39417	0	0.26014	0
51652	1.00182	0	0.21368	0	0.27791	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
142546	0.79069	0	-0.51921	0	0.20100	0
142551	1.29401	0	-0.22086	0	0.30042	0
77139	0.52897	0	0.18011	0	0.18605	0
142554	0.91859	0	-0.41032	0	0.17074	0
57741	0.54692	0	-0.61937	0	0.10888	0
57473	0.60166	0	1.48868	0	0.24979	0
93450	0.58468	0	-0.42820	0	0.12822	0
57226	0.83518	0	-0.21525	0	0.16952	0
57456	1.03255	0	-0.20349	0	0.33751	0
57540	1.16171	0	-0.13564	0	0.20627	0
57530	0.54028	0	-0.83719	0	0.11040	0
93402	0.63907	0	-0.37821	0	0.20203	0
57227	0.61522	0	-0.29799	0	0.19300	0
93441	0.47682	0	0.90027	0	0.12946	0
57185	0.73352	0	-0.07323	0	0.23117	0
57176	0.81959	0	-1.31726	0	0.10388	0
57238	1.14291	0	0.06466	0	0.39495	0
93434	0.76712	0	0.26779	0	0.20224	0
57451	0.88711	0	-0.19646	0	0.20936	0
57235	1.27261	0	-0.26174	0	0.24921	0
57603	1.18218	0	0.07410	0	0.19469	0
57536	0.91644	0	0.41504	0	0.29712	0
93270	0.80590	0	0.33333	0	0.15992	0
93453	0.43637	0	0.07354	0	0.12405	0
57443	0.74178	0	-0.69746	0	0.13819	0
57542	0.28283	0	-2.10775	0	0.00000	0
58065	1.02402	0	0.12672	0	0.32794	0
57221	0.95249	0	-0.34140	0	0.16101	0
58068	1.06052	0	0.20246	0	0.38617	0
93368	0.47956	0	0.74414	0	0.30854	0
57177	0.82072	0	0.38911	0	0.29779	0
57534	0.83927	0	-0.76459	0	0.23741	0
93413	0.67402	0	-0.68735	0	0.16319	0
57236	0.91970	0	-0.64690	0	0.17134	0
57529	0.83964	0	-2.04059	0	0.11110	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
93347	1.03616	0	-0.03142	0	0.14373	0
57224	0.66524	0	0.34025	0	0.24538	0
93438	0.50462	0	-0.44315	0	0.16089	0

Table E-36. 2010–11 KCCT: IRT Parameters for Polytomous Items—Social Studies Grade 5

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
57487	0.62074	0	0.54954	0	0	0	2.26667	0	0.83918	0	-1.18207	0	-1.92376	0
93447	0.44365	0	0.81758	0	0	0	3.64214	0	0.99281	0	-2.09033	0	-2.54462	0
57258	0.53598	0	0.37872	0	0	0	3.62467	0	0.72136	0	-1.81922	0	-2.52682	0
142498	0.57696	0	0.40856	0	0	0	2.61220	0	1.03402	0	-1.42694	0	-2.21928	0
142577	0.56697	0	-0.50135	0	0	0	3.73501	0	1.66578	0	-1.49694	0	-3.90385	0
93373	0.52259	0	0.56409	0	0	0	2.32249	0	0.80759	0	-1.17672	0	-1.95336	0
57202	0.46404	0	0.02813	0	0	0	3.02082	0	1.53154	0	-1.96087	0	-2.59149	0
57481	0.47069	0	0.54748	0	0	0	2.20328	0	1.23737	0	-0.39139	0	-3.04926	0
93480	0.53228	0	0.40123	0	0	0	3.13786	0	0.53380	0	-1.57778	0	-2.09388	0

Table E-37. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Social Studies Grade 8

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
51743	0.89444	0	-1.06612	0	0.22527	0
151181	0.75661	0	-2.08309	0	0.08553	0
51745	1.14537	0	-0.08237	0	0.19874	0
87263	0.93628	0	0.35366	0	0.13295	0
94112	0.85152	0	-0.63111	0	0.26339	0
51738	0.27247	0	-0.94856	0	0.00000	0
58587	1.21068	0	0.02842	0	0.31169	0
58083	1.06640	0	0.20032	0	0.20398	0
87254	1.02567	0	0.35729	0	0.21040	0
51749	0.94926	0	0.00854	0	0.33386	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
151182	1.52189	0	-0.24417	0	0.18690	0
58070	0.72513	0	-0.29503	0	0.15164	0
151232	0.81813	0	-1.43686	0	0.06347	0
51740	0.68321	0	-1.06596	0	0.03240	0
58125	0.69123	0	-0.93299	0	0.09002	0
151237	1.00598	0	-0.18430	0	0.11158	0
151263	1.52066	0	0.07179	0	0.18757	0
151264	0.39953	0	-0.63554	0	0.00000	0
151252	0.81160	0	-0.51751	0	0.16555	0
87274	0.44249	0	-0.55211	0	0.00000	0
94080	0.40056	0	0.66879	0	0.06666	0
94084	0.88667	0	0.59899	0	0.20351	0
58055	1.03969	0	-0.86251	0	0.13829	0
58715	0.85725	0	-0.86732	0	0.14198	0
58561	0.87043	0	-0.40868	0	0.15408	0
151204	0.79855	0	-0.09816	0	0.33932	0
151206	1.33021	0	-0.40859	0	0.25304	0
151208	0.68556	0	1.11776	0	0.23128	0
151211	1.28590	0	-0.73262	0	0.16249	0
153242	1.02982	0	0.61471	0	0.25796	0
58624	0.44739	0	0.21056	0	0.10549	0
58113	1.14442	0	0.47755	0	0.16890	0
94074	0.84463	0	-0.61393	0	0.09900	0
151275	0.86613	0	-0.02434	0	0.28897	0
151277	1.01362	0	0.50724	0	0.28311	0
58832	0.98723	0	0.26793	0	0.41050	0
58142	0.72397	0	0.16965	0	0.06024	0
58655	0.69723	0	-0.91414	0	0.12349	0
151279	1.35884	0	-0.54214	0	0.16637	0
151283	1.38292	0	0.11601	0	0.22516	0
94274	0.95900	0	-1.08997	0	0.14723	0
58630	0.54998	0	0.59223	0	0.13511	0
94159	0.53045	0	-0.48963	0	0.08311	0
58778	1.17639	0	0.58572	0	0.34406	0
58831	0.63512	0	-0.85366	0	0.00000	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
58796	1.30526	0	0.55628	0	0.17036	0
58700	0.62825	0	0.35425	0	0.25131	0
58926	0.64370	0	-0.02426	0	0.13291	0
94131	0.87776	0	0.78538	0	0.23687	0
94123	0.94451	0	0.68874	0	0.20193	0
58869	0.46890	0	0.13989	0	0.14666	0
58897	1.42744	0	-0.54609	0	0.15629	0
153254	0.90404	0	0.37152	0	0.30953	0
94189	0.95651	0	0.59759	0	0.22509	0
94288	0.97234	0	0.36752	0	0.21040	0
94145	0.94538	0	0.66331	0	0.28968	0
94202	0.62461	0	-0.25474	0	0.18638	0
94204	0.79653	0	0.80721	0	0.32892	0
94126	1.01523	0	0.24899	0	0.18393	0
58863	0.78103	0	-0.35208	0	0.10372	0
58860	1.52904	0	-0.61531	0	0.13658	0
58901	1.04954	0	-0.01455	0	0.19956	0
58867	0.76026	0	-0.10619	0	0.19386	0
58911	1.12169	0	0.09547	0	0.19185	0
58866	0.73520	0	0.20380	0	0.27320	0
58653	1.51449	0	-0.99030	0	0.12948	0
58663	1.13730	0	-0.47004	0	0.15308	0
58665	1.03766	0	-0.02007	0	0.13615	0
94228	0.44735	0	0.33071	0	0.11163	0
58871	0.62931	0	0.08271	0	0.05484	0
94231	0.68729	0	-0.13108	0	0.08301	0
58873	1.23277	0	0.26179	0	0.27477	0

Table E-38. 2010–11 KCCT: IRT Parameters for Polytomous Items—Social Studies Grade 8

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
151185	0.48934	0	-0.22288	0	0	0	1.99122	0	1.94007	0	-1.44885	0	-2.48244	0
151188	0.70038	0	0.24646	0	0	0	2.91831	0	1.09771	0	-1.39486	0	-2.62115	0
151265	0.55491	0	0.25890	0	0	0	2.74253	0	1.39131	0	-0.90761	0	-3.22624	0
151226	0.63935	0	0.38266	0	0	0	1.71470	0	1.19853	0	-0.91933	0	-1.99390	0
59017	0.89832	0	0.43462	0	0	0	2.03539	0	0.91784	0	-0.94904	0	-2.00420	0
58729	0.64390	0	-0.38135	0	0	0	3.36260	0	0.75964	0	-1.66955	0	-2.45268	0
58899	0.60186	0	0.05866	0	0	0	2.35100	0	1.41559	0	-1.38587	0	-2.38072	0
94301	0.63451	0	0.35338	0	0	0	2.90656	0	0.80810	0	-1.46151	0	-2.25315	0
58845	0.58992	0	0.03360	0	0	0	2.93099	0	0.95312	0	-1.45427	0	-2.42984	0

Table E-39. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Social Studies Grade 11

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
132318	0.44861	0	-1.93733	0	0.00000	0
49587	0.70494	0	-0.89732	0	0.04254	0
132340	1.11242	0	0.34283	0	0.34964	0
132343	1.10699	0	-1.01576	0	0.09873	0
132346	0.52215	0	0.21731	0	0.10168	0
49593	1.02133	0	-0.12116	0	0.24358	0
75021	0.43143	0	-1.43769	0	0.00000	0
51581	0.82390	0	0.28095	0	0.27091	0
132368	0.75720	0	-0.12735	0	0.11536	0
132404	0.66468	0	-0.17996	0	0.22783	0
51578	0.51373	0	-0.83835	0	0.04656	0
132448	0.54598	0	-0.69270	0	0.06984	0
134032	0.92644	0	1.28469	0	0.24341	0
134030	1.02837	0	0.49439	0	0.19759	0
134031	1.18733	0	-0.10186	0	0.15101	0
51264	0.39013	0	-0.76811	0	0.00000	0
134029	0.49444	0	-0.98693	0	0.00000	0
134042	1.04101	0	-0.56390	0	0.08227	0
134044	0.39806	0	-1.31324	0	0.00000	0

continued

IREF	Parameters and Measures of Standard Error					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
51572	0.94196	0	0.46265	0	0.24739	0
134033	0.52155	0	0.86354	0	0.20637	0
51262	1.04382	0	0.99982	0	0.31144	0
134045	0.72374	0	0.75619	0	0.16424	0
134038	1.72627	0	0.26004	0	0.18469	0
132557	1.12663	0	-0.27111	0	0.22662	0
50556	0.77558	0	-1.10605	0	0.06638	0
132640	1.16575	0	-0.37981	0	0.16332	0
133557	0.78783	0	-0.63334	0	0.16615	0
51496	0.91277	0	1.07257	0	0.23255	0
50560	0.73795	0	0.77594	0	0.10012	0
51154	0.74558	0	-0.58464	0	0.13364	0
133687	0.56786	0	-0.26598	0	0.07661	0
152476	0.95352	0	-1.12969	0	0.10463	0
51268	0.63859	0	0.78361	0	0.10880	0
51265	0.99275	0	-0.79618	0	0.12188	0
152480	0.62317	0	0.32300	0	0.11984	0
152481	1.21664	0	-0.45150	0	0.24137	0
152483	0.30851	0	0.91629	0	0.07770	0
152484	0.71516	0	-0.71030	0	0.10205	0
152498	1.49009	0	-0.43350	0	0.20979	0
51493	0.46112	0	0.40029	0	0.17887	0
51484	0.98338	0	-1.04218	0	0.10989	0
51334	0.66112	0	-0.41053	0	0.14913	0
51347	0.58831	0	0.68285	0	0.09290	0
51606	0.72367	0	-0.24285	0	0.17200	0
51617	0.93599	0	0.76839	0	0.16803	0
51499	0.69967	0	-0.50352	0	0.05679	0
51500	0.93852	0	-1.14643	0	0.09258	0
51485	0.85573	0	-0.69880	0	0.17572	0
51152	0.82473	0	-0.61108	0	0.18565	0
51602	1.07109	0	-0.77944	0	0.12448	0
51498	0.32744	0	-0.85807	0	0.00000	0
51497	0.79210	0	0.04017	0	0.17838	0
51157	1.18622	0	0.42186	0	0.23703	0

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
51609	1.17957	0	0.05655	0	0.28863	0
51159	0.72184	0	-0.39978	0	0.12691	0
51151	0.60827	0	0.57209	0	0.25495	0
51611	0.85413	0	-0.85248	0	0.16890	0
51331	0.83816	0	2.68645	0	0.39707	0
51608	0.72457	0	-0.09905	0	0.27030	0
51487	0.72435	0	-0.69735	0	0.15348	0
51613	0.89559	0	-0.94928	0	0.10311	0
51610	0.68693	0	-0.65896	0	0.11237	0
51353	1.29559	0	0.10625	0	0.25011	0
51494	0.40286	0	0.51293	0	0.12422	0
51491	0.90113	0	-0.36301	0	0.19142	0
51148	0.86316	0	-1.30636	0	0.06052	0
51486	1.21476	0	-0.86374	0	0.11808	0
51156	0.80071	0	-0.43693	0	0.06988	0
51153	0.80148	0	0.44483	0	0.13609	0
51490	0.95458	0	-0.31582	0	0.19682	0
51616	1.11488	0	-0.84638	0	0.17697	0

Table E-40. 2010–11 KCCT: IRT Parameters for Polytomous Items—Social Studies Grade 11

IREF	Parameters and Measures of Standard Error													
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)	D4	SE(D4)
51585	0.47645	0	0.16715	0	0	0	2.15779	0	1.11354	0	-1.05201	0	-2.21932	0
132449	0.79155	0	0.47017	0	0	0	2.37267	0	0.48732	0	-1.14005	0	-1.71994	0
134049	0.52662	0	0.45478	0	0	0	1.31967	0	1.18882	0	-0.75589	0	-1.75260	0
134025	0.48534	0	1.28884	0	0	0	1.48442	0	1.37834	0	-0.70657	0	-2.15618	0
152511	0.53714	0	1.04991	0	0	0	1.84358	0	0.97207	0	-0.84850	0	-1.96715	0
51619	0.62066	0	1.13715	0	0	0	1.96151	0	0.45630	0	-0.98358	0	-1.43423	0
51163	0.54473	0	0.66821	0	0	0	1.92057	0	0.62615	0	-0.70977	0	-1.83694	0
51162	0.35861	0	0.74388	0	0	0	1.33009	0	0.93623	0	-0.57249	0	-1.69382	0
51503	0.58910	0	0.22613	0	0	0	1.72282	0	1.00823	0	-1.01128	0	-1.71977	0

Table E-41. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Writing Grade 5

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
30536	0.94627	0.01804	-2.15898	0.06277	0.10743	0.04268
32394	0.46268	0.00938	-2.89160	0.06585	0.00000	0.00000
30560	0.47107	0.01263	0.28930	0.05966	0.06354	0.01789
30558	0.64555	0.01012	-1.68644	0.04813	0.04721	0.02111
30508	0.36277	0.02548	-0.85867	0.32780	0.18998	0.07307
30509	0.40364	0.02067	-1.76695	0.22465	0.13645	0.06038
30511	0.41208	0.02542	-0.62277	0.23379	0.15435	0.05963
30507	1.22110	0.04314	-0.67205	0.05023	0.16011	0.02897
30445	0.93557	0.03545	-0.58384	0.06775	0.14386	0.03298
30447	0.92995	0.03660	-0.53466	0.07046	0.16374	0.03343
30448	0.78445	0.03202	-0.81776	0.09688	0.14560	0.04340
32318	1.00054	0.03702	-0.56233	0.06120	0.14727	0.03090
30420	0.84495	0.03255	-1.14567	0.09373	0.13494	0.04659
32310	0.78243	0.03635	-0.72193	0.11169	0.20607	0.04666
30423	0.81043	0.03521	-0.25391	0.07631	0.15766	0.03167
30419	0.71792	0.03303	0.03905	0.07544	0.12568	0.02865
30521	1.00681	0.03558	-1.36080	0.07240	0.10776	0.04122
30523	1.11783	0.04001	-1.07235	0.06413	0.13100	0.03810
30524	0.57710	0.02385	-1.11857	0.12371	0.10733	0.04509
30525	0.90789	0.04710	0.72070	0.04723	0.22564	0.01700
32306	0.73246	0.03822	-0.10881	0.09875	0.21832	0.03566
30411	0.99058	0.03340	-1.20520	0.06421	0.09069	0.03509
30410	1.84557	0.06904	-0.06598	0.02692	0.28249	0.01530
30408	1.06361	0.04135	-1.56889	0.08522	0.13890	0.05199
30364	0.85517	0.03430	-1.29620	0.10460	0.15388	0.05340
30361	1.30410	0.04613	-0.73542	0.04809	0.15806	0.02929
30363	2.07067	0.07388	-0.14487	0.02315	0.24622	0.01462
30360	0.59114	0.03262	0.24086	0.10028	0.12836	0.03309
30309	0.76650	0.03871	0.59538	0.05713	0.15102	0.02099
30310	0.57042	0.04359	0.61238	0.12556	0.25423	0.03481
30313	0.76326	0.02848	-1.19731	0.09435	0.11032	0.04369
30312	0.69888	0.04146	0.47000	0.08392	0.22327	0.02761
30372	1.15733	0.04356	-0.84900	0.06287	0.17635	0.03622
30375	1.03993	0.04872	0.24091	0.05219	0.29311	0.02034

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
30374	1.34924	0.06638	1.13161	0.02829	0.22318	0.00920
30376	0.84638	0.03588	-0.27503	0.07327	0.16226	0.03142
30393	0.76874	0.03277	-0.22009	0.07605	0.12859	0.03114
30395	1.17988	0.04673	0.26410	0.03643	0.20474	0.01636
30396	0.67083	0.02959	-1.23889	0.14068	0.16040	0.05850
30397	0.71390	0.02775	-1.05178	0.10110	0.11451	0.04388
30494	1.48482	0.05564	0.44261	0.02527	0.20238	0.01177
30495	0.87442	0.03985	-0.26834	0.07862	0.22333	0.03251
30493	0.86980	0.03445	-0.38783	0.06863	0.13666	0.03103
30497	0.56879	0.02800	-0.88517	0.15908	0.15402	0.05527
30348	0.93220	0.03888	-1.75385	0.11313	0.16650	0.06398
32298	0.90521	0.03675	-1.24231	0.10135	0.16934	0.05298
30350	0.65854	0.02739	-0.42942	0.09004	0.09920	0.03433
30347	0.49062	0.02454	-0.89514	0.17196	0.13268	0.05314
32319	0.28799	0.02531	0.15334	0.34020	0.15192	0.06102
30442	0.58055	0.02702	-0.87132	0.14239	0.13658	0.05069
30438	0.89775	0.04550	0.75707	0.04552	0.20090	0.01660
30436	0.95396	0.05496	1.04847	0.04342	0.25545	0.01405

Table E-42. 2010–11 KCCT: IRT Parameters for Polytomous Items—Writing Grade 5

IREF	Parameters and Measures of Standard Error											
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)
37875C	0.43952	0.00932	0.27877	0.02422	0	0	1.34607	0.25980	3.20250	0.21208	0.87721	0.12739
37875S	0.43952	0.00932	0.27877	0.02422	0	0	1.34607	0.25980	3.20250	0.21208	0.87721	0.12739
37875V	0.43952	0.00932	0.27877	0.02422	0	0	1.34607	0.25980	3.20250	0.21208	0.87721	0.12739
30334C	0.34106	0.00518	-0.06353	0.02401	0	0	0.60119	0.53638	5.07329	0.42849	0.60308	0.17046
30334S	0.34106	0.00518	-0.06353	0.02401	0	0	0.60119	0.53638	5.07329	0.42849	0.60308	0.17046
30334V	0.34106	0.00518	-0.06353	0.02401	0	0	0.60119	0.53638	5.07329	0.42849	0.60308	0.17046
30414C	0.40306	0.00996	0.67189	0.03124	0	0	1.00032	0.32774	3.52023	0.28857	1.73491	0.16029
30414S	0.40306	0.00996	0.67189	0.03124	0	0	1.00032	0.32774	3.52023	0.28857	1.73491	0.16029
30414V	0.40306	0.00996	0.67189	0.03124	0	0	1.00032	0.32774	3.52023	0.28857	1.73491	0.16029
30580C	0.38733	0.00574	0.31703	0.01846	0	0	1.99185	0.22692	3.59725	0.16051	0.92291	0.09014

continued

IREF	Parameters and Measures of Standard Error											
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*
30580S	0.38733	0.00574	0.31703	0.01846	0	0	1.99185	0.22692	3.59725	0.16051	0.92291	0.09014
30580V	0.38733	0.00574	0.31703	0.01846	0	0	1.99185	0.22692	3.59725	0.16051	0.92291	0.09014
38134C	0.42116	0.00834	0.42121	0.02302	0	0	1.68744	0.22233	3.02996	0.17432	0.90835	0.11277
38134S	0.42116	0.00834	0.42121	0.02302	0	0	1.68744	0.22233	3.02996	0.17432	0.90835	0.11277
38134V	0.42116	0.00834	0.42121	0.02302	0	0	1.68744	0.22233	3.02996	0.17432	0.90835	0.11277
30272C	0.35875	0.00524	0.53597	0.02261	0	0	1.14607	0.26746	3.95878	0.21888	0.94215	0.12315
30272S	0.35875	0.00524	0.53597	0.02261	0	0	1.14607	0.26746	3.95878	0.21888	0.94215	0.12315
30272V	0.35875	0.00524	0.53597	0.02261	0	0	1.14607	0.26746	3.95878	0.21888	0.94215	0.12315
30298C	0.42677	0.00871	0.34167	0.02709	0	0	1.10709	0.30794	3.60858	0.25639	0.85675	0.14047
30298S	0.42677	0.00871	0.34167	0.02709	0	0	1.10709	0.30794	3.60858	0.25639	0.85675	0.14047
30298V	0.42677	0.00871	0.34167	0.02709	0	0	1.10709	0.30794	3.60858	0.25639	0.85675	0.14047
30583C	0.37586	0.00607	0.07888	0.02011	0	0	2.32692	0.44869	5.24884	0.26896	0.18604	0.09805
30583S	0.37586	0.00607	0.07888	0.02011	0	0	2.32692	0.44869	5.24884	0.26896	0.18604	0.09805
30583V	0.37586	0.00607	0.07888	0.02011	0	0	2.32692	0.44869	5.24884	0.26896	0.18604	0.09805
32312C	0.33190	0.00586	0.33215	0.02343	0	0	1.00141	0.35863	5.69260	0.27843	0.53146	0.10724
32312S	0.33190	0.00586	0.33215	0.02343	0	0	1.00141	0.35863	5.69260	0.27843	0.53146	0.10724
32312V	0.33190	0.00586	0.33215	0.02343	0	0	1.00141	0.35863	5.69260	0.27843	0.53146	0.10724
38129C	0.36282	0.00758	0.41248	0.02359	0	0	1.40765	0.25519	3.16471	0.19971	0.94874	0.12373
38129S	0.36282	0.00758	0.41248	0.02359	0	0	1.40765	0.25519	3.16471	0.19971	0.94874	0.12373
38129V	0.36282	0.00758	0.41248	0.02359	0	0	1.40765	0.25519	3.16471	0.19971	0.94874	0.12373
30512C	0.37997	0.00738	0.21696	0.02479	0	0	1.21684	0.44035	5.34579	0.33627	0.52204	0.12220
30512S	0.37997	0.00738	0.21696	0.02479	0	0	1.21684	0.44035	5.34579	0.33627	0.52204	0.12220
30512V	0.37997	0.00738	0.21696	0.02479	0	0	1.21684	0.44035	5.34579	0.33627	0.52204	0.12220
30582C	0.34820	0.00596	0.29466	0.02570	0	0	1.20961	0.44596	5.48397	0.33807	0.90193	0.12317
30582S	0.34820	0.00596	0.29466	0.02570	0	0	1.20961	0.44596	5.48397	0.33807	0.90193	0.12317
30582V	0.34820	0.00596	0.29466	0.02570	0	0	1.20961	0.44596	5.48397	0.33807	0.90193	0.12317

IREF (continued)	Parameters and Measures of Standard Error									
	D4	*SE(D4)*	*D5*	*SE(D5)*	*D6*	*SE(D6)*	*D7*	*SE(D7)*	*D8*	*SE(D8)*
37875C	2.32348	0.09890	-0.99704	0.07650	-0.64239	0.09253	-4.55304	0.27580	-1.55681	0.40214
37875S	2.32348	0.09890	-0.99704	0.07650	-0.64239	0.09253	-4.55304	0.27580	-1.55681	0.40214
37875V	2.32348	0.09890	-0.99704	0.07650	-0.64239	0.09253	-4.55304	0.27580	-1.55681	0.40214
30334C	3.88733	0.12575	-1.02890	0.06604	-0.57757	0.07337	-4.76762	0.16409	-3.79079	0.35447
30334S	3.88733	0.12575	-1.02890	0.06604	-0.57757	0.07337	-4.76762	0.16409	-3.79079	0.35447
30334V	3.88733	0.12575	-1.02890	0.06604	-0.57757	0.07337	-4.76762	0.16409	-3.79079	0.35447

continued

IREF (continued)	Parameters and Measures of Standard Error									
	D4	SE(D4)	D5	SE(D5)	D6	SE(D6)	D7	SE(D7)	D8	SE(D8)
30414C	2.42538	0.11249	-1.00622	0.09809	-0.62206	0.12669	-4.89949	0.43683	-2.15307	0.77828
30414S	2.42538	0.11249	-1.00622	0.09809	-0.62206	0.12669	-4.89949	0.43683	-2.15307	0.77828
30414V	2.42538	0.11249	-1.00622	0.09809	-0.62206	0.12669	-4.89949	0.43683	-2.15307	0.77828
30580C	2.23435	0.07071	-1.02417	0.05870	-1.01073	0.07596	-3.77977	0.16989	-2.93167	0.33030
30580S	2.23435	0.07071	-1.02417	0.05870	-1.01073	0.07596	-3.77977	0.16989	-2.93167	0.33030
30580V	2.23435	0.07071	-1.02417	0.05870	-1.01073	0.07596	-3.77977	0.16989	-2.93167	0.33030
38134C	2.16708	0.08929	-1.15880	0.07791	-0.98581	0.10448	-3.28351	0.21708	-2.36470	0.37204
38134S	2.16708	0.08929	-1.15880	0.07791	-0.98581	0.10448	-3.28351	0.21708	-2.36470	0.37204
38134V	2.16708	0.08929	-1.15880	0.07791	-0.98581	0.10448	-3.28351	0.21708	-2.36470	0.37204
30272C	3.36968	0.09394	-1.43925	0.07073	-0.76198	0.09391	-4.43315	0.24417	-2.78231	0.47263
30272S	3.36968	0.09394	-1.43925	0.07073	-0.76198	0.09391	-4.43315	0.24417	-2.78231	0.47263
30272V	3.36968	0.09394	-1.43925	0.07073	-0.76198	0.09391	-4.43315	0.24417	-2.78231	0.47263
30298C	2.67763	0.10776	-1.32699	0.08243	-1.14527	0.11365	-3.44452	0.24483	-2.33327	0.40790
30298S	2.67763	0.10776	-1.32699	0.08243	-1.14527	0.11365	-3.44452	0.24483	-2.33327	0.40790
30298V	2.67763	0.10776	-1.32699	0.08243	-1.14527	0.11365	-3.44452	0.24483	-2.33327	0.40790
30583C	2.21588	0.08204	-1.09435	0.06299	-0.84884	0.07436	-4.47079	0.17592	-3.56370	0.38075
30583S	2.21588	0.08204	-1.09435	0.06299	-0.84884	0.07436	-4.47079	0.17592	-3.56370	0.38075
30583V	2.21588	0.08204	-1.09435	0.06299	-0.84884	0.07436	-4.47079	0.17592	-3.56370	0.38075
32312C	2.21858	0.09061	-1.01847	0.07788	-1.00869	0.09820	-5.51326	0.30465	-1.90363	0.48101
32312S	2.21858	0.09061	-1.01847	0.07788	-1.00869	0.09820	-5.51326	0.30465	-1.90363	0.48101
32312V	2.21858	0.09061	-1.01847	0.07788	-1.00869	0.09820	-5.51326	0.30465	-1.90363	0.48101
38129C	1.87619	0.09852	-1.08647	0.08966	-0.65844	0.10883	-3.30695	0.19932	-2.34543	0.33189
38129S	1.87619	0.09852	-1.08647	0.08966	-0.65844	0.10883	-3.30695	0.19932	-2.34543	0.33189
38129V	1.87619	0.09852	-1.08647	0.08966	-0.65844	0.10883	-3.30695	0.19932	-2.34543	0.33189
30512C	2.43712	0.09952	-1.03351	0.07632	-0.69471	0.09075	-4.70223	0.23986	-3.09133	0.48172
30512S	2.43712	0.09952	-1.03351	0.07632	-0.69471	0.09075	-4.70223	0.23986	-3.09133	0.48172
30512V	2.43712	0.09952	-1.03351	0.07632	-0.69471	0.09075	-4.70223	0.23986	-3.09133	0.48172
30582C	2.73252	0.09451	-1.29501	0.07434	-1.07534	0.09668	-6.05023	0.36247	-1.90745	0.57096
30582S	2.73252	0.09451	-1.29501	0.07434	-1.07534	0.09668	-6.05023	0.36247	-1.90745	0.57096
30582V	2.73252	0.09451	-1.29501	0.07434	-1.07534	0.09668	-6.05023	0.36247	-1.90745	0.57096

Table E-43. 2010–11 KCCT: IRT Parameters for Dichotomous Items—Writing Grade 8

IREF	*Parameters and Measures of Standard Error*					
	a	*SE (a)*	*b*	*SE (b)*	*c*	*SE (c)*
31259	0.39951	0.00977	-1.10957	0.10774	0.07240	0.03056
31260	0.69685	0.01720	0.13847	0.04140	0.22095	0.01408
31261	0.67040	0.00988	-1.29717	0.03674	0.03620	0.01584
32391	1.03911	0.01815	-0.21343	0.02340	0.21441	0.01078
31497	0.58011	0.04918	1.15961	0.08914	0.24806	0.02502
31493	1.13334	0.03732	-0.69158	0.04543	0.10479	0.02512
31495	1.03152	0.03884	-0.76561	0.06369	0.16159	0.03325
31491	0.92318	0.03500	-0.86360	0.07380	0.14011	0.03701
32397	1.06311	0.03838	-1.17126	0.06799	0.13175	0.03958
31227	1.10112	0.04178	-0.37162	0.04973	0.18994	0.02442
31229	0.90516	0.03102	-0.42985	0.05088	0.08457	0.02370
31228	0.89529	0.03175	-0.83725	0.06647	0.10500	0.03283
31104	0.98310	0.03875	-0.34886	0.05742	0.15118	0.02758
31105	1.03741	0.03841	-0.92061	0.06534	0.12891	0.03637
68893	0.85231	0.03830	-0.21650	0.07237	0.17701	0.03055
31109	0.80134	0.03341	-0.31024	0.07133	0.12057	0.03058
31219	1.16110	0.04252	-1.14813	0.06223	0.12559	0.03852
31218	0.88175	0.04132	0.23833	0.05614	0.18571	0.02242
31220	2.00454	0.07344	-0.54958	0.02779	0.21104	0.01959
32419	0.81706	0.02971	-0.83115	0.07201	0.09244	0.03367
31208	0.73122	0.03957	-0.12577	0.10044	0.22567	0.03586
31209	1.34354	0.05174	-1.17339	0.05867	0.15726	0.03945
51736	0.97735	0.03514	-0.74166	0.06063	0.10894	0.03142
31213	1.30785	0.04868	-0.24887	0.03914	0.19612	0.02071
31265	0.65701	0.03683	0.45206	0.07814	0.14031	0.02696
31267	1.19803	0.06128	1.03765	0.03195	0.22134	0.01069
31268	1.33536	0.04720	-0.16370	0.03396	0.16103	0.01814
31275	1.10114	0.03854	-0.85686	0.05490	0.11058	0.03116
32426	0.58352	0.03886	0.24513	0.12469	0.19864	0.03814
31444	1.12610	0.04010	-0.74188	0.05271	0.12145	0.02971
68894	0.93913	0.03080	-0.91616	0.05482	0.07158	0.02747
31453	0.75960	0.04568	0.46458	0.07616	0.25589	0.02539
31278	1.08486	0.03850	-0.70678	0.05328	0.11492	0.02923
31281	0.80827	0.03160	-0.77782	0.08073	0.11309	0.03715

continued

IREF	Parameters and Measures of Standard Error					
	a	SE (a)	b	SE (b)	c	SE (c)
31279	0.84223	0.03681	-0.19717	0.06908	0.15264	0.02939
31280	1.40006	0.05111	-0.63406	0.04260	0.17661	0.02597
31432	0.95442	0.04314	-0.86107	0.09408	0.23849	0.04550
32418	0.40235	0.02172	-1.73816	0.22867	0.13877	0.06123
31434	1.28991	0.04584	-0.63569	0.04454	0.14607	0.02656
31436	0.66972	0.02515	-1.41379	0.09218	0.08326	0.03700
31112	0.70988	0.03766	0.05718	0.08865	0.17603	0.03225
31113	1.31530	0.04620	-0.50381	0.04043	0.14691	0.02367
31116	1.46110	0.04957	-0.61691	0.03614	0.13166	0.02294
31117	1.08120	0.06036	0.89921	0.04003	0.28245	0.01359
37890	0.57569	0.02702	-0.60138	0.12130	0.11328	0.04245
31405	0.35183	0.03180	-0.27787	0.35948	0.21651	0.07325
36559	0.79616	0.03657	0.05657	0.06587	0.14162	0.02637
31408	0.61254	0.03638	0.49598	0.08617	0.13340	0.02872
31194	1.48258	0.05648	-0.59456	0.04187	0.22169	0.02543
31195	1.12402	0.03881	-1.22209	0.05702	0.09190	0.03397
31196	1.36003	0.04843	-1.04501	0.04838	0.11984	0.03210
31197	0.44997	0.03681	0.01951	0.22928	0.21529	0.05695

Table E-44. 2010–11 KCCT: IRT Parameters for Polytomous Items—Writing Grade 8

IREF	Parameters and Measures of Standard Error											
	a	SE(a)	b	SE(b)	c	SE(c)	D1	SE(D1)	D2	SE(D2)	D3	SE(D3)
31581C	0.40149	0.00685	0.54027	0.01953	0	0	1.22783	0.17022	3.53441	0.14264	0.80622	0.08863
31581S	0.40149	0.00685	0.54027	0.01953	0	0	1.22783	0.17022	3.53441	0.14264	0.80622	0.08863
31581V	0.40149	0.00685	0.54027	0.01953	0	0	1.22783	0.17022	3.53441	0.14264	0.80622	0.08863
31199C	0.41602	0.00768	0.35519	0.01924	0	0	0.59267	0.21286	3.52907	0.18402	0.69593	0.10093
31199S	0.41602	0.00768	0.35519	0.01924	0	0	0.59267	0.21286	3.52907	0.18402	0.69593	0.10093
31199V	0.41602	0.00768	0.35519	0.01924	0	0	0.59267	0.21286	3.52907	0.18402	0.69593	0.10093
32348C	0.38174	0.00703	0.14380	0.02195	0	0	1.28098	0.26668	3.40567	0.20844	0.89775	0.11693
32348S	0.38174	0.00703	0.14380	0.02195	0	0	1.28098	0.26668	3.40567	0.20844	0.89775	0.11693
32348V	0.38174	0.00703	0.14380	0.02195	0	0	1.28098	0.26668	3.40567	0.20844	0.89775	0.11693
37679C	0.36356	0.00670	0.35709	0.02243	0	0	1.55023	0.24591	3.47153	0.18732	0.97068	0.10932

continued

IREF	Parameters and Measures of Standard Error											
	a	*SE(a)*	*b*	*SE(b)*	*c*	*SE(c)*	*D1*	*SE(D1)*	*D2*	*SE(D2)*	*D3*	*SE(D3)*
37679S	0.36356	0.00670	0.35709	0.02243	0	0	1.55023	0.24591	3.47153	0.18732	0.97068	0.10932
37679V	0.36356	0.00670	0.35709	0.02243	0	0	1.55023	0.24591	3.47153	0.18732	0.97068	0.10932
32364C	0.38660	0.00682	-0.04629	0.02016	0	0	0.73242	0.29525	3.52915	0.24413	0.51758	0.13492
32364S	0.38660	0.00682	-0.04629	0.02016	0	0	0.73242	0.29525	3.52915	0.24413	0.51758	0.13492
32364V	0.38660	0.00682	-0.04629	0.02016	0	0	0.73242	0.29525	3.52915	0.24413	0.51758	0.13492
31585C	0.35395	0.00769	0.39702	0.02491	0	0	1.51145	0.22432	2.89620	0.18191	0.81728	0.13003
31585S	0.35395	0.00769	0.39702	0.02491	0	0	1.51145	0.22432	2.89620	0.18191	0.81728	0.13003
31585V	0.35395	0.00769	0.39702	0.02491	0	0	1.51145	0.22432	2.89620	0.18191	0.81728	0.13003
31574C	0.45138	0.00886	0.47255	0.02261	0	0	1.52995	0.19194	2.99340	0.15449	0.76196	0.10086
31574S	0.45138	0.00886	0.47255	0.02261	0	0	1.52995	0.19194	2.99340	0.15449	0.76196	0.10086
31574V	0.45138	0.00886	0.47255	0.02261	0	0	1.52995	0.19194	2.99340	0.15449	0.76196	0.10086
31428C	0.39560	0.00599	0.12959	0.02049	0	0	1.15187	0.27061	3.34791	0.21673	0.97674	0.12012
31428S	0.39560	0.00599	0.12959	0.02049	0	0	1.15187	0.27061	3.34791	0.21673	0.97674	0.12012
31428V	0.39560	0.00599	0.12959	0.02049	0	0	1.15187	0.27061	3.34791	0.21673	0.97674	0.12012
31230C	0.30882	0.00632	0.25191	0.02580	0	0	0.78510	0.31163	3.84911	0.25865	0.82066	0.15290
31230S	0.30882	0.00632	0.25191	0.02580	0	0	0.78510	0.31163	3.84911	0.25865	0.82066	0.15290
31230V	0.30882	0.00632	0.25191	0.02580	0	0	0.78510	0.31163	3.84911	0.25865	0.82066	0.15290
31501C	0.38444	0.00763	0.15712	0.02031	0	0	1.65497	0.24466	3.02125	0.18126	1.01848	0.10831
31501S	0.38444	0.00763	0.15712	0.02031	0	0	1.65497	0.24466	3.02125	0.18126	1.01848	0.10831
31501V	0.38444	0.00763	0.15712	0.02031	0	0	1.65497	0.24466	3.02125	0.18126	1.01848	0.10831
37719C	0.34914	0.00881	0.05802	0.02661	0	0	0.50836	0.29694	2.39079	0.27119	1.15260	0.19038
37719S	0.34914	0.00881	0.05802	0.02661	0	0	0.50836	0.29694	2.39079	0.27119	1.15260	0.19038
37719V	0.34914	0.00881	0.05802	0.02661	0	0	0.50836	0.29694	2.39079	0.27119	1.15260	0.19038
31118C	0.36565	0.00604	0.23951	0.01927	0	0	1.80502	0.22529	3.38672	0.16327	0.66934	0.09923
31118S	0.36565	0.00604	0.23951	0.01927	0	0	1.80502	0.22529	3.38672	0.16327	0.66934	0.09923
31118V	0.36565	0.00604	0.23951	0.01927	0	0	1.80502	0.22529	3.38672	0.16327	0.66934	0.09923

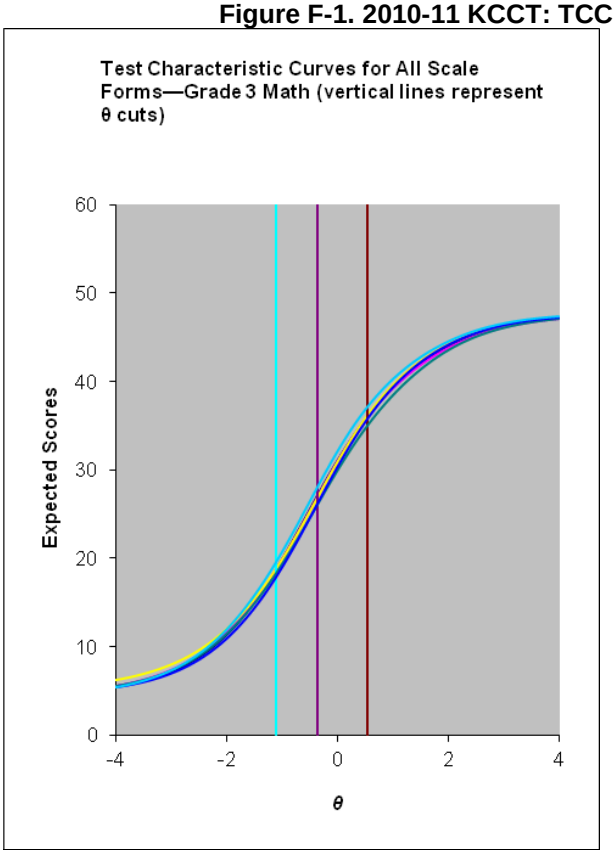
IREF (continued)	Parameters and Measures of Standard Error									
	D4	*SE(D4)*	*D5*	*SE(D5)*	*D6*	*SE(D6)*	*D7*	*SE(D7)*	*D8*	*SE(D8)*
31581C	2.10673	0.07488	-1.61121	0.08054	-0.60291	0.10803	-2.90810	0.19814	-2.55297	0.36088
31581S	2.10673	0.07488	-1.61121	0.08054	-0.60291	0.10803	-2.90810	0.19814	-2.55297	0.36088
31581V	2.10673	0.07488	-1.61121	0.08054	-0.60291	0.10803	-2.90810	0.19814	-2.55297	0.36088
31199C	1.98929	0.08195	-1.13562	0.07195	-0.53242	0.08690	-3.14929	0.16039	-1.98962	0.25050
31199S	1.98929	0.08195	-1.13562	0.07195	-0.53242	0.08690	-3.14929	0.16039	-1.98962	0.25050
31199V	1.98929	0.08195	-1.13562	0.07195	-0.53242	0.08690	-3.14929	0.16039	-1.98962	0.25050

continued

IREF (continued)	Parameters and Measures of Standard Error									
	D4	SE(D4)	D5	SE(D5)	D6	SE(D6)	D7	SE(D7)	D8	SE(D8)
32348C	2.10642	0.08983	-1.41327	0.07872	-0.67290	0.09591	-3.34124	0.17065	-2.26344	0.26837
32348S	2.10642	0.08983	-1.41327	0.07872	-0.67290	0.09591	-3.34124	0.17065	-2.26344	0.26837
32348V	2.10642	0.08983	-1.41327	0.07872	-0.67290	0.09591	-3.34124	0.17065	-2.26344	0.26837
37679C	1.97892	0.08674	-1.55648	0.08565	-0.66704	0.10847	-3.34998	0.19841	-2.39786	0.32920
37679S	1.97892	0.08674	-1.55648	0.08565	-0.66704	0.10847	-3.34998	0.19841	-2.39786	0.32920
37679V	1.97892	0.08674	-1.55648	0.08565	-0.66704	0.10847	-3.34998	0.19841	-2.39786	0.32920
32364C	2.44457	0.10612	-0.51887	0.06922	-0.07098	0.06834	-3.59923	0.11599	-3.03464	0.21794
32364S	2.44457	0.10612	-0.51887	0.06922	-0.07098	0.06834	-3.59923	0.11599	-3.03464	0.21794
32364V	2.44457	0.10612	-0.51887	0.06922	-0.07098	0.06834	-3.59923	0.11599	-3.03464	0.21794
31585C	2.18036	0.10674	-1.30208	0.09953	-0.72799	0.12676	-3.72416	0.26135	-1.65105	0.38713
31585S	2.18036	0.10674	-1.30208	0.09953	-0.72799	0.12676	-3.72416	0.26135	-1.65105	0.38713
31585V	2.18036	0.10674	-1.30208	0.09953	-0.72799	0.12676	-3.72416	0.26135	-1.65105	0.38713
31574C	2.03899	0.08248	-1.83904	0.09009	-0.65547	0.12176	-3.37398	0.26281	-1.45582	0.37272
31574S	2.03899	0.08248	-1.83904	0.09009	-0.65547	0.12176	-3.37398	0.26281	-1.45582	0.37272
31574V	2.03899	0.08248	-1.83904	0.09009	-0.65547	0.12176	-3.37398	0.26281	-1.45582	0.37272
31428C	2.74193	0.08699	-1.57912	0.06603	-0.69680	0.08167	-3.52736	0.15425	-2.41519	0.25281
31428S	2.74193	0.08699	-1.57912	0.06603	-0.69680	0.08167	-3.52736	0.15425	-2.41519	0.25281
31428V	2.74193	0.08699	-1.57912	0.06603	-0.69680	0.08167	-3.52736	0.15425	-2.41519	0.25281
31230C	2.56242	0.12155	-0.87610	0.09695	-0.61205	0.11344	-3.39735	0.19453	-3.13179	0.36064
31230S	2.56242	0.12155	-0.87610	0.09695	-0.61205	0.11344	-3.39735	0.19453	-3.13179	0.36064
31230V	2.56242	0.12155	-0.87610	0.09695	-0.61205	0.11344	-3.39735	0.19453	-3.13179	0.36064
31501C	1.48454	0.08508	-0.76360	0.07469	-0.64727	0.08439	-3.25454	0.14797	-2.51383	0.24797
31501S	1.48454	0.08508	-0.76360	0.07469	-0.64727	0.08439	-3.25454	0.14797	-2.51383	0.24797
31501V	1.48454	0.08508	-0.76360	0.07469	-0.64727	0.08439	-3.25454	0.14797	-2.51383	0.24797
37719C	2.17384	0.14098	-0.69317	0.10928	-0.02275	0.11315	-2.99537	0.16573	-2.51430	0.26965
37719S	2.17384	0.14098	-0.69317	0.10928	-0.02275	0.11315	-2.99537	0.16573	-2.51430	0.26965
37719V	2.17384	0.14098	-0.69317	0.10928	-0.02275	0.11315	-2.99537	0.16573	-2.51430	0.26965
31118C	2.09132	0.08070	-1.18830	0.07012	-0.73247	0.08556	-3.45241	0.15897	-2.57922	0.27193
31118S	2.09132	0.08070	-1.18830	0.07012	-0.73247	0.08556	-3.45241	0.15897	-2.57922	0.27193
31118V	2.09132	0.08070	-1.18830	0.07012	-0.73247	0.08556	-3.45241	0.15897	-2.57922	0.27193

Appendix F—Test Characteristic Curve and Test Information Function Plots

Figure F-1. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 3



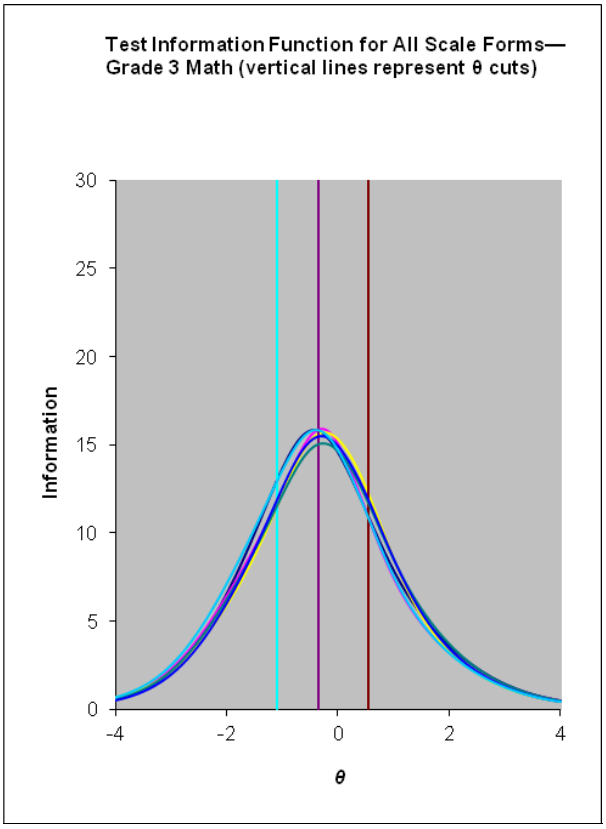
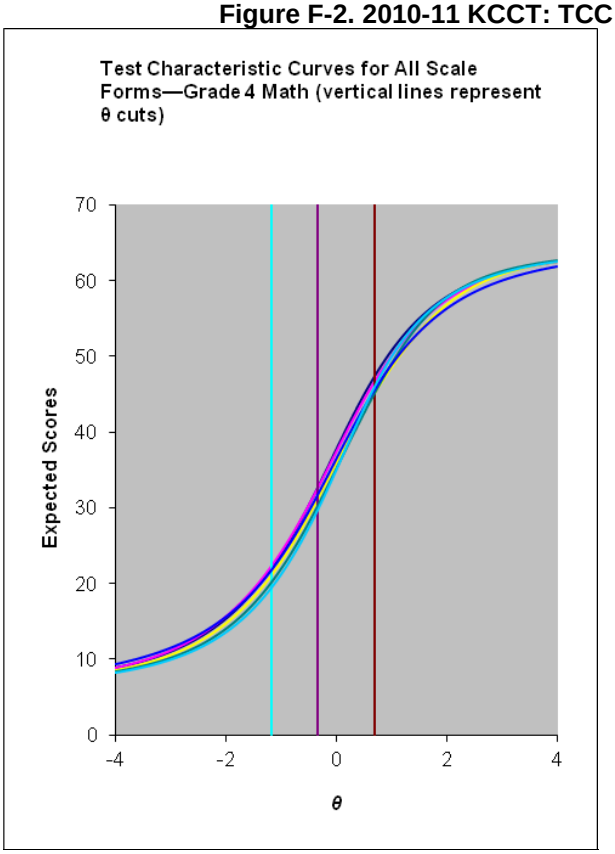


Figure F-2. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 4



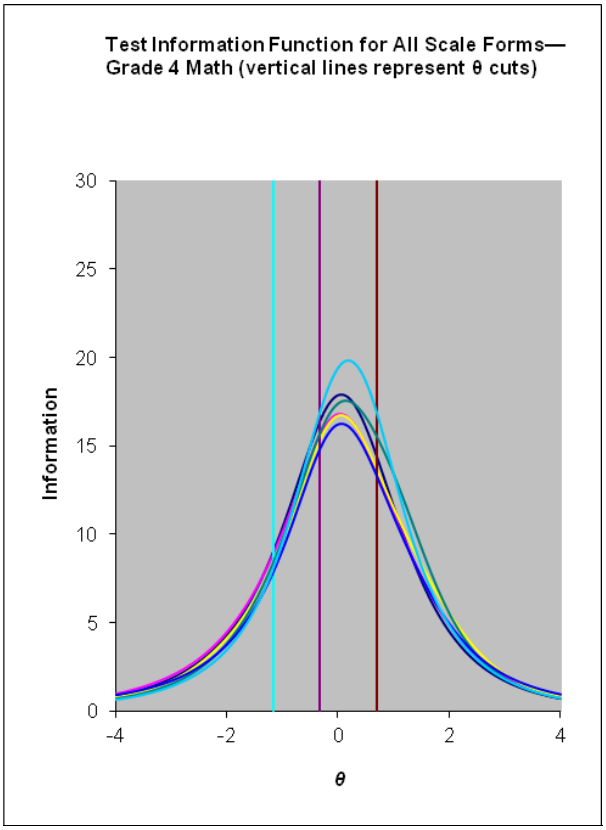
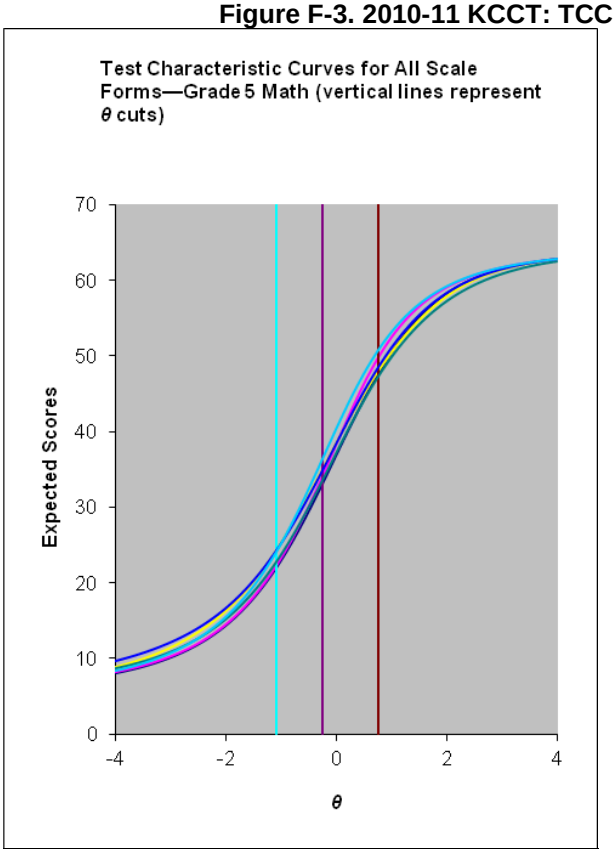


Figure F-3. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 5



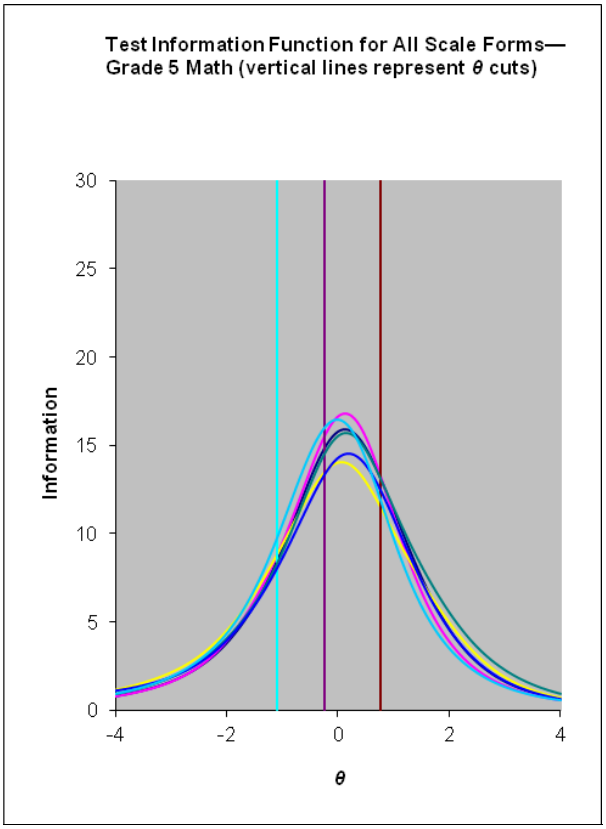
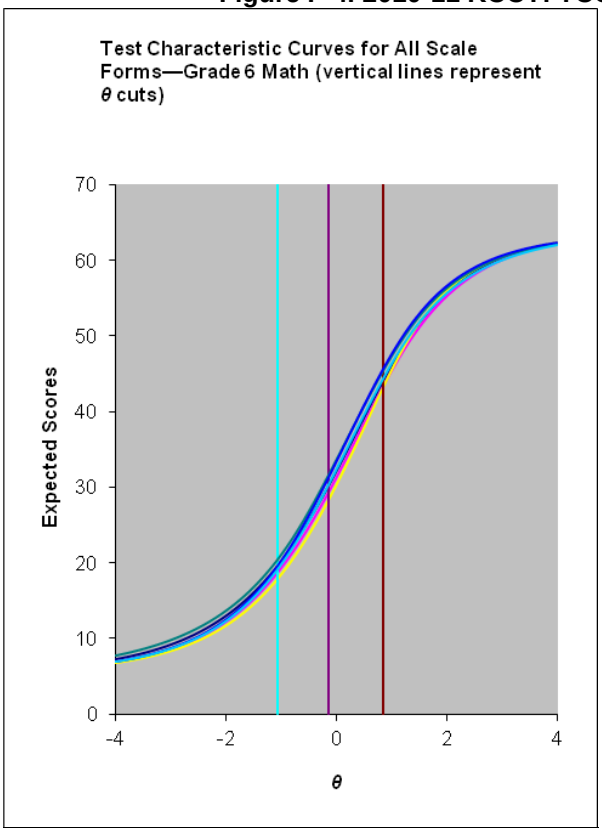


Figure F-4. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 6



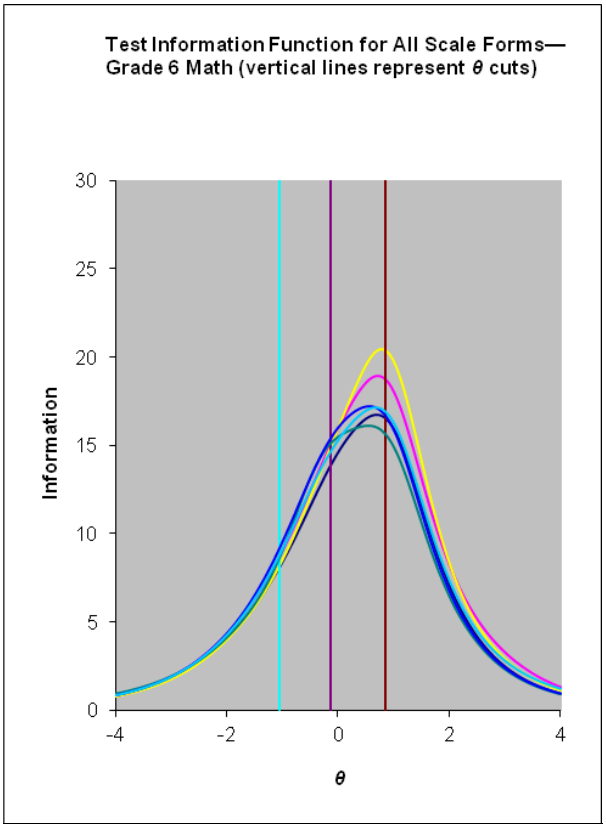
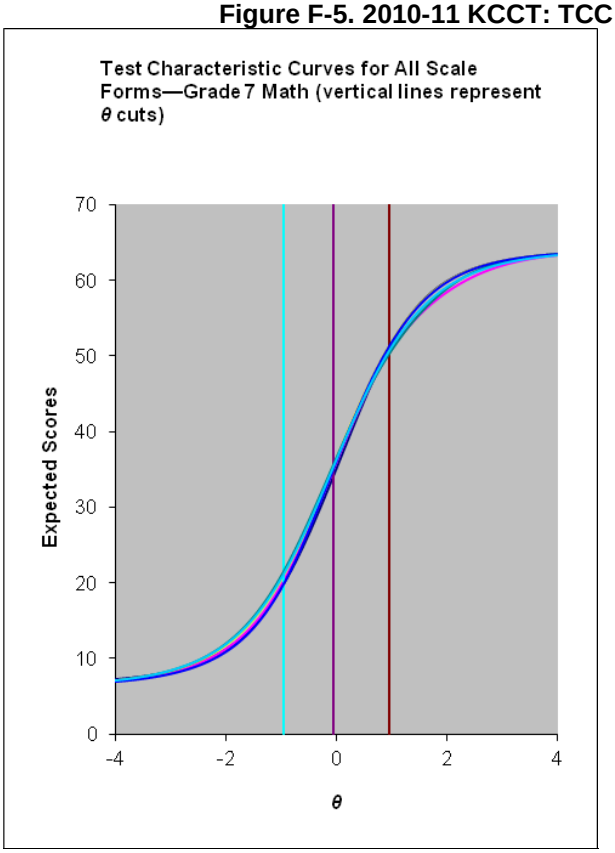


Figure F-5. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 7



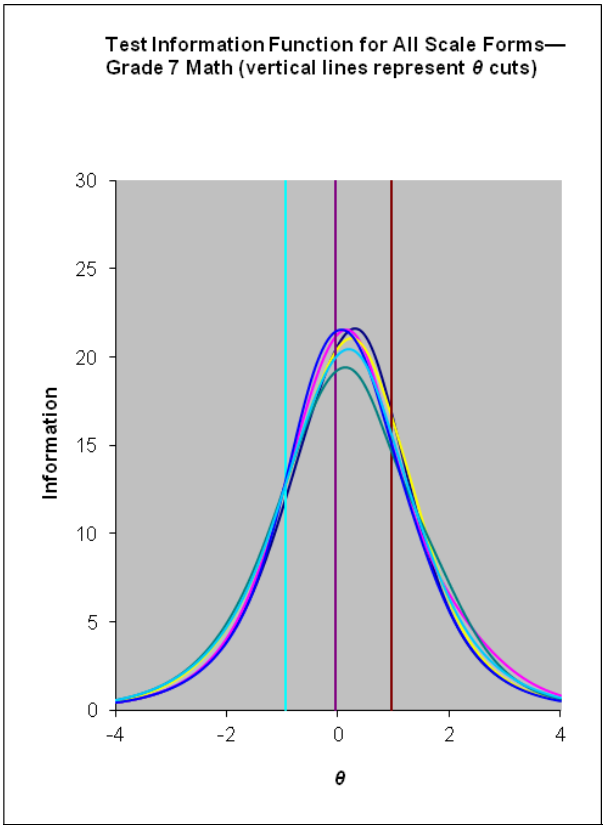
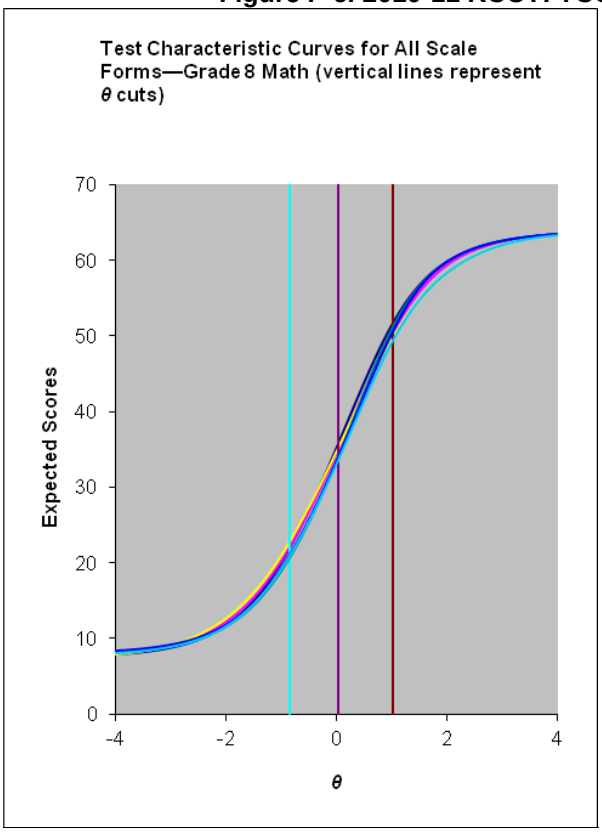


Figure F-6. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 8



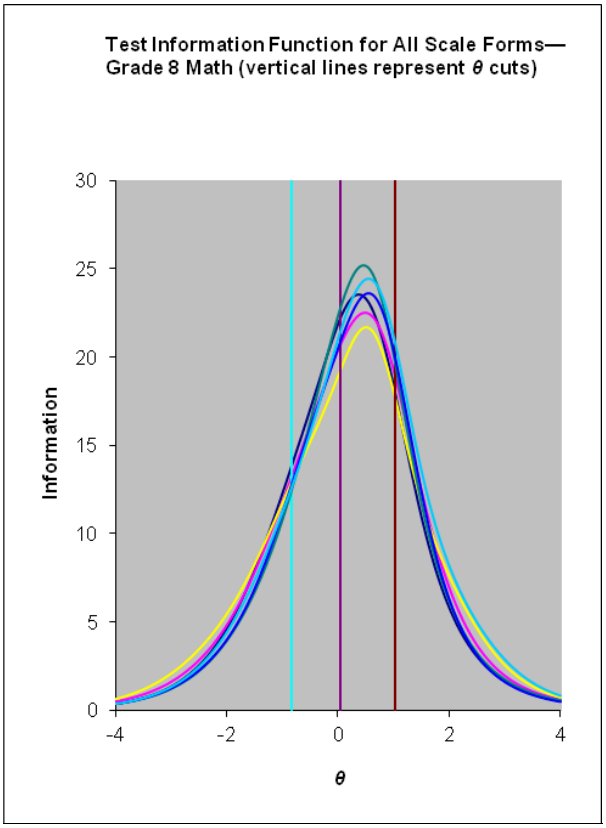
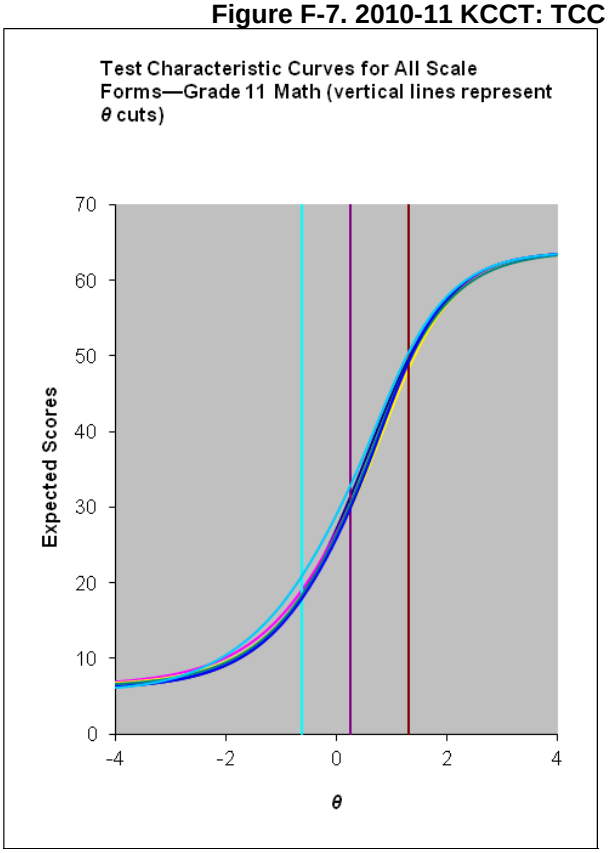


Figure F-7. 2010-11 KCCT: TCC and TIF Plots—Mathematics Grade 11



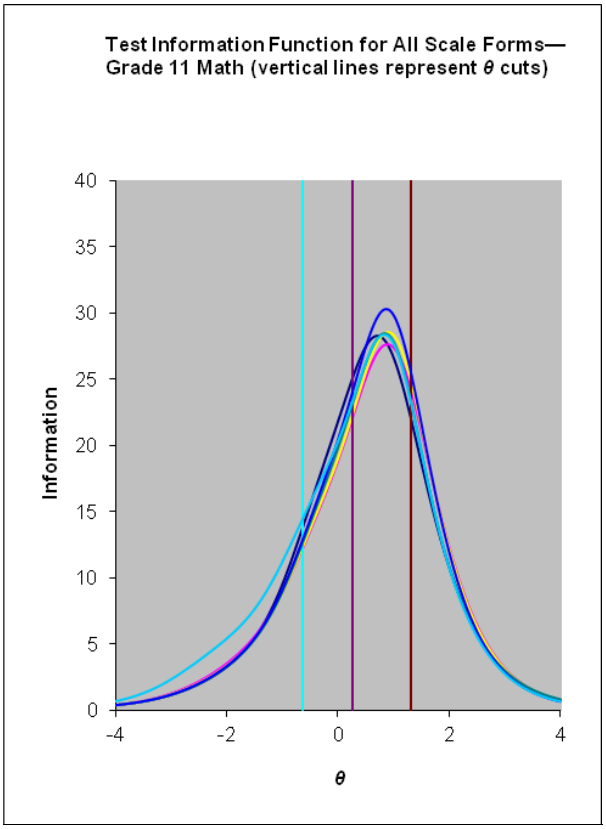
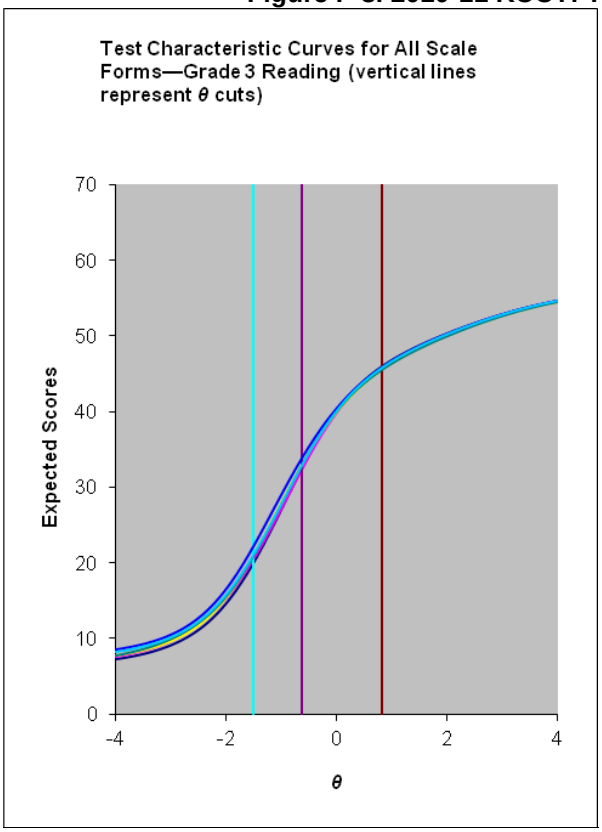


Figure F-8. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 3



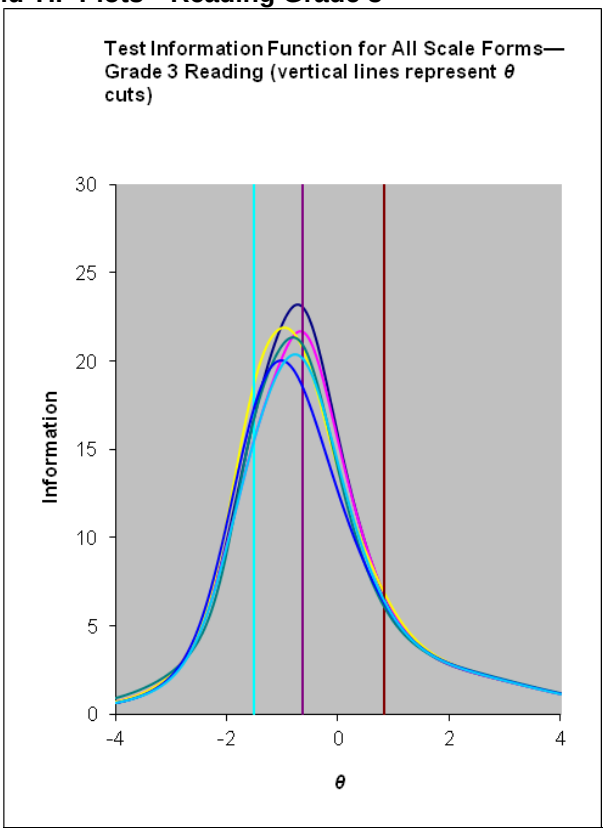
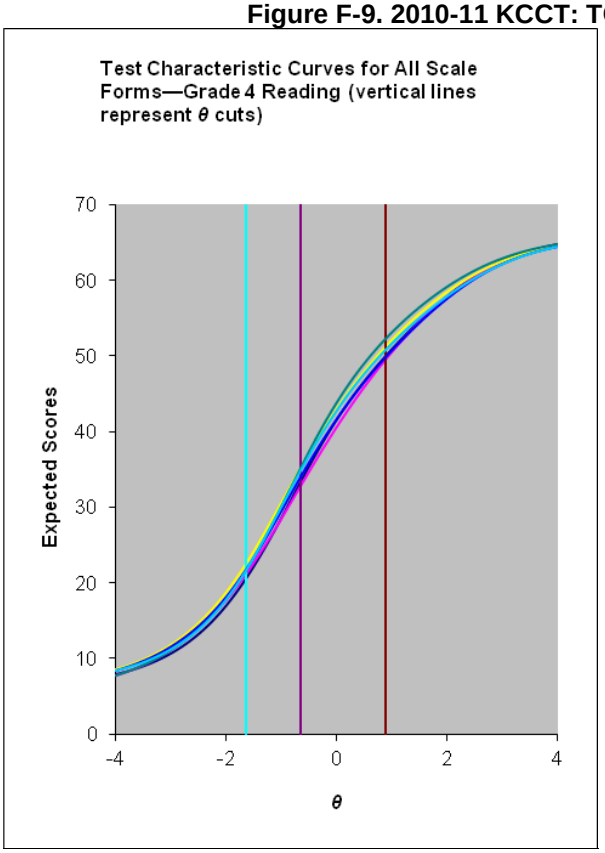


Figure F-9. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 4



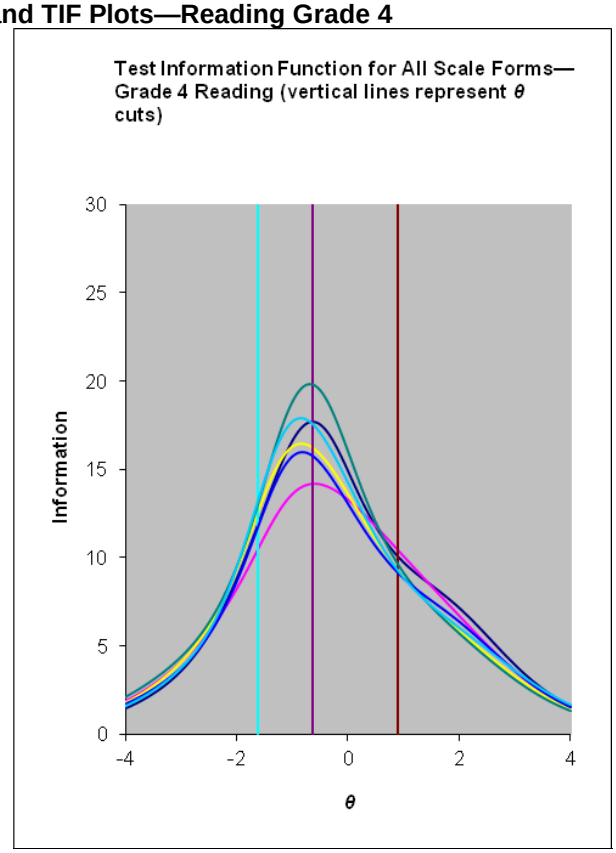
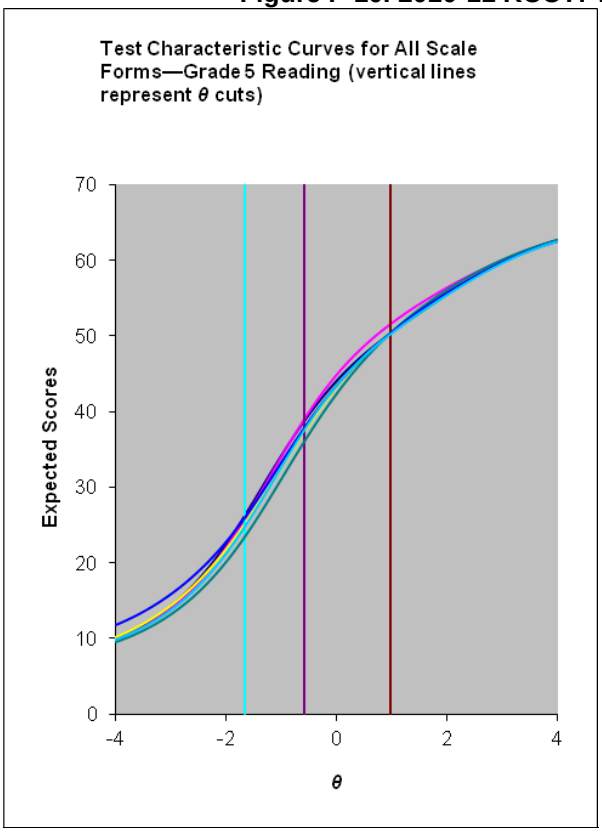


Figure F-10. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 5



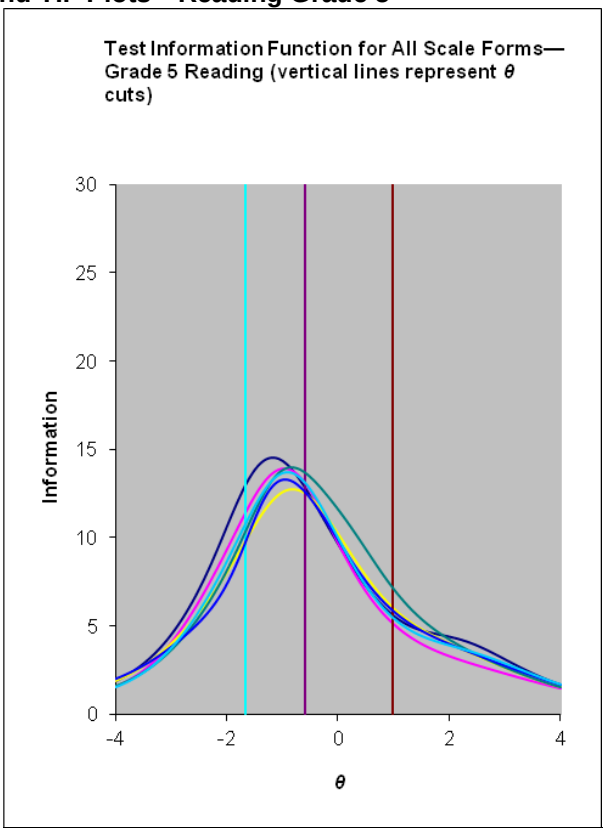
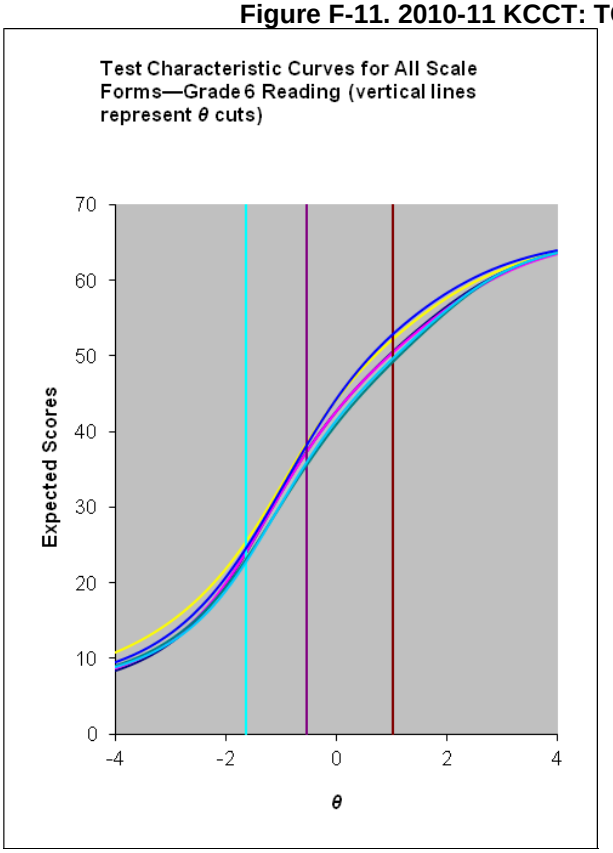


Figure F-11. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 6



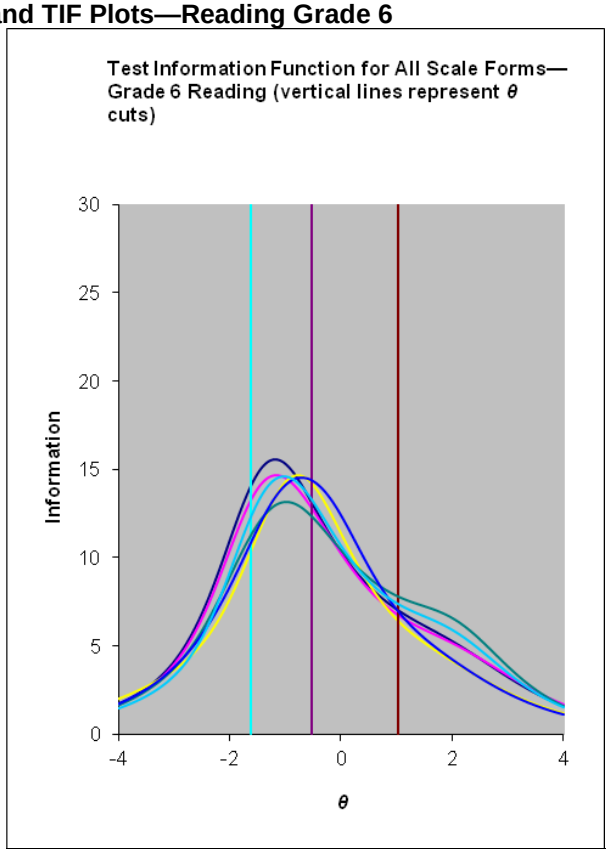
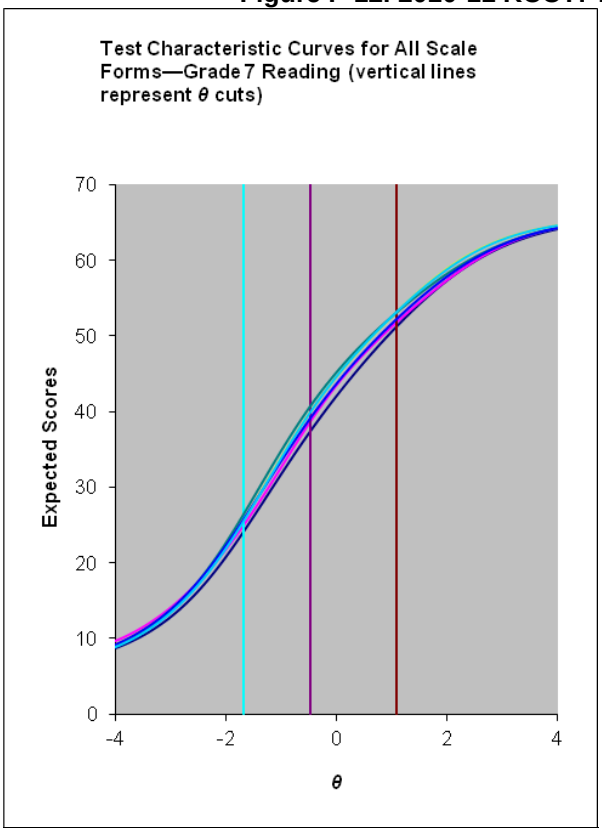


Figure F-12. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 7



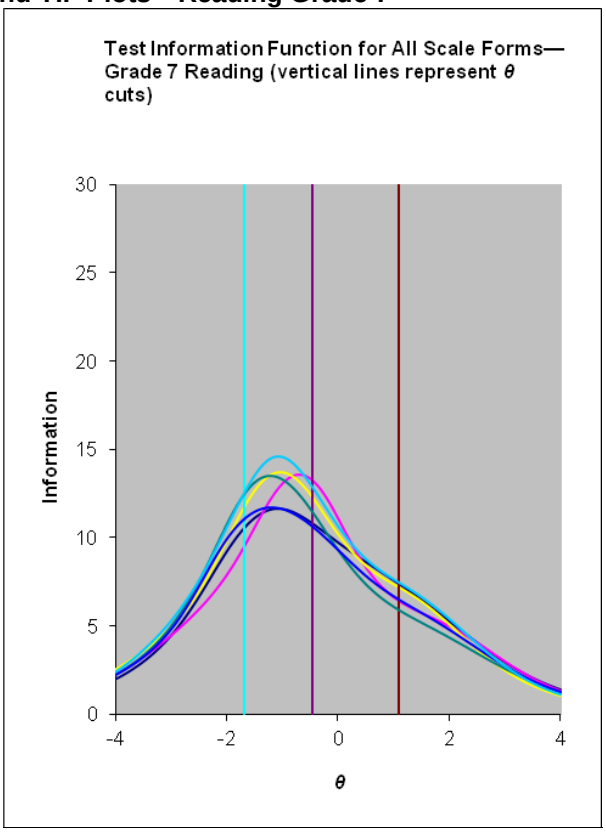
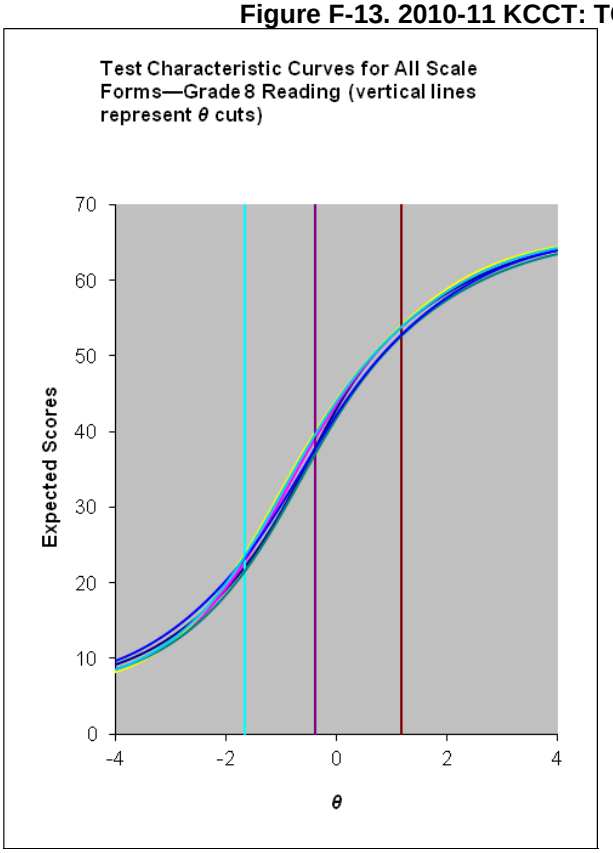


Figure F-13. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 8



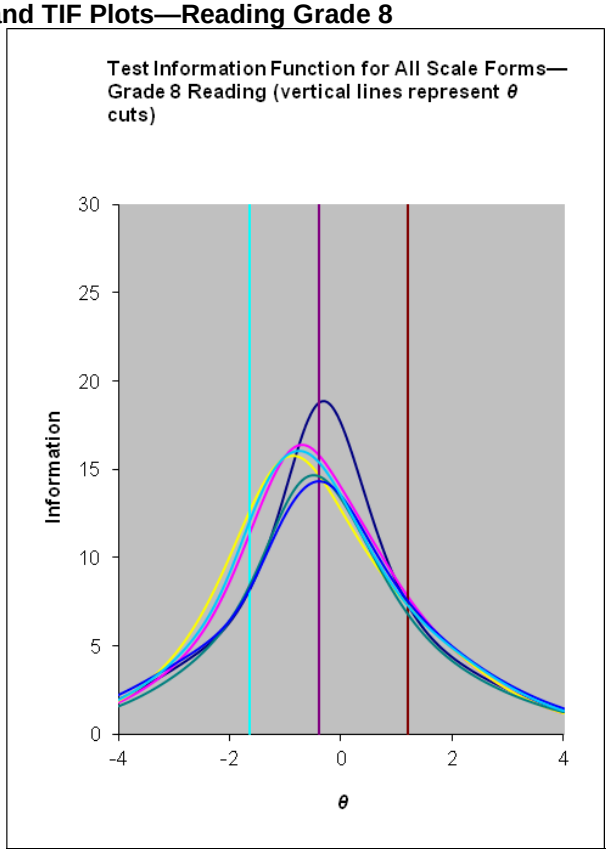
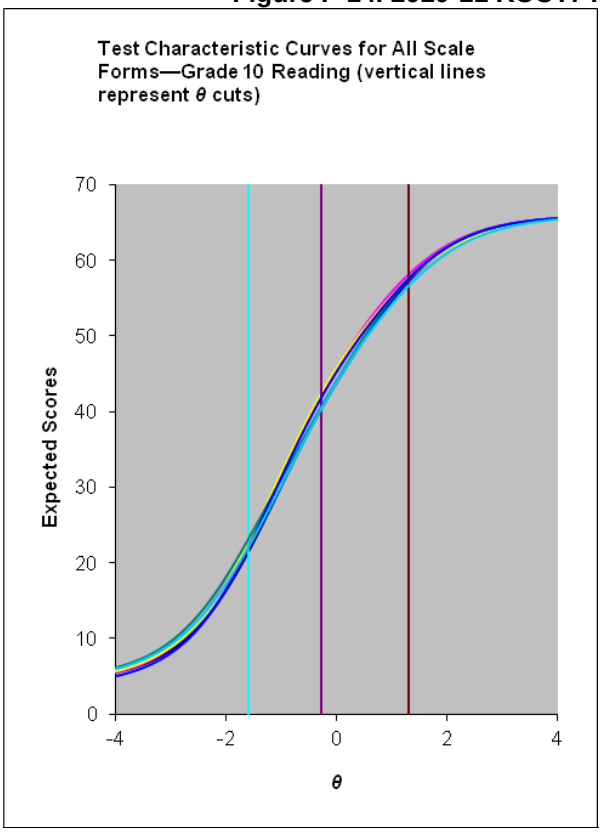


Figure F-14. 2010-11 KCCT: TCC and TIF Plots—Reading Grade 10



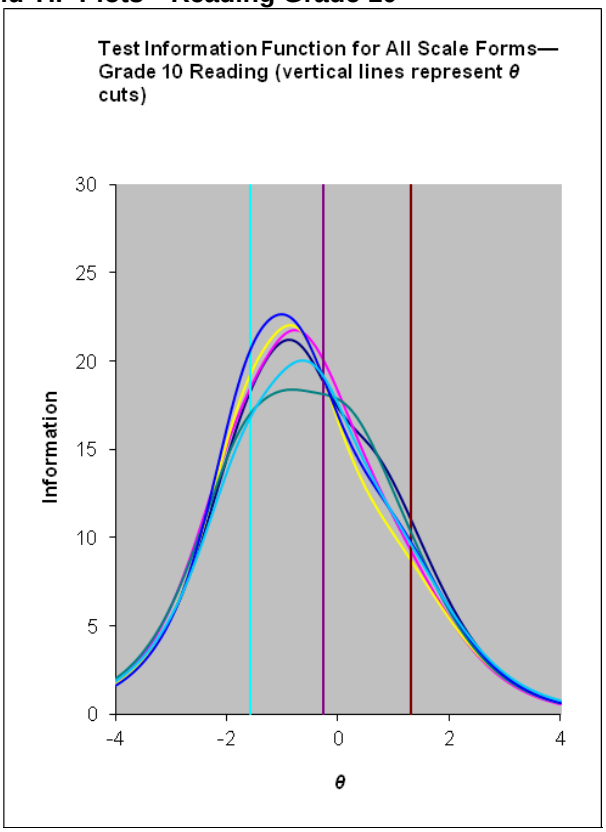
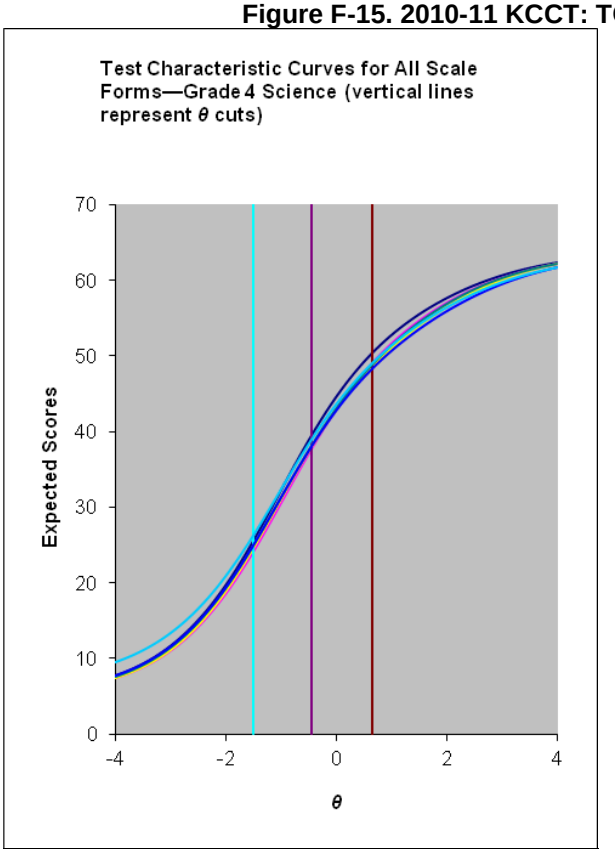


Figure F-15. 2010-11 KCCT: TCC and TIF Plots—Science Grade 4



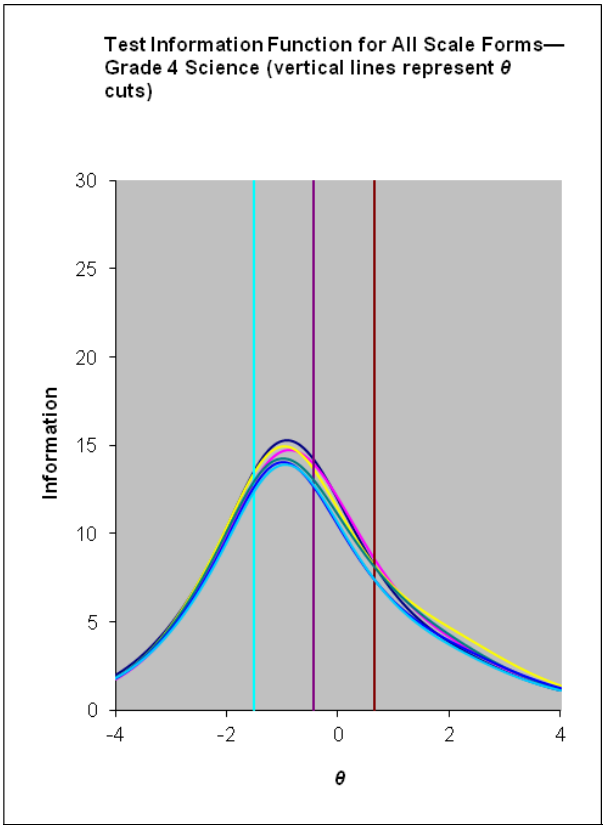
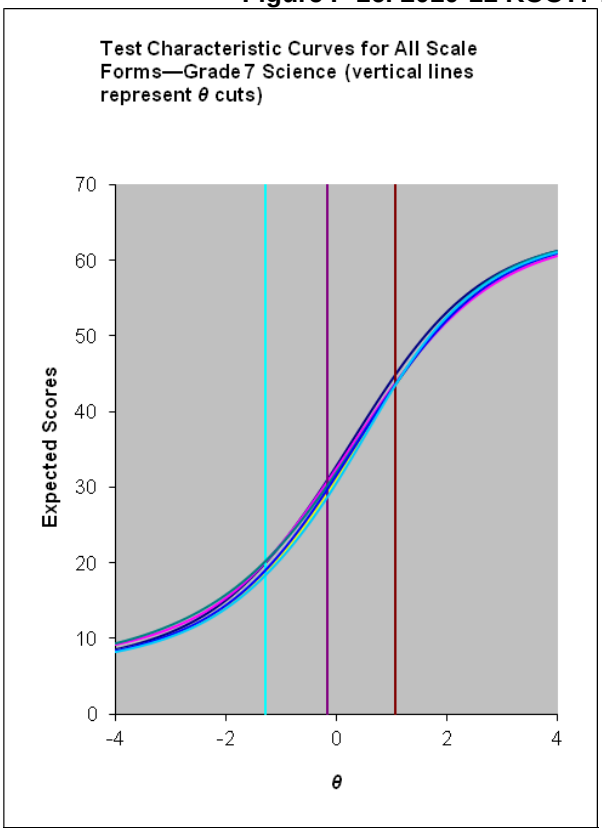


Figure F-16. 2010-11 KCCT: TCC and TIF Plots—Science Grade 7



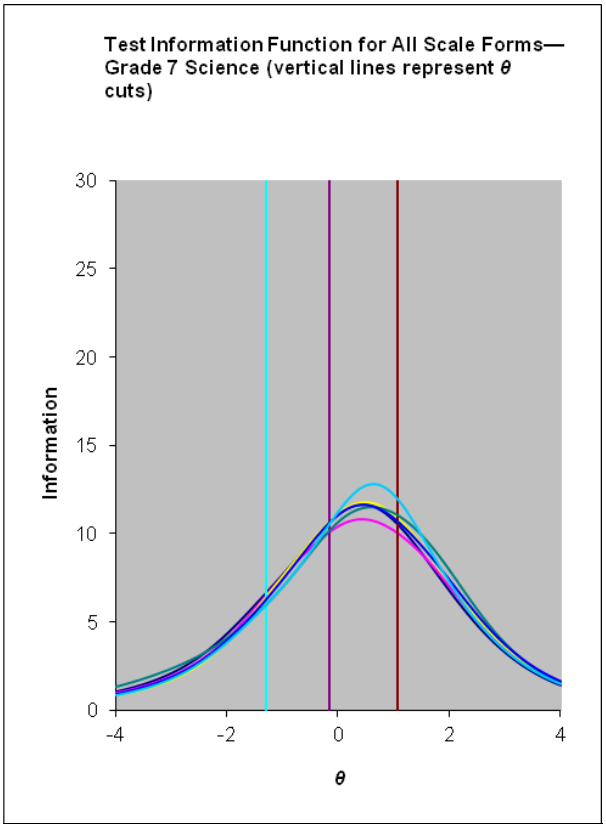
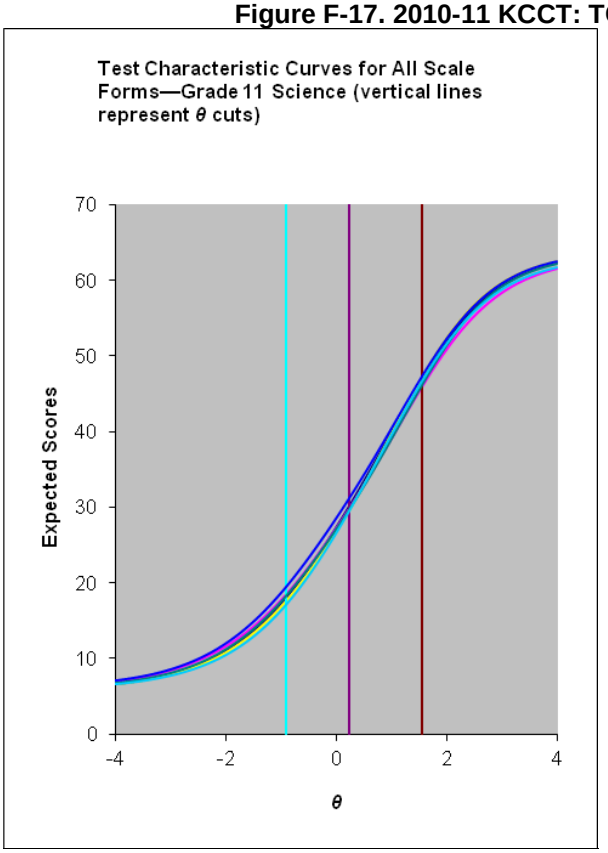


Figure F-17. 2010-11 KCCT: TCC and TIF Plots—Science Grade 11



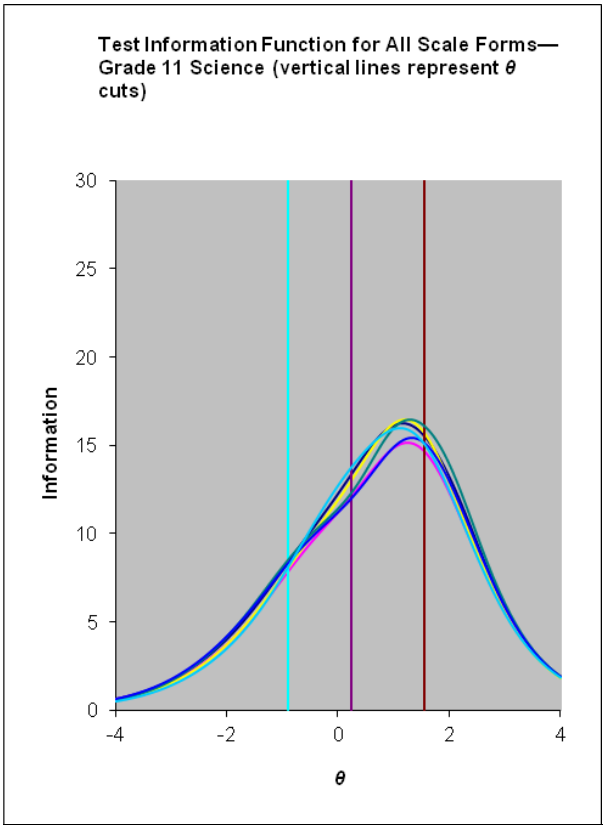
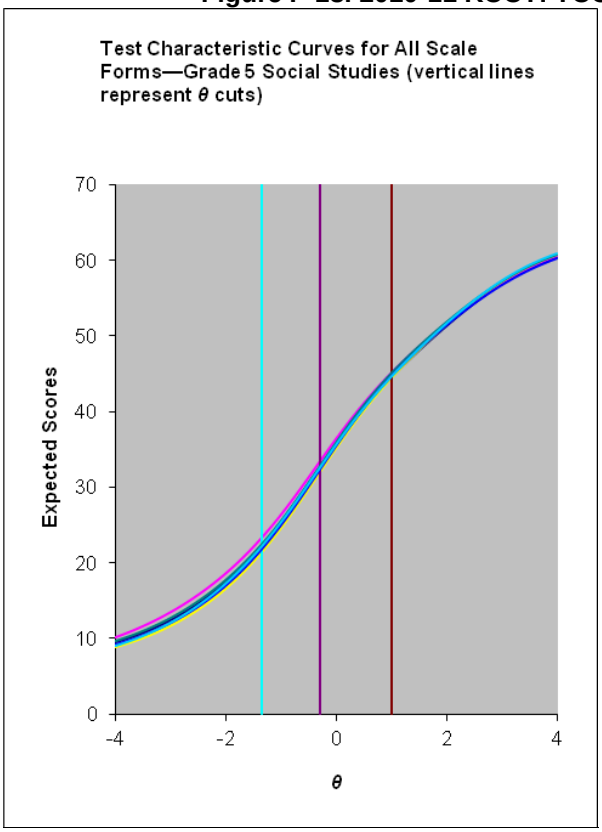


Figure F-18. 2010-11 KCCT: TCC and TIF Plots—Social Studies Grade 5



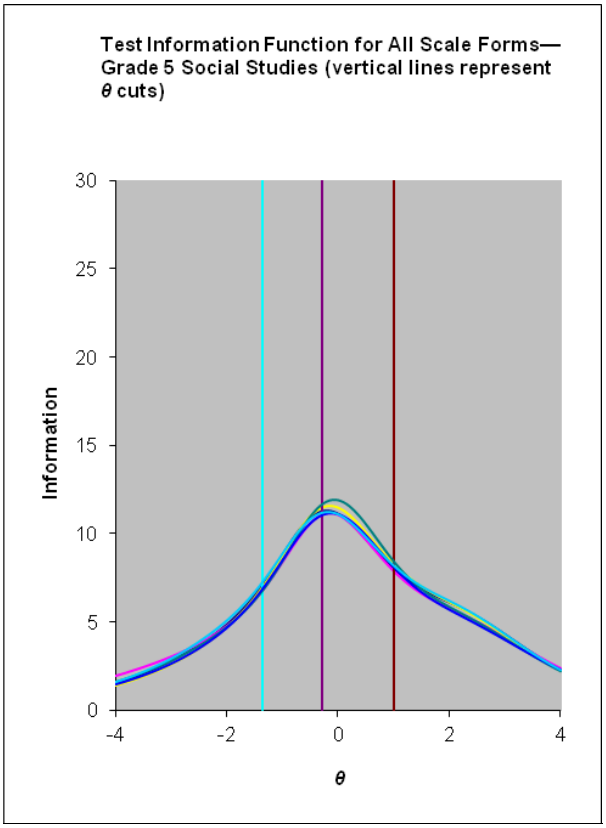
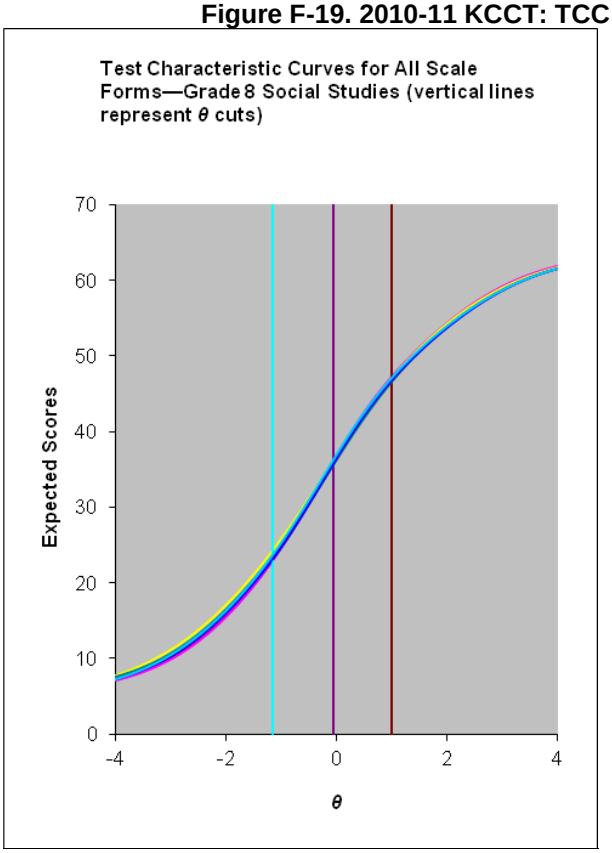


Figure F-19. 2010-11 KCCT: TCC and TIF Plots—Social Studies Grade 8



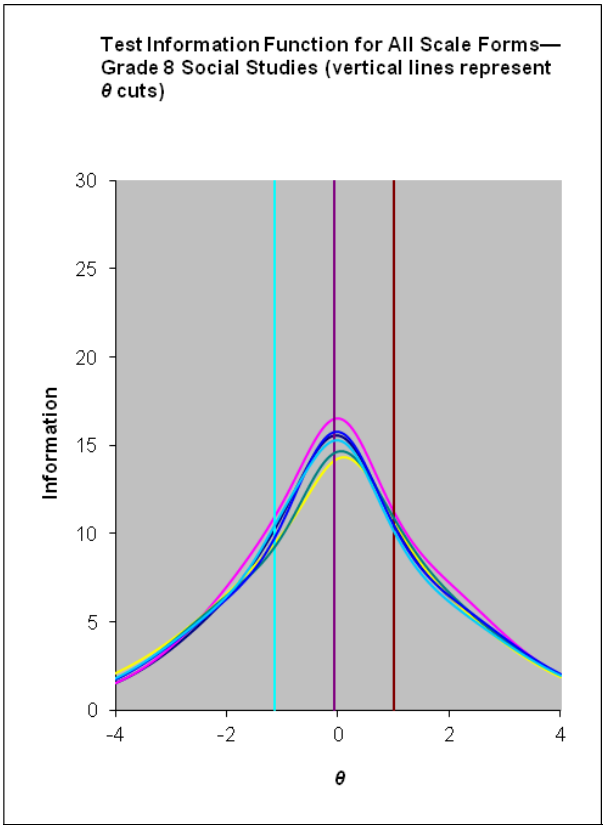
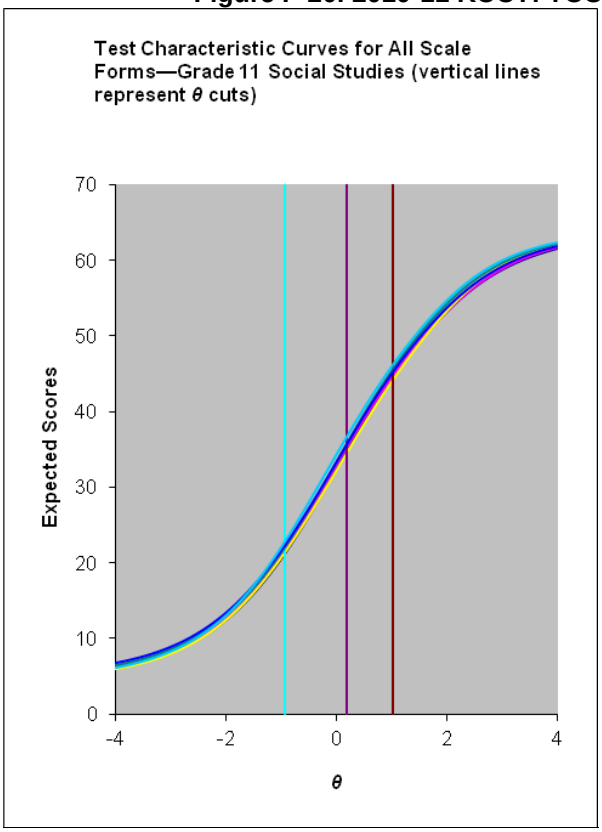


Figure F-20. 2010-11 KCCT: TCC and TIF Plots—Social Studies Grade 11



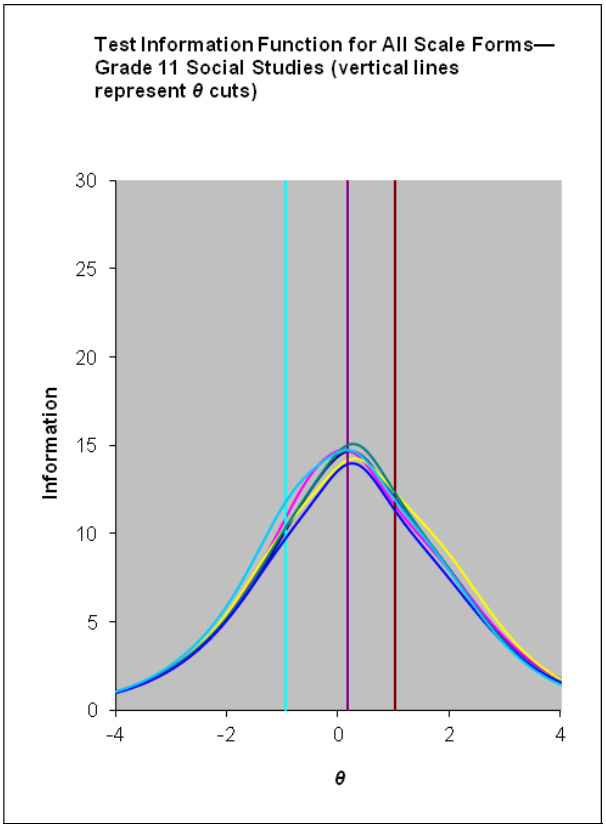
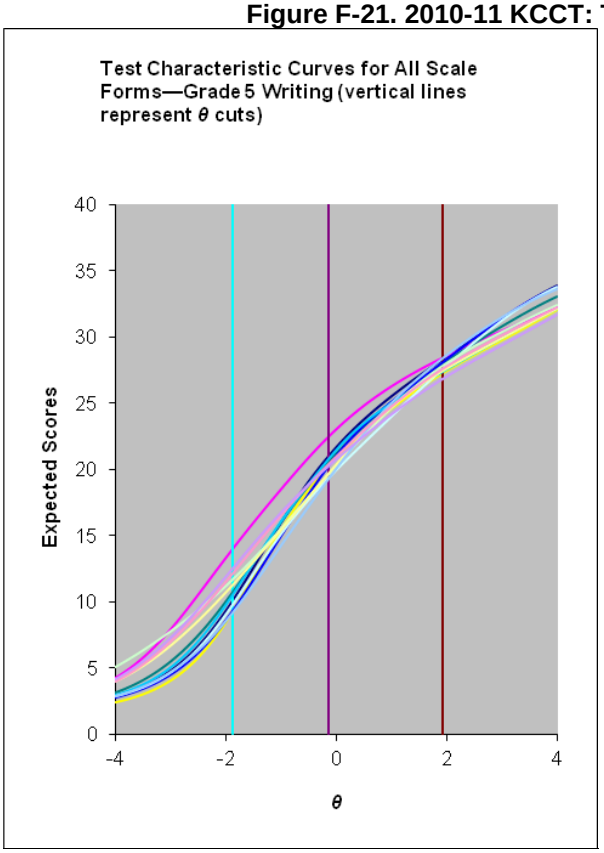


Figure F-21. 2010-11 KCCT: TCC and TIF Plots—Writing Grade 5



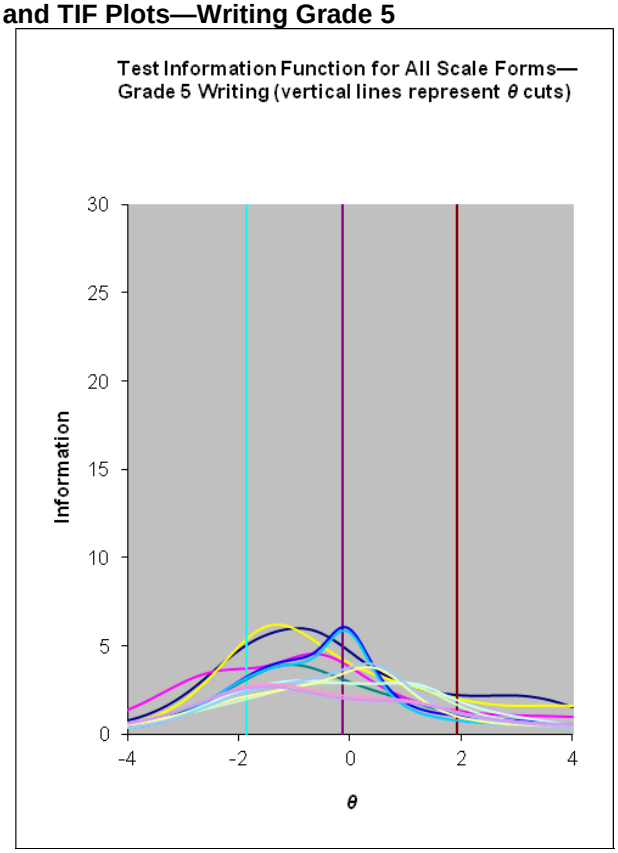
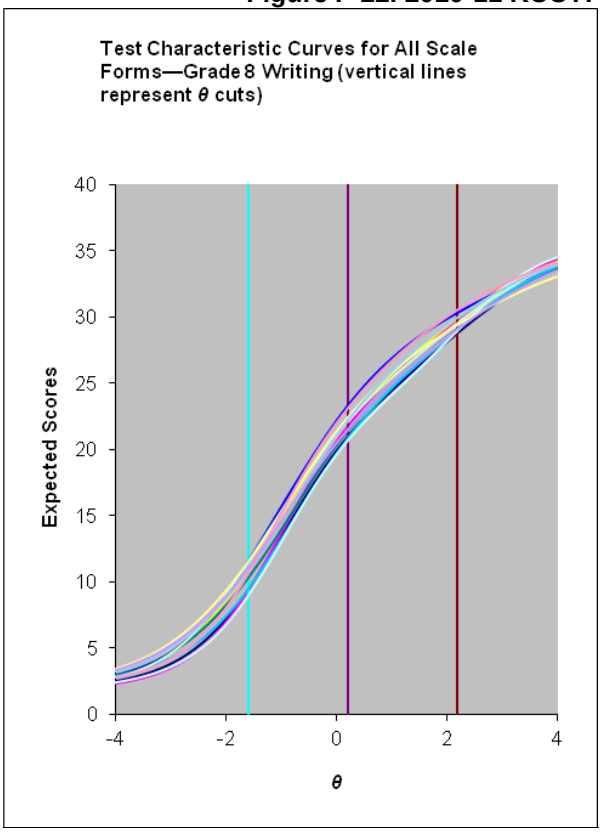
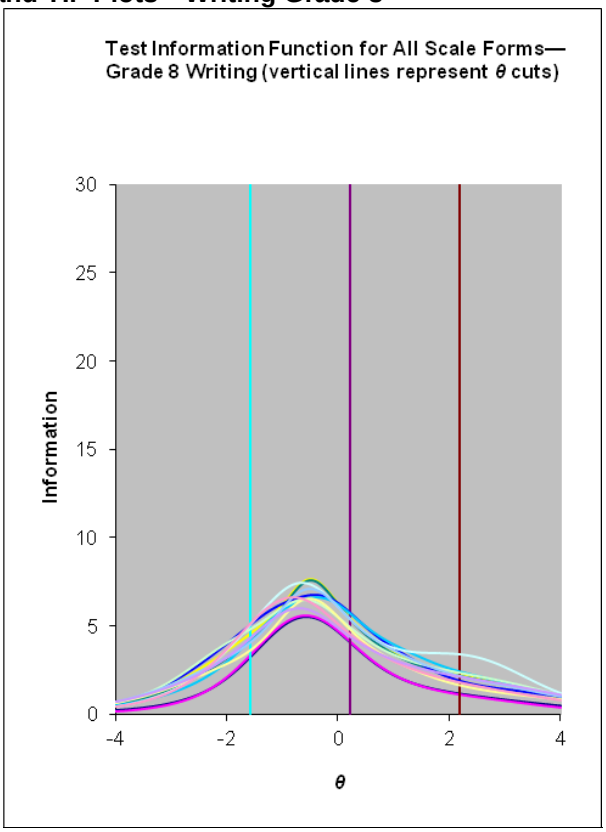


Figure F-22. 2010-11 KCCT: TCC and TIF Plots—Writing Grade 8





Appendix G—Delta Analyses and Rescore Analyses

Figure G-1. 2010–11 KCCT: Delta Plot—Mathematics Grade 3

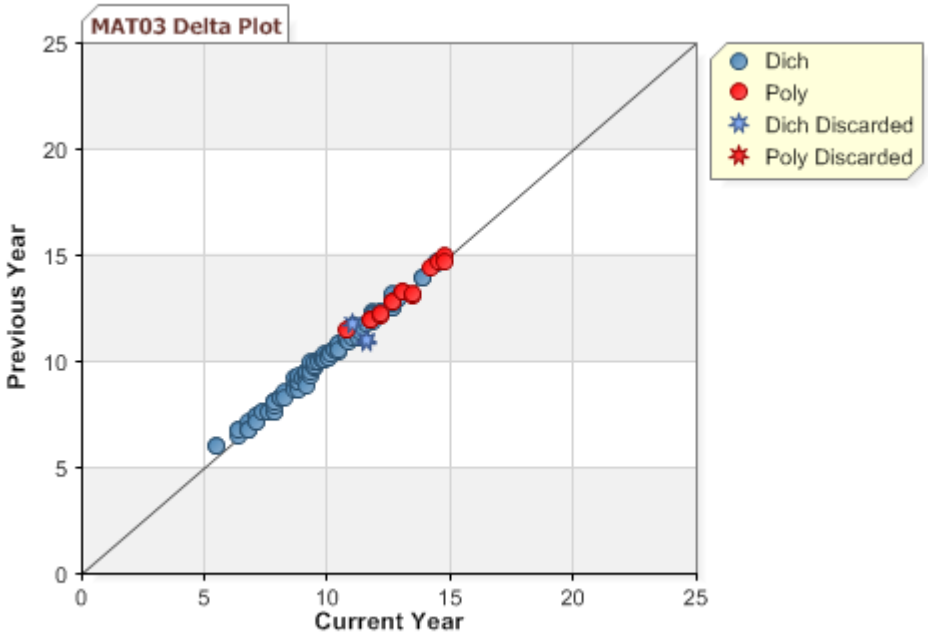


Table G-1. 2010–11 KCCT: Delta Analysis—Mathematics Grade 3

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
47133	0.89	0.90	8.0939	7.8738	FALSE	-0.8313
47149	0.84	0.85	9.0222	8.8543	FALSE	-0.9367
47153	0.92	0.93	7.3797	7.0968	FALSE	-0.4654
47160	0.78	0.82	9.9112	9.3385	FALSE	1.6275
47160	0.80	0.82	9.6335	9.3385	FALSE	-0.2291
47191	0.78	0.80	9.9112	9.6335	FALSE	-0.3240
47194	0.62	0.64	11.7781	11.5662	FALSE	-0.6299
47233	0.95	0.95	6.4206	6.4206	FALSE	0.3546
47236	0.81	0.83	9.4884	9.1833	FALSE	-0.1723
47236	0.82	0.83	9.3385	9.1833	FALSE	-0.8746
47245	0.66	0.66	11.3501	11.3501	FALSE	0.0127
47245	0.64	0.66	11.5662	11.3501	FALSE	-0.6174
47247	0.75	0.77	10.3020	10.0446	FALSE	-0.4311
47247	0.76	0.77	10.1748	10.0446	FALSE	-0.7670
47253	0.88	0.89	8.3001	8.0939	FALSE	-0.9091
47253	0.88	0.89	8.3001	8.0939	FALSE	-0.9091
47256	0.64	0.68	11.5662	11.1292	FALSE	0.8443
47256	0.64	0.68	11.5662	11.1292	FALSE	0.8443
47257	0.57	0.58	12.2945	12.1924	FALSE	-0.7282
47260	0.83	0.85	9.1833	8.8543	FALSE	-0.0347
47260	0.82	0.85	9.3385	8.8543	FALSE	1.0028
47264	1.97	1.82	13.0752	13.4522	FALSE	2.3868
47264	1.92	1.82	13.2006	13.4522	FALSE	1.5484

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52062	0.81	0.83	9.4884	9.1833	FALSE	-0.1723
52062	0.81	0.83	9.4884	9.1833	FALSE	-0.1723
52063	0.77	0.79	10.0446	9.7743	FALSE	-0.3638
52063	0.77	0.79	10.0446	9.7743	FALSE	-0.3638
52065	0.63	0.68	11.6726	11.1292	FALSE	1.5558
52065	0.64	0.68	11.5662	11.1292	FALSE	0.8443
52072	0.51	0.52	12.8997	12.7994	FALSE	-0.7586
52072	0.51	0.52	12.8997	12.7994	FALSE	-0.7586
52081	2.60	2.84	11.4587	10.7865	FALSE	2.3935
52123	0.89	0.90	8.0939	7.8738	FALSE	-0.8313
52123	0.89	0.90	8.0939	7.8738	FALSE	-0.8313
52124	0.94	0.94	6.7809	6.7809	FALSE	0.3296
52124	0.94	0.94	6.7809	6.7809	FALSE	0.3296
52127	0.59	0.61	12.0898	11.8827	FALSE	-0.6401
52127	0.60	0.61	11.9866	11.8827	FALSE	-0.7188
52128	0.85	0.83	8.8543	9.1833	FALSE	2.3629
52130	0.67	0.67	11.2403	11.2403	FALSE	0.0203
52130	0.68	0.67	11.1292	11.2403	FALSE	0.7633
52144	2.43	2.48	11.9088	11.7781	FALSE	-0.8907
52144	2.41	2.48	11.9607	11.7781	FALSE	-0.8109
52179	0.58	0.61	12.1924	11.8827	FALSE	0.0459
52179	0.59	0.61	12.0898	11.8827	FALSE	-0.6401
52181	0.71	0.74	10.7865	10.4266	FALSE	0.2800
52181	0.71	0.74	10.7865	10.4266	FALSE	0.2800
52182	0.69	0.71	11.0166	10.7865	FALSE	-0.5621
52182	0.68	0.71	11.1292	10.7865	FALSE	0.1907
52186	0.70	0.64	10.9024	11.5662	TRUE	4.4351
52186	0.69	0.64	11.0166	11.5662	TRUE	3.6716
52187	0.63	0.69	11.6726	11.0166	FALSE	2.3007
52187	0.62	0.69	11.7781	11.0166	TRUE	3.0060
52189	1.90	1.96	13.2508	13.1003	FALSE	-0.9336
52189	1.91	1.96	13.2257	13.1003	FALSE	-0.9473
52222	0.81	0.82	9.4884	9.3385	FALSE	-0.8497
52222	0.82	0.82	9.3385	9.3385	FALSE	0.1522
52223	0.73	0.75	10.5487	10.3020	FALSE	-0.4849
52223	0.73	0.75	10.5487	10.3020	FALSE	-0.4849
52225	0.75	0.76	10.3020	10.1748	FALSE	-0.7565
52225	0.74	0.76	10.4266	10.1748	FALSE	-0.4595
52226	0.94	0.94	6.7809	6.7809	FALSE	0.3296
52226	0.93	0.94	7.0968	6.7809	FALSE	-0.2664
52228	0.64	0.66	11.5662	11.3501	FALSE	-0.6174
52228	0.64	0.66	11.5662	11.3501	FALSE	-0.6174
52261	0.91	0.91	7.6370	7.6370	FALSE	0.2702
52261	0.91	0.91	7.6370	7.6370	FALSE	0.2702
52263	0.91	0.90	7.6370	7.8738	FALSE	1.8369
52263	0.91	0.90	7.6370	7.8738	FALSE	1.8369
52290	0.41	0.41	13.9102	13.9102	FALSE	-0.1649
52290	0.41	0.41	13.9102	13.9102	FALSE	-0.1649
52296	0.84	0.85	9.0222	8.8543	FALSE	-0.9367
52299	0.74	0.74	10.4266	10.4266	FALSE	0.0767

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52300	0.78	0.81	9.9112	9.4884	FALSE	0.6359
52300	0.80	0.81	9.6335	9.4884	FALSE	-0.8282
52301	1.35	1.40	14.6772	14.5413	FALSE	-0.9316
76632	0.77	0.80	10.0446	9.6335	FALSE	0.5677
76635	0.83	0.86	9.1833	8.6787	FALSE	1.1266
76637	0.77	0.78	10.0446	9.9112	FALSE	-0.7792
76638	1.46	1.54	14.3805	14.1695	FALSE	-0.4553
93158	0.83	0.83	9.1833	9.1833	FALSE	0.1630
93158	0.82	0.83	9.3385	9.1833	FALSE	-0.8746
93160	0.76	0.77	10.1748	10.0446	FALSE	-0.7670
93162	0.88	0.88	8.3001	8.3001	FALSE	0.2242
93162	0.87	0.88	8.4944	8.3001	FALSE	-0.9736
93164	0.93	0.93	7.0968	7.0968	FALSE	0.3077
93166	0.75	0.78	10.3020	9.9112	FALSE	0.4513
94215	0.85	0.86	8.8543	8.6787	FALSE	-0.9756
94215	0.85	0.86	8.8543	8.6787	FALSE	-0.9756
94217	0.91	0.92	7.6370	7.3797	FALSE	-0.6170
94217	0.91	0.92	7.6370	7.3797	FALSE	-0.6170
94234	0.69	0.71	11.0166	10.7865	FALSE	-0.5621
94234	0.69	0.71	11.0166	10.7865	FALSE	-0.5621
94237	0.35	0.36	14.5413	14.4338	FALSE	-0.9195
94237	0.34	0.36	14.6499	14.4338	FALSE	-0.4035
94238	0.83	0.84	9.1833	9.0222	FALSE	-0.9033
94238	0.83	0.84	9.1833	9.0222	FALSE	-0.9033
94278	0.55	0.53	12.4974	12.6989	FALSE	1.2666
94278	0.55	0.53	12.4974	12.6989	FALSE	1.2666
94291	0.52	0.53	12.7994	12.6989	FALSE	-0.7525
94291	0.53	0.53	12.6989	12.6989	FALSE	-0.0809
94297	0.48	0.53	13.2006	12.6989	FALSE	1.3860
94297	0.49	0.53	13.1003	12.6989	FALSE	0.7152
94299	0.96	0.97	5.9973	5.4768	FALSE	1.0103
94299	0.96	0.97	5.9973	5.4768	FALSE	1.0103
94302	0.57	0.61	12.2945	11.8827	FALSE	0.7283
94302	0.58	0.61	12.1924	11.8827	FALSE	0.0459
94308	1.26	1.31	14.9269	14.7873	FALSE	-0.8898
94308	1.34	1.31	14.7046	14.7873	FALSE	0.3272
94311	0.73	0.74	10.5487	10.4266	FALSE	-0.7397
94311	0.72	0.74	10.6686	10.4266	FALSE	-0.5076
94319	0.94	0.95	6.7809	6.4206	FALSE	0.0054
94319	0.94	0.95	6.7809	6.4206	FALSE	0.0054
94322	0.61	0.61	11.8827	11.8827	FALSE	-0.0243
94322	0.59	0.61	12.0898	11.8827	FALSE	-0.6401
94325	0.85	0.85	8.8543	8.8543	FALSE	0.1858
94325	0.86	0.85	8.6787	8.8543	FALSE	1.3593
94329	2.32	2.32	12.1924	12.1924	FALSE	-0.0458
94329	2.35	2.32	12.1155	12.1924	FALSE	0.4683
94334	0.90	0.90	7.8738	7.8738	FALSE	0.2538
94334	0.89	0.90	8.0939	7.8738	FALSE	-0.8313
94337	0.79	0.81	9.7743	9.4884	FALSE	-0.2794
94339	0.50	0.51	13.0000	12.8997	FALSE	-0.7652

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94339	0.50	0.51	13.0000	12.8997	FALSE	-0.7652
94345	0.86	0.86	8.6787	8.6787	FALSE	0.1980
94345	0.85	0.86	8.8543	8.6787	FALSE	-0.9756
94349	2.07	2.14	12.8245	12.6486	FALSE	-0.7958
94349	2.08	2.14	12.7994	12.6486	FALSE	-0.9635
140628	0.92	0.93	7.3797	7.0968	FALSE	-0.4654
140630	0.68	0.69	11.1292	11.0166	FALSE	-0.7170
140638	0.93	0.93	7.0968	7.0968	FALSE	0.3077
140674	0.79	0.81	9.7743	9.4884	FALSE	-0.2794
140681	0.70	0.70	10.9024	10.9024	FALSE	0.0437
140683	0.57	0.58	12.2945	12.1924	FALSE	-0.7282
140685	0.88	0.89	8.3001	8.0939	FALSE	-0.9091

Figure G-2. 2010–11 KCCT: Delta Plot—Mathematics Grade 4

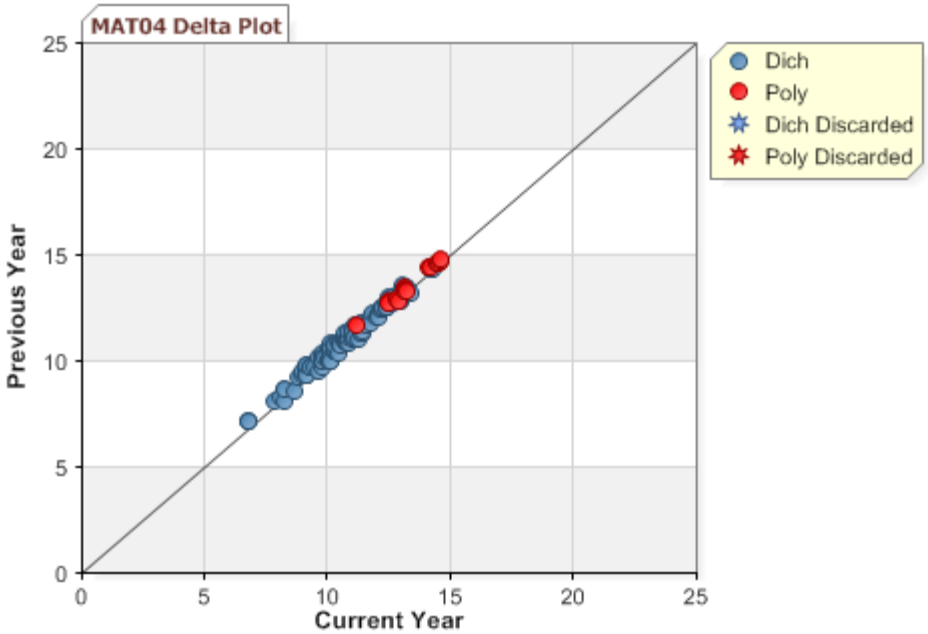


Table G-2. 2010–11 KCCT: Delta Analysis—Mathematics Grade 4

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50251	0.64	0.65	11.5662	11.4587	FALSE	-0.8275
50251	0.62	0.66	11.7781	11.3501	FALSE	0.9056
50253	0.75	0.74	10.3020	10.4266	FALSE	1.3257
50253	0.73	0.75	10.5487	10.3020	FALSE	-0.8238
50263	2.53	2.71	11.6461	11.1571	FALSE	1.3804
50267	0.89	0.90	8.0939	7.8738	FALSE	-1.0685

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50272	0.76	0.78	10.1748	9.9112	FALSE	-0.7591
50272	0.75	0.79	10.3020	9.7743	FALSE	1.4341
50273	0.73	0.76	10.5487	10.1748	FALSE	0.2206
50273	0.73	0.77	10.5487	10.0446	FALSE	1.2891
50275	0.82	0.83	9.3385	9.1833	FALSE	-0.7809
50275	0.83	0.85	9.1833	8.8543	FALSE	-0.4166
50278	0.77	0.77	10.0446	10.0446	FALSE	0.3539
50278	0.78	0.76	9.9112	10.1748	FALSE	2.5434
50282	0.56	0.58	12.3961	12.1924	FALSE	-0.8131
50283	0.88	0.89	8.3001	8.0939	FALSE	-0.9948
50283	0.89	0.88	8.0939	8.3001	FALSE	2.4301
50285	2.11	2.19	12.7241	12.5226	FALSE	-0.7671
51045	0.63	0.68	11.6726	11.1292	FALSE	1.8324
51046	0.62	0.65	11.7781	11.4587	FALSE	0.0145
51048	0.81	0.83	9.4884	9.1833	FALSE	-0.5535
51048	0.82	0.83	9.3385	9.1833	FALSE	-0.7809
51053	0.50	0.53	13.0000	12.6989	FALSE	0.1050
51057	1.47	1.52	14.3539	14.2219	FALSE	-1.0161
51057	1.44	1.56	14.4338	14.1173	FALSE	0.5143
52435	0.71	0.71	10.7865	10.7865	FALSE	0.2079
52436	0.69	0.72	11.0166	10.6686	FALSE	0.0994
52436	0.69	0.71	11.0166	10.7865	FALSE	-0.8677
52438	0.63	0.64	11.6726	11.5662	FALSE	-0.8400
52439	0.60	0.62	11.9866	11.7781	FALSE	-0.8540
52439	0.62	0.62	11.7781	11.7781	FALSE	0.0127
52440	0.73	0.75	10.5487	10.3020	FALSE	-0.8238
52442	0.82	0.84	9.3385	9.0222	FALSE	-0.4903
52442	0.81	0.83	9.4884	9.1833	FALSE	-0.5535
52446	0.47	0.50	13.3011	13.0000	FALSE	0.1643
52446	0.47	0.49	13.3011	13.1003	FALSE	-0.6587
52505	0.67	0.65	11.2403	11.4587	FALSE	1.9108
52505	0.66	0.65	11.3501	11.4587	FALSE	0.9880
52510	0.74	0.76	10.4266	10.1748	FALSE	-0.8058
52512	0.70	0.71	10.9024	10.7865	FALSE	-0.7665
52519	2.08	2.05	12.7994	12.8746	FALSE	0.4293
52519	2.04	2.07	12.8997	12.8245	FALSE	-0.8257
52581	0.48	0.48	13.2006	13.2006	FALSE	-0.2674
52581	0.47	0.48	13.3011	13.2006	FALSE	-1.1117
52583	0.81	0.80	9.4884	9.6335	FALSE	1.6543
52583	0.80	0.79	9.6335	9.7743	FALSE	1.5905
52585	0.66	0.70	11.3501	10.9024	FALSE	0.9840
52585	0.67	0.72	11.2403	10.6686	FALSE	1.9799
52729	0.78	0.79	9.9112	9.7743	FALSE	-0.7435
52729	0.78	0.79	9.9112	9.7743	FALSE	-0.7435
52731	0.76	0.80	10.1748	9.6335	FALSE	1.5203
52731	0.76	0.79	10.1748	9.7743	FALSE	0.3646
52732	0.78	0.77	9.9112	10.0446	FALSE	1.4750
52732	0.78	0.76	9.9112	10.1748	FALSE	2.5434
52734	0.55	0.57	12.4974	12.2945	FALSE	-0.8001
52735	0.68	0.70	11.1292	10.9024	FALSE	-0.8729

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52735	0.68	0.69	11.1292	11.0166	FALSE	-0.7838
52736	0.93	0.94	7.0968	6.7809	FALSE	-0.9352
52736	0.93	0.94	7.0968	6.7809	FALSE	-0.9352
52739	0.70	0.72	10.9024	10.6686	FALSE	-0.8604
52739	0.70	0.71	10.9024	10.7865	FALSE	-0.7665
52741	1.37	1.42	14.6226	14.4874	FALSE	-0.9372
52741	1.40	1.40	14.5413	14.5413	FALSE	-0.5313
52742	0.47	0.49	13.3011	13.1003	FALSE	-0.6587
52742	0.45	0.49	13.5026	13.1003	FALSE	1.0353
52748	2.09	2.20	12.7743	12.4974	FALSE	-0.1376
52856	0.58	0.61	12.1924	11.8827	FALSE	0.0168
52858	0.46	0.48	13.4017	13.2006	FALSE	-0.6363
52858	0.47	0.48	13.3011	13.2006	FALSE	-1.1117
52863	0.80	0.82	9.6335	9.3385	FALSE	-0.6078
52863	0.80	0.83	9.6335	9.1833	FALSE	0.6660
52865	1.81	1.95	13.4774	13.1254	FALSE	0.6173
52865	1.85	1.94	13.3765	13.1504	FALSE	-0.4361
76263	0.58	0.59	12.1924	12.0898	FALSE	-0.9110
76264	0.67	0.66	11.2403	11.3501	FALSE	1.0197
76265	0.74	0.75	10.4266	10.3020	FALSE	-0.7438
76265	0.74	0.75	10.4266	10.3020	FALSE	-0.7438
76267	0.76	0.76	10.1748	10.1748	FALSE	0.3283
93745	0.51	0.51	12.8997	12.8997	FALSE	-0.2081
93745	0.51	0.51	12.8997	12.8997	FALSE	-0.2081
93752	0.78	0.79	9.9112	9.7743	FALSE	-0.7435
93756	0.55	0.57	12.4974	12.2945	FALSE	-0.8001
93767	0.64	0.65	11.5662	11.4587	FALSE	-0.8275
93768	0.71	0.73	10.7865	10.5487	FALSE	-0.8508
93818	0.60	0.59	11.9866	12.0898	FALSE	0.8187
93818	0.60	0.60	11.9866	11.9866	FALSE	-0.0284
93819	0.55	0.56	12.4974	12.3961	FALSE	-0.9598
93819	0.55	0.56	12.4974	12.3961	FALSE	-0.9598
93822	0.72	0.75	10.6686	10.3020	FALSE	0.1838
93822	0.71	0.74	10.7865	10.4266	FALSE	0.1516
93843	0.72	0.73	10.6686	10.5487	FALSE	-0.7529
93843	0.71	0.70	10.7865	10.9024	FALSE	1.1594
93847	0.80	0.82	9.6335	9.3385	FALSE	-0.6078
93847	0.80	0.82	9.6335	9.3385	FALSE	-0.6078
93850	0.52	0.54	12.7994	12.5983	FALSE	-0.7549
93850	0.53	0.55	12.6989	12.4974	FALSE	-0.7710
93851	0.68	0.69	11.1292	11.0166	FALSE	-0.7838
93851	0.69	0.69	11.0166	11.0166	FALSE	0.1626
93856	0.55	0.57	12.4974	12.2945	FALSE	-0.8001
93856	0.55	0.56	12.4974	12.3961	FALSE	-0.9598
93861	0.53	0.56	12.6989	12.3961	FALSE	0.0599
93861	0.53	0.53	12.6989	12.6989	FALSE	-0.1686
93877	0.52	0.50	12.7994	13.0000	FALSE	1.4582
93877	0.51	0.50	12.8997	13.0000	FALSE	0.6149
93879	0.51	0.54	12.8997	12.5983	FALSE	0.0884
93879	0.50	0.55	13.0000	12.4974	FALSE	1.7594

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
93906	0.76	0.76	10.1748	10.1748	FALSE	0.3283
93906	0.76	0.76	10.1748	10.1748	FALSE	0.3283
93907	0.48	0.46	13.2006	13.4017	FALSE	1.3833
93907	0.47	0.47	13.3011	13.3011	FALSE	-0.2871
93910	0.65	0.69	11.4587	11.0166	FALSE	0.9592
93910	0.66	0.69	11.3501	11.0166	FALSE	0.0467
93916	1.89	1.93	13.2759	13.1755	FALSE	-1.1065
93916	1.89	1.91	13.2759	13.2257	FALSE	-0.6945
93926	0.87	0.86	8.4944	8.6787	FALSE	2.1716
93926	0.86	0.88	8.6787	8.3001	FALSE	-0.1088
93932	0.37	0.37	14.3274	14.3274	FALSE	-0.4892
93932	0.37	0.38	14.3274	14.2219	FALSE	-1.2390
93962	0.51	0.50	12.8997	13.0000	FALSE	0.6149
93962	0.51	0.51	12.8997	12.8997	FALSE	-0.2081
93969	1.33	1.36	14.7321	14.6499	FALSE	-1.2437
93969	1.35	1.38	14.6772	14.5954	FALSE	-1.2291
137563	0.86	0.88	8.6787	8.3001	FALSE	-0.1088
137566	0.82	0.83	9.3385	9.1833	FALSE	-0.7809
137568	0.81	0.84	9.4884	9.0222	FALSE	0.7693
137571	0.80	0.81	9.6335	9.4884	FALSE	-0.7561
137743	0.69	0.67	11.0166	11.2403	FALSE	1.9990
137743	0.68	0.68	11.1292	11.1292	FALSE	0.1404
137744	0.71	0.75	10.7865	10.3020	FALSE	1.1740
137744	0.71	0.76	10.7865	10.1748	FALSE	2.2185
137745	0.56	0.57	12.3961	12.2945	FALSE	-0.9430
137745	0.55	0.56	12.4974	12.3961	FALSE	-0.9598
138301	0.93	0.94	7.0968	6.7809	FALSE	-0.9352
149980	0.79	0.83	9.7743	9.1833	FALSE	1.8494
149980	0.79	0.83	9.7743	9.1833	FALSE	1.8494

Table G-3. 2010–11 KCCT: Rescore Analysis—Mathematics Grade 4

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
52519	4	1.358	1.289	1.109	1.159	-0.062	No
52519	4	1.215	1.268	1.277	1.307	0.042	No
52519	4	1.794	1.828	1.031	1.030	0.032	No
52519	4	1.377	1.348	1.469	1.426	-0.020	No

Figure G-3. 2010–11 KCCT: Delta Plot—Mathematics Grade 5

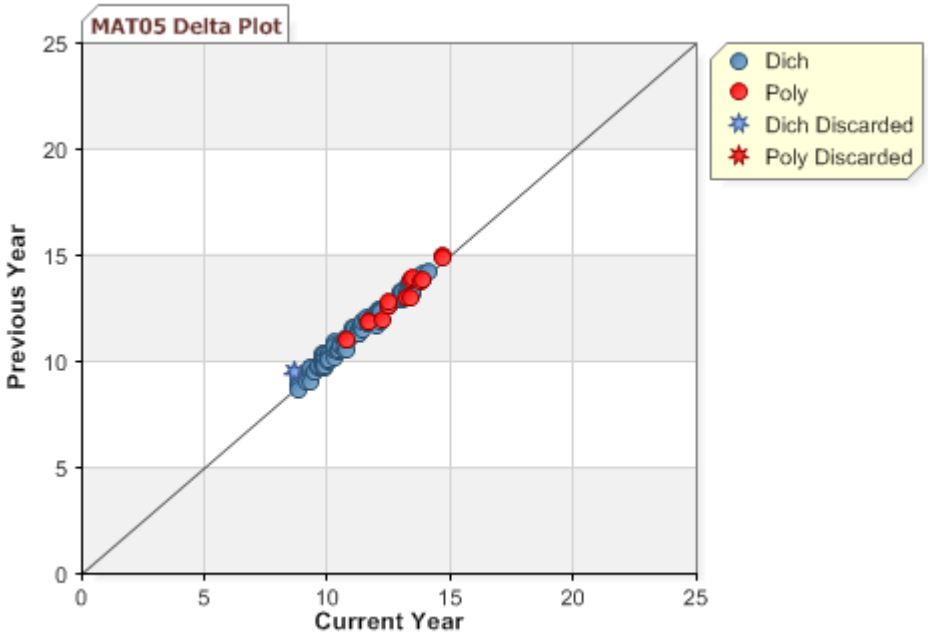


Table G-4. 2010–11 KCCT: Delta Analysis—Mathematics Grade 5

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
51425	0.67	0.67	11.2403	11.2403	FALSE	-0.2581
55258	0.44	0.47	13.6039	13.3011	FALSE	0.4935
55258	0.45	0.46	13.5026	13.4017	FALSE	-0.9618
55263	0.68	0.70	11.1292	10.9024	FALSE	-0.5740
55263	0.68	0.70	11.1292	10.9024	FALSE	-0.5740
55354	1.28	1.33	14.8708	14.7321	FALSE	-0.4015
55354	1.26	1.34	14.9269	14.7046	FALSE	0.2041
57028	0.71	0.75	10.7865	10.3020	FALSE	1.1824
57028	0.72	0.75	10.6686	10.3020	FALSE	0.3205
57054	0.79	0.78	9.7743	9.9112	FALSE	1.0270
57054	0.80	0.78	9.6335	9.9112	FALSE	2.0569
57058	0.69	0.72	11.0166	10.6686	FALSE	0.2624
57058	0.69	0.71	11.0166	10.7865	FALSE	-0.5744
57066	0.47	0.50	13.3011	13.0000	FALSE	0.4167
57066	0.49	0.49	13.1003	13.1003	FALSE	-0.6548
57070	0.47	0.49	13.3011	13.1003	FALSE	-0.2954
57070	0.50	0.49	13.0000	13.1003	FALSE	0.0787
57122	0.72	0.73	10.6686	10.5487	FALSE	-0.9875
57178	0.75	0.78	10.3020	9.9112	FALSE	0.4143
57178	0.75	0.78	10.3020	9.9112	FALSE	0.4143
57182	0.66	0.67	11.3501	11.2403	FALSE	-1.0613
57182	0.67	0.67	11.2403	11.2403	FALSE	-0.2581
57391	0.81	0.86	9.4884	8.6787	TRUE	3.2155

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
57391	0.81	0.86	9.4884	8.6787	TRUE	3.2155
57411	0.57	0.58	12.2945	12.1924	FALSE	-1.2079
57422	0.57	0.59	12.2945	12.0898	FALSE	-0.4826
57422	0.56	0.59	12.3961	12.0898	FALSE	0.2608
57424	0.75	0.79	10.3020	9.7743	FALSE	1.3866
57424	0.76	0.79	10.1748	9.7743	FALSE	0.4557
57438	0.51	0.51	12.8997	12.8997	FALSE	-0.6120
57442	0.60	0.64	11.9866	11.5662	FALSE	0.9841
57442	0.63	0.66	11.6726	11.3501	FALSE	0.2210
57449	0.82	0.85	9.3385	8.8543	FALSE	0.8725
57449	0.82	0.85	9.3385	8.8543	FALSE	0.8725
57464	0.86	0.85	8.6787	8.8543	FALSE	1.5350
57464	0.85	0.85	8.8543	8.8543	FALSE	0.2509
57492	0.49	0.50	13.1003	13.0000	FALSE	-1.0522
57492	0.49	0.49	13.1003	13.1003	FALSE	-0.6548
57514	0.73	0.71	10.5487	10.7865	FALSE	1.5776
57514	0.73	0.74	10.5487	10.4266	FALSE	-0.9779
57539	2.47	2.51	11.8043	11.6990	FALSE	-1.1260
57539	2.47	2.52	11.8043	11.6726	FALSE	-1.1053
57571	0.46	0.45	13.4017	13.5026	FALSE	-0.0025
57577	0.68	0.71	11.1292	10.7865	FALSE	0.2493
57580	0.54	0.55	12.5983	12.4974	FALSE	-1.1548
57678	0.78	0.78	9.9112	9.9112	FALSE	0.0254
57678	0.78	0.79	9.9112	9.7743	FALSE	-0.9469
57690	0.39	0.41	14.1173	13.9102	FALSE	-0.0766
57690	0.38	0.39	14.2219	14.1173	FALSE	-0.7819
57695	0.61	0.64	11.8827	11.5662	FALSE	0.2241
57695	0.62	0.63	11.7781	11.6726	FALSE	-1.1219
58020	0.62	0.63	11.7781	11.6726	FALSE	-1.1219
58020	0.61	0.65	11.8827	11.4587	FALSE	0.9872
58042	0.70	0.72	10.9024	10.6686	FALSE	-0.5730
58042	0.71	0.73	10.7865	10.5487	FALSE	-0.5697
77096	0.58	0.60	12.1924	11.9866	FALSE	-0.4963
77099	0.72	0.73	10.6686	10.5487	FALSE	-0.9875
77099	0.73	0.72	10.5487	10.6686	FALSE	0.7409
77106	0.72	0.75	10.6686	10.3020	FALSE	0.3205
77106	0.70	0.75	10.9024	10.3020	FALSE	2.0305
77107	0.67	0.67	11.2403	11.2403	FALSE	-0.2581
93384	0.62	0.63	11.7781	11.6726	FALSE	-1.1219
93534	0.77	0.77	10.0446	10.0446	FALSE	-0.0030
93674	0.47	0.45	13.3011	13.5026	FALSE	0.7338
93674	0.48	0.45	13.2006	13.5026	FALSE	1.4688
93751	0.51	0.49	12.8997	13.1003	FALSE	0.8123
93751	0.50	0.47	13.0000	13.3011	FALSE	1.5048
93753	0.64	0.66	11.5662	11.3501	FALSE	-0.5574
93753	0.64	0.68	11.5662	11.1292	FALSE	1.0116
93761	0.50	0.49	13.0000	13.1003	FALSE	0.0787
93761	0.48	0.50	13.2006	13.0000	FALSE	-0.3182
93769	1.66	1.83	13.8588	13.4269	FALSE	1.4645
93769	1.64	1.80	13.9102	13.5026	FALSE	1.3027

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
93778	0.79	0.79	9.7743	9.7743	FALSE	0.0546
93778	0.79	0.80	9.7743	9.6335	FALSE	-0.9453
93779	0.81	0.82	9.4884	9.3385	FALSE	-0.9488
93779	0.80	0.82	9.6335	9.3385	FALSE	-0.4089
93853	0.68	0.70	11.1292	10.9024	FALSE	-0.5740
93853	0.67	0.69	11.2403	11.0166	FALSE	-0.5720
93858	0.76	0.77	10.1748	10.0446	FALSE	-0.9553
93858	0.76	0.75	10.1748	10.3020	FALSE	0.8729
93865	0.75	0.77	10.3020	10.0446	FALSE	-0.5330
93865	0.76	0.78	10.1748	9.9112	FALSE	-0.5166
93875	1.69	1.66	13.7820	13.8588	FALSE	-0.2548
93875	1.71	1.68	13.7310	13.8076	FALSE	-0.2453
93889	0.45	0.47	13.5026	13.3011	FALSE	-0.2470
93889	0.45	0.46	13.5026	13.4017	FALSE	-0.9618
93893	0.78	0.78	9.9112	9.9112	FALSE	0.0254
93893	0.77	0.79	10.0446	9.7743	FALSE	-0.4965
93898	0.81	0.81	9.4884	9.4884	FALSE	0.1156
93898	0.81	0.81	9.4884	9.4884	FALSE	0.1156
93909	0.61	0.58	11.8827	12.1924	FALSE	1.8043
93909	0.58	0.59	12.1924	12.0898	FALSE	-1.1898
93918	2.15	2.21	12.6235	12.4721	FALSE	-0.7910
93918	2.10	2.19	12.7492	12.5226	FALSE	-0.2302
142882	0.65	0.65	11.4587	11.4587	FALSE	-0.3046
142884	0.54	0.55	12.5983	12.4974	FALSE	-1.1548
142886	0.73	0.75	10.5487	10.3020	FALSE	-0.5565
142888	0.75	0.77	10.3020	10.0446	FALSE	-0.5330
142889	0.84	0.85	9.0222	8.8543	FALSE	-0.9773
142891	0.80	0.82	9.6335	9.3385	FALSE	-0.4089
142893	2.78	2.85	10.9597	10.7572	FALSE	-0.7827
142896	2.41	2.31	11.9607	12.2180	FALSE	1.4155
142903	0.65	0.67	11.4587	11.2403	FALSE	-0.5636
142903	0.64	0.69	11.5662	11.0166	FALSE	1.8113
142904	0.74	0.74	10.4266	10.4266	FALSE	-0.0845
142904	0.73	0.75	10.5487	10.3020	FALSE	-0.5565
142905	0.79	0.80	9.7743	9.6335	FALSE	-0.9453
142905	0.80	0.80	9.6335	9.6335	FALSE	0.0847
142906	0.62	0.63	11.7781	11.6726	FALSE	-1.1219
142906	0.61	0.65	11.8827	11.4587	FALSE	0.9872
142908	0.59	0.58	12.0898	12.1924	FALSE	0.2894
142908	0.59	0.61	12.0898	11.8827	FALSE	-0.5091
142909	0.61	0.60	11.8827	11.9866	FALSE	0.3427
142909	0.63	0.60	11.6726	11.9866	FALSE	1.8799
144107	0.56	0.58	12.3961	12.1924	FALSE	-0.4679
144107	0.57	0.58	12.2945	12.1924	FALSE	-1.2079
144117	0.73	0.74	10.5487	10.4266	FALSE	-0.9779
144118	0.60	0.61	11.9866	11.8827	FALSE	-1.1550
144147	0.60	0.61	11.9866	11.8827	FALSE	-1.1550
144152	0.79	0.78	9.7743	9.9112	FALSE	1.0270
144154	0.69	0.70	11.0166	10.9024	FALSE	-1.0214
144157	0.84	0.85	9.0222	8.8543	FALSE	-0.9773

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
144160	2.17	2.19	12.5731	12.5226	FALSE	-0.9007
144171	0.78	0.77	9.9112	10.0446	FALSE	0.9727
144171	0.77	0.78	10.0446	9.9112	FALSE	-0.9503
144173	0.47	0.48	13.3011	13.2006	FALSE	-1.0080
144173	0.47	0.47	13.3011	13.3011	FALSE	-0.6976
144199	0.42	0.41	13.8076	13.9102	FALSE	-0.0770
144199	0.41	0.42	13.9102	13.8076	FALSE	-0.8629
144201	0.84	0.83	9.0222	9.1833	FALSE	1.3597
144201	0.84	0.82	9.0222	9.3385	FALSE	2.4619
144219	2.03	1.84	12.9248	13.4017	FALSE	2.7697
144219	2.02	1.92	12.9499	13.2006	FALSE	1.1580
150963	0.57	0.59	12.2945	12.0898	FALSE	-0.4826

Table G-5. 2010–11 KCCT: Rescore Analysis—Mathematics Grade 5

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
55354	4	1.751	1.722	1.087	1.137	-0.027	No
55354	4	1.627	1.578	1.075	1.124	-0.046	No
55354	4	2.088	2.166	1.078	1.123	0.072	No
55354	4	2.415	2.341	1.386	1.387	-0.053	No

Figure G-4. 2010–11 KCCT: Delta Plot—Mathematics Grade 6

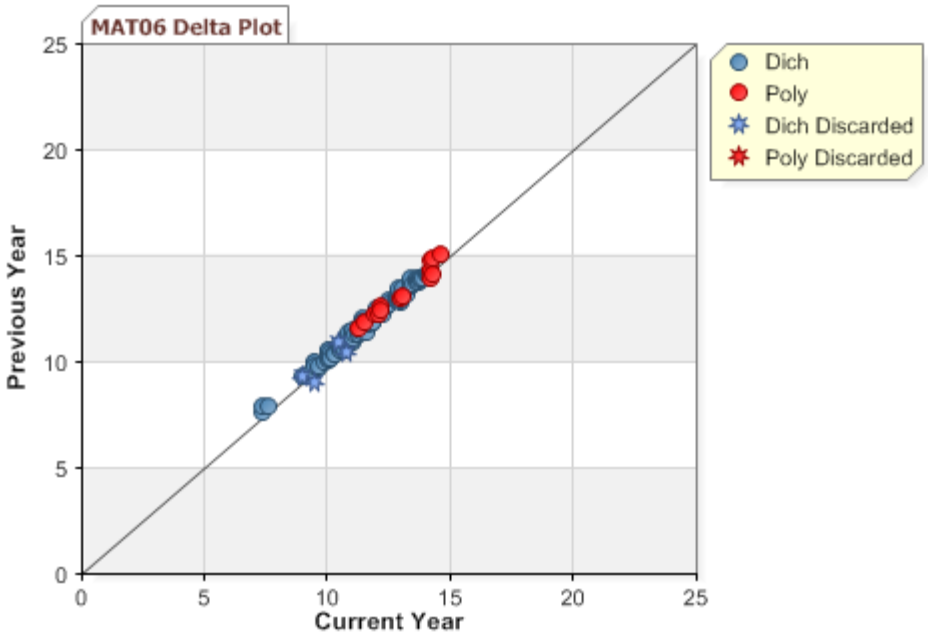


Table G-6. 2010–11 KCCT: Delta Analysis—Mathematics Grade 6

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
47137	0.67	0.67	11.2403	11.2403	FALSE	0.1289
47137	0.68	0.70	11.1292	10.9024	FALSE	-0.9514
47139	0.60	0.61	11.9866	11.8827	FALSE	-0.8425
47139	0.62	0.63	11.7781	11.6726	FALSE	-0.8295
47140	0.74	0.77	10.4266	10.0446	FALSE	0.2684
47140	0.75	0.75	10.3020	10.3020	FALSE	0.2483
47141	0.54	0.56	12.5983	12.3961	FALSE	-0.9724
47141	0.53	0.55	12.6989	12.4974	FALSE	-0.9645
47145	0.58	0.57	12.1924	12.2945	FALSE	0.8688
47516	0.74	0.71	10.4266	10.7865	TRUE	3.2681
47516	0.70	0.74	10.9024	10.4266	TRUE	1.1201
47517	0.81	0.82	9.4884	9.3385	FALSE	-0.9124
47519	0.51	0.52	12.8997	12.7994	FALSE	-0.9288
47519	0.51	0.52	12.8997	12.7994	FALSE	-0.9288
47538	0.42	0.42	13.8076	13.8076	FALSE	-0.1980
47540	0.39	0.39	14.1173	14.1173	FALSE	-0.2374
47540	0.39	0.38	14.1173	14.2219	FALSE	0.6454
47549	0.69	0.69	11.0166	11.0166	FALSE	0.1574
47617	0.59	0.61	12.0898	11.8827	FALSE	-0.9954
47617	0.61	0.64	11.8827	11.5662	FALSE	-0.0983
47619	0.61	0.65	11.8827	11.4587	FALSE	0.8081
47627	0.61	0.61	11.8827	11.8827	FALSE	0.0471
47631	0.75	0.77	10.3020	10.0446	FALSE	-0.7984
51877	0.44	0.45	13.6039	13.5026	FALSE	-1.0260
51877	0.42	0.43	13.8076	13.7055	FALSE	-1.0591
51942	0.64	0.65	11.5662	11.4587	FALSE	-0.8190
51942	0.66	0.65	11.3501	11.4587	FALSE	1.0308
51947	0.46	0.51	13.4017	12.8997	FALSE	1.6595
51947	0.47	0.51	13.3011	12.8997	FALSE	0.7976
51949	0.51	0.51	12.8997	12.8997	FALSE	-0.0824
51949	0.50	0.51	13.0000	12.8997	FALSE	-0.9411
51953	0.41	0.41	13.9102	13.9102	FALSE	-0.2110
51954	0.61	0.65	11.8827	11.4587	FALSE	0.8081
51954	0.60	0.65	11.9866	11.4587	FALSE	1.6977
51957	0.55	0.57	12.4974	12.2945	FALSE	-0.9793
51957	0.57	0.59	12.2945	12.0898	FALSE	-0.9897
51958	0.67	0.67	11.2403	11.2403	FALSE	0.1289
51958	0.67	0.69	11.2403	11.0166	FALSE	-0.9630
51961	0.66	0.64	11.3501	11.5662	FALSE	1.9372
51961	0.65	0.67	11.4587	11.2403	FALSE	-0.9806
51963	0.73	0.73	10.5487	10.5487	FALSE	0.2169
51963	0.76	0.76	10.1748	10.1748	FALSE	0.2645
51964	0.72	0.74	10.6686	10.4266	FALSE	-0.8817
51964	0.74	0.76	10.4266	10.1748	FALSE	-0.8297
51966	1.22	1.38	15.0403	14.5954	FALSE	1.3861
51968	0.78	0.81	9.9112	9.4884	FALSE	0.5471
51968	0.78	0.81	9.9112	9.4884	FALSE	0.5471
51970	0.64	0.67	11.5662	11.2403	FALSE	-0.0605
51970	0.64	0.66	11.5662	11.3501	FALSE	-0.9868

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51974	0.72	0.73	10.6686	10.5487	FALSE	-0.8097
51974	0.73	0.73	10.5487	10.5487	FALSE	0.2169
51975	1.51	1.53	14.2482	14.1957	FALSE	-0.6972
51975	1.49	1.52	14.3010	14.2219	FALSE	-0.9275
51977	0.64	0.65	11.5662	11.4587	FALSE	-0.8190
51977	0.64	0.67	11.5662	11.2403	FALSE	-0.0605
51981	0.61	0.61	11.8827	11.8827	FALSE	0.0471
51983	1.58	1.50	14.0652	14.2746	FALSE	1.5350
51983	1.63	1.51	13.9359	14.2482	FALSE	2.4202
51984	0.82	0.84	9.3385	9.0222	FALSE	-0.4238
51984	0.82	0.83	9.3385	9.1833	FALSE	-0.9383
51996	0.73	0.77	10.5487	10.0446	FALSE	1.3143
51996	0.73	0.77	10.5487	10.0446	FALSE	1.3143
52006	0.42	0.43	13.8076	13.7055	FALSE	-1.0591
52015	0.70	0.72	10.9024	10.6686	FALSE	-0.9216
52015	0.69	0.70	11.0166	10.9024	FALSE	-0.8060
52017	0.51	0.50	12.8997	13.0000	FALSE	0.7635
52017	0.49	0.52	13.1003	12.7994	FALSE	-0.0755
52019	0.78	0.78	9.9112	9.9112	FALSE	0.2981
52019	0.77	0.77	10.0446	10.0446	FALSE	0.2811
52020	2.16	2.34	12.5983	12.1412	FALSE	1.1781
52020	2.25	2.33	12.3708	12.1668	FALSE	-0.9863
76667	0.65	0.66	11.4587	11.3501	FALSE	-0.8148
76668	0.69	0.71	11.0166	10.7865	FALSE	-0.9376
76669	0.51	0.52	12.8997	12.7994	FALSE	-0.9288
76671	0.64	0.66	11.5662	11.3501	FALSE	-0.9868
76672	0.61	0.65	11.8827	11.4587	FALSE	0.8081
76672	0.61	0.65	11.8827	11.4587	FALSE	0.8081
76673	2.58	2.67	11.5126	11.2679	FALSE	-0.7520
93116	0.65	0.67	11.4587	11.2403	FALSE	-0.9806
93134	0.65	0.69	11.4587	11.0166	FALSE	0.9069
93135	0.79	0.81	9.7743	9.4884	FALSE	-0.6254
93139	0.54	0.56	12.5983	12.3961	FALSE	-0.9724
93142	0.51	0.55	12.8997	12.4974	FALSE	0.7551
93146	1.30	1.48	14.8150	14.3274	FALSE	1.7182
93146	1.31	1.51	14.7873	14.2482	FALSE	2.1488
93148	0.74	0.75	10.4266	10.3020	FALSE	-0.8185
93149	0.52	0.50	12.7994	13.0000	FALSE	1.6228
93149	0.51	0.50	12.8997	13.0000	FALSE	0.7635
93223	0.76	0.76	10.1748	10.1748	FALSE	0.2645
93223	0.75	0.75	10.3020	10.3020	FALSE	0.2483
93226	0.70	0.69	10.9024	11.0166	FALSE	1.1353
93226	0.68	0.69	11.1292	11.0166	FALSE	-0.8069
93327	0.66	0.69	11.3501	11.0166	FALSE	-0.0228
93327	0.66	0.69	11.3501	11.0166	FALSE	-0.0228
93328	0.71	0.73	10.7865	10.5487	FALSE	-0.9030
93328	0.73	0.72	10.5487	10.6686	FALSE	1.2283
93348	0.71	0.71	10.7865	10.7865	FALSE	0.1867
93348	0.69	0.72	11.0166	10.6686	FALSE	0.0564
93354	0.48	0.48	13.2006	13.2006	FALSE	-0.1207

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
93354	0.46	0.49	13.4017	13.1003	FALSE	-0.0323
93359	0.66	0.70	11.3501	10.9024	FALSE	0.9406
93359	0.67	0.68	11.2403	11.1292	FALSE	-0.8087
93362	0.76	0.77	10.1748	10.0446	FALSE	-0.8336
93362	0.75	0.77	10.3020	10.0446	FALSE	-0.7984
93379	2.32	2.36	12.1924	12.0898	FALSE	-0.8579
93379	2.32	2.41	12.1924	11.9607	FALSE	-0.7746
93387	0.61	0.64	11.8827	11.5662	FALSE	-0.0983
93387	0.61	0.61	11.8827	11.8827	FALSE	0.0471
93393	0.43	0.44	13.7055	13.6039	FALSE	-1.0422
93393	0.43	0.43	13.7055	13.7055	FALSE	-0.1850
93400	0.50	0.50	13.0000	13.0000	FALSE	-0.0952
93400	0.51	0.51	12.8997	12.8997	FALSE	-0.0824
93405	0.39	0.40	14.1173	14.0134	FALSE	-1.1138
93405	0.39	0.39	14.1173	14.1173	FALSE	-0.2374
93417	2.01	2.00	12.9749	13.0000	FALSE	0.1195
93417	1.96	1.96	13.1003	13.1003	FALSE	-0.1079
93423	0.55	0.60	12.4974	11.9866	FALSE	1.6181
93423	0.56	0.60	12.3961	11.9866	FALSE	0.7512
93429	0.62	0.66	11.7781	11.3501	FALSE	0.8279
93429	0.64	0.67	11.5662	11.2403	FALSE	-0.0605
93436	0.91	0.92	7.6370	7.3797	FALSE	-1.1390
93436	0.90	0.92	7.8738	7.3797	FALSE	0.8889
93443	0.41	0.44	13.9102	13.6039	FALSE	0.0733
93443	0.41	0.42	13.9102	13.8076	FALSE	-1.0766
93455	2.44	2.59	11.8827	11.4857	FALSE	0.5806
144467	0.90	0.91	7.8738	7.6370	FALSE	-1.2814
144471	0.45	0.46	13.5026	13.4017	FALSE	-1.0104
144473	0.41	0.42	13.9102	13.8076	FALSE	-1.0766
144487	0.84	0.81	9.0222	9.4884	TRUE	4.3445
144487	0.82	0.84	9.3385	9.0222	TRUE	-0.4238
144490	0.80	0.80	9.6335	9.6335	FALSE	0.3334
144490	0.79	0.80	9.7743	9.6335	FALSE	-0.8723
144503	0.39	0.39	14.1173	14.1173	FALSE	-0.2374
144516	0.43	0.46	13.7055	13.4017	FALSE	0.0258
144516	0.41	0.46	13.9102	13.4017	FALSE	1.7785

Table G-7. 2010–11 KCCT: Rescore Analysis—Mathematics Grade 6

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
51983	4	1.468	1.498	1.303	1.303	0.023	No
51983	4	2.163	2.232	1.346	1.343	0.051	No
51983	4	2.358	2.235	1.266	1.262	-0.097	No
51983	4	2.095	2.070	1.163	1.222	-0.022	No

Figure G-5. 2010–11 KCCT: Delta Plot—Mathematics Grade 7

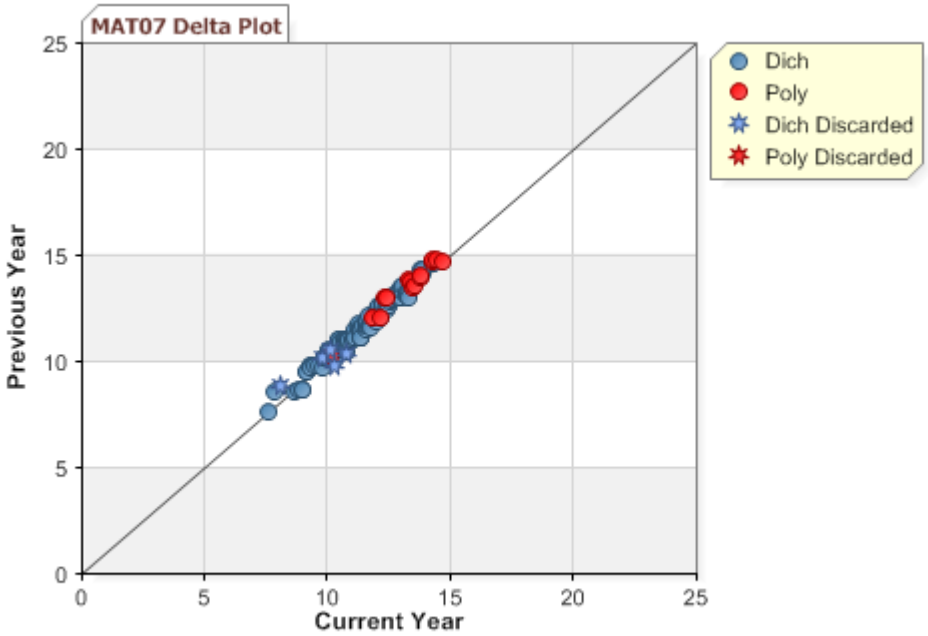


Table G-8. 2010–11 KCCT: Delta Analysis—Mathematics Grade 7

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
50448	0.61	0.60	11.8827	11.9866	FALSE	0.6086
50448	0.62	0.62	11.7781	11.7781	FALSE	-0.1295
50454	0.50	0.52	13.0000	12.7994	FALSE	-1.2395
50454	0.49	0.53	13.1003	12.6989	FALSE	0.1449
50457	0.69	0.70	11.0166	10.9024	FALSE	-1.0301
50457	0.69	0.70	11.0166	10.9024	FALSE	-1.0301
50464	3.02	3.04	10.2388	10.1748	FALSE	-0.7877
50473	0.49	0.52	13.1003	12.7994	FALSE	-0.5549
50474	0.53	0.57	12.6989	12.2945	FALSE	0.2217
50476	0.64	0.62	11.5662	11.7781	FALSE	1.3173
50476	0.61	0.64	11.8827	11.5662	FALSE	-0.2776
50477	0.60	0.58	11.9866	12.1924	FALSE	1.3329
50477	0.56	0.60	12.3961	11.9866	FALSE	0.2990
50478	0.79	0.75	9.7743	10.3020	TRUE	3.2697
50478	0.76	0.79	10.1748	9.7743	TRUE	0.5428
50480	0.70	0.70	10.9024	10.9024	FALSE	-0.2504
52320	0.74	0.71	10.4266	10.7865	FALSE	2.1904
52320	0.72	0.73	10.6686	10.5487	FALSE	-1.1178
52321	0.76	0.77	10.1748	10.0446	FALSE	-1.2577
52326	0.63	0.65	11.6726	11.4587	FALSE	-0.9639
52329	0.50	0.47	13.0000	13.3011	FALSE	2.1364
52329	0.47	0.51	13.3011	12.8997	FALSE	0.1172
52330	0.49	0.48	13.1003	13.2006	FALSE	0.7520

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52332	0.62	0.64	11.7781	11.5662	FALSE	-0.9921
52334	0.73	0.74	10.5487	10.4266	FALSE	-1.1500
52336	0.76	0.78	10.1748	9.9112	FALSE	-0.4109
52336	0.76	0.78	10.1748	9.9112	FALSE	-0.4109
53500	0.66	0.66	11.3501	11.3501	FALSE	-0.1886
53500	0.65	0.66	11.4587	11.3501	FALSE	-0.9299
53507	0.45	0.49	13.5026	13.1003	FALSE	0.0964
53507	0.47	0.48	13.3011	13.2006	FALSE	-0.6190
53516	0.80	0.79	9.6335	9.7743	FALSE	0.5551
53516	0.79	0.80	9.7743	9.6335	FALSE	-1.2107
53520	0.79	0.82	9.7743	9.3385	FALSE	0.8439
53520	0.79	0.82	9.7743	9.3385	FALSE	0.8439
53528	0.65	0.67	11.4587	11.2403	FALSE	-0.9030
53528	0.68	0.66	11.1292	11.3501	FALSE	1.3199
53970	0.86	0.84	8.6787	9.0222	FALSE	1.8348
53970	0.86	0.84	8.6787	9.0222	FALSE	1.8348
54602	0.75	0.71	10.3020	10.7865	TRUE	3.0409
54602	0.73	0.76	10.5487	10.1748	TRUE	0.3064
54609	0.56	0.57	12.3961	12.2945	FALSE	-0.7520
54640	0.58	0.58	12.1924	12.1924	FALSE	-0.0723
54640	0.57	0.58	12.2945	12.1924	FALSE	-0.7692
54646	0.91	0.91	7.6370	7.6370	FALSE	-0.7014
54653	0.54	0.55	12.5983	12.4974	FALSE	-0.7192
54653	0.54	0.55	12.5983	12.4974	FALSE	-0.7192
54967	0.53	0.57	12.6989	12.2945	FALSE	0.2217
54967	0.54	0.59	12.5983	12.0898	FALSE	0.9602
54973	0.86	0.85	8.6787	8.8543	FALSE	0.6653
54973	0.87	0.86	8.4944	8.6787	FALSE	0.7007
54978	0.63	0.63	11.6726	11.6726	FALSE	-0.1441
54978	0.65	0.64	11.4587	11.5662	FALSE	0.5748
54983	1.36	1.35	14.6499	14.6772	FALSE	0.4574
54983	1.33	1.42	14.7321	14.4874	FALSE	-1.1719
55301	0.65	0.66	11.4587	11.3501	FALSE	-0.9299
55301	0.65	0.66	11.4587	11.3501	FALSE	-0.9299
55311	0.87	0.90	8.4944	7.8738	FALSE	2.3084
55311	0.85	0.89	8.8543	8.0939	TRUE	3.2321
55340	0.61	0.64	11.8827	11.5662	FALSE	-0.2776
55340	0.59	0.63	12.0898	11.6726	FALSE	0.3950
55347	0.50	0.54	13.0000	12.5983	FALSE	0.1614
55347	0.50	0.53	13.0000	12.6989	FALSE	-0.5397
55360	1.60	1.69	14.0134	13.7820	FALSE	-1.1651
55360	1.64	1.69	13.9102	13.7820	FALSE	-0.7279
76467	0.71	0.73	10.7865	10.5487	FALSE	-0.6754
76471	0.63	0.64	11.6726	11.5662	FALSE	-0.8854
76471	0.62	0.67	11.7781	11.2403	FALSE	1.2774
76478	0.39	0.41	14.1173	13.9102	FALSE	-1.2491
76479	0.61	0.64	11.8827	11.5662	FALSE	-0.2776
94451	0.77	0.75	10.0446	10.3020	FALSE	1.4242
94453	0.55	0.57	12.4974	12.2945	FALSE	-1.1545
94461	0.63	0.64	11.6726	11.5662	FALSE	-0.8854

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94467	0.76	0.78	10.1748	9.9112	FALSE	-0.4109
94468	0.81	0.83	9.4884	9.1833	FALSE	-0.0270
94468	0.81	0.83	9.4884	9.1833	FALSE	-0.0270
94470	0.72	0.74	10.6686	10.4266	FALSE	-0.6292
94472	1.35	1.50	14.6772	14.2746	FALSE	-0.0640
94472	1.33	1.48	14.7321	14.3274	FALSE	-0.0573
95463	0.73	0.77	10.5487	10.0446	FALSE	1.2132
95463	0.74	0.77	10.4266	10.0446	FALSE	0.3793
95468	0.79	0.81	9.7743	9.4884	FALSE	-0.2000
95468	0.80	0.82	9.6335	9.3385	FALSE	-0.1174
95470	0.68	0.66	11.1292	11.3501	FALSE	1.3199
95470	0.68	0.66	11.1292	11.3501	FALSE	1.3199
95473	0.48	0.47	13.2006	13.3011	FALSE	0.7667
95473	0.47	0.49	13.3011	13.1003	FALSE	-1.2798
95523	1.71	1.84	13.7310	13.4017	FALSE	-0.4445
95523	1.68	1.88	13.8076	13.3011	FALSE	0.7796
95536	0.75	0.75	10.3020	10.3020	FALSE	-0.3333
95536	0.74	0.77	10.4266	10.0446	FALSE	0.3793
95540	0.69	0.69	11.0166	11.0166	FALSE	-0.2347
95540	0.69	0.69	11.0166	11.0166	FALSE	-0.2347
95542	0.53	0.55	12.6989	12.4974	FALSE	-1.1913
95542	0.53	0.56	12.6989	12.3961	FALSE	-0.4862
95553	0.59	0.59	12.0898	12.0898	FALSE	-0.0865
95553	0.59	0.60	12.0898	11.9866	FALSE	-0.8054
95557	0.68	0.68	11.1292	11.1292	FALSE	-0.2191
95557	0.68	0.68	11.1292	11.1292	FALSE	-0.2191
95562	1.81	1.81	13.4774	13.4774	FALSE	0.1051
95562	1.80	1.79	13.5026	13.5279	FALSE	0.2847
95569	0.37	0.42	14.3274	13.8076	FALSE	0.8008
95569	0.37	0.41	14.3274	13.9102	FALSE	0.0861
95571	0.49	0.51	13.1003	12.8997	FALSE	-1.2538
95571	0.50	0.50	13.0000	13.0000	FALSE	0.0392
95572	0.69	0.71	11.0166	10.7865	FALSE	-0.7600
95572	0.69	0.72	11.0166	10.6686	FALSE	0.0607
95575	0.51	0.53	12.8997	12.6989	FALSE	-1.2244
95575	0.52	0.54	12.7994	12.5983	FALSE	-1.2083
95576	0.46	0.50	13.4017	13.0000	FALSE	0.1059
95576	0.48	0.48	13.2006	13.2006	FALSE	0.0669
95577	2.02	2.26	12.9499	12.3454	FALSE	1.5807
95577	2.03	2.24	12.9248	12.3961	FALSE	1.0560
95588	0.50	0.50	13.0000	13.0000	FALSE	0.0392
95588	0.50	0.50	13.0000	13.0000	FALSE	0.0392
95589	0.69	0.74	11.0166	10.4266	FALSE	1.7465
95589	0.69	0.74	11.0166	10.4266	FALSE	1.7465
95590	0.50	0.55	13.0000	12.4974	FALSE	0.8643
95590	0.50	0.53	13.0000	12.6989	FALSE	-0.5397
95591	0.35	0.37	14.5413	14.3274	FALSE	-1.2377
95591	0.35	0.37	14.5413	14.3274	FALSE	-1.2377
95594	0.70	0.72	10.9024	10.6686	FALSE	-0.7190
95594	0.70	0.73	10.9024	10.5487	FALSE	0.1161

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
138161	0.64	0.66	11.5662	11.3501	FALSE	-0.9342
138163	0.65	0.68	11.4587	11.1292	FALSE	-0.1288
138166	0.71	0.71	10.7865	10.7865	FALSE	-0.2665
138168	2.38	2.32	12.0383	12.1924	FALSE	0.9800
138231	0.59	0.60	12.0898	11.9866	FALSE	-0.8054
138232	0.50	0.52	13.0000	12.7994	FALSE	-1.2395
138233	2.39	2.45	12.0125	11.8566	FALSE	-1.1827
138321	0.56	0.56	12.3961	12.3961	FALSE	-0.0442
138321	0.55	0.59	12.4974	12.0898	FALSE	0.2712
138337	0.71	0.72	10.7865	10.6686	FALSE	-1.0872
152764	0.70	0.71	10.9024	10.7865	FALSE	-1.0580
152764	0.69	0.72	11.0166	10.6686	FALSE	0.0607

Table G-9. 2010–11 KCCT: Rescore Analysis—Mathematics Grade 7

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
54983	4	2.155	2.218	1.189	1.298	0.053	No
54983	4	1.691	1.623	0.989	0.934	-0.069	No
54983	4	1.815	1.800	1.477	1.473	-0.010	No
54983	4	1.624	1.589	1.066	1.050	-0.033	No

Figure G-6. 2010–11 KCCT: Delta Plot—Mathematics Grade 8

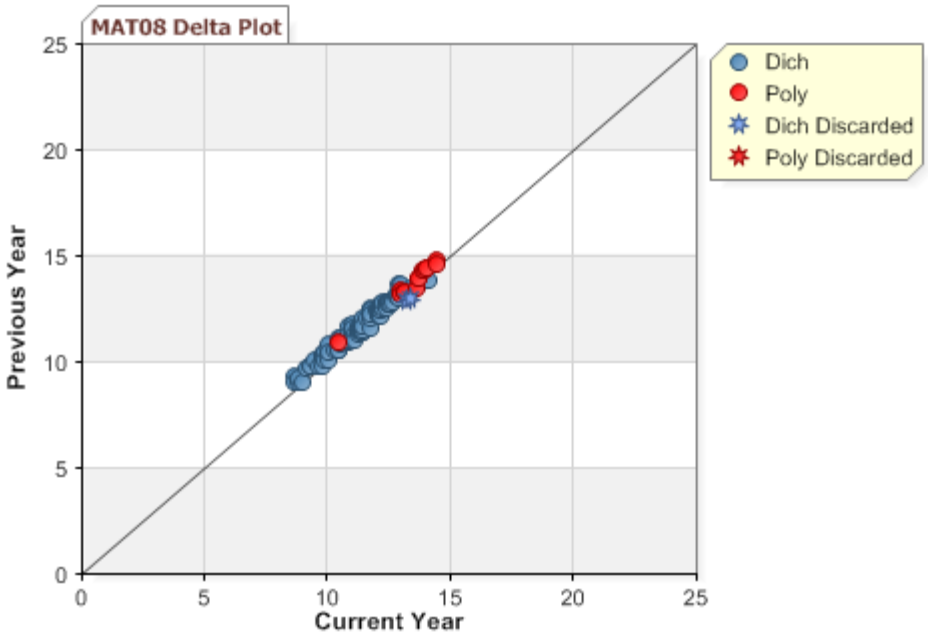


Table G-10. 2010–11 KCCT: Delta Analysis—Mathematics Grade 8

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
51773	0.63	0.65	11.6726	11.4587	FALSE	-0.9512
51800	0.53	0.58	12.6989	12.1924	FALSE	0.7703
51800	0.55	0.62	12.4974	11.7781	FALSE	2.2728
51823	0.42	0.39	13.8076	14.1173	FALSE	2.3577
51823	0.43	0.42	13.7055	13.8076	FALSE	0.8691
58420	0.46	0.46	13.4017	13.4017	FALSE	0.1974
58421	0.73	0.75	10.5487	10.3020	FALSE	-0.9243
58421	0.75	0.79	10.3020	9.7743	FALSE	0.3572
58426	0.60	0.62	11.9866	11.7781	FALSE	-0.9867
58426	0.60	0.62	11.9866	11.7781	FALSE	-0.9867
58430	1.89	1.93	13.2759	13.1755	FALSE	-0.5045
58430	1.95	2.01	13.1254	12.9749	FALSE	-0.8331
58431	0.57	0.59	12.2945	12.0898	FALSE	-1.0316
58431	0.58	0.59	12.1924	12.0898	FALSE	-0.2637
58436	0.53	0.55	12.6989	12.4974	FALSE	-1.1047
58436	0.52	0.55	12.7994	12.4974	FALSE	-0.6956
58438	0.74	0.77	10.4266	10.0446	FALSE	-0.6750
58442	0.42	0.43	13.8076	13.7055	FALSE	-0.6425
58442	0.43	0.42	13.7055	13.8076	FALSE	0.8691
58500	0.73	0.74	10.5487	10.4266	FALSE	-0.0166
58508	0.63	0.70	11.6726	10.9024	FALSE	2.4484
58508	0.62	0.69	11.7781	11.0166	FALSE	2.4099
58521	0.63	0.65	11.6726	11.4587	FALSE	-0.9512
58523	0.64	0.67	11.5662	11.2403	FALSE	-0.8144
58523	0.63	0.66	11.6726	11.3501	FALSE	-0.8138
58528	0.69	0.68	11.0166	11.1292	FALSE	1.5828
58528	0.67	0.68	11.2403	11.1292	FALSE	-0.1004
58549	0.68	0.74	11.1292	10.4266	FALSE	1.8271
58549	0.68	0.73	11.1292	10.5487	FALSE	0.9373
58554	0.58	0.62	12.1924	11.7781	FALSE	-0.0210
58585	0.69	0.71	11.0166	10.7865	FALSE	-0.9144
58585	0.70	0.71	10.9024	10.7865	FALSE	-0.0553
58590	0.48	0.49	13.2006	13.1003	FALSE	-0.4860
58590	0.48	0.48	13.2006	13.2006	FALSE	0.2450
58609	0.60	0.64	11.9866	11.5662	FALSE	-0.0254
58609	0.59	0.62	12.0898	11.7781	FALSE	-0.7929
58618	1.82	1.76	13.4522	13.6039	FALSE	1.2908
58620	0.67	0.70	11.2403	10.9024	FALSE	-0.8032
58620	0.70	0.70	10.9024	10.9024	FALSE	0.7894
58621	1.46	1.59	14.3805	14.0393	FALSE	-0.0356
58621	1.44	1.58	14.4338	14.0652	FALSE	0.1765
58622	1.51	1.61	14.2482	13.9875	FALSE	-0.6536
58622	1.49	1.65	14.3010	13.8845	FALSE	0.4939
58689	0.54	0.58	12.5983	12.1924	FALSE	0.0131
58689	0.56	0.58	12.3961	12.1924	FALSE	-1.0485
58691	0.54	0.58	12.5983	12.1924	FALSE	0.0131
58747	0.65	0.66	11.4587	11.3501	FALSE	-0.1334
58747	0.66	0.65	11.3501	11.4587	FALSE	1.4744
58795	0.63	0.67	11.6726	11.2403	FALSE	-0.0138

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
58795	0.63	0.66	11.6726	11.3501	FALSE	-0.8138
58802	0.62	0.65	11.7781	11.4587	FALSE	-0.8113
58809	0.67	0.69	11.2403	11.0166	FALSE	-0.9208
58809	0.67	0.69	11.2403	11.0166	FALSE	-0.9208
58816	0.75	0.78	10.3020	9.9112	FALSE	-0.6403
58816	0.77	0.81	10.0446	9.4884	FALSE	0.5037
58825	0.47	0.51	13.3011	12.8997	FALSE	0.1469
58825	0.47	0.49	13.3011	13.1003	FALSE	-1.2418
58839	1.88	1.95	13.3011	13.1254	FALSE	-1.0591
58839	1.91	1.95	13.2257	13.1254	FALSE	-0.4921
86421	0.66	0.69	11.3501	11.0166	FALSE	-0.8092
86430	0.84	0.86	9.0222	8.6787	FALSE	-1.2675
86440	0.54	0.57	12.5983	12.2945	FALSE	-0.7306
86457	0.72	0.74	10.6686	10.4266	FALSE	-0.9185
86457	0.74	0.78	10.4266	9.9112	FALSE	0.2969
86460	0.64	0.62	11.5662	11.7781	FALSE	2.1761
86460	0.60	0.65	11.9866	11.4587	FALSE	0.7575
94214	0.48	0.50	13.2006	13.0000	FALSE	-1.2166
94216	0.71	0.77	10.7865	10.0446	FALSE	2.0320
94220	0.77	0.78	10.0446	9.9112	FALSE	0.0208
94328	0.59	0.59	12.0898	12.0898	FALSE	0.5081
94328	0.58	0.58	12.1924	12.1924	FALSE	0.4838
94330	0.79	0.82	9.7743	9.3385	FALSE	-0.4377
94330	0.80	0.83	9.6335	9.1833	FALSE	-0.3661
94355	0.53	0.54	12.6989	12.5983	FALSE	-0.3695
94355	0.52	0.55	12.7994	12.4974	FALSE	-0.6956
94357	0.66	0.67	11.3501	11.2403	FALSE	-0.1166
94357	0.67	0.67	11.2403	11.2403	FALSE	0.7093
94372	0.73	0.74	10.5487	10.4266	FALSE	-0.0166
94372	0.73	0.74	10.5487	10.4266	FALSE	-0.0166
94379	0.75	0.77	10.3020	10.0446	FALSE	-0.9439
94379	0.74	0.77	10.4266	10.0446	FALSE	-0.6750
94382	0.68	0.69	11.1292	11.0166	FALSE	-0.0847
94382	0.67	0.69	11.2403	11.0166	FALSE	-0.9208
94402	0.52	0.56	12.7994	12.3961	FALSE	0.0420
94402	0.52	0.56	12.7994	12.3961	FALSE	0.0420
94403	0.53	0.57	12.6989	12.2945	FALSE	0.0266
94403	0.52	0.57	12.7994	12.2945	FALSE	0.7823
94404	0.52	0.53	12.7994	12.6989	FALSE	-0.3919
94404	0.53	0.55	12.6989	12.4974	FALSE	-1.1047
94406	0.76	0.79	10.1748	9.7743	FALSE	-0.6000
94406	0.76	0.79	10.1748	9.7743	FALSE	-0.6000
94407	0.50	0.51	13.0000	12.8997	FALSE	-0.4380
94407	0.49	0.52	13.1003	12.7994	FALSE	-0.6326
94409	0.66	0.66	11.3501	11.3501	FALSE	0.6833
94409	0.65	0.67	11.4587	11.2403	FALSE	-0.9334
94412	0.44	0.51	13.6039	12.8997	FALSE	2.4247
94412	0.44	0.50	13.6039	13.0000	FALSE	1.6941
94428	0.65	0.65	11.4587	11.4587	FALSE	0.6576
94428	0.63	0.65	11.6726	11.4587	FALSE	-0.9512

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94430	0.69	0.70	11.0166	10.9024	FALSE	-0.0697
94430	0.69	0.71	11.0166	10.7865	FALSE	-0.9144
94431	1.33	1.43	14.7321	14.4606	FALSE	-0.4603
94431	1.37	1.42	14.6226	14.4874	FALSE	-1.0766
151447	0.71	0.74	10.7865	10.4266	FALSE	-0.7512
151462	0.55	0.59	12.4974	12.0898	FALSE	0.0015
151791	0.58	0.59	12.1924	12.0898	FALSE	-0.2637
151795	0.79	0.82	9.7743	9.3385	FALSE	-0.4377
151798	2.81	2.94	10.8736	10.4880	FALSE	-0.5428
151841	0.66	0.65	11.3501	11.4587	FALSE	1.4744
151841	0.64	0.69	11.5662	11.0166	FALSE	0.8158
151842	0.59	0.58	12.0898	12.1924	FALSE	1.2557
151842	0.56	0.62	12.3961	11.7781	FALSE	1.5113
151844	0.50	0.46	13.0000	13.4017	TRUE	3.2195
151844	0.51	0.48	12.8997	13.2006	TRUE	2.5085
151903	0.71	0.73	10.7865	10.5487	FALSE	-0.9150
151910	0.48	0.52	13.2006	12.7994	FALSE	0.1222
151915	0.63	0.65	11.6726	11.4587	FALSE	-0.9512
151934	0.52	0.55	12.7994	12.4974	FALSE	-0.6956
151937	0.77	0.77	10.0446	10.0446	FALSE	0.9926
151943	0.70	0.72	10.9024	10.6686	FALSE	-0.9137
151958	0.56	0.60	12.3961	11.9866	FALSE	-0.0080
151958	0.56	0.58	12.3961	12.1924	FALSE	-1.0485
151965	0.79	0.80	9.7743	9.6335	FALSE	0.0308
151965	0.79	0.79	9.7743	9.7743	FALSE	1.0566
151972	0.84	0.85	9.0222	8.8543	FALSE	0.0115
151972	0.84	0.84	9.0222	9.0222	FALSE	1.2348
151973	0.56	0.62	12.3961	11.7781	FALSE	1.5113
151973	0.57	0.62	12.2945	11.7781	FALSE	0.7468
151977	0.82	0.86	9.3385	8.6787	FALSE	1.0914
151977	0.83	0.85	9.1833	8.8543	FALSE	-1.2009
151979	0.55	0.57	12.4974	12.2945	FALSE	-1.0663
151979	0.55	0.56	12.4974	12.3961	FALSE	-0.3259
151992	1.62	1.70	13.9617	13.7565	FALSE	-1.1255
151992	1.62	1.72	13.9617	13.7055	FALSE	-0.7541
153214	1.87	2.02	13.3262	12.9499	FALSE	-0.0293

Table G-11. 2010–11 KCCT: Rescore Analysis—Mathematics Grade 8

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
58430	4	1.858	1.868	0.789	0.844	0.012	No
58430	4	1.520	1.446	1.425	1.411	-0.052	No
58430	4	1.485	1.441	1.293	1.295	-0.034	No
58430	4	1.436	1.332	1.019	0.992	-0.102	No

Figure G-7. 2010–11 KCCT: Delta Plot—Mathematics Grade 11

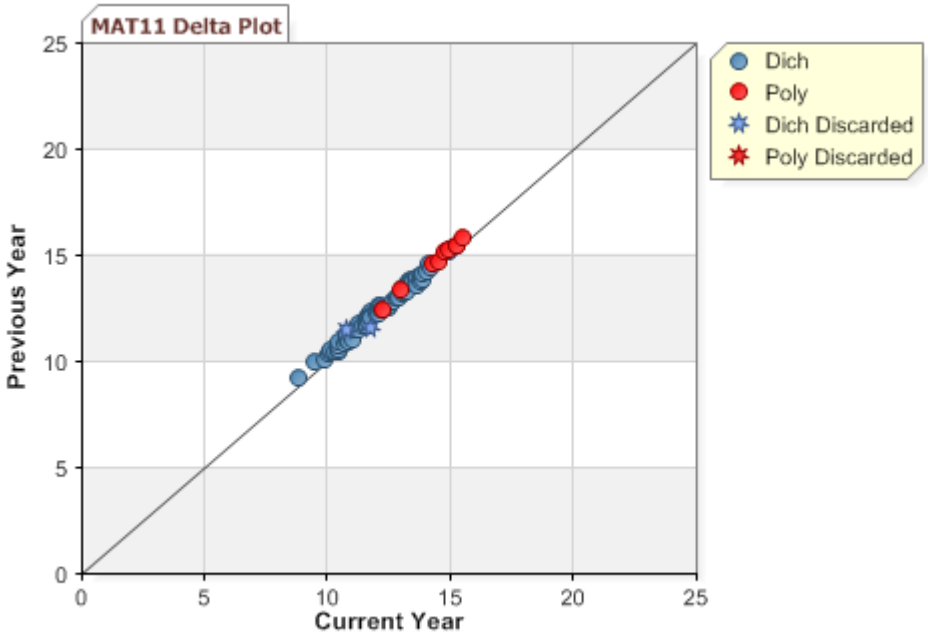


Table G-12. 2010–11 KCCT: Delta Analysis—Mathematics Grade 11

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
49781	0.56	0.58	12.3961	12.1924	FALSE	-1.0078
49785	0.58	0.60	12.1924	11.9866	FALSE	-1.0108
51081	0.59	0.62	12.0898	11.7781	FALSE	-0.2714
51085	0.67	0.71	11.2403	10.7865	FALSE	1.0349
51090	0.43	0.46	13.7055	13.4017	FALSE	-0.2094
51094	0.58	0.59	12.1924	12.0898	FALSE	-0.0091
51095	0.36	0.38	14.4338	14.2219	FALSE	-1.0380
51096	0.29	0.31	15.2135	14.9834	FALSE	-0.7938
51099	0.42	0.44	13.8076	13.6039	FALSE	-1.1297
51102	0.30	0.31	15.0976	14.9834	FALSE	-0.3724
51103	0.78	0.81	9.9112	9.4884	FALSE	0.6186
51105	0.39	0.41	14.1173	13.9102	FALSE	-1.1120
51106	1.87	2.00	13.3262	13.0000	FALSE	-0.0241
51109	1.10	1.15	15.3910	15.2428	FALSE	-0.7280
51110	0.61	0.63	11.8827	11.6726	FALSE	-1.0260
51111	0.42	0.41	13.8076	13.9102	FALSE	1.8432
51114	0.41	0.44	13.9102	13.6039	FALSE	-0.1670
51117	0.45	0.44	13.5026	13.6039	FALSE	1.8562
51119	0.65	0.68	11.4587	11.1292	FALSE	-0.1534
51120	0.77	0.78	10.0446	9.9112	FALSE	-0.1224
51124	2.22	2.29	12.4468	12.2690	FALSE	-0.7604
51191	0.56	0.57	12.3961	12.2945	FALSE	-0.0171
51198	0.50	0.52	13.0000	12.7994	FALSE	-1.0301

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51208	0.75	0.77	10.3020	10.0446	FALSE	-0.9528
51213	0.72	0.74	10.6686	10.4266	FALSE	-1.0708
51215	0.47	0.48	13.3011	13.2006	FALSE	-0.0840
51216	0.98	1.05	15.7612	15.5426	FALSE	-0.8584
51317	0.63	0.64	11.6726	11.5662	FALSE	-0.0013
51343	0.63	0.64	11.6726	11.5662	FALSE	-0.0013
51349	0.56	0.57	12.3961	12.2945	FALSE	-0.0171
51355	0.47	0.49	13.3011	13.1003	FALSE	-1.0579
51378	0.63	0.64	11.6726	11.5662	FALSE	-0.0013
51380	0.38	0.40	14.2219	14.0134	FALSE	-1.0890
51391	0.48	0.49	13.2006	13.1003	FALSE	-0.0741
51400	1.14	1.24	15.2722	14.9834	FALSE	-0.2193
51534	0.70	0.74	10.9024	10.4266	FALSE	1.2183
51536	0.64	0.62	11.5662	11.7781	TRUE	3.0976
51538	0.65	0.67	11.4587	11.2403	FALSE	-1.0694
51540	0.54	0.58	12.5983	12.1924	FALSE	0.6858
51541	0.46	0.49	13.4017	13.1003	FALSE	-0.2579
51546	0.30	0.32	15.0976	14.8708	FALSE	-0.8361
51547	0.69	0.71	11.0166	10.7865	FALSE	-1.1454
51550	0.54	0.59	12.5983	12.0898	FALSE	1.6817
51551	0.50	0.51	13.0000	12.8997	FALSE	-0.0562
51553	0.55	0.55	12.4974	12.4974	FALSE	0.9605
51554	1.37	1.48	14.6226	14.3274	FALSE	-0.2134
51555	0.74	0.75	10.4266	10.3020	FALSE	-0.0699
51557	0.57	0.62	12.2945	11.7781	FALSE	1.7329
51568	1.17	1.30	15.1844	14.8150	FALSE	0.5547
130610	0.70	0.70	10.9024	10.9024	FALSE	1.0981
130612	0.74	0.74	10.4266	10.4266	FALSE	1.1392
130613	0.73	0.74	10.5487	10.4266	FALSE	-0.0567
130614	0.65	0.71	11.4587	10.7865	TRUE	3.1733
130616	0.63	0.64	11.6726	11.5662	FALSE	-0.0013
130619	0.59	0.63	12.0898	11.6726	FALSE	0.7525
130621	0.44	0.45	13.6039	13.5026	FALSE	-0.1176
130623	1.36	1.39	14.6499	14.5683	FALSE	-0.0167
130631	0.74	0.76	10.4266	10.1748	FALSE	-0.9964
130634	0.52	0.53	12.7994	12.6989	FALSE	-0.0407
130636	0.60	0.62	11.9866	11.7781	FALSE	-1.0195
130637	0.50	0.52	13.0000	12.7994	FALSE	-1.0301
130639	0.43	0.45	13.7055	13.5026	FALSE	-1.1127
130641	0.62	0.67	11.7781	11.2403	FALSE	1.8951
130642	0.40	0.42	14.0134	13.8076	FALSE	-1.1334
130649	0.52	0.53	12.7994	12.6989	FALSE	-0.0407
130650	0.28	0.30	15.3314	15.0976	FALSE	-0.7484
130652	0.43	0.47	13.7055	13.3011	FALSE	0.7676
130654	0.60	0.64	11.9866	11.5662	FALSE	0.7748
130655	0.35	0.39	14.5413	14.1173	FALSE	1.0299
130656	0.71	0.72	10.7865	10.6686	FALSE	-0.0355
130657	0.69	0.69	11.0166	11.0166	FALSE	1.0883
130659	0.60	0.62	11.9866	11.7781	FALSE	-1.0195
130661	0.43	0.47	13.7055	13.3011	FALSE	0.7676

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
152071	0.73	0.76	10.5487	10.1748	FALSE	0.1995
152072	0.83	0.85	9.1833	8.8543	FALSE	-0.3540
152073	0.54	0.55	12.5983	12.4974	FALSE	-0.0277
152077	0.43	0.42	13.7055	13.8076	FALSE	1.8469
152081	0.63	0.65	11.6726	11.4587	FALSE	-1.0441
152084	0.42	0.46	13.8076	13.4017	FALSE	0.7902
152086	0.55	0.57	12.4974	12.2945	FALSE	-1.0084
152097	1.08	1.13	15.4513	15.3017	FALSE	-0.7458

Figure G-8. 2010–11 KCCT: Delta Plot—Reading Grade 3

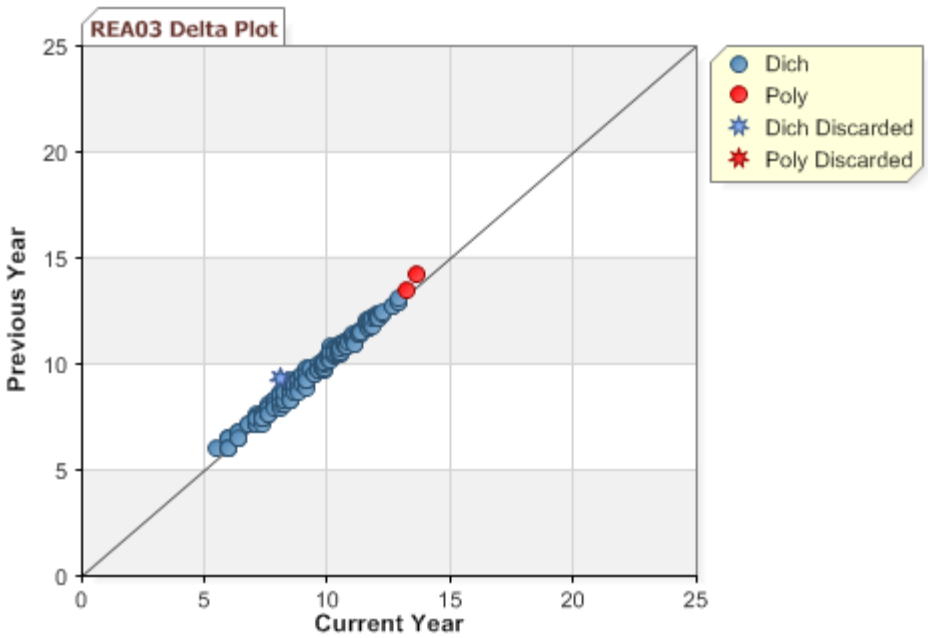


Table G-13. 2010–11 KCCT: Delta Analysis—Reading Grade 3

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
46977	0.96	0.96	5.9973	5.9973	FALSE	0.0220
46977	0.95	0.96	6.4206	5.9973	FALSE	0.8137
46980	0.82	0.84	9.3385	9.0222	FALSE	-0.0004
46980	0.84	0.84	9.0222	9.0222	FALSE	-0.0165
46983	0.63	0.63	11.6726	11.6726	FALSE	-0.0503
46983	0.63	0.63	11.6726	11.6726	FALSE	-0.0503
46984	0.84	0.83	9.0222	9.1833	FALSE	1.2662
46984	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
46985	0.87	0.87	8.4944	8.4944	FALSE	-0.0098
46985	0.87	0.87	8.4944	8.4944	FALSE	-0.0098

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
47036	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
47036	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
47037	0.65	0.67	11.4587	11.2403	FALSE	-0.7534
47037	0.66	0.67	11.3501	11.2403	FALSE	-0.9200
47040	0.70	0.71	10.9024	10.7865	FALSE	-0.9632
47040	0.71	0.71	10.7865	10.7865	FALSE	-0.0390
47042	0.86	0.86	8.6787	8.6787	FALSE	-0.0121
47042	0.86	0.86	8.6787	8.6787	FALSE	-0.0121
47043	0.91	0.91	7.6370	7.6370	FALSE	0.0011
47043	0.90	0.91	7.8738	7.6370	FALSE	-0.6522
47044	0.71	0.71	10.7865	10.7865	FALSE	-0.0390
47044	0.71	0.71	10.7865	10.7865	FALSE	-0.0390
47047	0.88	0.87	8.3001	8.4944	FALSE	1.5398
47047	0.87	0.87	8.4944	8.4944	FALSE	-0.0098
47048	0.73	0.73	10.5487	10.5487	FALSE	-0.0359
47048	0.72	0.73	10.6686	10.5487	FALSE	-0.9916
47071	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
47071	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
47072	0.67	0.69	11.2403	11.0166	FALSE	-0.7133
47072	0.66	0.69	11.3501	11.0166	FALSE	0.1619
47073	0.95	0.95	6.4206	6.4206	FALSE	0.0166
47073	0.95	0.95	6.4206	6.4206	FALSE	0.0166
47075	0.74	0.73	10.4266	10.5487	FALSE	0.9376
47075	0.73	0.73	10.5487	10.5487	FALSE	-0.0359
47077	0.91	0.91	7.6370	7.6370	FALSE	0.0011
47077	0.91	0.91	7.6370	7.6370	FALSE	0.0011
47078	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
47078	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
47079	0.88	0.87	8.3001	8.4944	FALSE	1.5398
47079	0.88	0.87	8.3001	8.4944	FALSE	1.5398
47083	0.89	0.89	8.0939	8.0939	FALSE	-0.0047
47083	0.90	0.89	7.8738	8.0939	FALSE	1.7498
47085	0.80	0.82	9.6335	9.3385	FALSE	-0.1669
47085	0.79	0.82	9.7743	9.3385	FALSE	0.9555
47086	0.68	0.70	11.1292	10.9024	FALSE	-0.6904
47086	0.68	0.70	11.1292	10.9024	FALSE	-0.6904
47088	0.73	0.74	10.5487	10.4266	FALSE	-1.0080
47088	0.72	0.74	10.6686	10.4266	FALSE	-0.5752
47089	0.88	0.90	8.3001	7.8738	FALSE	0.8609
47089	0.89	0.90	8.0939	7.8738	FALSE	-0.7825
47092	0.62	0.61	11.7781	11.8827	FALSE	0.7813
47092	0.59	0.61	12.0898	11.8827	FALSE	-0.8351
47094	0.74	0.77	10.4266	10.0446	FALSE	0.5358
47094	0.76	0.77	10.1748	10.0446	FALSE	-1.0672
47100	0.51	0.51	12.8997	12.8997	FALSE	-0.0659
47101	0.82	0.84	9.3385	9.0222	FALSE	-0.0004
47102	0.70	0.68	10.9024	11.1292	FALSE	1.7647
47103	0.69	0.68	11.0166	11.1292	FALSE	0.8543
47104	0.66	0.67	11.3501	11.2403	FALSE	-0.9200
47105	0.90	0.90	7.8738	7.8738	FALSE	-0.0019

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
47106	0.89	0.90	8.0939	7.8738	FALSE	-0.7825
47108	1.82	1.91	13.4522	13.2257	FALSE	-0.6638
52049	0.74	0.76	10.4266	10.1748	FALSE	-0.5002
52049	0.74	0.76	10.4266	10.1748	FALSE	-0.5002
52050	0.88	0.90	8.3001	7.8738	FALSE	0.8609
52050	0.88	0.90	8.3001	7.8738	FALSE	0.8609
52052	0.77	0.78	10.0446	9.9112	FALSE	-1.0911
52052	0.77	0.78	10.0446	9.9112	FALSE	-1.0911
52053	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52053	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52054	0.84	0.86	9.0222	8.6787	FALSE	0.2110
52054	0.85	0.86	8.8543	8.6787	FALSE	-1.1274
52055	0.93	0.94	7.0968	6.7809	FALSE	-0.0325
52055	0.93	0.94	7.0968	6.7809	FALSE	-0.0325
52056	0.85	0.87	8.8543	8.4944	FALSE	0.3393
52056	0.86	0.87	8.6787	8.4944	FALSE	-1.0600
52069	0.61	0.64	11.8827	11.5662	FALSE	0.0335
52069	0.60	0.64	11.9866	11.5662	FALSE	0.8616
52086	0.83	0.84	9.1833	9.0222	FALSE	-1.2376
52086	0.82	0.84	9.3385	9.0222	FALSE	-0.0004
52087	0.74	0.75	10.4266	10.3020	FALSE	-1.0259
52087	0.74	0.75	10.4266	10.3020	FALSE	-1.0259
52088	0.78	0.79	9.9112	9.7743	FALSE	-1.1175
52088	0.79	0.79	9.7743	9.7743	FALSE	-0.0261
52089	0.81	0.83	9.4884	9.1833	FALSE	-0.0884
52089	0.82	0.83	9.3385	9.1833	FALSE	-1.2557
52096	0.85	0.85	8.8543	8.8543	FALSE	-0.0144
52096	0.85	0.85	8.8543	8.8543	FALSE	-0.0144
52099	0.53	0.53	12.6989	12.6989	FALSE	-0.0633
52099	0.53	0.53	12.6989	12.6989	FALSE	-0.0633
52104	0.91	0.93	7.6370	7.0968	FALSE	1.7589
52104	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52105	0.84	0.85	9.0222	8.8543	FALSE	-1.1861
52105	0.83	0.85	9.1833	8.8543	FALSE	0.0987
52108	0.71	0.73	10.7865	10.5487	FALSE	-0.6080
52108	0.72	0.73	10.6686	10.5487	FALSE	-0.9916
52109	0.86	0.87	8.6787	8.4944	FALSE	-1.0600
52109	0.86	0.87	8.6787	8.4944	FALSE	-1.0600
52156	0.85	0.88	8.8543	8.3001	FALSE	1.8864
52156	0.86	0.88	8.6787	8.3001	FALSE	0.4870
52157	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
52157	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
52159	0.87	0.89	8.4944	8.0939	FALSE	0.6588
52159	0.88	0.89	8.3001	8.0939	FALSE	-0.8907
52172	0.93	0.93	7.0968	7.0968	FALSE	0.0080
52172	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52173	0.74	0.76	10.4266	10.1748	FALSE	-0.5002
52173	0.72	0.76	10.6686	10.1748	FALSE	1.4290
52175	0.82	0.85	9.3385	8.8543	FALSE	1.3359
52175	0.83	0.85	9.1833	8.8543	FALSE	0.0987

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52176	0.81	0.81	9.4884	9.4884	FALSE	-0.0224
52176	0.81	0.81	9.4884	9.4884	FALSE	-0.0224
52193	0.92	0.92	7.3797	7.3797	FALSE	0.0044
52193	0.92	0.92	7.3797	7.3797	FALSE	0.0044
52198	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
52198	0.92	0.92	7.3797	7.3797	FALSE	0.0044
52199	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
52199	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
52201	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52201	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
52203	0.94	0.95	6.7809	6.4206	FALSE	0.3168
52203	0.94	0.95	6.7809	6.4206	FALSE	0.3168
52206	0.88	0.89	8.3001	8.0939	FALSE	-0.8907
52206	0.87	0.89	8.4944	8.0939	FALSE	0.6588
52207	0.90	0.91	7.8738	7.6370	FALSE	-0.6522
52207	0.91	0.91	7.6370	7.6370	FALSE	0.0011
52214	0.87	0.89	8.4944	8.0939	FALSE	0.6588
52214	0.89	0.89	8.0939	8.0939	FALSE	-0.0047
52217	0.83	0.84	9.1833	9.0222	FALSE	-1.2376
52217	0.83	0.84	9.1833	9.0222	FALSE	-1.2376
52218	0.93	0.93	7.0968	7.0968	FALSE	0.0080
52218	0.93	0.93	7.0968	7.0968	FALSE	0.0080
52236	0.93	0.93	7.0968	7.0968	FALSE	0.0080
52236	0.93	0.93	7.0968	7.0968	FALSE	0.0080
52247	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
52247	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
52253	0.67	0.68	11.2403	11.1292	FALSE	-0.9293
52253	0.70	0.68	10.9024	11.1292	FALSE	1.7647
52255	0.49	0.51	13.1003	12.8997	FALSE	-0.8743
52255	0.51	0.51	12.8997	12.8997	FALSE	-0.0659
76643	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
76644	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
76645	0.94	0.95	6.7809	6.4206	FALSE	0.3168
76646	0.86	0.86	8.6787	8.6787	FALSE	-0.0121
76650	0.70	0.73	10.9024	10.5487	FALSE	0.3162
76650	0.70	0.73	10.9024	10.5487	FALSE	0.3162
93770	0.71	0.71	10.7865	10.7865	FALSE	-0.0390
93770	0.71	0.71	10.7865	10.7865	FALSE	-0.0390
93992	0.76	0.76	10.1748	10.1748	FALSE	-0.0312
94005	0.84	0.86	9.0222	8.6787	FALSE	0.2110
94007	0.81	0.84	9.4884	9.0222	FALSE	1.1943
94010	1.53	1.73	14.1957	13.6801	FALSE	1.6474
94093	0.79	0.78	9.7743	9.9112	FALSE	1.0636
94093	0.79	0.78	9.7743	9.9112	FALSE	1.0636
94093	0.78	0.78	9.9112	9.9112	FALSE	-0.0278
94093	0.78	0.78	9.9112	9.9112	FALSE	-0.0278
94099	0.71	0.76	10.7865	10.1748	FALSE	2.3683
94099	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94099	0.72	0.75	10.6686	10.3020	FALSE	0.4162
94099	0.73	0.75	10.5487	10.3020	FALSE	-0.5394

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94100	0.90	0.91	7.8738	7.6370	FALSE	-0.6522
94100	0.90	0.91	7.8738	7.6370	FALSE	-0.6522
94100	0.90	0.91	7.8738	7.6370	FALSE	-0.6522
94100	0.89	0.91	8.0939	7.6370	FALSE	1.1022
94107	0.85	0.86	8.8543	8.6787	FALSE	-1.1274
94107	0.84	0.87	9.0222	8.4944	FALSE	1.6777
94107	0.84	0.87	9.0222	8.4944	FALSE	1.6777
94107	0.83	0.87	9.1833	8.4944	FALSE	2.9625
94117	0.69	0.70	11.0166	10.9024	FALSE	-0.9508
94117	0.67	0.69	11.2403	11.0166	FALSE	-0.7133
94117	0.67	0.69	11.2403	11.0166	FALSE	-0.7133
94117	0.68	0.69	11.1292	11.0166	FALSE	-0.9396
94121	0.81	0.81	9.4884	9.4884	FALSE	-0.0224
94121	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
94121	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
94121	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
94125	0.89	0.88	8.0939	8.3001	FALSE	1.6362
94125	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
94125	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
94125	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
94127	0.70	0.72	10.9024	10.6686	FALSE	-0.6379
94127	0.69	0.72	11.0166	10.6686	FALSE	0.2724
94127	0.69	0.72	11.0166	10.6686	FALSE	0.2724
94127	0.69	0.72	11.0166	10.6686	FALSE	0.2724
94144	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
94144	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
94144	0.93	0.93	7.0968	7.0968	FALSE	0.0080
94144	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
94151	0.73	0.73	10.5487	10.5487	FALSE	-0.0359
94151	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94151	0.72	0.75	10.6686	10.3020	FALSE	0.4162
94151	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94152	0.65	0.66	11.4587	11.3501	FALSE	-0.9116
94152	0.65	0.66	11.4587	11.3501	FALSE	-0.9116
94152	0.64	0.66	11.5662	11.3501	FALSE	-0.7707
94152	0.66	0.66	11.3501	11.3501	FALSE	-0.0462
94156	0.71	0.72	10.7865	10.6686	FALSE	-0.9767
94156	0.71	0.73	10.7865	10.5487	FALSE	-0.6080
94156	0.70	0.73	10.9024	10.5487	FALSE	0.3162
94156	0.71	0.73	10.7865	10.5487	FALSE	-0.6080
94162	0.60	0.63	11.9866	11.6726	FALSE	0.0147
94162	0.61	0.62	11.8827	11.7781	FALSE	-0.8858
94162	0.62	0.62	11.7781	11.7781	FALSE	-0.0516
94162	0.59	0.62	12.0898	11.7781	FALSE	-0.0022
94165	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
94165	0.86	0.89	8.6787	8.0939	FALSE	2.1278
94165	0.88	0.89	8.3001	8.0939	FALSE	-0.8907
94165	0.87	0.89	8.4944	8.0939	FALSE	0.6588
94174	0.73	0.76	10.5487	10.1748	FALSE	0.4733
94174	0.75	0.75	10.3020	10.3020	FALSE	-0.0328

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94174	0.74	0.75	10.4266	10.3020	FALSE	-1.0259
94174	0.74	0.75	10.4266	10.3020	FALSE	-1.0259
94175	0.79	0.82	9.7743	9.3385	FALSE	0.9555
94175	0.79	0.83	9.7743	9.1833	FALSE	2.1907
94175	0.80	0.83	9.6335	9.1833	FALSE	1.0683
94175	0.80	0.83	9.6335	9.1833	FALSE	1.0683
94200	0.93	0.93	7.0968	7.0968	FALSE	0.0080
94200	0.93	0.92	7.0968	7.3797	FALSE	2.2594
94200	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94200	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94206	0.92	0.93	7.3797	7.0968	FALSE	-0.2919
94206	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94206	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
94206	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94207	0.86	0.87	8.6787	8.4944	FALSE	-1.0600
94207	0.88	0.87	8.3001	8.4944	FALSE	1.5398
94207	0.87	0.87	8.4944	8.4944	FALSE	-0.0098
94207	0.86	0.87	8.6787	8.4944	FALSE	-1.0600
94246	0.73	0.74	10.5487	10.4266	FALSE	-1.0080
94246	0.73	0.73	10.5487	10.5487	FALSE	-0.0359
94246	0.72	0.73	10.6686	10.5487	FALSE	-0.9916
94246	0.72	0.73	10.6686	10.5487	FALSE	-0.9916
94253	0.96	0.97	5.9973	5.4768	FALSE	1.5811
94253	0.96	0.96	5.9973	5.9973	FALSE	0.0220
94253	0.96	0.96	5.9973	5.9973	FALSE	0.0220
94253	0.96	0.96	5.9973	5.9973	FALSE	0.0220
94260	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94260	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94260	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94260	0.92	0.92	7.3797	7.3797	FALSE	0.0044
94262	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94262	0.74	0.75	10.4266	10.3020	FALSE	-1.0259
94262	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94262	0.73	0.75	10.5487	10.3020	FALSE	-0.5394
94265	0.86	0.85	8.6787	8.8543	FALSE	1.3850
94265	0.87	0.89	8.4944	8.0939	FALSE	0.6588
94265	0.82	0.89	9.3385	8.0939	TRUE	7.3876
94265	0.82	0.89	9.3385	8.0939	TRUE	7.3876
94310	0.72	0.75	10.6686	10.3020	FALSE	0.4162
94310	0.73	0.74	10.5487	10.4266	FALSE	-1.0080
94310	0.73	0.74	10.5487	10.4266	FALSE	-1.0080
94310	0.72	0.74	10.6686	10.4266	FALSE	-0.5752
94313	0.78	0.80	9.9112	9.6335	FALSE	-0.3008
94313	0.79	0.79	9.7743	9.7743	FALSE	-0.0261
94313	0.79	0.79	9.7743	9.7743	FALSE	-0.0261
94313	0.79	0.79	9.7743	9.7743	FALSE	-0.0261
94323	0.57	0.60	12.2945	11.9866	FALSE	-0.0302
94323	0.58	0.60	12.1924	11.9866	FALSE	-0.8439
94323	0.58	0.60	12.1924	11.9866	FALSE	-0.8439
94323	0.58	0.60	12.1924	11.9866	FALSE	-0.8439

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94347	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
94347	0.79	0.78	9.7743	9.9112	FALSE	1.0636
94347	0.79	0.78	9.7743	9.9112	FALSE	1.0636
94347	0.80	0.78	9.6335	9.9112	FALSE	2.1860
94348	0.88	0.87	8.3001	8.4944	FALSE	1.5398
94348	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
94348	0.88	0.88	8.3001	8.3001	FALSE	-0.0073
94348	0.87	0.88	8.4944	8.3001	FALSE	-0.9820
94356	0.82	0.83	9.3385	9.1833	FALSE	-1.2557
94356	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
94356	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
94356	0.83	0.83	9.1833	9.1833	FALSE	-0.0186
94373	0.58	0.59	12.1924	12.0898	FALSE	-0.8735
94373	0.59	0.59	12.0898	12.0898	FALSE	-0.0556
94373	0.58	0.59	12.1924	12.0898	FALSE	-0.8735
94373	0.59	0.59	12.0898	12.0898	FALSE	-0.0556
94374	0.77	0.79	10.0446	9.7743	FALSE	-0.3581
94374	0.77	0.78	10.0446	9.9112	FALSE	-1.0911
94374	0.76	0.78	10.1748	9.9112	FALSE	-0.4100
94374	0.76	0.78	10.1748	9.9112	FALSE	-0.4100
95477	0.92	0.92	7.3797	7.3797	FALSE	0.0044
95477	0.92	0.92	7.3797	7.3797	FALSE	0.0044
95484	0.95	0.96	6.4206	5.9973	FALSE	0.8137
95484	0.95	0.96	6.4206	5.9973	FALSE	0.8137
140523	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
140523	0.91	0.92	7.6370	7.3797	FALSE	-0.4925
153717	0.92	0.92	7.3797	7.3797	FALSE	0.0044
153717	0.92	0.92	7.3797	7.3797	FALSE	0.0044
153720	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
153720	0.80	0.80	9.6335	9.6335	FALSE	-0.0243
153721	0.95	0.95	6.4206	6.4206	FALSE	0.0166
153721	0.95	0.95	6.4206	6.4206	FALSE	0.0166
153722	0.57	0.57	12.2945	12.2945	FALSE	-0.0582
153722	0.56	0.57	12.3961	12.2945	FALSE	-0.8683
153724	0.83	0.84	9.1833	9.0222	FALSE	-1.2376
153724	0.84	0.84	9.0222	9.0222	FALSE	-0.0165
153725	0.87	0.87	8.4944	8.4944	FALSE	-0.0098
153725	0.85	0.87	8.8543	8.4944	FALSE	0.3393
153734	0.82	0.83	9.3385	9.1833	FALSE	-1.2557
153734	0.85	0.83	8.8543	9.1833	FALSE	2.6047
153737	0.82	0.85	9.3385	8.8543	FALSE	1.3359
153737	0.83	0.85	9.1833	8.8543	FALSE	0.0987
153740	0.59	0.60	12.0898	11.9866	FALSE	-0.8770
153740	0.59	0.60	12.0898	11.9866	FALSE	-0.8770

Table G-14. 2010–11 KCCT: Rescore Analysis—Reading Grade 3

IREF	*Number of Score Categories*	*Average Score*		*Standard Deviation*		*Effect Size*	*Discard*
		Old	*New*	*Old*	*New*		
94010	4	1.580	1.644	0.855	0.847	0.074	No
47108	4	1.868	1.790	0.936	0.698	-0.083	No

Figure G-9. 2010–11 KCCT: Delta Plot—Reading Grade 4

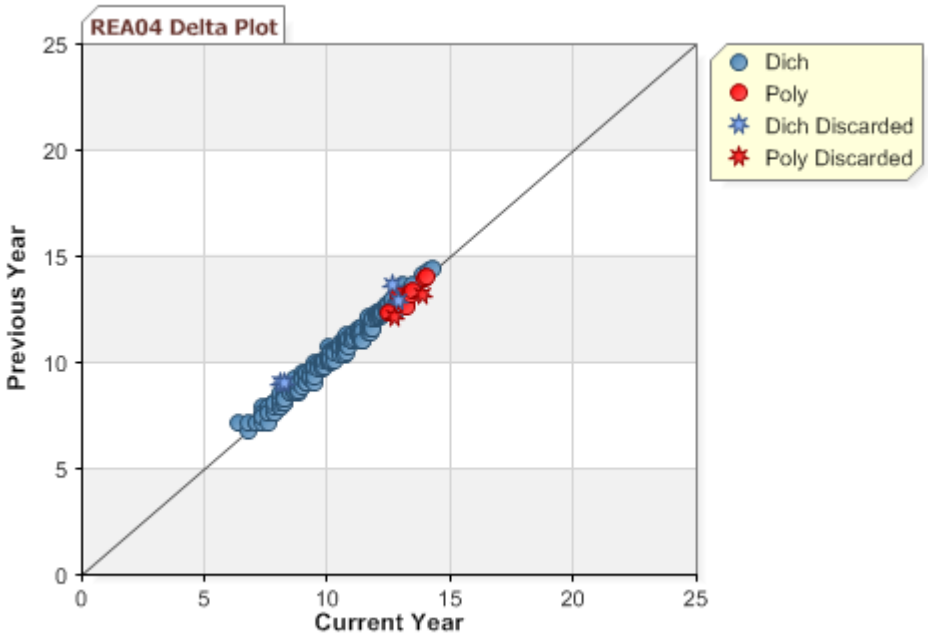


Table G-15. 2010–11 KCCT: Delta Analysis—Reading Grade 4

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
52389	0.69	0.69	11.0166	11.0166	FALSE	-0.9095
52389	0.68	0.70	11.1292	10.9024	FALSE	0.0521
52390	0.85	0.84	8.8543	9.0222	FALSE	0.3796
52390	0.84	0.85	9.0222	8.8543	FALSE	-0.5145
52392	0.58	0.59	12.1924	12.0898	FALSE	-0.6756
52392	0.58	0.58	12.1924	12.1924	FALSE	-1.0092
52401	0.78	0.79	9.9112	9.7743	FALSE	-0.6432
52401	0.78	0.81	9.9112	9.4884	FALSE	1.2397
52402	0.56	0.56	12.3961	12.3961	FALSE	-1.0265
52402	0.57	0.57	12.2945	12.2945	FALSE	-1.0179
52403	0.77	0.78	10.0446	9.9112	FALSE	-0.6551
52403	0.78	0.78	9.9112	9.9112	FALSE	-0.8158
52404	0.73	0.75	10.5487	10.3020	FALSE	0.1340
52404	0.74	0.76	10.4266	10.1748	FALSE	0.1573

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52408	0.85	0.85	8.8543	8.8543	FALSE	-0.7262
52408	0.85	0.86	8.8543	8.6787	FALSE	-0.4784
52420	0.72	0.72	10.6686	10.6686	FALSE	-0.8800
52421	0.67	0.69	11.2403	11.0166	FALSE	0.0414
52422	0.80	0.80	9.6335	9.6335	FALSE	-0.7922
52424	0.79	0.78	9.7743	9.9112	FALSE	0.0975
52425	0.79	0.80	9.7743	9.6335	FALSE	-0.6292
52427	0.64	0.62	11.5662	11.7781	FALSE	0.4394
52428	0.81	0.83	9.4884	9.1833	FALSE	0.4284
52428	0.81	0.83	9.4884	9.1833	FALSE	0.4284
52430	0.72	0.72	10.6686	10.6686	FALSE	-0.8800
52430	0.73	0.73	10.5487	10.5487	FALSE	-0.8698
52431	0.70	0.71	10.9024	10.7865	FALSE	-0.6972
52431	0.70	0.70	10.9024	10.9024	FALSE	-0.8998
52432	0.94	0.94	6.7809	6.7809	FALSE	-0.5503
52432	0.93	0.95	7.0968	6.4206	FALSE	2.6700
52542	0.36	0.37	14.4338	14.3274	FALSE	-0.4604
52546	0.85	0.86	8.8543	8.6787	FALSE	-0.4784
52550	0.93	0.93	7.0968	7.0968	FALSE	-0.5771
52554	0.74	0.75	10.4266	10.3020	FALSE	-0.6807
52567	0.72	0.70	10.6686	10.9024	FALSE	0.6595
52567	0.74	0.71	10.4266	10.7865	FALSE	1.5103
52568	0.82	0.82	9.3385	9.3385	FALSE	-0.7672
52568	0.83	0.82	9.1833	9.3385	FALSE	0.2680
52569	0.90	0.91	7.8738	7.6370	FALSE	-0.1580
52569	0.90	0.91	7.8738	7.6370	FALSE	-0.1580
52570	0.92	0.92	7.3797	7.3797	FALSE	-0.6011
52570	0.92	0.92	7.3797	7.3797	FALSE	-0.6011
52572	0.51	0.51	12.8997	12.8997	FALSE	-1.0692
52572	0.50	0.51	13.0000	12.8997	FALSE	-0.6225
52573	0.75	0.72	10.3020	10.6686	FALSE	1.5653
52573	0.75	0.72	10.3020	10.6686	FALSE	1.5653
52631	0.50	0.53	13.0000	12.6989	FALSE	0.6999
52631	0.51	0.53	12.8997	12.6989	FALSE	0.0310
52633	0.82	0.82	9.3385	9.3385	FALSE	-0.7672
52633	0.82	0.84	9.3385	9.0222	FALSE	0.4901
52634	0.85	0.85	8.8543	8.8543	FALSE	-0.7262
52634	0.84	0.85	9.0222	8.8543	FALSE	-0.5145
52636	0.85	0.87	8.8543	8.4944	FALSE	0.7353
52636	0.84	0.89	9.0222	8.0939	TRUE	4.4931
52658	0.59	0.61	12.0898	11.8827	FALSE	0.0038
52658	0.60	0.63	11.9866	11.6726	FALSE	0.6992
52660	0.87	0.85	8.4944	8.8543	FALSE	1.6741
52660	0.86	0.86	8.6787	8.6787	FALSE	-0.7113
52663	0.57	0.58	12.2945	12.1924	FALSE	-0.6705
52663	0.58	0.58	12.1924	12.1924	FALSE	-1.0092
52665	0.93	0.93	7.0968	7.0968	FALSE	-0.5771
52665	0.93	0.94	7.0968	6.7809	FALSE	0.2971
52667	0.87	0.89	8.4944	8.0939	FALSE	0.9729
52667	0.88	0.88	8.3001	8.3001	FALSE	-0.6792

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52669	0.91	0.90	7.6370	7.8738	FALSE	0.9366
52669	0.90	0.90	7.8738	7.8738	FALSE	-0.6430
52672	0.87	0.87	8.4944	8.4944	FALSE	-0.6956
52672	0.86	0.87	8.6787	8.4944	FALSE	-0.4357
52674	0.71	0.71	10.7865	10.7865	FALSE	-0.8900
52674	0.71	0.71	10.7865	10.7865	FALSE	-0.8900
52676	0.73	0.73	10.5487	10.5487	FALSE	-0.8698
52676	0.75	0.73	10.3020	10.5487	FALSE	0.7758
52678	1.95	2.03	13.1254	12.9248	FALSE	0.0485
52678	1.97	2.01	13.0752	12.9749	FALSE	-0.6162
52690	0.90	0.92	7.8738	7.3797	FALSE	1.5362
52690	0.91	0.91	7.6370	7.6370	FALSE	-0.6229
52699	0.69	0.71	11.0166	10.7865	FALSE	0.0645
52699	0.67	0.71	11.2403	10.7865	FALSE	1.5570
52700	0.81	0.82	9.4884	9.3385	FALSE	-0.5936
52700	0.82	0.81	9.3385	9.4884	FALSE	0.2198
52702	0.69	0.65	11.0166	11.4587	FALSE	2.0021
52702	0.69	0.65	11.0166	11.4587	FALSE	2.0021
52703	0.91	0.90	7.6370	7.8738	FALSE	0.9366
52703	0.90	0.89	7.8738	8.0939	FALSE	0.8064
52716	0.57	0.54	12.2945	12.5983	FALSE	0.9826
52716	0.56	0.54	12.3961	12.5983	FALSE	0.3047
52717	0.64	0.61	11.5662	11.8827	FALSE	1.1286
52717	0.64	0.61	11.5662	11.8827	FALSE	1.1286
52718	0.75	0.75	10.3020	10.3020	FALSE	-0.8489
52718	0.75	0.73	10.3020	10.5487	FALSE	0.7758
52719	0.67	0.67	11.2403	11.2403	FALSE	-0.9285
52719	0.67	0.67	11.2403	11.2403	FALSE	-0.9285
52721	0.57	0.57	12.2945	12.2945	FALSE	-1.0179
52721	0.56	0.56	12.3961	12.3961	FALSE	-1.0265
52722	0.88	0.88	8.3001	8.3001	FALSE	-0.6792
52722	0.88	0.89	8.3001	8.0939	FALSE	-0.3237
52750	0.76	0.77	10.1748	10.0446	FALSE	-0.6652
52750	0.77	0.76	10.0446	10.1748	FALSE	0.0302
52753	0.46	0.45	13.4017	13.5026	FALSE	-0.4472
52753	0.44	0.45	13.6039	13.5026	FALSE	-0.5650
52754	0.82	0.82	9.3385	9.3385	FALSE	-0.7672
52754	0.82	0.83	9.3385	9.1833	FALSE	-0.5713
52757	0.69	0.69	11.0166	11.0166	FALSE	-0.9095
52757	0.68	0.70	11.1292	10.9024	FALSE	0.0521
52758	0.89	0.88	8.0939	8.3001	FALSE	0.6960
52758	0.89	0.88	8.0939	8.3001	FALSE	0.6960
52761	0.77	0.76	10.0446	10.1748	FALSE	0.0302
52761	0.76	0.76	10.1748	10.1748	FALSE	-0.8381
52763	0.66	0.66	11.3501	11.3501	FALSE	-0.9378
52763	0.67	0.67	11.2403	11.2403	FALSE	-0.9285
52767	2.29	2.21	12.2690	12.4721	FALSE	0.3215
52767	2.35	2.10	12.1155	12.7492	TRUE	3.1702
76329	0.85	0.85	8.8543	8.8543	FALSE	-0.7262
76329	0.85	0.85	8.8543	8.8543	FALSE	-0.7262

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
76330	0.75	0.75	10.3020	10.3020	FALSE	-0.8489
76330	0.75	0.75	10.3020	10.3020	FALSE	-0.8489
76336	0.87	0.86	8.4944	8.6787	FALSE	0.5180
76336	0.86	0.86	8.6787	8.6787	FALSE	-0.7113
76337	0.65	0.67	11.4587	11.2403	FALSE	0.0245
76337	0.64	0.67	11.5662	11.2403	FALSE	0.7412
76339	0.81	0.83	9.4884	9.1833	FALSE	0.4284
76339	0.82	0.82	9.3385	9.3385	FALSE	-0.7672
76342	0.87	0.88	8.4944	8.3001	FALSE	-0.3848
76342	0.88	0.88	8.3001	8.3001	FALSE	-0.6792
76344	0.85	0.87	8.8543	8.4944	FALSE	0.7353
76344	0.84	0.88	9.0222	8.3001	TRUE	3.1353
76346	0.77	0.78	10.0446	9.9112	FALSE	-0.6551
76346	0.79	0.80	9.7743	9.6335	FALSE	-0.6292
76347	0.77	0.78	10.0446	9.9112	FALSE	-0.6551
76347	0.78	0.79	9.9112	9.7743	FALSE	-0.6432
94950	0.83	0.84	9.1833	9.0222	FALSE	-0.5451
94950	0.83	0.86	9.1833	8.6787	FALSE	1.7167
94952	0.79	0.81	9.7743	9.4884	FALSE	0.3264
94952	0.80	0.81	9.6335	9.4884	FALSE	-0.6128
94954	0.79	0.81	9.7743	9.4884	FALSE	0.3264
94954	0.80	0.81	9.6335	9.4884	FALSE	-0.6128
94962	1.62	1.63	13.9617	13.9359	FALSE	-1.0315
94962	1.61	1.59	13.9875	14.0393	FALSE	-0.8205
95038	0.53	0.51	12.6989	12.8997	FALSE	0.2702
95038	0.56	0.52	12.3961	12.7994	FALSE	1.6292
95044	0.50	0.51	13.0000	12.8997	FALSE	-0.6225
95044	0.50	0.51	13.0000	12.8997	FALSE	-0.6225
95046	0.83	0.83	9.1833	9.1833	FALSE	-0.7541
95046	0.82	0.83	9.3385	9.1833	FALSE	-0.5713
95048	0.82	0.81	9.3385	9.4884	FALSE	0.2198
95048	0.82	0.81	9.3385	9.4884	FALSE	0.2198
95050	0.56	0.57	12.3961	12.2945	FALSE	-0.6649
95050	0.56	0.58	12.3961	12.1924	FALSE	0.0074
95051	0.77	0.79	10.0446	9.7743	FALSE	0.2466
95051	0.78	0.80	9.9112	9.6335	FALSE	0.2841
95052	1.88	1.85	13.3011	13.3765	FALSE	-0.6062
95052	1.92	1.83	13.2006	13.4269	FALSE	0.3957
95054	0.68	0.71	11.1292	10.7865	FALSE	0.8156
95054	0.69	0.71	11.0166	10.7865	FALSE	0.0645
95055	0.84	0.86	9.0222	8.6787	FALSE	0.6416
95055	0.84	0.86	9.0222	8.6787	FALSE	0.6416
95056	0.39	0.41	14.1173	13.9102	FALSE	0.1757
95056	0.37	0.39	14.3274	14.1173	FALSE	0.2136
95057	0.44	0.53	13.6039	12.6989	TRUE	4.7280
95057	0.51	0.51	12.8997	12.8997	TRUE	-1.0692
95082	0.68	0.70	11.1292	10.9024	FALSE	0.0521
95082	0.68	0.72	11.1292	10.6686	FALSE	1.5916
95087	0.72	0.72	10.6686	10.6686	FALSE	-0.8800
95087	0.69	0.72	11.0166	10.6686	FALSE	0.8405

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95122	0.86	0.86	8.6787	8.6787	FALSE	-0.7113
95122	0.86	0.85	8.6787	8.8543	FALSE	0.4448
95158	0.88	0.88	8.3001	8.3001	FALSE	-0.6792
95158	0.87	0.88	8.4944	8.3001	FALSE	-0.3848
95163	0.81	0.82	9.4884	9.3385	FALSE	-0.5936
95163	0.81	0.81	9.4884	9.4884	FALSE	-0.7799
95167	0.57	0.57	12.2945	12.2945	FALSE	-1.0179
95167	0.57	0.56	12.2945	12.3961	FALSE	-0.3487
95229	0.61	0.62	11.8827	11.7781	FALSE	-0.6885
95229	0.62	0.61	11.7781	11.8827	FALSE	-0.2849
95232	0.85	0.88	8.8543	8.3001	FALSE	2.0154
95232	0.86	0.86	8.6787	8.6787	FALSE	-0.7113
95233	0.59	0.60	12.0898	11.9866	FALSE	-0.6804
95233	0.60	0.60	11.9866	11.9866	FALSE	-0.9918
95237	0.70	0.73	10.9024	10.5487	FALSE	0.8682
95237	0.71	0.71	10.7865	10.7865	FALSE	-0.8900
95380	0.65	0.67	11.4587	11.2403	FALSE	0.0245
95380	0.65	0.66	11.4587	11.3501	FALSE	-0.6986
95382	0.63	0.65	11.6726	11.4587	FALSE	0.0130
95382	0.65	0.65	11.4587	11.4587	FALSE	-0.9470
95384	0.79	0.79	9.7743	9.7743	FALSE	-0.8042
95384	0.80	0.79	9.6335	9.7743	FALSE	0.1350
95388	0.86	0.86	8.6787	8.6787	FALSE	-0.7113
95388	0.87	0.87	8.4944	8.4944	FALSE	-0.6956
95400	0.47	0.48	13.3011	13.2006	FALSE	-0.5957
95400	0.44	0.49	13.6039	13.1003	FALSE	2.0848
95413	0.90	0.89	7.8738	8.0939	FALSE	0.8064
95413	0.89	0.90	8.0939	7.8738	FALSE	-0.2495
95415	0.76	0.75	10.1748	10.3020	FALSE	-0.0001
95415	0.76	0.76	10.1748	10.1748	FALSE	-0.8381
95423	0.68	0.68	11.1292	11.1292	FALSE	-0.9191
95423	0.66	0.68	11.3501	11.1292	FALSE	0.0323
95424	0.69	0.69	11.0166	11.0166	FALSE	-0.9095
95424	0.70	0.70	10.9024	10.9024	FALSE	-0.8998
95439	0.88	0.88	8.3001	8.3001	FALSE	-0.6792
95439	0.88	0.89	8.3001	8.0939	FALSE	-0.3237
95453	0.91	0.91	7.6370	7.6370	FALSE	-0.6229
95453	0.91	0.92	7.6370	7.3797	FALSE	-0.0434
95458	0.59	0.58	12.0898	12.1924	FALSE	-0.3248
95458	0.58	0.59	12.1924	12.0898	FALSE	-0.6756
95475	2.10	1.92	12.7492	13.2006	FALSE	1.9166
95475	2.10	1.95	12.7492	13.1254	FALSE	1.4209
95493	0.58	0.60	12.1924	11.9866	FALSE	0.0041
95493	0.57	0.60	12.2945	11.9866	FALSE	0.6849
95495	0.63	0.62	11.6726	11.7781	FALSE	-0.2704
95495	0.63	0.63	11.6726	11.6726	FALSE	-0.9651
95496	0.90	0.89	7.8738	8.0939	FALSE	0.8064
95496	0.89	0.89	8.0939	8.0939	FALSE	-0.6617
95513	0.87	0.87	8.4944	8.4944	FALSE	-0.6956
95513	0.87	0.88	8.4944	8.3001	FALSE	-0.3848

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95516	0.83	0.84	9.1833	9.0222	FALSE	-0.5451
95516	0.81	0.84	9.4884	9.0222	FALSE	1.4898
95524	1.85	1.82	13.3765	13.4522	FALSE	-0.6117
95524	1.92	1.65	13.2006	13.8845	TRUE	3.4089
95528	0.68	0.66	11.1292	11.3501	FALSE	0.5360
95528	0.69	0.66	11.0166	11.3501	FALSE	1.2871
95535	0.53	0.52	12.6989	12.7994	FALSE	-0.3906
95535	0.52	0.52	12.7994	12.7994	FALSE	-1.0607
137724	2.15	1.92	12.6235	13.2006	FALSE	2.7552
137792	0.77	0.75	10.0446	10.3020	FALSE	0.8682
137792	0.76	0.77	10.1748	10.0446	FALSE	-0.6652
137793	0.73	0.75	10.5487	10.3020	FALSE	0.1340
137793	0.73	0.76	10.5487	10.1748	FALSE	0.9720
137795	0.46	0.46	13.4017	13.4017	FALSE	-1.1118
137795	0.47	0.46	13.3011	13.4017	FALSE	-0.4404
137797	0.89	0.90	8.0939	7.8738	FALSE	-0.2495
137797	0.89	0.90	8.0939	7.8738	FALSE	-0.2495
137800	0.74	0.75	10.4266	10.3020	FALSE	-0.6807
137800	0.76	0.77	10.1748	10.0446	FALSE	-0.6652
137802	0.47	0.51	13.3011	12.8997	FALSE	1.3858
137802	0.48	0.51	13.2006	12.8997	FALSE	0.7157
137807	0.82	0.82	9.3385	9.3385	FALSE	-0.7672
137807	0.82	0.81	9.3385	9.4884	FALSE	0.2198
138296	0.72	0.73	10.6686	10.5487	FALSE	-0.6911
138297	0.72	0.74	10.6686	10.4266	FALSE	0.1132
138299	1.94	1.88	13.1504	13.3011	FALSE	-0.0984
138300	0.60	0.61	11.9866	11.8827	FALSE	-0.6846
138300	0.59	0.63	12.0898	11.6726	FALSE	1.3877
152735	0.55	0.54	12.4974	12.5983	FALSE	-0.3705
152735	0.54	0.55	12.5983	12.4974	FALSE	-0.6524
152736	0.77	0.77	10.0446	10.0446	FALSE	-0.8271
152736	0.77	0.77	10.0446	10.0446	FALSE	-0.8271
152737	0.66	0.62	11.3501	11.7781	FALSE	1.8804
152737	0.66	0.63	11.3501	11.6726	FALSE	1.1856
152745	0.83	0.81	9.1833	9.4884	FALSE	1.2550
152745	0.83	0.82	9.1833	9.3385	FALSE	0.2680
152747	0.92	0.92	7.3797	7.3797	FALSE	-0.6011
152747	0.92	0.92	7.3797	7.3797	FALSE	-0.6011
152748	0.78	0.76	9.9112	10.1748	FALSE	0.9199
152748	0.77	0.77	10.0446	10.0446	FALSE	-0.8271
152750	0.69	0.70	11.0166	10.9024	FALSE	-0.6990
152750	0.69	0.69	11.0166	11.0166	FALSE	-0.9095
152751	0.53	0.56	12.6989	12.3961	FALSE	0.6857
152751	0.55	0.56	12.4974	12.3961	FALSE	-0.6588
152754	0.84	0.81	9.0222	9.4884	FALSE	2.3301
152754	0.84	0.83	9.0222	9.1833	FALSE	0.3210
152758	0.84	0.83	9.0222	9.1833	FALSE	0.3210
152758	0.84	0.83	9.0222	9.1833	FALSE	0.3210
152765	0.88	0.89	8.3001	8.0939	FALSE	-0.3237
152765	0.88	0.88	8.3001	8.3001	FALSE	-0.6792

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
152770	0.85	0.86	8.8543	8.6787	FALSE	-0.4784
152770	0.85	0.85	8.8543	8.8543	FALSE	-0.7262
152775	0.75	0.76	10.3020	10.1748	FALSE	-0.6736
152775	0.75	0.76	10.3020	10.1748	FALSE	-0.6736
153318	0.93	0.92	7.0968	7.3797	FALSE	1.2858
153318	0.93	0.91	7.0968	7.6370	FALSE	2.9800
153323	0.54	0.55	12.5983	12.4974	FALSE	-0.6524
153323	0.53	0.55	12.6989	12.4974	FALSE	0.0190
153630	0.74	0.76	10.4266	10.1748	FALSE	0.1573
153630	0.72	0.77	10.6686	10.0446	FALSE	2.6290
153643	0.76	0.77	10.1748	10.0446	FALSE	-0.6652
153643	0.76	0.76	10.1748	10.1748	FALSE	-0.8381
153669	0.84	0.86	9.0222	8.6787	FALSE	0.6416
153669	0.86	0.85	8.6787	8.8543	FALSE	0.4448

Table G-16. 2010–11 KCCT: Rescore Analysis—Reading Grade 4

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
94962	4	2.156	1.937	0.853	0.884	-0.257	No
94962	4	2.346	2.312	0.974	0.942	-0.035	No
94962	4	1.853	1.858	0.895	0.819	0.005	No
94962	4	1.879	1.975	0.860	0.773	0.111	No

Figure G-10. 2010–11 KCCT: Delta Plot—Reading Grade 5

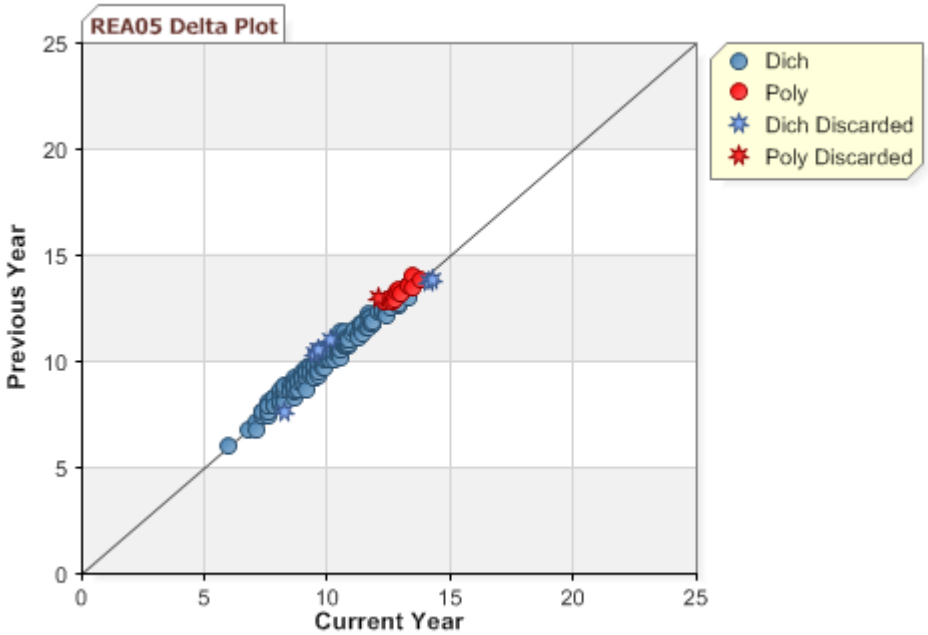


Table G-17. 2010–11 KCCT: Delta Analysis—Reading Grade 5

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
51402	0.75	0.77	10.3020	10.0446	FALSE	-0.4494
51402	0.76	0.78	10.1748	9.9112	FALSE	-0.4043
51403	0.75	0.76	10.3020	10.1748	FALSE	-1.1671
51403	0.76	0.77	10.1748	10.0446	FALSE	-1.1921
51404	0.77	0.78	10.0446	9.9112	FALSE	-1.2124
51404	0.76	0.79	10.1748	9.7743	FALSE	0.4527
51405	0.83	0.81	9.1833	9.4884	FALSE	1.4803
51405	0.82	0.81	9.3385	9.4884	FALSE	0.5170
51406	0.92	0.92	7.3797	7.3797	FALSE	-0.5240
51406	0.93	0.93	7.0968	7.0968	FALSE	-0.5389
51411	0.71	0.71	10.7865	10.7865	FALSE	-0.3451
51411	0.72	0.70	10.6686	10.9024	FALSE	1.1120
51412	0.57	0.56	12.2945	12.3961	FALSE	0.3701
51412	0.56	0.57	12.3961	12.2945	FALSE	-0.8967
51414	0.42	0.37	13.8076	14.3274	TRUE	3.0675
51414	0.43	0.39	13.7055	14.1173	TRUE	2.3857
51415	0.72	0.73	10.6686	10.5487	FALSE	-1.1018
51415	0.72	0.72	10.6686	10.6686	FALSE	-0.3513
51416	0.62	0.62	11.7781	11.7781	FALSE	-0.2931
51416	0.62	0.61	11.7781	11.8827	FALSE	0.3620
57015	0.74	0.75	10.4266	10.3020	FALSE	-1.1438
57015	0.74	0.74	10.4266	10.4266	FALSE	-0.3640
57016	0.82	0.84	9.3385	9.0222	FALSE	-0.0299
57016	0.82	0.84	9.3385	9.0222	FALSE	-0.0299
57021	0.80	0.81	9.6335	9.4884	FALSE	-1.1174
57021	0.80	0.81	9.6335	9.4884	FALSE	-1.1174
57022	0.53	0.56	12.6989	12.3961	FALSE	-0.2913
57022	0.51	0.55	12.8997	12.4974	FALSE	0.3215
57023	0.75	0.76	10.3020	10.1748	FALSE	-1.1671
57023	0.75	0.75	10.3020	10.3020	FALSE	-0.3706
57025	0.46	0.48	13.4017	13.2006	FALSE	-0.9646
57025	0.50	0.47	13.0000	13.3011	FALSE	1.6557
57140	0.87	0.87	8.4944	8.4944	FALSE	-0.4655
57140	0.86	0.88	8.6787	8.3001	FALSE	0.3947
57145	0.90	0.90	7.8738	7.8738	FALSE	-0.4981
57145	0.90	0.91	7.8738	7.6370	FALSE	-0.4510
57155	0.80	0.83	9.6335	9.1833	FALSE	0.7922
57155	0.81	0.83	9.4884	9.1833	FALSE	-0.1084
57157	0.60	0.62	11.9866	11.7781	FALSE	-0.8439
57157	0.58	0.63	12.1924	11.6726	FALSE	1.0939
57180	0.77	0.75	10.0446	10.3020	FALSE	1.2273
57194	0.83	0.83	9.1833	9.1833	FALSE	-0.4293
57199	0.96	0.96	5.9973	5.9973	FALSE	-0.5966
57208	0.91	0.92	7.6370	7.3797	FALSE	-0.3105
57211	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
57215	0.79	0.80	9.7743	9.6335	FALSE	-1.1518

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
57254	0.81	0.81	9.4884	9.4884	FALSE	-0.4133
57254	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
57263	0.86	0.86	8.6787	8.6787	FALSE	-0.4558
57263	0.85	0.86	8.8543	8.6787	FALSE	-0.8860
57265	0.88	0.90	8.3001	7.8738	FALSE	0.7125
57265	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
57269	0.88	0.89	8.3001	8.0939	FALSE	-0.6652
57269	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
57274	0.74	0.80	10.4266	9.6335	FALSE	2.8971
57274	0.75	0.81	10.3020	9.4884	TRUE	3.0321
57294	0.87	0.89	8.4944	8.0939	FALSE	0.5414
57294	0.89	0.88	8.0939	8.3001	FALSE	0.8040
57335	0.82	0.84	9.3385	9.0222	FALSE	-0.0299
57335	0.83	0.84	9.1833	9.0222	FALSE	-0.9932
57348	0.90	0.90	7.8738	7.8738	FALSE	-0.4981
57348	0.89	0.91	8.0939	7.6370	FALSE	0.9152
57351	0.90	0.90	7.8738	7.8738	FALSE	-0.4981
57351	0.91	0.92	7.6370	7.3797	FALSE	-0.3105
57352	0.73	0.80	10.5487	9.6335	TRUE	3.6552
57352	0.73	0.80	10.5487	9.6335	TRUE	3.6552
57353	0.82	0.83	9.3385	9.1833	FALSE	-1.0387
57353	0.83	0.83	9.1833	9.1833	FALSE	-0.4293
57354	0.91	0.91	7.6370	7.6370	FALSE	-0.5105
57354	0.92	0.91	7.3797	7.6370	FALSE	1.0864
57356	0.85	0.88	8.8543	8.3001	FALSE	1.4843
57356	0.85	0.87	8.8543	8.4944	FALSE	0.2676
57362	0.74	0.73	10.4266	10.5487	FALSE	0.4005
57362	0.73	0.74	10.5487	10.4266	FALSE	-1.1221
57363	0.73	0.74	10.5487	10.4266	FALSE	-1.1221
57363	0.73	0.74	10.5487	10.4266	FALSE	-1.1221
57364	0.76	0.78	10.1748	9.9112	FALSE	-0.4043
57364	0.73	0.78	10.5487	9.9112	FALSE	1.9168
57366	0.76	0.79	10.1748	9.7743	FALSE	0.4527
57366	0.75	0.79	10.3020	9.7743	FALSE	1.2425
57367	0.88	0.88	8.3001	8.3001	FALSE	-0.4757
57367	0.87	0.88	8.4944	8.3001	FALSE	-0.7492
57368	0.77	0.77	10.0446	10.0446	FALSE	-0.3841
57368	0.77	0.76	10.0446	10.1748	FALSE	0.4308
57388	0.83	0.81	9.1833	9.4884	FALSE	1.4803
57388	0.83	0.81	9.1833	9.4884	FALSE	1.4803
57390	0.88	0.89	8.3001	8.0939	FALSE	-0.6652
57390	0.89	0.88	8.0939	8.3001	FALSE	0.8040
57400	0.90	0.89	7.8738	8.0939	FALSE	0.8796
57400	0.91	0.88	7.6370	8.3001	TRUE	3.6401
57402	0.81	0.83	9.4884	9.1833	FALSE	-0.1084
57402	0.81	0.84	9.4884	9.0222	FALSE	0.9004
57409	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
57409	0.89	0.88	8.0939	8.3001	FALSE	0.8040
57413	0.80	0.78	9.6335	9.9112	FALSE	1.3327
57413	0.80	0.79	9.6335	9.7743	FALSE	0.4757

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
57416	0.62	0.61	11.7781	11.8827	FALSE	0.3620
57416	0.61	0.61	11.8827	11.8827	FALSE	-0.2876
57417	0.74	0.76	10.4266	10.1748	FALSE	-0.4910
57417	0.75	0.77	10.3020	10.0446	FALSE	-0.4494
57423	0.91	0.92	7.6370	7.3797	FALSE	-0.3105
57423	0.92	0.92	7.3797	7.3797	FALSE	-0.5240
57429	0.74	0.75	10.4266	10.3020	FALSE	-1.1438
57429	0.74	0.75	10.4266	10.3020	FALSE	-1.1438
57430	0.64	0.64	11.5662	11.5662	FALSE	-0.3042
57430	0.64	0.63	11.5662	11.6726	FALSE	0.3620
57461	0.73	0.73	10.5487	10.5487	FALSE	-0.3576
57461	0.72	0.73	10.6686	10.5487	FALSE	-1.1018
57485	0.70	0.71	10.9024	10.7865	FALSE	-1.0648
57485	0.70	0.71	10.9024	10.7865	FALSE	-1.0648
57503	0.81	0.80	9.4884	9.6335	FALSE	0.4950
57503	0.81	0.80	9.4884	9.6335	FALSE	0.4950
57509	0.70	0.73	10.9024	10.5487	FALSE	0.1214
57509	0.71	0.74	10.7865	10.4266	FALSE	0.1662
57545	0.83	0.83	9.1833	9.1833	FALSE	-0.4293
57545	0.83	0.83	9.1833	9.1833	FALSE	-0.4293
57554	0.69	0.72	11.0166	10.6686	FALSE	0.0798
57554	0.69	0.70	11.0166	10.9024	FALSE	-1.0479
57563	1.59	1.81	14.0393	13.4774	FALSE	1.2602
57563	1.68	1.68	13.8076	13.8076	FALSE	-0.1865
77581	0.67	0.67	11.2403	11.2403	FALSE	-0.3213
77581	0.65	0.68	11.4587	11.1292	FALSE	-0.0589
77584	0.71	0.72	10.7865	10.6686	FALSE	-1.0827
77584	0.70	0.72	10.9024	10.6686	FALSE	-0.6291
77593	0.62	0.65	11.7781	11.4587	FALSE	-0.1393
77593	0.62	0.66	11.7781	11.3501	FALSE	0.5403
77594	0.71	0.70	10.7865	10.9024	FALSE	0.3806
77594	0.71	0.71	10.7865	10.7865	FALSE	-0.3451
77597	0.84	0.84	9.0222	9.0222	FALSE	-0.4378
77597	0.85	0.85	8.8543	8.8543	FALSE	-0.4466
77598	0.45	0.46	13.5026	13.4017	FALSE	-0.8342
77598	0.45	0.47	13.5026	13.3011	FALSE	-0.9671
77603	0.85	0.85	8.8543	8.8543	FALSE	-0.4466
77603	0.85	0.86	8.8543	8.6787	FALSE	-0.8860
77605	0.84	0.85	9.0222	8.8543	FALSE	-0.9426
77605	0.84	0.84	9.0222	9.0222	FALSE	-0.4378
77606	0.90	0.91	7.8738	7.6370	FALSE	-0.4510
77606	0.91	0.91	7.6370	7.6370	FALSE	-0.5105
77610	0.87	0.86	8.4944	8.6787	FALSE	0.6881
77610	0.86	0.85	8.6787	8.8543	FALSE	0.6430
77611	0.94	0.93	6.7809	7.0968	FALSE	1.4222
77611	0.94	0.94	6.7809	6.7809	FALSE	-0.5554
77613	0.88	0.88	8.3001	8.3001	FALSE	-0.4757
77613	0.89	0.88	8.0939	8.3001	FALSE	0.8040
95771	0.82	0.83	9.3385	9.1833	FALSE	-1.0387
95771	0.82	0.83	9.3385	9.1833	FALSE	-1.0387

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95777	0.70	0.75	10.9024	10.3020	FALSE	1.6656
95777	0.69	0.76	11.0166	10.1748	TRUE	3.1710
95781	0.88	0.86	8.3001	8.6787	FALSE	1.8946
95781	0.86	0.88	8.6787	8.3001	FALSE	0.3947
95793	1.77	1.89	13.5785	13.2759	FALSE	-0.3388
95793	1.86	2.05	13.3514	12.8746	FALSE	0.7632
95801	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
95802	0.84	0.85	9.0222	8.8543	FALSE	-0.9426
95808	0.61	0.61	11.8827	11.8827	FALSE	-0.2876
95809	0.83	0.84	9.1833	9.0222	FALSE	-0.9932
95811	0.71	0.72	10.7865	10.6686	FALSE	-1.0827
95826	0.54	0.51	12.5983	12.8997	FALSE	1.6370
95826	0.53	0.51	12.6989	12.8997	FALSE	1.0122
95860	0.81	0.81	9.4884	9.4884	FALSE	-0.4133
95860	0.81	0.81	9.4884	9.4884	FALSE	-0.4133
95862	0.81	0.80	9.4884	9.6335	FALSE	0.4950
95862	0.82	0.80	9.3385	9.6335	FALSE	1.4253
95864	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
95864	0.87	0.89	8.4944	8.0939	FALSE	0.5414
95865	0.91	0.91	7.6370	7.6370	FALSE	-0.5105
95865	0.90	0.91	7.8738	7.6370	FALSE	-0.4510
95873	0.67	0.69	11.2403	11.0166	FALSE	-0.7095
95873	0.68	0.67	11.1292	11.2403	FALSE	0.3686
95876	0.75	0.74	10.3020	10.4266	FALSE	0.4092
95876	0.76	0.73	10.1748	10.5487	FALSE	1.9636
95881	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
95881	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
95897	0.60	0.63	11.9866	11.6726	FALSE	-0.1836
95905	1.89	2.06	13.2759	12.8496	FALSE	0.4520
95910	0.84	0.84	9.0222	9.0222	FALSE	-0.4378
95910	0.86	0.83	8.6787	9.1833	FALSE	2.7029
95911	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
95911	0.87	0.87	8.4944	8.4944	FALSE	-0.4655
95931	0.86	0.89	8.6787	8.0939	FALSE	1.6852
95931	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
95933	0.85	0.87	8.8543	8.4944	FALSE	0.2676
95933	0.83	0.86	9.1833	8.6787	FALSE	1.1566
95934	0.66	0.65	11.3501	11.4587	FALSE	0.3641
95934	0.65	0.65	11.4587	11.4587	FALSE	-0.3098
96027	2.07	2.26	12.8245	12.3454	FALSE	0.8058
96027	2.05	2.20	12.8746	12.4974	FALSE	0.1658
96033	0.88	0.90	8.3001	7.8738	FALSE	0.7125
96033	0.88	0.90	8.3001	7.8738	FALSE	0.7125
96034	0.58	0.57	12.1924	12.2945	FALSE	0.3677
96034	0.59	0.56	12.0898	12.3961	FALSE	1.6406
96036	0.73	0.75	10.5487	10.3020	FALSE	-0.5295
96036	0.74	0.74	10.4266	10.4266	FALSE	-0.3640
96038	0.81	0.82	9.4884	9.3385	FALSE	-1.0799
96038	0.82	0.81	9.3385	9.4884	FALSE	0.5170
96061	0.84	0.86	9.0222	8.6787	FALSE	0.1562

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
96061	0.85	0.86	8.8543	8.6787	FALSE	-0.8860
96064	0.66	0.65	11.3501	11.4587	FALSE	0.3641
96064	0.67	0.65	11.2403	11.4587	FALSE	1.0456
96065	0.66	0.72	11.3501	10.6686	FALSE	2.1501
96065	0.66	0.73	11.3501	10.5487	FALSE	2.9006
96066	0.71	0.72	10.7865	10.6686	FALSE	-1.0827
96066	0.70	0.73	10.9024	10.5487	FALSE	0.1214
96067	1.95	2.02	13.1254	12.9499	FALSE	-1.1106
96067	1.93	2.02	13.1755	12.9499	FALSE	-0.7992
96069	0.68	0.74	11.1292	10.4266	FALSE	2.2937
96069	0.68	0.73	11.1292	10.5487	FALSE	1.5292
96077	0.82	0.82	9.3385	9.3385	FALSE	-0.4212
96077	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
96083	0.80	0.82	9.6335	9.3385	FALSE	-0.1793
96083	0.82	0.83	9.3385	9.1833	FALSE	-1.0387
96089	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
96089	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
96091	0.63	0.66	11.6726	11.3501	FALSE	-0.1144
96091	0.63	0.66	11.6726	11.3501	FALSE	-0.1144
96094	0.72	0.72	10.6686	10.6686	FALSE	-0.3513
96094	0.72	0.72	10.6686	10.6686	FALSE	-0.3513
96096	2.04	2.10	12.8997	12.7492	FALSE	-1.1766
96096	2.01	2.35	12.9749	12.1155	TRUE	3.1784
96102	0.86	0.86	8.6787	8.6787	FALSE	-0.4558
96102	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
96106	0.89	0.89	8.0939	8.0939	FALSE	-0.4865
96106	0.90	0.90	7.8738	7.8738	FALSE	-0.4981
96107	0.79	0.80	9.7743	9.6335	FALSE	-1.1518
96107	0.79	0.81	9.7743	9.4884	FALSE	-0.2435
96109	0.80	0.80	9.6335	9.6335	FALSE	-0.4057
96109	0.79	0.82	9.7743	9.3385	FALSE	0.6947
96140	0.69	0.71	11.0166	10.7865	FALSE	-0.6578
96140	0.68	0.71	11.1292	10.7865	FALSE	0.0412
96145	0.69	0.70	11.0166	10.9024	FALSE	-1.0479
96145	0.69	0.70	11.0166	10.9024	FALSE	-1.0479
96148	0.71	0.72	10.7865	10.6686	FALSE	-1.0827
96148	0.72	0.73	10.6686	10.5487	FALSE	-1.1018
96150	0.56	0.56	12.3961	12.3961	FALSE	-0.2606
96150	0.55	0.54	12.4974	12.5983	FALSE	0.3764
96151	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
96151	0.86	0.86	8.6787	8.6787	FALSE	-0.4558
96153	0.45	0.46	13.5026	13.4017	FALSE	-0.8342
96153	0.45	0.47	13.5026	13.3011	FALSE	-0.9671
96155	0.72	0.71	10.6686	10.7865	FALSE	0.3862
96155	0.71	0.71	10.7865	10.7865	FALSE	-0.3451
96156	1.77	1.86	13.5785	13.3514	FALSE	-0.8109
96156	1.82	1.80	13.4522	13.5026	FALSE	0.1109
142436	0.77	0.79	10.0446	9.7743	FALSE	-0.3553
142436	0.76	0.79	10.1748	9.7743	FALSE	0.4527
143886	0.67	0.67	11.2403	11.2403	FALSE	-0.3213

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
143886	0.65	0.68	11.4587	11.1292	FALSE	-0.0589
143887	0.72	0.72	10.6686	10.6686	FALSE	-0.3513
143887	0.72	0.73	10.6686	10.5487	FALSE	-1.1018
143888	0.73	0.77	10.5487	10.0446	FALSE	1.0819
143888	0.74	0.76	10.4266	10.1748	FALSE	-0.4910
143889	0.62	0.61	11.7781	11.8827	FALSE	0.3620
143889	0.61	0.61	11.8827	11.8827	FALSE	-0.2876
143898	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
143898	0.86	0.87	8.6787	8.4944	FALSE	-0.8220
143899	0.57	0.57	12.2945	12.2945	FALSE	-0.2659
143899	0.56	0.57	12.3961	12.2945	FALSE	-0.8967
143900	0.84	0.86	9.0222	8.6787	FALSE	0.1562
143900	0.85	0.86	8.8543	8.6787	FALSE	-0.8860
151390	0.73	0.73	10.5487	10.5487	FALSE	-0.3576
151390	0.73	0.74	10.5487	10.4266	FALSE	-1.1221
151452	0.74	0.77	10.4266	10.0446	FALSE	0.3238
151452	0.75	0.77	10.3020	10.0446	FALSE	-0.4494
151455	0.80	0.82	9.6335	9.3385	FALSE	-0.1793
151455	0.80	0.82	9.6335	9.3385	FALSE	-0.1793
151460	0.54	0.57	12.5983	12.2945	FALSE	-0.2800
151460	0.54	0.57	12.5983	12.2945	FALSE	-0.2800
151461	0.57	0.59	12.2945	12.0898	FALSE	-0.8842
151461	0.57	0.59	12.2945	12.0898	FALSE	-0.8842
151464	0.80	0.82	9.6335	9.3385	FALSE	-0.1793
151464	0.80	0.81	9.6335	9.4884	FALSE	-1.1174
151467	0.80	0.80	9.6335	9.6335	FALSE	-0.4057
151467	0.81	0.80	9.4884	9.6335	FALSE	0.4950
151468	0.85	0.88	8.8543	8.3001	FALSE	1.4843
151468	0.86	0.88	8.6787	8.3001	FALSE	0.3947
151471	0.82	0.81	9.3385	9.4884	FALSE	0.5170
151471	0.82	0.81	9.3385	9.4884	FALSE	0.5170
151562	2.09	2.14	12.7743	12.6486	FALSE	-1.0274

Table G-18. 2010–11 KCCT: Rescore Analysis—Reading Grade 5

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
95793	4	1.856	1.901	0.835	0.928	0.053	No
95793	4	1.887	1.778	0.963	0.975	-0.112	No
95793	4	1.990	2.138	0.836	0.831	0.177	No
95793	4	1.767	1.827	0.918	0.941	0.065	No

Figure G-11. 2010–11 KCCT: Delta Plot—Reading Grade 6

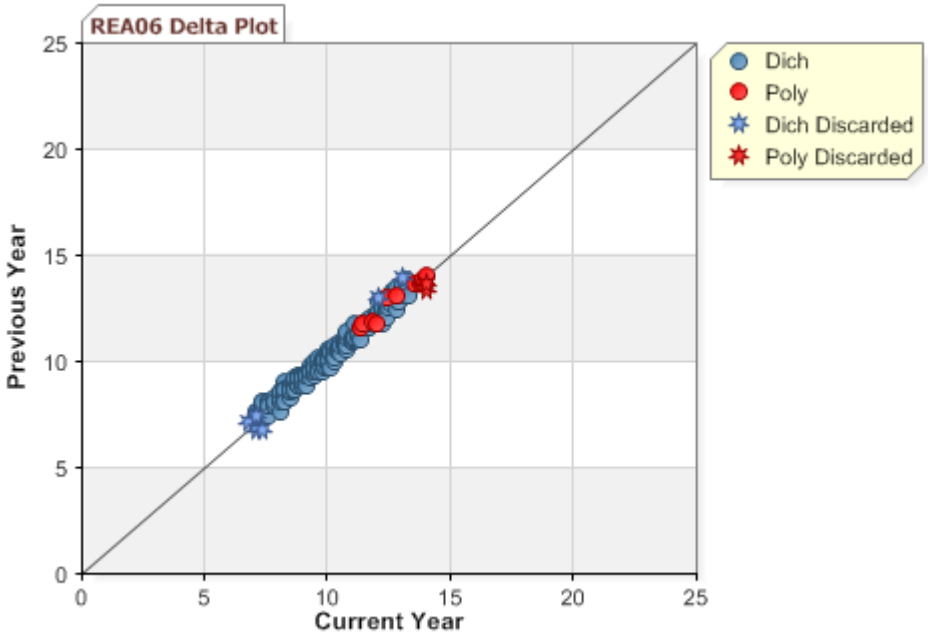


Table G-19. 2010–11 KCCT: Delta Analysis—Reading Grade 6

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
47671	0.80	0.81	9.6335	9.4884	FALSE	-1.0229
47671	0.79	0.82	9.7743	9.3385	FALSE	0.7909
47672	0.85	0.85	8.8543	8.8543	FALSE	-0.4336
47672	0.85	0.85	8.8543	8.8543	FALSE	-0.4336
47673	0.85	0.86	8.8543	8.6787	FALSE	-0.8797
47673	0.85	0.86	8.8543	8.6787	FALSE	-0.8797
47674	0.82	0.85	9.3385	8.8543	FALSE	1.0665
47674	0.84	0.86	9.0222	8.6787	FALSE	0.1731
47675	0.85	0.87	8.8543	8.4944	FALSE	0.2650
47675	0.86	0.88	8.6787	8.3001	FALSE	0.3717
47676	0.91	0.93	7.6370	7.0968	FALSE	1.3133
47676	0.91	0.92	7.6370	7.3797	FALSE	-0.4438
47679	0.67	0.71	11.2403	10.7865	FALSE	0.9898
47679	0.68	0.71	11.1292	10.7865	FALSE	0.2929
47680	0.72	0.72	10.6686	10.6686	FALSE	-0.5405
47680	0.72	0.71	10.6686	10.7865	FALSE	0.1914
47682	0.85	0.86	8.8543	8.6787	FALSE	-0.8797
47682	0.86	0.86	8.6787	8.6787	FALSE	-0.4233
47683	0.47	0.53	13.3011	12.6989	FALSE	2.0322
47683	0.47	0.53	13.3011	12.6989	FALSE	2.0322
47685	0.75	0.75	10.3020	10.3020	FALSE	-0.5189
47685	0.73	0.74	10.5487	10.4266	FALSE	-1.1116
47688	0.81	0.80	9.4884	9.6335	FALSE	0.4303

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
47688	0.80	0.80	9.6335	9.6335	FALSE	-0.4795
47689	0.81	0.82	9.4884	9.3385	FALSE	-1.0018
47689	0.81	0.82	9.4884	9.3385	FALSE	-1.0018
47690	0.81	0.79	9.4884	9.7743	FALSE	1.3049
47690	0.80	0.80	9.6335	9.6335	FALSE	-0.4795
47691	0.70	0.69	10.9024	11.0166	FALSE	0.1551
47691	0.70	0.69	10.9024	11.0166	FALSE	0.1551
47693	0.84	0.84	9.0222	9.0222	FALSE	-0.4435
47693	0.82	0.83	9.3385	9.1833	FALSE	-0.9775
47734	0.73	0.71	10.5487	10.7865	FALSE	0.9431
47734	0.72	0.73	10.6686	10.5487	FALSE	-1.1185
47734	0.74	0.76	10.4266	10.1748	FALSE	-0.3132
47734	0.71	0.73	10.7865	10.5487	FALSE	-0.3797
47737	0.91	0.89	7.6370	8.0939	FALSE	2.4761
47737	0.91	0.91	7.6370	7.6370	FALSE	-0.3619
47737	0.89	0.92	8.0939	7.3797	FALSE	2.4212
47737	0.90	0.91	7.8738	7.6370	FALSE	-0.5569
47739	0.80	0.76	9.6335	10.1748	FALSE	2.8825
47739	0.80	0.80	9.6335	9.6335	FALSE	-0.4795
47739	0.76	0.80	10.1748	9.6335	FALSE	1.4698
47739	0.78	0.81	9.9112	9.4884	FALSE	0.7185
47741	0.85	0.87	8.8543	8.4944	FALSE	0.2650
47741	0.85	0.88	8.8543	8.3001	FALSE	1.4724
47741	0.87	0.88	8.4944	8.3001	FALSE	-0.7839
47741	0.87	0.89	8.4944	8.0939	FALSE	0.4967
47743	0.74	0.74	10.4266	10.4266	FALSE	-0.5263
47743	0.74	0.76	10.4266	10.1748	FALSE	-0.3132
47743	0.73	0.75	10.5487	10.3020	FALSE	-0.3378
47743	0.76	0.75	10.1748	10.3020	FALSE	0.2790
47746	0.67	0.68	11.2403	11.1292	FALSE	-1.1392
47746	0.66	0.71	11.3501	10.7865	FALSE	1.6783
47746	0.69	0.69	11.0166	11.0166	FALSE	-0.5610
47746	0.68	0.69	11.1292	11.0166	FALSE	-1.1366
51850	0.84	0.84	9.0222	9.0222	FALSE	-0.4435
51850	0.83	0.84	9.1833	9.0222	FALSE	-0.9496
51851	0.79	0.78	9.7743	9.9112	FALSE	0.3626
51851	0.78	0.77	9.9112	10.0446	FALSE	0.3326
51854	0.90	0.92	7.8738	7.3797	FALSE	1.0411
51861	0.64	0.65	11.5662	11.4587	FALSE	-1.1429
51863	0.87	0.87	8.4944	8.4944	FALSE	-0.4124
51863	0.86	0.88	8.6787	8.3001	FALSE	0.3717
51867	0.83	0.84	9.1833	9.0222	FALSE	-0.9496
51867	0.83	0.82	9.1833	9.3385	FALSE	0.5110
51869	0.80	0.81	9.6335	9.4884	FALSE	-1.0229
51869	0.79	0.81	9.7743	9.4884	FALSE	-0.1400
51870	0.83	0.84	9.1833	9.0222	FALSE	-0.9496
51870	0.83	0.83	9.1833	9.1833	FALSE	-0.4530
51871	0.84	0.84	9.0222	9.0222	FALSE	-0.4435
51871	0.85	0.84	8.8543	9.0222	FALSE	0.6093
51873	0.52	0.51	12.7994	12.8997	FALSE	-0.0428

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51873	0.52	0.51	12.7994	12.8997	FALSE	-0.0428
51891	0.69	0.71	11.0166	10.7865	FALSE	-0.4132
51892	0.68	0.68	11.1292	11.1292	FALSE	-0.5676
51900	0.58	0.56	12.1924	12.3961	FALSE	0.6350
51900	0.58	0.56	12.1924	12.3961	FALSE	0.6350
51902	0.64	0.63	11.5662	11.6726	FALSE	0.0676
51902	0.63	0.64	11.6726	11.5662	FALSE	-1.1430
51904	0.72	0.71	10.6686	10.7865	FALSE	0.1914
51904	0.71	0.72	10.7865	10.6686	FALSE	-1.1244
51906	0.70	0.73	10.9024	10.5487	FALSE	0.3473
51906	0.69	0.72	11.0166	10.6686	FALSE	0.3187
51907	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
51907	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
51909	0.94	0.92	6.7809	7.3797	TRUE	3.4079
51909	0.92	0.93	7.3797	7.0968	TRUE	-0.2998
51909	0.93	0.94	7.0968	6.7809	TRUE	-0.1112
51909	0.94	0.93	6.7809	7.0968	TRUE	1.6509
51910	0.86	0.86	8.6787	8.6787	FALSE	-0.4233
51910	0.85	0.87	8.8543	8.4944	FALSE	0.2650
51910	0.84	0.88	9.0222	8.3001	FALSE	2.5252
51910	0.86	0.86	8.6787	8.6787	FALSE	-0.4233
51912	0.68	0.68	11.1292	11.1292	FALSE	-0.5676
51912	0.69	0.66	11.0166	11.3501	FALSE	1.5108
51913	0.64	0.63	11.5662	11.6726	FALSE	0.0676
51913	0.62	0.63	11.7781	11.6726	FALSE	-1.1426
51922	0.61	0.64	11.8827	11.5662	FALSE	0.1746
51922	0.62	0.62	11.7781	11.7781	FALSE	-0.6059
51924	0.70	0.71	10.9024	10.7865	FALSE	-1.1293
51924	0.71	0.71	10.7865	10.7865	FALSE	-0.5475
51929	0.82	0.82	9.3385	9.3385	FALSE	-0.4622
51929	0.83	0.83	9.1833	9.1833	FALSE	-0.4530
51929	0.85	0.84	8.8543	9.0222	FALSE	0.6093
51929	0.85	0.83	8.8543	9.1833	FALSE	1.6104
51931	0.56	0.52	12.3961	12.7994	FALSE	1.8626
51931	0.52	0.54	12.7994	12.5983	FALSE	-0.4884
51931	0.55	0.55	12.4974	12.4974	FALSE	-0.6482
51931	0.53	0.54	12.6989	12.5983	FALSE	-1.1184
51933	0.89	0.88	8.0939	8.3001	FALSE	0.8917
51933	0.89	0.89	8.0939	8.0939	FALSE	-0.3889
51933	0.90	0.90	7.8738	7.8738	FALSE	-0.3759
51933	0.87	0.89	8.4944	8.0939	FALSE	0.4967
51935	0.60	0.56	11.9866	12.3961	FALSE	1.9255
51935	0.62	0.57	11.7781	12.2945	FALSE	2.6019
51935	0.60	0.62	11.9866	11.7781	FALSE	-0.4902
51935	0.58	0.60	12.1924	11.9866	FALSE	-0.4950
51937	0.87	0.87	8.4944	8.4944	FALSE	-0.4124
51937	0.87	0.88	8.4944	8.3001	FALSE	-0.7839
51940	0.81	0.81	9.4884	9.4884	FALSE	-0.4710
51940	0.81	0.81	9.4884	9.4884	FALSE	-0.4710
51941	0.87	0.88	8.4944	8.3001	FALSE	-0.7839

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51941	0.89	0.90	8.0939	7.8738	FALSE	-0.6478
51941	0.89	0.91	8.0939	7.6370	FALSE	0.8232
51941	0.89	0.90	8.0939	7.8738	FALSE	-0.6478
51946	0.86	0.88	8.6787	8.3001	FALSE	0.3717
51946	0.88	0.87	8.3001	8.4944	FALSE	0.8064
51951	0.83	0.86	9.1833	8.6787	FALSE	1.1837
51951	0.82	0.84	9.3385	9.0222	FALSE	0.0236
51952	1.76	1.69	13.6039	13.7820	FALSE	0.3930
51952	1.74	1.62	13.6546	13.9617	FALSE	1.1909
52001	0.91	0.91	7.6370	7.6370	FALSE	-0.3619
52001	0.91	0.91	7.6370	7.6370	FALSE	-0.3619
52003	0.83	0.85	9.1833	8.8543	FALSE	0.0933
52003	0.82	0.85	9.3385	8.8543	FALSE	1.0665
52007	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
52007	0.77	0.79	10.0446	9.7743	FALSE	-0.2210
76682	0.64	0.66	11.5662	11.3501	FALSE	-0.4685
76682	0.62	0.65	11.7781	11.4587	FALSE	0.1858
76683	0.85	0.86	8.8543	8.6787	FALSE	-0.8797
76683	0.85	0.86	8.8543	8.6787	FALSE	-0.8797
76684	0.66	0.67	11.3501	11.2403	FALSE	-1.1410
76684	0.68	0.67	11.1292	11.2403	FALSE	0.1227
76685	0.84	0.84	9.0222	9.0222	FALSE	-0.4435
76685	0.83	0.84	9.1833	9.0222	FALSE	-0.9496
76686	0.88	0.89	8.3001	8.0939	FALSE	-0.7221
76686	0.87	0.88	8.4944	8.3001	FALSE	-0.7839
76689	0.60	0.59	11.9866	12.0898	FALSE	0.0229
76689	0.61	0.61	11.8827	11.8827	FALSE	-0.6120
76690	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
76690	0.76	0.77	10.1748	10.0446	FALSE	-1.0837
76691	0.88	0.90	8.3001	7.8738	FALSE	0.6450
76691	0.89	0.89	8.0939	8.0939	FALSE	-0.3889
76695	0.79	0.78	9.7743	9.9112	FALSE	0.3626
76695	0.76	0.78	10.1748	9.9112	FALSE	-0.2552
76696	0.86	0.86	8.6787	8.6787	FALSE	-0.4233
76696	0.86	0.87	8.6787	8.4944	FALSE	-0.8357
76697	2.47	2.45	11.8043	11.8566	FALSE	-0.2824
76697	2.48	2.39	11.7781	12.0125	FALSE	0.8501
76698	0.82	0.83	9.3385	9.1833	FALSE	-0.9775
76698	0.83	0.83	9.1833	9.1833	FALSE	-0.4530
76699	0.45	0.49	13.5026	13.1003	FALSE	0.8030
76699	0.49	0.47	13.1003	13.3011	FALSE	0.5635
76701	0.92	0.91	7.3797	7.6370	FALSE	1.2512
76701	0.92	0.93	7.3797	7.0968	FALSE	-0.2998
76701	0.93	0.93	7.0968	7.0968	FALSE	-0.3301
76701	0.91	0.93	7.6370	7.0968	FALSE	1.3133
95712	0.80	0.78	9.6335	9.9112	FALSE	1.2454
95712	0.77	0.79	10.0446	9.7743	FALSE	-0.2210
95725	0.73	0.77	10.5487	10.0446	FALSE	1.2612
95725	0.73	0.77	10.5487	10.0446	FALSE	1.2612
95783	0.88	0.88	8.3001	8.3001	FALSE	-0.4010

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95794	0.64	0.66	11.5662	11.3501	FALSE	-0.4685
95796	0.61	0.64	11.8827	11.5662	FALSE	0.1746
95799	0.62	0.68	11.7781	11.1292	FALSE	2.2326
95805	0.78	0.79	9.9112	9.7743	FALSE	-1.0574
95807	0.76	0.77	10.1748	10.0446	FALSE	-1.0837
95813	1.98	2.06	13.0501	12.8496	FALSE	-0.4771
95820	0.57	0.59	12.2945	12.0898	FALSE	-0.4960
95820	0.58	0.59	12.1924	12.0898	FALSE	-1.1361
95822	0.83	0.84	9.1833	9.0222	FALSE	-0.9496
95822	0.82	0.83	9.3385	9.1833	FALSE	-0.9775
95823	0.74	0.74	10.4266	10.4266	FALSE	-0.5263
95823	0.75	0.73	10.3020	10.5487	FALSE	1.0135
95833	0.73	0.73	10.5487	10.5487	FALSE	-0.5335
95833	0.74	0.74	10.4266	10.4266	FALSE	-0.5263
95834	0.90	0.90	7.8738	7.8738	FALSE	-0.3759
95834	0.90	0.91	7.8738	7.6370	FALSE	-0.5569
95841	0.81	0.80	9.4884	9.6335	FALSE	0.4303
95841	0.81	0.80	9.4884	9.6335	FALSE	0.4303
95848	0.84	0.86	9.0222	8.6787	FALSE	0.1731
95848	0.83	0.85	9.1833	8.8543	FALSE	0.0933
95886	0.49	0.50	13.1003	13.0000	FALSE	-1.0971
95886	0.49	0.52	13.1003	12.7994	FALSE	0.1490
95888	0.87	0.87	8.4944	8.4944	FALSE	-0.4124
95888	0.86	0.87	8.6787	8.4944	FALSE	-0.8357
95889	0.90	0.91	7.8738	7.6370	FALSE	-0.5569
95889	0.90	0.90	7.8738	7.8738	FALSE	-0.3759
95892	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
95892	0.77	0.78	10.0446	9.9112	FALSE	-1.0714
95896	0.47	0.48	13.3011	13.2006	FALSE	-1.0841
95896	0.47	0.48	13.3011	13.2006	FALSE	-1.0841
95900	0.89	0.91	8.0939	7.6370	FALSE	0.8232
95900	0.89	0.91	8.0939	7.6370	FALSE	0.8232
95909	0.61	0.63	11.8827	11.6726	FALSE	-0.4864
95909	0.61	0.64	11.8827	11.5662	FALSE	0.1746
95914	1.66	1.64	13.8588	13.9102	FALSE	-0.4093
95914	1.60	1.58	14.0134	14.0652	FALSE	-0.4155
95916	0.82	0.81	9.3385	9.4884	FALSE	0.4688
95916	0.81	0.81	9.4884	9.4884	FALSE	-0.4710
95932	0.91	0.91	7.6370	7.6370	FALSE	-0.3619
95932	0.92	0.92	7.3797	7.3797	FALSE	-0.3468
95936	0.88	0.89	8.3001	8.0939	FALSE	-0.7221
95936	0.89	0.88	8.0939	8.3001	FALSE	0.8917
95940	0.42	0.48	13.8076	13.2006	FALSE	2.0918
95940	0.41	0.49	13.9102	13.1003	TRUE	3.3584
95941	1.74	1.78	13.6546	13.5532	FALSE	-1.0573
95941	1.74	1.64	13.6546	13.9102	FALSE	0.8709
95943	0.83	0.83	9.1833	9.1833	FALSE	-0.4530
95943	0.82	0.83	9.3385	9.1833	FALSE	-0.9775
95944	0.90	0.91	7.8738	7.6370	FALSE	-0.5569
95944	0.91	0.91	7.6370	7.6370	FALSE	-0.3619

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95945	0.75	0.75	10.3020	10.3020	FALSE	-0.5189
95945	0.75	0.76	10.3020	10.1748	FALSE	-1.0944
95946	0.55	0.57	12.4974	12.2945	FALSE	-0.4955
95946	0.56	0.56	12.3961	12.3961	FALSE	-0.6423
95989	0.92	0.93	7.3797	7.0968	FALSE	-0.2998
95989	0.92	0.92	7.3797	7.3797	FALSE	-0.3468
95991	0.64	0.65	11.5662	11.4587	FALSE	-1.1429
95991	0.64	0.65	11.5662	11.4587	FALSE	-1.1429
95992	0.70	0.72	10.9024	10.6686	FALSE	-0.3974
95992	0.72	0.73	10.6686	10.5487	FALSE	-1.1185
95995	2.50	2.60	11.7254	11.4587	FALSE	-0.1442
95995	2.57	2.63	11.5394	11.3774	FALSE	-0.8056
96004	0.81	0.82	9.4884	9.3385	FALSE	-1.0018
96004	0.81	0.82	9.4884	9.3385	FALSE	-1.0018
96005	0.80	0.81	9.6335	9.4884	FALSE	-1.0229
96005	0.80	0.80	9.6335	9.6335	FALSE	-0.4795
96007	0.68	0.68	11.1292	11.1292	FALSE	-0.5676
96007	0.68	0.68	11.1292	11.1292	FALSE	-0.5676
96008	0.46	0.52	13.4017	12.7994	FALSE	2.0393
96008	0.49	0.50	13.1003	13.0000	FALSE	-1.0971
96012	0.87	0.87	8.4944	8.4944	FALSE	-0.4124
96012	0.86	0.87	8.6787	8.4944	FALSE	-0.8357
96013	0.79	0.77	9.7743	10.0446	FALSE	1.1911
96013	0.81	0.80	9.4884	9.6335	FALSE	0.4303
96014	0.85	0.84	8.8543	9.0222	FALSE	0.6093
96014	0.84	0.86	9.0222	8.6787	FALSE	0.1731
96015	0.78	0.75	9.9112	10.3020	FALSE	1.9316
96015	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
96016	0.85	0.85	8.8543	8.8543	FALSE	-0.4336
96016	0.86	0.87	8.6787	8.4944	FALSE	-0.8357
96023	0.56	0.56	12.3961	12.3961	FALSE	-0.6423
96023	0.55	0.56	12.4974	12.3961	FALSE	-1.1267
96025	0.50	0.55	13.0000	12.4974	FALSE	1.3963
96025	0.51	0.57	12.8997	12.2945	FALSE	2.0275
96028	1.87	1.60	13.3262	14.0134	TRUE	3.5712
96028	1.74	1.58	13.6546	14.0652	TRUE	1.8341
147118	0.68	0.69	11.1292	11.0166	FALSE	-1.1366
147118	0.68	0.68	11.1292	11.1292	FALSE	-0.5676
147119	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
147119	0.77	0.77	10.0446	10.0446	FALSE	-0.5038
147120	0.58	0.56	12.1924	12.3961	FALSE	0.6350
147120	0.57	0.57	12.2945	12.2945	FALSE	-0.6363
152166	0.77	0.79	10.0446	9.7743	FALSE	-0.2210
152168	0.80	0.81	9.6335	9.4884	FALSE	-1.0229
152169	2.01	2.22	12.9749	12.4468	FALSE	1.5532
152171	0.85	0.85	8.8543	8.8543	FALSE	-0.4336
152171	0.83	0.85	9.1833	8.8543	FALSE	0.0933
152179	0.89	0.89	8.0939	8.0939	FALSE	-0.3889
152179	0.89	0.90	8.0939	7.8738	FALSE	-0.6478
152181	0.52	0.59	12.7994	12.0898	FALSE	2.6698

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
152181	0.50	0.59	13.0000	12.0898	TRUE	3.9277
152185	0.72	0.74	10.6686	10.4266	FALSE	-0.3599
152185	0.72	0.75	10.6686	10.3020	FALSE	0.4139
152187	0.89	0.92	8.0939	7.3797	FALSE	2.4212
152187	0.91	0.91	7.6370	7.6370	FALSE	-0.3619

Table G-20. 2010–11 KCCT: Rescore Analysis—Reading Grade 6

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
96028	4	1.752	1.728	0.843	0.861	-0.029	No
96028	4	2.569	2.554	1.125	1.039	-0.013	No
96028	4	1.590	1.532	0.962	0.892	-0.061	No
96028	4	1.771	1.556	0.938	0.863	-0.229	No

Figure G-12. 2010–11 KCCT: Delta Plot—Reading Grade 7

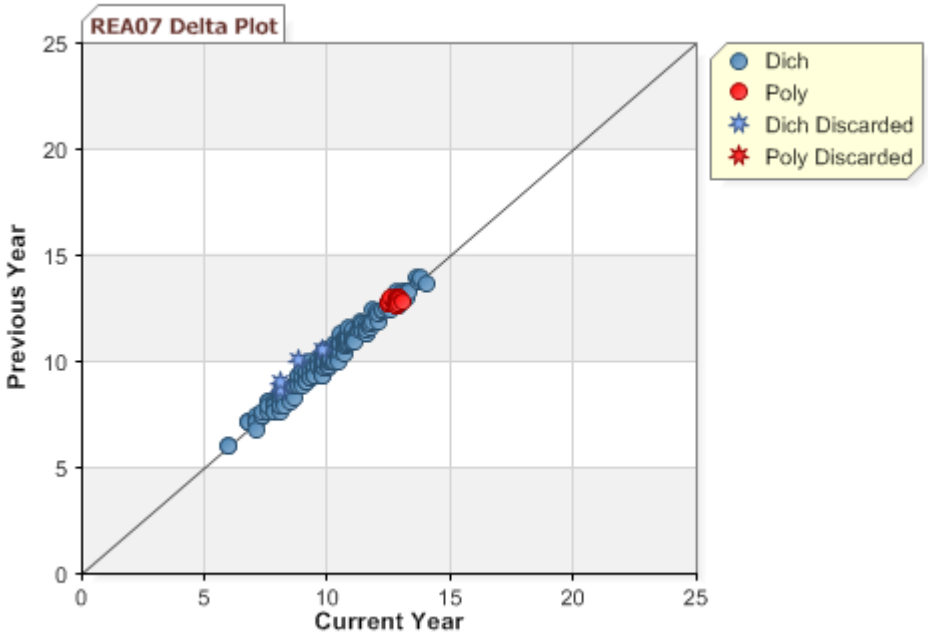


Table G-21. 2010–11 KCCT: Delta Analysis—Reading Grade 7

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50499	0.93	0.93	7.0968	7.0968	FALSE	-0.9119
50499	0.93	0.94	7.0968	6.7809	FALSE	0.3474
50500	0.88	0.88	8.3001	8.3001	FALSE	-0.9001
50500	0.88	0.89	8.3001	8.0939	FALSE	-0.3715
50501	0.75	0.76	10.3020	10.1748	FALSE	-0.8997
50501	0.75	0.75	10.3020	10.3020	FALSE	-0.8803
50502	0.75	0.72	10.3020	10.6686	FALSE	1.4812
50502	0.76	0.74	10.1748	10.4266	FALSE	0.7407
50503	0.69	0.71	11.0166	10.7865	FALSE	-0.2440
50503	0.69	0.70	11.0166	10.9024	FALSE	-0.9908
50504	0.76	0.78	10.1748	9.9112	FALSE	-0.0203
50504	0.75	0.78	10.3020	9.9112	FALSE	0.7981
52147	0.91	0.90	7.6370	7.8738	FALSE	0.6189
52147	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
52148	0.78	0.75	9.9112	10.3020	FALSE	1.6334
52148	0.77	0.75	10.0446	10.3020	FALSE	0.7755
52149	0.71	0.70	10.7865	10.9024	FALSE	-0.1286
52149	0.70	0.70	10.9024	10.9024	FALSE	-0.8743
52150	0.80	0.79	9.6335	9.7743	FALSE	0.0201
52150	0.80	0.78	9.6335	9.9112	FALSE	0.9021
52313	0.79	0.80	9.7743	9.6335	FALSE	-0.8072
52313	0.77	0.80	10.0446	9.6335	FALSE	0.9313
52314	0.76	0.76	10.1748	10.1748	FALSE	-0.8815
52314	0.76	0.77	10.1748	10.0446	FALSE	-0.8796
52315	0.70	0.70	10.9024	10.9024	FALSE	-0.8743
52315	0.69	0.71	11.0166	10.7865	FALSE	-0.2440
52316	0.87	0.88	8.4944	8.3001	FALSE	-0.4494
52316	0.86	0.87	8.6787	8.4944	FALSE	-0.5162
52317	0.89	0.89	8.0939	8.0939	FALSE	-0.9021
52317	0.88	0.88	8.3001	8.3001	FALSE	-0.9001
52318	0.85	0.86	8.8543	8.6787	FALSE	-0.5743
52318	0.85	0.86	8.8543	8.6787	FALSE	-0.5743
52319	0.54	0.51	12.5983	12.8997	FALSE	1.0843
52319	0.54	0.52	12.5983	12.7994	FALSE	0.4380
53109	0.72	0.72	10.6686	10.6686	FALSE	-0.8766
53109	0.71	0.75	10.7865	10.3020	FALSE	1.3963
53114	0.83	0.82	9.1833	9.3385	FALSE	0.1084
53114	0.82	0.82	9.3385	9.3385	FALSE	-0.8898
53314	0.79	0.78	9.7743	9.9112	FALSE	-0.0035
53314	0.80	0.79	9.6335	9.7743	FALSE	0.0201
53318	0.63	0.63	11.6726	11.6726	FALSE	-0.8667
53318	0.62	0.64	11.7781	11.5662	FALSE	-0.3689
53325	0.61	0.59	11.8827	12.0898	FALSE	0.4694
53325	0.61	0.61	11.8827	11.8827	FALSE	-0.8646
53363	0.82	0.81	9.3385	9.4884	FALSE	0.0757
53363	0.81	0.81	9.4884	9.4884	FALSE	-0.8883
53367	0.84	0.83	9.0222	9.1833	FALSE	0.1453
53367	0.84	0.84	9.0222	9.0222	FALSE	-0.8929
53375	0.62	0.62	11.7781	11.7781	FALSE	-0.8657

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
53375	0.62	0.62	11.7781	11.7781	FALSE	-0.8657
53384	0.77	0.77	10.0446	10.0446	FALSE	-0.8828
53384	0.77	0.76	10.0446	10.1748	FALSE	-0.0442
53408	2.16	2.06	12.5983	12.8496	FALSE	0.7612
53408	2.14	2.03	12.6486	12.9248	FALSE	0.9220
53457	0.78	0.75	9.9112	10.3020	FALSE	1.6334
53457	0.76	0.76	10.1748	10.1748	FALSE	-0.8815
53464	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
53464	0.89	0.91	8.0939	7.6370	FALSE	1.2457
53467	0.83	0.82	9.1833	9.3385	FALSE	0.1084
53467	0.83	0.82	9.1833	9.3385	FALSE	0.1084
53471	0.78	0.78	9.9112	9.9112	FALSE	-0.8841
53471	0.79	0.79	9.7743	9.7743	FALSE	-0.8855
53474	0.93	0.94	7.0968	6.7809	FALSE	0.3474
53474	0.92	0.93	7.3797	7.0968	FALSE	0.1317
54466	0.48	0.52	13.2006	12.7994	FALSE	0.8365
54466	0.47	0.52	13.3011	12.7994	FALSE	1.4827
54479	0.77	0.79	10.0446	9.7743	FALSE	0.0243
54479	0.76	0.76	10.1748	10.1748	FALSE	-0.8815
54500	0.88	0.89	8.3001	8.0939	FALSE	-0.3715
54500	0.89	0.89	8.0939	8.0939	FALSE	-0.9021
54506	0.89	0.91	8.0939	7.6370	FALSE	1.2457
54506	0.90	0.91	7.8738	7.6370	FALSE	-0.1699
54508	0.82	0.83	9.3385	9.1833	FALSE	-0.7101
54508	0.85	0.85	8.8543	8.8543	FALSE	-0.8946
54536	0.82	0.79	9.3385	9.7743	FALSE	1.9173
54536	0.81	0.79	9.4884	9.7743	FALSE	0.9534
54537	0.87	0.88	8.4944	8.3001	FALSE	-0.4494
54537	0.86	0.87	8.6787	8.4944	FALSE	-0.5162
54538	0.79	0.77	9.7743	10.0446	FALSE	0.8557
54538	0.78	0.78	9.9112	9.9112	FALSE	-0.8841
54540	0.89	0.89	8.0939	8.0939	FALSE	-0.9021
54540	0.90	0.88	7.8738	8.3001	FALSE	1.8415
54542	0.80	0.81	9.6335	9.4884	FALSE	-0.7781
54542	0.82	0.81	9.3385	9.4884	FALSE	0.0757
54557	0.71	0.74	10.7865	10.4266	FALSE	0.5938
54557	0.72	0.73	10.6686	10.5487	FALSE	-0.9507
54561	0.70	0.69	10.9024	11.0166	FALSE	-0.1387
54561	0.70	0.70	10.9024	10.9024	FALSE	-0.8743
54868	0.89	0.91	8.0939	7.6370	FALSE	1.2457
54868	0.90	0.89	7.8738	8.0939	FALSE	0.5135
54873	0.74	0.76	10.4266	10.1748	FALSE	-0.0984
54873	0.74	0.76	10.4266	10.1748	FALSE	-0.0984
54874	0.76	0.76	10.1748	10.1748	FALSE	-0.8815
54874	0.76	0.74	10.1748	10.4266	FALSE	0.7407
54877	2.07	2.19	12.8245	12.5226	FALSE	0.2002
54877	2.12	2.10	12.6989	12.7492	FALSE	-0.5329
54882	0.62	0.65	11.7781	11.4587	FALSE	0.3232
54882	0.64	0.66	11.5662	11.3501	FALSE	-0.3404
54885	0.88	0.89	8.3001	8.0939	FALSE	-0.3715

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
54885	0.88	0.88	8.3001	8.3001	FALSE	-0.9001
54886	0.84	0.83	9.0222	9.1833	FALSE	0.1453
54886	0.83	0.84	9.1833	9.0222	FALSE	-0.6701
54893	0.73	0.78	10.5487	9.9112	FALSE	2.3849
54893	0.74	0.76	10.4266	10.1748	FALSE	-0.0984
54996	0.83	0.83	9.1833	9.1833	FALSE	-0.8913
54996	0.82	0.83	9.3385	9.1833	FALSE	-0.7101
55010	0.69	0.68	11.0166	11.1292	FALSE	-0.1478
55010	0.68	0.69	11.1292	11.0166	FALSE	-1.0022
55013	0.70	0.68	10.9024	11.1292	FALSE	0.5867
55013	0.69	0.69	11.0166	11.0166	FALSE	-0.8732
55016	0.80	0.81	9.6335	9.4884	FALSE	-0.7781
55016	0.78	0.82	9.9112	9.3385	FALSE	1.9735
55019	0.66	0.69	11.3501	11.0166	FALSE	0.4189
55019	0.65	0.69	11.4587	11.0166	FALSE	1.1172
55020	0.88	0.89	8.3001	8.0939	FALSE	-0.3715
55020	0.87	0.89	8.4944	8.0939	FALSE	0.8787
55143	0.94	0.93	6.7809	7.0968	FALSE	1.1200
55143	0.93	0.94	7.0968	6.7809	FALSE	0.3474
55144	0.89	0.87	8.0939	8.4944	FALSE	1.6781
55144	0.88	0.88	8.3001	8.3001	FALSE	-0.9001
55146	0.82	0.79	9.3385	9.7743	FALSE	1.9173
55146	0.81	0.84	9.4884	9.0222	FALSE	1.2921
55148	0.71	0.70	10.7865	10.9024	FALSE	-0.1286
55148	0.72	0.72	10.6686	10.6686	FALSE	-0.8766
55153	0.91	0.89	7.6370	8.0939	FALSE	2.0366
55153	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
55156	0.75	0.74	10.3020	10.4266	FALSE	-0.0778
55156	0.76	0.77	10.1748	10.0446	FALSE	-0.8796
55158	0.88	0.86	8.3001	8.6787	FALSE	1.5392
55158	0.86	0.88	8.6787	8.3001	FALSE	0.7359
76448	0.82	0.85	9.3385	8.8543	FALSE	1.4097
76448	0.84	0.85	9.0222	8.8543	FALSE	-0.6252
76450	0.90	0.91	7.8738	7.6370	FALSE	-0.1699
76450	0.90	0.91	7.8738	7.6370	FALSE	-0.1699
76451	0.68	0.71	11.1292	10.7865	FALSE	0.4803
76451	0.68	0.72	11.1292	10.6686	FALSE	1.2393
76452	0.47	0.48	13.3011	13.2006	FALSE	-1.1019
76452	0.47	0.49	13.3011	13.1003	FALSE	-0.4555
94529	0.81	0.83	9.4884	9.1833	FALSE	0.2539
94529	0.82	0.81	9.3385	9.4884	FALSE	0.0757
94540	0.71	0.71	10.7865	10.7865	FALSE	-0.8755
94540	0.69	0.72	11.0166	10.6686	FALSE	0.5150
94542	0.83	0.82	9.1833	9.3385	FALSE	0.1084
94542	0.83	0.83	9.1833	9.1833	FALSE	-0.8913
94543	2.00	2.08	13.0000	12.7994	FALSE	-0.4538
94543	2.04	2.03	12.8997	12.9248	FALSE	-0.6931
94891	0.91	0.90	7.6370	7.8738	FALSE	0.6189
94891	0.91	0.90	7.6370	7.8738	FALSE	0.6189
94893	0.78	0.78	9.9112	9.9112	FALSE	-0.8841

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94893	0.78	0.76	9.9112	10.1748	FALSE	0.8137
94895	0.77	0.77	10.0446	10.0446	FALSE	-0.8828
94895	0.77	0.76	10.0446	10.1748	FALSE	-0.0442
94896	0.85	0.85	8.8543	8.8543	FALSE	-0.8946
94896	0.85	0.84	8.8543	9.0222	FALSE	0.1870
94899	0.85	0.86	8.8543	8.6787	FALSE	-0.5743
94899	0.84	0.84	9.0222	9.0222	FALSE	-0.8929
94902	2.01	2.03	12.9749	12.9248	FALSE	-1.1768
94902	2.03	2.04	12.9248	12.8997	FALSE	-1.0158
94919	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
94919	0.90	0.89	7.8738	8.0939	FALSE	0.5135
94934	0.67	0.70	11.2403	10.9024	FALSE	0.4483
94934	0.68	0.70	11.1292	10.9024	FALSE	-0.2666
94991	0.74	0.73	10.4266	10.5487	FALSE	-0.0923
94991	0.74	0.72	10.4266	10.6686	FALSE	0.6800
95000	0.90	0.91	7.8738	7.6370	FALSE	-0.1699
95000	0.91	0.91	7.6370	7.6370	FALSE	-0.9066
95006	0.84	0.89	9.0222	8.0939	TRUE	4.2729
95006	0.86	0.89	8.6787	8.0939	TRUE	2.0640
95014	0.68	0.71	11.1292	10.7865	FALSE	0.4803
95014	0.67	0.73	11.2403	10.5487	FALSE	2.7264
95022	0.92	0.92	7.3797	7.3797	FALSE	-0.9091
95022	0.91	0.92	7.6370	7.3797	FALSE	-0.0358
95027	0.78	0.77	9.9112	10.0446	FALSE	-0.0249
95027	0.77	0.76	10.0446	10.1748	FALSE	-0.0442
95037	0.64	0.70	11.5662	10.9024	FALSE	2.5439
95037	0.65	0.70	11.4587	10.9024	FALSE	1.8528
95040	2.14	2.21	12.6486	12.4721	FALSE	-0.6054
95040	2.12	2.20	12.6989	12.4974	FALSE	-0.4447
95303	0.72	0.74	10.6686	10.4266	FALSE	-0.1640
95315	0.89	0.90	8.0939	7.8738	FALSE	-0.2798
95317	0.83	0.83	9.1833	9.1833	FALSE	-0.8913
95329	0.68	0.71	11.1292	10.7865	FALSE	0.4803
95336	0.92	0.92	7.3797	7.3797	FALSE	-0.9091
95341	0.88	0.88	8.3001	8.3001	FALSE	-0.9001
95346	2.00	2.18	13.0000	12.5478	FALSE	1.1666
95498	0.65	0.64	11.4587	11.5662	FALSE	-0.1767
95498	0.65	0.67	11.4587	11.2403	FALSE	-0.3242
95499	0.78	0.74	9.9112	10.4266	FALSE	2.4358
95499	0.77	0.77	10.0446	10.0446	FALSE	-0.8828
95500	0.47	0.48	13.3011	13.2006	FALSE	-1.1019
95500	0.48	0.50	13.2006	13.0000	FALSE	-0.4558
95502	0.53	0.52	12.6989	12.7994	FALSE	-0.2094
95502	0.54	0.52	12.5983	12.7994	FALSE	0.4380
95506	0.78	0.80	9.9112	9.6335	FALSE	0.0734
95506	0.77	0.85	10.0446	8.8543	TRUE	5.9510
95507	0.58	0.59	12.1924	12.0898	FALSE	-1.0771
95507	0.56	0.61	12.3961	11.8827	FALSE	1.5671
95508	0.41	0.42	13.9102	13.8076	FALSE	-1.0941
95508	0.43	0.43	13.7055	13.7055	FALSE	-0.8466

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95509	0.50	0.49	13.0000	13.1003	FALSE	-0.2076
95509	0.50	0.49	13.0000	13.1003	FALSE	-0.2076
95510	0.44	0.40	13.6039	14.0134	FALSE	1.7903
95510	0.42	0.42	13.8076	13.8076	FALSE	-0.8456
95511	0.47	0.47	13.3011	13.3011	FALSE	-0.8506
95511	0.47	0.48	13.3011	13.2006	FALSE	-1.1019
95512	2.07	1.98	12.8245	13.0501	FALSE	0.5983
95512	2.01	2.04	12.9749	12.8997	FALSE	-1.2613
95526	0.80	0.82	9.6335	9.3385	FALSE	0.1874
95526	0.81	0.83	9.4884	9.1833	FALSE	0.2539
95529	0.74	0.77	10.4266	10.0446	FALSE	0.7401
95529	0.76	0.76	10.1748	10.1748	FALSE	-0.8815
95530	0.71	0.73	10.7865	10.5487	FALSE	-0.1929
95530	0.71	0.72	10.7865	10.6686	FALSE	-0.9652
95531	0.70	0.72	10.9024	10.6686	FALSE	-0.2195
95531	0.70	0.72	10.9024	10.6686	FALSE	-0.2195
95532	0.67	0.64	11.2403	11.5662	FALSE	1.2278
95532	0.67	0.64	11.2403	11.5662	FALSE	1.2278
95546	0.89	0.89	8.0939	8.0939	FALSE	-0.9021
95546	0.90	0.89	7.8738	8.0939	FALSE	0.5135
95548	0.77	0.78	10.0446	9.9112	FALSE	-0.8576
95548	0.77	0.77	10.0446	10.0446	FALSE	-0.8828
95551	0.92	0.92	7.3797	7.3797	FALSE	-0.9091
95551	0.92	0.92	7.3797	7.3797	FALSE	-0.9091
95555	0.80	0.80	9.6335	9.6335	FALSE	-0.8869
95555	0.80	0.78	9.6335	9.9112	FALSE	0.9021
95559	0.88	0.87	8.3001	8.4944	FALSE	0.3521
95559	0.89	0.88	8.0939	8.3001	FALSE	0.4260
95561	0.90	0.89	7.8738	8.0939	FALSE	0.5135
95561	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
95564	0.57	0.60	12.2945	11.9866	FALSE	0.2442
95564	0.59	0.60	12.0898	11.9866	FALSE	-1.0722
95973	0.78	0.80	9.9112	9.6335	FALSE	0.0734
95973	0.78	0.80	9.9112	9.6335	FALSE	0.0734
138323	0.64	0.62	11.5662	11.7781	FALSE	0.4973
138323	0.66	0.65	11.3501	11.4587	FALSE	-0.1705
138324	0.49	0.48	13.1003	13.2006	FALSE	-0.2063
138324	0.50	0.48	13.0000	13.2006	FALSE	0.4387
138325	0.70	0.69	10.9024	11.0166	FALSE	-0.1387
138325	0.69	0.71	11.0166	10.7865	FALSE	-0.2440
138326	0.84	0.83	9.0222	9.1833	FALSE	0.1453
138326	0.82	0.85	9.3385	8.8543	FALSE	1.4097
138330	0.72	0.72	10.6686	10.6686	FALSE	-0.8766
138331	0.75	0.75	10.3020	10.3020	FALSE	-0.8803
138332	0.90	0.89	7.8738	8.0939	FALSE	0.5135
138333	0.76	0.77	10.1748	10.0446	FALSE	-0.8796
138334	0.41	0.44	13.9102	13.6039	FALSE	0.2180
138335	0.82	0.83	9.3385	9.1833	FALSE	-0.7101
138336	2.16	2.06	12.5983	12.8496	FALSE	0.7612
152022	0.57	0.57	12.2945	12.2945	FALSE	-0.8606

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
152022	0.56	0.57	12.3961	12.2945	FALSE	-1.0855
152023	0.71	0.74	10.7865	10.4266	FALSE	0.5938
152023	0.73	0.75	10.5487	10.3020	FALSE	-0.1326
152039	0.81	0.81	9.4884	9.4884	FALSE	-0.8883
152039	0.81	0.82	9.4884	9.3385	FALSE	-0.7459
152068	0.90	0.90	7.8738	7.8738	FALSE	-0.9043
152068	0.89	0.89	8.0939	8.0939	FALSE	-0.9021
152078	0.62	0.65	11.7781	11.4587	FALSE	0.3232
152078	0.61	0.66	11.8827	11.3501	FALSE	1.6957
152080	0.96	0.96	5.9973	5.9973	FALSE	-0.9228
152080	0.96	0.96	5.9973	5.9973	FALSE	-0.9228
152083	0.72	0.71	10.6686	10.7865	FALSE	-0.1176
152083	0.74	0.72	10.4266	10.6686	FALSE	0.6800
152085	0.70	0.71	10.9024	10.7865	FALSE	-0.9785
152085	0.69	0.71	11.0166	10.7865	FALSE	-0.2440
152087	0.73	0.72	10.5487	10.6686	FALSE	-0.1056
152087	0.72	0.73	10.6686	10.5487	FALSE	-0.9507
152089	0.71	0.73	10.7865	10.5487	FALSE	-0.1929
152089	0.70	0.72	10.9024	10.6686	FALSE	-0.2195
152091	0.55	0.56	12.4974	12.3961	FALSE	-1.0890
152091	0.56	0.54	12.3961	12.5983	FALSE	0.4426
152098	0.80	0.77	9.6335	10.0446	FALSE	1.7613
152098	0.79	0.77	9.7743	10.0446	FALSE	0.8557
153563	0.85	0.86	8.8543	8.6787	FALSE	-0.5743
153563	0.85	0.86	8.8543	8.6787	FALSE	-0.5743
153565	0.75	0.79	10.3020	9.7743	FALSE	1.6800
153565	0.73	0.79	10.5487	9.7743	TRUE	3.2668
153567	0.93	0.93	7.0968	7.0968	FALSE	-0.9119
153567	0.93	0.93	7.0968	7.0968	FALSE	-0.9119

Table G-22. 2010–11 KCCT: Rescore Analysis—Reading Grade 7

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
95512	4	2.172	2.015	0.862	0.719	-0.183	No
95512	4	2.189	2.150	0.799	0.764	-0.049	No
95512	4	2.005	1.827	0.909	0.829	-0.196	No
95512	4	2.205	2.215	0.904	0.804	0.011	No

Figure G-13. 2010–11 KCCT: Delta Plot—Reading Grade 8

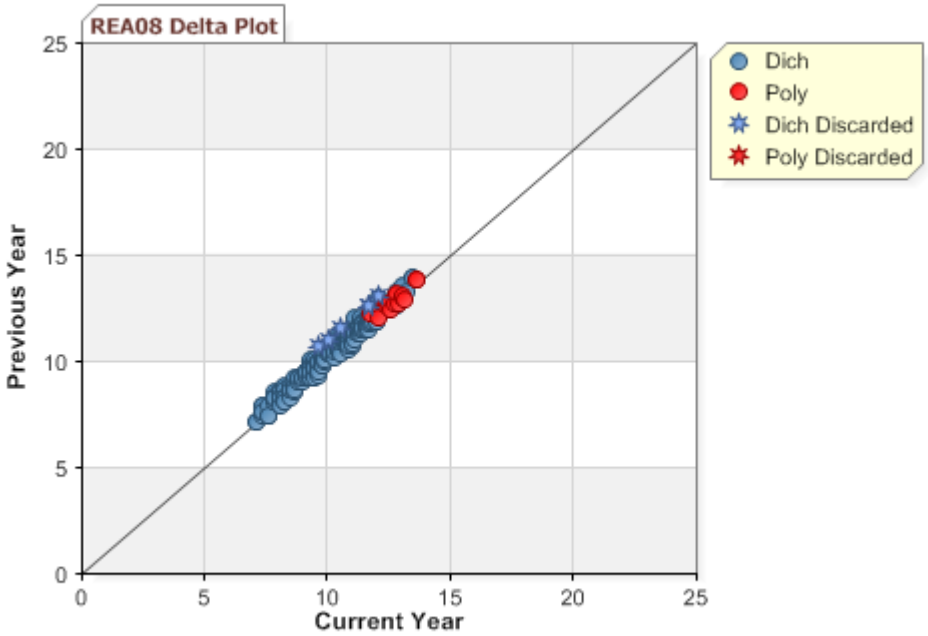


Table G-23. 2010–11 KCCT: Delta Analysis—Reading Grade 8

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
51755	0.74	0.74	10.4266	10.4266	FALSE	-0.0282
51755	0.72	0.77	10.6686	10.0446	FALSE	1.3927
51756	0.78	0.80	9.9112	9.6335	FALSE	-0.6727
51756	0.79	0.82	9.7743	9.3385	FALSE	0.3175
51757	0.71	0.71	10.7865	10.7865	FALSE	0.0072
51757	0.70	0.74	10.9024	10.4266	FALSE	0.4537
51758	0.64	0.69	11.5662	11.0166	FALSE	0.8443
51758	0.66	0.71	11.3501	10.7865	FALSE	0.9528
51759	0.69	0.72	11.0166	10.6686	FALSE	-0.3473
51759	0.71	0.73	10.7865	10.5487	FALSE	-1.0059
51760	0.70	0.71	10.9024	10.7865	FALSE	-0.6978
51760	0.72	0.75	10.6686	10.3020	FALSE	-0.1980
51763	0.86	0.86	8.6787	8.6787	FALSE	-0.2002
51763	0.86	0.86	8.6787	8.6787	FALSE	-0.2002
51764	0.91	0.92	7.6370	7.3797	FALSE	-0.5753
51764	0.92	0.91	7.3797	7.6370	FALSE	1.2616
51765	0.92	0.92	7.3797	7.3797	FALSE	-0.3280
51765	0.92	0.91	7.3797	7.6370	FALSE	1.2616
51766	0.75	0.75	10.3020	10.3020	FALSE	-0.0405
51766	0.73	0.75	10.5487	10.3020	FALSE	-0.9270
51767	0.91	0.92	7.6370	7.3797	FALSE	-0.5753
51767	0.92	0.91	7.3797	7.6370	FALSE	1.2616
58098	0.83	0.85	9.1833	8.8543	FALSE	-0.2837

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
58098	0.83	0.84	9.1833	9.0222	FALSE	-1.1464
58101	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
58101	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
58103	0.66	0.68	11.3501	11.1292	FALSE	-1.1650
58103	0.66	0.67	11.3501	11.2403	FALSE	-0.6158
58104	0.82	0.82	9.3385	9.3385	FALSE	-0.1353
58104	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
58159	0.41	0.45	13.9102	13.5026	FALSE	-0.2639
58159	0.41	0.45	13.9102	13.5026	FALSE	-0.2639
58166	0.70	0.71	10.9024	10.7865	FALSE	-0.6978
58166	0.70	0.70	10.9024	10.9024	FALSE	0.0186
58168	0.81	0.83	9.4884	9.1833	FALSE	-0.4620
58171	0.74	0.75	10.4266	10.3020	FALSE	-0.7980
58171	0.75	0.75	10.3020	10.3020	FALSE	-0.0405
58173	0.62	0.64	11.7781	11.5662	FALSE	-1.2047
58176	1.69	1.76	13.7820	13.6039	FALSE	-0.7988
58176	1.68	1.76	13.8076	13.6039	FALSE	-0.9543
58179	0.66	0.68	11.3501	11.1292	FALSE	-1.1650
58181	0.78	0.80	9.9112	9.6335	FALSE	-0.6727
58184	0.53	0.57	12.6989	12.2945	FALSE	-0.1640
58187	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
58188	2.39	2.35	12.0125	12.1155	FALSE	0.7645
58220	0.88	0.90	8.3001	7.8738	FALSE	0.4037
58220	0.88	0.89	8.3001	8.0939	FALSE	-0.9562
58226	0.81	0.80	9.4884	9.6335	FALSE	0.7760
58226	0.82	0.80	9.3385	9.6335	FALSE	1.6873
58235	0.79	0.82	9.7743	9.3385	FALSE	0.3175
58235	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
58239	0.61	0.65	11.8827	11.4587	FALSE	0.0373
58239	0.62	0.65	11.7781	11.4587	FALSE	-0.5990
58259	0.75	0.78	10.3020	9.9112	FALSE	-0.0123
58259	0.74	0.78	10.4266	9.9112	FALSE	0.7452
58262	0.87	0.87	8.4944	8.4944	FALSE	-0.2183
58262	0.87	0.89	8.4944	8.0939	FALSE	0.2257
58264	0.65	0.65	11.4587	11.4587	FALSE	0.0733
58264	0.64	0.65	11.5662	11.4587	FALSE	-0.5800
58268	0.86	0.87	8.6787	8.4944	FALSE	-1.1287
58268	0.87	0.87	8.4944	8.4944	FALSE	-0.2183
58274	0.81	0.80	9.4884	9.6335	FALSE	0.7760
58274	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
58278	0.83	0.85	9.1833	8.8543	FALSE	-0.2837
58278	0.83	0.85	9.1833	8.8543	FALSE	-0.2837
58281	0.63	0.65	11.6726	11.4587	FALSE	-1.2272
58281	0.65	0.64	11.4587	11.5662	FALSE	0.7372
58346	0.89	0.89	8.0939	8.0939	FALSE	-0.2577
58346	0.88	0.89	8.3001	8.0939	FALSE	-0.9562
58348	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
58348	0.79	0.81	9.7743	9.4884	FALSE	-0.6086
58349	0.71	0.71	10.7865	10.7865	FALSE	0.0072
58349	0.70	0.71	10.9024	10.7865	FALSE	-0.6978

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
58351	0.74	0.75	10.4266	10.3020	FALSE	-0.7980
58351	0.74	0.76	10.4266	10.1748	FALSE	-0.8833
58353	0.70	0.70	10.9024	10.9024	FALSE	0.0186
58353	0.71	0.69	10.7865	11.0166	FALSE	1.4292
58356	0.73	0.74	10.5487	10.4266	FALSE	-0.7709
58356	0.73	0.74	10.5487	10.4266	FALSE	-0.7709
58380	0.65	0.68	11.4587	11.1292	FALSE	-0.5048
58380	0.67	0.67	11.2403	11.2403	FALSE	0.0518
58381	0.78	0.82	9.9112	9.3385	FALSE	1.1500
58381	0.79	0.80	9.7743	9.6335	FALSE	-0.9624
58383	0.83	0.84	9.1833	9.0222	FALSE	-1.1464
58383	0.84	0.84	9.0222	9.0222	FALSE	-0.1664
58434	0.88	0.88	8.3001	8.3001	FALSE	-0.2375
58434	0.88	0.88	8.3001	8.3001	FALSE	-0.2375
58435	0.88	0.90	8.3001	7.8738	FALSE	0.4037
58435	0.88	0.90	8.3001	7.8738	FALSE	0.4037
58445	0.64	0.67	11.5662	11.2403	FALSE	-0.5382
58445	0.65	0.66	11.4587	11.3501	FALSE	-0.5976
58454	0.72	0.75	10.6686	10.3020	FALSE	-0.1980
58454	0.71	0.76	10.7865	10.1748	FALSE	1.3047
58473	0.88	0.90	8.3001	7.8738	FALSE	0.4037
58473	0.89	0.90	8.0939	7.8738	FALSE	-0.8499
58477	0.93	0.93	7.0968	7.0968	FALSE	-0.3558
58477	0.93	0.93	7.0968	7.0968	FALSE	-0.3558
58492	0.84	0.85	9.0222	8.8543	FALSE	-1.2039
58492	0.86	0.86	8.6787	8.6787	FALSE	-0.2002
58496	0.81	0.83	9.4884	9.1833	FALSE	-0.4620
58496	0.81	0.83	9.4884	9.1833	FALSE	-0.4620
58499	0.85	0.86	8.8543	8.6787	FALSE	-1.2000
58499	0.86	0.87	8.6787	8.4944	FALSE	-1.1287
58502	0.59	0.62	12.0898	11.7781	FALSE	-0.6767
58502	0.58	0.61	12.1924	11.8827	FALSE	-0.6994
58505	0.57	0.61	12.2945	11.8827	FALSE	-0.0787
58505	0.58	0.60	12.1924	11.9866	FALSE	-1.1262
58707	0.86	0.87	8.6787	8.4944	FALSE	-1.1287
58707	0.87	0.86	8.4944	8.6787	FALSE	0.9204
58713	0.82	0.82	9.3385	9.3385	FALSE	-0.1353
58713	0.81	0.81	9.4884	9.4884	FALSE	-0.1206
58720	0.69	0.75	11.0166	10.3020	FALSE	1.9178
58720	0.67	0.74	11.2403	10.4266	FALSE	2.5086
58731	0.88	0.88	8.3001	8.3001	FALSE	-0.2375
58731	0.89	0.88	8.0939	8.3001	FALSE	1.0161
58740	0.89	0.88	8.0939	8.3001	FALSE	1.0161
58740	0.89	0.89	8.0939	8.0939	FALSE	-0.2577
58746	0.81	0.82	9.4884	9.3385	FALSE	-1.0466
58746	0.83	0.82	9.1833	9.3385	FALSE	0.8084
58748	0.67	0.67	11.2403	11.2403	FALSE	0.0518
58748	0.67	0.66	11.2403	11.3501	FALSE	0.7303
58752	2.13	2.09	12.6738	12.7743	FALSE	0.8139
58752	2.11	2.03	12.7241	12.9248	FALSE	1.4382

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
58755	0.86	0.89	8.6787	8.0939	FALSE	1.3463
58755	0.87	0.89	8.4944	8.0939	FALSE	0.2257
58756	0.83	0.86	9.1833	8.6787	FALSE	0.8010
58756	0.84	0.85	9.0222	8.8543	FALSE	-1.2039
58766	0.82	0.83	9.3385	9.1833	FALSE	-1.0943
58766	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
58783	0.61	0.62	11.8827	11.7781	FALSE	-0.5316
58783	0.61	0.60	11.8827	11.9866	FALSE	0.7569
58786	0.62	0.63	11.7781	11.6726	FALSE	-0.5471
58786	0.61	0.61	11.8827	11.8827	FALSE	0.1150
58790	0.64	0.65	11.5662	11.4587	FALSE	-0.5800
58790	0.65	0.65	11.4587	11.4587	FALSE	0.0733
58792	0.47	0.48	13.3011	13.2006	FALSE	-0.3662
58792	0.45	0.49	13.5026	13.1003	FALSE	-0.2557
58896	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
58896	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
58905	0.71	0.75	10.7865	10.3020	FALSE	0.5185
58905	0.69	0.77	11.0166	10.0446	TRUE	3.5085
86678	0.70	0.69	10.9024	11.0166	FALSE	0.7242
86678	0.66	0.71	11.3501	10.7865	FALSE	0.9528
86678	0.69	0.68	11.0166	11.1292	FALSE	0.7256
86678	0.69	0.69	11.0166	11.0166	FALSE	0.0298
86686	0.79	0.79	9.7743	9.7743	FALSE	-0.0924
86686	0.77	0.82	10.0446	9.3385	FALSE	1.9610
86686	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
86686	0.81	0.80	9.4884	9.6335	FALSE	0.7760
86698	0.88	0.87	8.3001	8.4944	FALSE	0.9636
86698	0.87	0.90	8.4944	7.8738	FALSE	1.5857
86698	0.89	0.90	8.0939	7.8738	FALSE	-0.8499
86698	0.90	0.89	7.8738	8.0939	FALSE	1.0805
86711	0.81	0.83	9.4884	9.1833	FALSE	-0.4620
86711	0.83	0.83	9.1833	9.1833	FALSE	-0.1506
86713	0.63	0.69	11.6726	11.0166	FALSE	1.4914
86713	0.60	0.68	11.9866	11.1292	FALSE	2.7051
94853	0.69	0.74	11.0166	10.4266	FALSE	1.1481
94853	0.71	0.74	10.7865	10.4266	FALSE	-0.2513
94853	0.70	0.73	10.9024	10.5487	FALSE	-0.3010
94853	0.68	0.73	11.1292	10.5487	FALSE	1.0782
94858	0.62	0.65	11.7781	11.4587	FALSE	-0.5990
94858	0.63	0.64	11.6726	11.5662	FALSE	-0.5632
94858	0.61	0.66	11.8827	11.3501	FALSE	0.7082
94858	0.63	0.67	11.6726	11.2403	FALSE	0.1089
94862	0.55	0.57	12.4974	12.2945	FALSE	-1.0779
94862	0.53	0.59	12.6989	12.0898	FALSE	1.1007
94862	0.56	0.56	12.3961	12.3961	FALSE	0.1655
94862	0.56	0.55	12.3961	12.4974	FALSE	0.7910
94871	0.72	0.70	10.6686	10.9024	FALSE	1.4400
94871	0.71	0.72	10.7865	10.6686	FALSE	-0.7209
94871	0.71	0.73	10.7865	10.5487	FALSE	-1.0059
94871	0.69	0.72	11.0166	10.6686	FALSE	-0.3473

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94875	0.72	0.69	10.6686	11.0166	FALSE	2.1456
94875	0.71	0.70	10.7865	10.9024	FALSE	0.7235
94875	0.70	0.71	10.9024	10.7865	FALSE	-0.6978
94875	0.72	0.70	10.6686	10.9024	FALSE	1.4400
94878	0.75	0.73	10.3020	10.5487	FALSE	1.4839
94878	0.75	0.76	10.3020	10.1748	FALSE	-0.8268
94878	0.73	0.76	10.5487	10.1748	FALSE	-0.1407
94878	0.75	0.76	10.3020	10.1748	FALSE	-0.8268
94880	0.61	0.60	11.8827	11.9866	FALSE	0.7569
94880	0.59	0.63	12.0898	11.6726	FALSE	-0.0249
94880	0.62	0.62	11.7781	11.7781	FALSE	0.1047
94880	0.61	0.63	11.8827	11.6726	FALSE	-1.1834
94910	0.68	0.71	11.1292	10.7865	FALSE	-0.3907
94910	0.70	0.73	10.9024	10.5487	FALSE	-0.3010
94933	0.90	0.92	7.8738	7.3797	FALSE	0.8647
94933	0.90	0.91	7.8738	7.6370	FALSE	-0.7249
94933	0.91	0.92	7.6370	7.3797	FALSE	-0.5753
94933	0.90	0.92	7.8738	7.3797	FALSE	0.8647
94937	0.66	0.67	11.3501	11.2403	FALSE	-0.6158
94937	0.65	0.67	11.4587	11.2403	FALSE	-1.1916
94937	0.66	0.67	11.3501	11.2403	FALSE	-0.6158
94937	0.66	0.67	11.3501	11.2403	FALSE	-0.6158
94940	0.76	0.79	10.1748	9.7743	FALSE	0.0600
94940	0.77	0.79	10.0446	9.7743	FALSE	-0.7316
94940	0.78	0.80	9.9112	9.6335	FALSE	-0.6727
94940	0.78	0.79	9.9112	9.7743	FALSE	-0.9249
94946	0.82	0.83	9.3385	9.1833	FALSE	-1.0943
94946	0.83	0.82	9.1833	9.3385	FALSE	0.8084
94946	0.82	0.83	9.3385	9.1833	FALSE	-1.0943
94946	0.83	0.81	9.1833	9.4884	FALSE	1.7345
94993	0.70	0.71	10.9024	10.7865	FALSE	-0.6978
94993	0.69	0.70	11.0166	10.9024	FALSE	-0.6758
95004	0.65	0.67	11.4587	11.2403	FALSE	-1.1916
95004	0.65	0.67	11.4587	11.2403	FALSE	-1.1916
95008	0.73	0.75	10.5487	10.3020	FALSE	-0.9270
95008	0.73	0.74	10.5487	10.4266	FALSE	-0.7709
95013	0.59	0.60	12.0898	11.9866	FALSE	-0.5023
95013	0.59	0.60	12.0898	11.9866	FALSE	-0.5023
95016	0.52	0.54	12.7994	12.5983	FALSE	-1.0375
95016	0.53	0.53	12.6989	12.6989	FALSE	0.1953
95019	2.11	2.25	12.7241	12.3708	FALSE	-0.4824
95019	2.12	2.21	12.6989	12.4721	FALSE	-1.2063
95032	0.85	0.87	8.8543	8.4944	FALSE	-0.0613
95032	0.86	0.86	8.6787	8.6787	FALSE	-0.2002
95049	0.56	0.57	12.3961	12.2945	FALSE	-0.4624
95049	0.54	0.57	12.5983	12.2945	FALSE	-0.7761
95116	0.53	0.52	12.6989	12.7994	FALSE	0.8161
95116	0.54	0.52	12.5983	12.7994	FALSE	1.4281
95118	0.65	0.67	11.4587	11.2403	FALSE	-1.1916
95118	0.65	0.67	11.4587	11.2403	FALSE	-1.1916

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95127	0.78	0.80	9.9112	9.6335	FALSE	-0.6727
95127	0.79	0.79	9.7743	9.7743	FALSE	-0.0924
95134	0.75	0.75	10.3020	10.3020	FALSE	-0.0405
95134	0.75	0.77	10.3020	10.0446	FALSE	-0.8364
95597	0.78	0.78	9.9112	9.9112	FALSE	-0.0790
95597	0.77	0.78	10.0446	9.9112	FALSE	-0.8900
95598	0.74	0.76	10.4266	10.1748	FALSE	-0.8833
95598	0.72	0.76	10.6686	10.1748	FALSE	0.5883
95600	0.51	0.53	12.8997	12.6989	FALSE	-1.0257
95600	0.50	0.52	13.0000	12.7994	FALSE	-1.0147
95606	0.65	0.63	11.4587	11.6726	FALSE	1.3948
95606	0.60	0.66	11.9866	11.3501	FALSE	1.3399
95607	0.82	0.81	9.3385	9.4884	FALSE	0.7908
95607	0.81	0.83	9.4884	9.1833	FALSE	-0.4620
95609	0.71	0.70	10.7865	10.9024	FALSE	0.7235
95609	0.67	0.72	11.2403	10.6686	FALSE	1.0132
95610	0.76	0.75	10.1748	10.3020	FALSE	0.7333
95610	0.72	0.80	10.6686	9.6335	TRUE	3.9328
95612	1.99	1.96	13.0251	13.1003	FALSE	0.6921
95612	1.93	2.07	13.1755	12.8245	FALSE	-0.5407
95617	0.74	0.73	10.4266	10.5487	FALSE	0.7264
95617	0.73	0.76	10.5487	10.1748	FALSE	-0.1407
95621	0.73	0.70	10.5487	10.9024	FALSE	2.1690
95621	0.70	0.73	10.9024	10.5487	FALSE	-0.3010
95622	0.68	0.68	11.1292	11.1292	FALSE	0.0409
95622	0.64	0.73	11.5662	10.5487	TRUE	3.7351
95652	0.80	0.82	9.6335	9.3385	FALSE	-0.5387
95659	0.63	0.65	11.6726	11.4587	FALSE	-1.2272
95662	0.74	0.77	10.4266	10.0446	FALSE	-0.0789
95664	2.32	2.48	12.1924	11.7781	FALSE	-0.0528
95670	0.75	0.77	10.3020	10.0446	FALSE	-0.8364
95672	0.59	0.59	12.0898	12.0898	FALSE	0.1354
95673	0.85	0.86	8.8543	8.6787	FALSE	-1.2000
95717	0.77	0.81	10.0446	9.4884	FALSE	1.0350
95717	0.78	0.80	9.9112	9.6335	FALSE	-0.6727
95719	0.86	0.87	8.6787	8.4944	FALSE	-1.1287
95719	0.86	0.88	8.6787	8.3001	FALSE	0.0724
95735	2.00	1.97	13.0000	13.0752	FALSE	0.6896
95735	2.05	1.95	12.8746	13.1254	FALSE	1.7617
95741	0.50	0.59	13.0000	12.0898	FALSE	2.9314
95741	0.49	0.59	13.1003	12.0898	TRUE	3.5412
95745	0.67	0.70	11.2403	10.9024	FALSE	-0.4312
95745	0.68	0.68	11.1292	11.1292	FALSE	0.0409
95754	0.80	0.80	9.6335	9.6335	FALSE	-0.1063
95754	0.80	0.81	9.6335	9.4884	FALSE	-1.0028
95762	0.74	0.75	10.4266	10.3020	FALSE	-0.7980
95762	0.73	0.75	10.5487	10.3020	FALSE	-0.9270
95769	0.54	0.63	12.5983	11.6726	TRUE	3.0667
95769	0.54	0.63	12.5983	11.6726	TRUE	3.0667
95774	0.85	0.88	8.8543	8.3001	FALSE	1.1398

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
95774	0.86	0.86	8.6787	8.6787	FALSE	-0.2002
153706	0.47	0.50	13.3011	13.0000	FALSE	-0.8618
153706	0.47	0.52	13.3011	12.7994	FALSE	0.3778
153709	2.16	2.23	12.5983	12.4215	FALSE	-0.9070
153709	2.22	2.17	12.4468	12.5731	FALSE	0.9508

Table G-24. 2010–11 KCCT: Rescore Analysis—Reading Grade 8

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
95612	4	2.187	2.148	0.809	0.767	-0.049	No
95612	4	2.055	1.860	0.856	0.889	-0.228	No
95612	4	1.710	1.535	1.211	1.109	-0.145	No
95612	4	2.068	1.937	0.945	0.993	-0.139	No

Figure G-14. 2010–11 KCCT: Delta Plot—Reading Grade 10

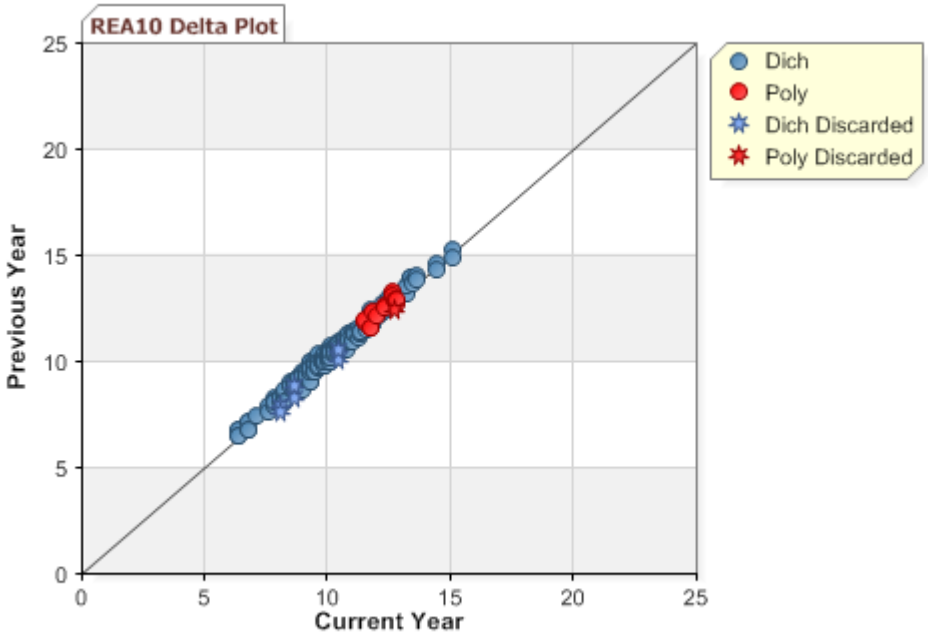


Table G-25. 2010–11 KCCT: Delta Analysis—Reading Grade 10

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
48987	0.75	0.78	10.3020	9.9112	FALSE	0.6465
48987	0.78	0.78	9.9112	9.9112	FALSE	0.0569
48988	0.74	0.77	10.4266	10.0446	FALSE	0.5691
48988	0.78	0.77	9.9112	10.0446	FALSE	1.1578
48989	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
48989	0.84	0.82	9.0222	9.3385	FALSE	2.6347
48990	0.80	0.80	9.6335	9.6335	FALSE	0.0464
48990	0.75	0.80	10.3020	9.6335	FALSE	2.9388
48993	0.68	0.72	11.1292	10.6686	FALSE	1.1911
48993	0.72	0.72	10.6686	10.6686	FALSE	0.0855
48995	0.54	0.55	12.5983	12.4974	FALSE	-0.6746
48995	0.50	0.55	13.0000	12.4974	FALSE	1.4677
48996	0.52	0.55	12.7994	12.4974	FALSE	-0.1806
48996	0.52	0.55	12.7994	12.4974	FALSE	-0.1806
49003	0.76	0.76	10.1748	10.1748	FALSE	0.0668
49003	0.76	0.76	10.1748	10.1748	FALSE	0.0668
49007	0.78	0.81	9.9112	9.4884	FALSE	0.9254
49007	0.79	0.81	9.7743	9.4884	FALSE	-0.1996
49027	0.77	0.78	10.0446	9.9112	FALSE	-1.0391
49028	0.69	0.69	11.0166	11.0166	FALSE	0.0986
49029	0.75	0.76	10.3020	10.1748	FALSE	-0.9787
49030	0.61	0.61	11.8827	11.8827	FALSE	0.1313
49032	0.85	0.87	8.8543	8.4944	FALSE	0.4454
49033	0.66	0.68	11.3501	11.1292	FALSE	-0.7952
49034	0.56	0.57	12.3961	12.2945	FALSE	-0.6881
49034	0.57	0.57	12.2945	12.2945	FALSE	0.1468
49035	0.78	0.79	9.9112	9.7743	FALSE	-1.0732
49035	0.77	0.79	10.0446	9.7743	FALSE	-0.3386
49036	0.74	0.76	10.4266	10.1748	FALSE	-0.5054
49036	0.73	0.76	10.5487	10.1748	FALSE	0.4980
49037	0.77	0.78	10.0446	9.9112	FALSE	-1.0391
49037	0.78	0.78	9.9112	9.9112	FALSE	0.0569
49038	0.43	0.45	13.7055	13.5026	FALSE	-1.0335
49038	0.44	0.45	13.6039	13.5026	FALSE	-0.6393
49039	0.84	0.86	9.0222	8.6787	FALSE	0.3038
49039	0.85	0.86	8.8543	8.6787	FALSE	-1.0757
50635	0.53	0.55	12.6989	12.4974	FALSE	-1.0061
50635	0.54	0.55	12.5983	12.4974	FALSE	-0.6746
50636	0.81	0.81	9.4884	9.4884	FALSE	0.0409
50636	0.80	0.81	9.6335	9.4884	FALSE	-1.1513
50637	0.68	0.70	11.1292	10.9024	FALSE	-0.7385
50637	0.67	0.70	11.2403	10.9024	FALSE	0.1747
50638	0.75	0.76	10.3020	10.1748	FALSE	-0.9787
50638	0.76	0.76	10.1748	10.1748	FALSE	0.0668
50639	0.84	0.85	9.0222	8.8543	FALSE	-1.1452
50639	0.83	0.85	9.1833	8.8543	FALSE	0.1791
50642	0.40	0.44	14.0134	13.6039	FALSE	0.6607
50642	0.42	0.44	13.8076	13.6039	FALSE	-1.0303
50643	0.73	0.76	10.5487	10.1748	FALSE	0.4980

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50643	0.78	0.76	9.9112	10.1748	FALSE	2.2324
50644	0.75	0.74	10.3020	10.4266	FALSE	1.0999
50644	0.72	0.74	10.6686	10.4266	FALSE	-0.5956
50645	0.35	0.36	14.5413	14.4338	FALSE	-0.6553
50645	0.37	0.36	14.3274	14.4338	FALSE	1.1020
50646	0.88	0.86	8.3001	8.6787	TRUE	3.1217
50646	0.85	0.86	8.8543	8.6787	TRUE	-1.0757
50647	0.54	0.53	12.5983	12.6989	FALSE	0.9891
50647	0.54	0.53	12.5983	12.6989	FALSE	0.9891
50648	0.75	0.78	10.3020	9.9112	FALSE	0.6465
50648	0.79	0.78	9.7743	9.9112	FALSE	1.1818
50694	0.69	0.70	11.0166	10.9024	FALSE	-0.8440
50694	0.67	0.70	11.2403	10.9024	FALSE	0.1747
50695	0.89	0.90	8.0939	7.8738	FALSE	-0.6793
50695	0.89	0.90	8.0939	7.8738	FALSE	-0.6793
50697	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
50697	0.84	0.82	9.0222	9.3385	FALSE	2.6347
50698	0.78	0.80	9.9112	9.6335	FALSE	-0.2723
50698	0.79	0.80	9.7743	9.6335	FALSE	-1.1105
50699	0.78	0.79	9.9112	9.7743	FALSE	-1.0732
50699	0.77	0.79	10.0446	9.7743	FALSE	-0.3386
50700	0.65	0.64	11.4587	11.5662	FALSE	1.0022
50700	0.62	0.64	11.7781	11.5662	FALSE	-0.8859
50701	0.59	0.59	12.0898	12.0898	FALSE	0.1391
50701	0.57	0.59	12.2945	12.0898	FALSE	-0.9651
50704	0.32	0.30	14.8708	15.0976	FALSE	2.1162
50704	0.29	0.30	15.2135	15.0976	FALSE	-0.7000
50705	0.79	0.81	9.7743	9.4884	FALSE	-0.1996
50705	0.78	0.81	9.9112	9.4884	FALSE	0.9254
50706	0.60	0.63	11.9866	11.6726	FALSE	-0.0509
50706	0.62	0.63	11.7781	11.6726	FALSE	-0.7434
50707	0.74	0.75	10.4266	10.3020	FALSE	-0.9520
50707	0.73	0.75	10.5487	10.3020	FALSE	-0.5523
50708	0.73	0.74	10.5487	10.4266	FALSE	-0.9272
50708	0.73	0.74	10.5487	10.4266	FALSE	-0.9272
50709	0.54	0.55	12.5983	12.4974	FALSE	-0.6746
50709	0.51	0.55	12.8997	12.4974	FALSE	0.6438
50723	0.94	0.94	6.7809	6.7809	FALSE	-0.0613
50723	0.94	0.94	6.7809	6.7809	FALSE	-0.0613
50724	0.70	0.70	10.9024	10.9024	FALSE	0.0943
50724	0.70	0.70	10.9024	10.9024	FALSE	0.0943
50725	0.65	0.66	11.4587	11.3501	FALSE	-0.7809
50725	0.66	0.66	11.3501	11.3501	FALSE	0.1112
50726	0.79	0.80	9.7743	9.6335	FALSE	-1.1105
50726	0.80	0.80	9.6335	9.6335	FALSE	0.0464
50727	0.66	0.66	11.3501	11.3501	FALSE	0.1112
50727	0.67	0.66	11.2403	11.3501	FALSE	1.0133
50728	0.69	0.70	11.0166	10.9024	FALSE	-0.8440
50728	0.69	0.70	11.0166	10.9024	FALSE	-0.8440
50729	0.90	0.91	7.8738	7.6370	FALSE	-0.5330

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50729	0.91	0.91	7.6370	7.6370	FALSE	-0.0290
50730	1.88	2.15	13.3011	12.6235	FALSE	2.9007
50730	1.97	2.15	13.0752	12.6235	FALSE	1.0448
50733	0.69	0.70	11.0166	10.9024	FALSE	-0.8440
50733	0.68	0.70	11.1292	10.9024	FALSE	-0.7385
50751	0.49	0.53	13.1003	12.6989	FALSE	0.6279
50751	0.48	0.53	13.2006	12.6989	FALSE	1.4523
50753	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
50753	0.80	0.82	9.6335	9.3385	FALSE	-0.1193
50754	0.76	0.78	10.1748	9.9112	FALSE	-0.3991
50754	0.76	0.78	10.1748	9.9112	FALSE	-0.3991
50757	0.74	0.76	10.4266	10.1748	FALSE	-0.5054
50757	0.74	0.76	10.4266	10.1748	FALSE	-0.5054
50759	0.81	0.83	9.4884	9.1833	FALSE	-0.0305
50759	0.82	0.83	9.3385	9.1833	FALSE	-1.2458
50761	0.86	0.88	8.6787	8.3001	FALSE	0.6075
50761	0.87	0.88	8.4944	8.3001	FALSE	-0.9067
50771	0.59	0.61	12.0898	11.8827	FALSE	-0.9374
50771	0.59	0.61	12.0898	11.8827	FALSE	-0.9374
50773	0.74	0.76	10.4266	10.1748	FALSE	-0.5054
50773	0.72	0.76	10.6686	10.1748	FALSE	1.4831
50774	0.85	0.86	8.8543	8.6787	FALSE	-1.0757
50774	0.85	0.86	8.8543	8.6787	FALSE	-1.0757
50776	0.71	0.74	10.7865	10.4266	FALSE	0.3726
50776	0.74	0.74	10.4266	10.4266	FALSE	0.0763
50777	0.83	0.83	9.1833	9.1833	FALSE	0.0294
50777	0.82	0.83	9.3385	9.1833	FALSE	-1.2458
50779	0.73	0.74	10.5487	10.4266	FALSE	-0.9272
50779	0.73	0.74	10.5487	10.4266	FALSE	-0.9272
50781	0.80	0.81	9.6335	9.4884	FALSE	-1.1513
50781	0.79	0.81	9.7743	9.4884	FALSE	-0.1996
50791	0.84	0.86	9.0222	8.6787	FALSE	0.3038
50791	0.85	0.86	8.8543	8.6787	FALSE	-1.0757
50793	0.91	0.89	7.6370	8.0939	TRUE	3.7424
50793	0.90	0.89	7.8738	8.0939	TRUE	1.7966
50794	0.86	0.86	8.6787	8.6787	FALSE	0.0103
50794	0.87	0.86	8.4944	8.6787	FALSE	1.5245
50796	0.88	0.89	8.3001	8.0939	FALSE	-0.8021
50796	0.89	0.89	8.0939	8.0939	FALSE	-0.0117
50798	0.81	0.83	9.4884	9.1833	FALSE	-0.0305
50798	0.81	0.83	9.4884	9.1833	FALSE	-0.0305
50799	0.67	0.66	11.2403	11.3501	FALSE	1.0133
50799	0.66	0.66	11.3501	11.3501	FALSE	0.1112
50800	2.43	2.58	11.9088	11.5126	FALSE	0.6302
50800	2.44	2.58	11.8827	11.5126	FALSE	0.4162
50802	0.86	0.84	8.6787	9.0222	FALSE	2.8452
50802	0.82	0.84	9.3385	9.0222	FALSE	0.0684
50804	0.57	0.57	12.2945	12.2945	FALSE	0.1468
50804	0.53	0.57	12.6989	12.2945	FALSE	0.6683
50805	0.77	0.74	10.0446	10.4266	TRUE	3.2150

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50805	0.73	0.74	10.5487	10.4266	TRUE	-0.9272
50806	0.68	0.67	11.1292	11.2403	FALSE	1.0202
50806	0.64	0.67	11.5662	11.2403	FALSE	0.0623
50807	0.79	0.78	9.7743	9.9112	FALSE	1.1818
50807	0.76	0.78	10.1748	9.9112	FALSE	-0.3991
50813	0.70	0.69	10.9024	11.0166	FALSE	1.0369
50813	0.66	0.69	11.3501	11.0166	FALSE	0.1343
50814	0.87	0.86	8.4944	8.6787	FALSE	1.5245
50814	0.84	0.86	9.0222	8.6787	FALSE	0.3038
50816	0.81	0.81	9.4884	9.4884	FALSE	0.0409
50816	0.81	0.81	9.4884	9.4884	FALSE	0.0409
50822	0.83	0.85	9.1833	8.8543	FALSE	0.1791
50822	0.83	0.85	9.1833	8.8543	FALSE	0.1791
50839	0.83	0.84	9.1833	9.0222	FALSE	-1.2068
50839	0.83	0.84	9.1833	9.0222	FALSE	-1.2068
50843	0.60	0.62	11.9866	11.7781	FALSE	-0.9217
50843	0.61	0.62	11.8827	11.7781	FALSE	-0.7325
50846	0.59	0.62	12.0898	11.7781	FALSE	-0.0737
50846	0.58	0.62	12.1924	11.7781	FALSE	0.7694
50849	0.73	0.75	10.5487	10.3020	FALSE	-0.5523
50849	0.73	0.75	10.5487	10.3020	FALSE	-0.5523
50851	2.06	2.08	12.8496	12.7994	FALSE	-0.2464
50851	2.12	2.08	12.6989	12.7994	FALSE	0.9913
50857	0.88	0.89	8.3001	8.0939	FALSE	-0.8021
50857	0.88	0.89	8.3001	8.0939	FALSE	-0.8021
50858	0.94	0.95	6.7809	6.4206	FALSE	0.5277
50858	0.94	0.95	6.7809	6.4206	FALSE	0.5277
50859	0.76	0.77	10.1748	10.0446	FALSE	-1.0077
50859	0.76	0.77	10.1748	10.0446	FALSE	-1.0077
50860	0.81	0.84	9.4884	9.0222	FALSE	1.2998
50860	0.82	0.84	9.3385	9.0222	FALSE	0.0684
50861	0.85	0.87	8.8543	8.4944	FALSE	0.4454
50861	0.84	0.87	9.0222	8.4944	FALSE	1.8250
50862	0.75	0.77	10.3020	10.0446	FALSE	-0.4545
50862	0.75	0.77	10.3020	10.0446	FALSE	-0.4545
50863	0.75	0.77	10.3020	10.0446	FALSE	-0.4545
50863	0.75	0.77	10.3020	10.0446	FALSE	-0.4545
50864	2.20	2.27	12.4974	12.3199	FALSE	-1.1979
50864	2.17	2.27	12.5731	12.3199	FALSE	-0.5758
50866	0.88	0.90	8.3001	7.8738	FALSE	1.0146
50866	0.89	0.90	8.0939	7.8738	FALSE	-0.6793
50869	0.62	0.61	11.7781	11.8827	FALSE	0.9911
50869	0.61	0.61	11.8827	11.8827	FALSE	0.1313
50870	0.89	0.88	8.0939	8.3001	FALSE	1.6900
50870	0.88	0.88	8.3001	8.3001	FALSE	-0.0040
50873	0.56	0.62	12.3961	11.7781	FALSE	2.4431
50873	0.58	0.62	12.1924	11.7781	FALSE	0.7694
50875	0.61	0.62	11.8827	11.7781	FALSE	-0.7325
50875	0.60	0.62	11.9866	11.7781	FALSE	-0.9217
50880	0.80	0.82	9.6335	9.3385	FALSE	-0.1193

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50880	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
50882	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
50882	0.80	0.82	9.6335	9.3385	FALSE	-0.1193
50884	2.55	2.49	11.5929	11.7518	FALSE	1.4321
50884	2.57	2.49	11.5394	11.7518	FALSE	1.8714
50891	0.59	0.62	12.0898	11.7781	FALSE	-0.0737
50891	0.60	0.62	11.9866	11.7781	FALSE	-0.9217
50936	0.90	0.90	7.8738	7.8738	FALSE	-0.0200
50936	0.90	0.90	7.8738	7.8738	FALSE	-0.0200
74109	0.81	0.82	9.4884	9.3385	FALSE	-1.1962
74109	0.78	0.82	9.9112	9.3385	FALSE	2.1625
74110	0.95	0.95	6.4206	6.4206	FALSE	-0.0749
74110	0.95	0.95	6.4206	6.4206	FALSE	-0.0749
74111	0.89	0.90	8.0939	7.8738	FALSE	-0.6793
74111	0.89	0.90	8.0939	7.8738	FALSE	-0.6793
74112	0.82	0.84	9.3385	9.0222	FALSE	0.0684
74112	0.82	0.84	9.3385	9.0222	FALSE	0.0684
74113	0.85	0.86	8.8543	8.6787	FALSE	-1.0757
74113	0.84	0.86	9.0222	8.6787	FALSE	0.3038
74114	0.82	0.83	9.3385	9.1833	FALSE	-1.2458
74114	0.82	0.83	9.3385	9.1833	FALSE	-1.2458
92854	0.84	0.85	9.0222	8.8543	FALSE	-1.1452
92855	0.58	0.62	12.1924	11.7781	FALSE	0.7694
92856	0.78	0.80	9.9112	9.6335	FALSE	-0.2723
92857	0.93	0.94	7.0968	6.7809	FALSE	0.1494
92859	0.93	0.94	7.0968	6.7809	FALSE	0.1494
92860	0.92	0.93	7.3797	7.0968	FALSE	-0.1341
92861	2.28	2.44	12.2945	11.8827	FALSE	0.7443
92929	0.71	0.72	10.7865	10.6686	FALSE	-0.8827
92929	0.70	0.72	10.9024	10.6686	FALSE	-0.6725
92930	0.78	0.79	9.9112	9.7743	FALSE	-1.0732
92930	0.77	0.79	10.0446	9.7743	FALSE	-0.3386
92932	0.75	0.75	10.3020	10.3020	FALSE	0.0716
92932	0.75	0.75	10.3020	10.3020	FALSE	0.0716
92933	0.61	0.61	11.8827	11.8827	FALSE	0.1313
92933	0.62	0.61	11.7781	11.8827	FALSE	0.9911
92934	0.88	0.88	8.3001	8.3001	FALSE	-0.0040
92934	0.89	0.88	8.0939	8.3001	FALSE	1.6900
92940	0.84	0.85	9.0222	8.8543	FALSE	-1.1452
92940	0.84	0.85	9.0222	8.8543	FALSE	-1.1452
92942	0.79	0.82	9.7743	9.3385	FALSE	1.0375
92942	0.78	0.82	9.9112	9.3385	FALSE	2.1625
93195	0.78	0.78	9.9112	9.9112	FALSE	0.0569
93195	0.78	0.78	9.9112	9.9112	FALSE	0.0569
93278	0.66	0.68	11.3501	11.1292	FALSE	-0.7952
93278	0.66	0.68	11.3501	11.1292	FALSE	-0.7952
93280	0.57	0.60	12.2945	11.9866	FALSE	-0.1132
93280	0.58	0.60	12.1924	11.9866	FALSE	-0.9519
93281	0.48	0.48	13.2006	13.2006	FALSE	0.1810
93281	0.45	0.48	13.5026	13.2006	FALSE	-0.2072

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
93283	0.70	0.72	10.9024	10.6686	FALSE	-0.6725
93283	0.70	0.72	10.9024	10.6686	FALSE	-0.6725
93285	0.70	0.71	10.9024	10.7865	FALSE	-0.8627
93285	0.70	0.71	10.9024	10.7865	FALSE	-0.8627
93288	0.53	0.53	12.6989	12.6989	FALSE	0.1621
93288	0.53	0.53	12.6989	12.6989	FALSE	0.1621
93290	0.41	0.46	13.9102	13.4017	FALSE	1.4812
93290	0.41	0.46	13.9102	13.4017	FALSE	1.4812
110781	2.06	2.09	12.8496	12.7743	FALSE	-0.4536
110781	2.25	2.09	12.3708	12.7743	TRUE	3.4805
110802	2.36	2.40	12.0898	11.9866	FALSE	-0.7128
110821	0.51	0.52	12.8997	12.7994	FALSE	-0.6585
110821	0.52	0.52	12.7994	12.7994	FALSE	0.1659
110822	0.73	0.73	10.5487	10.5487	FALSE	0.0809
110822	0.72	0.73	10.6686	10.5487	FALSE	-0.9041
110823	0.62	0.64	11.7781	11.5662	FALSE	-0.8859
110823	0.62	0.64	11.7781	11.5662	FALSE	-0.8859
110824	0.71	0.71	10.7865	10.7865	FALSE	0.0899
110824	0.73	0.71	10.5487	10.7865	FALSE	2.0431
110825	0.78	0.80	9.9112	9.6335	FALSE	-0.2723
110825	0.79	0.80	9.7743	9.6335	FALSE	-1.1105
110826	0.77	0.79	10.0446	9.7743	FALSE	-0.3386
110826	0.78	0.79	9.9112	9.7743	FALSE	-1.0732
110827	0.70	0.72	10.9024	10.6686	FALSE	-0.6725
110827	0.69	0.72	11.0166	10.6686	FALSE	0.2658
110846	0.67	0.68	11.2403	11.1292	FALSE	-0.8104
110846	0.67	0.68	11.2403	11.1292	FALSE	-0.8104
110893	0.71	0.74	10.7865	10.4266	FALSE	0.3726
110893	0.70	0.74	10.9024	10.4266	FALSE	1.3251

Figure G-15. 2010–11 KCCT: Delta Plot—Science Grade 4

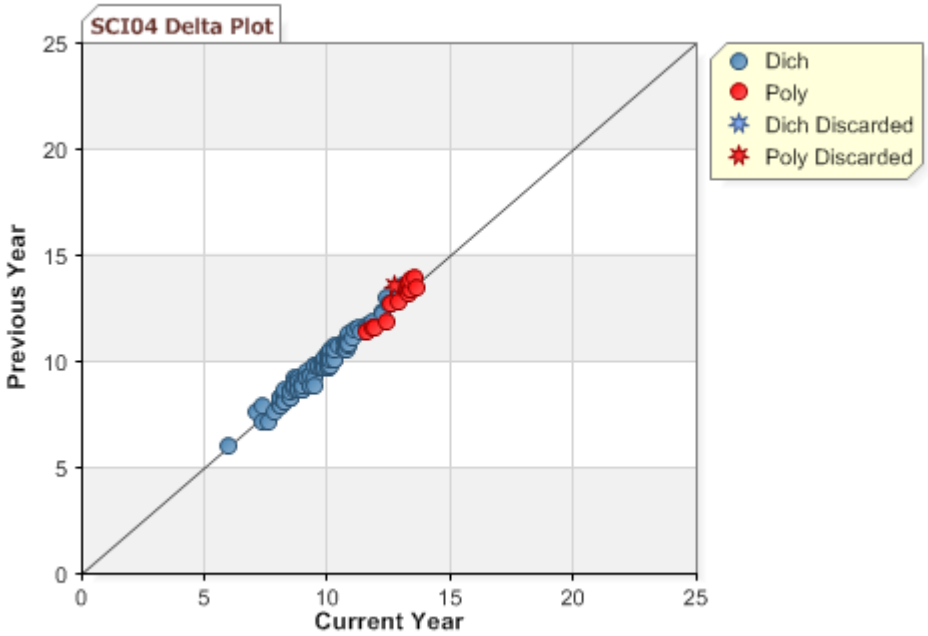


Table G-26. 2010–11 KCCT: Delta Analysis—Science Grade 4

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
50200	0.80	0.78	9.6335	9.9112	FALSE	0.4800
50205	0.72	0.70	10.6686	10.9024	FALSE	0.3870
50206	0.89	0.88	8.0939	8.3001	FALSE	-0.2940
50207	0.82	0.82	9.3385	9.3385	FALSE	-1.2057
50212	0.78	0.77	9.9112	10.0446	FALSE	-0.4280
50221	0.73	0.72	10.5487	10.6686	FALSE	-0.3949
50221	0.72	0.74	10.6686	10.4266	FALSE	0.1500
50222	0.77	0.76	10.0446	10.1748	FALSE	-0.4237
50223	0.83	0.83	9.1833	9.1833	FALSE	-1.1757
50223	0.82	0.82	9.3385	9.3385	FALSE	-1.2057
51063	0.68	0.69	11.1292	11.0166	FALSE	-0.8012
51063	0.67	0.70	11.2403	10.9024	FALSE	0.6788
51064	0.84	0.85	9.0222	8.8543	FALSE	-0.0259
51064	0.84	0.86	9.0222	8.6787	FALSE	1.1437
52452	0.70	0.72	10.9024	10.6686	FALSE	0.0499
52464	0.88	0.87	8.3001	8.4944	FALSE	-0.3327
52464	0.88	0.87	8.3001	8.4944	FALSE	-0.3327
52484	0.48	0.50	13.2006	13.0000	FALSE	-0.6147
52484	0.49	0.50	13.1003	13.0000	FALSE	-1.2639
52485	0.80	0.80	9.6335	9.6335	FALSE	-1.2626
52485	0.79	0.81	9.7743	9.4884	FALSE	0.6151
52493	0.69	0.71	11.0166	10.7865	FALSE	0.0037
52493	0.70	0.71	10.9024	10.7865	FALSE	-0.7352

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
52495	0.93	0.91	7.0968	7.6370	FALSE	1.7387
52495	0.93	0.92	7.0968	7.3797	FALSE	0.0246
52497	0.73	0.71	10.5487	10.7865	FALSE	0.3902
52523	0.83	0.85	9.1833	8.8543	FALSE	1.0168
52606	0.88	0.88	8.3001	8.3001	FALSE	-1.0052
52606	0.88	0.88	8.3001	8.3001	FALSE	-1.0052
52608	0.90	0.89	7.8738	8.0939	FALSE	-0.2437
52613	0.85	0.81	8.8543	9.4884	FALSE	2.7044
52613	0.85	0.82	8.8543	9.3385	FALSE	1.7058
52637	0.75	0.75	10.3020	10.3020	FALSE	-1.2413
52747	0.79	0.80	9.7743	9.6335	FALSE	-0.3517
52747	0.79	0.81	9.7743	9.4884	FALSE	0.6151
52759	0.80	0.77	9.6335	10.0446	FALSE	1.3687
52759	0.80	0.77	9.6335	10.0446	FALSE	1.3687
52770	0.65	0.63	11.4587	11.6726	FALSE	0.4070
52770	0.64	0.63	11.5662	11.6726	FALSE	-0.2881
52775	0.71	0.70	10.7865	10.9024	FALSE	-0.3753
52775	0.70	0.70	10.9024	10.9024	FALSE	-1.1254
52777	0.77	0.75	10.0446	10.3020	FALSE	0.4242
52777	0.77	0.75	10.0446	10.3020	FALSE	0.4242
52785	0.88	0.89	8.3001	8.0939	FALSE	0.3685
52785	0.86	0.88	8.6787	8.3001	FALSE	1.4447
52813	0.61	0.61	11.8827	11.8827	FALSE	-0.9361
52815	0.87	0.87	8.4944	8.4944	FALSE	-1.0427
52815	0.86	0.87	8.6787	8.4944	FALSE	0.1496
52819	2.14	2.18	12.6486	12.5478	FALSE	-1.1734
52819	2.09	2.04	12.7743	12.8997	FALSE	0.0718
52870	0.85	0.85	8.8543	8.8543	FALSE	-1.1122
52870	0.84	0.85	9.0222	8.8543	FALSE	-0.0259
52874	0.91	0.90	7.6370	7.8738	FALSE	-0.1780
52874	0.90	0.92	7.8738	7.3797	FALSE	2.3691
52897	0.87	0.87	8.4944	8.4944	FALSE	-1.0427
52897	0.88	0.87	8.3001	8.4944	FALSE	-0.3327
52913	0.73	0.76	10.5487	10.1748	FALSE	1.0523
52913	0.75	0.77	10.3020	10.0446	FALSE	0.3235
52918	0.89	0.88	8.0939	8.3001	FALSE	-0.2940
52918	0.89	0.89	8.0939	8.0939	FALSE	-0.9654
52923	1.87	1.84	13.3262	13.4017	FALSE	-0.1542
52923	1.81	1.76	13.4774	13.6039	FALSE	0.2146
76312	0.79	0.77	9.7743	10.0446	FALSE	0.4578
76312	0.78	0.77	9.9112	10.0446	FALSE	-0.4280
76313	0.72	0.75	10.6686	10.3020	FALSE	0.9800
76313	0.73	0.75	10.5487	10.3020	FALSE	0.2044
76368	0.90	0.89	7.8738	8.0939	FALSE	-0.2437
76368	0.88	0.89	8.3001	8.0939	FALSE	0.3685
76369	0.53	0.54	12.6989	12.5983	FALSE	-1.1839
76370	0.77	0.77	10.0446	10.0446	FALSE	-1.2910
76374	0.88	0.88	8.3001	8.3001	FALSE	-1.0052
76374	0.88	0.89	8.3001	8.0939	FALSE	0.3685
76375	0.85	0.84	8.8543	9.0222	FALSE	-0.4021

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
76375	0.85	0.82	8.8543	9.3385	FALSE	1.7058
76385	0.85	0.82	8.8543	9.3385	FALSE	1.7058
76385	0.83	0.81	9.1833	9.4884	FALSE	0.5754
93614	0.66	0.66	11.3501	11.3501	FALSE	-1.0389
93618	0.77	0.77	10.0446	10.0446	FALSE	-1.2910
93618	0.76	0.78	10.1748	9.9112	FALSE	0.3889
93675	0.89	0.89	8.0939	8.0939	FALSE	-0.9654
93679	0.87	0.87	8.4944	8.4944	FALSE	-1.0427
93683	0.88	0.88	8.3001	8.3001	FALSE	-1.0052
93714	1.77	2.11	13.5785	12.7241	TRUE	3.6689
93719	0.86	0.85	8.6787	8.8543	FALSE	-0.3851
93719	0.86	0.86	8.6787	8.6787	FALSE	-1.0783
93730	0.72	0.71	10.6686	10.7865	FALSE	-0.3855
93730	0.70	0.70	10.9024	10.9024	FALSE	-1.1254
93734	0.75	0.77	10.3020	10.0446	FALSE	0.3235
93734	0.74	0.76	10.4266	10.1748	FALSE	0.2621
93748	0.86	0.85	8.6787	8.8543	FALSE	-0.3851
93748	0.86	0.85	8.6787	8.8543	FALSE	-0.3851
93755	0.52	0.52	12.7994	12.7994	FALSE	-0.7591
93755	0.51	0.52	12.8997	12.7994	FALSE	-1.2248
93757	0.64	0.63	11.5662	11.6726	FALSE	-0.2881
93757	0.64	0.63	11.5662	11.6726	FALSE	-0.2881
93765	1.95	1.89	13.1254	13.2759	FALSE	0.3072
93765	1.75	1.86	13.6292	13.3514	FALSE	-0.1828
93785	0.64	0.67	11.5662	11.2403	FALSE	0.5351
93785	0.65	0.68	11.4587	11.1292	FALSE	0.5804
93792	0.83	0.86	9.1833	8.6787	FALSE	2.1865
93792	0.84	0.85	9.0222	8.8543	FALSE	-0.0259
93793	0.84	0.84	9.0222	9.0222	FALSE	-1.1446
93793	0.83	0.83	9.1833	9.1833	FALSE	-1.1757
93798	1.67	1.83	13.8332	13.4269	FALSE	0.6332
93798	1.65	1.79	13.8845	13.5279	FALSE	0.2922
93802	0.86	0.84	8.6787	9.0222	FALSE	0.7336
93802	0.86	0.84	8.6787	9.0222	FALSE	0.7336
93806	0.79	0.76	9.7743	10.1748	FALSE	1.3251
93806	0.77	0.76	10.0446	10.1748	FALSE	-0.4237
93810	0.45	0.49	13.5026	13.1003	FALSE	0.6712
93810	0.47	0.48	13.3011	13.2006	FALSE	-1.3014
93811	0.78	0.79	9.9112	9.7743	FALSE	-0.4040
93811	0.78	0.78	9.9112	9.9112	FALSE	-1.3163
138046	0.96	0.96	5.9973	5.9973	FALSE	-0.5605
138047	0.63	0.64	11.6726	11.5662	FALSE	-0.9473
138048	0.77	0.77	10.0446	10.0446	FALSE	-1.2910
138050	2.62	2.54	11.4046	11.6195	FALSE	0.4036
138080	0.80	0.79	9.6335	9.7743	FALSE	-0.4323
138080	0.79	0.80	9.7743	9.6335	FALSE	-0.3517
138084	0.58	0.57	12.1924	12.2945	FALSE	-0.1962
138084	0.57	0.57	12.2945	12.2945	FALSE	-0.8566
138085	0.76	0.75	10.1748	10.3020	FALSE	-0.4180
138085	0.75	0.77	10.3020	10.0446	FALSE	0.3235

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
138098	2.56	2.45	11.5662	11.8566	FALSE	0.9382
138098	2.55	2.41	11.5929	11.9607	FALSE	1.4588
138105	0.85	0.86	8.8543	8.6787	FALSE	0.0574
138108	0.91	0.93	7.6370	7.0968	FALSE	2.7218
138114	0.81	0.83	9.4884	9.1833	FALSE	0.7980
138120	2.45	2.23	11.8566	12.4215	FALSE	2.8222
150329	0.79	0.78	9.7743	9.9112	FALSE	-0.4310
150329	0.77	0.78	10.0446	9.9112	FALSE	-0.4533
150333	0.53	0.55	12.6989	12.4974	FALSE	-0.5115
150333	0.50	0.56	13.0000	12.3961	FALSE	2.1109
150341	1.86	1.83	13.3514	13.4269	FALSE	-0.1491
150341	1.79	1.90	13.5279	13.2508	FALSE	-0.1684

Table G-27. 2010–11 KCCT: Rescore Analysis—Science Grade 4

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
138098	4	1.861	1.733	0.950	0.813	-0.136	No
138098	4	1.852	1.931	1.068	0.975	0.074	No
138098	4	1.663	1.805	1.012	1.096	0.140	No
138098	4	2.206	2.167	0.927	0.811	-0.042	No

Figure G-16. 2010–11 KCCT: Delta Plot—Science Grade 7

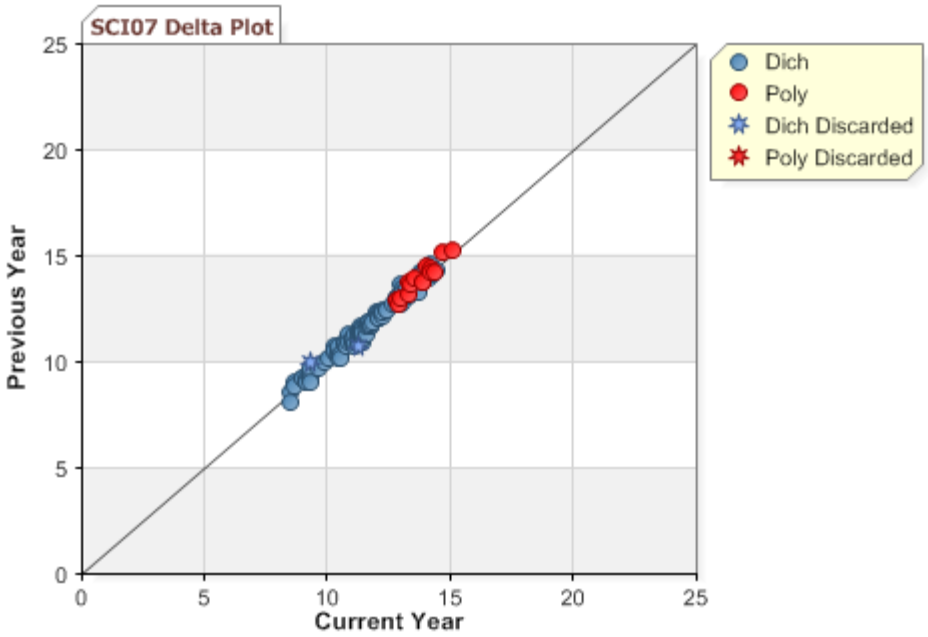


Table G-28. 2010–11 KCCT: Delta Analysis—Science Grade 7

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
50599	0.51	0.51	12.8997	12.8997	FALSE	-1.0068
50605	2.03	1.99	12.9248	13.0251	FALSE	-0.2277
50605	2.05	2.06	12.8746	12.8496	FALSE	-1.2048
50609	0.47	0.49	13.3011	13.1003	FALSE	-0.2324
50611	0.57	0.59	12.2945	12.0898	FALSE	-0.0385
50611	0.57	0.57	12.2945	12.2945	FALSE	-1.1054
50621	0.76	0.74	10.1748	10.4266	FALSE	0.4959
50621	0.78	0.78	9.9112	9.9112	FALSE	-1.2325
52338	0.47	0.43	13.3011	13.7055	FALSE	2.1845
52338	0.46	0.46	13.4017	13.4017	FALSE	-0.9251
52360	0.64	0.66	11.5662	11.3501	FALSE	0.1677
53585	0.74	0.74	10.4266	10.4266	FALSE	-1.3164
53585	0.73	0.74	10.5487	10.4266	FALSE	-0.3923
53599	0.87	0.87	8.4944	8.4944	FALSE	-1.0017
53599	0.89	0.87	8.0939	8.4944	FALSE	1.3066
53604	0.70	0.69	10.9024	11.0166	FALSE	-0.4494
53604	0.70	0.69	10.9024	11.0166	FALSE	-0.4494
53611	0.84	0.82	9.0222	9.3385	FALSE	0.8071
53611	0.84	0.83	9.0222	9.1833	FALSE	-0.3925
53614	0.63	0.62	11.6726	11.7781	FALSE	-0.3913
53614	0.63	0.62	11.6726	11.7781	FALSE	-0.3913
53617	0.64	0.65	11.5662	11.4587	FALSE	-0.6715
53617	0.63	0.66	11.6726	11.3501	FALSE	0.9730
53620	0.73	0.75	10.5487	10.3020	FALSE	0.5706
53620	0.72	0.74	10.6686	10.4266	FALSE	0.5149
53649	0.41	0.41	13.9102	13.9102	FALSE	-0.8423
53649	0.41	0.41	13.9102	13.9102	FALSE	-0.8423
54283	0.48	0.50	13.2006	13.0000	FALSE	-0.2175
54283	0.49	0.49	13.1003	13.1003	FALSE	-0.9742
54352	0.50	0.52	13.0000	12.7994	FALSE	-0.1848
54352	0.51	0.52	12.8997	12.7994	FALSE	-0.9436
54387	0.83	0.84	9.1833	9.0222	FALSE	0.1318
54387	0.83	0.83	9.1833	9.1833	FALSE	-1.1139
54690	0.53	0.53	12.6989	12.6989	FALSE	-1.0395
54690	0.53	0.52	12.6989	12.7994	FALSE	-0.2630
54691	0.70	0.65	10.9024	11.4587	FALSE	2.9680
54691	0.67	0.68	11.2403	11.1292	FALSE	-0.5898
54694	0.46	0.48	13.4017	13.2006	FALSE	-0.2463
54698	0.66	0.66	11.3501	11.3501	FALSE	-1.2592
54698	0.66	0.67	11.3501	11.2403	FALSE	-0.6181
54701	0.48	0.49	13.2006	13.1003	FALSE	-0.9926
54709	0.68	0.65	11.1292	11.4587	FALSE	1.2518
54709	0.67	0.64	11.2403	11.5662	FALSE	1.2413
54718	0.43	0.44	13.7055	13.6039	FALSE	-1.0649
54718	0.43	0.44	13.7055	13.6039	FALSE	-1.0649
54988	0.72	0.68	10.6686	11.1292	FALSE	2.1898
54988	0.72	0.67	10.6686	11.2403	TRUE	3.0489
54997	0.38	0.42	14.2219	13.8076	FALSE	1.2683
54997	0.38	0.41	14.2219	13.9102	FALSE	0.4752

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
55027	0.72	0.71	10.6686	10.7865	FALSE	-0.4594
55034	0.57	0.60	12.2945	11.9866	FALSE	0.7593
55035	0.40	0.42	14.0134	13.8076	FALSE	-0.3096
55040	1.64	1.79	13.9102	13.5279	FALSE	1.0710
55386	0.71	0.67	10.7865	11.2403	FALSE	2.1573
55386	0.70	0.68	10.9024	11.1292	FALSE	0.4210
55399	0.66	0.66	11.3501	11.3501	FALSE	-1.2592
55399	0.67	0.66	11.2403	11.3501	FALSE	-0.4284
55403	0.53	0.50	12.6989	13.0000	FALSE	1.2877
55403	0.52	0.49	12.7994	13.1003	FALSE	1.3026
55447	0.48	0.50	13.2006	13.0000	FALSE	-0.2175
55447	0.49	0.51	13.1003	12.8997	FALSE	-0.2016
55478	1.18	1.33	15.1553	14.7321	FALSE	1.1852
55478	1.16	1.19	15.2135	15.1264	FALSE	-1.3035
76422	0.80	0.80	9.6335	9.6335	FALSE	-1.1872
76422	0.78	0.82	9.9112	9.3385	TRUE	3.1941
76423	0.83	0.84	9.1833	9.0222	FALSE	0.1318
76423	0.84	0.83	9.0222	9.1833	FALSE	-0.3925
76427	0.76	0.77	10.1748	10.0446	FALSE	-0.2692
94362	0.40	0.40	14.0134	14.0134	FALSE	-0.8255
94362	0.39	0.41	14.1173	13.9102	FALSE	-0.3167
94458	0.49	0.49	13.1003	13.1003	FALSE	-0.9742
94458	0.50	0.52	13.0000	12.7994	FALSE	-0.1848
94479	0.61	0.63	11.8827	11.6726	FALSE	0.0707
94479	0.62	0.62	11.7781	11.7781	FALSE	-1.1895
94486	0.37	0.36	14.3274	14.4338	FALSE	0.0482
94486	0.35	0.38	14.5413	14.2219	FALSE	0.4820
94487	0.41	0.40	13.9102	14.0134	FALSE	-0.0445
94487	0.41	0.39	13.9102	14.1173	FALSE	0.7585
94517	0.81	0.82	9.4884	9.3385	FALSE	-0.0051
94517	0.80	0.82	9.6335	9.3385	FALSE	1.0928
94518	0.36	0.39	14.4338	14.1173	FALSE	0.4779
94518	0.39	0.37	14.1173	14.3274	FALSE	0.8157
94524	0.64	0.65	11.5662	11.4587	FALSE	-0.6715
94524	0.66	0.65	11.3501	11.4587	FALSE	-0.4200
94527	1.43	1.60	14.4606	14.0134	FALSE	1.4834
94527	1.47	1.53	14.3539	14.1957	FALSE	-0.7328
94598	0.56	0.57	12.3961	12.2945	FALSE	-0.8517
94598	0.56	0.56	12.3961	12.3961	FALSE	-1.0889
94608	0.49	0.47	13.1003	13.3011	FALSE	0.5779
94608	0.48	0.47	13.2006	13.3011	FALSE	-0.1813
94610	1.52	1.53	14.2219	14.1957	FALSE	-0.9943
94610	1.53	1.46	14.1957	14.3805	FALSE	0.6327
94624	0.67	0.65	11.2403	11.4587	FALSE	0.4108
94624	0.68	0.65	11.1292	11.4587	FALSE	1.2518
94626	0.75	0.73	10.3020	10.5487	FALSE	0.4771
94626	0.76	0.73	10.1748	10.5487	FALSE	1.4399
94629	0.63	0.64	11.6726	11.5662	FALSE	-0.6967
94629	0.64	0.65	11.5662	11.4587	FALSE	-0.6715
94636	0.48	0.49	13.2006	13.1003	FALSE	-0.9926

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94636	0.46	0.49	13.4017	13.1003	FALSE	0.5293
94644	1.70	1.86	13.7565	13.3514	FALSE	1.2725
94644	1.75	1.84	13.6292	13.4017	FALSE	-0.0794
138099	0.70	0.70	10.9024	10.9024	FALSE	-1.3321
138101	0.68	0.67	11.1292	11.2403	FALSE	-0.4361
138102	0.66	0.67	11.3501	11.2403	FALSE	-0.6181
138107	0.74	0.75	10.4266	10.3020	FALSE	-0.3535
138109	0.72	0.75	10.6686	10.3020	FALSE	1.4778
138115	1.94	1.89	13.1504	13.2759	FALSE	0.0041
138126	0.68	0.69	11.1292	11.0166	FALSE	-0.5604
138126	0.67	0.70	11.2403	10.9024	FALSE	1.1633
138130	0.46	0.45	13.4017	13.5026	FALSE	-0.1451
138130	0.45	0.46	13.5026	13.4017	FALSE	-1.0373
138131	0.56	0.56	12.3961	12.3961	FALSE	-1.0889
138131	0.57	0.58	12.2945	12.1924	FALSE	-0.8316
138138	0.61	0.63	11.8827	11.6726	FALSE	0.0707
138140	0.65	0.66	11.4587	11.3501	FALSE	-0.6453
138141	0.59	0.57	12.0898	12.2945	FALSE	0.4434
138147	0.63	0.63	11.6726	11.6726	FALSE	-1.2067
138150	0.46	0.44	13.4017	13.6039	FALSE	0.6374
138151	0.65	0.66	11.4587	11.3501	FALSE	-0.6453
138152	0.60	0.59	11.9866	12.0898	FALSE	-0.3578
138154	0.50	0.52	13.0000	12.7994	FALSE	-0.1848
138155	0.44	0.50	13.6039	13.0000	FALSE	2.8339
138156	0.61	0.63	11.8827	11.6726	FALSE	0.0707
138157	2.13	2.03	12.6738	12.9248	FALSE	0.8966
153012	0.85	0.86	8.8543	8.6787	FALSE	0.2965
153012	0.84	0.86	9.0222	8.6787	FALSE	1.5670
153014	0.82	0.82	9.3385	9.3385	FALSE	-1.1392
153014	0.83	0.82	9.1833	9.3385	FALSE	-0.4124
153015	0.60	0.59	11.9866	12.0898	FALSE	-0.3578
153015	0.61	0.61	11.8827	11.8827	FALSE	-1.1725
153016	0.71	0.72	10.7865	10.6686	FALSE	-0.4642
153016	0.70	0.72	10.9024	10.6686	FALSE	0.4130
153021	1.70	1.64	13.7565	13.9102	FALSE	0.3207
153021	1.73	1.66	13.6801	13.8588	FALSE	0.5019

Table G-29. 2010–11 KCCT: Rescore Analysis—Science Grade 7

IREF	Number of Score Categories	Average Score		Standard Deviation		Effect Size	Discard
		Old	New	Old	New		
50605	4	1.505	1.574	1.262	1.236	0.054	No
50605	4	1.662	1.747	0.848	0.821	0.101	No
50605	4	1.537	1.473	1.079	1.042	-0.060	No
50605	4	1.127	1.471	1.262	1.355	0.272	No

Figure G-17. 2010–11 KCCT: Delta Plot—Science Grade 11

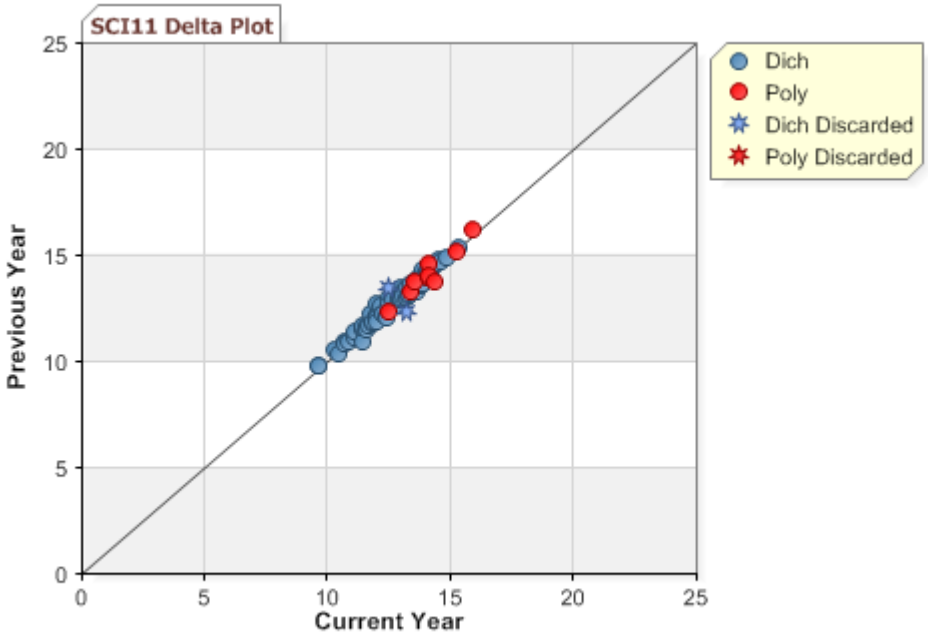


Table G-30. 2010–11 KCCT: Delta Analysis—Science Grade 11

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
49715	0.51	0.50	12.8997	13.0000	FALSE	-0.4073
49716	0.42	0.42	13.8076	13.8076	FALSE	-0.9966
49719	0.60	0.56	11.9866	12.3961	FALSE	1.3179
49736	1.88	1.83	13.3011	13.4269	FALSE	-0.2878
49743	0.35	0.36	14.5413	14.4338	FALSE	-0.5249
49749	0.58	0.57	12.1924	12.2945	FALSE	-0.3630
50577	0.68	0.68	11.1292	11.1292	FALSE	-0.8659
50578	0.32	0.32	14.8708	14.8708	FALSE	-1.0484
50579	0.53	0.55	12.6989	12.4974	FALSE	-0.1032
50580	0.58	0.57	12.1924	12.2945	FALSE	-0.3630
50581	0.65	0.65	11.4587	11.4587	FALSE	-0.8820
51169	0.43	0.42	13.7055	13.8076	FALSE	-0.4368
51172	0.37	0.41	14.3274	13.9102	FALSE	1.1483
51173	0.63	0.63	11.6726	11.6726	FALSE	-0.8924
51174	0.38	0.40	14.2219	14.0134	FALSE	0.0089
51179	0.54	0.52	12.5983	12.7994	FALSE	0.1555
51181	0.36	0.37	14.4338	14.3274	FALSE	-0.5357
51182	0.44	0.46	13.6039	13.4017	FALSE	-0.0560
51218	0.59	0.60	12.0898	11.9866	FALSE	-0.6675
51298	0.38	0.40	14.2219	14.0134	FALSE	0.0089
51299	0.75	0.74	10.3020	10.4266	FALSE	-0.1485
51303	0.50	0.50	13.0000	13.0000	FALSE	-0.9572
51306	0.63	0.64	11.6726	11.5662	FALSE	-0.6704

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51311	0.70	0.65	10.9024	11.4587	FALSE	2.1687
51313	0.51	0.50	12.8997	13.0000	FALSE	-0.4073
51318	0.57	0.48	12.2945	13.2006	TRUE	4.0019
51321	2.28	2.19	12.2945	12.5226	FALSE	0.3170
51325	1.39	1.56	14.5683	14.1173	FALSE	1.3438
51435	0.79	0.80	9.7743	9.6335	FALSE	-0.5761
51438	0.59	0.56	12.0898	12.3961	FALSE	0.7520
51441	0.60	0.60	11.9866	11.9866	FALSE	-0.9078
51443	0.64	0.65	11.5662	11.4587	FALSE	-0.6700
51448	0.38	0.39	14.2219	14.1173	FALSE	-0.5557
51450	0.43	0.41	13.7055	13.9102	FALSE	0.1209
51454	0.54	0.58	12.5983	12.1924	FALSE	1.0021
51464	0.40	0.39	14.0134	14.1173	FALSE	-0.4420
51467	0.43	0.41	13.7055	13.9102	FALSE	0.1209
51474	0.39	0.39	14.1173	14.1173	FALSE	-1.0117
51479	1.59	1.56	14.0393	14.1173	FALSE	-0.5840
51574	0.73	0.75	10.5487	10.3020	FALSE	0.0372
51577	0.49	0.47	13.1003	13.3011	FALSE	0.1293
51580	0.34	0.34	14.6499	14.6499	FALSE	-1.0376
51583	0.50	0.48	13.0000	13.2006	FALSE	0.1332
51586	0.28	0.28	15.3314	15.3314	FALSE	-1.0703
51587	0.65	0.64	11.4587	11.5662	FALSE	-0.2980
51591	0.46	0.55	13.4017	12.4974	TRUE	3.7508
51592	0.61	0.61	11.8827	11.8827	FALSE	-0.9027
51596	1.65	1.57	13.8845	14.0912	FALSE	0.1234
75065	0.66	0.68	11.3501	11.1292	FALSE	-0.0637
75072	0.41	0.40	13.9102	14.0134	FALSE	-0.4406
75082	0.79	0.80	9.7743	9.6335	FALSE	-0.5761
75098	0.59	0.60	12.0898	11.9866	FALSE	-0.6675
75107	0.53	0.60	12.6989	11.9866	FALSE	2.6727
75109	0.70	0.70	10.9024	10.9024	FALSE	-0.8549
92916	0.45	0.42	13.5026	13.8076	FALSE	0.6756
130671	0.61	0.60	11.8827	11.9866	FALSE	-0.3381
130672	0.70	0.72	10.9024	10.6686	FALSE	-0.0158
130674	0.51	0.53	12.8997	12.6989	FALSE	-0.0976
130675	0.33	0.35	14.7597	14.5413	FALSE	0.0886
130676	0.63	0.65	11.6726	11.4587	FALSE	-0.0864
130677	0.42	0.44	13.8076	13.6039	FALSE	-0.0376
130678	0.86	0.92	16.1568	15.9554	FALSE	0.0644
130684	0.41	0.43	13.9102	13.7055	FALSE	-0.0272
130686	0.39	0.38	14.1173	14.2219	FALSE	-0.4429
130687	0.44	0.41	13.6039	13.9102	FALSE	0.6781
130691	1.73	1.78	13.6801	13.5532	FALSE	-0.4615
130694	0.71	0.72	10.7865	10.6686	FALSE	-0.6516
130695	0.47	0.44	13.3011	13.6039	FALSE	0.6738
130696	0.47	0.49	13.3011	13.1003	FALSE	-0.0780
130697	0.50	0.51	13.0000	12.8997	FALSE	-0.6391
130698	0.48	0.47	13.2006	13.3011	FALSE	-0.4209
130699	0.50	0.55	13.0000	12.4974	FALSE	1.5478
130700	0.39	0.38	14.1173	14.2219	FALSE	-0.4429

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
130702	0.46	0.48	13.4017	13.2006	FALSE	-0.0714
130703	1.20	1.14	15.0976	15.2722	FALSE	-0.1105
152638	0.41	0.41	13.9102	13.9102	FALSE	-1.0016
152640	0.46	0.50	13.4017	13.0000	FALSE	1.0190
152642	0.58	0.62	12.1924	11.7781	FALSE	1.0285
152649	0.62	0.61	11.7781	11.8827	FALSE	-0.3288
152658	0.49	0.49	13.1003	13.1003	FALSE	-0.9621
152666	1.70	1.46	13.7565	14.3805	FALSE	2.3975

Figure G-18. 2010–11 KCCT: Delta Plot—Social Studies Grade 5

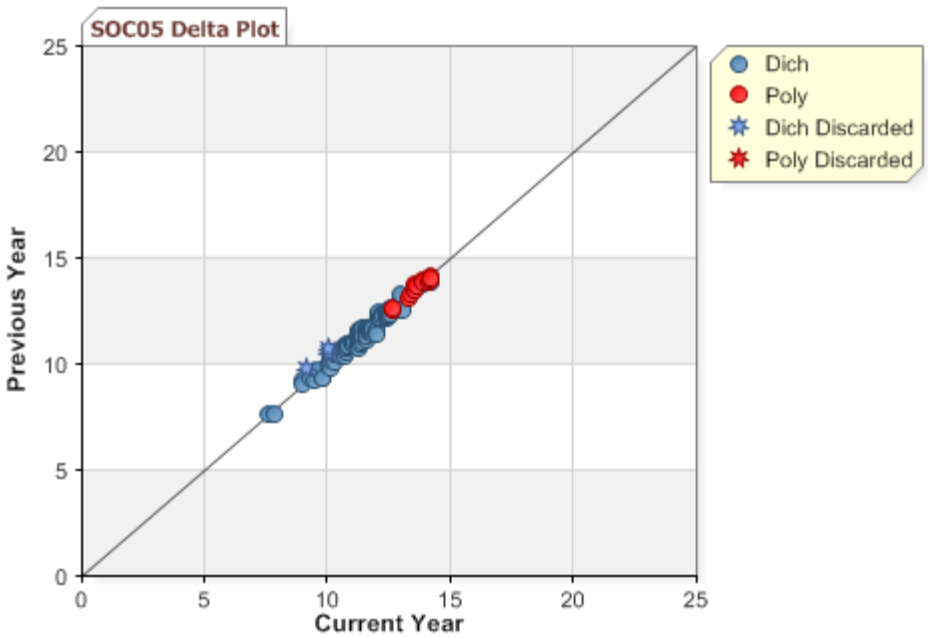


Table G-31. 2010–11 KCCT: Delta Analysis—Social Studies Grade 5

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51505	0.78	0.77	9.9112	10.0446	FALSE	-0.8129
51505	0.79	0.76	9.7743	10.1748	FALSE	1.0525
51514	0.73	0.74	10.5487	10.4266	FALSE	0.3369
51652	0.59	0.58	12.0898	12.1924	FALSE	-0.9922
51652	0.59	0.59	12.0898	12.0898	FALSE	-0.2832
51658	0.58	0.57	12.1924	12.2945	FALSE	-0.9736
57176	0.82	0.79	9.3385	9.7743	FALSE	1.3597
57176	0.82	0.79	9.3385	9.7743	FALSE	1.3597
57177	0.58	0.56	12.1924	12.3961	FALSE	-0.6584
57177	0.58	0.58	12.1924	12.1924	FALSE	-0.2683

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
57179	0.72	0.71	10.6686	10.7865	FALSE	-1.0304
57181	0.63	0.64	11.6726	11.5662	FALSE	0.3916
57181	0.63	0.65	11.6726	11.4587	FALSE	1.1340
57185	0.63	0.63	11.6726	11.6726	FALSE	-0.3438
57185	0.63	0.64	11.6726	11.5662	FALSE	0.3916
57187	0.75	0.72	10.3020	10.6686	FALSE	0.7417
57201	0.70	0.71	10.9024	10.7865	FALSE	0.3454
57202	1.99	1.87	13.0251	13.3262	FALSE	-0.1059
57202	1.89	1.85	13.2759	13.3765	FALSE	-0.8060
57221	0.67	0.64	11.2403	11.5662	FALSE	0.3237
57221	0.65	0.64	11.4587	11.5662	FALSE	-1.1173
57224	0.56	0.59	12.3961	12.0898	FALSE	1.8778
57224	0.57	0.59	12.2945	12.0898	FALSE	1.1609
57226	0.64	0.62	11.5662	11.7781	FALSE	-0.5107
57226	0.62	0.61	11.7781	11.8827	FALSE	-1.0516
57227	0.64	0.66	11.5662	11.3501	FALSE	1.1334
57227	0.65	0.67	11.4587	11.2403	FALSE	1.1340
57235	0.68	0.67	11.1292	11.2403	FALSE	-1.1435
57235	0.69	0.66	11.0166	11.3501	FALSE	0.4096
57236	0.72	0.77	10.6686	10.0446	TRUE	3.8222
57236	0.73	0.77	10.5487	10.0446	TRUE	2.9764
57238	0.68	0.64	11.1292	11.5662	FALSE	1.1078
57238	0.69	0.66	11.0166	11.3501	FALSE	0.4096
57258	1.68	1.65	13.8076	13.8845	FALSE	-0.5651
57443	0.71	0.70	10.7865	10.9024	FALSE	-1.0606
57443	0.71	0.70	10.7865	10.9024	FALSE	-1.0606
57451	0.65	0.62	11.4587	11.7781	FALSE	0.2474
57451	0.65	0.62	11.4587	11.7781	FALSE	0.2474
57456	0.71	0.70	10.7865	10.9024	FALSE	-1.0606
57456	0.70	0.69	10.9024	11.0166	FALSE	-1.0894
57473	0.41	0.38	13.9102	14.2219	FALSE	-0.1613
57473	0.41	0.38	13.9102	14.2219	FALSE	-0.1613
57477	0.70	0.69	10.9024	11.0166	FALSE	-1.0894
57477	0.71	0.71	10.7865	10.7865	FALSE	-0.4725
57481	1.81	1.78	13.4774	13.5532	FALSE	-0.6056
57481	1.82	1.78	13.4522	13.5532	FALSE	-0.7836
57487	1.62	1.65	13.9617	13.8845	FALSE	0.5223
57529	0.91	0.90	7.6370	7.8738	FALSE	0.2321
57529	0.91	0.91	7.6370	7.6370	FALSE	-0.9300
57530	0.70	0.66	10.9024	11.3501	FALSE	1.2153
57530	0.69	0.68	11.0166	11.1292	FALSE	-1.1170
57534	0.76	0.76	10.1748	10.1748	FALSE	-0.5613
57534	0.77	0.75	10.0446	10.3020	FALSE	0.0248
57536	0.57	0.59	12.2945	12.0898	FALSE	1.1609
57536	0.57	0.56	12.2945	12.3961	FALSE	-0.9556
57540	0.63	0.61	11.6726	11.8827	FALSE	-0.5384
57540	0.63	0.62	11.6726	11.7781	FALSE	-1.0727
57542	0.72	0.71	10.6686	10.7865	FALSE	-1.0304
57542	0.73	0.71	10.5487	10.7865	FALSE	-0.1846
57546	0.80	0.80	9.6335	9.6335	FALSE	-0.6400

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
57597	0.74	0.76	10.4266	10.1748	FALSE	1.2153
57603	0.58	0.55	12.1924	12.4974	FALSE	0.0411
57603	0.57	0.57	12.2945	12.2945	FALSE	-0.2535
57609	0.69	0.68	11.0166	11.1292	FALSE	-1.1170
57611	0.65	0.63	11.4587	11.6726	FALSE	-0.4816
57741	0.66	0.60	11.3501	11.9866	FALSE	2.4543
57741	0.66	0.61	11.3501	11.8827	FALSE	1.7364
58065	0.64	0.60	11.5662	11.9866	FALSE	0.9302
58065	0.64	0.60	11.5662	11.9866	FALSE	0.9302
58068	0.66	0.64	11.3501	11.5662	FALSE	-0.4509
58068	0.66	0.64	11.3501	11.5662	FALSE	-0.4509
77125	0.84	0.84	9.0222	9.0222	FALSE	-0.7288
77139	0.56	0.54	12.3961	12.5983	FALSE	-0.6987
77139	0.56	0.55	12.3961	12.4974	FALSE	-0.9382
77144	0.71	0.70	10.7865	10.9024	FALSE	-1.0606
77145	0.83	0.81	9.1833	9.4884	FALSE	0.4792
77145	0.82	0.82	9.3385	9.3385	FALSE	-0.6828
77147	0.56	0.56	12.3961	12.3961	FALSE	-0.2387
77149	0.63	0.63	11.6726	11.6726	FALSE	-0.3438
77150	0.69	0.65	11.0166	11.4587	FALSE	1.1598
77150	0.69	0.67	11.0166	11.2403	FALSE	-0.3491
93174	0.55	0.55	12.4974	12.4974	FALSE	-0.2240
93181	0.71	0.70	10.7865	10.9024	FALSE	-1.0606
93201	0.57	0.57	12.2945	12.2945	FALSE	-0.2535
93270	0.50	0.50	13.0000	13.0000	FALSE	-0.1510
93270	0.52	0.50	12.7994	13.0000	FALSE	-0.7679
93347	0.57	0.55	12.2945	12.4974	FALSE	-0.6791
93347	0.59	0.56	12.0898	12.3961	FALSE	0.0655
93368	0.57	0.54	12.2945	12.5983	FALSE	0.0182
93368	0.56	0.55	12.3961	12.4974	FALSE	-0.9382
93373	1.62	1.54	13.9617	14.1695	FALSE	-0.8871
93373	1.60	1.51	14.0134	14.2482	FALSE	-0.7078
93402	0.66	0.64	11.3501	11.5662	FALSE	-0.4509
93402	0.67	0.65	11.2403	11.4587	FALSE	-0.4187
93413	0.71	0.71	10.7865	10.7865	FALSE	-0.4725
93413	0.71	0.72	10.7865	10.6686	FALSE	0.3417
93434	0.54	0.54	12.5983	12.5983	FALSE	-0.2093
93434	0.55	0.55	12.4974	12.4974	FALSE	-0.2240
93438	0.66	0.65	11.3501	11.4587	FALSE	-1.1408
93438	0.64	0.67	11.5662	11.2403	FALSE	1.8921
93441	0.42	0.41	13.8076	13.9102	FALSE	-0.7427
93441	0.43	0.41	13.7055	13.9102	FALSE	-0.8714
93447	1.55	1.54	14.1434	14.1695	FALSE	-0.1655
93450	0.64	0.64	11.5662	11.5662	FALSE	-0.3593
93450	0.63	0.65	11.6726	11.4587	FALSE	1.1340
93453	0.55	0.51	12.4974	12.8997	FALSE	0.6701
93453	0.55	0.49	12.4974	13.1003	FALSE	2.0558
93480	1.62	1.53	13.9617	14.1957	FALSE	-0.7061
93480	1.69	1.55	13.7820	14.1434	FALSE	0.2001
142426	0.79	0.83	9.7743	9.1833	TRUE	3.4640

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
142429	0.76	0.76	10.1748	10.1748	FALSE	-0.5613
142447	0.75	0.73	10.3020	10.5487	FALSE	-0.0866
142447	0.74	0.75	10.4266	10.3020	FALSE	0.3360
142451	0.64	0.61	11.5662	11.8827	FALSE	0.2124
142451	0.63	0.61	11.6726	11.8827	FALSE	-0.5384
142459	0.67	0.65	11.2403	11.4587	FALSE	-0.4187
142459	0.67	0.67	11.2403	11.2403	FALSE	-0.4066
142470	0.42	0.39	13.8076	14.1173	FALSE	-0.1605
142470	0.42	0.38	13.8076	14.2219	FALSE	0.5626
142498	1.70	1.77	13.7565	13.5785	FALSE	1.1884
142498	1.76	1.76	13.6039	13.6039	FALSE	-0.0633
142507	0.72	0.67	10.6686	11.2403	FALSE	2.1058
142510	0.72	0.71	10.6686	10.7865	FALSE	-1.0304
142514	0.70	0.70	10.9024	10.9024	FALSE	-0.4557
142518	0.83	0.84	9.1833	9.0222	FALSE	0.4083
142522	0.69	0.69	11.0166	11.0166	FALSE	-0.4391
142525	0.47	0.50	13.3011	13.0000	FALSE	1.9731
142546	0.70	0.67	10.9024	11.2403	FALSE	0.4566
142546	0.69	0.69	11.0166	11.0166	FALSE	-0.4391
142551	0.70	0.66	10.9024	11.3501	FALSE	1.2153
142551	0.69	0.66	11.0166	11.3501	FALSE	0.4096
142554	0.68	0.67	11.1292	11.2403	FALSE	-1.1435
142554	0.66	0.66	11.3501	11.3501	FALSE	-0.3906
142577	2.19	2.14	12.5226	12.6486	FALSE	-1.0910
142577	2.18	2.13	12.5478	12.6738	FALSE	-1.0868

Figure G-19. 2010–11 KCCT: Delta Plot—Social Studies Grade 8

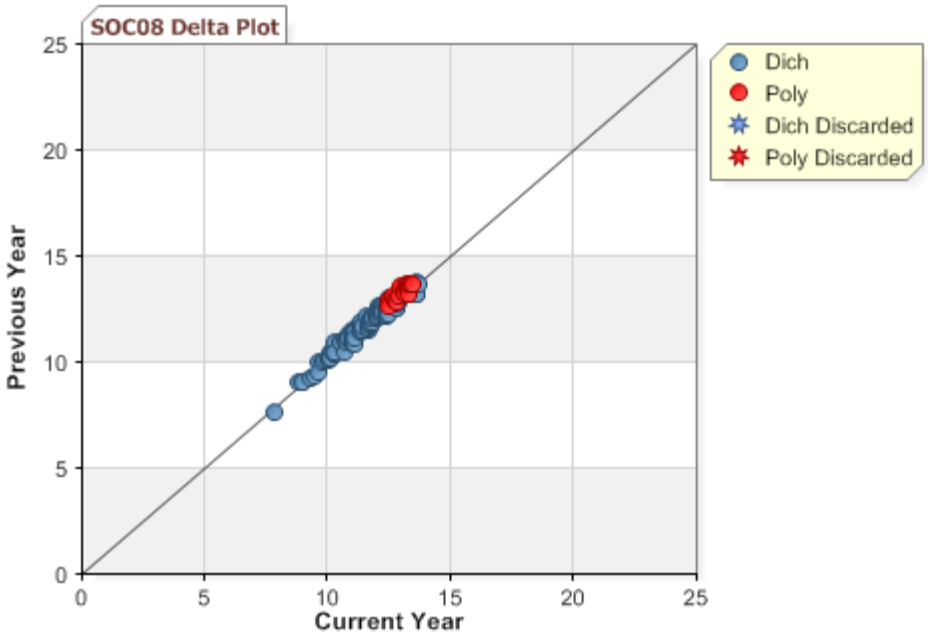


Table G-32. 2010–11 KCCT: Delta Analysis—Social Studies Grade 8

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51738	0.61	0.63	11.8827	11.6726	FALSE	-0.3749
51740	0.75	0.76	10.3020	10.1748	FALSE	-1.0079
51743	0.83	0.82	9.1833	9.3385	FALSE	0.6070
51745	0.64	0.66	11.5662	11.3501	FALSE	-0.3231
51749	0.68	0.68	11.1292	11.1292	FALSE	-0.5944
58055	0.78	0.79	9.9112	9.7743	FALSE	-0.9249
58070	0.65	0.69	11.4587	11.0166	FALSE	1.4743
58083	0.57	0.58	12.2945	12.1924	FALSE	-1.2397
58113	0.48	0.47	13.2006	13.3011	FALSE	0.2366
58113	0.47	0.49	13.3011	13.1003	FALSE	-0.4717
58125	0.74	0.75	10.4266	10.3020	FALSE	-1.0311
58142	0.51	0.51	12.8997	12.8997	FALSE	-0.5661
58142	0.50	0.51	13.0000	12.8997	FALSE	-1.2653
58561	0.66	0.69	11.3501	11.0166	FALSE	0.6138
58561	0.69	0.72	11.0166	10.6686	FALSE	0.7336
58587	0.66	0.68	11.3501	11.1292	FALSE	-0.2806
58624	0.52	0.52	12.7994	12.7994	FALSE	-0.5677
58624	0.54	0.53	12.5983	12.6989	FALSE	0.2285
58630	0.47	0.47	13.3011	13.3011	FALSE	-0.5597
58630	0.48	0.45	13.2006	13.5026	FALSE	1.8374
58653	0.84	0.85	9.0222	8.8543	FALSE	-0.6645
58653	0.84	0.84	9.0222	9.0222	FALSE	-0.6282
58655	0.75	0.75	10.3020	10.3020	FALSE	-0.6077
58655	0.75	0.75	10.3020	10.3020	FALSE	-0.6077
58663	0.71	0.69	10.7865	11.0166	FALSE	1.2278
58663	0.71	0.68	10.7865	11.1292	FALSE	2.1221
58665	0.59	0.61	12.0898	11.8827	FALSE	-0.4024
58665	0.59	0.60	12.0898	11.9866	FALSE	-1.2274
58700	0.57	0.56	12.2945	12.3961	FALSE	0.2313
58700	0.58	0.55	12.1924	12.4974	FALSE	1.8443
58715	0.77	0.77	10.0446	10.0446	FALSE	-0.6118
58729	2.05	2.21	12.8746	12.4721	FALSE	1.1375
58729	2.08	2.08	12.7994	12.7994	FALSE	-0.5677
58778	0.56	0.58	12.3961	12.1924	FALSE	-0.4343
58778	0.57	0.57	12.2945	12.2945	FALSE	-0.5758
58796	0.45	0.45	13.5026	13.5026	FALSE	-0.5564
58796	0.46	0.45	13.4017	13.5026	FALSE	0.2434
58831	0.68	0.70	11.1292	10.9024	FALSE	-0.2304
58831	0.70	0.69	10.9024	11.0166	FALSE	0.3089
58832	0.67	0.70	11.2403	10.9024	FALSE	0.6505
58832	0.68	0.68	11.1292	11.1292	FALSE	-0.5944
58845	1.94	1.95	13.1504	13.1254	FALSE	-0.7613
58845	1.95	1.88	13.1254	13.3011	FALSE	0.8331
58860	0.77	0.78	10.0446	9.9112	FALSE	-0.9550
58860	0.76	0.77	10.1748	10.0446	FALSE	-0.9826
58863	0.65	0.65	11.4587	11.4587	FALSE	-0.5892
58863	0.65	0.63	11.4587	11.6726	FALSE	1.1094
58866	0.62	0.66	11.7781	11.3501	FALSE	1.3565
58866	0.61	0.66	11.8827	11.3501	FALSE	2.1859

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
58867	0.63	0.65	11.6726	11.4587	FALSE	-0.3419
58867	0.64	0.66	11.5662	11.3501	FALSE	-0.3231
58869	0.55	0.56	12.4974	12.3961	FALSE	-1.2497
58869	0.58	0.56	12.1924	12.3961	FALSE	1.0403
58871	0.53	0.56	12.6989	12.3961	FALSE	0.3479
58871	0.52	0.54	12.7994	12.5983	FALSE	-0.4612
58873	0.60	0.62	11.9866	11.7781	FALSE	-0.3893
58873	0.59	0.59	12.0898	12.0898	FALSE	-0.5791
58897	0.74	0.76	10.4266	10.1748	FALSE	-0.0205
58897	0.76	0.76	10.1748	10.1748	FALSE	-0.6097
58899	2.04	2.11	12.8997	12.7241	FALSE	-0.6649
58899	1.99	2.04	13.0251	12.8997	FALSE	-1.0666
58901	0.62	0.62	11.7781	11.7781	FALSE	-0.5841
58901	0.63	0.62	11.6726	11.7781	FALSE	0.2520
58911	0.60	0.61	11.9866	11.8827	FALSE	-1.2204
58911	0.59	0.61	12.0898	11.8827	FALSE	-0.4024
58926	0.58	0.60	12.1924	11.9866	FALSE	-0.4142
58926	0.58	0.59	12.1924	12.0898	FALSE	-1.2339
59017	1.75	1.85	13.6292	13.3765	FALSE	-0.0649
59017	1.76	1.90	13.6039	13.2508	FALSE	0.7325
87254	0.54	0.57	12.5983	12.2945	FALSE	0.3572
87263	0.50	0.51	13.0000	12.8997	FALSE	-1.2653
87274	0.60	0.60	11.9866	11.9866	FALSE	-0.5807
94074	0.70	0.73	10.9024	10.5487	FALSE	0.7806
94074	0.70	0.73	10.9024	10.5487	FALSE	0.7806
94080	0.45	0.46	13.5026	13.4017	FALSE	-1.2683
94084	0.49	0.52	13.1003	12.7994	FALSE	0.3264
94112	0.76	0.76	10.1748	10.1748	FALSE	-0.6097
94123	0.47	0.50	13.3011	13.0000	FALSE	0.3246
94123	0.47	0.50	13.3011	13.0000	FALSE	0.3246
94126	0.55	0.58	12.4974	12.1924	FALSE	0.3681
94126	0.56	0.57	12.3961	12.2945	FALSE	-1.2449
94131	0.48	0.44	13.2006	13.6039	FALSE	2.6414
94131	0.48	0.44	13.2006	13.6039	FALSE	2.6414
94145	0.54	0.53	12.5983	12.6989	FALSE	0.2285
94145	0.53	0.52	12.6989	12.7994	FALSE	0.2286
94159	0.63	0.63	11.6726	11.6726	FALSE	-0.5857
94159	0.64	0.63	11.5662	11.6726	FALSE	0.2577
94189	0.50	0.52	13.0000	12.7994	FALSE	-0.4684
94189	0.51	0.51	12.8997	12.8997	FALSE	-0.5661
94202	0.65	0.66	11.4587	11.3501	FALSE	-1.1747
94202	0.66	0.66	11.3501	11.3501	FALSE	-0.5909
94204	0.55	0.52	12.4974	12.7994	FALSE	1.8262
94204	0.55	0.52	12.4974	12.7994	FALSE	1.8262
94228	0.52	0.51	12.7994	12.8997	FALSE	0.2292
94228	0.51	0.51	12.8997	12.8997	FALSE	-0.5661
94231	0.58	0.58	12.1924	12.1924	FALSE	-0.5774
94231	0.59	0.56	12.0898	12.3961	FALSE	1.8536
94274	0.81	0.80	9.4884	9.6335	FALSE	0.5317
94274	0.82	0.81	9.3385	9.4884	FALSE	0.5672

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
94288	0.54	0.58	12.5983	12.1924	FALSE	1.1679
94288	0.54	0.59	12.5983	12.0898	FALSE	1.9828
94301	1.76	1.88	13.6039	13.3011	FALSE	0.3334
94301	1.76	1.82	13.6039	13.4522	FALSE	-0.8664
151181	0.91	0.90	7.6370	7.8738	FALSE	1.2304
151182	0.68	0.69	11.1292	11.0166	FALSE	-1.1374
151185	2.18	2.20	12.5478	12.4974	FALSE	-0.9727
151188	1.87	1.95	13.3262	13.1254	FALSE	-0.4716
151204	0.68	0.71	11.1292	10.7865	FALSE	0.6903
151204	0.70	0.71	10.9024	10.7865	FALSE	-1.1073
151206	0.74	0.72	10.4266	10.6686	FALSE	1.3164
151206	0.72	0.75	10.6686	10.3020	FALSE	0.8871
151208	0.44	0.43	13.6039	13.7055	FALSE	0.2522
151208	0.43	0.44	13.7055	13.6039	FALSE	-1.2659
151211	0.76	0.76	10.1748	10.1748	FALSE	-0.6097
151211	0.78	0.80	9.9112	9.6335	FALSE	0.1933
151226	1.81	1.89	13.4774	13.2759	FALSE	-0.4695
151226	1.80	1.99	13.5026	13.0251	FALSE	1.7232
151232	0.84	0.84	9.0222	9.0222	FALSE	-0.6282
151237	0.62	0.62	11.7781	11.7781	FALSE	-0.5841
151252	0.70	0.75	10.9024	10.3020	FALSE	2.7399
151263	0.59	0.64	12.0898	11.5662	FALSE	2.1117
151264	0.61	0.61	11.8827	11.8827	FALSE	-0.5824
151265	1.98	2.15	13.0501	12.6235	FALSE	1.3262
151275	0.66	0.69	11.3501	11.0166	FALSE	0.6138
151275	0.66	0.68	11.3501	11.1292	FALSE	-0.2806
151277	0.55	0.55	12.4974	12.4974	FALSE	-0.5725
151277	0.56	0.56	12.3961	12.3961	FALSE	-0.5742
151279	0.74	0.75	10.4266	10.3020	FALSE	-1.0311
151279	0.75	0.75	10.3020	10.3020	FALSE	-0.6077
151283	0.60	0.61	11.9866	11.8827	FALSE	-1.2204
151283	0.61	0.62	11.8827	11.7781	FALSE	-1.2127
153242	0.51	0.52	12.8997	12.7994	FALSE	-1.2632
153242	0.50	0.55	13.0000	12.4974	FALSE	1.9303
153254	0.60	0.60	11.9866	11.9866	FALSE	-0.5807
153254	0.60	0.60	11.9866	11.9866	FALSE	-0.5807

Figure G-20. 2010–11 KCCT: Delta Plot—Social Studies Grade 11

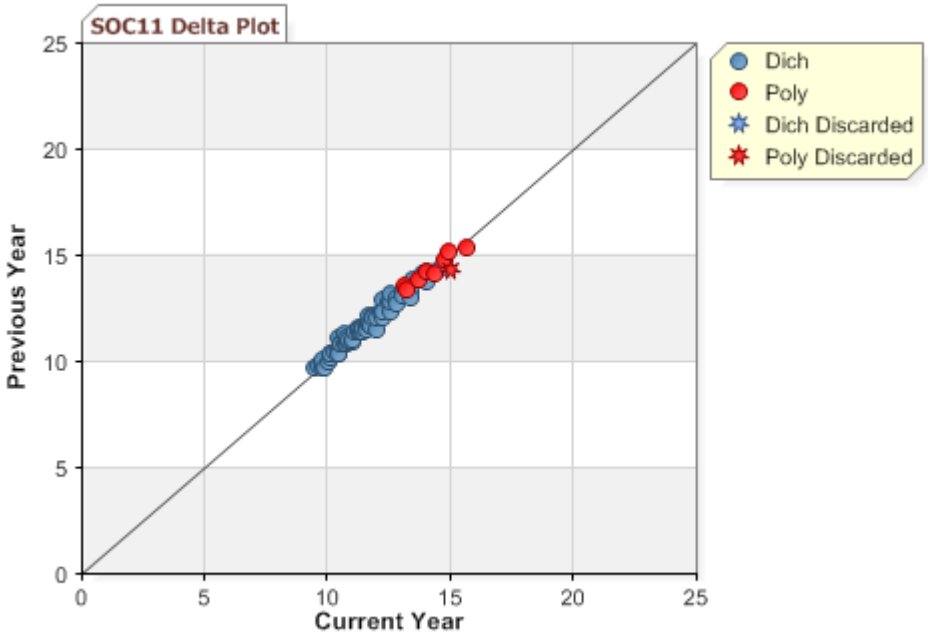


Table G-33. 2010–11 KCCT: Delta Analysis—Social Studies Grade 11

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
49587	0.70	0.69	10.9024	11.0166	FALSE	0.1671
49593	0.63	0.62	11.6726	11.7781	FALSE	-0.0250
50556	0.75	0.76	10.3020	10.1748	FALSE	-0.9571
50560	0.37	0.35	14.3274	14.5413	FALSE	0.1492
51148	0.80	0.81	9.6335	9.4884	FALSE	-0.9703
51151	0.53	0.52	12.6989	12.7994	FALSE	-0.2413
51152	0.71	0.73	10.7865	10.5487	FALSE	-0.2018
51153	0.46	0.47	13.4017	13.3011	FALSE	-0.5566
51154	0.66	0.66	11.3501	11.3501	FALSE	-0.6042
51156	0.62	0.63	11.7781	11.6726	FALSE	-0.8214
51157	0.51	0.57	12.8997	12.2945	FALSE	2.4018
51159	0.64	0.67	11.5662	11.2403	FALSE	0.4718
51162	1.52	1.59	14.2219	14.0393	FALSE	0.0874
51163	1.51	1.22	14.2482	15.0403	TRUE	3.6579
51262	0.46	0.47	13.4017	13.3011	FALSE	-0.5566
51264	0.60	0.57	11.9866	12.2945	FALSE	1.1413
51265	0.74	0.75	10.4266	10.3020	FALSE	-0.9507
51268	0.39	0.41	14.1173	13.9102	FALSE	0.2163
51331	0.42	0.45	13.8076	13.5026	FALSE	0.7514
51334	0.64	0.65	11.5662	11.4587	FALSE	-0.8479
51347	0.41	0.40	13.9102	14.0134	FALSE	-0.4440
51353	0.59	0.61	12.0898	11.8827	FALSE	-0.1509
51484	0.79	0.80	9.7743	9.6335	FALSE	-0.9708

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
51485	0.73	0.74	10.5487	10.4266	FALSE	-0.9434
51486	0.76	0.76	10.1748	10.1748	FALSE	-0.3913
51487	0.70	0.70	10.9024	10.9024	FALSE	-0.5231
51490	0.65	0.67	11.4587	11.2403	FALSE	-0.1970
51491	0.66	0.68	11.3501	11.1292	FALSE	-0.2011
51493	0.52	0.54	12.7994	12.5983	FALSE	-0.0585
51494	0.48	0.54	13.2006	12.5983	FALSE	2.4389
51496	0.40	0.40	14.0134	14.0134	FALSE	-1.0541
51497	0.57	0.58	12.2945	12.1924	FALSE	-0.7485
51498	0.60	0.61	11.9866	11.8827	FALSE	-0.7933
51499	0.63	0.64	11.6726	11.5662	FALSE	-0.8348
51500	0.80	0.79	9.6335	9.7743	FALSE	0.5576
51503	1.79	1.95	13.5279	13.1254	FALSE	1.2909
51572	0.52	0.55	12.7994	12.4974	FALSE	0.5513
51578	0.66	0.67	11.3501	11.2403	FALSE	-0.8728
51581	0.57	0.57	12.2945	12.2945	FALSE	-0.7752
51585	1.87	1.90	13.3262	13.2508	FALSE	-0.7229
51602	0.75	0.74	10.3020	10.4266	FALSE	0.3385
51606	0.62	0.63	11.7781	11.6726	FALSE	-0.8214
51608	0.64	0.65	11.5662	11.4587	FALSE	-0.8479
51609	0.63	0.62	11.6726	11.7781	FALSE	-0.0250
51610	0.68	0.71	11.1292	10.7865	FALSE	0.4949
51611	0.75	0.76	10.3020	10.1748	FALSE	-0.9571
51613	0.75	0.74	10.3020	10.4266	FALSE	0.3385
51616	0.77	0.79	10.0446	9.7743	FALSE	-0.1393
51617	0.40	0.40	14.0134	14.0134	FALSE	-1.0541
51619	1.13	1.00	15.3017	15.6980	FALSE	1.0749
75021	0.71	0.72	10.7865	10.6686	FALSE	-0.9264
132318	0.78	0.77	9.9112	10.0446	FALSE	0.4625
132340	0.60	0.60	11.9866	11.9866	FALSE	-0.7194
132343	0.78	0.79	9.9112	9.7743	FALSE	-0.9695
132346	0.50	0.46	13.0000	13.4017	FALSE	1.5249
132368	0.57	0.57	12.2945	12.2945	FALSE	-0.7752
132404	0.63	0.62	11.6726	11.7781	FALSE	-0.0250
132448	0.65	0.64	11.4587	11.5662	FALSE	0.0255
132449	1.55	1.47	14.1434	14.3539	FALSE	0.1626
132557	0.65	0.60	11.4587	11.9866	FALSE	2.5664
132640	0.65	0.65	11.4587	11.4587	FALSE	-0.6238
133557	0.69	0.70	11.0166	10.9024	FALSE	-0.9066
133687	0.57	0.54	12.2945	12.5983	FALSE	1.0606
134025	1.19	1.24	15.1264	14.9834	FALSE	0.0117
134029	0.66	0.65	11.3501	11.4587	FALSE	0.0520
134030	0.47	0.46	13.3011	13.4017	FALSE	-0.3491
134031	0.59	0.63	12.0898	11.6726	FALSE	1.1191
134032	0.38	0.40	14.2219	14.0134	FALSE	0.2439
134033	0.47	0.49	13.3011	13.1003	FALSE	0.0304
134038	0.50	0.52	13.0000	12.7994	FALSE	-0.0252
134042	0.67	0.72	11.2403	10.6686	FALSE	1.8988
134044	0.68	0.74	11.1292	10.4266	FALSE	2.6696
134045	0.42	0.42	13.8076	13.8076	FALSE	-1.0492

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
134049	1.68	1.71	13.8076	13.7310	FALSE	-0.6284
152476	0.80	0.78	9.6335	9.9112	FALSE	1.3850
152480	0.49	0.49	13.1003	13.1003	FALSE	-0.9211
152481	0.71	0.71	10.7865	10.7865	FALSE	-0.5021
152483	0.43	0.40	13.7055	14.0134	FALSE	0.8300
152484	0.69	0.69	11.0166	11.0166	FALSE	-0.5438
152498	0.71	0.73	10.7865	10.5487	FALSE	-0.2018
152511	1.31	1.32	14.7873	14.7597	FALSE	-0.7468

Figure G-21. 2010–11 KCCT: Delta Plot—Writing Grade 5

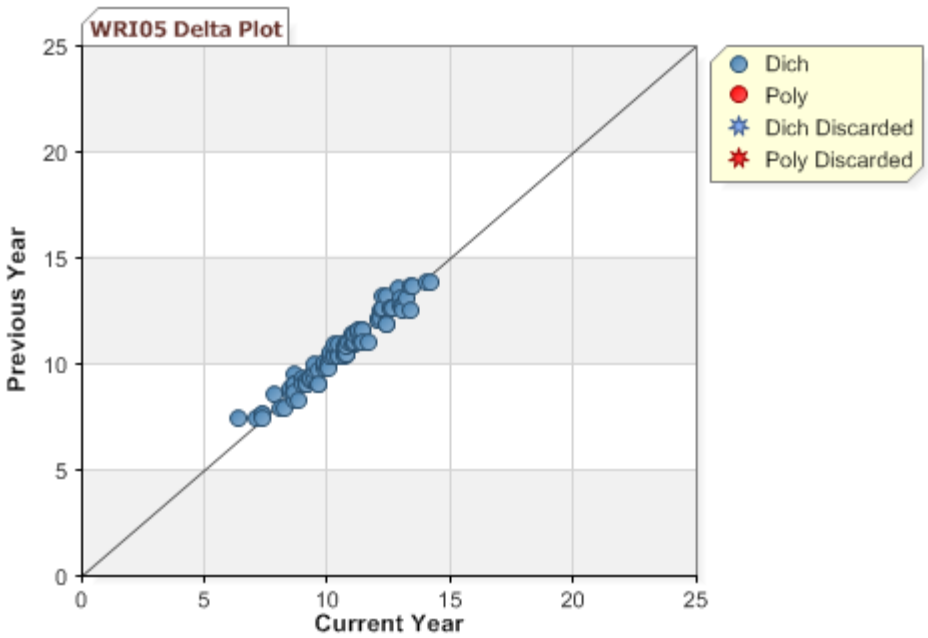


Table G-34. 2010–11 KCCT: Delta Analysis—Writing Grade 5

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
30309	0.49	0.48	13.1003	13.2006	FALSE	-1.0497
30309	0.49	0.50	13.1003	13.0000	FALSE	-0.4907
30310	0.48	0.57	13.2006	12.2945	FALSE	3.1886
30310	0.48	0.56	13.2006	12.3961	FALSE	2.7263
30312	0.61	0.56	11.8827	12.3961	FALSE	0.9862
30312	0.61	0.56	11.8827	12.3961	FALSE	0.9862
30313	0.82	0.84	9.3385	9.0222	FALSE	0.0090
30313	0.82	0.82	9.3385	9.3385	FALSE	-1.0226
30347	0.75	0.72	10.3020	10.6686	FALSE	0.5214
30347	0.75	0.74	10.3020	10.4266	FALSE	-0.5797

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
30348	0.92	0.92	7.3797	7.3797	FALSE	-0.7708
30348	0.92	0.93	7.3797	7.0968	FALSE	-0.3952
30350	0.66	0.68	11.3501	11.1292	FALSE	-0.1666
30350	0.66	0.67	11.3501	11.2403	FALSE	-0.6723
30360	0.54	0.54	12.5983	12.5983	FALSE	-1.0114
30360	0.54	0.57	12.5983	12.2945	FALSE	0.3706
30361	0.82	0.81	9.3385	9.4884	FALSE	-0.3407
30361	0.82	0.82	9.3385	9.3385	FALSE	-1.0226
30363	0.73	0.72	10.5487	10.6686	FALSE	-0.6327
30363	0.73	0.72	10.5487	10.6686	FALSE	-0.6327
30364	0.85	0.86	8.8543	8.6787	FALSE	-0.6940
30364	0.85	0.87	8.8543	8.4944	FALSE	0.1444
30372	0.84	0.83	9.0222	9.1833	FALSE	-0.2487
30372	0.84	0.83	9.0222	9.1833	FALSE	-0.2487
30374	0.42	0.38	13.8076	14.2219	FALSE	0.2881
30374	0.42	0.40	13.8076	14.0134	FALSE	-0.6607
30375	0.69	0.65	11.0166	11.4587	FALSE	0.7732
30375	0.69	0.63	11.0166	11.6726	FALSE	1.7463
30376	0.66	0.69	11.3501	11.0166	FALSE	0.3457
30376	0.66	0.69	11.3501	11.0166	FALSE	0.3457
30393	0.64	0.65	11.5662	11.4587	FALSE	-0.6553
30393	0.64	0.65	11.5662	11.4587	FALSE	-0.6553
30395	0.59	0.59	12.0898	12.0898	FALSE	-1.0768
30395	0.59	0.58	12.0898	12.1924	FALSE	-0.9095
30396	0.83	0.82	9.1833	9.3385	FALSE	-0.2965
30396	0.83	0.83	9.1833	9.1833	FALSE	-1.0027
30397	0.84	0.80	9.0222	9.6335	FALSE	1.7995
30397	0.84	0.80	9.0222	9.6335	FALSE	1.7995
30408	0.91	0.92	7.6370	7.3797	FALSE	-0.4787
30408	0.91	0.92	7.6370	7.3797	FALSE	-0.4787
30410	0.74	0.71	10.4266	10.7865	FALSE	0.4747
30410	0.74	0.71	10.4266	10.7865	FALSE	0.4747
30411	0.84	0.86	9.0222	8.6787	FALSE	0.0915
30411	0.84	0.86	9.0222	8.6787	FALSE	0.0915
30419	0.60	0.59	11.9866	12.0898	FALSE	-0.8935
30419	0.60	0.59	11.9866	12.0898	FALSE	-0.8935
30420	0.84	0.83	9.0222	9.1833	FALSE	-0.2487
30420	0.84	0.84	9.0222	9.0222	FALSE	-0.9820
30423	0.64	0.67	11.5662	11.2403	FALSE	0.3383
30423	0.64	0.67	11.5662	11.2403	FALSE	0.3383
30436	0.44	0.45	13.6039	13.5026	FALSE	-0.4216
30436	0.44	0.46	13.6039	13.4017	FALSE	0.0375
30438	0.55	0.46	12.4974	13.4017	FALSE	2.6861
30438	0.55	0.49	12.4974	13.1003	FALSE	1.3145
30442	0.75	0.74	10.3020	10.4266	FALSE	-0.5797
30442	0.75	0.76	10.3020	10.1748	FALSE	-0.7276
30445	0.74	0.74	10.4266	10.4266	FALSE	-1.1625
30445	0.74	0.76	10.4266	10.1748	FALSE	-0.1448
30447	0.70	0.74	10.9024	10.4266	FALSE	0.9353
30447	0.70	0.75	10.9024	10.3020	FALSE	1.5021

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
30448	0.78	0.78	9.9112	9.9112	FALSE	-1.0962
30448	0.78	0.77	9.9112	10.0446	FALSE	-0.4894
30493	0.69	0.71	11.0166	10.7865	FALSE	-0.1677
30493	0.69	0.70	11.0166	10.9024	FALSE	-0.6952
30494	0.54	0.53	12.5983	12.6989	FALSE	-0.9837
30494	0.54	0.54	12.5983	12.5983	FALSE	-1.0114
30495	0.74	0.71	10.4266	10.7865	FALSE	0.4747
30495	0.74	0.71	10.4266	10.7865	FALSE	0.4747
30497	0.73	0.76	10.5487	10.1748	FALSE	0.4265
30497	0.73	0.75	10.5487	10.3020	FALSE	-0.1524
30507	0.78	0.78	9.9112	9.9112	FALSE	-1.0962
30507	0.78	0.81	9.9112	9.4884	FALSE	0.5669
30508	0.71	0.71	10.7865	10.7865	FALSE	-1.2088
30508	0.71	0.72	10.7865	10.6686	FALSE	-0.7083
30509	0.80	0.80	9.6335	9.6335	FALSE	-1.0605
30509	0.80	0.81	9.6335	9.4884	FALSE	-0.7324
30511	0.70	0.68	10.9024	11.1292	FALSE	-0.1917
30511	0.70	0.69	10.9024	11.0166	FALSE	-0.7041
30521	0.90	0.88	7.8738	8.3001	FALSE	1.1051
30521	0.90	0.89	7.8738	8.0939	FALSE	0.1670
30523	0.88	0.85	8.3001	8.8543	FALSE	1.6324
30523	0.88	0.86	8.3001	8.6787	FALSE	0.8337
30524	0.79	0.78	9.7743	9.9112	FALSE	-0.4557
30524	0.79	0.77	9.7743	10.0446	FALSE	0.1512
30525	0.53	0.50	12.6989	13.0000	FALSE	-0.0847
30525	0.53	0.49	12.6989	13.1003	FALSE	0.3715
30536	0.92	0.95	7.3797	6.4206	FALSE	2.6816
30558	0.81	0.86	9.4884	8.6787	FALSE	2.2727
30560	0.45	0.51	13.5026	12.8997	FALSE	1.8480
32298	0.86	0.86	8.6787	8.6787	FALSE	-0.9378
32298	0.86	0.87	8.6787	8.4944	FALSE	-0.6768
32306	0.69	0.68	11.0166	11.1292	FALSE	-0.7260
32306	0.69	0.66	11.0166	11.3501	FALSE	0.2792
32310	0.77	0.77	10.0446	10.0446	FALSE	-1.1134
32310	0.77	0.78	10.0446	9.9112	FALSE	-0.7328
32318	0.75	0.75	10.3020	10.3020	FALSE	-1.1465
32318	0.75	0.76	10.3020	10.1748	FALSE	-0.7276
32319	0.55	0.58	12.4974	12.1924	FALSE	0.3629
32319	0.55	0.57	12.4974	12.2945	FALSE	-0.1015
32394	0.87	0.90	8.4944	7.8738	FALSE	1.2848

Figure G-22. 2010–11 KCCT: Delta Plot—Writing Grade 8

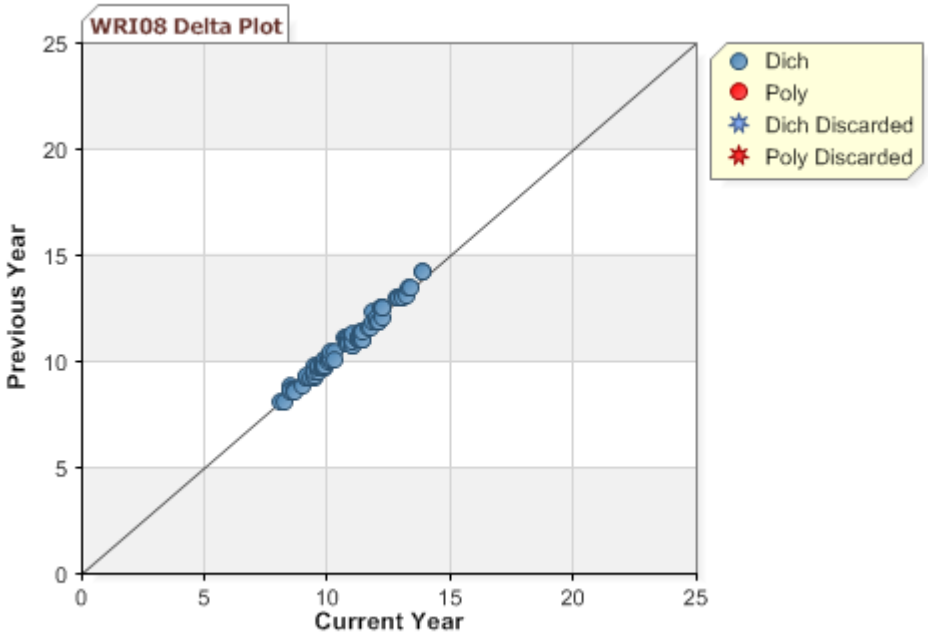


Table G-35. 2010–11 KCCT: Delta Analysis—Writing Grade 8

IREF	*Difficulty*		*Delta*		*Discard*	*Standardized Distance*
	Old	*New*	*Old*	*New*		
31104	0.70	0.69	10.9024	11.0166	FALSE	-0.4024
31104	0.70	0.70	10.9024	10.9024	FALSE	-1.1505
31105	0.83	0.82	9.1833	9.3385	FALSE	-0.3299
31105	0.83	0.81	9.1833	9.4884	FALSE	1.0367
31109	0.69	0.67	11.0166	11.2403	FALSE	0.6165
31109	0.69	0.65	11.0166	11.4587	FALSE	2.6076
31112	0.61	0.60	11.8827	11.9866	FALSE	-0.3246
31112	0.61	0.61	11.8827	11.8827	FALSE	-1.2719
31113	0.74	0.76	10.4266	10.1748	FALSE	1.2291
31113	0.74	0.75	10.4266	10.3020	FALSE	0.0688
31116	0.79	0.78	9.7743	9.9112	FALSE	-0.3931
31116	0.79	0.78	9.7743	9.9112	FALSE	-0.3931
31117	0.49	0.49	13.1003	13.1003	FALSE	-1.0584
31117	0.49	0.48	13.1003	13.2006	FALSE	-0.1435
31194	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
31194	0.79	0.80	9.7743	9.6335	FALSE	0.3311
31195	0.87	0.86	8.4944	8.6787	FALSE	-0.1855
31195	0.87	0.87	8.4944	8.4944	FALSE	-0.7284
31196	0.86	0.86	8.6787	8.6787	FALSE	-0.7607
31196	0.86	0.86	8.6787	8.6787	FALSE	-0.7607
31197	0.64	0.62	11.5662	11.7781	FALSE	0.6049
31197	0.64	0.63	11.5662	11.6726	FALSE	-0.3570
31208	0.68	0.67	11.1292	11.2403	FALSE	-0.3905

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
31208	0.68	0.67	11.1292	11.2403	FALSE	-0.3905
31209	0.89	0.88	8.0939	8.3001	FALSE	-0.0562
31209	0.89	0.89	8.0939	8.0939	FALSE	-0.6582
31213	0.71	0.71	10.7865	10.7865	FALSE	-1.1302
31213	0.71	0.70	10.7865	10.9024	FALSE	-0.4069
31218	0.55	0.57	12.4974	12.2945	FALSE	0.4195
31218	0.55	0.58	12.4974	12.1924	FALSE	1.3503
31219	0.86	0.87	8.6787	8.4944	FALSE	0.9197
31219	0.86	0.86	8.6787	8.6787	FALSE	-0.7607
31220	0.79	0.81	9.7743	9.4884	FALSE	1.6542
31220	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
31227	0.68	0.70	11.1292	10.9024	FALSE	0.8778
31227	0.68	0.72	11.1292	10.6686	FALSE	3.0093
31228	0.77	0.76	10.0446	10.1748	FALSE	-0.4071
31228	0.77	0.78	10.0446	9.9112	FALSE	0.2161
31229	0.67	0.66	11.2403	11.3501	FALSE	-0.3833
31229	0.67	0.69	11.2403	11.0166	FALSE	0.8304
31259	0.68	0.71	11.1292	10.7865	FALSE	1.9349
31260	0.57	0.61	12.2945	11.8827	FALSE	2.3601
31261	0.80	0.80	9.6335	9.6335	FALSE	-0.9281
31265	0.50	0.51	13.0000	12.8997	FALSE	-0.6039
31265	0.50	0.52	13.0000	12.7994	FALSE	0.3110
31267	0.38	0.41	14.2219	13.9102	FALSE	1.1101
31267	0.38	0.41	14.2219	13.9102	FALSE	1.1101
31268	0.68	0.67	11.1292	11.2403	FALSE	-0.3905
31268	0.68	0.67	11.1292	11.2403	FALSE	-0.3905
31275	0.81	0.80	9.4884	9.6335	FALSE	-0.3685
31275	0.81	0.81	9.4884	9.4884	FALSE	-0.9026
31278	0.78	0.78	9.9112	9.9112	FALSE	-0.9767
31278	0.78	0.77	9.9112	10.0446	FALSE	-0.4012
31279	0.69	0.65	11.0166	11.4587	FALSE	2.6076
31279	0.69	0.66	11.0166	11.3501	FALSE	1.6177
31280	0.80	0.79	9.6335	9.7743	FALSE	-0.3823
31280	0.80	0.80	9.6335	9.6335	FALSE	-0.9281
31281	0.76	0.76	10.1748	10.1748	FALSE	-1.0230
31281	0.76	0.76	10.1748	10.1748	FALSE	-1.0230
31405	0.66	0.66	11.3501	11.3501	FALSE	-1.2290
31405	0.66	0.65	11.3501	11.4587	FALSE	-0.3753
31408	0.50	0.49	13.0000	13.1003	FALSE	-0.1617
31408	0.50	0.51	13.0000	12.8997	FALSE	-0.6039
31432	0.82	0.81	9.3385	9.4884	FALSE	-0.3513
31432	0.82	0.83	9.3385	9.1833	FALSE	0.5388
31434	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
31434	0.79	0.78	9.7743	9.9112	FALSE	-0.3931
31436	0.83	0.83	9.1833	9.1833	FALSE	-0.8491
31436	0.83	0.83	9.1833	9.1833	FALSE	-0.8491
31444	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
31444	0.79	0.78	9.7743	9.9112	FALSE	-0.3931
31453	0.55	0.57	12.4974	12.2945	FALSE	0.4195
31453	0.55	0.57	12.4974	12.2945	FALSE	0.4195

continued

IREF	Difficulty		Delta		Discard	Standardized Distance
	Old	New	Old	New		
31491	0.79	0.78	9.7743	9.9112	FALSE	-0.3931
31491	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
31493	0.77	0.75	10.0446	10.3020	FALSE	0.7532
31493	0.77	0.78	10.0446	9.9112	FALSE	0.2161
31495	0.80	0.78	9.6335	9.9112	FALSE	0.8661
31495	0.80	0.79	9.6335	9.7743	FALSE	-0.3823
31497	0.46	0.46	13.4017	13.4017	FALSE	-1.0056
31497	0.46	0.47	13.4017	13.3011	FALSE	-0.6709
32391	0.68	0.69	11.1292	11.0166	FALSE	-0.1635
32397	0.85	0.84	8.8543	9.0222	FALSE	-0.2718
32397	0.85	0.87	8.8543	8.4944	FALSE	2.4896
32418	0.79	0.79	9.7743	9.7743	FALSE	-0.9527
32418	0.79	0.80	9.7743	9.6335	FALSE	0.3311
32419	0.77	0.77	10.0446	10.0446	FALSE	-1.0001
32419	0.77	0.76	10.0446	10.1748	FALSE	-0.4071
32426	0.60	0.60	11.9866	11.9866	FALSE	-1.2536
32426	0.60	0.57	11.9866	12.2945	FALSE	1.5538
36559	0.61	0.59	11.8827	12.0898	FALSE	0.6165
36559	0.61	0.59	11.8827	12.0898	FALSE	0.6165
37890	0.72	0.69	10.6686	11.0166	FALSE	1.6881
37890	0.72	0.69	10.6686	11.0166	FALSE	1.6881
51736	0.77	0.77	10.0446	10.0446	FALSE	-1.0001
51736	0.77	0.77	10.0446	10.0446	FALSE	-1.0001
68893	0.69	0.67	11.0166	11.2403	FALSE	0.6165
68893	0.69	0.67	11.0166	11.2403	FALSE	0.6165
68894	0.79	0.80	9.7743	9.6335	FALSE	0.3311
68894	0.79	0.79	9.7743	9.7743	FALSE	-0.9527

Appendix H—*A*-PLOTS AND *B*-PLOTS

Figure H-1. 2010–11 KCCT: *α*-Plot—Mathematics Grade 3

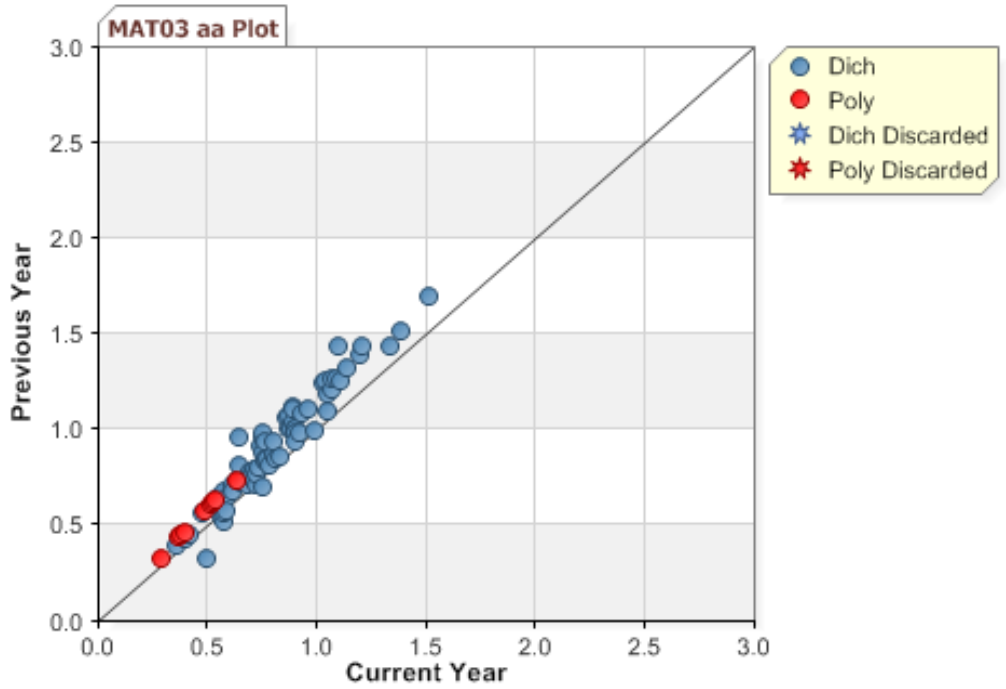


Figure H-2. 2010–11 KCCT: *b*-Plot—Mathematics Grade 3

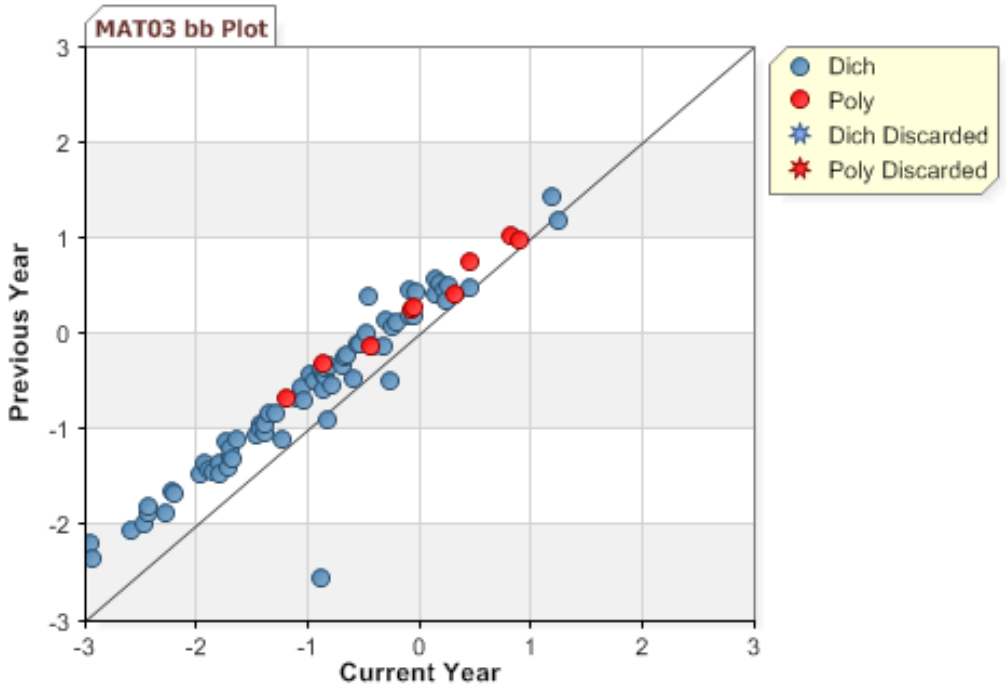


Figure H-3. 2010–11 KCCT: *α*-Plot—Mathematics Grade 4

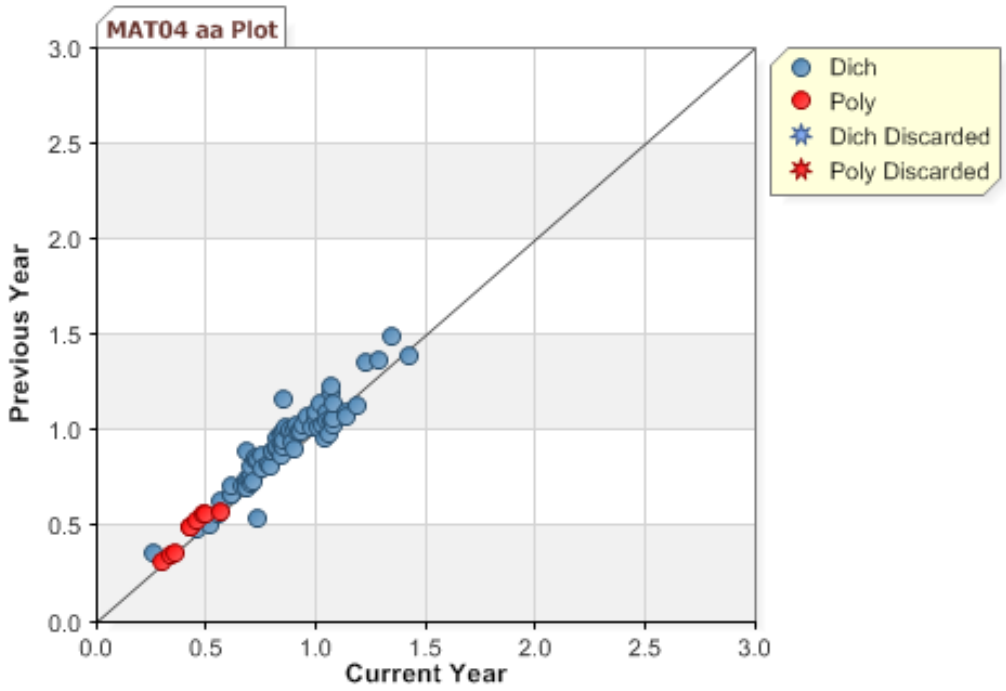


Figure H-4. 2010–11 KCCT: *b*-Plot—Mathematics Grade 4

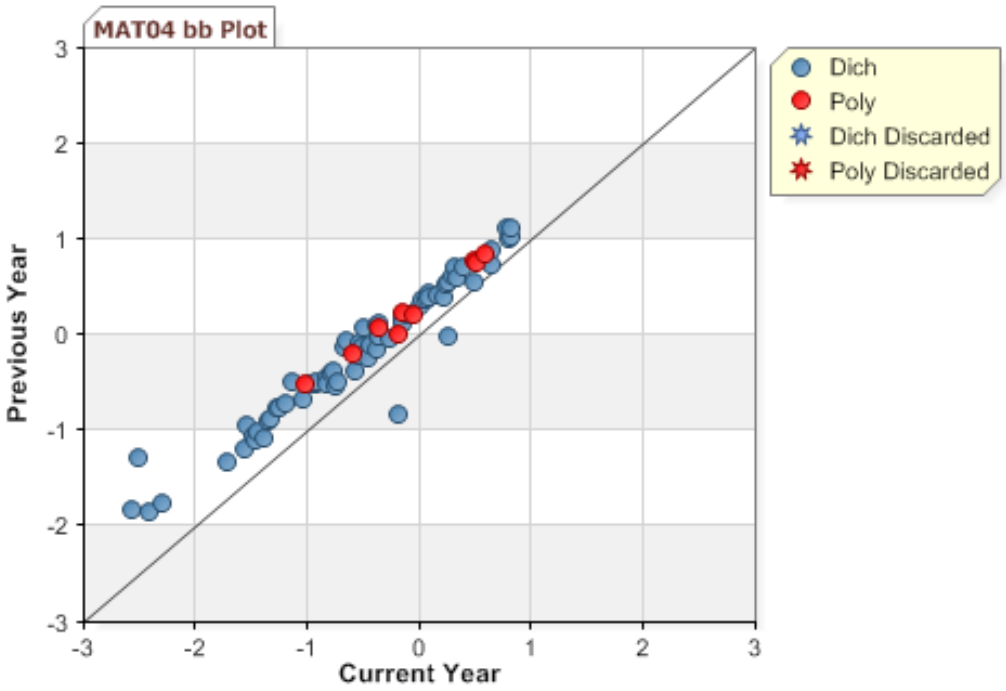


Figure H-5. 2010–11 KCCT: *α*-Plot—Mathematics Grade 5

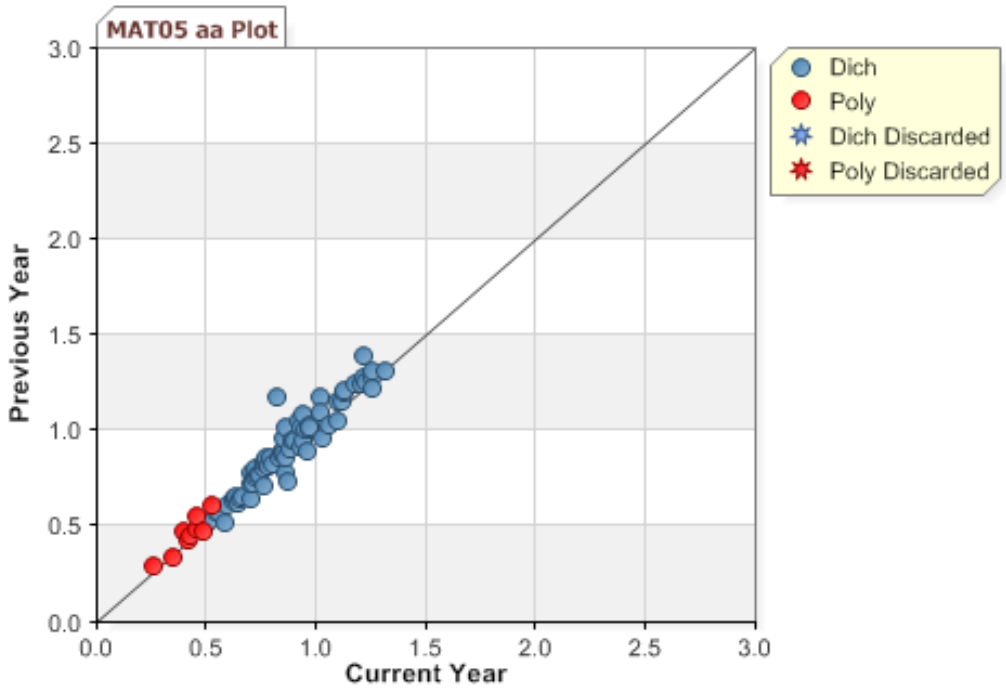


Figure H-6. 2010–-11 KCCT: *b*-Plot—Mathematics Grade 5

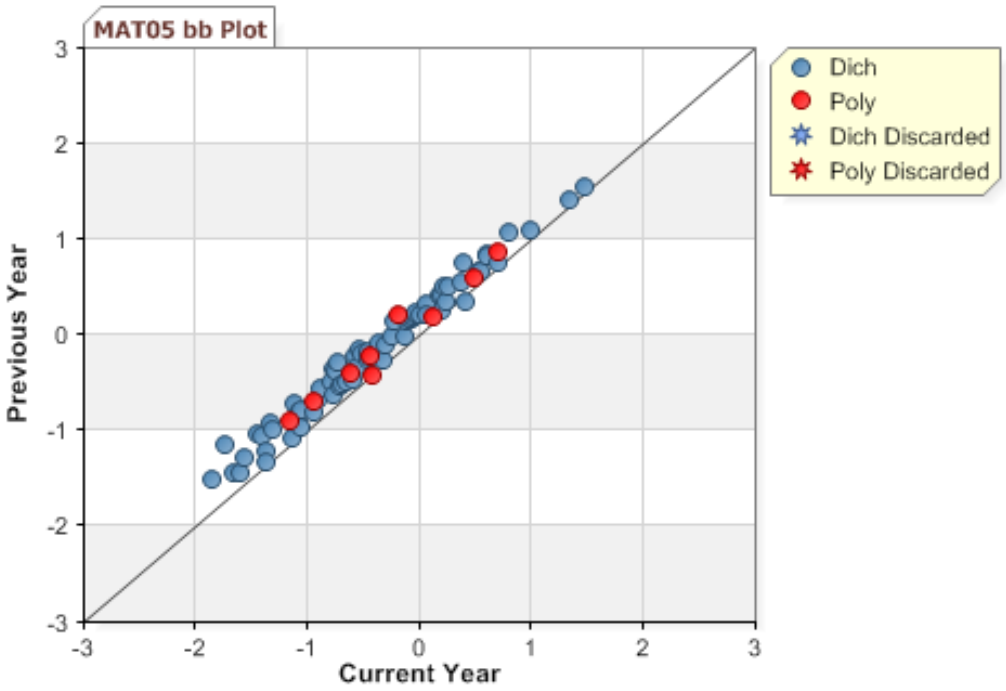


Figure H-7. 2010–11 KCCT: *α*-Plot—Mathematics Grade 6

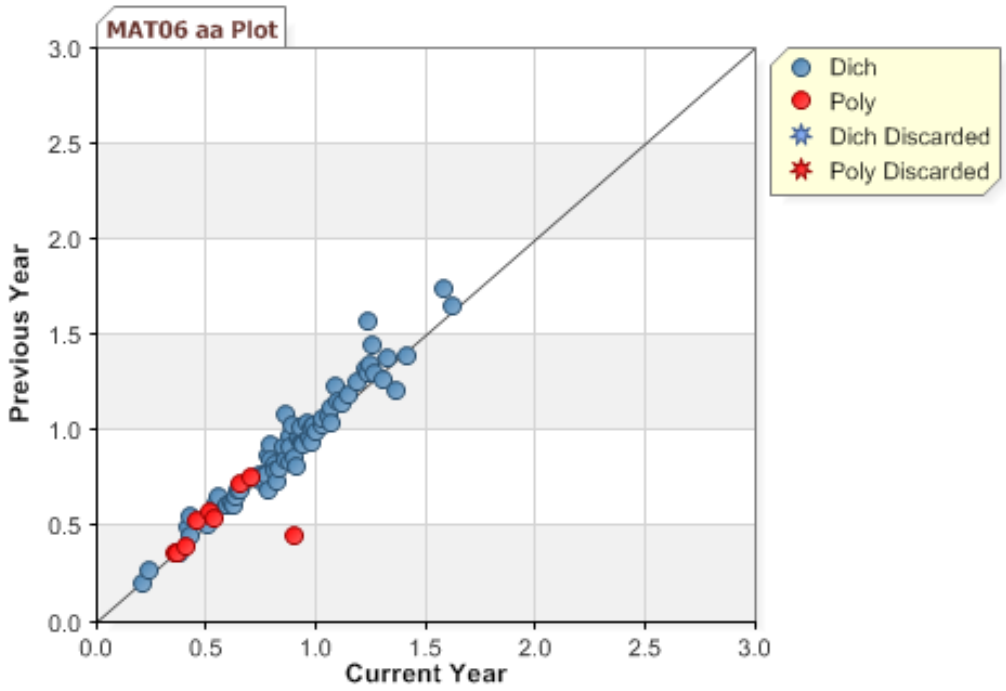


Figure H-8. 2010–-11 KCCT: *b*-Plot—Mathematics Grade 6

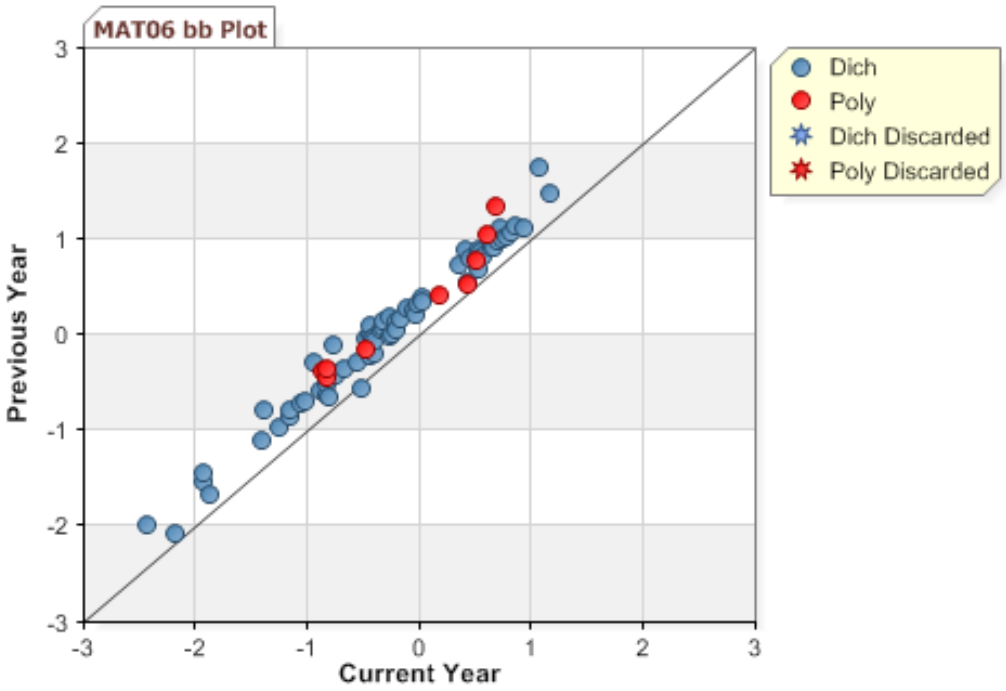


Figure H-9. 2010–11 KCCT: *α*-Plot—Mathematics Grade 7

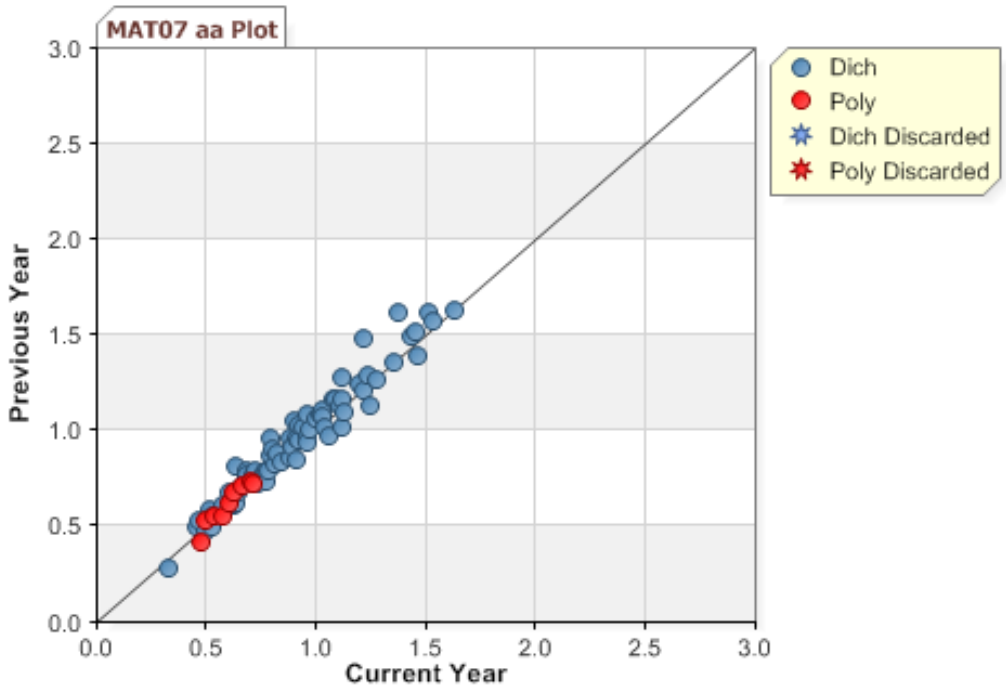


Figure H-10. 2010–11 KCCT: *b*-Plot—Mathematics Grade 7

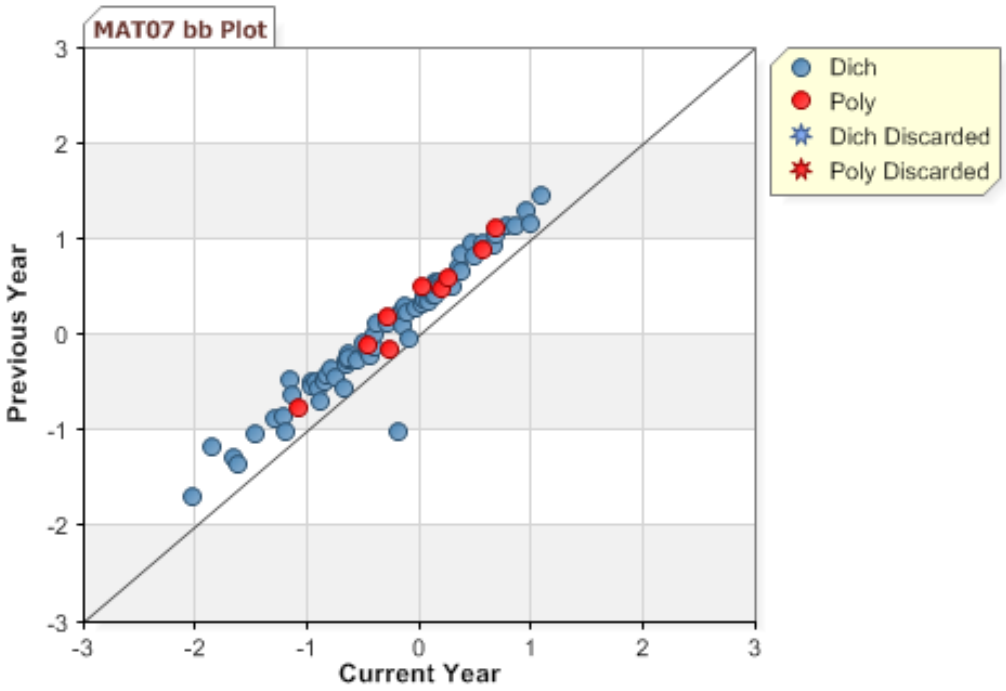


Figure H-11. 2010–11 KCCT: *α*-Plot— – Mathematics Grade 8

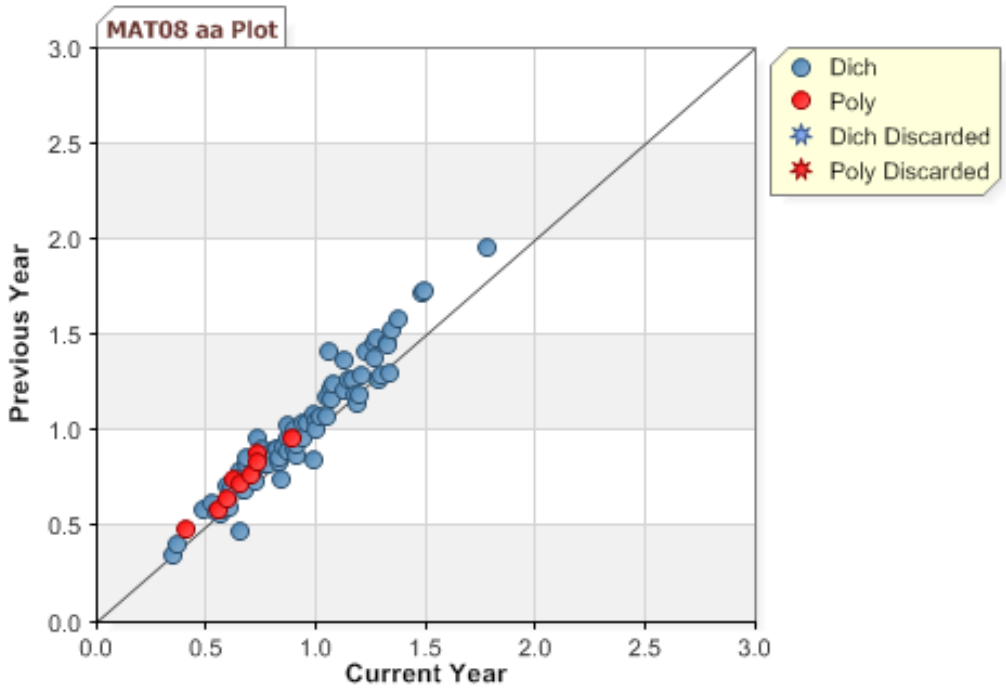


Figure H-12. 2010–11 KCCT: *b*-Plot—Mathematics Grade 8

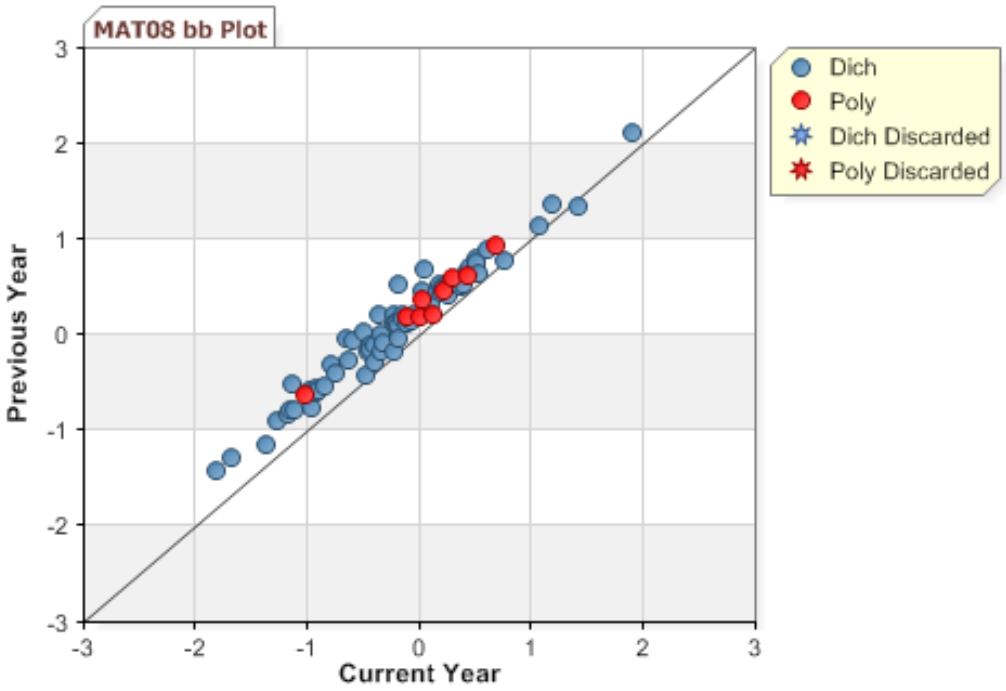


Figure H-13. 2010–11 KCCT: *α*-Plot—Mathematics Grade 11

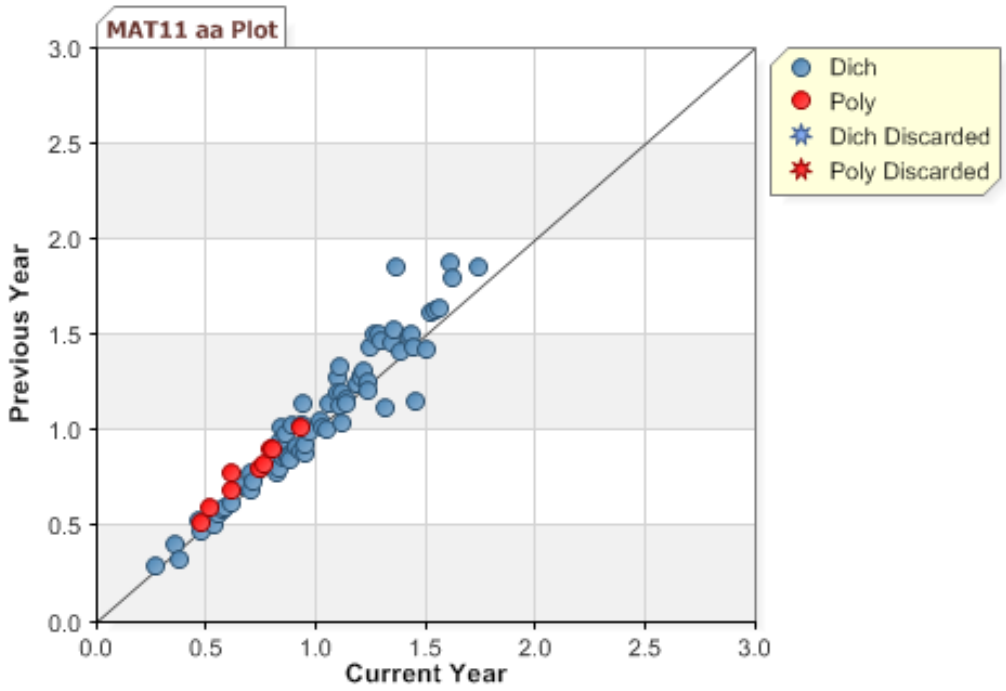


Figure H-14. 2010–11 KCCT: *b*-Plot—Mathematics Grade 11

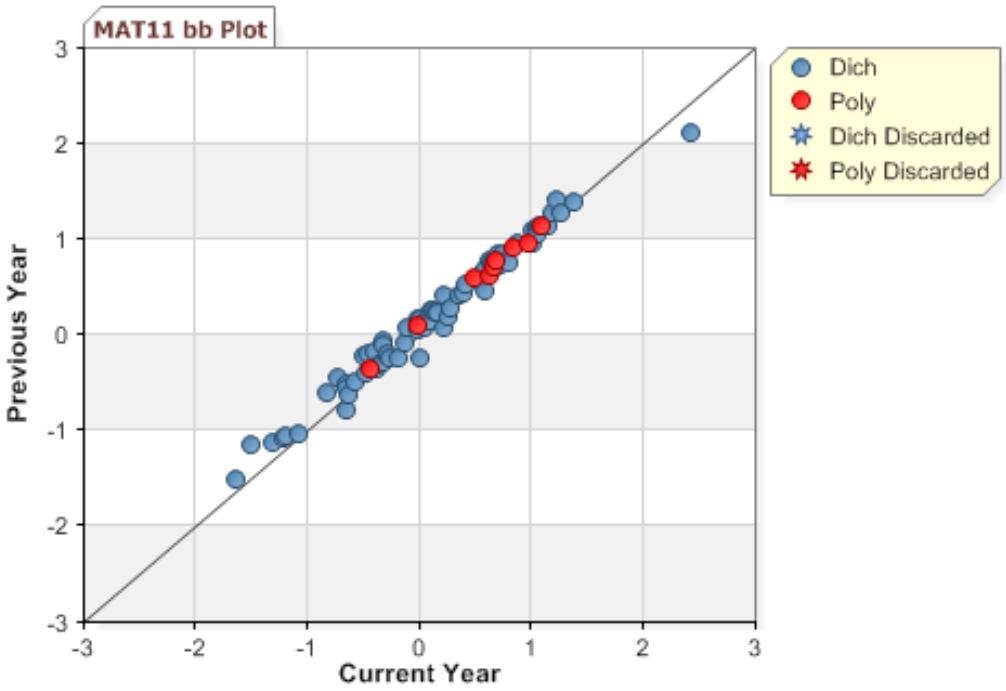


Figure H-15. 2010–11 KCCT: *α*-Plot—Reading Grade 3

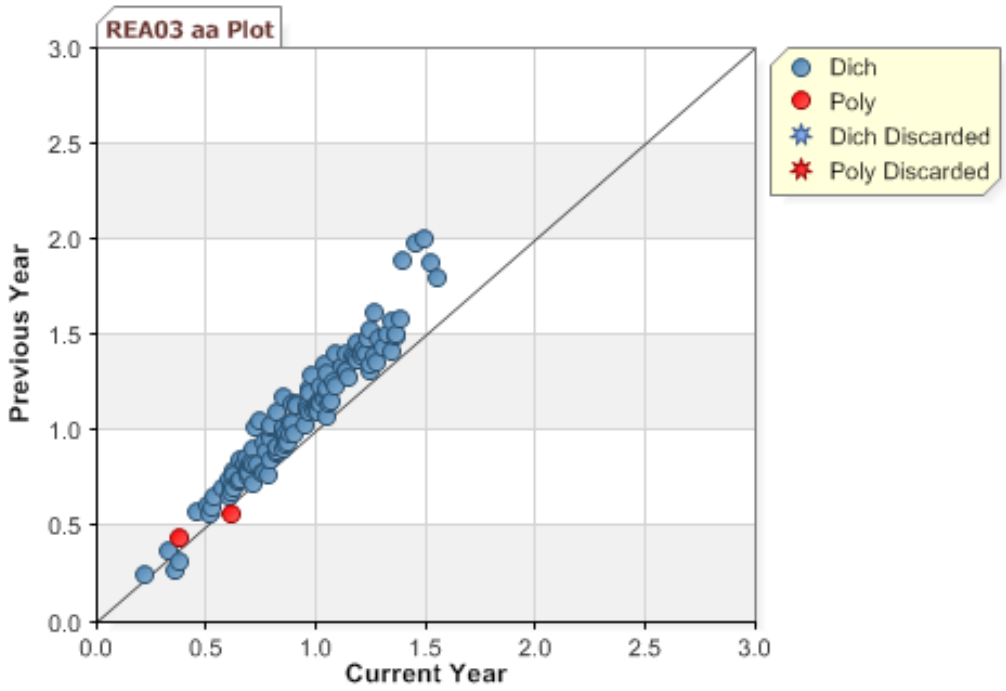


Figure H-16. 2010–11 KCCT: *b*-Plot—Reading Grade 3

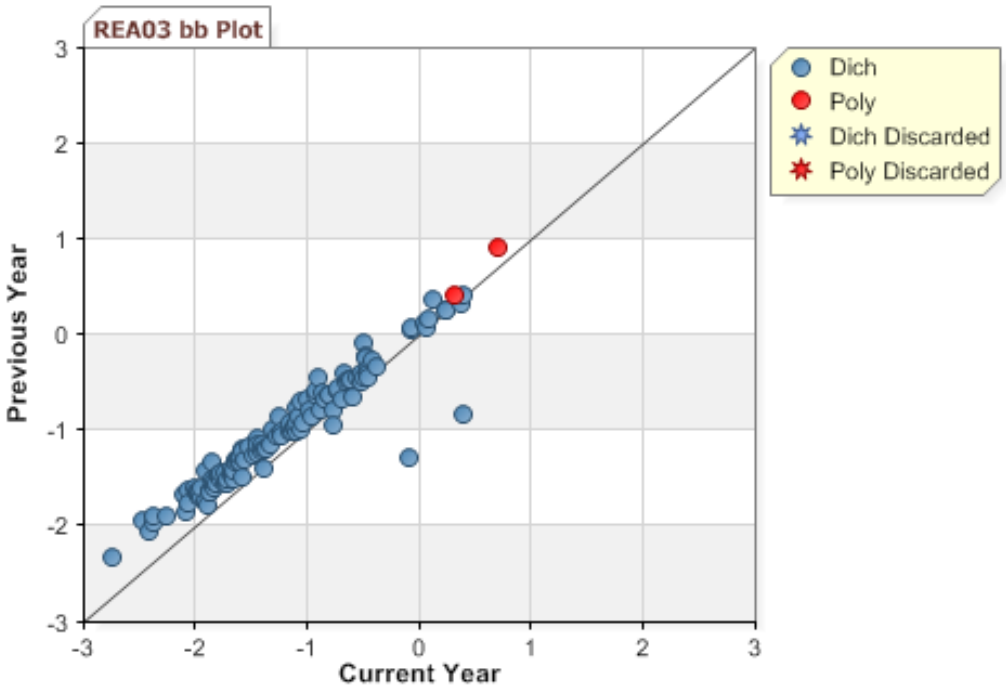


Figure H-17. 2010–11 KCCT: *α*-Plot—Reading Grade 4

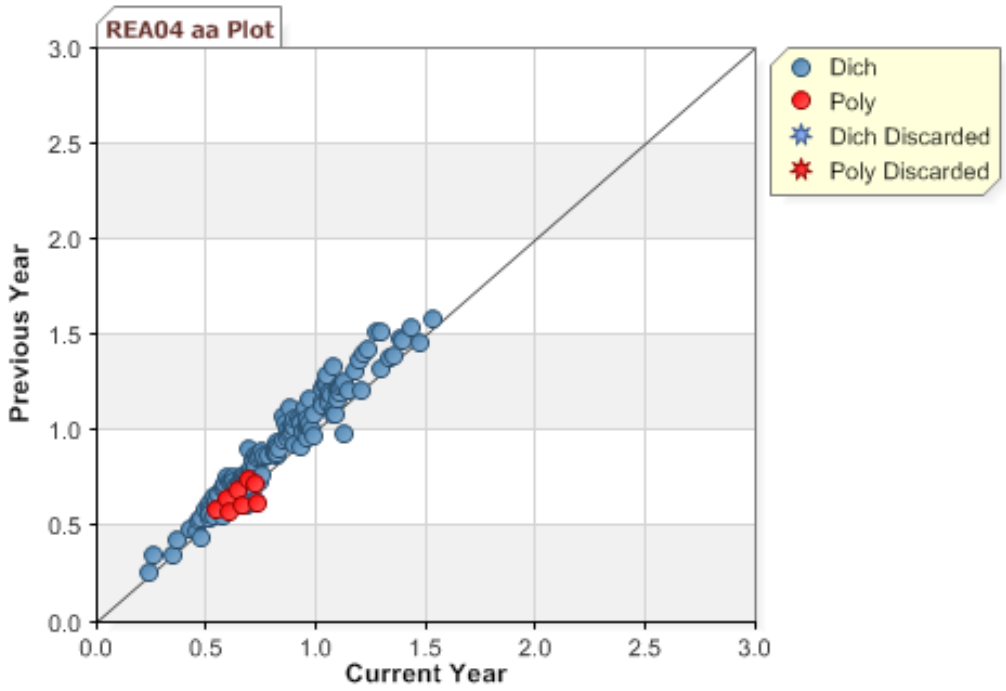


Figure H-18. 2010–11 KCCT: *b*-Plot—Reading Grade 4

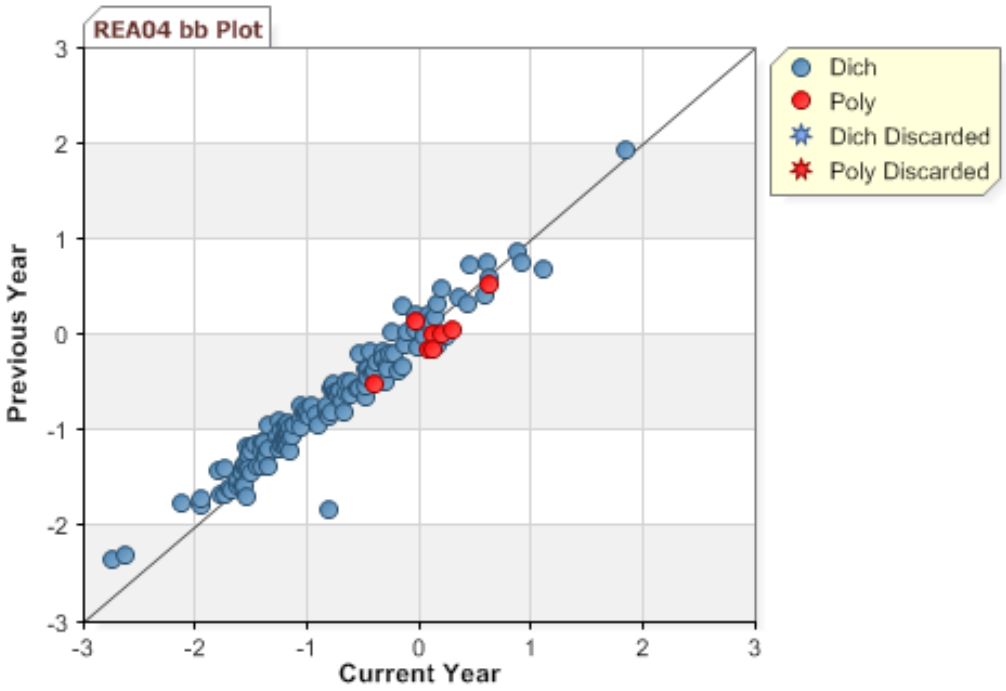


Figure H-19. 2010–11 KCCT: *α*-Plot—Reading Grade 5

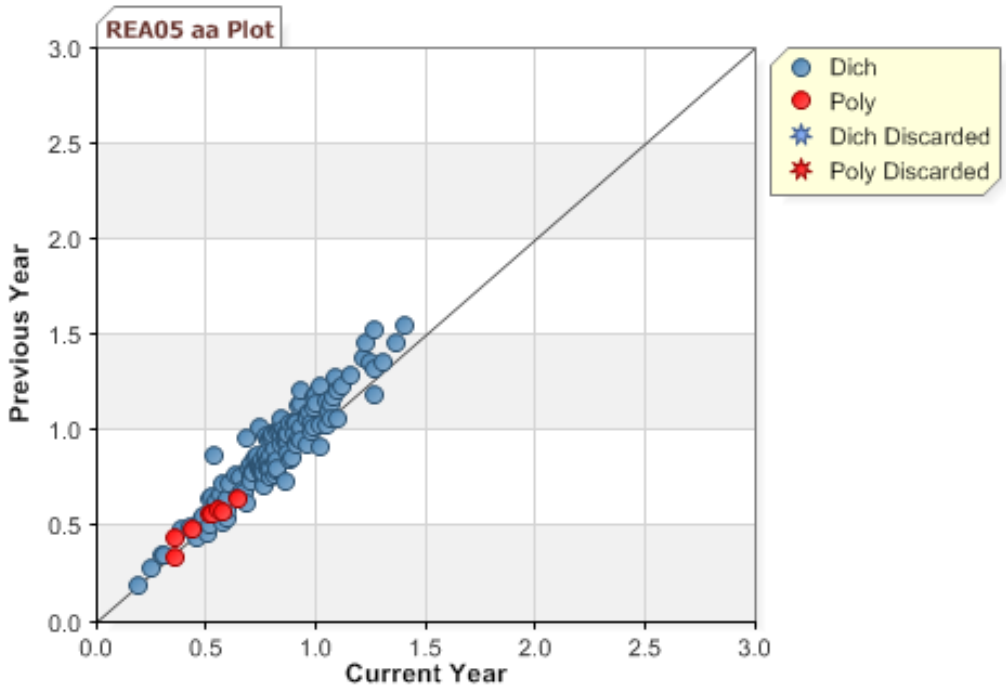


Figure H-20. 2010–11 KCCT: *b*-Plot—Reading Grade 5

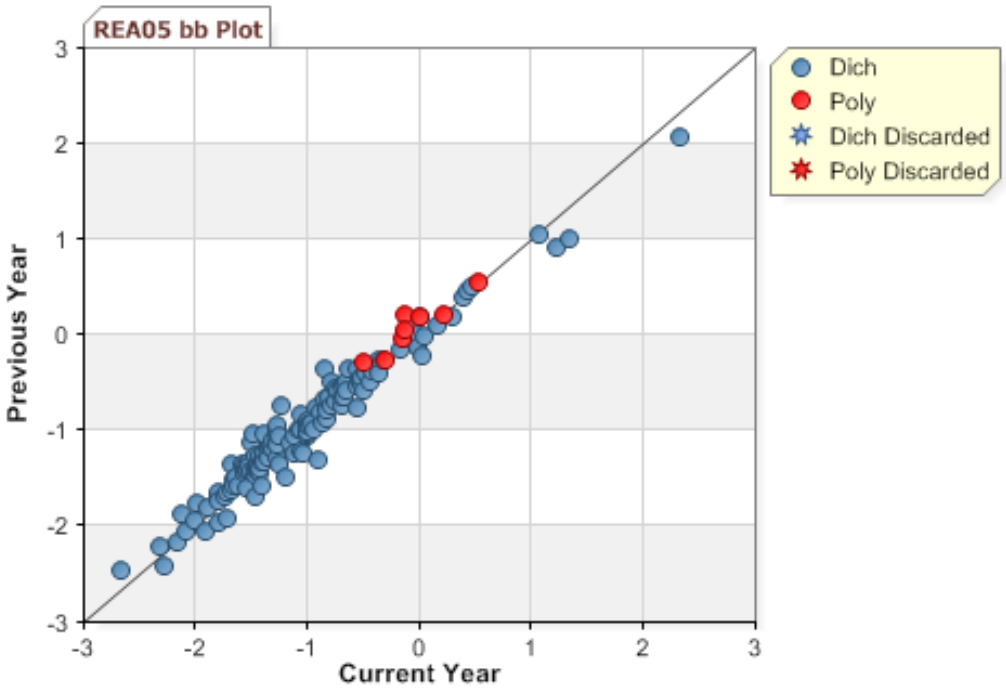


Figure H-21. 2010–11 KCCT: *α*-Plot—Reading Grade 6

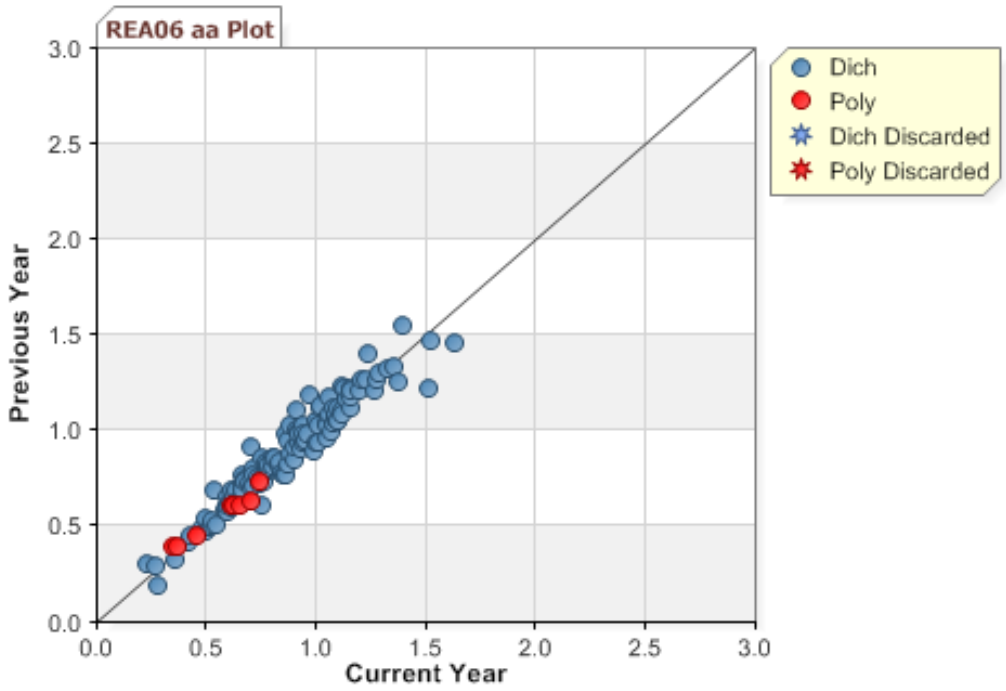


Figure H-22. 2010–11 KCCT: *b*-Plot—Reading Grade 6

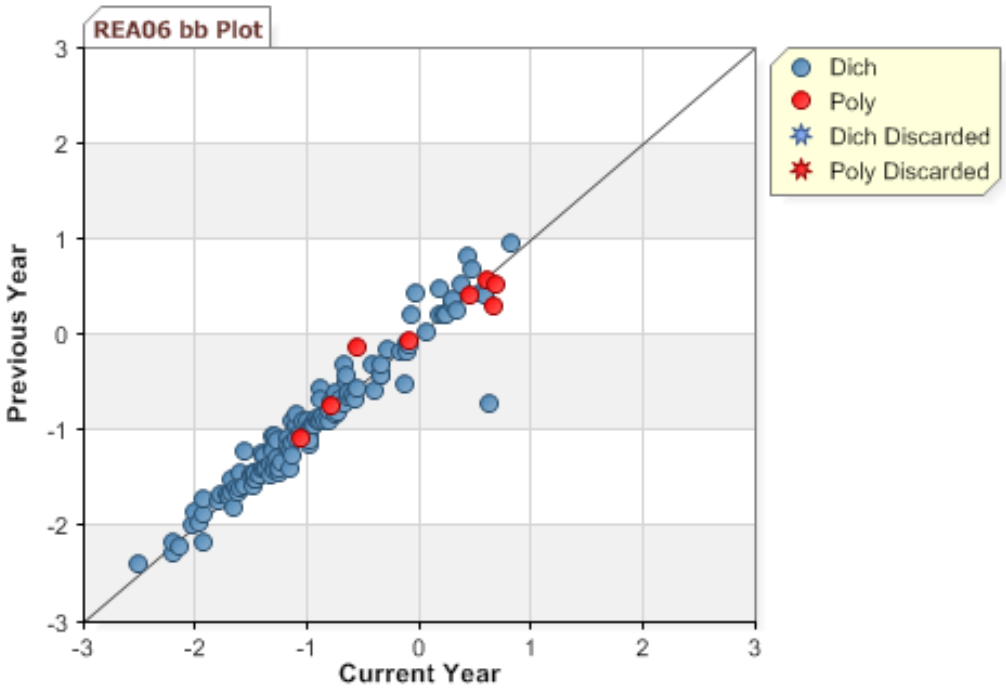


Figure H-23. 2010–11 KCCT: *α*-Plot—Reading Grade 7

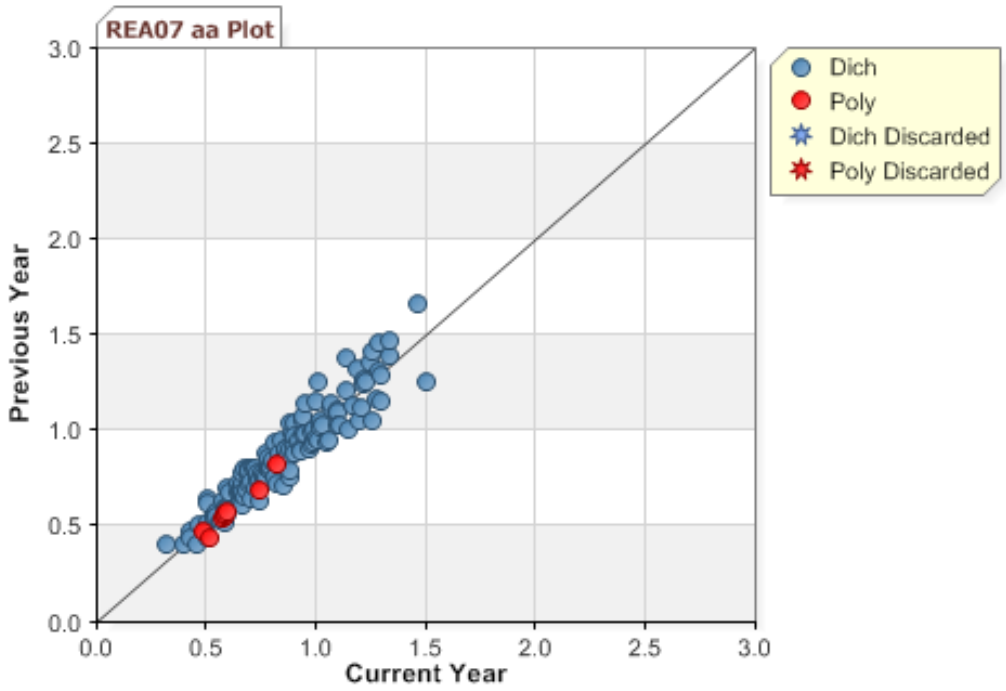


Figure H-24. 2010–11 KCCT: *b*-Plot—Reading Grade 7

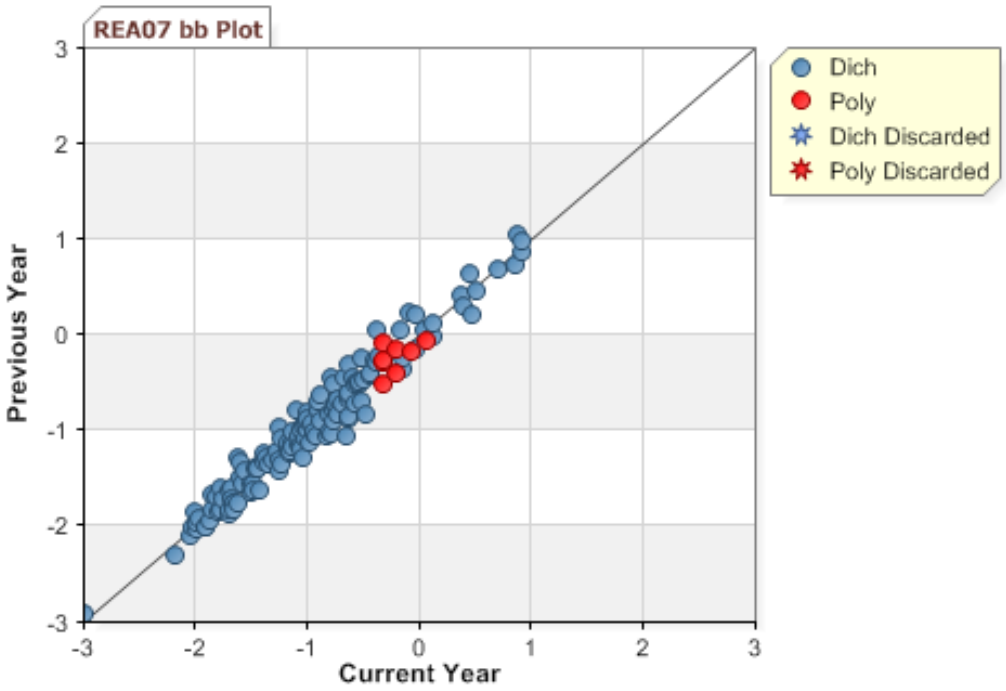


Figure H-25. 2010–11 KCCT: *α*-Plot—Reading Grade 8

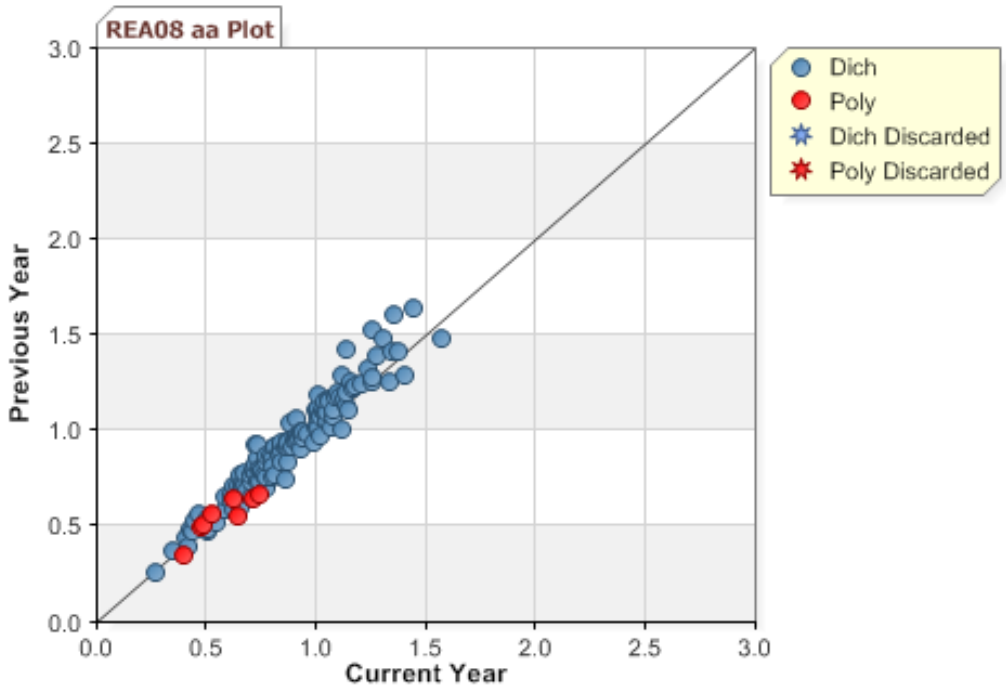


Figure H-26. 2010–11 KCCT: *b*-Plot—Reading Grade 8

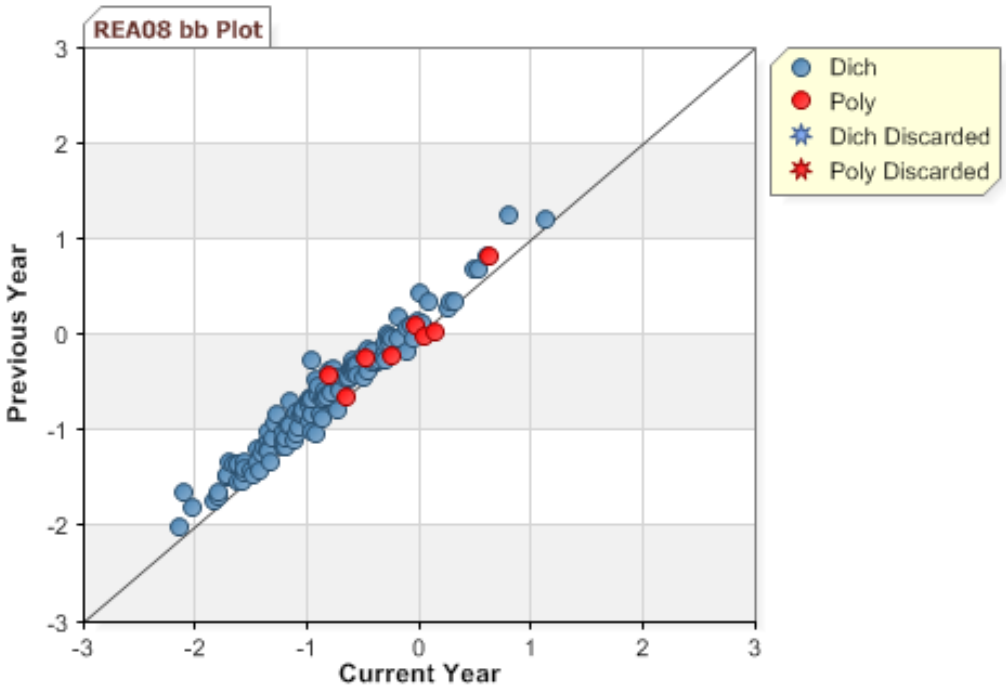


Figure H-27. 2010–11 KCCT: *α*-Plot—Reading Grade 10

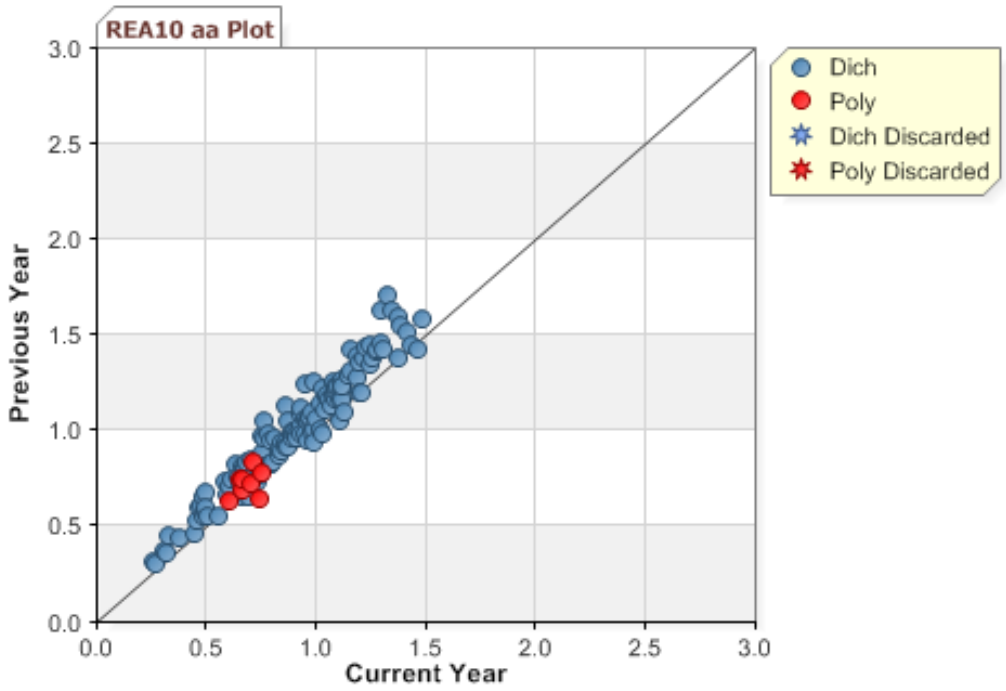


Figure H-28. 2010–11 KCCT: *b*-Plot—Reading Grade 10

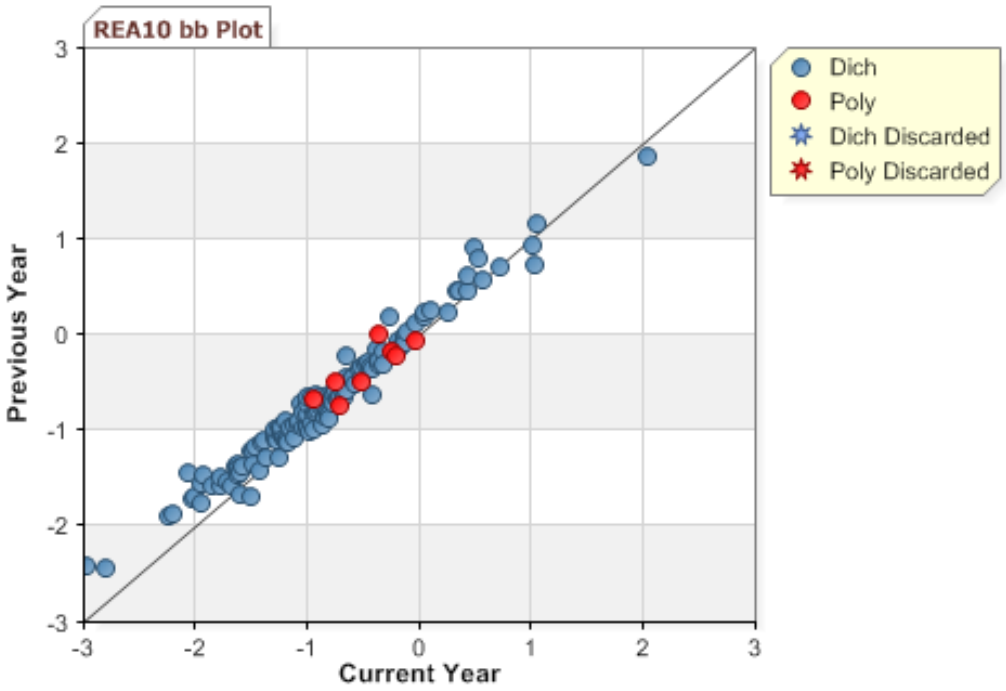


Figure H-29. 2010–11 KCCT: *α*-Plot—Science Grade 4

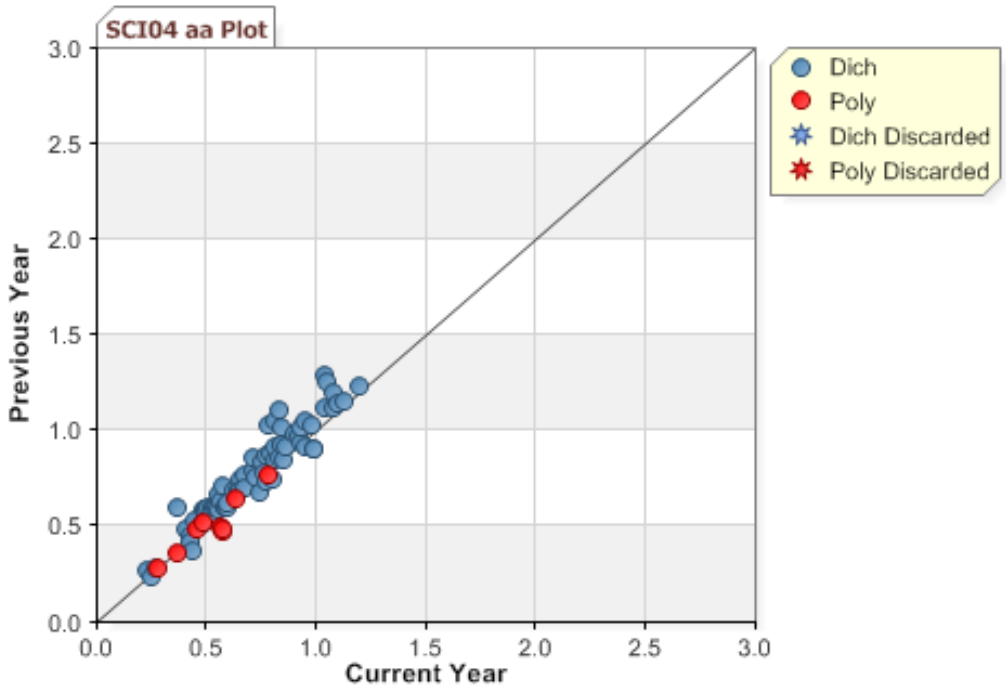


Figure H-30. 2010–11 KCCT: *b*-Plot—Science Grade 4

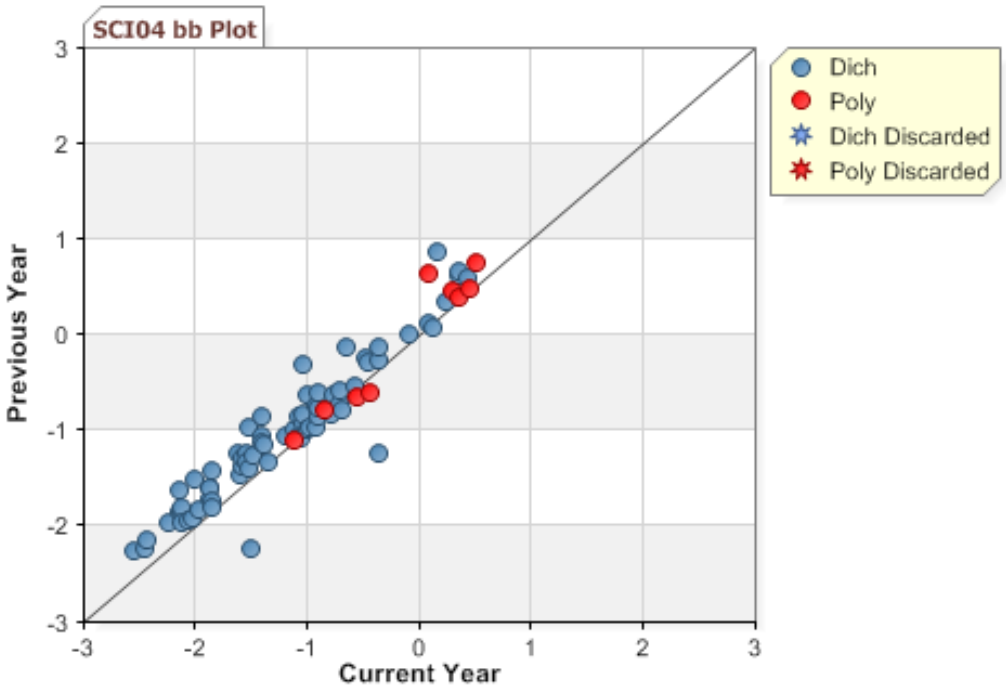


Figure H-31. 2010–11 KCCT: *α*-Plot—Science Grade 7

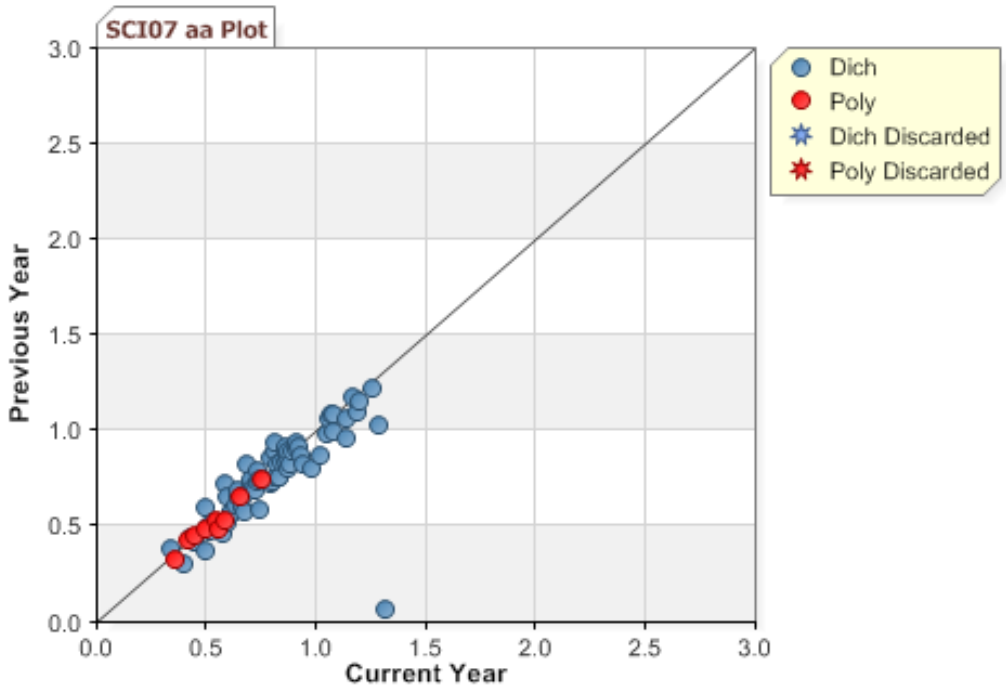


Figure H-32. 2010–11 KCCT: *b*-Plot—Science Grade 7

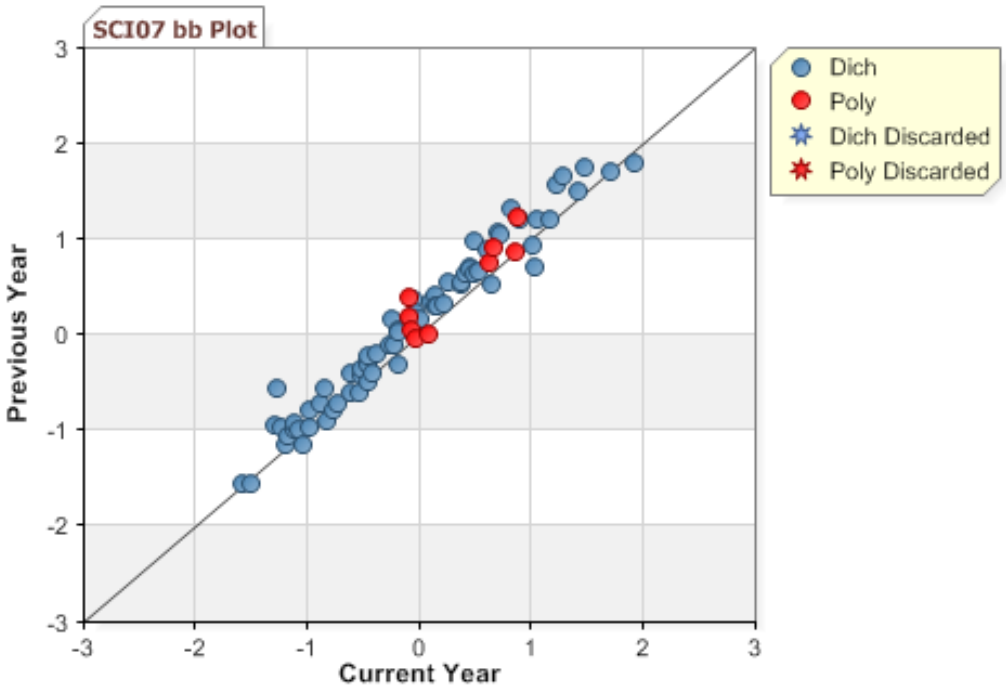


Figure H-33. 2010–11 KCCT: *α*-Plot—Science Grade 11

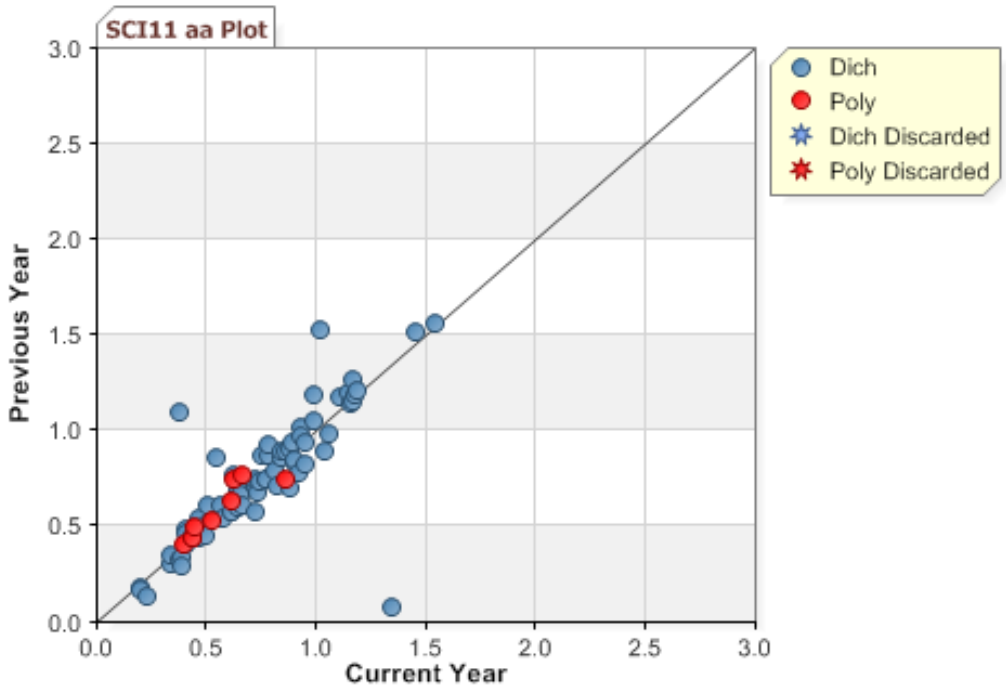


Figure H-34. 2010–11 KCCT: *b*-Plot—Science Grade 11

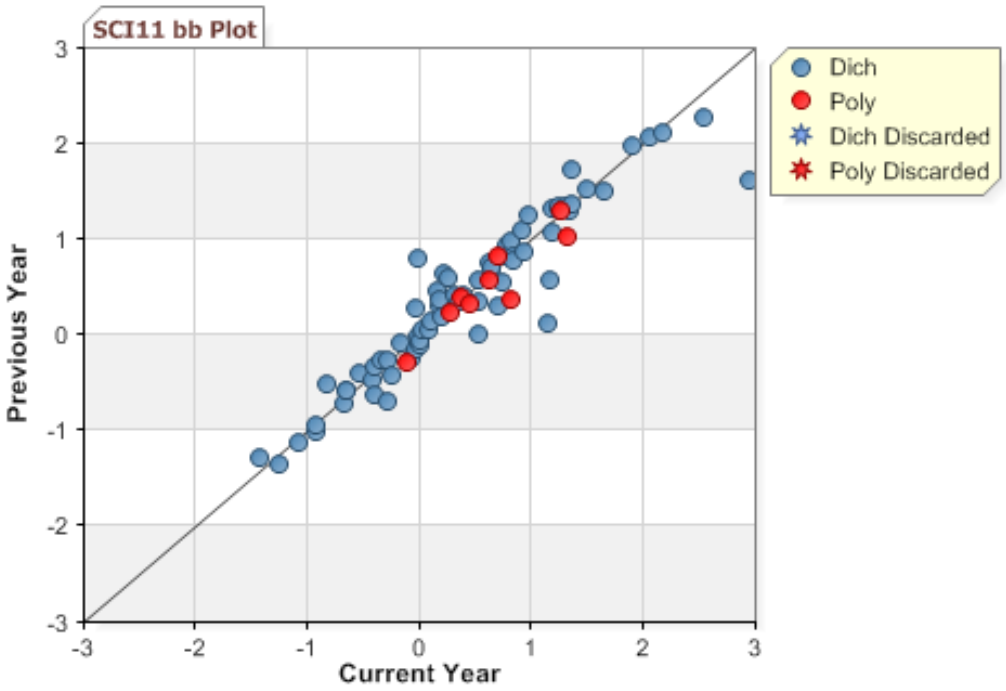


Figure H-35. 2010–11 KCCT: *α*-Plot—Social Studies Grade 5

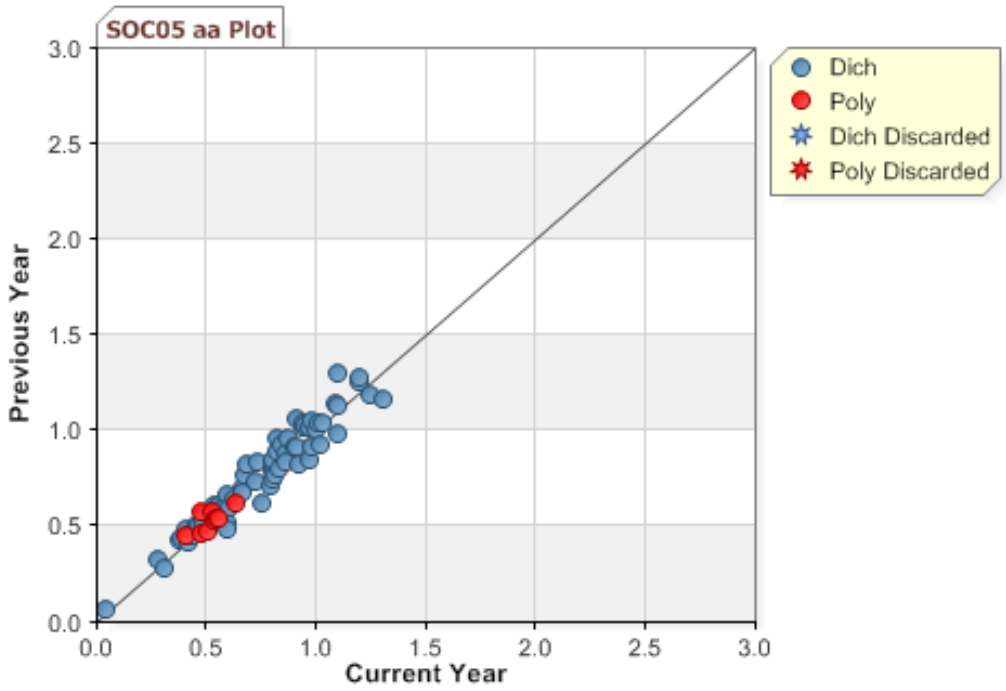


Figure H-36. 2010–11 KCCT: *b*-Plot—Social Studies Grade 5

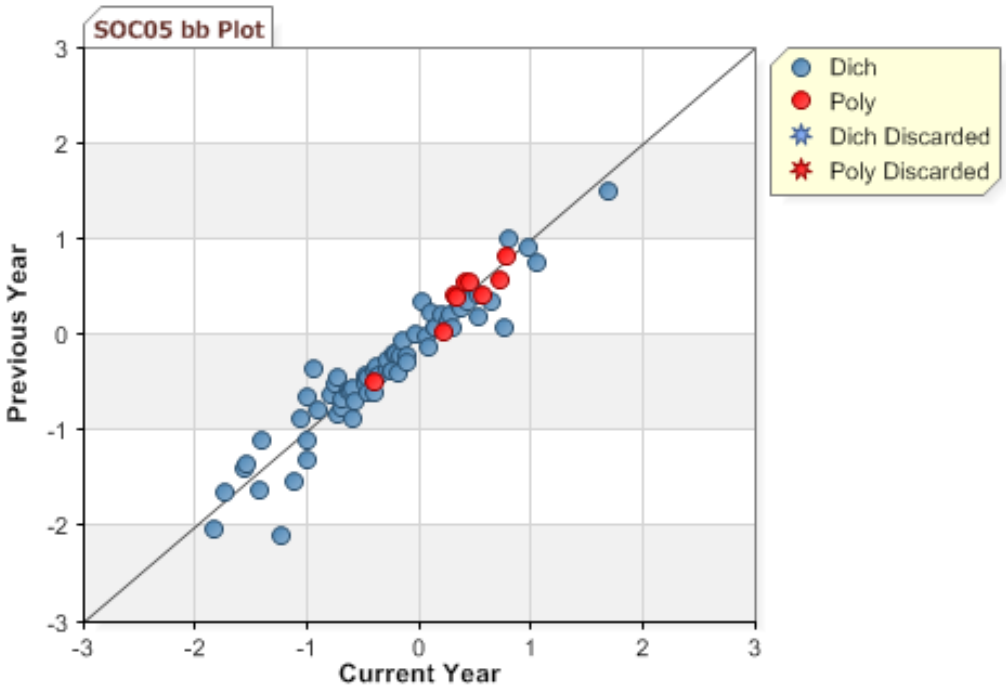


Figure H-37. 2010–11 KCCT: *α*-Plot—Social Studies Grade 8

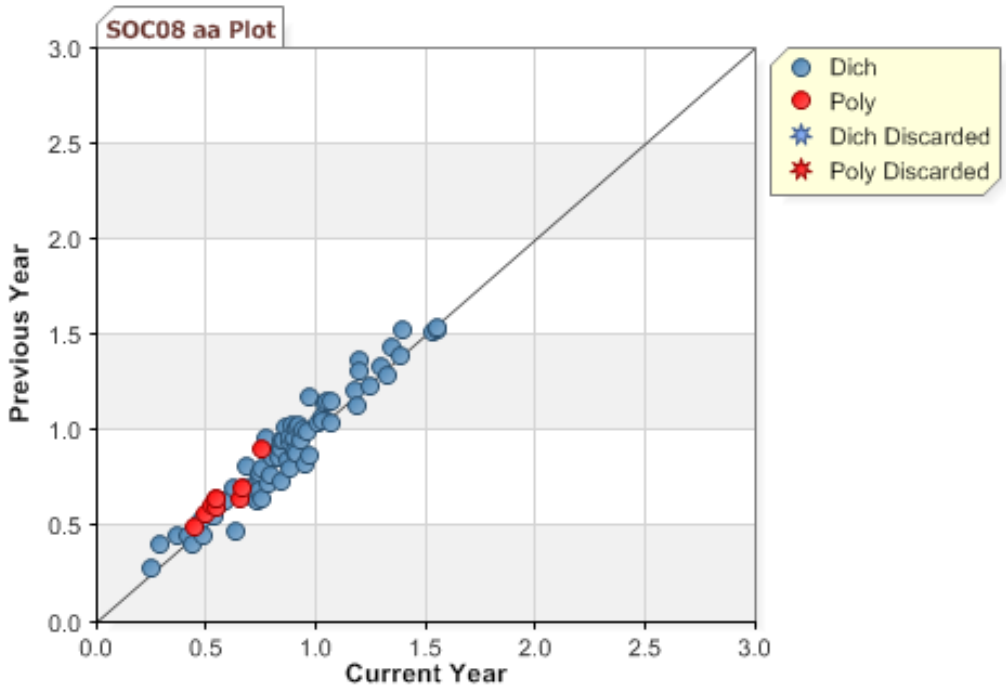


Figure H-38. 2010–11 KCCT: *b*-Plot—Social Studies Grade 8

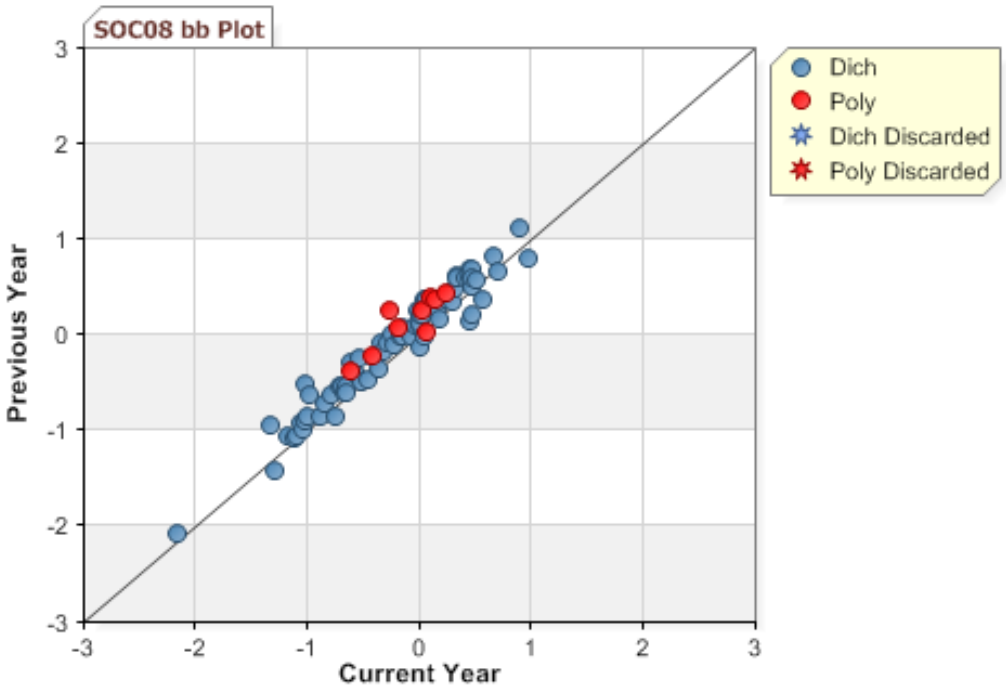


Figure H-39. 2010–11 KCCT: *α*-Plot—Social Studies Grade 11

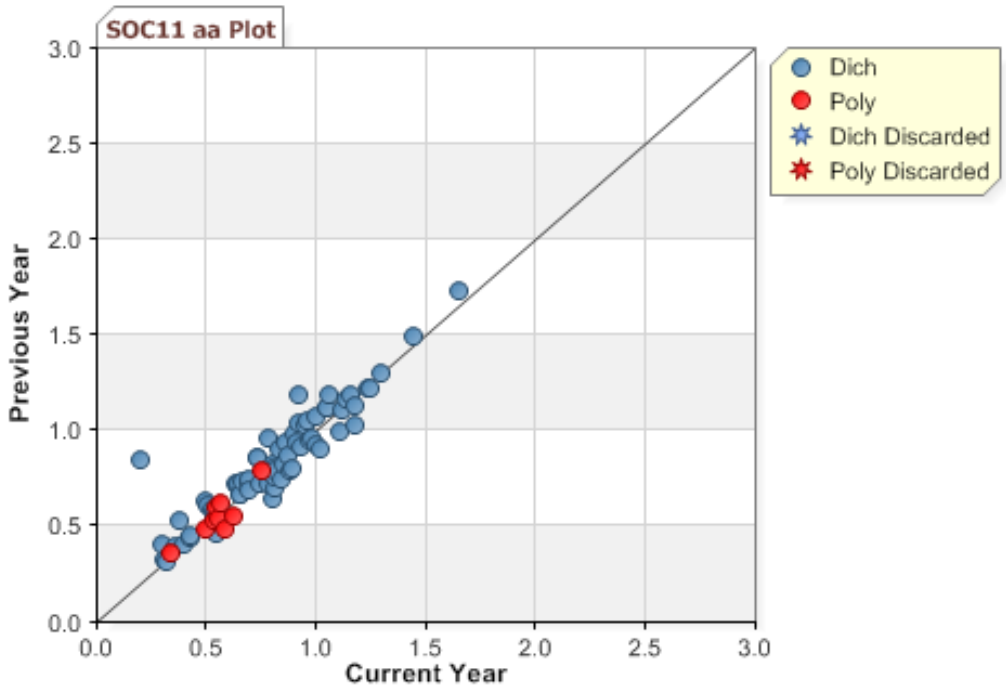


Figure H-40. 2010–11 KCCT: *b*-Plot—Social Studies Grade 11

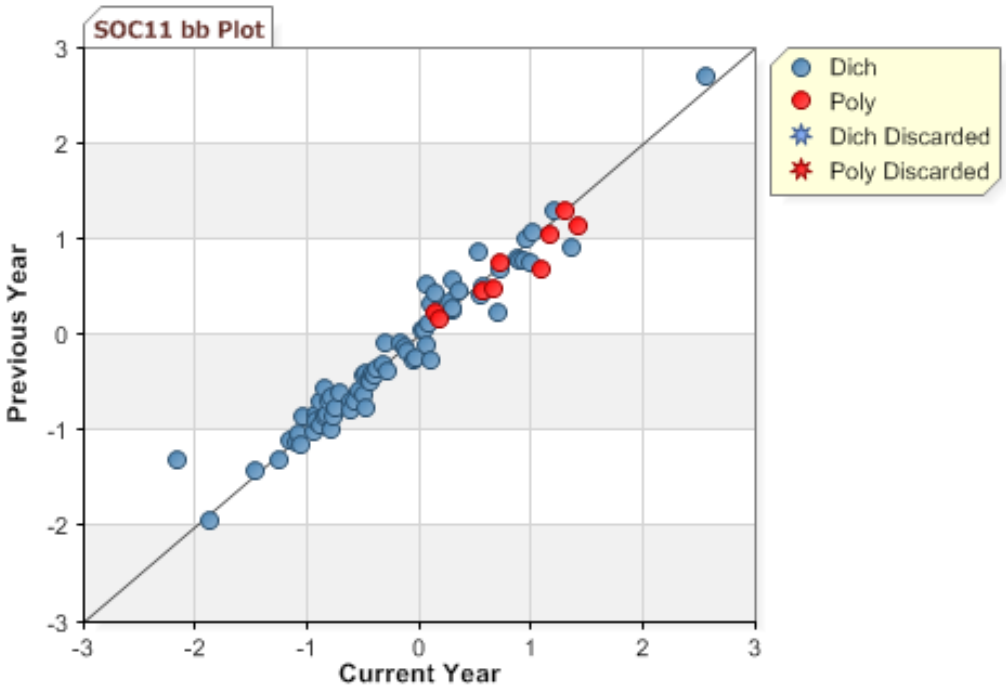


Figure H-41. 2010–11 KCCT: *α*-Plot—Writing Grade 5

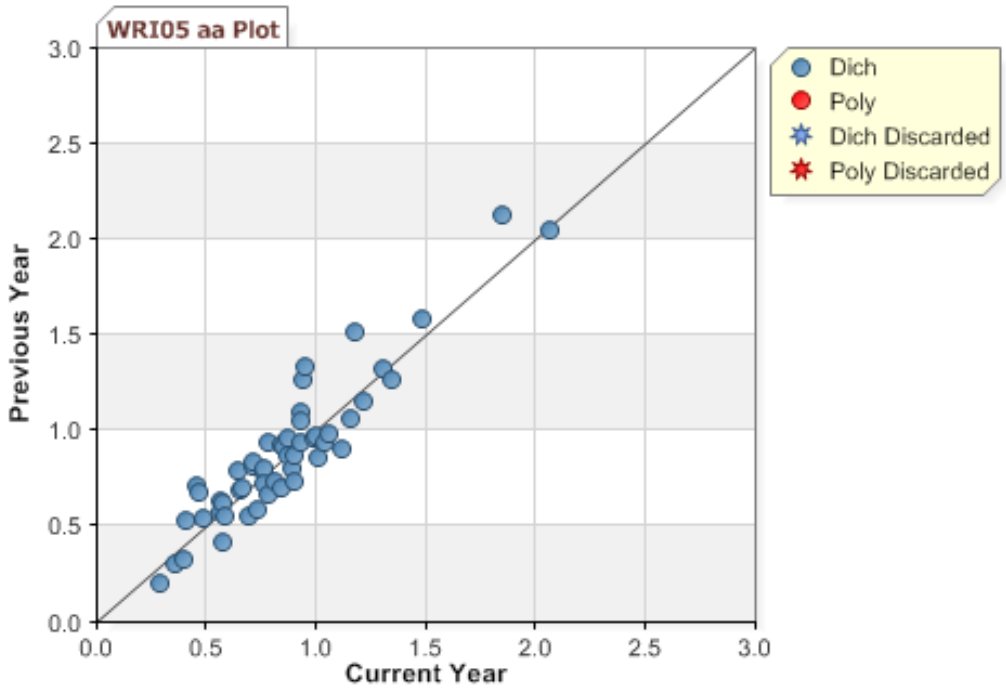


Figure H-42. 2010–11 KCCT: *b*-Plot—Writing Grade 5

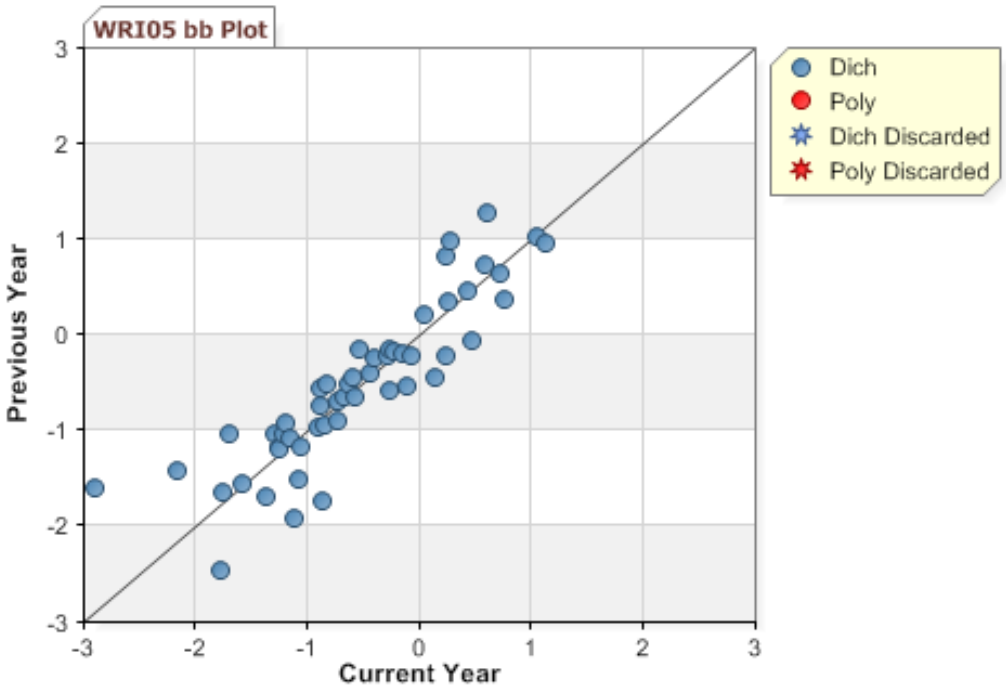


Figure H-43. 2010–11 KCCT: *α*-Plot—Writing Grade 8

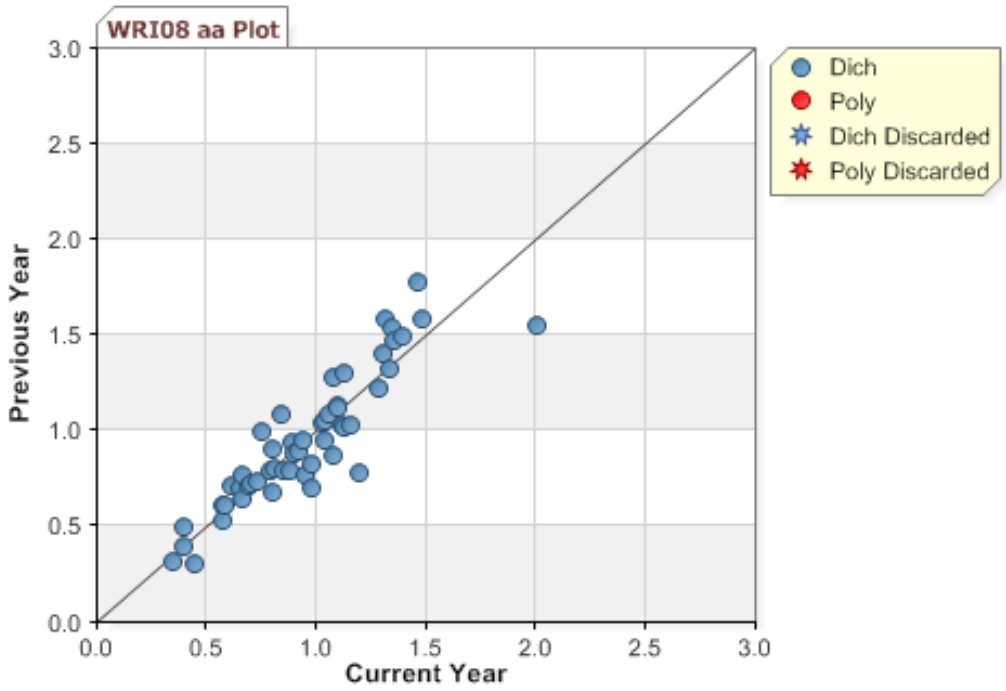
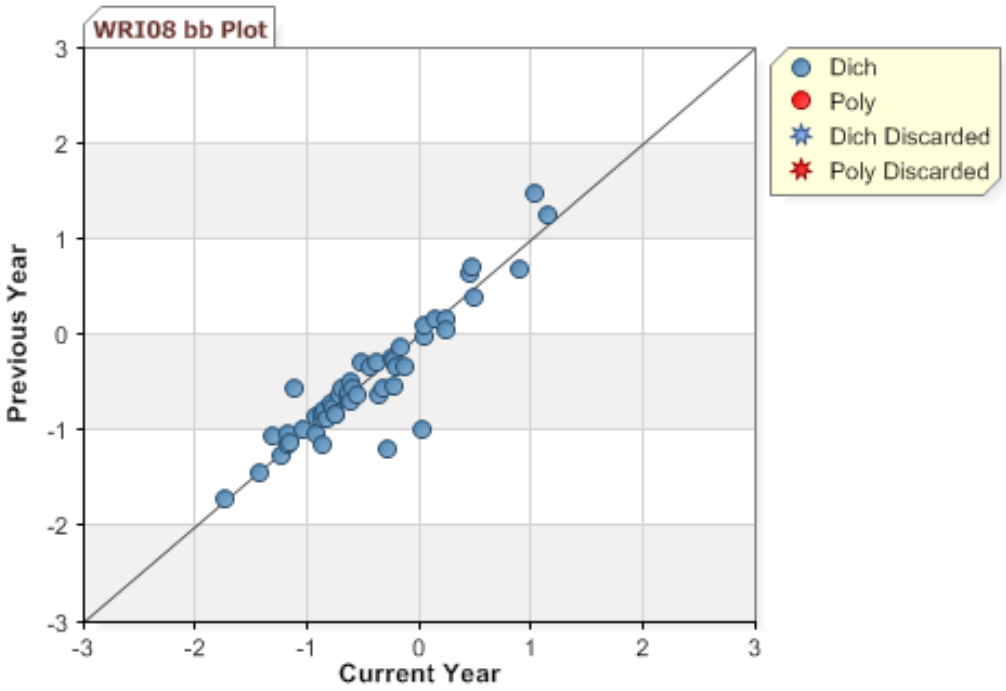


Figure H-44. 2010–11 KCCT: *b*-Plot—Writing Grade 8



Appendix I—Scaled Score Distributions

Figure I-1. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 3

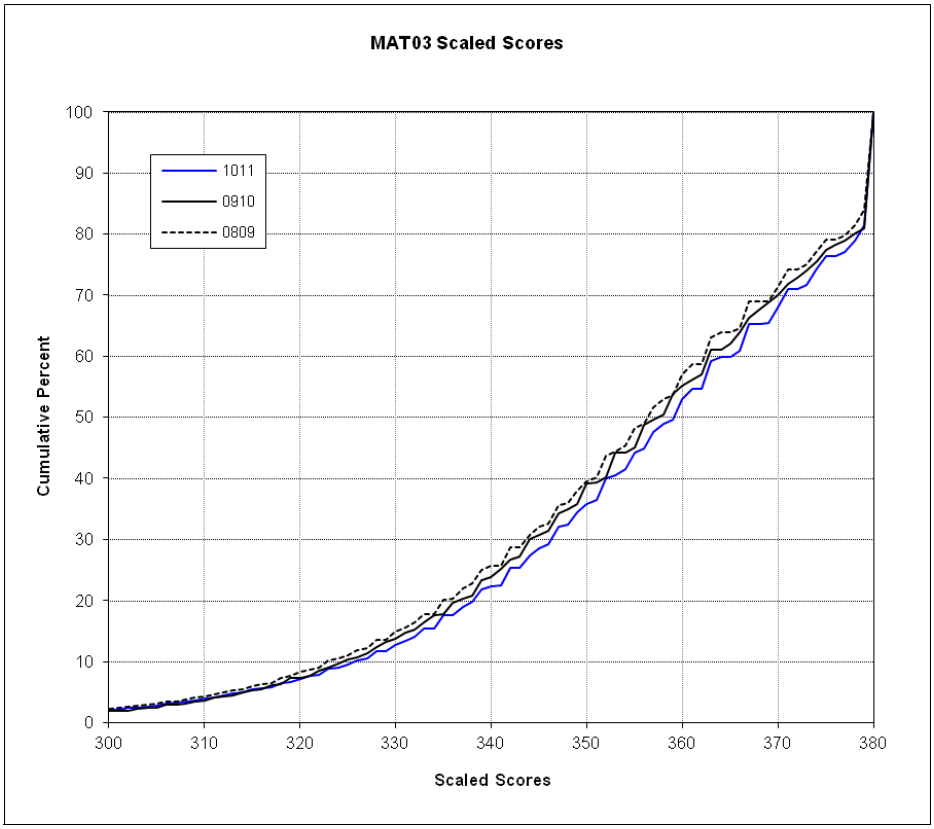


Figure I-2. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 4

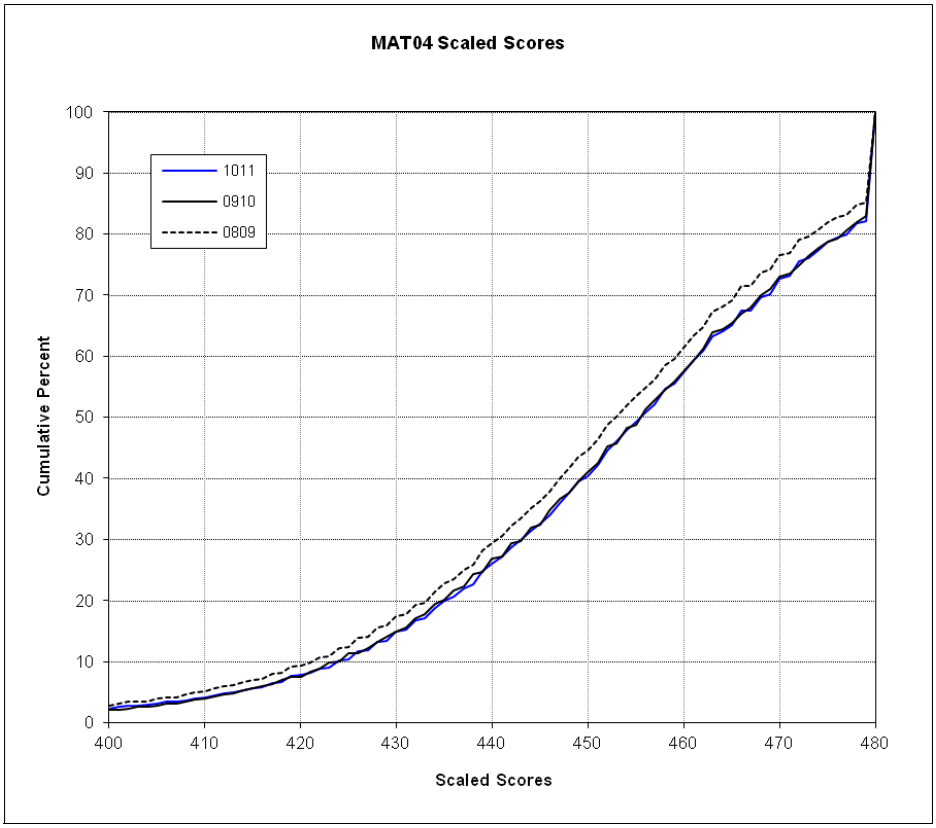


Figure I-3. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 5

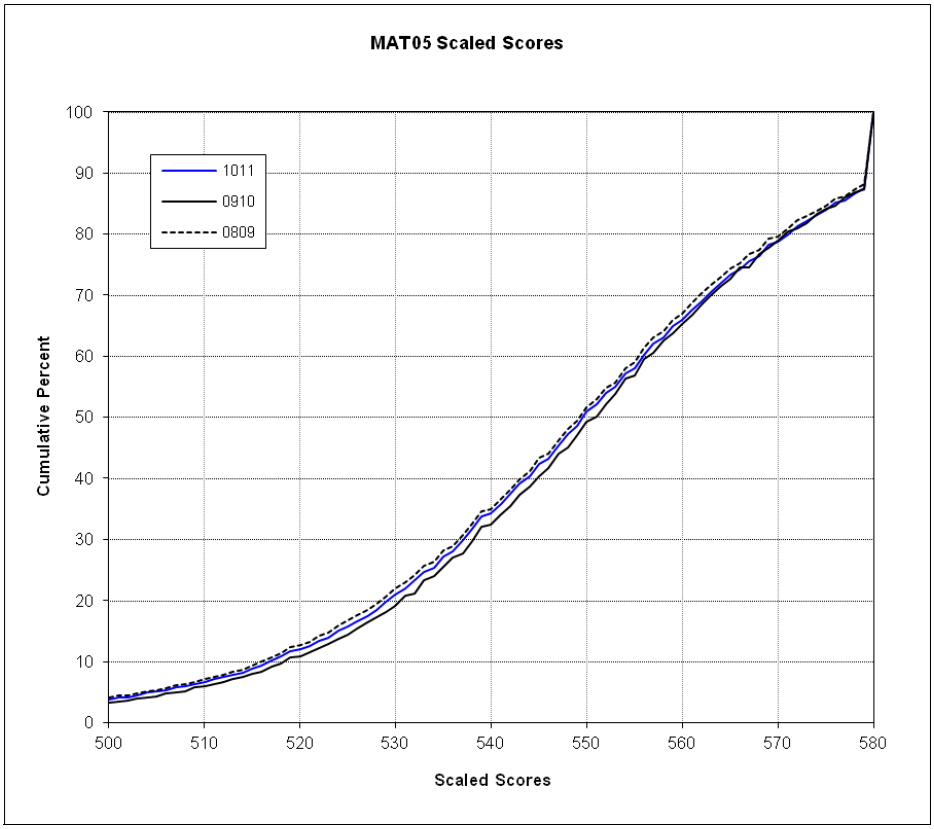


Figure I-4. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 6

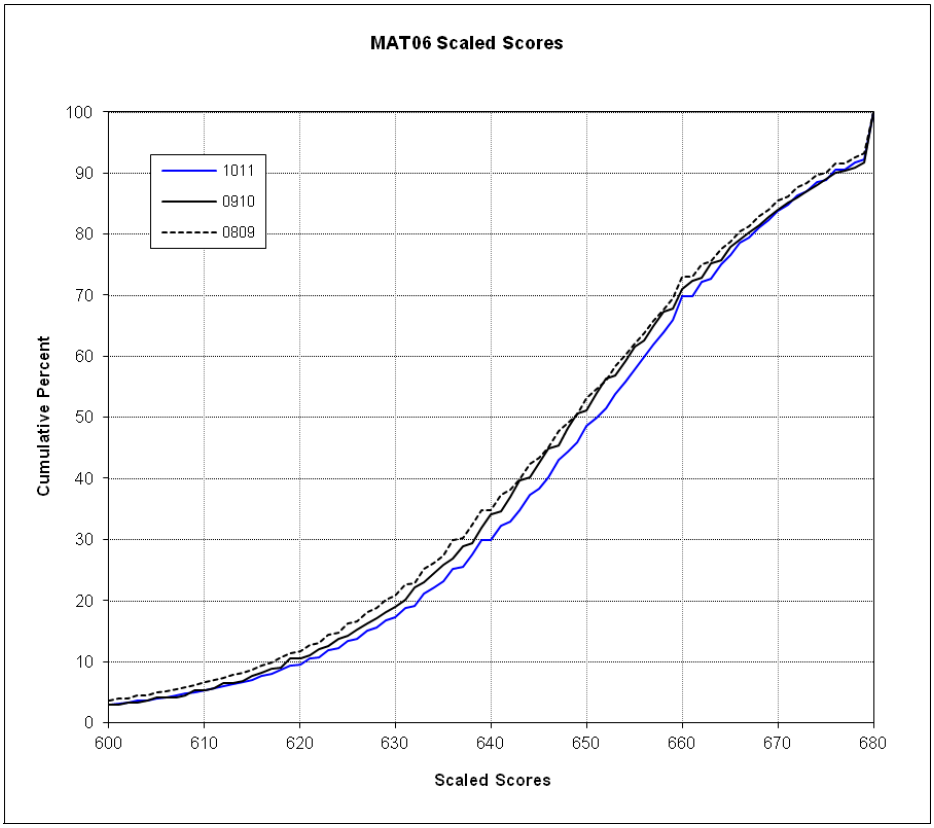


Figure I-5. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 7

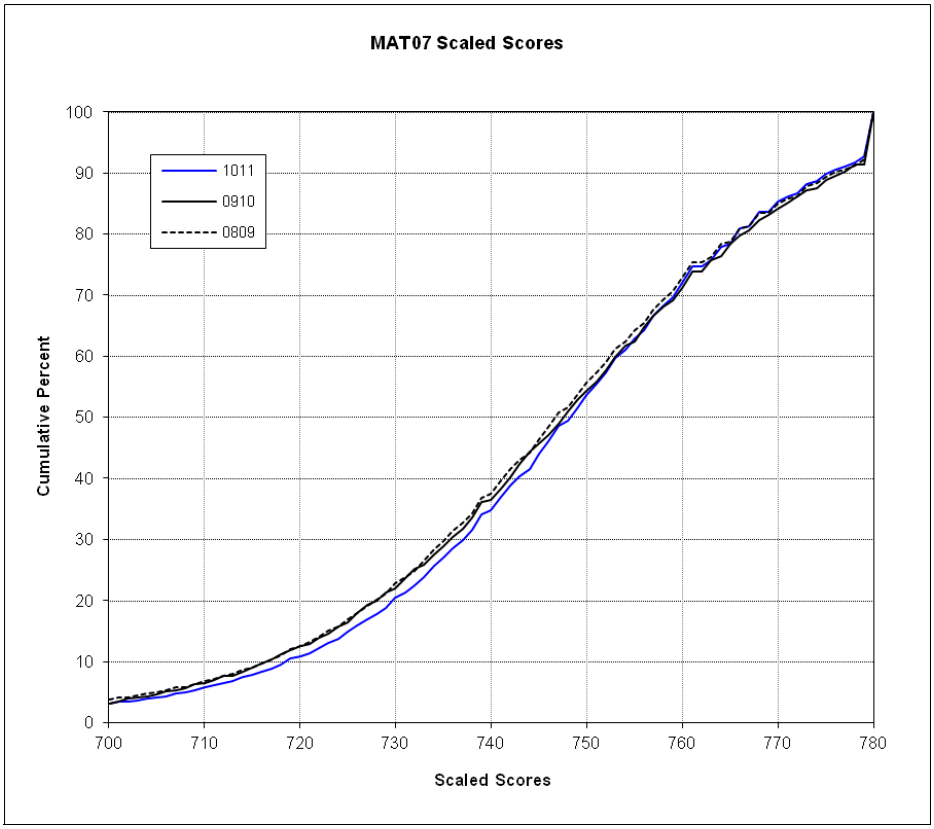


Figure I-6. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 8

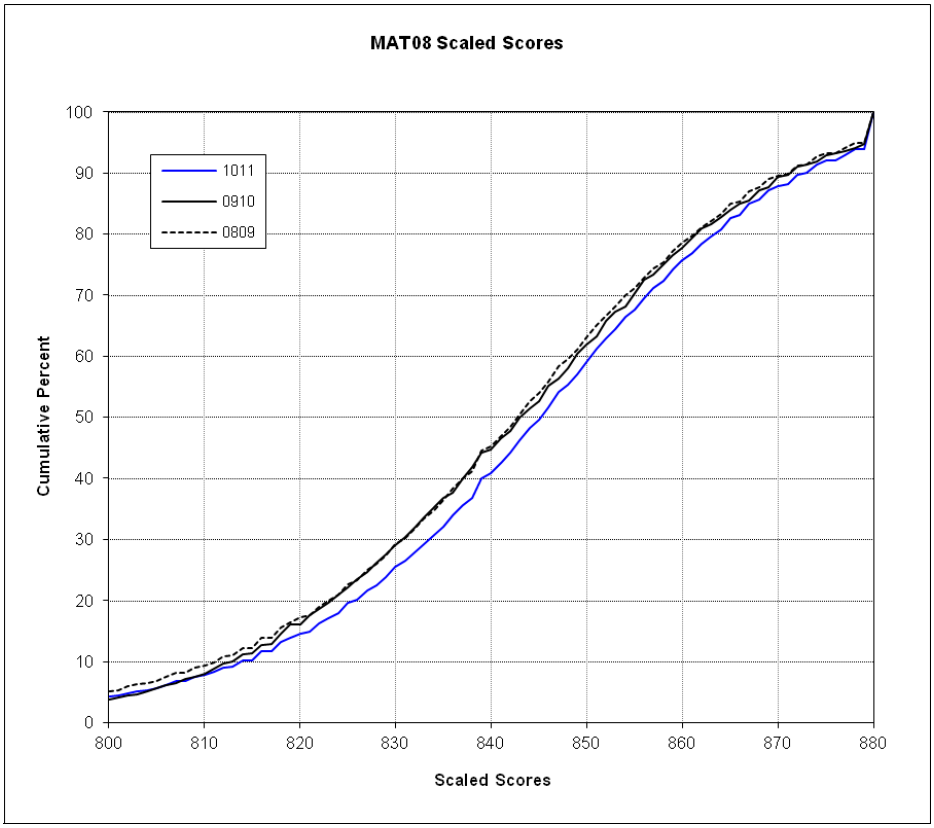


Figure I-7. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Mathematics Grade 11

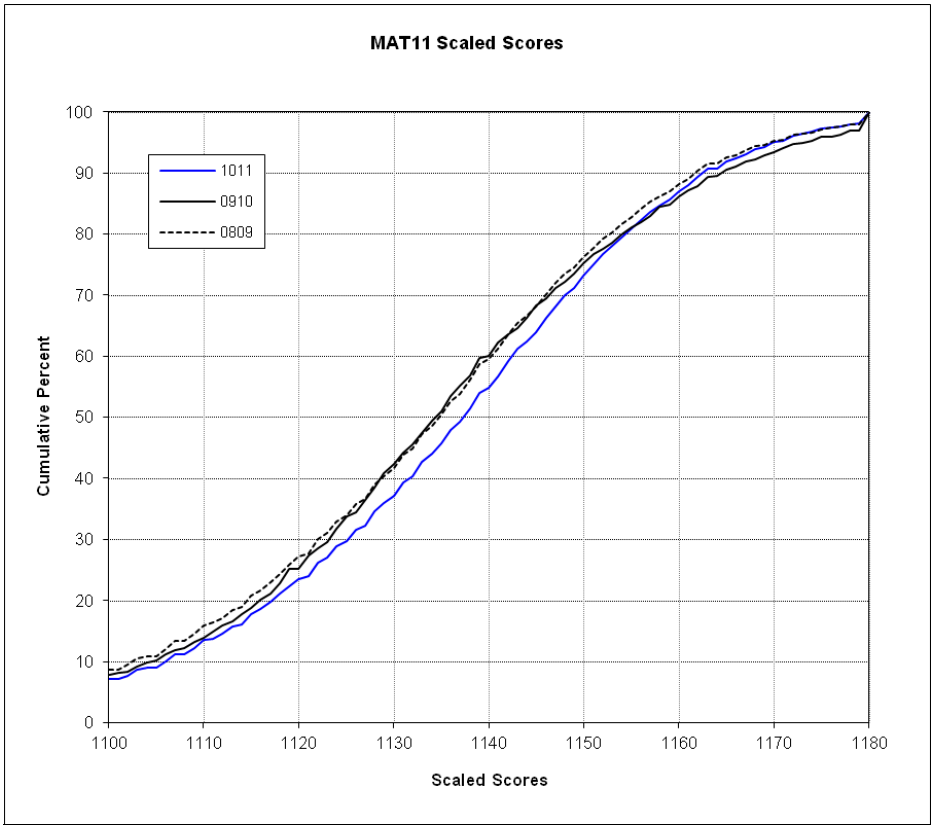


Figure I-8. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 3

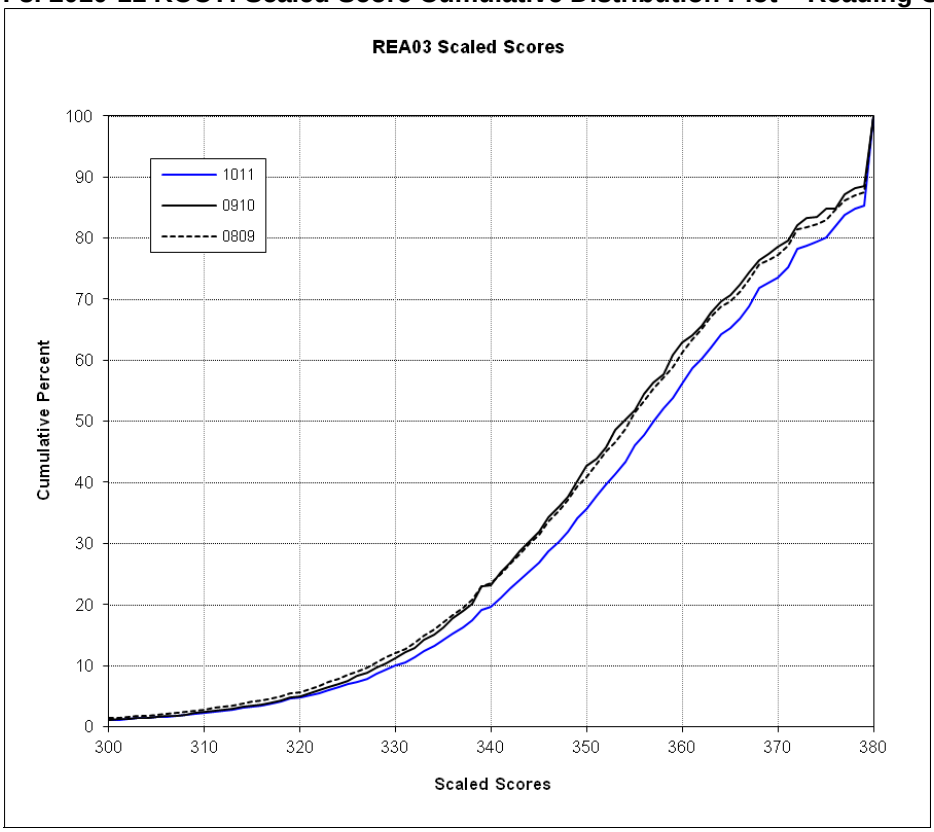


Figure I-9. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 4

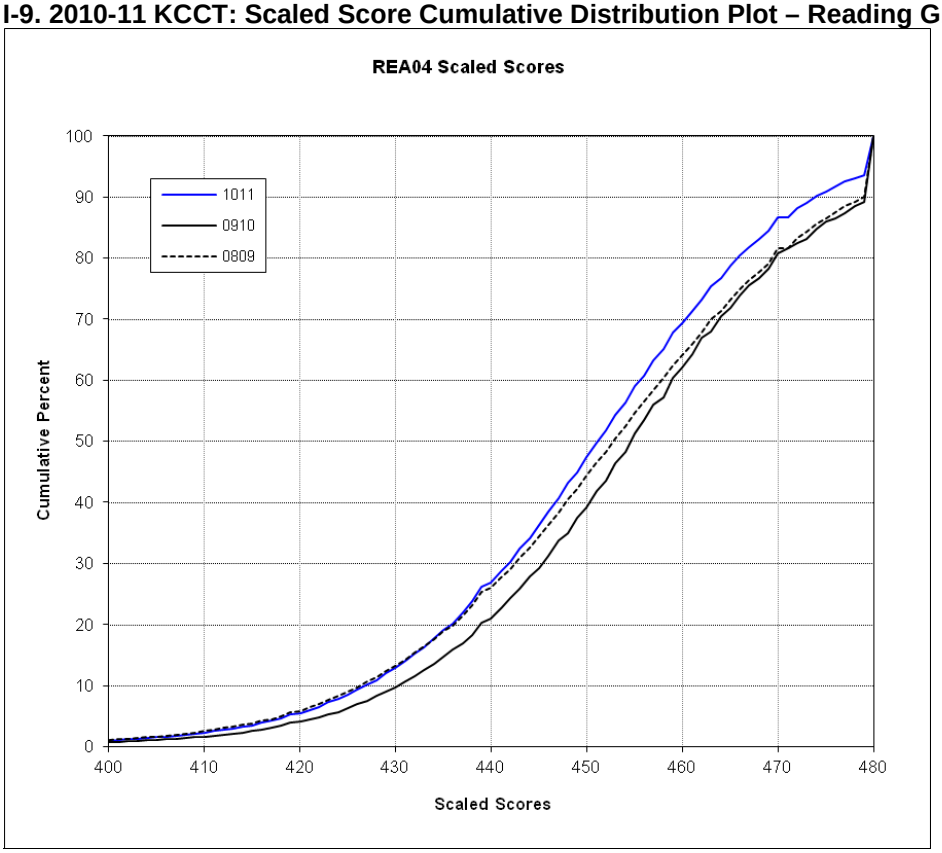


Figure I-10. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 5

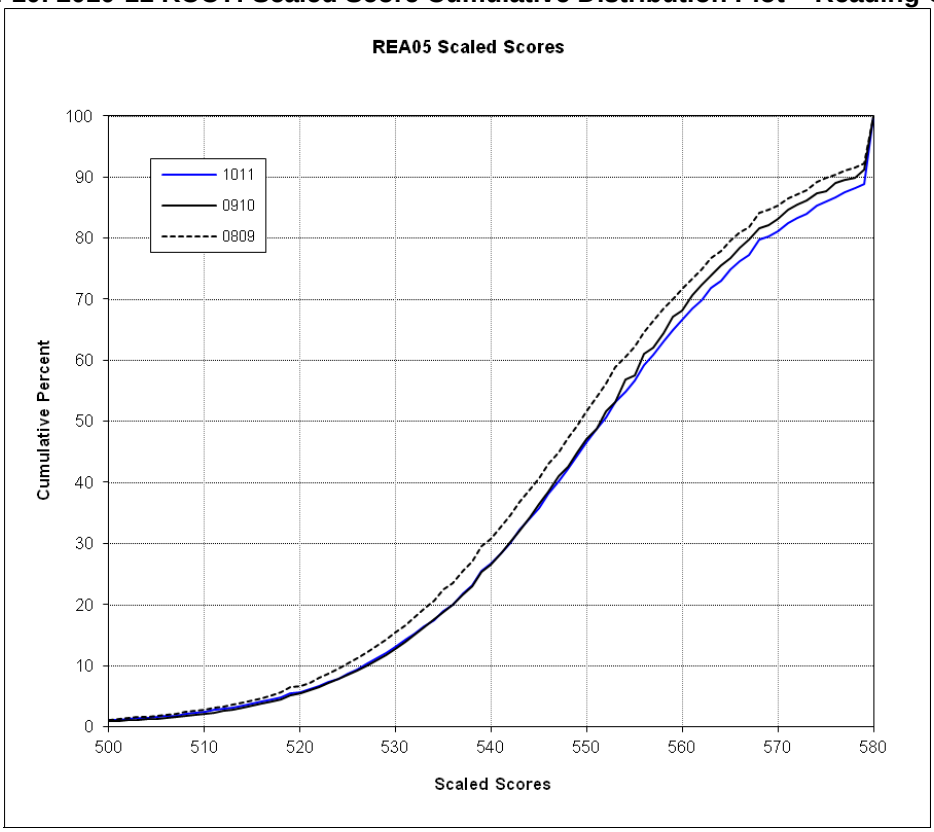


Figure I-11. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 6

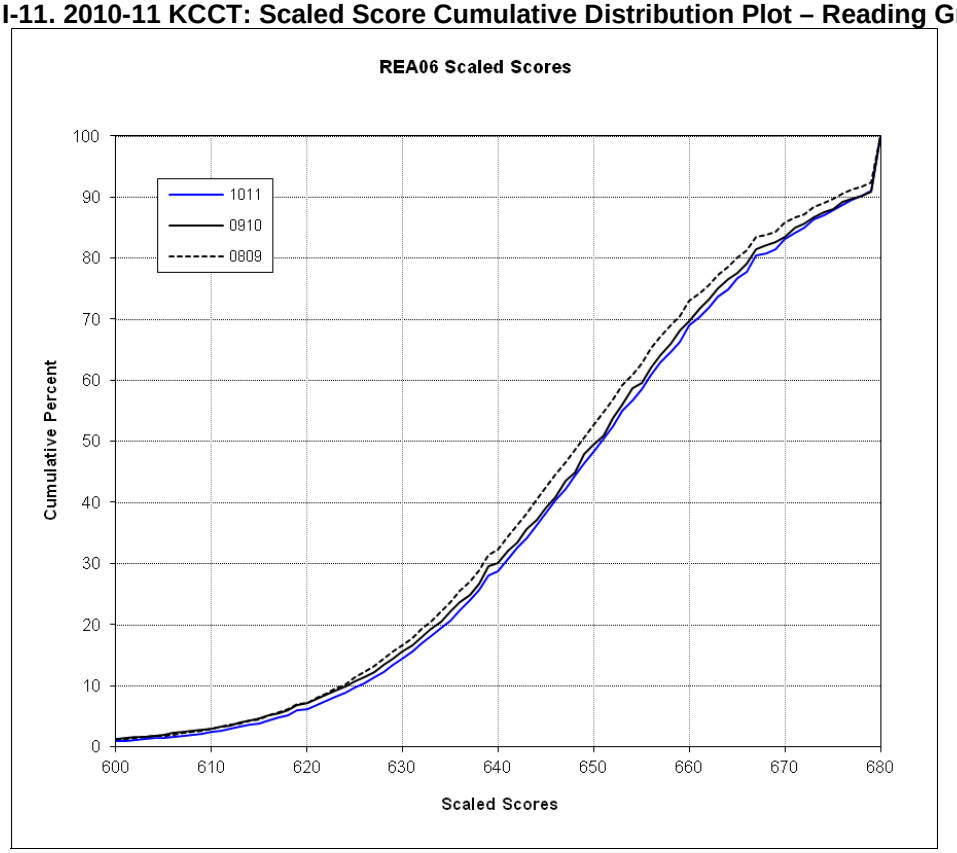


Figure I-12. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 7

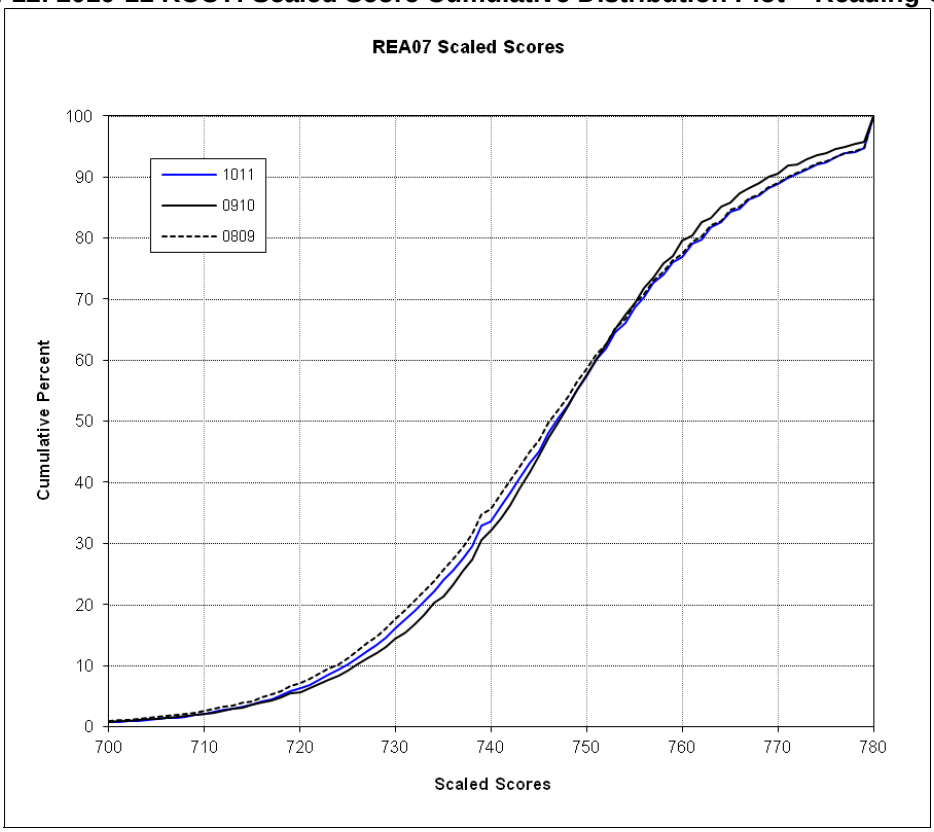


Figure I-13. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 8

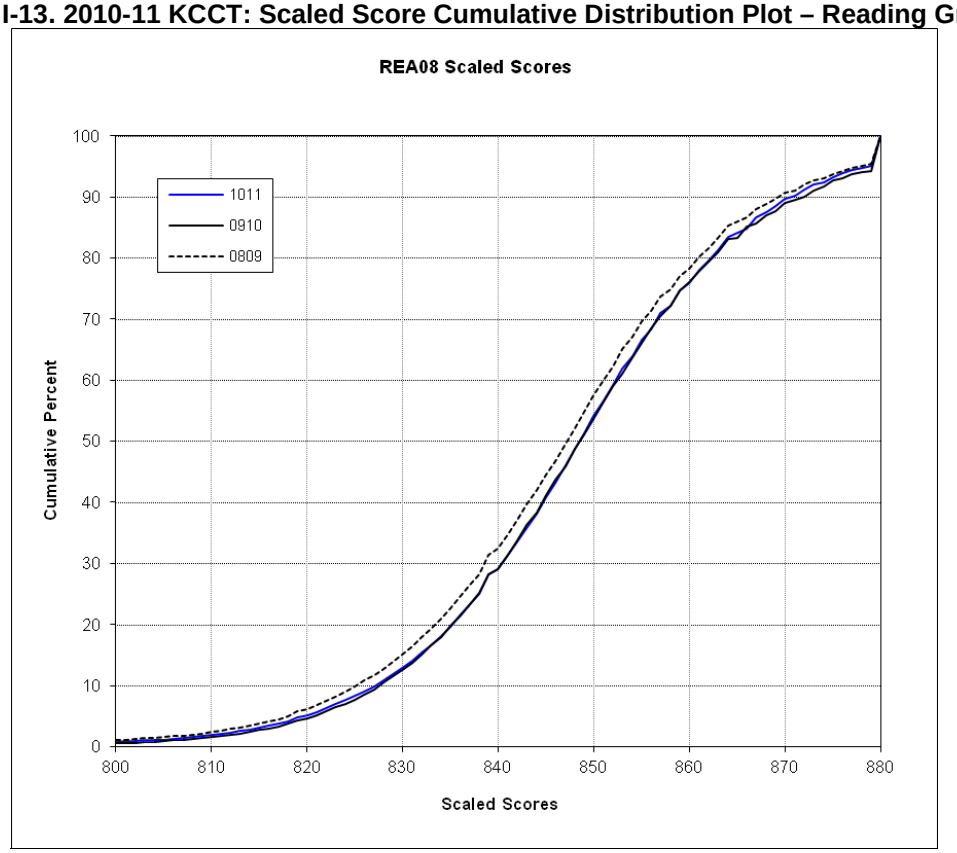


Figure I-14. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Reading Grade 10

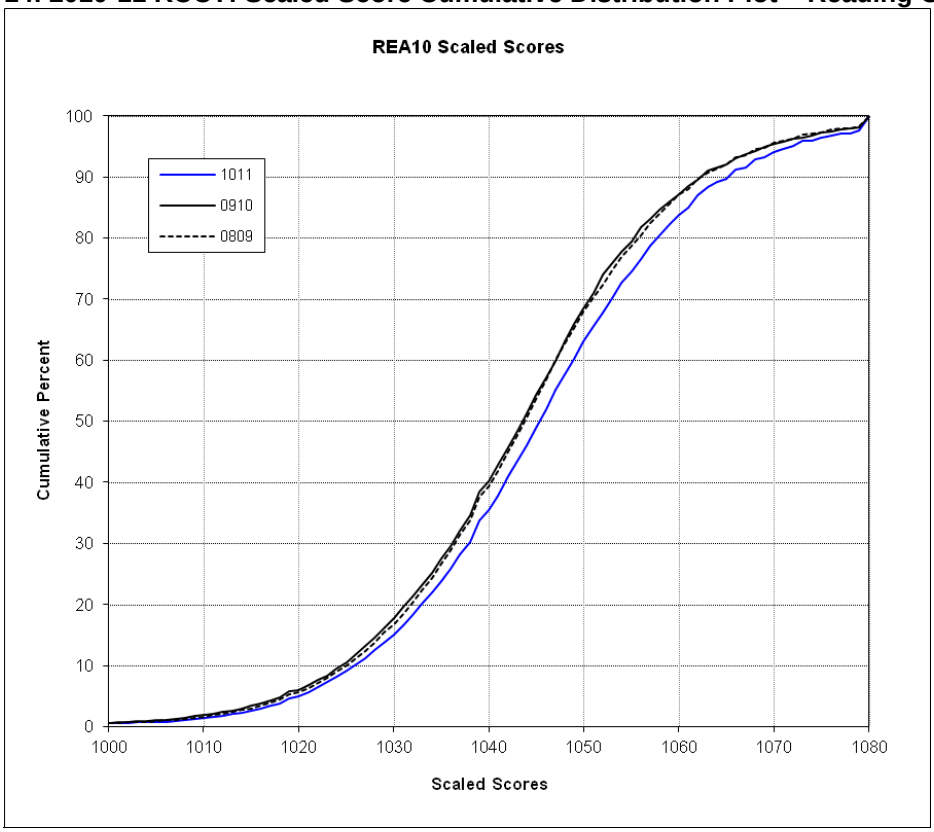


Figure I-15. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Science Grade 4

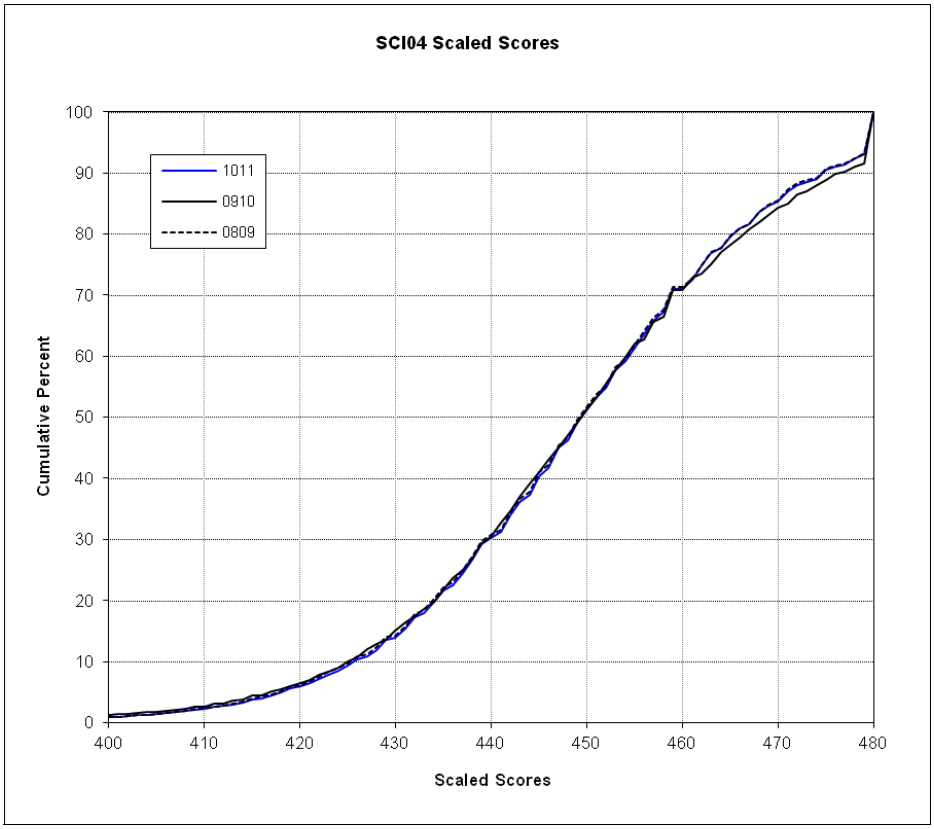


Figure I-16. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Science Grade 7

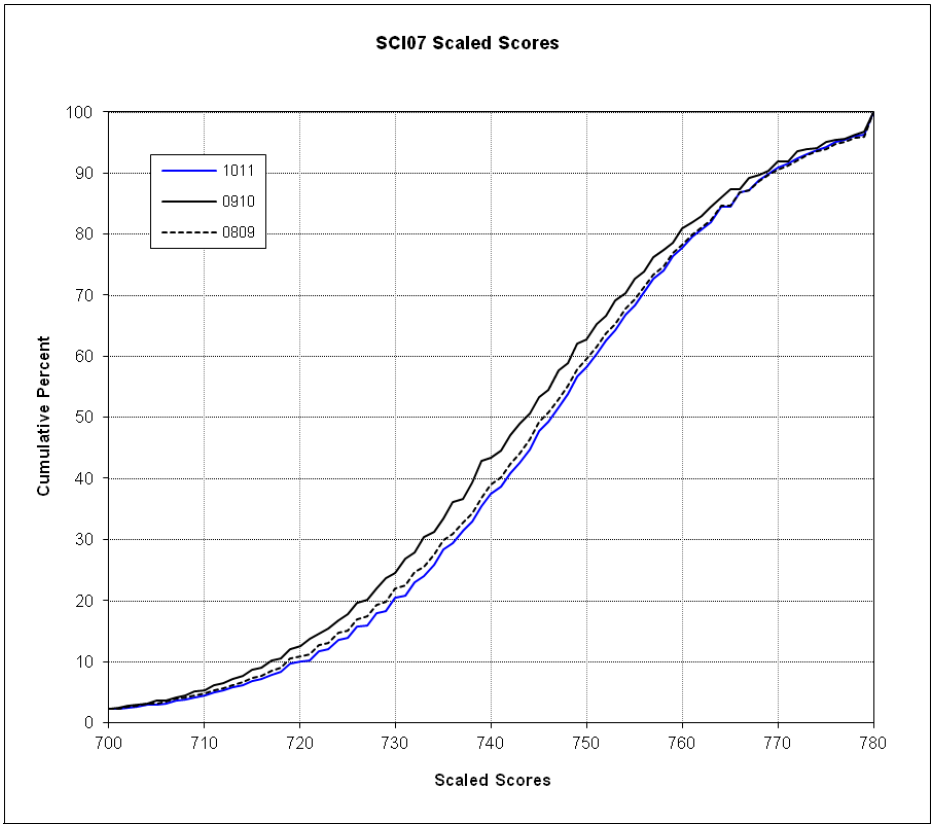


Figure I-17. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Science Grade 11

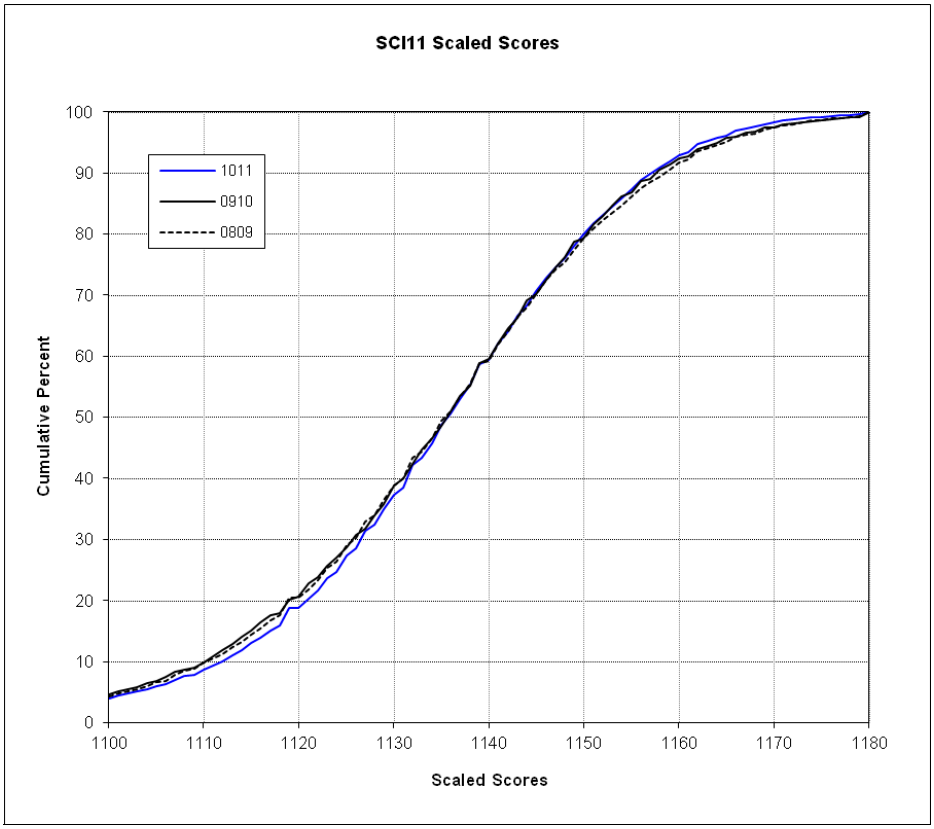


Figure I-18. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Social Studies Grade 5

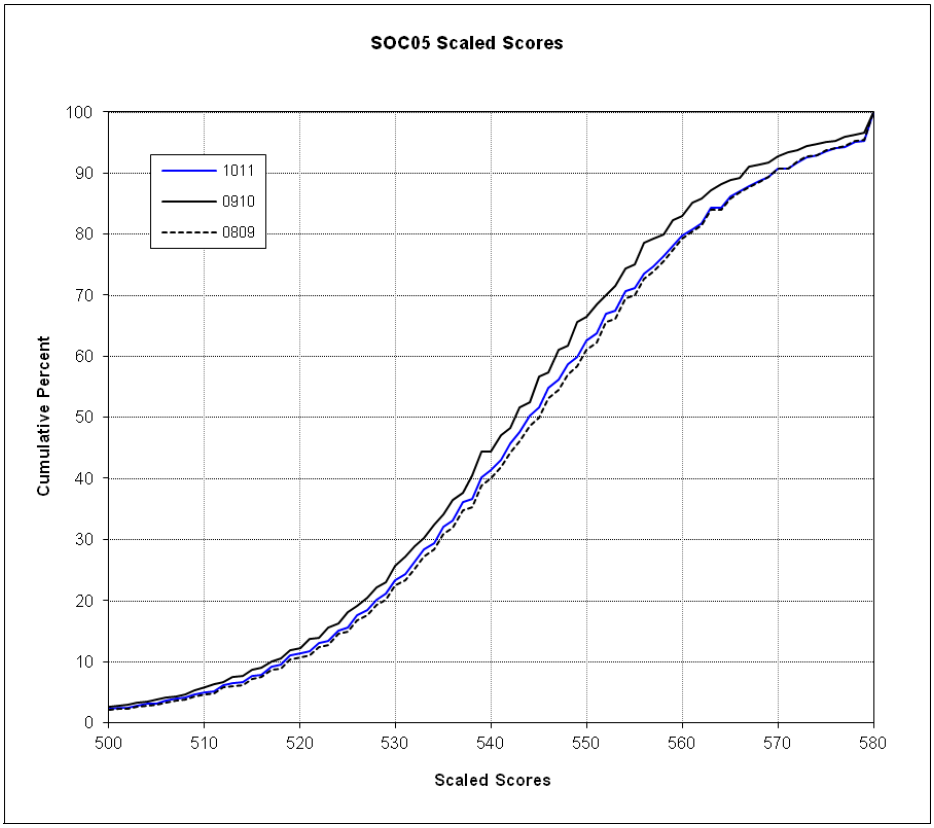


Figure I-19. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Social Studies Grade 8

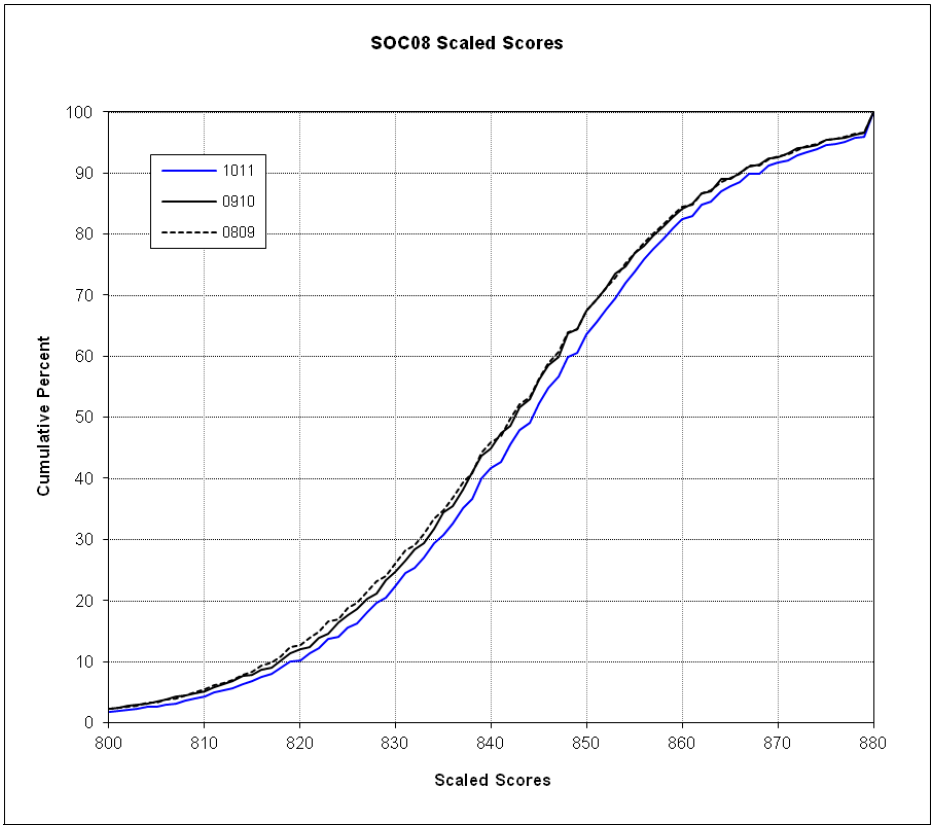


Figure I-20. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Social Studies Grade 11

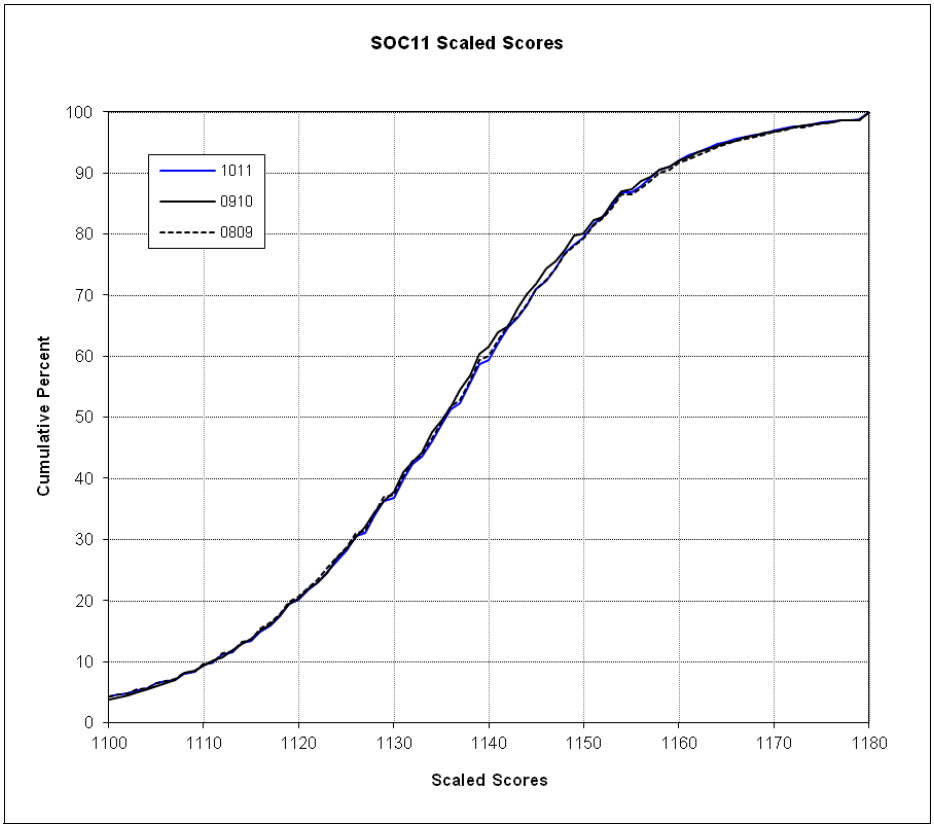


Figure I-21. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Writing Grade 5

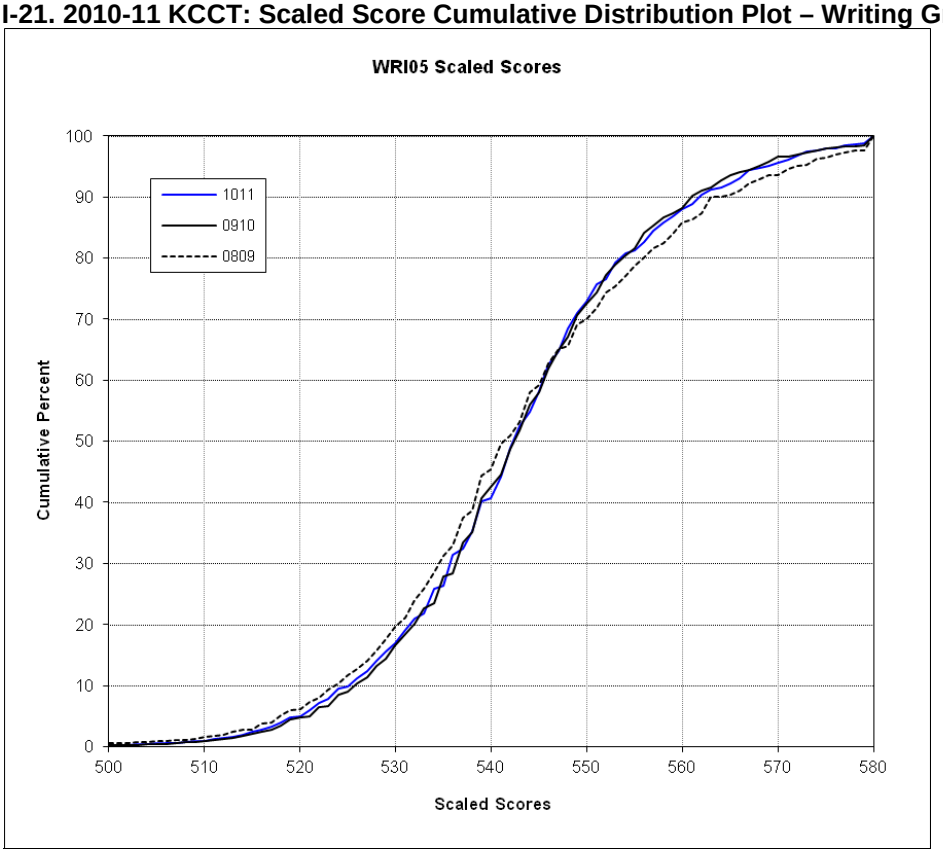


Figure I-22. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Writing Grade 8

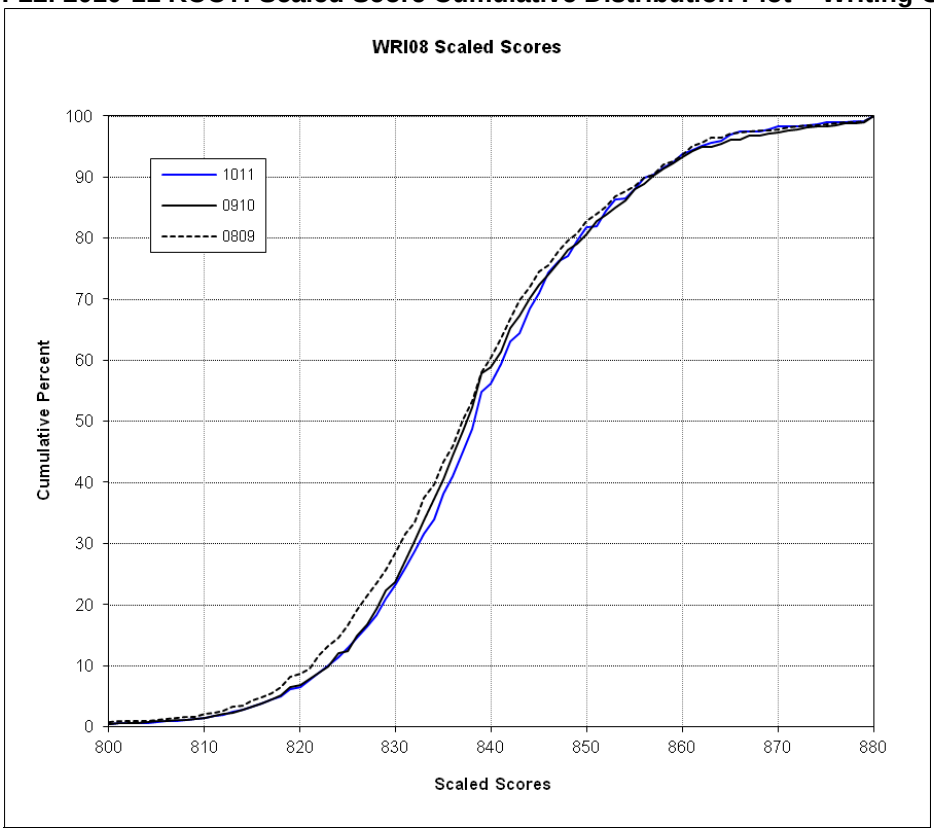
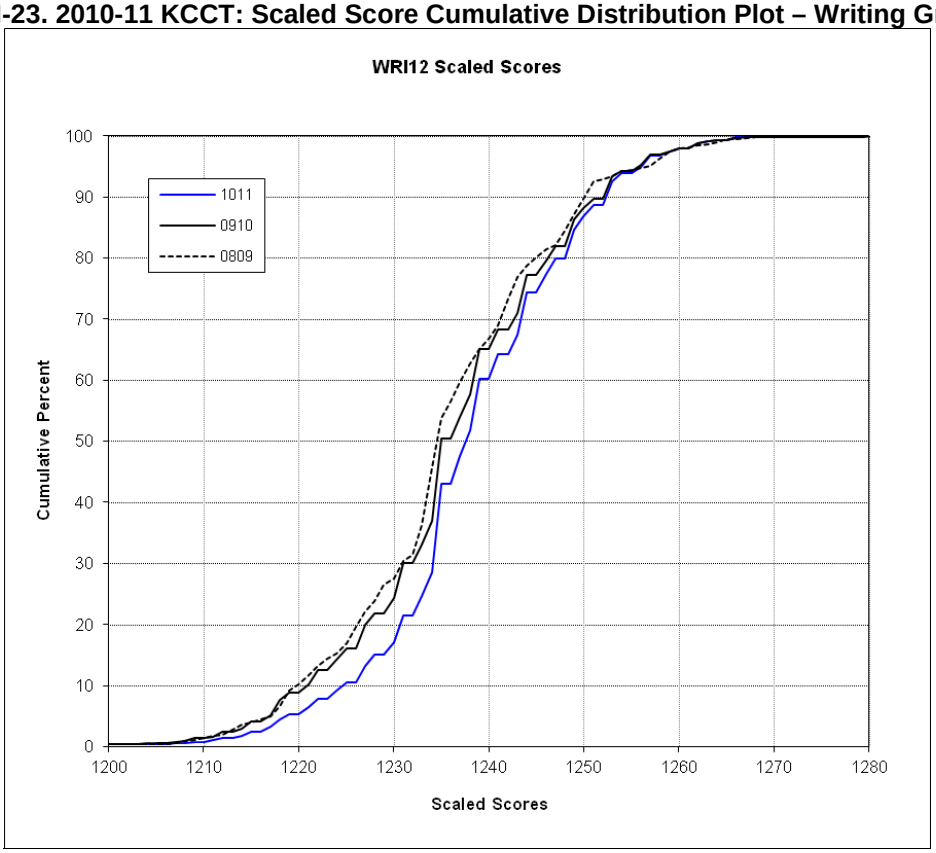


Figure I-23. 2010-11 KCCT: Scaled Score Cumulative Distribution Plot – Writing Grade 12



Appendix J—Raw to Scaled Score Lookup Tables

Table J-1. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312
1	300	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312	315
2	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312	315	317
3	300	300	300	300	300	300	300	300	300	300	302	305	309	312	315	317	319
4	300	300	300	300	300	300	300	300	300	302	306	309	312	315	317	320	323
5	300	300	300	300	300	300	300	300	302	306	309	312	315	317	320	323	325
6	300	300	300	300	300	300	300	302	306	309	312	315	317	320	323	325	327
7	300	300	300	300	300	300	302	306	309	312	315	318	320	323	325	327	330
8	300	300	300	300	300	302	306	309	312	315	318	320	323	325	327	330	332
9	300	300	300	300	302	306	309	312	315	318	320	323	325	328	330	332	334
10	300	300	300	302	306	309	312	315	318	320	323	325	328	330	332	334	337
11	300	300	302	306	309	312	315	318	320	323	325	328	330	332	335	337	339
12	300	302	306	309	312	315	318	320	323	325	328	330	332	335	337	339	341
13	303	306	309	312	315	318	320	323	325	328	330	332	335	337	339	341	344
14	306	309	312	315	318	320	323	325	328	330	332	335	337	339	342	344	346
15	309	312	315	318	320	323	325	328	330	332	335	337	339	342	344	346	349
16	312	315	318	320	323	325	328	330	332	335	337	339	342	344	346	349	351
17	315	318	321	323	325	328	330	332	335	337	339	342	344	346	349	351	354
18	318	321	323	325	328	330	332	335	337	339	342	344	346	349	352	354	357
19	321	323	325	328	330	332	335	337	339	342	344	346	349	352	354	357	360
20	323	326	328	330	333	335	337	339	342	344	347	349	352	354	357	360	363
21	326	328	330	333	335	337	339	342	344	347	349	352	354	357	360	363	367
22	328	330	333	335	337	339	342	344	347	349	352	354	357	360	363	367	370
23	330	333	335	337	339	342	344	347	349	352	354	357	360	363	367	370	374
24	333	335	337	339	342	344	347	349	352	354	357	360	363	367	370	374	378
25	335	337	339	342	344	347	349	352	354	357	360	363	367	370	374	378	380
26	337	339	342	344	347	349	352	355	357	360	363	367	370	374	379	380	380
27	339	342	344	347	349	352	355	357	360	363	367	370	374	379	380	380	380
28	342	344	347	349	352	355	357	360	363	367	371	374	379	380	380	380	380
29	344	347	349	352	355	357	360	363	367	371	374	379	380	380	380	380	380
30	347	349	352	355	358	360	363	367	371	375	379	380	380	380	380	380	380
31	349	352	355	358	361	363	367	371	375	379	380	380	380	380	380	380	380
32	352	355	358	361	363	367	371	375	379	380	380	380	380	380	380	380	380

Table J-2. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	301	304	308	311
1	300	300	300	300	300	300	300	300	300	300	300	300	301	305	308	311	314
2	300	300	300	300	300	300	300	300	300	300	300	301	305	308	311	314	317
3	300	300	300	300	300	300	300	300	300	300	301	305	308	311	314	317	319
4	300	300	300	300	300	300	300	300	300	301	305	308	311	314	317	319	323
5	300	300	300	300	300	300	300	300	301	305	308	311	314	317	320	323	325
6	300	300	300	300	300	300	300	301	305	308	311	314	317	320	323	325	328
7	300	300	300	300	300	300	301	305	308	311	314	317	320	323	325	328	330
8	300	300	300	300	300	301	305	308	311	315	317	320	323	325	328	330	333
9	300	300	300	300	301	305	308	312	315	317	320	323	325	328	330	333	335
10	300	300	300	301	305	308	312	315	317	320	323	325	328	330	333	335	337
11	300	300	301	305	308	312	315	318	320	323	325	328	330	333	335	337	339
12	300	301	305	308	312	315	318	320	323	325	328	330	333	335	337	339	342
13	301	305	309	312	315	318	320	323	326	328	330	333	335	337	339	342	344
14	305	309	312	315	318	320	323	326	328	330	333	335	337	339	342	344	347
15	309	312	315	318	320	323	326	328	330	333	335	337	339	342	344	347	349
16	312	315	318	320	323	326	328	330	333	335	337	339	342	344	347	349	352
17	315	318	321	323	326	328	331	333	335	337	339	342	344	347	349	352	354
18	318	321	323	326	328	331	333	335	338	339	342	344	347	349	352	354	357
19	321	323	326	328	331	333	335	338	339	342	344	347	349	352	354	357	360
20	323	326	328	331	333	335	338	339	342	345	347	349	352	354	357	360	363
21	326	328	331	333	335	338	339	342	345	347	349	352	355	357	360	363	367
22	328	331	333	335	338	339	342	345	347	349	352	355	357	360	363	367	370
23	331	333	335	338	339	342	345	347	349	352	355	357	360	363	367	370	374
24	333	335	338	340	342	345	347	349	352	355	357	360	363	367	370	374	379
25	335	338	340	342	345	347	350	352	355	357	360	363	367	370	374	379	380
26	338	340	342	345	347	350	352	355	357	360	363	367	370	374	379	380	380
27	340	342	345	347	350	352	355	358	360	363	367	371	374	379	380	380	380
28	342	345	347	350	352	355	358	360	363	367	371	375	379	380	380	380	380
29	345	347	350	352	355	358	361	363	367	371	375	379	380	380	380	380	380
30	347	350	352	355	358	361	363	367	371	375	379	380	380	380	380	380	380
31	350	352	355	358	361	363	367	371	375	379	380	380	380	380	380	380	380
32	352	355	358	361	363	367	371	375	379	380	380	380	380	380	380	380	380

Table J-3. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	300	304	307	311
1	300	300	300	300	300	300	300	300	300	300	300	300	300	304	307	311	314
2	300	300	300	300	300	300	300	300	300	300	300	300	304	307	311	314	317
3	300	300	300	300	300	300	300	300	300	300	300	304	308	311	314	317	319
4	300	300	300	300	300	300	300	300	300	300	304	308	311	314	317	319	323
5	300	300	300	300	300	300	300	300	300	304	308	311	314	317	319	323	325
6	300	300	300	300	300	300	300	300	304	308	311	314	317	319	323	325	328
7	300	300	300	300	300	300	300	304	308	311	314	317	320	323	325	328	330
8	300	300	300	300	300	300	304	308	311	314	317	320	323	325	328	330	333
9	300	300	300	300	300	304	308	311	314	317	320	323	325	328	330	333	335
10	300	300	300	300	304	308	311	314	317	320	323	325	328	330	333	335	337
11	300	300	300	304	308	311	314	317	320	323	325	328	330	333	335	337	339
12	300	300	304	308	311	314	317	320	323	325	328	330	333	335	337	339	342
13	301	304	308	311	315	317	320	323	326	328	330	333	335	337	339	342	344
14	305	308	311	315	318	320	323	326	328	330	333	335	338	339	342	344	347
15	308	312	315	318	320	323	326	328	331	333	335	338	339	342	345	347	349
16	312	315	318	320	323	326	328	331	333	335	338	339	342	345	347	349	352
17	315	318	320	323	326	328	331	333	335	338	339	342	345	347	349	352	354
18	318	320	323	326	328	331	333	335	338	339	342	345	347	349	352	354	357
19	321	323	326	328	331	333	335	338	340	342	345	347	349	352	354	357	360
20	323	326	328	331	333	335	338	340	342	345	347	349	352	354	357	360	363
21	326	328	331	333	335	338	340	342	345	347	349	352	355	357	360	363	366
22	328	331	333	335	338	340	342	345	347	350	352	355	357	360	363	366	369
23	331	333	336	338	340	342	345	347	350	352	355	357	360	363	366	369	373
24	333	336	338	340	342	345	347	350	352	355	357	360	363	366	369	373	377
25	336	338	340	343	345	347	350	352	355	357	360	363	366	369	373	377	380
26	338	340	343	345	347	350	352	355	357	360	363	366	369	373	377	380	380
27	340	343	345	347	350	352	355	357	360	363	366	370	373	377	380	380	380
28	343	345	347	350	352	355	357	360	363	366	370	373	377	380	380	380	380
29	345	347	350	352	355	357	360	363	366	370	373	377	380	380	380	380	380
30	347	350	352	355	358	360	363	366	370	373	377	380	380	380	380	380	380
31	350	352	355	358	360	363	366	370	373	377	380	380	380	380	380	380	380
32	352	355	358	360	363	366	370	373	377	380	380	380	380	380	380	380	380

Table J-4. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312
1	300	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312	315
2	300	300	300	300	300	300	300	300	300	300	300	302	305	309	312	315	318
3	300	300	300	300	300	300	300	300	300	300	302	306	309	312	315	318	321
4	300	300	300	300	300	300	300	300	300	302	306	309	312	315	318	321	324
5	300	300	300	300	300	300	300	300	302	306	309	312	315	318	321	324	327
6	300	300	300	300	300	300	300	302	306	309	312	316	318	321	324	327	329
7	300	300	300	300	300	300	302	306	309	312	316	318	321	324	327	329	332
8	300	300	300	300	300	302	306	309	313	316	319	321	324	327	329	332	334
9	300	300	300	300	302	306	309	313	316	319	321	324	327	329	332	334	337
10	300	300	300	302	306	309	313	316	319	321	324	327	329	332	334	337	339
11	300	300	302	306	309	313	316	319	321	324	327	329	332	334	337	339	342
12	300	302	306	309	313	316	319	322	324	327	329	332	334	337	339	342	344
13	302	306	310	313	316	319	322	324	327	329	332	334	337	339	342	344	347
14	306	310	313	316	319	322	324	327	329	332	334	337	339	342	344	347	349
15	310	313	316	319	322	324	327	329	332	334	337	339	342	344	347	349	352
16	313	316	319	322	324	327	330	332	334	337	339	342	344	347	349	352	354
17	316	319	322	324	327	330	332	335	337	339	342	344	347	349	352	355	357
18	319	322	324	327	330	332	335	337	339	342	344	347	349	352	355	357	360
19	322	324	327	330	332	335	337	339	342	344	347	349	352	355	357	360	363
20	325	327	330	332	335	337	339	342	344	347	349	352	355	357	360	363	367
21	327	330	332	335	337	339	342	344	347	349	352	355	357	360	363	367	370
22	330	332	335	337	339	342	344	347	349	352	355	358	360	363	367	370	374
23	332	335	337	339	342	344	347	349	352	355	358	360	363	367	370	374	378
24	335	337	339	342	345	347	350	352	355	358	360	363	367	370	374	378	380
25	337	339	342	345	347	350	352	355	358	361	363	367	370	374	378	380	380
26	339	342	345	347	350	352	355	358	361	363	367	370	374	378	380	380	380
27	342	345	347	350	352	355	358	361	363	367	370	374	378	380	380	380	380
28	345	347	350	352	355	358	361	363	367	370	374	378	380	380	380	380	380
29	347	350	352	355	358	361	363	367	370	374	378	380	380	380	380	380	380
30	350	352	355	358	361	363	367	371	374	378	380	380	380	380	380	380	380
31	352	355	358	361	363	367	371	374	378	380	380	380	380	380	380	380	380
32	355	358	361	363	367	371	374	378	380	380	380	380	380	380	380	380	380

Table J-5. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	304	307	311	314
1	300	300	300	300	300	300	300	300	300	300	300	300	304	307	311	314	317
2	300	300	300	300	300	300	300	300	300	300	300	304	307	311	314	317	319
3	300	300	300	300	300	300	300	300	300	300	304	307	311	314	317	319	322
4	300	300	300	300	300	300	300	300	300	304	307	311	314	317	319	322	325
5	300	300	300	300	300	300	300	300	304	308	311	314	317	319	322	325	327
6	300	300	300	300	300	300	300	304	308	311	314	317	319	322	325	327	330
7	300	300	300	300	300	300	304	308	311	314	317	319	322	325	327	330	332
8	300	300	300	300	300	304	308	311	314	317	319	322	325	327	330	332	334
9	300	300	300	300	304	308	311	314	317	319	322	325	327	330	332	334	337
10	300	300	300	304	308	311	314	317	319	322	325	327	330	332	334	337	339
11	300	300	304	308	311	314	317	319	322	325	327	330	332	334	337	339	341
12	300	304	308	311	314	317	319	322	325	327	330	332	334	337	339	341	343
13	304	308	311	314	317	319	323	325	327	330	332	334	337	339	341	343	346
14	308	311	314	317	319	323	325	328	330	332	335	337	339	341	344	346	348
15	311	314	317	319	323	325	328	330	332	335	337	339	341	344	346	348	351
16	314	317	320	323	325	328	330	332	335	337	339	341	344	346	348	351	353
17	317	320	323	325	328	330	332	335	337	339	341	344	346	348	351	353	356
18	320	323	325	328	330	332	335	337	339	341	344	346	348	351	353	356	358
19	323	325	328	330	332	335	337	339	341	344	346	348	351	353	356	358	361
20	325	328	330	332	335	337	339	341	344	346	348	351	353	356	358	361	363
21	328	330	332	335	337	339	342	344	346	348	351	353	356	358	361	363	367
22	330	332	335	337	339	342	344	346	348	351	353	356	358	361	364	367	370
23	333	335	337	339	342	344	346	348	351	353	356	358	361	364	367	370	374
24	335	337	339	342	344	346	348	351	353	356	358	361	364	367	370	374	378
25	337	339	342	344	346	349	351	353	356	359	361	364	367	371	374	378	380
26	339	342	344	346	349	351	353	356	359	361	364	367	371	374	378	380	380
27	342	344	346	349	351	353	356	359	361	364	367	371	374	378	380	380	380
28	344	346	349	351	353	356	359	361	364	367	371	374	378	380	380	380	380
29	346	349	351	353	356	359	361	364	367	371	374	378	380	380	380	380	380
30	349	351	354	356	359	361	364	367	371	374	378	380	380	380	380	380	380
31	351	354	356	359	362	364	368	371	374	378	380	380	380	380	380	380	380
32	354	356	359	362	364	368	371	374	378	380	380	380	380	380	380	380	380

Table J-6. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 3, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	300	300	300	300	300	300	300	300	300	300	300	300	300	300	303	306	309
1	300	300	300	300	300	300	300	300	300	300	300	300	300	303	306	309	312
2	300	300	300	300	300	300	300	300	300	300	300	300	303	306	309	312	315
3	300	300	300	300	300	300	300	300	300	300	300	303	306	309	312	315	318
4	300	300	300	300	300	300	300	300	300	300	303	306	309	312	315	318	320
5	300	300	300	300	300	300	300	300	300	303	306	309	312	315	318	320	323
6	300	300	300	300	300	300	300	300	303	306	309	312	315	318	320	323	325
7	300	300	300	300	300	300	300	303	306	310	312	315	318	320	323	325	328
8	300	300	300	300	300	300	303	306	310	312	315	318	320	323	325	328	330
9	300	300	300	300	300	303	307	310	313	315	318	321	323	325	328	330	332
10	300	300	300	300	303	307	310	313	315	318	321	323	325	328	330	332	335
11	300	300	300	303	307	310	313	315	318	321	323	325	328	330	332	335	337
12	300	300	303	307	310	313	315	318	321	323	326	328	330	332	335	337	339
13	300	303	307	310	313	315	318	321	323	326	328	330	332	335	337	339	342
14	304	307	310	313	316	318	321	323	326	328	330	333	335	337	339	342	344
15	307	310	313	316	318	321	323	326	328	330	333	335	337	339	342	344	346
16	310	313	316	318	321	323	326	328	330	333	335	337	339	342	344	346	349
17	313	316	318	321	323	326	328	330	333	335	337	339	342	344	346	349	351
18	316	318	321	323	326	328	330	333	335	337	339	342	344	346	349	351	354
19	318	321	323	326	328	330	333	335	337	339	342	344	346	349	351	354	357
20	321	323	326	328	330	333	335	337	339	342	344	346	349	351	354	357	360
21	323	326	328	330	333	335	337	339	342	344	346	349	351	354	357	360	363
22	326	328	331	333	335	337	339	342	344	347	349	351	354	357	360	363	366
23	328	331	333	335	337	339	342	344	347	349	352	354	357	360	363	366	370
24	331	333	335	337	339	342	344	347	349	352	354	357	360	363	366	370	374
25	333	335	337	339	342	344	347	349	352	354	357	360	363	366	370	374	379
26	335	337	339	342	344	347	349	352	354	357	360	363	367	370	374	379	380
27	337	339	342	344	347	349	352	354	357	360	363	367	370	374	379	380	380
28	339	342	344	347	349	352	354	357	360	363	367	370	374	379	380	380	380
29	342	344	347	349	352	354	357	360	363	367	370	375	379	380	380	380	380
30	344	347	349	352	354	357	360	363	367	370	375	379	380	380	380	380	380
31	347	349	352	354	357	360	363	367	371	375	379	380	380	380	380	380	380
32	349	352	355	357	360	363	367	371	375	379	380	380	380	380	380	380	380

Table J-7. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	402	409	415	419	424	428	432	435	439
1	400	400	400	400	400	400	400	400	406	412	417	422	426	430	434	437	440
2	400	400	400	400	400	400	400	402	409	415	419	424	428	432	435	439	442
3	400	400	400	400	400	400	400	406	412	417	422	426	430	434	437	440	444
4	400	400	400	400	400	400	402	409	415	419	424	428	432	435	439	442	445
5	400	400	400	400	400	400	406	412	417	422	426	430	434	437	440	444	447
6	400	400	400	400	400	402	409	415	419	424	428	432	435	439	442	445	448
7	400	400	400	400	400	406	412	417	422	426	430	434	437	440	444	447	450
8	400	400	400	400	402	409	415	419	424	428	432	435	439	442	445	448	452
9	400	400	400	400	406	412	417	422	426	430	434	437	440	444	447	450	453
10	400	400	400	402	409	415	419	424	428	432	435	439	442	445	448	452	455
11	400	400	400	406	412	417	422	426	430	434	437	440	444	447	450	453	457
12	400	400	402	409	415	419	424	428	432	435	439	442	445	448	452	455	458
13	400	400	406	412	417	422	426	430	434	437	440	444	447	450	453	457	460
14	400	402	409	415	419	424	428	432	435	439	442	445	448	452	455	458	462
15	400	406	412	417	422	426	430	434	437	440	444	447	450	453	457	460	463
16	402	409	415	419	424	428	432	435	439	442	445	448	452	455	458	462	466
17	406	412	417	422	426	430	434	437	440	444	447	450	453	457	460	463	468
18	409	415	419	424	428	432	435	439	442	445	448	452	455	458	462	466	470
19	412	417	422	426	430	434	437	440	444	447	450	453	457	460	463	468	472
20	415	419	424	428	432	435	439	442	445	448	452	455	458	462	466	470	475
21	417	422	426	430	434	437	440	444	447	450	453	457	460	463	468	472	478
22	419	424	428	432	435	439	442	445	448	452	455	458	462	466	470	475	480
23	422	426	430	434	437	440	444	447	450	453	457	460	463	468	472	478	480
24	424	428	432	435	439	442	445	448	452	455	458	462	466	470	475	480	480
25	426	430	434	437	440	444	447	450	453	457	460	463	468	472	478	480	480
26	428	432	435	439	442	445	448	452	455	458	462	466	470	475	480	480	480
27	430	434	437	440	444	447	450	453	457	460	463	468	472	478	480	480	480
28	432	435	439	442	445	448	452	455	458	462	466	470	475	480	480	480	480
29	434	437	440	444	447	450	453	457	460	463	468	472	478	480	480	480	480
30	435	439	442	445	448	452	455	458	462	466	470	475	480	480	480	480	480
31	437	440	444	447	450	453	457	460	463	468	472	478	480	480	480	480	480
32	439	442	445	448	452	455	458	462	466	470	475	480	480	480	480	480	480

Table J-8. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	401	408	414	419	424	428	432	435	439
1	400	400	400	400	400	400	400	400	405	411	417	421	426	430	434	437	441
2	400	400	400	400	400	400	400	401	408	414	419	424	428	432	435	439	442
3	400	400	400	400	400	400	400	405	411	417	421	426	430	434	437	441	444
4	400	400	400	400	400	400	401	408	414	419	424	428	432	435	439	442	446
5	400	400	400	400	400	400	405	411	417	421	426	430	434	437	441	444	447
6	400	400	400	400	400	401	408	414	419	424	428	432	435	439	442	446	449
7	400	400	400	400	400	405	411	417	421	426	430	434	437	441	444	447	451
8	400	400	400	400	401	408	414	419	424	428	432	435	439	442	446	449	452
9	400	400	400	400	405	411	417	421	426	430	434	437	441	444	447	451	454
10	400	400	400	401	408	414	419	424	428	432	435	439	442	446	449	452	456
11	400	400	400	405	411	417	421	426	430	434	437	441	444	447	451	454	458
12	400	400	401	408	414	419	424	428	432	435	439	442	446	449	452	456	460
13	400	400	405	411	417	421	426	430	434	437	441	444	447	451	454	458	461
14	400	401	408	414	419	424	428	432	435	439	442	446	449	452	456	460	463
15	400	405	411	417	421	426	430	434	437	441	444	447	451	454	458	461	465
16	401	408	414	419	424	428	432	435	439	442	446	449	452	456	460	463	468
17	405	411	417	421	426	430	434	437	441	444	447	451	454	458	461	465	470
18	408	414	419	424	428	432	435	439	442	446	449	452	456	460	463	468	472
19	411	417	421	426	430	434	437	441	444	447	451	454	458	461	465	470	474
20	414	419	424	428	432	435	439	442	446	449	452	456	460	463	468	472	477
21	417	421	426	430	434	437	441	444	447	451	454	458	461	465	470	474	480
22	419	424	428	432	435	439	442	446	449	452	456	460	463	468	472	477	480
23	421	426	430	434	437	441	444	447	451	454	458	461	465	470	474	480	480
24	424	428	432	435	439	442	446	449	452	456	460	463	468	472	477	480	480
25	426	430	434	437	441	444	447	451	454	458	461	465	470	474	480	480	480
26	428	432	435	439	442	446	449	452	456	460	463	468	472	477	480	480	480
27	430	434	437	441	444	447	451	454	458	461	465	470	474	480	480	480	480
28	432	435	439	442	446	449	452	456	460	463	468	472	477	480	480	480	480
29	434	437	441	444	447	451	454	458	461	465	470	474	480	480	480	480	480
30	435	439	442	446	449	452	456	460	463	468	472	477	480	480	480	480	480
31	437	441	444	447	451	454	458	461	465	470	474	480	480	480	480	480	480
32	439	442	446	449	452	456	460	463	468	472	477	480	480	480	480	480	480

Table J-9. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	405	411	417	422	426	430	434	438	441
1	400	400	400	400	400	400	400	401	408	414	419	424	428	432	436	439	443
2	400	400	400	400	400	400	400	405	411	417	422	426	430	434	438	441	445
3	400	400	400	400	400	400	401	408	414	419	424	428	432	436	439	443	447
4	400	400	400	400	400	400	405	411	417	422	426	430	434	438	441	445	448
5	400	400	400	400	400	401	408	414	419	424	428	432	436	439	443	447	450
6	400	400	400	400	400	405	411	417	422	426	430	434	438	441	445	448	452
7	400	400	400	400	401	408	414	419	424	428	432	436	439	443	447	450	453
8	400	400	400	400	405	411	417	422	426	430	434	438	441	445	448	452	455
9	400	400	400	401	408	414	419	424	428	432	436	439	443	447	450	453	457
10	400	400	400	405	411	417	422	426	430	434	438	441	445	448	452	455	459
11	400	400	401	408	414	419	424	428	432	436	439	443	447	450	453	457	461
12	400	400	405	411	417	422	426	430	434	438	441	445	448	452	455	459	462
13	400	401	408	414	419	424	428	432	436	439	443	447	450	453	457	461	464
14	400	405	411	417	422	426	430	434	438	441	445	448	452	455	459	462	466
15	401	408	414	419	424	428	432	436	439	443	447	450	453	457	461	464	469
16	405	411	417	422	426	430	434	438	441	445	448	452	455	459	462	466	471
17	408	414	419	424	428	432	436	439	443	447	450	453	457	461	464	469	473
18	411	417	422	426	430	434	438	441	445	448	452	455	459	462	466	471	475
19	414	419	424	428	432	436	439	443	447	450	453	457	461	464	469	473	478
20	417	422	426	430	434	438	441	445	448	452	455	459	462	466	471	475	480
21	419	424	428	432	436	439	443	447	450	453	457	461	464	469	473	478	480
22	422	426	430	434	438	441	445	448	452	455	459	462	466	471	475	480	480
23	424	428	432	436	439	443	447	450	453	457	461	464	469	473	478	480	480
24	426	430	434	438	441	445	448	452	455	459	462	466	471	475	480	480	480
25	428	432	436	439	443	447	450	453	457	461	464	469	473	478	480	480	480
26	430	434	438	441	445	448	452	455	459	462	466	471	475	480	480	480	480
27	432	436	439	443	447	450	453	457	461	464	469	473	478	480	480	480	480
28	434	438	441	445	448	452	455	459	462	466	471	475	480	480	480	480	480
29	436	439	443	447	450	453	457	461	464	469	473	478	480	480	480	480	480
30	438	441	445	448	452	455	459	462	466	471	475	480	480	480	480	480	480
31	439	443	447	450	453	457	461	464	469	473	478	480	480	480	480	480	480
32	441	445	448	452	455	459	462	466	471	475	480	480	480	480	480	480	480

Table J-10. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	408	414	419	424	428	432	436	439	443
1	400	400	400	400	400	400	400	404	411	417	422	426	430	434	438	441	444
2	400	400	400	400	400	400	400	408	414	419	424	428	432	436	439	443	446
3	400	400	400	400	400	400	404	411	417	422	426	430	434	438	441	444	448
4	400	400	400	400	400	400	408	414	419	424	428	432	436	439	443	446	449
5	400	400	400	400	400	404	411	417	422	426	430	434	438	441	444	448	451
6	400	400	400	400	400	408	414	419	424	428	432	436	439	443	446	449	453
7	400	400	400	400	404	411	417	422	426	430	434	438	441	444	448	451	454
8	400	400	400	400	408	414	419	424	428	432	436	439	443	446	449	453	456
9	400	400	400	404	411	417	422	426	430	434	438	441	444	448	451	454	458
10	400	400	400	408	414	419	424	428	432	436	439	443	446	449	453	456	459
11	400	400	404	411	417	422	426	430	434	438	441	444	448	451	454	458	461
12	400	400	408	414	419	424	428	432	436	439	443	446	449	453	456	459	463
13	400	404	411	417	422	426	430	434	438	441	444	448	451	454	458	461	464
14	400	408	414	419	424	428	432	436	439	443	446	449	453	456	459	463	466
15	404	411	417	422	426	430	434	438	441	444	448	451	454	458	461	464	468
16	408	414	419	424	428	432	436	439	443	446	449	453	456	459	463	466	470
17	411	417	422	426	430	434	438	441	444	448	451	454	458	461	464	468	472
18	414	419	424	428	432	436	439	443	446	449	453	456	459	463	466	470	474
19	417	422	426	430	434	438	441	444	448	451	454	458	461	464	468	472	476
20	419	424	428	432	436	439	443	446	449	453	456	459	463	466	470	474	478
21	422	426	430	434	438	441	444	448	451	454	458	461	464	468	472	476	480
22	424	428	432	436	439	443	446	449	453	456	459	463	466	470	474	478	480
23	426	430	434	438	441	444	448	451	454	458	461	464	468	472	476	480	480
24	428	432	436	439	443	446	449	453	456	459	463	466	470	474	478	480	480
25	430	434	438	441	444	448	451	454	458	461	464	468	472	476	480	480	480
26	432	436	439	443	446	449	453	456	459	463	466	470	474	478	480	480	480
27	434	438	441	444	448	451	454	458	461	464	468	472	476	480	480	480	480
28	436	439	443	446	449	453	456	459	463	466	470	474	478	480	480	480	480
29	438	441	444	448	451	454	458	461	464	468	472	476	480	480	480	480	480
30	439	443	446	449	453	456	459	463	466	470	474	478	480	480	480	480	480
31	441	444	448	451	454	458	461	464	468	472	476	480	480	480	480	480	480
32	443	446	449	453	456	459	463	466	470	474	478	480	480	480	480	480	480

Table J-11. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	401	409	415	420	425	429	433	437	440
1	400	400	400	400	400	400	400	400	405	412	418	423	427	431	435	439	442
2	400	400	400	400	400	400	400	401	409	415	420	425	429	433	437	440	444
3	400	400	400	400	400	400	400	405	412	418	423	427	431	435	439	442	446
4	400	400	400	400	400	400	401	409	415	420	425	429	433	437	440	444	447
5	400	400	400	400	400	400	405	412	418	423	427	431	435	439	442	446	449
6	400	400	400	400	400	401	409	415	420	425	429	433	437	440	444	447	451
7	400	400	400	400	400	405	412	418	423	427	431	435	439	442	446	449	452
8	400	400	400	400	401	409	415	420	425	429	433	437	440	444	447	451	454
9	400	400	400	400	405	412	418	423	427	431	435	439	442	446	449	452	456
10	400	400	400	401	409	415	420	425	429	433	437	440	444	447	451	454	458
11	400	400	400	405	412	418	423	427	431	435	439	442	446	449	452	456	460
12	400	400	401	409	415	420	425	429	433	437	440	444	447	451	454	458	462
13	400	400	405	412	418	423	427	431	435	439	442	446	449	452	456	460	463
14	400	401	409	415	420	425	429	433	437	440	444	447	451	454	458	462	466
15	400	405	412	418	423	427	431	435	439	442	446	449	452	456	460	463	468
16	401	409	415	420	425	429	433	437	440	444	447	451	454	458	462	466	470
17	405	412	418	423	427	431	435	439	442	446	449	452	456	460	463	468	472
18	409	415	420	425	429	433	437	440	444	447	451	454	458	462	466	470	475
19	412	418	423	427	431	435	439	442	446	449	452	456	460	463	468	472	478
20	415	420	425	429	433	437	440	444	447	451	454	458	462	466	470	475	480
21	418	423	427	431	435	439	442	446	449	452	456	460	463	468	472	478	480
22	420	425	429	433	437	440	444	447	451	454	458	462	466	470	475	480	480
23	423	427	431	435	439	442	446	449	452	456	460	463	468	472	478	480	480
24	425	429	433	437	440	444	447	451	454	458	462	466	470	475	480	480	480
25	427	431	435	439	442	446	449	452	456	460	463	468	472	478	480	480	480
26	429	433	437	440	444	447	451	454	458	462	466	470	475	480	480	480	480
27	431	435	439	442	446	449	452	456	460	463	468	472	478	480	480	480	480
28	433	437	440	444	447	451	454	458	462	466	470	475	480	480	480	480	480
29	435	439	442	446	449	452	456	460	463	468	472	478	480	480	480	480	480
30	437	440	444	447	451	454	458	462	466	470	475	480	480	480	480	480	480
31	439	442	446	449	452	456	460	463	468	472	478	480	480	480	480	480	480
32	440	444	447	451	454	458	462	466	470	475	480	480	480	480	480	480	480

Table J-12. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 4, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	402	410	416	421	426	430	434	437	440	443
1	400	400	400	400	400	400	400	406	413	419	424	428	432	435	439	442	445
2	400	400	400	400	400	400	402	410	416	421	426	430	434	437	440	443	447
3	400	400	400	400	400	400	406	413	419	424	428	432	435	439	442	445	448
4	400	400	400	400	400	402	410	416	421	426	430	434	437	440	443	447	449
5	400	400	400	400	400	406	413	419	424	428	432	435	439	442	445	448	451
6	400	400	400	400	402	410	416	421	426	430	434	437	440	443	447	449	452
7	400	400	400	400	406	413	419	424	428	432	435	439	442	445	448	451	454
8	400	400	400	402	410	416	421	426	430	434	437	440	443	447	449	452	455
9	400	400	400	406	413	419	424	428	432	435	439	442	445	448	451	454	457
10	400	400	402	410	416	421	426	430	434	437	440	443	447	449	452	455	458
11	400	400	406	413	419	424	428	432	435	439	442	445	448	451	454	457	460
12	400	402	410	416	421	426	430	434	437	440	443	447	449	452	455	458	461
13	400	406	413	419	424	428	432	435	439	442	445	448	451	454	457	460	463
14	402	410	416	421	426	430	434	437	440	443	447	449	452	455	458	461	465
15	406	413	419	424	428	432	435	439	442	445	448	451	454	457	460	463	466
16	410	416	421	426	430	434	437	440	443	447	449	452	455	458	461	465	468
17	413	419	424	428	432	435	439	442	445	448	451	454	457	460	463	466	470
18	416	421	426	430	434	437	440	443	447	449	452	455	458	461	465	468	472
19	419	424	428	432	435	439	442	445	448	451	454	457	460	463	466	470	474
20	421	426	430	434	437	440	443	447	449	452	455	458	461	465	468	472	476
21	424	428	432	435	439	442	445	448	451	454	457	460	463	466	470	474	479
22	426	430	434	437	440	443	447	449	452	455	458	461	465	468	472	476	480
23	428	432	435	439	442	445	448	451	454	457	460	463	466	470	474	479	480
24	430	434	437	440	443	447	449	452	455	458	461	465	468	472	476	480	480
25	432	435	439	442	445	448	451	454	457	460	463	466	470	474	479	480	480
26	434	437	440	443	447	449	452	455	458	461	465	468	472	476	480	480	480
27	435	439	442	445	448	451	454	457	460	463	466	470	474	479	480	480	480
28	437	440	443	447	449	452	455	458	461	465	468	472	476	480	480	480	480
29	439	442	445	448	451	454	457	460	463	466	470	474	479	480	480	480	480
30	440	443	447	449	452	455	458	461	465	468	472	476	480	480	480	480	480
31	442	445	448	451	454	457	460	463	466	470	474	479	480	480	480	480	480
32	443	447	449	452	455	458	461	465	468	472	476	480	480	480	480	480	480

Table J-13. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	504	510	516	520	524	528	532	535	538
1	500	500	500	500	500	500	500	501	507	513	518	522	526	530	533	537	539
2	500	500	500	500	500	500	500	504	510	516	520	524	528	532	535	538	541
3	500	500	500	500	500	500	501	507	513	518	522	526	530	533	537	539	543
4	500	500	500	500	500	500	504	510	516	520	524	528	532	535	538	541	545
5	500	500	500	500	500	501	507	513	518	522	526	530	533	537	539	543	546
6	500	500	500	500	500	504	510	516	520	524	528	532	535	538	541	545	548
7	500	500	500	500	501	507	513	518	522	526	530	533	537	539	543	546	549
8	500	500	500	500	504	510	516	520	524	528	532	535	538	541	545	548	551
9	500	500	500	501	507	513	518	522	526	530	533	537	539	543	546	549	552
10	500	500	500	504	510	516	520	524	528	532	535	538	541	545	548	551	554
11	500	500	501	507	513	518	522	526	530	533	537	539	543	546	549	552	556
12	500	500	504	510	516	520	524	528	532	535	538	541	545	548	551	554	557
13	500	501	507	513	518	522	526	530	533	537	539	543	546	549	552	556	559
14	500	504	510	516	520	524	528	532	535	538	541	545	548	551	554	557	561
15	501	507	513	518	522	526	530	533	537	539	543	546	549	552	556	559	563
16	504	510	516	520	524	528	532	535	538	541	545	548	551	554	557	561	565
17	507	513	518	522	526	530	533	537	539	543	546	549	552	556	559	563	567
18	510	516	520	524	528	532	535	538	541	545	548	551	554	557	561	565	569
19	513	518	522	526	530	533	537	539	543	546	549	552	556	559	563	567	571
20	516	520	524	528	532	535	538	541	545	548	551	554	557	561	565	569	573
21	518	522	526	530	533	537	539	543	546	549	552	556	559	563	567	571	576
22	520	524	528	532	535	538	541	545	548	551	554	557	561	565	569	573	578
23	522	526	530	533	537	539	543	546	549	552	556	559	563	567	571	576	580
24	524	528	532	535	538	541	545	548	551	554	557	561	565	569	573	578	580
25	526	530	533	537	539	543	546	549	552	556	559	563	567	571	576	580	580
26	528	532	535	538	541	545	548	551	554	557	561	565	569	573	578	580	580
27	530	533	537	539	543	546	549	552	556	559	563	567	571	576	580	580	580
28	532	535	538	541	545	548	551	554	557	561	565	569	573	578	580	580	580
29	533	537	539	543	546	549	552	556	559	563	567	571	576	580	580	580	580
30	535	538	541	545	548	551	554	557	561	565	569	573	578	580	580	580	580
31	537	539	543	546	549	552	556	559	563	567	571	576	580	580	580	580	580
32	538	541	545	548	551	554	557	561	565	569	573	578	580	580	580	580	580

Table J-14. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	504	510	515	519	523	527	531	534	537
1	500	500	500	500	500	500	500	500	507	512	517	521	525	529	532	535	538
2	500	500	500	500	500	500	500	504	510	515	519	523	527	531	534	537	539
3	500	500	500	500	500	500	500	507	512	517	521	525	529	532	535	538	541
4	500	500	500	500	500	500	504	510	515	519	523	527	531	534	537	539	543
5	500	500	500	500	500	500	507	512	517	521	525	529	532	535	538	541	544
6	500	500	500	500	500	504	510	515	519	523	527	531	534	537	539	543	545
7	500	500	500	500	500	507	512	517	521	525	529	532	535	538	541	544	547
8	500	500	500	500	504	510	515	519	523	527	531	534	537	539	543	545	548
9	500	500	500	500	507	512	517	521	525	529	532	535	538	541	544	547	550
10	500	500	500	504	510	515	519	523	527	531	534	537	539	543	545	548	551
11	500	500	500	507	512	517	521	525	529	532	535	538	541	544	547	550	553
12	500	500	504	510	515	519	523	527	531	534	537	539	543	545	548	551	554
13	500	500	507	512	517	521	525	529	532	535	538	541	544	547	550	553	556
14	500	504	510	515	519	523	527	531	534	537	539	543	545	548	551	554	557
15	500	507	512	517	521	525	529	532	535	538	541	544	547	550	553	556	559
16	504	510	515	519	523	527	531	534	537	539	543	545	548	551	554	557	561
17	507	512	517	521	525	529	532	535	538	541	544	547	550	553	556	559	562
18	510	515	519	523	527	531	534	537	539	543	545	548	551	554	557	561	564
19	512	517	521	525	529	532	535	538	541	544	547	550	553	556	559	562	566
20	515	519	523	527	531	534	537	539	543	545	548	551	554	557	561	564	568
21	517	521	525	529	532	535	538	541	544	547	550	553	556	559	562	566	571
22	519	523	527	531	534	537	539	543	545	548	551	554	557	561	564	568	573
23	521	525	529	532	535	538	541	544	547	550	553	556	559	562	566	571	576
24	523	527	531	534	537	539	543	545	548	551	554	557	561	564	568	573	579
25	525	529	532	535	538	541	544	547	550	553	556	559	562	566	571	576	580
26	527	531	534	537	539	543	545	548	551	554	557	561	564	568	573	579	580
27	529	532	535	538	541	544	547	550	553	556	559	562	566	571	576	580	580
28	531	534	537	539	543	545	548	551	554	557	561	564	568	573	579	580	580
29	532	535	538	541	544	547	550	553	556	559	562	566	571	576	580	580	580
30	534	537	539	543	545	548	551	554	557	561	564	568	573	579	580	580	580
31	535	538	541	544	547	550	553	556	559	562	566	571	576	580	580	580	580
32	537	539	543	545	548	551	554	557	561	564	568	573	579	580	580	580	580

Table J-15. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	500	504	510	515	519	524	528	531	535
1	500	500	500	500	500	500	500	500	501	507	513	517	522	526	529	533	537
2	500	500	500	500	500	500	500	500	504	510	515	519	524	528	531	535	538
3	500	500	500	500	500	500	500	501	507	513	517	522	526	529	533	537	539
4	500	500	500	500	500	500	500	504	510	515	519	524	528	531	535	538	542
5	500	500	500	500	500	500	501	507	513	517	522	526	529	533	537	539	543
6	500	500	500	500	500	500	504	510	515	519	524	528	531	535	538	542	545
7	500	500	500	500	500	501	507	513	517	522	526	529	533	537	539	543	547
8	500	500	500	500	500	504	510	515	519	524	528	531	535	538	542	545	549
9	500	500	500	500	501	507	513	517	522	526	529	533	537	539	543	547	550
10	500	500	500	500	504	510	515	519	524	528	531	535	538	542	545	549	552
11	500	500	500	501	507	513	517	522	526	529	533	537	539	543	547	550	554
12	500	500	500	504	510	515	519	524	528	531	535	538	542	545	549	552	556
13	500	500	501	507	513	517	522	526	529	533	537	539	543	547	550	554	558
14	500	500	504	510	515	519	524	528	531	535	538	542	545	549	552	556	560
15	500	501	507	513	517	522	526	529	533	537	539	543	547	550	554	558	562
16	500	504	510	515	519	524	528	531	535	538	542	545	549	552	556	560	564
17	501	507	513	517	522	526	529	533	537	539	543	547	550	554	558	562	566
18	504	510	515	519	524	528	531	535	538	542	545	549	552	556	560	564	569
19	507	513	517	522	526	529	533	537	539	543	547	550	554	558	562	566	571
20	510	515	519	524	528	531	535	538	542	545	549	552	556	560	564	569	574
21	513	517	522	526	529	533	537	539	543	547	550	554	558	562	566	571	576
22	515	519	524	528	531	535	538	542	545	549	552	556	560	564	569	574	579
23	517	522	526	529	533	537	539	543	547	550	554	558	562	566	571	576	580
24	519	524	528	531	535	538	542	545	549	552	556	560	564	569	574	579	580
25	522	526	529	533	537	539	543	547	550	554	558	562	566	571	576	580	580
26	524	528	531	535	538	542	545	549	552	556	560	564	569	574	579	580	580
27	526	529	533	537	539	543	547	550	554	558	562	566	571	576	580	580	580
28	528	531	535	538	542	545	549	552	556	560	564	569	574	579	580	580	580
29	529	533	537	539	543	547	550	554	558	562	566	571	576	580	580	580	580
30	531	535	538	542	545	549	552	556	560	564	569	574	579	580	580	580	580
31	533	537	539	543	547	550	554	558	562	566	571	576	580	580	580	580	580
32	535	538	542	545	549	552	556	560	564	569	574	579	580	580	580	580	580

Table J-16. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	501	508	514	518	523	527	530	534	537
1	500	500	500	500	500	500	500	500	505	511	516	521	525	529	532	536	539
2	500	500	500	500	500	500	500	501	508	514	518	523	527	530	534	537	541
3	500	500	500	500	500	500	500	505	511	516	521	525	529	532	536	539	542
4	500	500	500	500	500	500	501	508	514	518	523	527	530	534	537	541	544
5	500	500	500	500	500	500	505	511	516	521	525	529	532	536	539	542	546
6	500	500	500	500	500	501	508	514	518	523	527	530	534	537	541	544	547
7	500	500	500	500	500	505	511	516	521	525	529	532	536	539	542	546	549
8	500	500	500	500	501	508	514	518	523	527	530	534	537	541	544	547	550
9	500	500	500	500	505	511	516	521	525	529	532	536	539	542	546	549	552
10	500	500	500	501	508	514	518	523	527	530	534	537	541	544	547	550	554
11	500	500	500	505	511	516	521	525	529	532	536	539	542	546	549	552	556
12	500	500	501	508	514	518	523	527	530	534	537	541	544	547	550	554	557
13	500	500	505	511	516	521	525	529	532	536	539	542	546	549	552	556	559
14	500	501	508	514	518	523	527	530	534	537	541	544	547	550	554	557	561
15	500	505	511	516	521	525	529	532	536	539	542	546	549	552	556	559	563
16	501	508	514	518	523	527	530	534	537	541	544	547	550	554	557	561	565
17	505	511	516	521	525	529	532	536	539	542	546	549	552	556	559	563	568
18	508	514	518	523	527	530	534	537	541	544	547	550	554	557	561	565	570
19	511	516	521	525	529	532	536	539	542	546	549	552	556	559	563	568	572
20	514	518	523	527	530	534	537	541	544	547	550	554	557	561	565	570	575
21	516	521	525	529	532	536	539	542	546	549	552	556	559	563	568	572	578
22	518	523	527	530	534	537	541	544	547	550	554	557	561	565	570	575	580
23	521	525	529	532	536	539	542	546	549	552	556	559	563	568	572	578	580
24	523	527	530	534	537	541	544	547	550	554	557	561	565	570	575	580	580
25	525	529	532	536	539	542	546	549	552	556	559	563	568	572	578	580	580
26	527	530	534	537	541	544	547	550	554	557	561	565	570	575	580	580	580
27	529	532	536	539	542	546	549	552	556	559	563	568	572	578	580	580	580
28	530	534	537	541	544	547	550	554	557	561	565	570	575	580	580	580	580
29	532	536	539	542	546	549	552	556	559	563	568	572	578	580	580	580	580
30	534	537	541	544	547	550	554	557	561	565	570	575	580	580	580	580	580
31	536	539	542	546	549	552	556	559	563	568	572	578	580	580	580	580	580
32	537	541	544	547	550	554	557	561	565	570	575	580	580	580	580	580	580

Table J-17. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	500	503	509	515	519	524	528	531	535
1	500	500	500	500	500	500	500	500	500	506	512	517	522	526	530	533	537
2	500	500	500	500	500	500	500	500	503	509	515	519	524	528	531	535	538
3	500	500	500	500	500	500	500	500	506	512	517	522	526	530	533	537	540
4	500	500	500	500	500	500	500	503	509	515	519	524	528	531	535	538	542
5	500	500	500	500	500	500	500	506	512	517	522	526	530	533	537	540	543
6	500	500	500	500	500	500	503	509	515	519	524	528	531	535	538	542	545
7	500	500	500	500	500	500	506	512	517	522	526	530	533	537	540	543	547
8	500	500	500	500	500	503	509	515	519	524	528	531	535	538	542	545	548
9	500	500	500	500	500	506	512	517	522	526	530	533	537	540	543	547	550
10	500	500	500	500	503	509	515	519	524	528	531	535	538	542	545	548	552
11	500	500	500	500	506	512	517	522	526	530	533	537	540	543	547	550	554
12	500	500	500	503	509	515	519	524	528	531	535	538	542	545	548	552	555
13	500	500	500	506	512	517	522	526	530	533	537	540	543	547	550	554	557
14	500	500	503	509	515	519	524	528	531	535	538	542	545	548	552	555	559
15	500	500	506	512	517	522	526	530	533	537	540	543	547	550	554	557	561
16	500	503	509	515	519	524	528	531	535	538	542	545	548	552	555	559	563
17	500	506	512	517	522	526	530	533	537	540	543	547	550	554	557	561	565
18	503	509	515	519	524	528	531	535	538	542	545	548	552	555	559	563	567
19	506	512	517	522	526	530	533	537	540	543	547	550	554	557	561	565	569
20	509	515	519	524	528	531	535	538	542	545	548	552	555	559	563	567	572
21	512	517	522	526	530	533	537	540	543	547	550	554	557	561	565	569	574
22	515	519	524	528	531	535	538	542	545	548	552	555	559	563	567	572	577
23	517	522	526	530	533	537	540	543	547	550	554	557	561	565	569	574	580
24	519	524	528	531	535	538	542	545	548	552	555	559	563	567	572	577	580
25	522	526	530	533	537	540	543	547	550	554	557	561	565	569	574	580	580
26	524	528	531	535	538	542	545	548	552	555	559	563	567	572	577	580	580
27	526	530	533	537	540	543	547	550	554	557	561	565	569	574	580	580	580
28	528	531	535	538	542	545	548	552	555	559	563	567	572	577	580	580	580
29	530	533	537	540	543	547	550	554	557	561	565	569	574	580	580	580	580
30	531	535	538	542	545	548	552	555	559	563	567	572	577	580	580	580	580
31	533	537	540	543	547	550	554	557	561	565	569	574	580	580	580	580	580
32	535	538	542	545	548	552	555	559	563	567	572	577	580	580	580	580	580

Table J-18. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 5, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	500	506	511	516	519	524	527	530	533
1	500	500	500	500	500	500	500	500	503	509	514	518	522	525	529	532	535
2	500	500	500	500	500	500	500	500	506	511	516	519	524	527	530	533	536
3	500	500	500	500	500	500	500	503	509	514	518	522	525	529	532	535	538
4	500	500	500	500	500	500	500	506	511	516	519	524	527	530	533	536	539
5	500	500	500	500	500	500	503	509	514	518	522	525	529	532	535	538	541
6	500	500	500	500	500	500	506	511	516	519	524	527	530	533	536	539	542
7	500	500	500	500	500	503	509	514	518	522	525	529	532	535	538	541	544
8	500	500	500	500	500	506	511	516	519	524	527	530	533	536	539	542	545
9	500	500	500	500	503	509	514	518	522	525	529	532	535	538	541	544	547
10	500	500	500	500	506	511	516	519	524	527	530	533	536	539	542	545	548
11	500	500	500	503	509	514	518	522	525	529	532	535	538	541	544	547	550
12	500	500	500	506	511	516	519	524	527	530	533	536	539	542	545	548	551
13	500	500	503	509	514	518	522	525	529	532	535	538	541	544	547	550	553
14	500	500	506	511	516	519	524	527	530	533	536	539	542	545	548	551	555
15	500	503	509	514	518	522	525	529	532	535	538	541	544	547	550	553	556
16	500	506	511	516	519	524	527	530	533	536	539	542	545	548	551	555	558
17	503	509	514	518	522	525	529	532	535	538	541	544	547	550	553	556	560
18	506	511	516	519	524	527	530	533	536	539	542	545	548	551	555	558	562
19	509	514	518	522	525	529	532	535	538	541	544	547	550	553	556	560	564
20	511	516	519	524	527	530	533	536	539	542	545	548	551	555	558	562	567
21	514	518	522	525	529	532	535	538	541	544	547	550	553	556	560	564	569
22	516	519	524	527	530	533	536	539	542	545	548	551	555	558	562	567	572
23	518	522	525	529	532	535	538	541	544	547	550	553	556	560	564	569	575
24	519	524	527	530	533	536	539	542	545	548	551	555	558	562	567	572	578
25	522	525	529	532	535	538	541	544	547	550	553	556	560	564	569	575	580
26	524	527	530	533	536	539	542	545	548	551	555	558	562	567	572	578	580
27	525	529	532	535	538	541	544	547	550	553	556	560	564	569	575	580	580
28	527	530	533	536	539	542	545	548	551	555	558	562	567	572	578	580	580
29	529	532	535	538	541	544	547	550	553	556	560	564	569	575	580	580	580
30	530	533	536	539	542	545	548	551	555	558	562	567	572	578	580	580	580
31	532	535	538	541	544	547	550	553	556	560	564	569	575	580	580	580	580
32	533	536	539	542	545	548	551	555	558	562	567	572	578	580	580	580	580

Table J-19. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	600	603	610	616	621	625	629	633	636	639	643
1	600	600	600	600	600	600	600	607	613	618	623	627	631	635	638	641	644
2	600	600	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646
3	600	600	600	600	600	600	607	613	618	623	627	631	635	638	641	644	647
4	600	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649
5	600	600	600	600	600	607	613	618	623	627	631	635	638	641	644	647	650
6	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652
7	600	600	600	600	607	613	618	623	627	631	635	638	641	644	647	650	654
8	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655
9	600	600	600	607	613	618	623	627	631	635	638	641	644	647	650	654	657
10	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658
11	600	600	607	613	618	623	627	631	635	638	641	644	647	650	654	657	660
12	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660
13	600	607	613	618	623	627	631	635	638	641	644	647	650	654	657	660	663
14	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660	665
15	607	613	618	623	627	631	635	638	641	644	647	650	654	657	660	663	666
16	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660	665	668
17	613	618	623	627	631	635	638	641	644	647	650	654	657	660	663	666	670
18	616	621	625	629	633	636	639	643	646	649	652	655	658	660	665	668	672
19	618	623	627	631	635	638	641	644	647	650	654	657	660	663	666	670	674
20	621	625	629	633	636	639	643	646	649	652	655	658	660	665	668	672	676
21	623	627	631	635	638	641	644	647	650	654	657	660	663	666	670	674	678
22	625	629	633	636	639	643	646	649	652	655	658	660	665	668	672	676	680
23	627	631	635	638	641	644	647	650	654	657	660	663	666	670	674	678	680
24	629	633	636	639	643	646	649	652	655	658	660	665	668	672	676	680	680
25	631	635	638	641	644	647	650	654	657	660	663	666	670	674	678	680	680
26	633	636	639	643	646	649	652	655	658	660	665	668	672	676	680	680	680
27	635	638	641	644	647	650	654	657	660	663	666	670	674	678	680	680	680
28	636	639	643	646	649	652	655	658	660	665	668	672	676	680	680	680	680
29	638	641	644	647	650	654	657	660	663	666	670	674	678	680	680	680	680
30	639	643	646	649	652	655	658	660	665	668	672	676	680	680	680	680	680
31	641	644	647	650	654	657	660	663	666	670	674	678	680	680	680	680	680
32	643	646	649	652	655	658	660	665	668	672	676	680	680	680	680	680	680

Table J-20. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	600	607	613	618	623	627	631	634	638	641	644
1	600	600	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646
2	600	600	600	600	600	600	607	613	618	623	627	631	634	638	641	644	647
3	600	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649
4	600	600	600	600	600	607	613	618	623	627	631	634	638	641	644	647	650
5	600	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652
6	600	600	600	600	607	613	618	623	627	631	634	638	641	644	647	650	653
7	600	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655
8	600	600	600	607	613	618	623	627	631	634	638	641	644	647	650	653	656
9	600	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658
10	600	600	607	613	618	623	627	631	634	638	641	644	647	650	653	656	659
11	600	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660
12	600	607	613	618	623	627	631	634	638	641	644	647	650	653	656	659	662
13	603	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660	664
14	607	613	618	623	627	631	634	638	641	644	647	650	653	656	659	662	666
15	610	616	621	625	629	633	636	639	643	646	649	652	655	658	660	664	668
16	613	618	623	627	631	634	638	641	644	647	650	653	656	659	662	666	669
17	616	621	625	629	633	636	639	643	646	649	652	655	658	660	664	668	671
18	618	623	627	631	634	638	641	644	647	650	653	656	659	662	666	669	673
19	621	625	629	633	636	639	643	646	649	652	655	658	660	664	668	671	675
20	623	627	631	634	638	641	644	647	650	653	656	659	662	666	669	673	678
21	625	629	633	636	639	643	646	649	652	655	658	660	664	668	671	675	680
22	627	631	634	638	641	644	647	650	653	656	659	662	666	669	673	678	680
23	629	633	636	639	643	646	649	652	655	658	660	664	668	671	675	680	680
24	631	634	638	641	644	647	650	653	656	659	662	666	669	673	678	680	680
25	633	636	639	643	646	649	652	655	658	660	664	668	671	675	680	680	680
26	634	638	641	644	647	650	653	656	659	662	666	669	673	678	680	680	680
27	636	639	643	646	649	652	655	658	660	664	668	671	675	680	680	680	680
28	638	641	644	647	650	653	656	659	662	666	669	673	678	680	680	680	680
29	639	643	646	649	652	655	658	660	664	668	671	675	680	680	680	680	680
30	641	644	647	650	653	656	659	662	666	669	673	678	680	680	680	680	680
31	643	646	649	652	655	658	660	664	668	671	675	680	680	680	680	680	680
32	644	647	650	653	656	659	662	666	669	673	678	680	680	680	680	680	680

Table J-21. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	601	609	615	620	625	629	633	636	639	643	646
1	600	600	600	600	600	600	605	612	618	623	627	631	634	638	641	644	647
2	600	600	600	600	600	601	609	615	620	625	629	633	636	639	643	646	648
3	600	600	600	600	600	605	612	618	623	627	631	634	638	641	644	647	650
4	600	600	600	600	601	609	615	620	625	629	633	636	639	643	646	648	651
5	600	600	600	600	605	612	618	623	627	631	634	638	641	644	647	650	653
6	600	600	600	601	609	615	620	625	629	633	636	639	643	646	648	651	654
7	600	600	600	605	612	618	623	627	631	634	638	641	644	647	650	653	655
8	600	600	601	609	615	620	625	629	633	636	639	643	646	648	651	654	657
9	600	600	605	612	618	623	627	631	634	638	641	644	647	650	653	655	658
10	600	601	609	615	620	625	629	633	636	639	643	646	648	651	654	657	660
11	600	605	612	618	623	627	631	634	638	641	644	647	650	653	655	658	660
12	601	609	615	620	625	629	633	636	639	643	646	648	651	654	657	660	662
13	605	612	618	623	627	631	634	638	641	644	647	650	653	655	658	660	664
14	609	615	620	625	629	633	636	639	643	646	648	651	654	657	660	662	665
15	612	618	623	627	631	634	638	641	644	647	650	653	655	658	660	664	667
16	615	620	625	629	633	636	639	643	646	648	651	654	657	660	662	665	669
17	618	623	627	631	634	638	641	644	647	650	653	655	658	660	664	667	670
18	620	625	629	633	636	639	643	646	648	651	654	657	660	662	665	669	672
19	623	627	631	634	638	641	644	647	650	653	655	658	660	664	667	670	674
20	625	629	633	636	639	643	646	648	651	654	657	660	662	665	669	672	676
21	627	631	634	638	641	644	647	650	653	655	658	660	664	667	670	674	678
22	629	633	636	639	643	646	648	651	654	657	660	662	665	669	672	676	680
23	631	634	638	641	644	647	650	653	655	658	660	664	667	670	674	678	680
24	633	636	639	643	646	648	651	654	657	660	662	665	669	672	676	680	680
25	634	638	641	644	647	650	653	655	658	660	664	667	670	674	678	680	680
26	636	639	643	646	648	651	654	657	660	662	665	669	672	676	680	680	680
27	638	641	644	647	650	653	655	658	660	664	667	670	674	678	680	680	680
28	639	643	646	648	651	654	657	660	662	665	669	672	676	680	680	680	680
29	641	644	647	650	653	655	658	660	664	667	670	674	678	680	680	680	680
30	643	646	648	651	654	657	660	662	665	669	672	676	680	680	680	680	680
31	644	647	650	653	655	658	660	664	667	670	674	678	680	680	680	680	680
32	646	648	651	654	657	660	662	665	669	672	676	680	680	680	680	680	680

Table J-22. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	600	601	608	614	619	623	627	631	634	637	641
1	600	600	600	600	600	600	600	605	611	617	621	625	629	633	636	639	642
2	600	600	600	600	600	600	601	608	614	619	623	627	631	634	637	641	644
3	600	600	600	600	600	600	605	611	617	621	625	629	633	636	639	642	645
4	600	600	600	600	600	601	608	614	619	623	627	631	634	637	641	644	647
5	600	600	600	600	600	605	611	617	621	625	629	633	636	639	642	645	648
6	600	600	600	600	601	608	614	619	623	627	631	634	637	641	644	647	650
7	600	600	600	600	605	611	617	621	625	629	633	636	639	642	645	648	651
8	600	600	600	601	608	614	619	623	627	631	634	637	641	644	647	650	653
9	600	600	600	605	611	617	621	625	629	633	636	639	642	645	648	651	654
10	600	600	601	608	614	619	623	627	631	634	637	641	644	647	650	653	656
11	600	600	605	611	617	621	625	629	633	636	639	642	645	648	651	654	657
12	600	601	608	614	619	623	627	631	634	637	641	644	647	650	653	656	659
13	600	605	611	617	621	625	629	633	636	639	642	645	648	651	654	657	660
14	601	608	614	619	623	627	631	634	637	641	644	647	650	653	656	659	662
15	605	611	617	621	625	629	633	636	639	642	645	648	651	654	657	660	664
16	608	614	619	623	627	631	634	637	641	644	647	650	653	656	659	662	666
17	611	617	621	625	629	633	636	639	642	645	648	651	654	657	660	664	668
18	614	619	623	627	631	634	637	641	644	647	650	653	656	659	662	666	670
19	617	621	625	629	633	636	639	642	645	648	651	654	657	660	664	668	672
20	619	623	627	631	634	637	641	644	647	650	653	656	659	662	666	670	674
21	621	625	629	633	636	639	642	645	648	651	654	657	660	664	668	672	676
22	623	627	631	634	637	641	644	647	650	653	656	659	662	666	670	674	679
23	625	629	633	636	639	642	645	648	651	654	657	660	664	668	672	676	680
24	627	631	634	637	641	644	647	650	653	656	659	662	666	670	674	679	680
25	629	633	636	639	642	645	648	651	654	657	660	664	668	672	676	680	680
26	631	634	637	641	644	647	650	653	656	659	662	666	670	674	679	680	680
27	633	636	639	642	645	648	651	654	657	660	664	668	672	676	680	680	680
28	634	637	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680
29	636	639	642	645	648	651	654	657	660	664	668	672	676	680	680	680	680
30	637	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680	680
31	639	642	645	648	651	654	657	660	664	668	672	676	680	680	680	680	680
32	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680	680	680

Table J-23. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	600	605	611	616	621	625	628	632	635	638	641
1	600	600	600	600	600	600	602	608	614	619	623	627	630	633	636	639	642
2	600	600	600	600	600	600	605	611	616	621	625	628	632	635	638	641	644
3	600	600	600	600	600	602	608	614	619	623	627	630	633	636	639	642	645
4	600	600	600	600	600	605	611	616	621	625	628	632	635	638	641	644	647
5	600	600	600	600	602	608	614	619	623	627	630	633	636	639	642	645	648
6	600	600	600	600	605	611	616	621	625	628	632	635	638	641	644	647	650
7	600	600	600	602	608	614	619	623	627	630	633	636	639	642	645	648	651
8	600	600	600	605	611	616	621	625	628	632	635	638	641	644	647	650	653
9	600	600	602	608	614	619	623	627	630	633	636	639	642	645	648	651	654
10	600	600	605	611	616	621	625	628	632	635	638	641	644	647	650	653	656
11	600	602	608	614	619	623	627	630	633	636	639	642	645	648	651	654	657
12	600	605	611	616	621	625	628	632	635	638	641	644	647	650	653	656	659
13	602	608	614	619	623	627	630	633	636	639	642	645	648	651	654	657	660
14	605	611	616	621	625	628	632	635	638	641	644	647	650	653	656	659	662
15	608	614	619	623	627	630	633	636	639	642	645	648	651	654	657	660	664
16	611	616	621	625	628	632	635	638	641	644	647	650	653	656	659	662	665
17	614	619	623	627	630	633	636	639	642	645	648	651	654	657	660	664	667
18	616	621	625	628	632	635	638	641	644	647	650	653	656	659	662	665	669
19	619	623	627	630	633	636	639	642	645	648	651	654	657	660	664	667	671
20	621	625	628	632	635	638	641	644	647	650	653	656	659	662	665	669	673
21	623	627	630	633	636	639	642	645	648	651	654	657	660	664	667	671	676
22	625	628	632	635	638	641	644	647	650	653	656	659	662	665	669	673	678
23	627	630	633	636	639	642	645	648	651	654	657	660	664	667	671	676	680
24	628	632	635	638	641	644	647	650	653	656	659	662	665	669	673	678	680
25	630	633	636	639	642	645	648	651	654	657	660	664	667	671	676	680	680
26	632	635	638	641	644	647	650	653	656	659	662	665	669	673	678	680	680
27	633	636	639	642	645	648	651	654	657	660	664	667	671	676	680	680	680
28	635	638	641	644	647	650	653	656	659	662	665	669	673	678	680	680	680
29	636	639	642	645	648	651	654	657	660	664	667	671	676	680	680	680	680
30	638	641	644	647	650	653	656	659	662	665	669	673	678	680	680	680	680
31	639	642	645	648	651	654	657	660	664	667	671	676	680	680	680	680	680
32	641	644	647	650	653	656	659	662	665	669	673	678	680	680	680	680	680

Table J-24. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 6, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	600	600	600	600	600	600	600	606	612	617	622	626	630	633	636	639	643
1	600	600	600	600	600	600	603	609	615	619	624	628	631	635	638	641	644
2	600	600	600	600	600	600	606	612	617	622	626	630	633	636	639	643	646
3	600	600	600	600	600	603	609	615	619	624	628	631	635	638	641	644	647
4	600	600	600	600	600	606	612	617	622	626	630	633	636	639	643	646	649
5	600	600	600	600	603	609	615	619	624	628	631	635	638	641	644	647	650
6	600	600	600	600	606	612	617	622	626	630	633	636	639	643	646	649	652
7	600	600	600	603	609	615	619	624	628	631	635	638	641	644	647	650	653
8	600	600	600	606	612	617	622	626	630	633	636	639	643	646	649	652	655
9	600	600	603	609	615	619	624	628	631	635	638	641	644	647	650	653	656
10	600	600	606	612	617	622	626	630	633	636	639	643	646	649	652	655	658
11	600	603	609	615	619	624	628	631	635	638	641	644	647	650	653	656	659
12	600	606	612	617	622	626	630	633	636	639	643	646	649	652	655	658	660
13	603	609	615	619	624	628	631	635	638	641	644	647	650	653	656	659	662
14	606	612	617	622	626	630	633	636	639	643	646	649	652	655	658	660	664
15	609	615	619	624	628	631	635	638	641	644	647	650	653	656	659	662	666
16	612	617	622	626	630	633	636	639	643	646	649	652	655	658	660	664	668
17	615	619	624	628	631	635	638	641	644	647	650	653	656	659	662	666	670
18	617	622	626	630	633	636	639	643	646	649	652	655	658	660	664	668	672
19	619	624	628	631	635	638	641	644	647	650	653	656	659	662	666	670	674
20	622	626	630	633	636	639	643	646	649	652	655	658	660	664	668	672	676
21	624	628	631	635	638	641	644	647	650	653	656	659	662	666	670	674	679
22	626	630	633	636	639	643	646	649	652	655	658	660	664	668	672	676	680
23	628	631	635	638	641	644	647	650	653	656	659	662	666	670	674	679	680
24	630	633	636	639	643	646	649	652	655	658	660	664	668	672	676	680	680
25	631	635	638	641	644	647	650	653	656	659	662	666	670	674	679	680	680
26	633	636	639	643	646	649	652	655	658	660	664	668	672	676	680	680	680
27	635	638	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680
28	636	639	643	646	649	652	655	658	660	664	668	672	676	680	680	680	680
29	638	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680	680
30	639	643	646	649	652	655	658	660	664	668	672	676	680	680	680	680	680
31	641	644	647	650	653	656	659	662	666	670	674	679	680	680	680	680	680
32	643	646	649	652	655	658	660	664	668	672	676	680	680	680	680	680	680

Table J-25. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	707	712	717	720	724	727	730	732	735	737
1	700	700	700	700	700	700	704	710	714	718	722	725	728	731	734	736	739
2	700	700	700	700	700	700	707	712	717	720	724	727	730	732	735	737	739
3	700	700	700	700	700	704	710	714	718	722	725	728	731	734	736	739	741
4	700	700	700	700	700	707	712	717	720	724	727	730	732	735	737	739	742
5	700	700	700	700	704	710	714	718	722	725	728	731	734	736	739	741	744
6	700	700	700	700	707	712	717	720	724	727	730	732	735	737	739	742	745
7	700	700	700	704	710	714	718	722	725	728	731	734	736	739	741	744	746
8	700	700	700	707	712	717	720	724	727	730	732	735	737	739	742	745	747
9	700	700	704	710	714	718	722	725	728	731	734	736	739	741	744	746	749
10	700	700	707	712	717	720	724	727	730	732	735	737	739	742	745	747	750
11	700	704	710	714	718	722	725	728	731	734	736	739	741	744	746	749	751
12	700	707	712	717	720	724	727	730	732	735	737	739	742	745	747	750	752
13	704	710	714	718	722	725	728	731	734	736	739	741	744	746	749	751	754
14	707	712	717	720	724	727	730	732	735	737	739	742	745	747	750	752	755
15	710	714	718	722	725	728	731	734	736	739	741	744	746	749	751	754	757
16	712	717	720	724	727	730	732	735	737	739	742	745	747	750	752	755	758
17	714	718	722	725	728	731	734	736	739	741	744	746	749	751	754	757	759
18	717	720	724	727	730	732	735	737	739	742	745	747	750	752	755	758	761
19	718	722	725	728	731	734	736	739	741	744	746	749	751	754	757	759	763
20	720	724	727	730	732	735	737	739	742	745	747	750	752	755	758	761	764
21	722	725	728	731	734	736	739	741	744	746	749	751	754	757	759	763	766
22	724	727	730	732	735	737	739	742	745	747	750	752	755	758	761	764	768
23	725	728	731	734	736	739	741	744	746	749	751	754	757	759	763	766	770
24	727	730	732	735	737	739	742	745	747	750	752	755	758	761	764	768	773
25	728	731	734	736	739	741	744	746	749	751	754	757	759	763	766	770	775
26	730	732	735	737	739	742	745	747	750	752	755	758	761	764	768	773	778
27	731	734	736	739	741	744	746	749	751	754	757	759	763	766	770	775	780
28	732	735	737	739	742	745	747	750	752	755	758	761	764	768	773	778	780
29	734	736	739	741	744	746	749	751	754	757	759	763	766	770	775	780	780
30	735	737	739	742	745	747	750	752	755	758	761	764	768	773	778	780	780
31	736	739	741	744	746	749	751	754	757	759	763	766	770	775	780	780	780
32	737	739	742	745	747	750	752	755	758	761	764	768	773	778	780	780	780

Table J-26. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	706	711	716	719	723	726	729	731	734	736
1	700	700	700	700	700	700	703	709	714	718	721	724	727	730	733	735	738
2	700	700	700	700	700	700	706	711	716	719	723	726	729	731	734	736	739
3	700	700	700	700	700	703	709	714	718	721	724	727	730	733	735	738	740
4	700	700	700	700	700	706	711	716	719	723	726	729	731	734	736	739	741
5	700	700	700	700	703	709	714	718	721	724	727	730	733	735	738	740	743
6	700	700	700	700	706	711	716	719	723	726	729	731	734	736	739	741	744
7	700	700	700	703	709	714	718	721	724	727	730	733	735	738	740	743	745
8	700	700	700	706	711	716	719	723	726	729	731	734	736	739	741	744	747
9	700	700	703	709	714	718	721	724	727	730	733	735	738	740	743	745	748
10	700	700	706	711	716	719	723	726	729	731	734	736	739	741	744	747	749
11	700	703	709	714	718	721	724	727	730	733	735	738	740	743	745	748	751
12	700	706	711	716	719	723	726	729	731	734	736	739	741	744	747	749	752
13	703	709	714	718	721	724	727	730	733	735	738	740	743	745	748	751	753
14	706	711	716	719	723	726	729	731	734	736	739	741	744	747	749	752	755
15	709	714	718	721	724	727	730	733	735	738	740	743	745	748	751	753	757
16	711	716	719	723	726	729	731	734	736	739	741	744	747	749	752	755	758
17	714	718	721	724	727	730	733	735	738	740	743	745	748	751	753	757	760
18	716	719	723	726	729	731	734	736	739	741	744	747	749	752	755	758	761
19	718	721	724	727	730	733	735	738	740	743	745	748	751	753	757	760	764
20	719	723	726	729	731	734	736	739	741	744	747	749	752	755	758	761	766
21	721	724	727	730	733	735	738	740	743	745	748	751	753	757	760	764	768
22	723	726	729	731	734	736	739	741	744	747	749	752	755	758	761	766	771
23	724	727	730	733	735	738	740	743	745	748	751	753	757	760	764	768	774
24	726	729	731	734	736	739	741	744	747	749	752	755	758	761	766	771	777
25	727	730	733	735	738	740	743	745	748	751	753	757	760	764	768	774	780
26	729	731	734	736	739	741	744	747	749	752	755	758	761	766	771	777	780
27	730	733	735	738	740	743	745	748	751	753	757	760	764	768	774	780	780
28	731	734	736	739	741	744	747	749	752	755	758	761	766	771	777	780	780
29	733	735	738	740	743	745	748	751	753	757	760	764	768	774	780	780	780
30	734	736	739	741	744	747	749	752	755	758	761	766	771	777	780	780	780
31	735	738	740	743	745	748	751	753	757	760	764	768	774	780	780	780	780
32	736	739	741	744	747	749	752	755	758	761	766	771	777	780	780	780	780

Table J-27. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	704	710	714	718	722	725	728	730	733	736
1	700	700	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737
2	700	700	700	700	700	700	704	710	714	718	722	725	728	730	733	736	738
3	700	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739
4	700	700	700	700	700	704	710	714	718	722	725	728	730	733	736	738	741
5	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742
6	700	700	700	700	704	710	714	718	722	725	728	730	733	736	738	741	743
7	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745
8	700	700	700	704	710	714	718	722	725	728	730	733	736	738	741	743	746
9	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747
10	700	700	704	710	714	718	722	725	728	730	733	736	738	741	743	746	748
11	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750
12	700	704	710	714	718	722	725	728	730	733	736	738	741	743	746	748	751
13	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753
14	704	710	714	718	722	725	728	730	733	736	738	741	743	746	748	751	754
15	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756
16	710	714	718	722	725	728	730	733	736	738	741	743	746	748	751	754	757
17	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756	759
18	714	718	722	725	728	730	733	736	738	741	743	746	748	751	754	757	760
19	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756	759	761
20	718	722	725	728	730	733	736	738	741	743	746	748	751	754	757	760	764
21	719	723	726	729	732	734	737	739	742	745	747	750	753	756	759	761	766
22	722	725	728	730	733	736	738	741	743	746	748	751	754	757	760	764	768
23	723	726	729	732	734	737	739	742	745	747	750	753	756	759	761	766	770
24	725	728	730	733	736	738	741	743	746	748	751	754	757	760	764	768	773
25	726	729	732	734	737	739	742	745	747	750	753	756	759	761	766	770	775
26	728	730	733	736	738	741	743	746	748	751	754	757	760	764	768	773	779
27	729	732	734	737	739	742	745	747	750	753	756	759	761	766	770	775	780
28	730	733	736	738	741	743	746	748	751	754	757	760	764	768	773	779	780
29	732	734	737	739	742	745	747	750	753	756	759	761	766	770	775	780	780
30	733	736	738	741	743	746	748	751	754	757	760	764	768	773	779	780	780
31	734	737	739	742	745	747	750	753	756	759	761	766	770	775	780	780	780
32	736	738	741	743	746	748	751	754	757	760	764	768	773	779	780	780	780

Table J-28. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	703	709	713	717	721	724	727	730	733	735
1	700	700	700	700	700	700	700	706	711	715	719	722	725	728	731	734	737
2	700	700	700	700	700	700	703	709	713	717	721	724	727	730	733	735	738
3	700	700	700	700	700	700	706	711	715	719	722	725	728	731	734	737	739
4	700	700	700	700	700	703	709	713	717	721	724	727	730	733	735	738	741
5	700	700	700	700	700	706	711	715	719	722	725	728	731	734	737	739	742
6	700	700	700	700	703	709	713	717	721	724	727	730	733	735	738	741	743
7	700	700	700	700	706	711	715	719	722	725	728	731	734	737	739	742	745
8	700	700	700	703	709	713	717	721	724	727	730	733	735	738	741	743	746
9	700	700	700	706	711	715	719	722	725	728	731	734	737	739	742	745	747
10	700	700	703	709	713	717	721	724	727	730	733	735	738	741	743	746	749
11	700	700	706	711	715	719	722	725	728	731	734	737	739	742	745	747	750
12	700	703	709	713	717	721	724	727	730	733	735	738	741	743	746	749	752
13	700	706	711	715	719	722	725	728	731	734	737	739	742	745	747	750	753
14	703	709	713	717	721	724	727	730	733	735	738	741	743	746	749	752	755
15	706	711	715	719	722	725	728	731	734	737	739	742	745	747	750	753	757
16	709	713	717	721	724	727	730	733	735	738	741	743	746	749	752	755	758
17	711	715	719	722	725	728	731	734	737	739	742	745	747	750	753	757	760
18	713	717	721	724	727	730	733	735	738	741	743	746	749	752	755	758	761
19	715	719	722	725	728	731	734	737	739	742	745	747	750	753	757	760	764
20	717	721	724	727	730	733	735	738	741	743	746	749	752	755	758	761	766
21	719	722	725	728	731	734	737	739	742	745	747	750	753	757	760	764	768
22	721	724	727	730	733	735	738	741	743	746	749	752	755	758	761	766	771
23	722	725	728	731	734	737	739	742	745	747	750	753	757	760	764	768	773
24	724	727	730	733	735	738	741	743	746	749	752	755	758	761	766	771	776
25	725	728	731	734	737	739	742	745	747	750	753	757	760	764	768	773	779
26	727	730	733	735	738	741	743	746	749	752	755	758	761	766	771	776	780
27	728	731	734	737	739	742	745	747	750	753	757	760	764	768	773	779	780
28	730	733	735	738	741	743	746	749	752	755	758	761	766	771	776	780	780
29	731	734	737	739	742	745	747	750	753	757	760	764	768	773	779	780	780
30	733	735	738	741	743	746	749	752	755	758	761	766	771	776	780	780	780
31	734	737	739	742	745	747	750	753	757	760	764	768	773	779	780	780	780
32	735	738	741	743	746	749	752	755	758	761	766	771	776	780	780	780	780

Table J-29. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	701	708	713	717	720	723	726	729	732	734	736
1	700	700	700	700	700	700	705	710	715	719	722	725	728	730	733	735	738
2	700	700	700	700	700	701	708	713	717	720	723	726	729	732	734	736	739
3	700	700	700	700	700	705	710	715	719	722	725	728	730	733	735	738	740
4	700	700	700	700	701	708	713	717	720	723	726	729	732	734	736	739	741
5	700	700	700	700	705	710	715	719	722	725	728	730	733	735	738	740	742
6	700	700	700	701	708	713	717	720	723	726	729	732	734	736	739	741	744
7	700	700	700	705	710	715	719	722	725	728	730	733	735	738	740	742	745
8	700	700	701	708	713	717	720	723	726	729	732	734	736	739	741	744	746
9	700	700	705	710	715	719	722	725	728	730	733	735	738	740	742	745	747
10	700	701	708	713	717	720	723	726	729	732	734	736	739	741	744	746	749
11	700	705	710	715	719	722	725	728	730	733	735	738	740	742	745	747	750
12	701	708	713	717	720	723	726	729	732	734	736	739	741	744	746	749	751
13	705	710	715	719	722	725	728	730	733	735	738	740	742	745	747	750	753
14	708	713	717	720	723	726	729	732	734	736	739	741	744	746	749	751	754
15	710	715	719	722	725	728	730	733	735	738	740	742	745	747	750	753	756
16	713	717	720	723	726	729	732	734	736	739	741	744	746	749	751	754	757
17	715	719	722	725	728	730	733	735	738	740	742	745	747	750	753	756	759
18	717	720	723	726	729	732	734	736	739	741	744	746	749	751	754	757	760
19	719	722	725	728	730	733	735	738	740	742	745	747	750	753	756	759	761
20	720	723	726	729	732	734	736	739	741	744	746	749	751	754	757	760	764
21	722	725	728	730	733	735	738	740	742	745	747	750	753	756	759	761	766
22	723	726	729	732	734	736	739	741	744	746	749	751	754	757	760	764	768
23	725	728	730	733	735	738	740	742	745	747	750	753	756	759	761	766	770
24	726	729	732	734	736	739	741	744	746	749	751	754	757	760	764	768	773
25	728	730	733	735	738	740	742	745	747	750	753	756	759	761	766	770	776
26	729	732	734	736	739	741	744	746	749	751	754	757	760	764	768	773	779
27	730	733	735	738	740	742	745	747	750	753	756	759	761	766	770	776	780
28	732	734	736	739	741	744	746	749	751	754	757	760	764	768	773	779	780
29	733	735	738	740	742	745	747	750	753	756	759	761	766	770	776	780	780
30	734	736	739	741	744	746	749	751	754	757	760	764	768	773	779	780	780
31	735	738	740	742	745	747	750	753	756	759	761	766	770	776	780	780	780
32	736	739	741	744	746	749	751	754	757	760	764	768	773	779	780	780	780

Table J-30. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 7, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	704	709	714	718	721	725	727	730	733	736
1	700	700	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737
2	700	700	700	700	700	700	704	709	714	718	721	725	727	730	733	736	738
3	700	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739
4	700	700	700	700	700	704	709	714	718	721	725	727	730	733	736	738	741
5	700	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742
6	700	700	700	700	704	709	714	718	721	725	727	730	733	736	738	741	743
7	700	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745
8	700	700	700	704	709	714	718	721	725	727	730	733	736	738	741	743	746
9	700	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747
10	700	700	704	709	714	718	721	725	727	730	733	736	738	741	743	746	749
11	700	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750
12	700	704	709	714	718	721	725	727	730	733	736	738	741	743	746	749	752
13	701	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753
14	704	709	714	718	721	725	727	730	733	736	738	741	743	746	749	752	755
15	707	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756
16	709	714	718	721	725	727	730	733	736	738	741	743	746	749	752	755	758
17	712	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756	760
18	714	718	721	725	727	730	733	736	738	741	743	746	749	752	755	758	761
19	716	719	723	726	729	732	734	737	739	742	745	747	750	753	756	760	763
20	718	721	725	727	730	733	736	738	741	743	746	749	752	755	758	761	765
21	719	723	726	729	732	734	737	739	742	745	747	750	753	756	760	763	767
22	721	725	727	730	733	736	738	741	743	746	749	752	755	758	761	765	770
23	723	726	729	732	734	737	739	742	745	747	750	753	756	760	763	767	772
24	725	727	730	733	736	738	741	743	746	749	752	755	758	761	765	770	775
25	726	729	732	734	737	739	742	745	747	750	753	756	760	763	767	772	778
26	727	730	733	736	738	741	743	746	749	752	755	758	761	765	770	775	780
27	729	732	734	737	739	742	745	747	750	753	756	760	763	767	772	778	780
28	730	733	736	738	741	743	746	749	752	755	758	761	765	770	775	780	780
29	732	734	737	739	742	745	747	750	753	756	760	763	767	772	778	780	780
30	733	736	738	741	743	746	749	752	755	758	761	765	770	775	780	780	780
31	734	737	739	742	745	747	750	753	756	760	763	767	772	778	780	780	780
32	736	738	741	743	746	749	752	755	758	761	765	770	775	780	780	780	780

Table J-31. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	802	807	812	816	819	823	826	829	832	835
1	800	800	800	800	800	800	800	805	810	814	818	822	825	828	831	834	836
2	800	800	800	800	800	800	802	807	812	816	819	823	826	829	832	835	838
3	800	800	800	800	800	800	805	810	814	818	822	825	828	831	834	836	839
4	800	800	800	800	800	802	807	812	816	819	823	826	829	832	835	838	840
5	800	800	800	800	800	805	810	814	818	822	825	828	831	834	836	839	842
6	800	800	800	800	802	807	812	816	819	823	826	829	832	835	838	840	843
7	800	800	800	800	805	810	814	818	822	825	828	831	834	836	839	842	844
8	800	800	800	802	807	812	816	819	823	826	829	832	835	838	840	843	846
9	800	800	800	805	810	814	818	822	825	828	831	834	836	839	842	844	847
10	800	800	802	807	812	816	819	823	826	829	832	835	838	840	843	846	848
11	800	800	805	810	814	818	822	825	828	831	834	836	839	842	844	847	850
12	800	802	807	812	816	819	823	826	829	832	835	838	840	843	846	848	851
13	800	805	810	814	818	822	825	828	831	834	836	839	842	844	847	850	852
14	802	807	812	816	819	823	826	829	832	835	838	840	843	846	848	851	854
15	805	810	814	818	822	825	828	831	834	836	839	842	844	847	850	852	855
16	807	812	816	819	823	826	829	832	835	838	840	843	846	848	851	854	857
17	810	814	818	822	825	828	831	834	836	839	842	844	847	850	852	855	858
18	812	816	819	823	826	829	832	835	838	840	843	846	848	851	854	857	860
19	814	818	822	825	828	831	834	836	839	842	844	847	850	852	855	858	861
20	816	819	823	826	829	832	835	838	840	843	846	848	851	854	857	860	863
21	818	822	825	828	831	834	836	839	842	844	847	850	852	855	858	861	865
22	819	823	826	829	832	835	838	840	843	846	848	851	854	857	860	863	867
23	822	825	828	831	834	836	839	842	844	847	850	852	855	858	861	865	869
24	823	826	829	832	835	838	840	843	846	848	851	854	857	860	863	867	872
25	825	828	831	834	836	839	842	844	847	850	852	855	858	861	865	869	874
26	826	829	832	835	838	840	843	846	848	851	854	857	860	863	867	872	878
27	828	831	834	836	839	842	844	847	850	852	855	858	861	865	869	874	880
28	829	832	835	838	840	843	846	848	851	854	857	860	863	867	872	878	880
29	831	834	836	839	842	844	847	850	852	855	858	861	865	869	874	880	880
30	832	835	838	840	843	846	848	851	854	857	860	863	867	872	878	880	880
31	834	836	839	842	844	847	850	852	855	858	861	865	869	874	880	880	880
32	835	838	840	843	846	848	851	854	857	860	863	867	872	878	880	880	880

Table J-32. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	801	807	812	816	819	823	827	830	833	836
1	800	800	800	800	800	800	800	804	809	814	818	822	825	828	831	834	837
2	800	800	800	800	800	800	801	807	812	816	819	823	827	830	833	836	839
3	800	800	800	800	800	800	804	809	814	818	822	825	828	831	834	837	840
4	800	800	800	800	800	801	807	812	816	819	823	827	830	833	836	839	842
5	800	800	800	800	800	804	809	814	818	822	825	828	831	834	837	840	843
6	800	800	800	800	801	807	812	816	819	823	827	830	833	836	839	842	844
7	800	800	800	800	804	809	814	818	822	825	828	831	834	837	840	843	846
8	800	800	800	801	807	812	816	819	823	827	830	833	836	839	842	844	847
9	800	800	800	804	809	814	818	822	825	828	831	834	837	840	843	846	849
10	800	800	801	807	812	816	819	823	827	830	833	836	839	842	844	847	850
11	800	800	804	809	814	818	822	825	828	831	834	837	840	843	846	849	851
12	800	801	807	812	816	819	823	827	830	833	836	839	842	844	847	850	853
13	800	804	809	814	818	822	825	828	831	834	837	840	843	846	849	851	854
14	801	807	812	816	819	823	827	830	833	836	839	842	844	847	850	853	856
15	804	809	814	818	822	825	828	831	834	837	840	843	846	849	851	854	857
16	807	812	816	819	823	827	830	833	836	839	842	844	847	850	853	856	859
17	809	814	818	822	825	828	831	834	837	840	843	846	849	851	854	857	860
18	812	816	819	823	827	830	833	836	839	842	844	847	850	853	856	859	862
19	814	818	822	825	828	831	834	837	840	843	846	849	851	854	857	860	864
20	816	819	823	827	830	833	836	839	842	844	847	850	853	856	859	862	865
21	818	822	825	828	831	834	837	840	843	846	849	851	854	857	860	864	867
22	819	823	827	830	833	836	839	842	844	847	850	853	856	859	862	865	869
23	822	825	828	831	834	837	840	843	846	849	851	854	857	860	864	867	872
24	823	827	830	833	836	839	842	844	847	850	853	856	859	862	865	869	874
25	825	828	831	834	837	840	843	846	849	851	854	857	860	864	867	872	877
26	827	830	833	836	839	842	844	847	850	853	856	859	862	865	869	874	880
27	828	831	834	837	840	843	846	849	851	854	857	860	864	867	872	877	880
28	830	833	836	839	842	844	847	850	853	856	859	862	865	869	874	880	880
29	831	834	837	840	843	846	849	851	854	857	860	864	867	872	877	880	880
30	833	836	839	842	844	847	850	853	856	859	862	865	869	874	880	880	880
31	834	837	840	843	846	849	851	854	857	860	864	867	872	877	880	880	880
32	836	839	842	844	847	850	853	856	859	862	865	869	874	880	880	880	880

Table J-33. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	805	810	814	818	822	825	829	832	835
1	800	800	800	800	800	800	800	802	807	812	816	820	824	827	830	834	837
2	800	800	800	800	800	800	800	805	810	814	818	822	825	829	832	835	838
3	800	800	800	800	800	800	802	807	812	816	820	824	827	830	834	837	839
4	800	800	800	800	800	800	805	810	814	818	822	825	829	832	835	838	841
5	800	800	800	800	800	802	807	812	816	820	824	827	830	834	837	839	843
6	800	800	800	800	800	805	810	814	818	822	825	829	832	835	838	841	844
7	800	800	800	800	802	807	812	816	820	824	827	830	834	837	839	843	846
8	800	800	800	800	805	810	814	818	822	825	829	832	835	838	841	844	847
9	800	800	800	802	807	812	816	820	824	827	830	834	837	839	843	846	848
10	800	800	800	805	810	814	818	822	825	829	832	835	838	841	844	847	850
11	800	800	802	807	812	816	820	824	827	830	834	837	839	843	846	848	851
12	800	800	805	810	814	818	822	825	829	832	835	838	841	844	847	850	853
13	800	802	807	812	816	820	824	827	830	834	837	839	843	846	848	851	854
14	800	805	810	814	818	822	825	829	832	835	838	841	844	847	850	853	856
15	802	807	812	816	820	824	827	830	834	837	839	843	846	848	851	854	858
16	805	810	814	818	822	825	829	832	835	838	841	844	847	850	853	856	859
17	807	812	816	820	824	827	830	834	837	839	843	846	848	851	854	858	861
18	810	814	818	822	825	829	832	835	838	841	844	847	850	853	856	859	863
19	812	816	820	824	827	830	834	837	839	843	846	848	851	854	858	861	865
20	814	818	822	825	829	832	835	838	841	844	847	850	853	856	859	863	867
21	816	820	824	827	830	834	837	839	843	846	848	851	854	858	861	865	869
22	818	822	825	829	832	835	838	841	844	847	850	853	856	859	863	867	871
23	820	824	827	830	834	837	839	843	846	848	851	854	858	861	865	869	874
24	822	825	829	832	835	838	841	844	847	850	853	856	859	863	867	871	877
25	824	827	830	834	837	839	843	846	848	851	854	858	861	865	869	874	880
26	825	829	832	835	838	841	844	847	850	853	856	859	863	867	871	877	880
27	827	830	834	837	839	843	846	848	851	854	858	861	865	869	874	880	880
28	829	832	835	838	841	844	847	850	853	856	859	863	867	871	877	880	880
29	830	834	837	839	843	846	848	851	854	858	861	865	869	874	880	880	880
30	832	835	838	841	844	847	850	853	856	859	863	867	871	877	880	880	880
31	834	837	839	843	846	848	851	854	858	861	865	869	874	880	880	880	880
32	835	838	841	844	847	850	853	856	859	863	867	871	877	880	880	880	880

Table J-34. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	803	809	814	818	822	826	829	832	835	837
1	800	800	800	800	800	800	800	806	812	816	820	824	827	830	833	836	839
2	800	800	800	800	800	800	803	809	814	818	822	826	829	832	835	837	839
3	800	800	800	800	800	800	806	812	816	820	824	827	830	833	836	839	841
4	800	800	800	800	800	803	809	814	818	822	826	829	832	835	837	839	842
5	800	800	800	800	800	806	812	816	820	824	827	830	833	836	839	841	844
6	800	800	800	800	803	809	814	818	822	826	829	832	835	837	839	842	845
7	800	800	800	800	806	812	816	820	824	827	830	833	836	839	841	844	846
8	800	800	800	803	809	814	818	822	826	829	832	835	837	839	842	845	847
9	800	800	800	806	812	816	820	824	827	830	833	836	839	841	844	846	849
10	800	800	803	809	814	818	822	826	829	832	835	837	839	842	845	847	850
11	800	800	806	812	816	820	824	827	830	833	836	839	841	844	846	849	851
12	800	803	809	814	818	822	826	829	832	835	837	839	842	845	847	850	852
13	800	806	812	816	820	824	827	830	833	836	839	841	844	846	849	851	854
14	803	809	814	818	822	826	829	832	835	837	839	842	845	847	850	852	855
15	806	812	816	820	824	827	830	833	836	839	841	844	846	849	851	854	856
16	809	814	818	822	826	829	832	835	837	839	842	845	847	850	852	855	858
17	812	816	820	824	827	830	833	836	839	841	844	846	849	851	854	856	859
18	814	818	822	826	829	832	835	837	839	842	845	847	850	852	855	858	861
19	816	820	824	827	830	833	836	839	841	844	846	849	851	854	856	859	862
20	818	822	826	829	832	835	837	839	842	845	847	850	852	855	858	861	864
21	820	824	827	830	833	836	839	841	844	846	849	851	854	856	859	862	866
22	822	826	829	832	835	837	839	842	845	847	850	852	855	858	861	864	868
23	824	827	830	833	836	839	841	844	846	849	851	854	856	859	862	866	870
24	826	829	832	835	837	839	842	845	847	850	852	855	858	861	864	868	872
25	827	830	833	836	839	841	844	846	849	851	854	856	859	862	866	870	875
26	829	832	835	837	839	842	845	847	850	852	855	858	861	864	868	872	878
27	830	833	836	839	841	844	846	849	851	854	856	859	862	866	870	875	880
28	832	835	837	839	842	845	847	850	852	855	858	861	864	868	872	878	880
29	833	836	839	841	844	846	849	851	854	856	859	862	866	870	875	880	880
30	835	837	839	842	845	847	850	852	855	858	861	864	868	872	878	880	880
31	836	839	841	844	846	849	851	854	856	859	862	866	870	875	880	880	880
32	837	839	842	845	847	850	852	855	858	861	864	868	872	878	880	880	880

Table J-35. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	802	809	813	818	821	825	828	831	834	837
1	800	800	800	800	800	800	800	806	811	816	819	823	827	830	833	836	839
2	800	800	800	800	800	800	802	809	813	818	821	825	828	831	834	837	839
3	800	800	800	800	800	800	806	811	816	819	823	827	830	833	836	839	841
4	800	800	800	800	800	802	809	813	818	821	825	828	831	834	837	839	843
5	800	800	800	800	800	806	811	816	819	823	827	830	833	836	839	841	844
6	800	800	800	800	802	809	813	818	821	825	828	831	834	837	839	843	845
7	800	800	800	800	806	811	816	819	823	827	830	833	836	839	841	844	847
8	800	800	800	802	809	813	818	821	825	828	831	834	837	839	843	845	848
9	800	800	800	806	811	816	819	823	827	830	833	836	839	841	844	847	849
10	800	800	802	809	813	818	821	825	828	831	834	837	839	843	845	848	851
11	800	800	806	811	816	819	823	827	830	833	836	839	841	844	847	849	852
12	800	802	809	813	818	821	825	828	831	834	837	839	843	845	848	851	853
13	800	806	811	816	819	823	827	830	833	836	839	841	844	847	849	852	855
14	802	809	813	818	821	825	828	831	834	837	839	843	845	848	851	853	856
15	806	811	816	819	823	827	830	833	836	839	841	844	847	849	852	855	857
16	809	813	818	821	825	828	831	834	837	839	843	845	848	851	853	856	859
17	811	816	819	823	827	830	833	836	839	841	844	847	849	852	855	857	860
18	813	818	821	825	828	831	834	837	839	843	845	848	851	853	856	859	862
19	816	819	823	827	830	833	836	839	841	844	847	849	852	855	857	860	863
20	818	821	825	828	831	834	837	839	843	845	848	851	853	856	859	862	865
21	819	823	827	830	833	836	839	841	844	847	849	852	855	857	860	863	867
22	821	825	828	831	834	837	839	843	845	848	851	853	856	859	862	865	868
23	823	827	830	833	836	839	841	844	847	849	852	855	857	860	863	867	870
24	825	828	831	834	837	839	843	845	848	851	853	856	859	862	865	868	873
25	827	830	833	836	839	841	844	847	849	852	855	857	860	863	867	870	875
26	828	831	834	837	839	843	845	848	851	853	856	859	862	865	868	873	878
27	830	833	836	839	841	844	847	849	852	855	857	860	863	867	870	875	880
28	831	834	837	839	843	845	848	851	853	856	859	862	865	868	873	878	880
29	833	836	839	841	844	847	849	852	855	857	860	863	867	870	875	880	880
30	834	837	839	843	845	848	851	853	856	859	862	865	868	873	878	880	880
31	836	839	841	844	847	849	852	855	857	860	863	867	870	875	880	880	880
32	837	839	843	845	848	851	853	856	859	862	865	868	873	878	880	880	880

Table J-36. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 8, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	803	809	814	818	822	825	829	832	835	838
1	800	800	800	800	800	800	800	806	811	816	820	824	827	830	833	836	839
2	800	800	800	800	800	800	803	809	814	818	822	825	829	832	835	838	841
3	800	800	800	800	800	800	806	811	816	820	824	827	830	833	836	839	842
4	800	800	800	800	800	803	809	814	818	822	825	829	832	835	838	841	843
5	800	800	800	800	800	806	811	816	820	824	827	830	833	836	839	842	845
6	800	800	800	800	803	809	814	818	822	825	829	832	835	838	841	843	846
7	800	800	800	800	806	811	816	820	824	827	830	833	836	839	842	845	847
8	800	800	800	803	809	814	818	822	825	829	832	835	838	841	843	846	849
9	800	800	800	806	811	816	820	824	827	830	833	836	839	842	845	847	850
10	800	800	803	809	814	818	822	825	829	832	835	838	841	843	846	849	852
11	800	800	806	811	816	820	824	827	830	833	836	839	842	845	847	850	853
12	800	803	809	814	818	822	825	829	832	835	838	841	843	846	849	852	854
13	800	806	811	816	820	824	827	830	833	836	839	842	845	847	850	853	856
14	803	809	814	818	822	825	829	832	835	838	841	843	846	849	852	854	857
15	806	811	816	820	824	827	830	833	836	839	842	845	847	850	853	856	859
16	809	814	818	822	825	829	832	835	838	841	843	846	849	852	854	857	860
17	811	816	820	824	827	830	833	836	839	842	845	847	850	853	856	859	862
18	814	818	822	825	829	832	835	838	841	843	846	849	852	854	857	860	864
19	816	820	824	827	830	833	836	839	842	845	847	850	853	856	859	862	865
20	818	822	825	829	832	835	838	841	843	846	849	852	854	857	860	864	867
21	820	824	827	830	833	836	839	842	845	847	850	853	856	859	862	865	869
22	822	825	829	832	835	838	841	843	846	849	852	854	857	860	864	867	872
23	824	827	830	833	836	839	842	845	847	850	853	856	859	862	865	869	874
24	825	829	832	835	838	841	843	846	849	852	854	857	860	864	867	872	877
25	827	830	833	836	839	842	845	847	850	853	856	859	862	865	869	874	880
26	829	832	835	838	841	843	846	849	852	854	857	860	864	867	872	877	880
27	830	833	836	839	842	845	847	850	853	856	859	862	865	869	874	880	880
28	832	835	838	841	843	846	849	852	854	857	860	864	867	872	877	880	880
29	833	836	839	842	845	847	850	853	856	859	862	865	869	874	880	880	880
30	835	838	841	843	846	849	852	854	857	860	864	867	872	877	880	880	880
31	836	839	842	845	847	850	853	856	859	862	865	869	874	880	880	880	880
32	838	841	843	846	849	852	854	857	860	864	867	872	877	880	880	880	880

Table J-37. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141
1	1100	1100	1100	1100	1100	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142
2	1100	1100	1100	1100	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143
3	1100	1100	1100	1100	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145
4	1100	1100	1100	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146
5	1100	1100	1100	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147
6	1100	1100	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148
7	1100	1100	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150
8	1100	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151
9	1100	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152
10	1100	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153
11	1100	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155
12	1103	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156
13	1107	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157
14	1110	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159
15	1113	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160
16	1115	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162
17	1117	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163
18	1119	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165
19	1121	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166
20	1123	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168
21	1125	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170
22	1127	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172
23	1128	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170	1174
24	1130	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172	1176
25	1131	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170	1174	1179
26	1133	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172	1176	1180
27	1134	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170	1174	1179	1180
28	1136	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172	1176	1180	1180
29	1137	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170	1174	1179	1180	1180
30	1138	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172	1176	1180	1180	1180
31	1139	1142	1145	1147	1150	1152	1155	1157	1160	1163	1166	1170	1174	1179	1180	1180	1180
32	1141	1143	1146	1148	1151	1153	1156	1159	1162	1165	1168	1172	1176	1180	1180	1180	1180

Table J-38. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142
1	1100	1100	1100	1100	1100	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144
2	1100	1100	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145
3	1100	1100	1100	1100	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146
4	1100	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148
5	1100	1100	1100	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149
6	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150
7	1100	1100	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152
8	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153
9	1100	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154
10	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155
11	1100	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157
12	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158
13	1103	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159
14	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161
15	1110	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162
16	1113	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163
17	1115	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165
18	1118	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166
19	1120	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168
20	1122	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170
21	1124	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171
22	1126	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173
23	1128	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171	1175
24	1130	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173	1178
25	1132	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171	1175	1180
26	1133	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173	1178	1180
27	1135	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180
28	1136	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173	1178	1180	1180
29	1138	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180	1180
30	1139	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173	1178	1180	1180	1180
31	1141	1144	1146	1149	1152	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180	1180	1180
32	1142	1145	1148	1150	1153	1155	1158	1161	1163	1166	1170	1173	1178	1180	1180	1180	1180

Table J-39. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143
1	1100	1100	1100	1100	1100	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145
2	1100	1100	1100	1100	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146
3	1100	1100	1100	1100	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147
4	1100	1100	1100	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149
5	1100	1100	1100	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150
6	1100	1100	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151
7	1100	1100	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152
8	1100	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154
9	1100	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155
10	1100	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156
11	1100	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157
12	1102	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158
13	1106	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160
14	1109	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161
15	1112	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162
16	1115	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163
17	1117	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165
18	1119	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167
19	1122	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168
20	1124	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170
21	1126	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172
22	1128	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173
23	1129	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172	1175
24	1131	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173	1178
25	1133	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172	1175	1180
26	1135	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173	1178	1180
27	1136	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172	1175	1180	1180
28	1138	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173	1178	1180	1180
29	1139	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172	1175	1180	1180	1180
30	1141	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173	1178	1180	1180	1180
31	1142	1145	1147	1150	1152	1155	1157	1160	1162	1165	1168	1172	1175	1180	1180	1180	1180
32	1143	1146	1149	1151	1154	1156	1158	1161	1163	1167	1170	1173	1178	1180	1180	1180	1180

Table J-40. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142
1	1100	1100	1100	1100	1100	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143
2	1100	1100	1100	1100	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145
3	1100	1100	1100	1100	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146
4	1100	1100	1100	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147
5	1100	1100	1100	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148
6	1100	1100	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150
7	1100	1100	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151
8	1100	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152
9	1100	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153
10	1100	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154
11	1100	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156
12	1102	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157
13	1106	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158
14	1109	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160
15	1112	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161
16	1115	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162
17	1117	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163
18	1119	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165
19	1122	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167
20	1123	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169
21	1125	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171
22	1127	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172
23	1129	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171	1175
24	1131	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172	1177
25	1132	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171	1175	1180
26	1134	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172	1177	1180
27	1135	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171	1175	1180	1180
28	1137	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172	1177	1180	1180
29	1138	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171	1175	1180	1180	1180
30	1139	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172	1177	1180	1180	1180
31	1141	1143	1146	1148	1151	1153	1156	1158	1161	1163	1167	1171	1175	1180	1180	1180	1180
32	1142	1145	1147	1150	1152	1154	1157	1160	1162	1165	1169	1172	1177	1180	1180	1180	1180

Table J-41. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143
1	1100	1100	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144
2	1100	1100	1100	1100	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146
3	1100	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147
4	1100	1100	1100	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148
5	1100	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149
6	1100	1100	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150
7	1100	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151
8	1100	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153
9	1100	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154
10	1100	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155
11	1100	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156
12	1104	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157
13	1107	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159
14	1110	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160
15	1113	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161
16	1116	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162
17	1118	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163
18	1120	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165
19	1122	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167
20	1124	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168
21	1126	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170
22	1128	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172
23	1130	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170	1174
24	1131	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172	1176
25	1133	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170	1174	1178
26	1135	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172	1176	1180
27	1136	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170	1174	1178	1180
28	1138	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172	1176	1180	1180
29	1139	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170	1174	1178	1180	1180
30	1140	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172	1176	1180	1180	1180
31	1142	1144	1147	1149	1151	1154	1156	1159	1161	1163	1167	1170	1174	1178	1180	1180	1180
32	1143	1146	1148	1150	1153	1155	1157	1160	1162	1165	1168	1172	1176	1180	1180	1180	1180

Table J-42. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Mathematics Grade 11, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139
1	1100	1100	1100	1100	1100	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140
2	1100	1100	1100	1100	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142
3	1100	1100	1100	1100	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143
4	1100	1100	1100	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144
5	1100	1100	1100	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146
6	1100	1100	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147
7	1100	1100	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148
8	1100	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150
9	1100	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151
10	1100	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152
11	1100	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154
12	1100	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155
13	1100	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156
14	1103	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158
15	1106	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159
16	1109	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160
17	1111	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162
18	1114	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163
19	1116	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165
20	1118	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167
21	1120	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168
22	1122	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170
23	1124	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168	1172
24	1126	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170	1175
25	1128	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168	1172	1177
26	1129	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170	1175	1180
27	1131	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168	1172	1177	1180
28	1133	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170	1175	1180	1180
29	1134	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168	1172	1177	1180	1180
30	1136	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170	1175	1180	1180	1180
31	1137	1140	1143	1146	1148	1151	1154	1156	1159	1162	1165	1168	1172	1177	1180	1180	1180
32	1139	1142	1144	1147	1150	1152	1155	1158	1160	1163	1167	1170	1175	1180	1180	1180	1180

Table J-43. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score: 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	307	313	318
1	300	300	300	300	300	303	310	315	319
2	300	300	300	300	300	306	312	317	321
3	300	300	300	300	302	309	314	319	323
4	300	300	300	300	305	312	317	321	325
5	300	300	300	301	308	314	318	323	327
6	300	300	300	304	311	316	320	324	328
7	300	300	300	307	313	318	322	326	330
8	300	300	303	310	315	319	324	328	331
9	300	300	306	312	317	321	325	329	333
10	300	302	309	314	319	323	327	331	334
11	300	305	311	316	321	325	329	332	336
12	301	308	314	318	323	326	330	334	337
13	304	311	316	320	324	328	332	335	339
14	307	313	318	322	326	330	333	337	341
15	310	315	319	324	328	331	335	339	342
16	312	317	321	325	329	333	336	340	344
17	314	319	323	327	331	334	338	342	346
18	316	321	325	329	332	336	339	343	348
19	318	323	326	330	334	337	341	345	350
20	320	324	328	332	335	339	343	347	352
21	322	326	330	333	337	341	345	349	354
22	324	328	331	335	338	342	346	351	356
23	325	329	333	336	340	344	348	353	359
24	327	331	334	338	342	346	350	355	362
25	329	332	336	339	343	348	352	358	365
26	330	334	337	341	345	350	355	361	368
27	332	335	339	343	347	352	357	364	372
28	333	337	341	345	349	354	360	367	377
29	335	338	342	346	351	356	363	371	380
30	336	340	344	348	353	359	366	375	380
31	338	342	346	350	355	362	370	380	380
32	339	343	348	352	358	365	374	380	380
33	341	345	349	354	361	368	379	380	380
34	343	347	352	357	364	372	380	380	380
35	344	349	354	360	367	377	380	380	380
36	346	351	356	362	371	380	380	380	380
37	348	353	359	366	375	380	380	380	380
38	350	355	361	369	380	380	380	380	380

Table J-44. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score: 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	305	312	317
1	300	300	300	300	300	301	308	314	319
2	300	300	300	300	300	304	311	316	321
3	300	300	300	300	300	307	313	318	322
4	300	300	300	300	303	310	315	320	324
5	300	300	300	300	306	312	317	322	326
6	300	300	300	302	309	315	319	324	328
7	300	300	300	305	312	317	321	325	329
8	300	300	301	308	314	319	323	327	331
9	300	300	304	311	316	321	325	329	333
10	300	300	307	313	318	322	327	330	334
11	300	303	310	315	319	324	328	332	336
12	300	306	312	317	322	326	330	334	338
13	302	309	315	319	324	328	332	335	339
14	305	311	317	321	325	329	333	337	341
15	308	314	319	323	327	331	335	339	343
16	311	316	321	325	329	333	336	340	344
17	313	318	322	327	330	334	338	342	346
18	315	319	324	328	332	336	339	344	348
19	317	322	326	330	334	338	341	346	350
20	319	324	328	332	335	339	343	347	352
21	321	325	329	333	337	341	345	349	354
22	323	327	331	335	339	343	347	351	357
23	325	329	333	336	340	344	349	354	360
24	327	330	334	338	342	346	351	356	362
25	328	332	336	339	344	348	353	359	366
26	330	334	338	341	346	350	355	361	369
27	332	335	339	343	347	352	358	364	373
28	333	337	341	345	349	354	360	368	378
29	335	339	343	347	351	357	363	372	380
30	336	340	344	349	354	359	367	376	380
31	338	342	346	351	356	362	371	380	380
32	339	344	348	353	359	366	375	380	380
33	341	346	350	355	361	369	380	380	380
34	343	347	352	358	364	373	380	380	380
35	345	349	354	360	368	378	380	380	380
36	347	351	357	363	372	380	380	380	380
37	349	354	359	367	376	380	380	380	380
38	351	356	362	370	380	380	380	380	380

Table J-45. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	305	311	316
1	300	300	300	300	300	301	308	313	318
2	300	300	300	300	300	304	310	315	319
3	300	300	300	300	300	307	312	317	321
4	300	300	300	300	303	309	315	319	323
5	300	300	300	300	306	312	316	321	325
6	300	300	300	302	309	314	318	322	326
7	300	300	300	305	311	316	320	324	328
8	300	300	301	308	313	318	322	326	330
9	300	300	304	310	315	319	324	327	331
10	300	300	307	312	317	321	325	329	333
11	300	303	309	314	319	323	327	331	334
12	300	306	312	316	321	325	328	332	336
13	302	309	314	318	322	326	330	334	338
14	305	311	316	320	324	328	332	336	339
15	308	313	318	322	326	330	333	337	341
16	310	315	319	323	327	331	335	339	343
17	312	317	321	325	329	333	337	341	345
18	314	319	323	327	331	334	338	343	347
19	316	321	325	328	332	336	340	344	349
20	318	322	326	330	334	338	342	346	352
21	320	324	328	332	336	339	344	349	354
22	322	326	329	333	337	341	346	351	357
23	323	327	331	335	339	343	348	353	359
24	325	329	333	337	341	345	350	356	362
25	327	331	334	338	343	347	352	358	366
26	328	332	336	340	344	349	355	361	370
27	330	334	338	342	346	351	357	365	374
28	332	335	339	344	348	354	360	368	379
29	333	337	341	346	351	356	363	372	380
30	335	339	343	348	353	359	367	377	380
31	337	341	345	350	356	362	371	380	380
32	338	342	347	352	358	366	375	380	380
33	340	344	349	355	361	369	380	380	380
34	342	346	351	357	365	374	380	380	380
35	344	348	354	360	368	378	380	380	380
36	346	351	356	363	372	380	380	380	380
37	348	353	359	367	377	380	380	380	380
38	350	356	362	371	380	380	380	380	380

Table J-46. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	304	311	316
1	300	300	300	300	300	300	307	313	318
2	300	300	300	300	300	303	310	315	319
3	300	300	300	300	300	306	312	317	322
4	300	300	300	300	302	309	315	319	323
5	300	300	300	300	305	312	317	321	325
6	300	300	300	301	308	314	319	323	327
7	300	300	300	304	311	316	320	324	328
8	300	300	300	307	313	318	322	326	330
9	300	300	303	310	315	319	324	328	332
10	300	300	306	312	317	322	326	329	333
11	300	302	309	314	319	323	327	331	335
12	300	305	312	317	321	325	329	333	337
13	301	308	314	318	323	327	331	334	338
14	304	311	316	320	324	328	332	336	339
15	307	313	318	322	326	330	334	338	342
16	310	315	319	324	328	332	335	339	343
17	312	317	322	326	329	333	337	341	345
18	314	319	323	327	331	335	339	343	347
19	316	321	325	329	333	336	340	345	349
20	318	323	327	330	334	338	342	347	351
21	320	324	328	332	336	339	344	349	354
22	322	326	330	334	338	342	346	351	356
23	324	328	332	335	339	343	348	353	359
24	326	329	333	337	341	345	350	355	362
25	327	331	335	339	343	347	352	358	366
26	329	333	336	340	345	349	355	361	370
27	330	334	338	342	346	351	357	365	374
28	332	336	339	344	349	354	360	368	379
29	334	338	342	346	351	356	363	372	380
30	335	339	343	348	353	359	367	377	380
31	337	341	345	350	355	362	371	380	380
32	339	343	347	352	358	366	376	380	380
33	340	345	349	355	361	370	380	380	380
34	342	346	351	357	364	374	380	380	380
35	344	348	354	360	368	379	380	380	380
36	346	351	356	363	372	380	380	380	380
37	348	353	359	367	377	380	380	380	380
38	350	355	362	371	380	380	380	380	380

Table J-47. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	302	308	313
1	300	300	300	300	300	300	305	311	315
2	300	300	300	300	300	301	307	313	317
3	300	300	300	300	300	304	310	315	319
4	300	300	300	300	300	307	312	317	321
5	300	300	300	300	303	309	314	319	323
6	300	300	300	300	306	311	316	320	324
7	300	300	300	302	308	313	318	322	326
8	300	300	300	305	311	315	319	324	328
9	300	300	301	307	313	317	322	326	329
10	300	300	304	310	315	319	323	327	331
11	300	300	307	312	317	321	325	329	333
12	300	303	309	314	319	323	327	331	335
13	300	306	311	316	320	324	328	332	336
14	302	308	313	318	322	326	330	334	338
15	305	311	315	319	324	328	332	336	339
16	307	313	317	322	326	329	333	337	342
17	310	315	319	323	327	331	335	339	344
18	312	317	321	325	329	333	337	341	346
19	314	319	323	327	331	335	339	343	348
20	316	320	324	328	332	336	341	345	350
21	318	322	326	330	334	338	342	347	353
22	319	324	328	332	336	339	344	350	355
23	321	325	329	333	337	342	347	352	358
24	323	327	331	335	339	344	349	354	361
25	325	329	333	337	341	346	351	357	365
26	327	331	335	339	343	348	354	360	368
27	328	332	336	341	345	350	356	364	372
28	330	334	338	342	347	353	359	367	378
29	332	336	339	344	349	355	362	371	380
30	333	337	342	347	352	358	366	376	380
31	335	339	344	349	354	361	370	380	380
32	337	341	346	351	357	365	374	380	380
33	339	343	348	354	360	368	379	380	380
34	340	345	350	356	363	372	380	380	380
35	342	347	353	359	367	377	380	380	380
36	344	349	355	362	371	380	380	380	380
37	346	352	358	366	376	380	380	380	380
38	349	354	361	370	380	380	380	380	380

Table J-48. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 3, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score: 0	1	2	3	4	5	6	7	8
0	300	300	300	300	300	300	304	310	316
1	300	300	300	300	300	300	307	313	318
2	300	300	300	300	300	303	309	315	319
3	300	300	300	300	300	306	312	317	321
4	300	300	300	300	302	309	314	319	323
5	300	300	300	300	305	311	316	321	325
6	300	300	300	300	308	313	318	323	327
7	300	300	300	304	310	316	320	324	328
8	300	300	300	307	313	318	322	326	330
9	300	300	303	309	315	319	324	328	332
10	300	300	306	312	317	321	325	329	333
11	300	302	309	314	319	323	327	331	335
12	300	305	311	316	321	325	329	333	337
13	300	308	313	318	323	327	331	334	338
14	304	310	316	320	324	328	332	336	339
15	307	313	318	322	326	330	334	338	342
16	309	315	319	324	328	332	335	339	344
17	312	317	321	325	329	333	337	341	345
18	314	319	323	327	331	335	339	343	347
19	316	321	325	329	333	337	341	345	349
20	318	323	327	331	334	338	342	347	352
21	320	324	328	332	336	339	344	349	354
22	322	326	330	334	338	342	346	351	356
23	324	328	332	335	339	344	348	353	359
24	325	329	333	337	341	345	350	355	362
25	327	331	335	339	343	347	352	358	365
26	329	333	337	341	345	349	355	361	369
27	330	334	338	342	347	351	357	364	373
28	332	336	339	344	349	354	360	368	378
29	334	338	342	346	351	356	363	372	380
30	335	339	343	348	353	359	366	376	380
31	337	341	345	350	355	362	370	380	380
32	339	343	347	352	358	365	375	380	380
33	340	345	349	355	361	369	380	380	380
34	342	347	351	357	364	373	380	380	380
35	344	349	354	360	368	378	380	380	380
36	346	351	356	363	372	380	380	380	380
37	348	353	359	366	376	380	380	380	380
38	350	355	362	370	380	380	380	380	380

Table J-49. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	404	412	417	423	427	431	435	439
1	400	400	400	400	400	407	414	419	424	429	433	437	441
2	400	400	400	400	402	410	416	421	426	430	434	438	443
3	400	400	400	400	405	412	418	423	427	432	436	439	444
4	400	400	400	400	408	414	419	425	429	433	437	441	446
5	400	400	400	403	410	416	422	426	431	435	439	443	447
6	400	400	400	406	413	418	423	428	432	436	440	444	449
7	400	400	400	408	415	420	425	429	434	438	442	446	451
8	400	400	403	411	417	422	427	431	435	439	443	448	452
9	400	400	406	413	419	424	428	432	437	441	445	449	454
10	400	401	409	415	421	425	430	434	438	442	446	451	456
11	400	404	412	417	423	427	431	435	439	444	448	453	458
12	400	407	414	419	424	429	433	437	441	445	450	455	460
13	402	410	416	421	426	430	434	438	443	447	451	456	462
14	405	412	418	423	427	432	436	439	444	448	453	458	464
15	408	414	419	425	429	433	437	441	446	450	455	460	466
16	410	416	422	426	431	435	439	443	447	452	457	463	469
17	413	418	423	428	432	436	440	444	449	454	459	465	470
18	415	420	425	429	434	438	442	446	451	455	461	467	474
19	417	422	427	431	435	439	443	448	452	457	463	469	476
20	419	424	428	432	437	441	445	449	454	459	465	472	479
21	421	425	430	434	438	442	446	451	456	461	468	474	480
22	423	427	431	435	439	444	448	453	458	464	470	477	480
23	424	429	433	437	441	445	450	455	460	466	473	480	480
24	426	430	434	438	443	447	451	456	462	468	475	480	480
25	427	432	436	439	444	448	453	458	464	470	478	480	480
26	429	433	437	441	446	450	455	460	466	473	480	480	480
27	431	435	439	443	447	452	457	463	469	476	480	480	480
28	432	436	440	444	449	454	459	465	470	478	480	480	480
29	434	438	442	446	451	455	461	467	474	480	480	480	480
30	435	439	443	448	452	457	463	469	476	480	480	480	480
31	437	441	445	449	454	459	465	472	479	480	480	480	480
32	438	442	446	451	456	461	468	474	480	480	480	480	480
33	439	444	448	453	458	464	470	477	480	480	480	480	480

Table J-50. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	402	410	416	422	427	431	436	440
1	400	400	400	400	400	405	412	418	423	428	433	437	442
2	400	400	400	400	400	408	414	420	425	430	435	439	444
3	400	400	400	400	403	410	417	422	427	432	436	441	445
4	400	400	400	400	406	413	419	424	429	433	438	442	447
5	400	400	400	400	408	415	421	426	430	435	439	444	449
6	400	400	400	403	411	417	423	427	432	437	441	446	450
7	400	400	400	406	413	419	424	429	434	438	443	447	452
8	400	400	401	409	415	421	426	431	435	439	444	449	454
9	400	400	404	411	418	423	428	433	437	442	446	451	456
10	400	400	407	414	419	425	430	434	439	443	448	453	458
11	400	402	410	416	422	427	431	436	440	445	450	454	460
12	400	405	412	418	423	428	433	437	442	447	451	456	462
13	400	408	414	420	425	430	435	439	444	448	453	458	464
14	403	410	417	422	427	432	436	441	445	450	455	460	466
15	406	413	419	424	429	433	438	442	447	452	457	462	468
16	408	415	421	426	430	435	439	444	449	454	459	464	470
17	411	417	423	427	432	437	441	446	450	455	461	466	472
18	413	419	424	429	434	438	443	447	452	457	463	468	475
19	415	421	426	431	435	439	444	449	454	459	465	470	477
20	418	423	428	433	437	442	446	451	456	461	467	473	480
21	419	425	430	434	439	443	448	453	458	463	469	475	480
22	422	427	431	436	440	445	450	454	460	465	470	478	480
23	423	428	433	437	442	447	451	456	462	467	473	480	480
24	425	430	435	439	444	448	453	458	464	469	476	480	480
25	427	432	436	441	445	450	455	460	466	472	478	480	480
26	429	433	438	442	447	452	457	462	468	474	480	480	480
27	430	435	439	444	449	454	459	464	470	477	480	480	480
28	432	437	441	446	450	455	461	466	472	479	480	480	480
29	434	438	443	447	452	457	463	468	475	480	480	480	480
30	435	439	444	449	454	459	465	470	477	480	480	480	480
31	437	442	446	451	456	461	467	473	480	480	480	480	480
32	439	443	448	453	458	463	469	475	480	480	480	480	480
33	440	445	450	454	460	465	470	478	480	480	480	480	480

Table J-51. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	400	408	414	419	424	428	432	437
1	400	400	400	400	400	403	410	416	421	425	430	434	438
2	400	400	400	400	400	406	412	418	423	427	431	436	439
3	400	400	400	400	401	408	414	419	424	429	433	437	441
4	400	400	400	400	404	411	416	421	426	430	434	439	443
5	400	400	400	400	406	413	418	423	427	432	436	440	445
6	400	400	400	402	409	415	420	425	429	433	437	442	446
7	400	400	400	404	411	417	422	426	431	435	439	443	448
8	400	400	400	407	413	419	423	428	432	436	441	445	450
9	400	400	402	410	415	420	425	429	434	438	442	447	451
10	400	400	405	412	417	422	427	431	435	439	444	448	453
11	400	400	408	414	419	424	428	432	437	441	445	450	455
12	400	403	410	416	421	425	430	434	438	443	447	452	457
13	400	406	412	418	423	427	431	436	439	444	449	454	459
14	401	408	414	419	424	429	433	437	441	446	450	456	461
15	404	411	416	421	426	430	434	439	443	447	452	458	463
16	406	413	418	423	427	432	436	440	445	449	454	460	466
17	409	415	420	425	429	433	437	442	446	451	456	462	468
18	411	417	422	426	431	435	439	443	448	453	458	464	470
19	413	419	423	428	432	436	441	445	450	455	460	466	473
20	415	420	425	429	434	438	442	447	451	457	462	469	476
21	417	422	427	431	435	439	444	448	453	459	465	470	479
22	419	424	428	432	437	441	445	450	455	461	467	474	480
23	421	425	430	434	438	443	447	452	457	463	469	477	480
24	423	427	431	436	439	444	449	454	459	465	472	479	480
25	424	429	433	437	441	446	450	456	461	467	475	480	480
26	426	430	434	439	443	447	452	458	463	470	477	480	480
27	427	432	436	440	445	449	454	460	466	473	480	480	480
28	429	433	437	442	446	451	456	462	468	475	480	480	480
29	431	435	439	443	448	453	458	464	470	478	480	480	480
30	432	436	441	445	450	455	460	466	473	480	480	480	480
31	434	438	442	447	451	457	462	469	476	480	480	480	480
32	435	439	444	448	453	459	465	470	479	480	480	480	480
33	437	441	445	450	455	461	467	474	480	480	480	480	480

Table J-52. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	402	409	415	420	425	429	433	437
1	400	400	400	400	400	405	412	417	422	427	431	434	438
2	400	400	400	400	400	407	414	419	424	428	432	436	439
3	400	400	400	400	403	410	416	421	425	430	433	437	441
4	400	400	400	400	405	412	418	423	427	431	435	439	443
5	400	400	400	400	408	414	419	424	428	432	436	440	444
6	400	400	400	403	411	416	421	426	430	434	438	441	445
7	400	400	400	406	413	418	423	427	431	435	439	443	447
8	400	400	401	409	415	420	425	429	433	437	440	444	448
9	400	400	404	411	417	422	426	430	434	438	442	446	450
10	400	400	407	413	419	423	428	432	436	439	443	447	452
11	400	402	409	415	420	425	429	433	437	441	445	449	453
12	400	405	412	417	422	427	431	434	438	442	446	450	455
13	400	407	414	419	424	428	432	436	439	444	448	452	457
14	403	410	416	421	425	430	433	437	441	445	449	454	459
15	405	412	418	423	427	431	435	439	443	447	451	456	461
16	408	414	419	424	428	432	436	440	444	448	453	458	463
17	411	416	421	426	430	434	438	441	445	450	454	459	465
18	413	418	423	427	431	435	439	443	447	451	456	462	468
19	415	420	425	429	433	437	440	444	448	453	458	464	470
20	417	422	426	430	434	438	442	446	450	455	460	466	473
21	419	423	428	432	436	439	443	447	452	457	462	468	476
22	420	425	429	433	437	441	445	449	453	459	464	470	479
23	422	427	431	434	438	442	446	450	455	461	467	474	480
24	424	428	432	436	439	444	448	452	457	463	469	477	480
25	425	430	433	437	441	445	449	454	459	465	472	480	480
26	427	431	435	439	443	447	451	456	461	467	474	480	480
27	428	432	436	440	444	448	453	458	463	470	477	480	480
28	430	434	438	441	445	450	454	459	465	472	480	480	480
29	431	435	439	443	447	451	456	462	468	475	480	480	480
30	433	437	440	444	448	453	458	464	470	478	480	480	480
31	434	438	442	446	450	455	460	466	473	480	480	480	480
32	436	439	443	447	452	457	462	468	476	480	480	480	480
33	437	441	445	449	453	459	464	470	479	480	480	480	480

Table J-53. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	401	409	415	421	425	430	434	438
1	400	400	400	400	400	404	411	417	422	427	431	436	440
2	400	400	400	400	400	407	414	419	424	429	433	437	442
3	400	400	400	400	402	410	416	421	426	430	435	439	443
4	400	400	400	400	405	412	418	423	427	432	436	440	445
5	400	400	400	400	408	414	419	425	429	433	438	442	447
6	400	400	400	403	410	416	422	426	431	435	439	444	448
7	400	400	400	406	413	418	423	428	432	437	441	445	450
8	400	400	400	408	415	420	425	429	434	438	442	447	452
9	400	400	403	411	417	422	427	431	435	439	444	449	454
10	400	400	406	413	419	424	428	433	437	441	446	451	456
11	400	401	409	415	421	425	430	434	438	443	448	452	458
12	400	404	411	417	422	427	431	436	440	445	449	454	460
13	400	407	414	419	424	429	433	437	442	446	451	456	462
14	402	410	416	421	426	430	435	439	443	448	453	458	464
15	405	412	418	423	427	432	436	440	445	450	455	461	467
16	408	414	419	425	429	433	438	442	447	452	457	463	469
17	410	416	422	426	431	435	439	444	448	453	459	465	472
18	413	418	423	428	432	437	441	445	450	455	461	467	474
19	415	420	425	429	434	438	442	447	452	457	463	470	477
20	417	422	427	431	435	439	444	449	454	459	466	472	480
21	419	424	428	433	437	441	446	451	456	462	468	475	480
22	421	425	430	434	438	443	448	452	458	464	470	477	480
23	422	427	431	436	440	445	449	454	460	466	473	480	480
24	424	429	433	437	442	446	451	456	462	469	475	480	480
25	426	430	435	439	443	448	453	458	464	470	478	480	480
26	427	432	436	440	445	450	455	461	467	474	480	480	480
27	429	433	438	442	447	452	457	463	469	476	480	480	480
28	431	435	439	444	448	453	459	465	472	479	480	480	480
29	432	437	441	445	450	455	461	467	474	480	480	480	480
30	434	438	442	447	452	457	463	470	477	480	480	480	480
31	435	439	444	449	454	459	466	472	480	480	480	480	480
32	437	441	446	451	456	462	468	475	480	480	480	480	480
33	438	443	448	452	458	464	470	477	480	480	480	480	480

Table J-54. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	402	410	416	421	425	429	433	437
1	400	400	400	400	400	405	412	418	422	427	431	435	439
2	400	400	400	400	400	408	414	419	424	428	432	436	440
3	400	400	400	400	403	410	416	421	425	430	434	438	442
4	400	400	400	400	406	413	418	423	427	431	435	439	443
5	400	400	400	401	409	415	419	424	428	432	437	441	445
6	400	400	400	404	411	417	421	426	430	434	438	442	447
7	400	400	400	407	413	418	423	427	431	435	439	444	448
8	400	400	401	409	415	420	425	429	433	437	441	445	450
9	400	400	404	411	417	422	426	430	434	438	443	447	452
10	400	400	407	414	419	423	428	432	436	439	444	449	454
11	400	402	410	416	421	425	429	433	437	441	446	450	456
12	400	405	412	418	422	427	431	435	439	443	447	452	458
13	400	408	414	419	424	428	432	436	440	445	449	454	460
14	403	410	416	421	425	430	434	438	442	446	451	456	462
15	406	413	418	423	427	431	435	439	443	448	453	458	464
16	409	415	419	424	428	432	437	441	445	450	455	460	466
17	411	417	421	426	430	434	438	442	447	451	457	462	469
18	413	418	423	427	431	435	439	444	448	453	459	465	472
19	415	420	425	429	433	437	441	445	450	455	461	467	474
20	417	422	426	430	434	438	443	447	452	457	463	470	477
21	419	423	428	432	436	439	444	449	454	459	465	472	480
22	421	425	429	433	437	441	446	450	456	461	468	475	480
23	422	427	431	435	439	443	447	452	458	464	470	478	480
24	424	428	432	436	440	445	449	454	460	466	473	480	480
25	425	430	434	438	442	446	451	456	462	468	476	480	480
26	427	431	435	439	443	448	453	458	464	470	479	480	480
27	428	432	437	441	445	450	455	460	466	474	480	480	480
28	430	434	438	442	447	451	457	462	469	477	480	480	480
29	431	435	439	444	448	453	459	465	472	480	480	480	480
30	433	437	441	445	450	455	461	467	474	480	480	480	480
31	434	438	443	447	452	457	463	470	477	480	480	480	480
32	436	439	444	449	454	459	465	472	480	480	480	480	480
33	437	441	446	450	456	461	468	475	480	480	480	480	480

Table J-55. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 4, Scale Form 7

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	400	400	400	400	400	401	409	415	419	424	429	432	436
1	400	400	400	400	400	405	411	417	422	426	430	434	438
2	400	400	400	400	400	407	414	419	423	428	432	435	439
3	400	400	400	400	403	410	416	421	425	429	433	437	441
4	400	400	400	400	406	412	418	422	427	431	435	438	442
5	400	400	400	401	408	415	419	424	428	432	436	439	444
6	400	400	400	404	411	417	421	426	430	434	438	441	445
7	400	400	400	407	413	419	423	427	431	435	439	443	447
8	400	400	402	410	415	420	425	429	433	437	440	444	449
9	400	400	405	412	417	422	426	430	434	438	442	446	450
10	400	400	408	414	419	424	428	432	436	439	444	448	452
11	400	404	411	416	421	425	430	433	437	441	445	449	454
12	400	406	413	418	423	427	431	435	439	443	447	451	456
13	402	409	415	420	425	429	433	436	440	444	448	453	458
14	405	412	417	422	426	430	434	438	442	446	450	455	460
15	408	414	419	424	428	432	436	439	443	447	452	457	463
16	410	416	421	425	429	433	437	441	445	449	454	459	465
17	413	418	423	427	431	435	438	442	446	451	456	461	468
18	415	419	424	428	432	436	439	444	448	453	458	464	470
19	417	422	426	430	434	438	442	446	450	455	460	466	473
20	419	423	427	431	435	439	443	447	452	457	462	469	476
21	421	425	429	433	437	441	445	449	453	459	465	472	480
22	422	427	431	434	438	442	446	451	455	461	467	475	480
23	424	428	432	436	439	444	448	452	457	463	470	478	480
24	426	430	434	437	441	445	450	454	460	466	473	480	480
25	427	431	435	439	443	447	451	456	462	468	476	480	480
26	429	433	437	440	444	449	453	458	464	470	479	480	480
27	430	434	438	442	446	450	455	460	467	474	480	480	480
28	432	436	439	443	448	452	457	463	469	477	480	480	480
29	433	437	441	445	449	454	459	465	472	480	480	480	480
30	435	439	443	447	451	456	461	468	475	480	480	480	480
31	436	440	444	448	453	458	464	470	479	480	480	480	480

Table J-56. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	502	508	513	518	522	526	531
1	500	500	500	500	500	500	504	510	515	519	524	528	532
2	500	500	500	500	500	500	506	512	517	521	525	529	534
3	500	500	500	500	500	502	508	514	518	523	527	531	535
4	500	500	500	500	500	505	510	515	519	524	528	533	537
5	500	500	500	500	500	507	512	517	521	526	530	534	539
6	500	500	500	500	503	509	514	519	523	527	531	536	541
7	500	500	500	500	505	511	516	520	524	529	533	537	542
8	500	500	500	501	507	513	517	522	526	530	535	539	544
9	500	500	500	503	509	514	519	523	527	532	536	541	546
10	500	500	500	506	511	516	521	525	529	533	538	543	549
11	500	500	502	508	513	518	522	526	531	535	539	545	551
12	500	500	504	510	515	519	524	528	532	537	541	547	553
13	500	500	506	512	517	521	525	529	534	538	543	549	556
14	500	502	508	514	518	523	527	531	535	540	545	551	558
15	500	505	510	515	519	524	528	533	537	542	547	554	561
16	500	507	512	517	521	526	530	534	539	544	550	556	564
17	503	509	514	519	523	527	531	536	541	546	552	559	568
18	505	511	516	520	524	529	533	537	542	548	554	562	571
19	507	513	517	522	526	530	535	539	544	550	557	565	575
20	509	514	519	523	527	532	536	541	546	553	560	568	579
21	511	516	521	525	529	533	538	543	549	555	563	572	580
22	513	518	522	526	531	535	539	545	551	558	566	576	580
23	515	519	524	528	532	537	541	547	553	561	570	579	580
24	517	521	525	529	534	538	543	549	556	564	573	580	580
25	518	523	527	531	535	540	545	551	558	567	577	580	580
26	519	524	528	533	537	542	547	554	561	570	580	580	580
27	521	526	530	534	539	544	550	556	564	574	580	580	580
28	523	527	531	536	541	546	552	559	568	578	580	580	580
29	524	529	533	537	542	548	554	562	571	580	580	580	580
30	526	530	535	539	544	550	557	565	575	580	580	580	580
31	527	532	536	541	546	553	560	568	579	580	580	580	580
32	529	533	538	543	549	555	563	572	580	580	580	580	580
33	531	535	539	545	551	558	566	576	580	580	580	580	580

Table J-57. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	503	509	514	519	523	527	531
1	500	500	500	500	500	500	505	511	516	520	524	528	532
2	500	500	500	500	500	501	507	513	517	522	526	530	534
3	500	500	500	500	500	503	509	514	519	523	527	531	535
4	500	500	500	500	500	506	511	516	521	525	529	533	537
5	500	500	500	500	501	508	513	518	522	526	530	534	539
6	500	500	500	500	504	510	515	519	524	528	532	536	540
7	500	500	500	500	506	512	517	521	525	529	533	537	542
8	500	500	500	502	508	514	518	522	527	531	535	539	543
9	500	500	500	504	510	515	519	524	528	532	536	541	545
10	500	500	500	507	512	517	521	525	530	534	538	542	547
11	500	500	503	509	514	519	523	527	531	535	539	544	549
12	500	500	505	511	516	520	524	528	532	537	541	546	551
13	500	501	507	513	517	522	526	530	534	538	543	548	553
14	500	503	509	514	519	523	527	531	535	539	544	550	556
15	500	506	511	516	521	525	529	533	537	541	546	552	558
16	501	508	513	518	522	526	530	534	539	543	548	554	561
17	504	510	515	519	524	528	532	536	540	545	550	556	564
18	506	512	517	521	525	529	533	537	542	547	552	559	567
19	508	514	518	522	527	531	535	539	543	549	555	562	570
20	510	515	519	524	528	532	536	541	545	551	557	565	574
21	512	517	521	525	530	534	538	542	547	553	560	568	578
22	514	519	523	527	531	535	539	544	549	555	562	571	580
23	516	520	524	528	532	537	541	546	551	558	565	575	580
24	517	522	526	530	534	538	543	548	553	560	568	579	580
25	519	523	527	531	535	539	544	550	556	563	572	580	580
26	521	525	529	533	537	541	546	552	558	566	576	580	580
27	522	526	530	534	539	543	548	554	561	569	580	580	580
28	524	528	532	536	540	545	550	556	564	573	580	580	580
29	525	529	533	537	542	547	552	559	567	577	580	580	580
30	527	531	535	539	543	549	555	562	570	580	580	580	580
31	528	532	536	541	545	551	557	565	574	580	580	580	580
32	530	534	538	542	547	553	560	568	578	580	580	580	580
33	531	535	539	544	549	555	562	571	580	580	580	580	580

Table J-58. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	502	508	514	519	524	529	533
1	500	500	500	500	500	500	504	511	516	521	526	530	535
2	500	500	500	500	500	500	507	513	518	523	527	532	536
3	500	500	500	500	500	502	509	515	519	525	529	533	538
4	500	500	500	500	500	505	511	517	522	526	531	535	539
5	500	500	500	500	500	507	513	518	523	528	532	537	541
6	500	500	500	500	503	510	515	520	525	529	534	538	543
7	500	500	500	500	505	512	517	522	527	531	535	539	545
8	500	500	500	501	508	514	519	524	528	533	537	542	546
9	500	500	500	504	510	516	521	525	530	534	539	543	548
10	500	500	500	506	512	518	522	527	531	536	540	545	550
11	500	500	502	508	514	519	524	529	533	537	542	547	552
12	500	500	504	511	516	521	526	530	535	539	544	549	555
13	500	500	507	513	518	523	527	532	536	541	546	551	557
14	500	502	509	515	519	525	529	533	538	542	547	553	559
15	500	505	511	517	522	526	531	535	539	544	549	555	562
16	500	507	513	518	523	528	532	537	541	546	551	557	565
17	503	510	515	520	525	529	534	538	543	548	553	560	567
18	505	512	517	522	527	531	535	539	545	550	556	563	570
19	508	514	519	524	528	533	537	542	546	552	558	565	574
20	510	516	521	525	530	534	539	543	548	554	561	568	577
21	512	518	522	527	531	536	540	545	550	556	563	571	580
22	514	519	524	529	533	537	542	547	552	559	566	575	580
23	516	521	526	530	535	539	544	549	555	561	568	578	580
24	518	523	527	532	536	541	546	551	557	564	572	580	580
25	519	525	529	533	538	542	547	553	559	567	575	580	580
26	522	526	531	535	539	544	549	555	562	570	579	580	580
27	523	528	532	537	541	546	551	557	565	573	580	580	580
28	525	529	534	538	543	548	553	560	567	576	580	580	580
29	527	531	535	539	545	550	556	563	570	580	580	580	580
30	528	533	537	542	546	552	558	565	574	580	580	580	580
31	530	534	539	543	548	554	561	568	577	580	580	580	580
32	531	536	540	545	550	556	563	571	580	580	580	580	580
33	533	537	542	547	552	559	566	575	580	580	580	580	580

Table J-59. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	506	512	518	523	527	531	535
1	500	500	500	500	500	501	508	514	519	524	529	533	537
2	500	500	500	500	500	504	511	516	521	526	530	534	539
3	500	500	500	500	500	506	513	518	523	527	532	536	540
4	500	500	500	500	502	509	515	519	525	529	533	537	542
5	500	500	500	500	504	511	517	522	526	530	535	539	543
6	500	500	500	500	507	513	519	523	528	532	536	540	545
7	500	500	500	502	509	515	520	525	529	534	538	542	547
8	500	500	500	505	512	517	522	527	531	535	539	544	548
9	500	500	500	508	514	519	524	528	532	537	541	545	550
10	500	500	503	510	516	521	525	530	534	538	543	547	552
11	500	500	506	512	518	523	527	531	535	539	544	549	554
12	500	501	508	514	519	524	529	533	537	541	546	551	556
13	500	504	511	516	521	526	530	534	539	543	548	553	558
14	500	506	513	518	523	527	532	536	540	545	549	555	561
15	502	509	515	519	525	529	533	537	542	546	551	557	563
16	504	511	517	522	526	530	535	539	543	548	553	559	565
17	507	513	519	523	528	532	536	540	545	550	555	561	568
18	509	515	520	525	529	534	538	542	547	552	557	563	571
19	512	517	522	527	531	535	539	544	548	554	559	566	574
20	514	519	524	528	532	537	541	545	550	556	562	568	577
21	516	521	525	530	534	538	543	547	552	558	564	571	580
22	518	523	527	531	535	539	544	549	554	560	567	574	580
23	519	524	529	533	537	541	546	551	556	562	569	578	580
24	521	526	530	534	539	543	548	553	558	565	572	580	580
25	523	527	532	536	540	545	549	555	561	567	575	580	580
26	525	529	533	537	542	546	551	557	563	570	578	580	580
27	526	530	535	539	543	548	553	559	565	573	580	580	580
28	528	532	536	540	545	550	555	561	568	576	580	580	580
29	529	534	538	542	547	552	557	563	571	579	580	580	580
30	531	535	539	544	548	554	559	566	574	580	580	580	580
31	532	537	541	545	550	556	562	568	577	580	580	580	580
32	534	538	543	547	552	558	564	571	580	580	580	580	580
33	535	539	544	549	554	560	567	574	580	580	580	580	580

Table J-60. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	500	506	512	518	523	528	532
1	500	500	500	500	500	500	501	508	514	519	525	529	534
2	500	500	500	500	500	500	504	511	517	522	526	531	535
3	500	500	500	500	500	500	506	513	518	523	528	532	537
4	500	500	500	500	500	502	509	515	520	525	530	534	539
5	500	500	500	500	500	504	511	517	522	527	531	536	541
6	500	500	500	500	500	507	513	519	524	528	533	537	542
7	500	500	500	500	502	509	516	521	526	530	535	539	544
8	500	500	500	500	505	512	518	523	527	532	536	541	546
9	500	500	500	500	508	514	519	524	529	533	538	543	548
10	500	500	500	503	510	516	521	526	530	535	539	545	550
11	500	500	500	506	512	518	523	528	532	537	541	547	552
12	500	500	501	508	514	519	525	529	534	538	543	549	555
13	500	500	504	511	517	522	526	531	535	540	545	551	557
14	500	500	506	513	518	523	528	532	537	542	547	553	559
15	500	502	509	515	520	525	530	534	539	544	549	555	562
16	500	504	511	517	522	527	531	536	541	546	551	558	565
17	500	507	513	519	524	528	533	537	542	548	553	560	568
18	502	509	516	521	526	530	535	539	544	550	556	563	571
19	505	512	518	523	527	532	536	541	546	552	558	566	574
20	508	514	519	524	529	533	538	543	548	554	561	568	578
21	510	516	521	526	530	535	539	545	550	556	564	572	580
22	512	518	523	528	532	537	541	547	552	559	566	575	580
23	514	519	525	529	534	538	543	549	555	561	569	579	580
24	517	522	526	531	535	540	545	551	557	564	573	580	580
25	518	523	528	532	537	542	547	553	559	567	576	580	580
26	520	525	530	534	539	544	549	555	562	570	580	580	580
27	522	527	531	536	541	546	551	558	565	574	580	580	580
28	524	528	533	537	542	548	553	560	568	577	580	580	580
29	526	530	535	539	544	550	556	563	571	580	580	580	580
30	527	532	536	541	546	552	558	566	574	580	580	580	580
31	529	533	538	543	548	554	561	568	578	580	580	580	580
32	530	535	539	545	550	556	564	572	580	580	580	580	580
33	532	537	541	547	552	559	566	575	580	580	580	580	580

Table J-61. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 5, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	503	510	515	520	525	529	533
1	500	500	500	500	500	500	506	512	517	522	526	530	535
2	500	500	500	500	500	501	508	514	519	523	528	532	536
3	500	500	500	500	500	504	510	516	521	525	529	533	538
4	500	500	500	500	500	507	512	518	522	527	531	535	539
5	500	500	500	500	502	509	514	519	524	528	532	536	541
6	500	500	500	500	505	511	516	521	525	530	534	538	543
7	500	500	500	500	507	513	518	523	527	531	535	539	544
8	500	500	500	503	509	515	519	524	528	533	537	541	546
9	500	500	500	505	511	517	521	526	530	534	538	543	548
10	500	500	501	508	513	518	523	527	531	536	540	545	550
11	500	500	503	510	515	520	525	529	533	537	542	547	552
12	500	500	506	512	517	522	526	530	535	539	543	549	555
13	500	501	508	514	519	523	528	532	536	540	545	551	557
14	500	504	510	516	521	525	529	533	538	542	547	553	559
15	500	507	512	518	522	527	531	535	539	544	549	555	562
16	502	509	514	519	524	528	532	536	541	546	551	558	565
17	505	511	516	521	525	530	534	538	543	548	553	560	568
18	507	513	518	523	527	531	535	539	544	550	556	563	572
19	509	515	519	524	528	533	537	541	546	552	558	566	575
20	511	517	521	526	530	534	538	543	548	554	561	569	579
21	513	518	523	527	531	536	540	545	550	556	564	573	580
22	515	520	525	529	533	537	542	547	552	559	567	576	580
23	517	522	526	530	535	539	543	549	555	562	570	580	580
24	519	523	528	532	536	540	545	551	557	564	573	580	580
25	521	525	529	533	538	542	547	553	559	568	577	580	580
26	522	527	531	535	539	544	549	555	562	571	580	580	580
27	524	528	532	536	541	546	551	558	565	574	580	580	580
28	525	530	534	538	543	548	553	560	568	578	580	580	580
29	527	531	535	539	544	550	556	563	572	580	580	580	580
30	528	533	537	541	546	552	558	566	575	580	580	580	580
31	530	534	538	543	548	554	561	569	579	580	580	580	580
32	531	536	540	545	550	556	564	573	580	580	580	580	580
33	533	537	542	547	552	559	567	576	580	580	580	580	580

Table J-62. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	607	612	617	621	625	629	633
1	600	600	600	600	600	603	609	614	618	623	627	630	635
2	600	600	600	600	600	605	611	616	619	624	628	632	636
3	600	600	600	600	601	607	613	617	621	625	629	633	638
4	600	600	600	600	603	609	614	619	623	627	631	635	639
5	600	600	600	600	606	611	616	620	624	628	632	636	641
6	600	600	600	602	608	613	618	622	626	630	634	638	643
7	600	600	600	604	610	615	619	623	627	631	635	639	645
8	600	600	600	606	612	616	621	625	629	633	637	641	646
9	600	600	602	608	614	618	622	626	630	634	638	643	648
10	600	600	605	610	615	619	624	628	632	636	640	645	650
11	600	600	607	612	617	621	625	629	633	637	642	647	652
12	600	603	609	614	618	623	627	630	635	639	644	649	655
13	600	605	611	616	619	624	628	632	636	641	645	651	657
14	601	607	613	617	621	625	629	633	638	642	647	653	659
15	603	609	614	619	623	627	631	635	639	644	649	655	662
16	606	611	616	620	624	628	632	636	641	646	651	657	664
17	608	613	618	622	626	630	634	638	643	648	653	660	667
18	610	615	619	623	627	631	635	639	645	650	656	662	669
19	612	616	621	625	629	633	637	641	646	652	658	665	672
20	614	618	622	626	630	634	638	643	648	654	660	667	675
21	615	619	624	628	632	636	640	645	650	656	663	670	678
22	617	621	625	629	633	637	642	647	652	659	665	673	680
23	618	623	627	630	635	639	644	649	655	661	667	676	680
24	619	624	628	632	636	641	645	651	657	663	671	679	680
25	621	625	629	633	638	642	647	653	659	666	674	680	680
26	623	627	631	635	639	644	649	655	662	669	677	680	680
27	624	628	632	636	641	646	651	657	664	672	680	680	680
28	626	630	634	638	643	648	653	660	667	674	680	680	680
29	627	631	635	639	645	650	656	662	669	677	680	680	680
30	629	633	637	641	646	652	658	665	672	680	680	680	680
31	630	634	638	643	648	654	660	667	675	680	680	680	680
32	632	636	640	645	650	656	663	670	678	680	680	680	680
33	633	637	642	647	652	659	665	673	680	680	680	680	680

Table J-63. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	606	612	617	621	625	629	633
1	600	600	600	600	600	602	609	614	618	623	627	631	635
2	600	600	600	600	600	605	611	616	619	624	628	632	636
3	600	600	600	600	600	607	612	617	621	625	629	634	638
4	600	600	600	600	603	609	614	619	623	627	631	635	639
5	600	600	600	600	605	611	616	620	624	628	632	637	641
6	600	600	600	601	608	613	618	622	626	630	634	638	643
7	600	600	600	604	610	615	619	623	627	631	635	639	645
8	600	600	600	606	612	616	621	625	629	633	637	641	646
9	600	600	602	608	613	618	622	626	630	634	639	643	648
10	600	600	604	610	615	619	624	628	632	636	640	645	650
11	600	600	606	612	617	621	625	629	633	637	642	647	652
12	600	602	609	614	618	623	627	631	635	639	644	649	655
13	600	605	611	616	619	624	628	632	636	641	645	651	657
14	600	607	612	617	621	625	629	634	638	642	647	653	659
15	603	609	614	619	623	627	631	635	639	644	649	655	662
16	605	611	616	620	624	628	632	637	641	646	651	657	664
17	608	613	618	622	626	630	634	638	643	648	653	660	667
18	610	615	619	623	627	631	635	639	645	650	656	662	670
19	612	616	621	625	629	633	637	641	646	652	658	665	673
20	613	618	622	626	630	634	639	643	648	654	660	667	676
21	615	619	624	628	632	636	640	645	650	656	663	670	679
22	617	621	625	629	633	637	642	647	652	659	666	673	680
23	618	623	627	631	635	639	644	649	655	661	668	676	680
24	619	624	628	632	636	641	645	651	657	664	671	679	680
25	621	625	629	634	638	642	647	653	659	666	674	680	680
26	623	627	631	635	639	644	649	655	662	669	677	680	680
27	624	628	632	637	641	646	651	657	664	672	680	680	680
28	626	630	634	638	643	648	653	660	667	675	680	680	680
29	627	631	635	639	645	650	656	662	670	678	680	680	680
30	629	633	637	641	646	652	658	665	673	680	680	680	680
31	630	634	639	643	648	654	660	667	676	680	680	680	680
32	632	636	640	645	650	656	663	670	679	680	680	680	680
33	633	637	642	647	652	659	666	673	680	680	680	680	680

Table J-64. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	600	608	614	619	623	628	632
1	600	600	600	600	600	600	603	610	616	620	625	629	633
2	600	600	600	600	600	600	606	612	617	622	626	631	635
3	600	600	600	600	600	601	608	614	619	624	628	632	636
4	600	600	600	600	600	604	610	616	621	625	629	634	638
5	600	600	600	600	600	606	613	618	623	627	631	635	639
6	600	600	600	600	602	609	615	619	624	628	632	636	641
7	600	600	600	600	604	611	616	621	626	630	634	638	642
8	600	600	600	600	607	613	618	623	627	631	635	639	644
9	600	600	600	602	609	615	620	625	629	633	637	641	646
10	600	600	600	605	612	617	622	626	630	634	638	643	647
11	600	600	600	608	614	619	623	628	632	636	639	644	649
12	600	600	603	610	616	620	625	629	633	637	641	646	651
13	600	600	606	612	617	622	626	631	635	639	643	648	653
14	600	601	608	614	619	624	628	632	636	640	645	650	655
15	600	604	610	616	621	625	629	634	638	642	646	652	657
16	600	606	613	618	623	627	631	635	639	643	648	654	660
17	602	609	615	619	624	628	632	636	641	645	650	656	662
18	604	611	616	621	626	630	634	638	642	647	652	658	665
19	607	613	618	623	627	631	635	639	644	649	654	660	667
20	609	615	620	625	629	633	637	641	646	651	656	663	670
21	612	617	622	626	630	634	638	643	647	653	659	665	673
22	614	619	623	628	632	636	639	644	649	655	661	667	676
23	616	620	625	629	633	637	641	646	651	657	663	671	680
24	617	622	626	631	635	639	643	648	653	659	666	674	680
25	619	624	628	632	636	640	645	650	655	662	669	677	680
26	621	625	629	634	638	642	646	652	657	664	672	680	680
27	623	627	631	635	639	643	648	654	660	667	675	680	680
28	624	628	632	636	641	645	650	656	662	670	678	680	680
29	626	630	634	638	642	647	652	658	665	673	680	680	680
30	627	631	635	639	644	649	654	660	667	676	680	680	680
31	629	633	637	641	646	651	656	663	670	679	680	680	680
32	630	634	638	643	647	653	659	665	673	680	680	680	680
33	632	636	639	644	649	655	661	667	676	680	680	680	680

Table J-65. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	607	613	618	623	627	631	636
1	600	600	600	600	600	602	609	615	619	624	629	633	637
2	600	600	600	600	600	605	611	617	621	626	630	634	639
3	600	600	600	600	600	607	613	618	623	627	632	636	641
4	600	600	600	600	603	610	615	620	625	629	633	638	642
5	600	600	600	600	606	612	617	622	626	631	635	639	644
6	600	600	600	601	608	614	619	623	628	632	636	641	646
7	600	600	600	604	610	616	621	625	629	634	638	643	648
8	600	600	600	606	612	618	622	627	631	635	639	644	650
9	600	600	602	609	614	619	624	628	632	637	641	646	652
10	600	600	604	611	616	621	625	630	634	638	643	648	654
11	600	600	607	613	618	623	627	631	636	640	645	650	656
12	600	602	609	615	619	624	629	633	637	642	647	652	658
13	600	605	611	617	621	626	630	634	639	644	649	654	660
14	600	607	613	618	623	627	632	636	641	645	651	656	663
15	603	610	615	620	625	629	633	638	642	647	653	659	665
16	606	612	617	622	626	631	635	639	644	649	655	661	667
17	608	614	619	623	628	632	636	641	646	651	657	663	670
18	610	616	621	625	629	634	638	643	648	653	659	666	673
19	612	618	622	627	631	635	639	644	650	655	661	667	675
20	614	619	624	628	632	637	641	646	652	657	664	671	678
21	616	621	625	630	634	638	643	648	654	660	666	673	680
22	618	623	627	631	636	640	645	650	656	662	669	676	680
23	619	624	629	633	637	642	647	652	658	664	671	679	680
24	621	626	630	634	639	644	649	654	660	667	674	680	680
25	623	627	632	636	641	645	651	656	663	669	677	680	680
26	625	629	633	638	642	647	653	659	665	672	679	680	680
27	626	631	635	639	644	649	655	661	667	675	680	680	680
28	628	632	636	641	646	651	657	663	670	677	680	680	680
29	629	634	638	643	648	653	659	666	673	680	680	680	680
30	631	635	639	644	650	655	661	667	675	680	680	680	680
31	632	637	641	646	652	657	664	671	678	680	680	680	680
32	634	638	643	648	654	660	666	673	680	680	680	680	680
33	636	640	645	650	656	662	669	676	680	680	680	680	680

Table J-66. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	604	610	616	620	624	628	632
1	600	600	600	600	600	600	607	612	617	622	626	630	634
2	600	600	600	600	600	602	609	614	619	623	627	631	635
3	600	600	600	600	600	605	611	616	621	625	629	633	637
4	600	600	600	600	600	607	613	618	622	626	630	634	638
5	600	600	600	600	603	609	615	619	624	628	632	636	639
6	600	600	600	600	605	611	616	621	625	629	633	637	641
7	600	600	600	601	608	613	618	622	627	631	634	638	643
8	600	600	600	604	610	615	619	624	628	632	636	639	644
9	600	600	600	606	612	617	621	625	629	633	637	641	646
10	600	600	602	608	614	619	623	627	631	635	639	643	647
11	600	600	604	610	616	620	624	628	632	636	640	644	649
12	600	600	607	612	617	622	626	630	634	638	642	646	651
13	600	602	609	614	619	623	627	631	635	639	643	648	653
14	600	605	611	616	621	625	629	633	637	641	645	649	655
15	600	607	613	618	622	626	630	634	638	642	647	651	657
16	603	609	615	619	624	628	632	636	639	644	648	653	659
17	605	611	616	621	625	629	633	637	641	645	650	655	661
18	608	613	618	622	627	631	634	638	643	647	652	657	663
19	610	615	619	624	628	632	636	639	644	649	654	659	666
20	612	617	621	625	629	633	637	641	646	650	656	661	668
21	614	619	623	627	631	635	639	643	647	652	658	664	671
22	616	620	624	628	632	636	640	644	649	654	660	666	674
23	617	622	626	630	634	638	642	646	651	656	662	669	677
24	619	623	627	631	635	639	643	648	653	658	665	672	680
25	621	625	629	633	637	641	645	649	655	660	667	675	680
26	622	626	630	634	638	642	647	651	657	663	670	678	680
27	624	628	632	636	639	644	648	653	659	665	673	680	680
28	625	629	633	637	641	645	650	655	661	667	676	680	680
29	627	631	634	638	643	647	652	657	663	671	679	680	680
30	628	632	636	639	644	649	654	659	666	674	680	680	680
31	629	633	637	641	646	650	656	661	668	677	680	680	680
32	631	635	639	643	647	652	658	664	671	680	680	680	680
33	632	636	640	644	649	654	660	666	674	680	680	680	680

Table J-67. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	601	608	614	619	623	627	631	635
1	600	600	600	600	600	604	610	616	620	625	629	633	637
2	600	600	600	600	600	606	612	617	622	626	630	634	638
3	600	600	600	600	601	609	614	619	623	627	632	636	639
4	600	600	600	600	604	611	616	621	625	629	633	637	642
5	600	600	600	600	607	613	618	622	626	630	634	639	643
6	600	600	600	602	609	615	619	624	628	632	636	640	645
7	600	600	600	605	611	617	621	625	629	633	638	642	647
8	600	600	600	607	613	618	623	627	631	635	639	644	649
9	600	600	603	610	615	619	624	628	632	636	641	645	651
10	600	600	606	612	617	621	626	630	634	638	642	647	653
11	600	601	608	614	619	623	627	631	635	639	644	649	655
12	600	604	610	616	620	625	629	633	637	641	646	651	657
13	600	606	612	617	622	626	630	634	638	643	648	653	659
14	601	609	614	619	623	627	632	636	639	644	650	655	661
15	604	611	616	621	625	629	633	637	642	646	652	657	664
16	607	613	618	622	626	630	634	639	643	648	654	660	666
17	609	615	619	624	628	632	636	640	645	650	656	662	669
18	611	617	621	625	629	633	638	642	647	652	658	664	671
19	613	618	623	627	631	635	639	644	649	654	660	667	674
20	615	619	624	628	632	636	641	645	651	656	663	670	677
21	617	621	626	630	634	638	642	647	653	658	665	672	680
22	619	623	627	631	635	639	644	649	655	661	667	675	680
23	620	625	629	633	637	641	646	651	657	663	670	678	680
24	622	626	630	634	638	643	648	653	659	666	673	680	680
25	623	627	632	636	639	644	650	655	661	668	675	680	680
26	625	629	633	637	642	646	652	657	664	671	678	680	680
27	626	630	634	639	643	648	654	660	666	673	680	680	680
28	628	632	636	640	645	650	656	662	669	676	680	680	680
29	629	633	638	642	647	652	658	664	671	679	680	680	680
30	631	635	639	644	649	654	660	667	674	680	680	680	680
31	632	636	641	645	651	656	663	670	677	680	680	680	680
32	634	638	642	647	653	658	665	672	680	680	680	680	680
33	635	639	644	649	655	661	667	675	680	680	680	680	680

Table J-68. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 6, Scale Form 7

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	600	600	600	600	600	600	607	613	618	623	627	631	636
1	600	600	600	600	600	603	610	615	620	625	629	634	638
2	600	600	600	600	600	606	613	618	622	627	631	636	640
3	600	600	600	600	603	609	615	619	624	629	633	638	642
4	600	600	600	600	606	612	617	622	626	631	635	639	645
5	600	600	600	602	609	615	619	624	628	633	637	642	647
6	600	600	600	605	612	617	622	626	630	635	639	644	649
7	600	600	601	608	614	619	624	628	633	637	642	647	652
8	600	600	605	611	617	621	626	630	635	639	644	649	655
9	600	601	608	614	619	623	628	632	637	641	646	652	657
10	600	604	611	616	621	625	630	634	639	643	649	654	660
11	600	607	613	618	623	627	632	636	641	646	651	657	663
12	604	610	616	621	625	629	634	638	643	648	654	660	666
13	607	613	618	623	627	631	636	641	645	651	656	663	669
14	610	615	620	625	629	634	638	643	648	653	659	666	673
15	613	618	622	627	631	636	640	645	650	656	662	669	676
16	615	619	624	629	633	638	642	647	653	659	665	672	679
17	617	622	626	631	635	639	645	650	656	662	668	675	680
18	619	624	628	633	637	642	647	652	658	665	671	679	680
19	622	626	630	635	639	644	649	655	661	667	675	680	680
20	624	628	633	637	642	647	652	658	664	671	678	680	680
21	626	630	635	639	644	649	655	661	667	674	680	680	680
22	628	632	637	641	646	652	657	664	670	677	680	680	680
23	630	634	639	643	649	654	660	667	674	680	680	680	680
24	632	636	641	646	651	657	663	670	677	680	680	680	680
25	634	638	643	648	654	660	666	673	680	680	680	680	680
26	636	641	645	651	656	663	669	676	680	680	680	680	680

Table J-69. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	701	707	712	717	721	725	729	733
1	700	700	700	700	700	703	709	714	718	723	727	731	735
2	700	700	700	700	700	706	711	716	719	724	728	732	736
3	700	700	700	700	702	708	713	717	721	725	730	734	738
4	700	700	700	700	704	710	714	719	723	727	731	735	739
5	700	700	700	700	706	711	716	720	724	728	732	737	741
6	700	700	700	702	708	713	718	722	726	730	734	738	743
7	700	700	700	704	710	715	719	723	727	731	735	739	744
8	700	700	700	707	712	716	721	725	729	733	737	741	746
9	700	700	703	709	714	718	722	726	730	734	739	743	748
10	700	700	705	710	715	719	724	728	732	736	740	745	749
11	700	701	707	712	717	721	725	729	733	737	742	746	751
12	700	703	709	714	718	723	727	731	735	739	743	748	753
13	700	706	711	716	719	724	728	732	736	741	745	750	755
14	702	708	713	717	721	725	730	734	738	742	747	752	757
15	704	710	714	719	723	727	731	735	739	744	749	754	759
16	706	711	716	720	724	728	732	737	741	745	750	755	761
17	708	713	718	722	726	730	734	738	743	747	752	757	763
18	710	715	719	723	727	731	735	739	744	749	754	759	765
19	712	716	721	725	729	733	737	741	746	751	756	761	767
20	714	718	722	726	730	734	739	743	748	753	758	764	770
21	715	719	724	728	732	736	740	745	749	754	760	766	772
22	717	721	725	729	733	737	742	746	751	756	762	768	774
23	718	723	727	731	735	739	743	748	753	758	764	770	777
24	719	724	728	732	736	741	745	750	755	760	766	773	780
25	721	725	730	734	738	742	747	752	757	762	768	775	780
26	723	727	731	735	739	744	749	754	759	765	771	778	780
27	724	728	732	737	741	745	750	755	761	767	773	780	780
28	726	730	734	738	743	747	752	757	763	769	776	780	780
29	727	731	735	739	744	749	754	759	765	771	778	780	780
30	729	733	737	741	746	751	756	761	767	774	780	780	780
31	730	734	739	743	748	753	758	764	770	776	780	780	780
32	732	736	740	745	749	754	760	766	772	779	780	780	780
33	733	737	742	746	751	756	762	768	774	780	780	780	780

Table J-70. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	700	704	710	715	719	724	728	732
1	700	700	700	700	700	700	706	712	717	721	725	729	733
2	700	700	700	700	700	702	709	714	718	723	727	731	735
3	700	700	700	700	700	705	711	716	720	724	728	732	736
4	700	700	700	700	701	707	712	717	722	726	730	733	737
5	700	700	700	700	703	709	714	719	723	727	731	735	739
6	700	700	700	700	705	711	716	720	725	729	732	736	740
7	700	700	700	701	708	713	718	722	726	730	734	738	742
8	700	700	700	704	710	715	719	723	727	731	735	739	744
9	700	700	700	706	712	716	721	725	729	733	737	741	745
10	700	700	702	708	713	718	722	726	730	734	738	742	747
11	700	700	704	710	715	719	724	728	732	736	739	744	749
12	700	700	706	712	717	721	725	729	733	737	741	746	751
13	700	702	709	714	718	723	727	731	735	739	743	747	752
14	700	705	711	716	720	724	728	732	736	740	744	749	755
15	701	707	712	717	722	726	730	733	737	742	746	751	757
16	703	709	714	719	723	727	731	735	739	743	748	753	759
17	705	711	716	720	725	729	732	736	740	745	750	755	761
18	708	713	718	722	726	730	734	738	742	746	751	757	764
19	710	715	719	723	727	731	735	739	744	748	753	759	766
20	712	716	721	725	729	733	737	741	745	750	756	762	769
21	713	718	722	726	730	734	738	742	747	752	758	764	771
22	715	719	724	728	732	736	739	744	749	754	760	767	774
23	717	721	725	729	733	737	741	746	751	756	762	769	777
24	718	723	727	731	735	739	743	747	752	758	765	772	780
25	720	724	728	732	736	740	744	749	755	761	767	775	780
26	722	726	730	733	737	742	746	751	757	763	770	777	780
27	723	727	731	735	739	743	748	753	759	765	773	780	780
28	725	729	732	736	740	745	750	755	761	768	775	780	780
29	726	730	734	738	742	746	751	757	764	771	778	780	780
30	727	731	735	739	744	748	753	759	766	773	780	780	780
31	729	733	737	741	745	750	756	762	769	776	780	780	780
32	730	734	738	742	747	752	758	764	771	779	780	780	780
33	732	736	739	744	749	754	760	767	774	780	780	780	780

Table J-71. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	700	704	710	714	719	722	726	730
1	700	700	700	700	700	700	707	712	716	720	724	728	731
2	700	700	700	700	700	703	708	713	718	721	725	729	733
3	700	700	700	700	700	705	710	715	719	723	727	730	734
4	700	700	700	700	701	707	712	716	720	724	728	732	735
5	700	700	700	700	703	709	714	718	722	726	729	733	737
6	700	700	700	700	706	711	715	719	723	727	731	734	738
7	700	700	700	702	707	712	717	721	725	728	732	736	739
8	700	700	700	704	709	714	718	722	726	730	733	737	741
9	700	700	700	706	711	716	719	724	727	731	735	739	743
10	700	700	702	708	713	717	721	725	729	732	736	740	745
11	700	700	704	710	714	719	722	726	730	734	738	742	747
12	700	700	707	712	716	720	724	728	731	735	739	744	748
13	700	703	708	713	718	721	725	729	733	737	741	745	750
14	700	705	710	715	719	723	727	730	734	738	742	747	752
15	701	707	712	716	720	724	728	732	735	739	744	749	754
16	703	709	714	718	722	726	729	733	737	741	746	751	756
17	706	711	715	719	723	727	731	734	738	743	747	753	758
18	707	712	717	721	725	728	732	736	739	744	749	755	761
19	709	714	718	722	726	730	733	737	741	746	751	757	763
20	711	716	719	724	727	731	735	739	743	748	753	759	765
21	713	717	721	725	729	732	736	740	745	750	755	761	767
22	714	719	722	726	730	734	738	742	747	752	757	763	770
23	716	720	724	728	731	735	739	744	748	754	759	766	772
24	718	721	725	729	733	737	741	745	750	756	762	768	775
25	719	723	727	730	734	738	742	747	752	758	764	770	778
26	720	724	728	732	735	739	744	749	754	760	766	773	780
27	722	726	729	733	737	741	746	751	756	762	769	776	780
28	723	727	731	734	738	743	747	753	758	765	771	779	780
29	725	728	732	736	739	744	749	755	761	767	774	780	780
30	726	730	733	737	741	746	751	757	763	769	776	780	780
31	727	731	735	739	743	748	753	759	765	772	779	780	780
32	729	732	736	740	745	750	755	761	767	774	780	780	780
33	730	734	738	742	747	752	757	763	770	777	780	780	780

Table J-72. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	700	704	709	714	718	721	725	729
1	700	700	700	700	700	701	706	711	715	719	723	726	730
2	700	700	700	700	700	703	708	713	717	720	724	728	731
3	700	700	700	700	700	705	710	714	718	722	725	729	733
4	700	700	700	700	701	707	711	716	719	723	727	730	734
5	700	700	700	700	703	709	713	717	721	724	728	732	736
6	700	700	700	700	705	710	714	718	722	726	729	733	737
7	700	700	700	702	707	712	716	719	723	727	731	735	739
8	700	700	700	704	709	713	717	721	725	728	732	736	740
9	700	700	700	706	711	715	719	722	726	730	734	738	742
10	700	700	702	708	712	716	720	724	727	731	735	739	744
11	700	700	704	709	714	718	721	725	729	732	736	741	745
12	700	701	706	711	715	719	723	726	730	734	738	742	747
13	700	703	708	713	717	720	724	728	731	735	739	744	749
14	700	705	710	714	718	722	725	729	733	737	741	746	751
15	701	707	711	716	719	723	727	730	734	738	743	748	753
16	703	709	713	717	721	724	728	732	736	739	745	750	756
17	705	710	714	718	722	726	729	733	737	742	746	752	758
18	707	712	716	719	723	727	731	735	739	743	748	754	760
19	709	713	717	721	725	728	732	736	740	745	750	756	763
20	711	715	719	722	726	730	734	738	742	747	752	758	765
21	712	716	720	724	727	731	735	739	744	749	754	761	768
22	714	718	721	725	729	732	736	741	745	751	757	763	771
23	715	719	723	726	730	734	738	742	747	753	759	766	774
24	717	720	724	728	731	735	739	744	749	755	762	769	777
25	718	722	725	729	733	737	741	746	751	757	764	772	780
26	719	723	727	730	734	738	743	748	753	760	767	774	780
27	721	724	728	732	736	739	745	750	756	762	769	778	780
28	722	726	729	733	737	742	746	752	758	765	772	780	780
29	723	727	731	735	739	743	748	754	760	767	775	780	780
30	725	728	732	736	740	745	750	756	763	770	778	780	780
31	726	730	734	738	742	747	752	758	765	773	780	780	780
32	727	731	735	739	744	749	754	761	768	776	780	780	780
33	729	732	736	741	745	751	757	763	771	779	780	780	780

Table J-73. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	700	705	710	714	719	723	727	731
1	700	700	700	700	700	701	707	711	716	720	724	728	732
2	700	700	700	700	700	703	708	713	717	722	726	729	734
3	700	700	700	700	700	705	710	715	719	723	727	731	735
4	700	700	700	700	701	707	712	716	720	724	728	732	737
5	700	700	700	700	703	709	714	718	722	726	730	734	738
6	700	700	700	700	706	711	715	719	723	727	731	735	739
7	700	700	700	702	707	712	717	721	725	729	733	737	741
8	700	700	700	704	709	714	718	722	726	730	734	739	743
9	700	700	700	706	711	716	719	724	728	732	736	740	745
10	700	700	702	708	713	717	721	725	729	733	737	742	747
11	700	700	705	710	714	719	723	727	731	735	739	743	748
12	700	701	707	711	716	720	724	728	732	736	741	745	750
13	700	703	708	713	717	722	726	729	734	738	742	747	752
14	700	705	710	715	719	723	727	731	735	739	744	749	754
15	701	707	712	716	720	724	728	732	737	741	746	751	756
16	703	709	714	718	722	726	730	734	738	743	747	753	758
17	706	711	715	719	723	727	731	735	739	744	749	755	761
18	707	712	717	721	725	729	733	737	741	746	751	757	763
19	709	714	718	722	726	730	734	739	743	748	753	759	765
20	711	716	719	724	728	732	736	740	745	750	755	761	768
21	713	717	721	725	729	733	737	742	747	752	757	763	770
22	714	719	723	727	731	735	739	743	748	754	759	766	773
23	716	720	724	728	732	736	741	745	750	756	762	768	775
24	717	722	726	729	734	738	742	747	752	758	764	771	778
25	719	723	727	731	735	739	744	749	754	760	766	773	780
26	720	724	728	732	737	741	746	751	756	762	769	776	780
27	722	726	730	734	738	743	747	753	758	765	771	779	780
28	723	727	731	735	739	744	749	755	761	767	774	780	780
29	725	729	733	737	741	746	751	757	763	769	777	780	780
30	726	730	734	739	743	748	753	759	765	772	780	780	780
31	728	732	736	740	745	750	755	761	768	775	780	780	780
32	729	733	737	742	747	752	757	763	770	777	780	780	780
33	731	735	739	743	748	754	759	766	773	780	780	780	780

Table J-74. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 7, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	700	700	700	700	700	700	705	710	715	719	723	726	730
1	700	700	700	700	700	701	707	712	716	720	724	728	731
2	700	700	700	700	700	704	709	714	718	722	725	729	733
3	700	700	700	700	700	706	711	715	719	723	727	730	734
4	700	700	700	700	702	708	712	717	721	724	728	732	736
5	700	700	700	700	704	710	714	718	722	726	729	733	737
6	700	700	700	700	706	711	716	719	723	727	731	734	738
7	700	700	700	703	708	713	717	721	725	728	732	736	739
8	700	700	700	705	710	714	719	722	726	730	733	737	741
9	700	700	701	707	712	716	719	724	727	731	735	739	743
10	700	700	703	709	713	717	721	725	729	732	736	740	745
11	700	700	705	710	715	719	723	726	730	734	738	742	746
12	700	701	707	712	716	720	724	728	731	735	739	744	748
13	700	704	709	714	718	722	725	729	733	737	741	745	750
14	700	706	711	715	719	723	727	730	734	738	742	747	752
15	702	708	712	717	721	724	728	732	736	739	744	749	754
16	704	710	714	718	722	726	729	733	737	741	746	751	756
17	706	711	716	719	723	727	731	734	738	743	747	753	758
18	708	713	717	721	725	728	732	736	739	744	749	755	760
19	710	714	719	722	726	730	733	737	741	746	751	757	763
20	712	716	719	724	727	731	735	739	743	748	753	759	765
21	713	717	721	725	729	732	736	740	745	750	755	761	767
22	715	719	723	726	730	734	738	742	746	752	757	763	770
23	716	720	724	728	731	735	739	744	748	754	759	765	772
24	718	722	725	729	733	737	741	745	750	756	762	768	775
25	719	723	727	730	734	738	742	747	752	758	764	771	778
26	721	724	728	732	736	739	744	749	754	760	766	773	780
27	722	726	729	733	737	741	746	751	756	762	769	776	780
28	723	727	731	734	738	743	747	753	758	764	771	779	780
29	725	728	732	736	739	744	749	755	760	767	774	780	780
30	726	730	733	737	741	746	751	757	763	769	777	780	780
31	727	731	735	739	743	748	753	759	765	772	780	780	780
32	729	732	736	740	745	750	755	761	767	774	780	780	780
33	730	734	738	742	746	752	757	763	770	777	780	780	780

Table J-75. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	801	809	815	819	824	828	831	835
1	800	800	800	800	800	804	811	816	821	825	829	833	836
2	800	800	800	800	800	807	813	818	823	827	830	834	837
3	800	800	800	800	802	809	815	820	824	828	832	835	838
4	800	800	800	800	805	811	817	822	826	829	833	836	839
5	800	800	800	800	807	814	819	823	827	831	834	837	840
6	800	800	800	803	810	816	820	825	829	832	835	838	841
7	800	800	800	805	812	817	822	826	830	833	836	839	843
8	800	800	801	808	814	819	824	828	831	834	837	841	844
9	800	800	803	810	816	821	825	829	832	835	839	842	845
10	800	800	806	812	818	822	826	830	833	837	839	843	846
11	800	801	809	815	819	824	828	831	835	838	841	844	848
12	800	804	811	816	821	825	829	833	836	839	842	845	849
13	800	807	813	818	823	827	830	834	837	840	843	847	850
14	802	809	815	820	824	828	832	835	838	841	844	848	852
15	805	811	817	822	826	829	833	836	839	842	846	849	853
16	807	814	819	823	827	831	834	837	840	844	847	851	855
17	810	816	820	825	829	832	835	838	841	845	848	852	857
18	812	817	822	826	830	833	836	839	843	846	850	854	859
19	814	819	824	828	831	834	837	841	844	847	851	855	861
20	816	821	825	829	832	835	839	842	845	849	853	857	863
21	818	822	826	830	833	837	839	843	846	850	854	859	865
22	819	824	828	831	835	838	841	844	848	851	856	861	868
23	821	825	829	833	836	839	842	845	849	853	858	863	871
24	823	827	830	834	837	840	843	847	850	855	860	866	874
25	824	828	832	835	838	841	844	848	852	856	862	868	877
26	826	829	833	836	839	842	846	849	853	858	864	871	880
27	827	831	834	837	840	844	847	851	855	860	866	874	880
28	829	832	835	838	841	845	848	852	857	862	869	878	880
29	830	833	836	839	843	846	850	854	859	864	872	880	880
30	831	834	837	841	844	847	851	855	861	867	875	880	880
31	832	835	839	842	845	849	853	857	863	870	879	880	880
32	833	837	839	843	846	850	854	859	865	873	880	880	880
33	835	838	841	844	848	851	856	861	868	876	880	880	880

Table J-76. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	803	809	814	819	822	826	829	833
1	800	800	800	800	800	806	811	816	820	824	827	831	834
2	800	800	800	800	801	808	813	818	821	825	828	832	835
3	800	800	800	800	804	810	815	819	823	826	830	833	836
4	800	800	800	800	806	812	816	820	824	828	831	834	838
5	800	800	800	802	808	813	818	822	825	829	832	835	839
6	800	800	800	804	810	815	819	823	827	830	833	837	840
7	800	800	800	807	812	817	821	824	828	831	834	838	841
8	800	800	802	809	814	818	822	826	829	832	836	839	843
9	800	800	805	811	816	819	823	827	830	834	837	840	844
10	800	800	807	813	817	821	825	828	831	835	838	842	845
11	800	803	809	814	819	822	826	829	833	836	839	843	847
12	800	806	811	816	820	824	827	831	834	837	841	844	848
13	801	808	813	818	821	825	828	832	835	838	842	846	850
14	804	810	815	819	823	826	830	833	836	839	843	847	852
15	806	812	816	820	824	828	831	834	838	841	845	849	853
16	808	813	818	822	825	829	832	835	839	842	846	850	855
17	810	815	819	823	827	830	833	837	840	844	848	852	857
18	812	817	821	824	828	831	834	838	841	845	849	854	859
19	814	818	822	826	829	832	836	839	843	847	851	855	861
20	816	819	823	827	830	834	837	840	844	848	852	857	863
21	817	821	825	828	831	835	838	842	845	850	854	859	864
22	819	822	826	829	833	836	839	843	847	851	856	861	867
23	820	824	827	831	834	837	841	844	848	853	858	863	870
24	821	825	828	832	835	838	842	846	850	854	860	866	873
25	823	826	830	833	836	839	843	847	852	856	862	868	876
26	824	828	831	834	838	841	845	849	853	858	864	871	879
27	825	829	832	835	839	842	846	850	855	860	866	873	880
28	827	830	833	837	840	844	848	852	857	862	869	876	880
29	828	831	834	838	841	845	849	854	859	864	871	880	880
30	829	832	836	839	843	847	851	855	861	867	874	880	880
31	830	834	837	840	844	848	852	857	863	869	877	880	880
32	831	835	838	842	845	850	854	859	864	872	880	880	880
33	833	836	839	843	847	851	856	861	867	875	880	880	880

Table J-77. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	803	809	813	817	821	825	828	831
1	800	800	800	800	800	805	810	815	819	822	826	829	833
2	800	800	800	800	801	807	812	816	820	824	827	830	834
3	800	800	800	800	803	809	814	818	821	825	828	832	835
4	800	800	800	800	806	811	815	819	823	826	830	833	836
5	800	800	800	802	808	812	817	820	824	827	831	834	838
6	800	800	800	804	809	814	818	822	825	829	832	835	839
7	800	800	800	806	811	816	819	823	826	830	833	837	840
8	800	800	802	808	813	817	821	824	828	831	834	838	842
9	800	800	805	810	814	818	822	826	829	832	836	839	843
10	800	800	807	812	816	819	823	827	830	834	837	841	845
11	800	803	809	813	817	821	825	828	831	835	838	842	846
12	800	805	810	815	819	822	826	829	833	836	839	843	848
13	801	807	812	816	820	824	827	830	834	837	841	845	849
14	803	809	814	818	821	825	828	832	835	839	842	847	851
15	806	811	815	819	823	826	830	833	836	839	844	848	853
16	808	812	817	820	824	827	831	834	838	841	845	850	855
17	809	814	818	822	825	829	832	835	839	843	847	851	857
18	811	816	819	823	826	830	833	837	840	844	849	853	859
19	813	817	821	824	828	831	834	838	842	846	850	855	861
20	814	818	822	826	829	832	836	839	843	847	852	857	863
21	816	819	823	827	830	834	837	841	845	849	854	859	864
22	817	821	825	828	831	835	838	842	846	851	856	861	867
23	819	822	826	829	833	836	839	843	848	852	858	863	870
24	820	824	827	830	834	837	841	845	849	854	860	866	873
25	821	825	828	832	835	839	842	847	851	856	862	868	876
26	823	826	830	833	836	839	844	848	853	858	864	871	879
27	824	827	831	834	838	841	845	850	855	860	866	873	880
28	825	829	832	835	839	843	847	851	857	862	869	877	880
29	826	830	833	837	840	844	849	853	859	864	871	880	880
30	828	831	834	838	842	846	850	855	861	867	874	880	880
31	829	832	836	839	843	847	852	857	863	869	877	880	880
32	830	834	837	841	845	849	854	859	864	872	880	880	880
33	831	835	838	842	846	851	856	861	867	875	880	880	880

Table J-78. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	804	810	816	821	825	828	832	835
1	800	800	800	800	800	806	813	818	822	826	830	833	836
2	800	800	800	800	802	809	814	819	824	827	831	834	838
3	800	800	800	800	804	811	816	821	825	829	832	836	839
4	800	800	800	800	807	813	818	822	826	830	833	837	840
5	800	800	800	802	809	815	819	824	828	831	835	838	841
6	800	800	800	805	811	817	821	825	829	832	836	839	843
7	800	800	800	808	814	818	823	827	830	834	837	840	844
8	800	800	803	810	815	820	824	828	832	835	838	842	845
9	800	800	806	812	817	822	826	829	833	836	839	843	847
10	800	801	808	814	819	823	827	831	834	837	841	844	848
11	800	804	810	816	821	825	828	832	835	839	842	846	849
12	800	806	813	818	822	826	830	833	836	839	843	847	851
13	802	809	814	819	824	827	831	834	838	841	845	848	853
14	804	811	816	821	825	829	832	836	839	842	846	850	854
15	807	813	818	822	826	830	833	837	840	844	847	851	856
16	809	815	819	824	828	831	835	838	841	845	849	853	858
17	811	817	821	825	829	832	836	839	843	846	850	855	860
18	814	818	823	827	830	834	837	840	844	848	852	856	862
19	815	820	824	828	832	835	838	842	845	849	853	858	864
20	817	822	826	829	833	836	839	843	847	851	855	860	866
21	819	823	827	831	834	837	841	844	848	852	857	862	868
22	821	825	828	832	835	839	842	846	849	854	859	864	871
23	822	826	830	833	836	839	843	847	851	855	861	867	874
24	824	827	831	834	838	841	845	848	853	857	863	869	877
25	825	829	832	836	839	842	846	850	854	859	864	872	880
26	826	830	833	837	840	844	847	851	856	861	867	875	880
27	828	831	835	838	841	845	849	853	858	863	870	878	880
28	829	832	836	839	843	846	850	855	860	865	872	880	880
29	830	834	837	840	844	848	852	856	862	868	875	880	880
30	832	835	838	842	845	849	853	858	864	870	879	880	880
31	833	836	839	843	847	851	855	860	866	873	880	880	880
32	834	837	841	844	848	852	857	862	868	876	880	880	880
33	835	839	842	846	849	854	859	864	871	880	880	880	880

Table J-79. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	800	806	812	818	822	826	830	834
1	800	800	800	800	800	802	809	814	819	824	828	832	835
2	800	800	800	800	800	804	811	816	821	825	829	833	837
3	800	800	800	800	800	807	813	818	823	827	831	834	838
4	800	800	800	800	802	809	815	819	824	828	832	836	839
5	800	800	800	800	805	811	817	821	826	830	833	837	841
6	800	800	800	800	807	813	819	823	827	831	835	838	842
7	800	800	800	803	810	815	820	825	829	832	836	839	843
8	800	800	800	806	812	817	822	826	830	834	837	841	845
9	800	800	801	808	814	819	823	828	831	835	839	842	846
10	800	800	804	810	816	821	825	829	833	836	839	844	847
11	800	800	806	812	818	822	826	830	834	838	841	845	849
12	800	802	809	814	819	824	828	832	835	839	843	846	851
13	800	804	811	816	821	825	829	833	837	840	844	848	852
14	800	807	813	818	823	827	831	834	838	842	845	849	854
15	802	809	815	819	824	828	832	836	839	843	847	851	856
16	805	811	817	821	826	830	833	837	841	844	848	853	857
17	807	813	819	823	827	831	835	838	842	846	850	854	859
18	810	815	820	825	829	832	836	839	843	847	851	856	861
19	812	817	822	826	830	834	837	841	845	849	853	858	863
20	814	819	823	828	831	835	839	842	846	850	855	860	866
21	816	821	825	829	833	836	839	844	847	852	856	862	868
22	818	822	826	830	834	838	841	845	849	853	858	864	870
23	819	824	828	832	835	839	843	846	851	855	860	866	873
24	821	825	829	833	837	840	844	848	852	857	862	869	876
25	823	827	831	834	838	842	845	849	854	859	864	871	879
26	824	828	832	836	839	843	847	851	856	861	867	874	880
27	826	830	833	837	841	844	848	853	857	863	869	877	880
28	827	831	835	838	842	846	850	854	859	864	872	880	880
29	829	832	836	839	843	847	851	856	861	867	875	880	880
30	830	834	837	841	845	849	853	858	863	870	878	880	880
31	831	835	839	842	846	850	855	860	866	872	880	880	880
32	833	836	839	844	847	852	856	862	868	875	880	880	880
33	834	838	841	845	849	853	858	864	870	878	880	880	880

Table J-80. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 8, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	802	808	813	818	822	825	828	832
1	800	800	800	800	800	805	810	815	819	823	826	830	833
2	800	800	800	800	800	807	812	817	820	824	828	831	834
3	800	800	800	800	803	809	814	818	822	825	829	832	836
4	800	800	800	800	805	811	815	819	823	827	830	833	837
5	800	800	800	801	807	813	817	821	824	828	831	835	838
6	800	800	800	803	809	814	818	822	826	829	832	836	839
7	800	800	800	806	811	816	819	823	827	830	834	837	841
8	800	800	802	808	813	817	821	825	828	832	835	838	842
9	800	800	804	810	815	819	822	826	829	833	836	839	843
10	800	800	806	812	816	820	824	827	831	834	837	841	845
11	800	802	808	813	818	822	825	828	832	835	839	842	846
12	800	805	810	815	819	823	826	830	833	836	840	844	848
13	800	807	812	817	820	824	828	831	834	838	841	845	849
14	803	809	814	818	822	825	829	832	836	839	843	847	851
15	805	811	815	819	823	827	830	833	837	840	844	848	853
16	807	813	817	821	824	828	831	835	838	842	846	850	855
17	809	814	818	822	826	829	832	836	839	843	847	852	857
18	811	816	819	823	827	830	834	837	841	845	849	853	859
19	813	817	821	825	828	832	835	838	842	846	850	855	861
20	815	819	822	826	829	833	836	839	843	848	852	857	863
21	816	820	824	827	831	834	837	841	845	849	854	859	865
22	818	822	825	828	832	835	839	842	846	851	856	861	868
23	819	823	826	830	833	836	840	844	848	852	858	864	871
24	820	824	828	831	834	838	841	845	849	854	860	866	874
25	822	825	829	832	836	839	843	847	851	856	862	869	877
26	823	827	830	833	837	840	844	848	853	858	864	871	880
27	824	828	831	835	838	842	846	850	855	860	867	874	880
28	826	829	832	836	839	843	847	852	857	862	869	877	880
29	827	830	834	837	841	845	849	853	859	864	872	880	880
30	828	832	835	838	842	846	850	855	861	867	875	880	880
31	829	833	836	839	843	848	852	857	863	870	878	880	880
32	831	834	837	841	845	849	854	859	865	873	880	880	880
33	832	835	839	842	846	851	856	861	868	876	880	880	880

Table J-81. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1005	1010	1014	1017	1021	1023	1026	1029	1032
1	1000	1000	1000	1001	1007	1012	1015	1019	1022	1024	1027	1030	1033
2	1000	1000	1000	1004	1009	1013	1017	1019	1023	1026	1028	1031	1034
3	1000	1000	1000	1006	1010	1014	1018	1021	1024	1027	1029	1032	1035
4	1000	1000	1002	1008	1012	1016	1019	1022	1025	1028	1030	1033	1036
5	1000	1000	1004	1009	1013	1017	1019	1023	1026	1029	1031	1034	1037
6	1000	1000	1006	1011	1015	1018	1021	1024	1027	1030	1032	1035	1038
7	1000	1002	1008	1012	1016	1019	1022	1025	1028	1031	1033	1036	1039
8	1000	1005	1010	1014	1017	1020	1023	1026	1029	1032	1034	1037	1041
9	1000	1007	1011	1015	1018	1021	1024	1027	1030	1033	1036	1039	1042
10	1003	1008	1013	1016	1019	1022	1025	1028	1031	1034	1037	1039	1043
11	1005	1010	1014	1017	1021	1023	1026	1029	1032	1035	1038	1041	1044
12	1007	1012	1015	1019	1022	1024	1027	1030	1033	1036	1039	1042	1046
13	1009	1013	1017	1019	1023	1026	1028	1031	1034	1037	1040	1043	1047
14	1010	1014	1018	1021	1024	1027	1029	1032	1035	1038	1041	1045	1048
15	1012	1016	1019	1022	1025	1028	1030	1033	1036	1039	1042	1046	1049
16	1013	1017	1019	1023	1026	1029	1031	1034	1037	1040	1044	1047	1051
17	1015	1018	1021	1024	1027	1030	1032	1035	1038	1042	1045	1048	1052
18	1016	1019	1022	1025	1028	1031	1033	1036	1039	1043	1046	1050	1054
19	1017	1020	1023	1026	1029	1032	1034	1037	1041	1044	1047	1051	1055
20	1018	1021	1024	1027	1030	1033	1036	1039	1042	1045	1049	1053	1057
21	1019	1022	1025	1028	1031	1034	1037	1039	1043	1046	1050	1054	1058
22	1021	1023	1026	1029	1032	1035	1038	1041	1044	1048	1052	1056	1060
23	1022	1024	1027	1030	1033	1036	1039	1042	1046	1049	1053	1057	1062
24	1023	1026	1028	1031	1034	1037	1040	1043	1047	1051	1054	1059	1063
25	1024	1027	1029	1032	1035	1038	1041	1045	1048	1052	1056	1060	1065
26	1025	1028	1030	1033	1036	1039	1042	1046	1049	1053	1057	1062	1067
27	1026	1029	1031	1034	1037	1040	1044	1047	1051	1055	1059	1064	1070
28	1027	1030	1032	1035	1038	1042	1045	1048	1052	1056	1061	1066	1072
29	1028	1031	1033	1036	1039	1043	1046	1050	1054	1058	1062	1068	1076
30	1029	1032	1034	1037	1041	1044	1047	1051	1055	1059	1064	1070	1079
31	1030	1033	1036	1039	1042	1045	1049	1053	1057	1061	1066	1073	1080
32	1031	1034	1037	1039	1043	1046	1050	1054	1058	1063	1069	1076	1080
33	1032	1035	1038	1041	1044	1048	1052	1056	1060	1065	1071	1080	1080

Table J-82. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1004	1009	1013	1016	1019	1022	1025	1028	1030
1	1000	1000	1000	1000	1006	1010	1014	1017	1020	1023	1026	1029	1031
2	1000	1000	1000	1002	1007	1012	1015	1018	1021	1024	1027	1030	1032
3	1000	1000	1000	1004	1009	1013	1016	1019	1022	1025	1028	1031	1033
4	1000	1000	1001	1006	1010	1014	1017	1020	1023	1026	1029	1032	1034
5	1000	1000	1003	1008	1012	1015	1018	1021	1024	1027	1030	1033	1035
6	1000	1000	1005	1009	1013	1017	1019	1023	1025	1028	1031	1034	1037
7	1000	1001	1007	1011	1014	1018	1021	1024	1026	1029	1032	1035	1038
8	1000	1003	1008	1012	1016	1019	1022	1025	1027	1030	1033	1036	1039
9	1000	1005	1010	1013	1017	1019	1023	1026	1028	1031	1034	1037	1039
10	1002	1007	1011	1015	1018	1021	1024	1027	1029	1032	1035	1038	1041
11	1004	1009	1013	1016	1019	1022	1025	1028	1030	1033	1036	1039	1042
12	1006	1010	1014	1017	1020	1023	1026	1029	1031	1034	1037	1040	1043
13	1007	1012	1015	1018	1021	1024	1027	1030	1032	1035	1038	1041	1045
14	1009	1013	1016	1019	1022	1025	1028	1031	1033	1036	1039	1042	1046
15	1010	1014	1017	1020	1023	1026	1029	1032	1034	1037	1040	1044	1047
16	1012	1015	1018	1021	1024	1027	1030	1033	1035	1038	1042	1045	1048
17	1013	1017	1019	1023	1025	1028	1031	1034	1037	1039	1043	1046	1050
18	1014	1018	1021	1024	1026	1029	1032	1035	1038	1041	1044	1047	1051
19	1016	1019	1022	1025	1027	1030	1033	1036	1039	1042	1045	1049	1053
20	1017	1019	1023	1026	1028	1031	1034	1037	1039	1043	1046	1050	1054
21	1018	1021	1024	1027	1029	1032	1035	1038	1041	1044	1048	1052	1056
22	1019	1022	1025	1028	1030	1033	1036	1039	1042	1045	1049	1053	1058
23	1020	1023	1026	1029	1031	1034	1037	1040	1043	1047	1051	1055	1059
24	1021	1024	1027	1030	1032	1035	1038	1041	1045	1048	1052	1056	1061
25	1022	1025	1028	1031	1033	1036	1039	1042	1046	1049	1054	1058	1063
26	1023	1026	1029	1032	1034	1037	1040	1044	1047	1051	1055	1060	1066
27	1024	1027	1030	1033	1035	1038	1042	1045	1048	1052	1057	1062	1068
28	1025	1028	1031	1034	1037	1039	1043	1046	1050	1054	1059	1064	1071
29	1026	1029	1032	1035	1038	1041	1044	1047	1051	1056	1060	1066	1074
30	1027	1030	1033	1036	1039	1042	1045	1049	1053	1057	1062	1069	1078
31	1028	1031	1034	1037	1039	1043	1046	1050	1054	1059	1065	1072	1080
32	1029	1032	1035	1038	1041	1044	1048	1052	1056	1061	1067	1075	1080
33	1030	1033	1036	1039	1042	1045	1049	1053	1058	1063	1070	1079	1080

Table J-83. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1004	1009	1013	1016	1019	1022	1025	1027	1030
1	1000	1000	1000	1000	1006	1010	1014	1017	1020	1023	1026	1028	1031
2	1000	1000	1000	1002	1007	1012	1015	1018	1021	1024	1027	1029	1032
3	1000	1000	1000	1004	1009	1013	1016	1019	1022	1025	1028	1030	1033
4	1000	1000	1000	1006	1011	1014	1017	1020	1023	1026	1028	1031	1034
5	1000	1000	1003	1008	1012	1015	1018	1021	1024	1027	1029	1032	1035
6	1000	1000	1005	1009	1013	1017	1019	1022	1025	1028	1030	1033	1036
7	1000	1001	1007	1011	1015	1018	1021	1023	1026	1029	1031	1034	1037
8	1000	1003	1008	1012	1016	1019	1022	1024	1027	1030	1032	1035	1038
9	1000	1005	1010	1014	1017	1019	1023	1025	1028	1031	1033	1036	1039
10	1002	1007	1011	1015	1018	1021	1024	1026	1029	1032	1034	1037	1040
11	1004	1009	1013	1016	1019	1022	1025	1027	1030	1033	1035	1038	1042
12	1006	1010	1014	1017	1020	1023	1026	1028	1031	1034	1037	1039	1043
13	1007	1012	1015	1018	1021	1024	1027	1029	1032	1035	1038	1041	1044
14	1009	1013	1016	1019	1022	1025	1028	1030	1033	1036	1039	1042	1046
15	1011	1014	1017	1020	1023	1026	1028	1031	1034	1037	1039	1043	1047
16	1012	1015	1018	1021	1024	1027	1029	1032	1035	1038	1041	1045	1048
17	1013	1017	1019	1022	1025	1028	1030	1033	1036	1039	1042	1046	1050
18	1015	1018	1021	1023	1026	1029	1031	1034	1037	1040	1044	1047	1052
19	1016	1019	1022	1024	1027	1030	1032	1035	1038	1041	1045	1049	1053
20	1017	1019	1023	1025	1028	1031	1033	1036	1039	1043	1046	1050	1055
21	1018	1021	1024	1026	1029	1032	1034	1037	1040	1044	1048	1052	1057
22	1019	1022	1025	1027	1030	1033	1035	1038	1042	1045	1049	1054	1059
23	1020	1023	1026	1028	1031	1034	1037	1039	1043	1047	1051	1055	1060
24	1021	1024	1027	1029	1032	1035	1038	1041	1044	1048	1052	1057	1062
25	1022	1025	1028	1030	1033	1036	1039	1042	1046	1050	1054	1059	1065
26	1023	1026	1028	1031	1034	1037	1039	1043	1047	1051	1056	1061	1067
27	1024	1027	1029	1032	1035	1038	1041	1045	1048	1053	1058	1063	1070
28	1025	1028	1030	1033	1036	1039	1042	1046	1050	1054	1059	1065	1073
29	1026	1029	1031	1034	1037	1040	1044	1047	1052	1056	1061	1068	1076
30	1027	1030	1032	1035	1038	1041	1045	1049	1053	1058	1063	1070	1080
31	1028	1031	1033	1036	1039	1043	1046	1050	1055	1060	1066	1073	1080
32	1029	1032	1034	1037	1040	1044	1048	1052	1057	1062	1068	1077	1080
33	1030	1033	1035	1038	1042	1045	1049	1054	1059	1064	1071	1080	1080

Table J-84. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1002	1007	1012	1015	1019	1022	1025	1028	1031
1	1000	1000	1000	1000	1004	1009	1013	1017	1019	1023	1026	1029	1032
2	1000	1000	1000	1000	1006	1011	1014	1018	1021	1024	1027	1030	1033
3	1000	1000	1000	1003	1008	1012	1016	1019	1022	1025	1028	1031	1035
4	1000	1000	1000	1005	1009	1013	1017	1020	1023	1026	1029	1033	1036
5	1000	1000	1001	1007	1011	1015	1018	1021	1024	1027	1031	1034	1037
6	1000	1000	1003	1008	1012	1016	1019	1022	1025	1029	1032	1035	1038
7	1000	1000	1005	1010	1014	1017	1020	1024	1027	1030	1033	1036	1039
8	1000	1002	1007	1011	1015	1018	1022	1025	1028	1031	1034	1037	1040
9	1000	1004	1009	1013	1016	1019	1023	1026	1029	1032	1035	1038	1042
10	1000	1006	1010	1014	1017	1021	1024	1027	1030	1033	1036	1039	1043
11	1002	1007	1012	1015	1019	1022	1025	1028	1031	1034	1037	1041	1044
12	1004	1009	1013	1017	1019	1023	1026	1029	1032	1035	1039	1042	1045
13	1006	1011	1014	1018	1021	1024	1027	1030	1033	1037	1039	1043	1047
14	1008	1012	1016	1019	1022	1025	1028	1031	1035	1038	1041	1044	1048
15	1009	1013	1017	1020	1023	1026	1029	1033	1036	1039	1042	1046	1049
16	1011	1015	1018	1021	1024	1027	1031	1034	1037	1040	1043	1047	1050
17	1012	1016	1019	1022	1025	1029	1032	1035	1038	1041	1045	1048	1052
18	1014	1017	1020	1024	1027	1030	1033	1036	1039	1043	1046	1049	1053
19	1015	1018	1022	1025	1028	1031	1034	1037	1040	1044	1047	1051	1055
20	1016	1019	1023	1026	1029	1032	1035	1038	1042	1045	1048	1052	1056
21	1017	1021	1024	1027	1030	1033	1036	1039	1043	1046	1050	1054	1058
22	1019	1022	1025	1028	1031	1034	1037	1041	1044	1047	1051	1055	1059
23	1019	1023	1026	1029	1032	1035	1039	1042	1045	1049	1052	1057	1061
24	1021	1024	1027	1030	1033	1037	1039	1043	1047	1050	1054	1058	1063
25	1022	1025	1028	1031	1035	1038	1041	1044	1048	1051	1055	1060	1065
26	1023	1026	1029	1033	1036	1039	1042	1046	1049	1053	1057	1061	1067
27	1024	1027	1031	1034	1037	1040	1043	1047	1050	1054	1058	1063	1069
28	1025	1029	1032	1035	1038	1041	1045	1048	1052	1056	1060	1065	1072
29	1027	1030	1033	1036	1039	1043	1046	1049	1053	1057	1062	1068	1075
30	1028	1031	1034	1037	1040	1044	1047	1051	1055	1059	1063	1070	1079
31	1029	1032	1035	1038	1042	1045	1048	1052	1056	1061	1066	1073	1080
32	1030	1033	1036	1039	1043	1046	1050	1054	1058	1062	1068	1076	1080
33	1031	1034	1037	1041	1044	1047	1051	1055	1059	1064	1071	1080	1080

Table J-85. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1006	1010	1014	1017	1019	1023	1025	1028	1031
1	1000	1000	1000	1002	1007	1012	1015	1018	1021	1024	1026	1029	1032
2	1000	1000	1000	1004	1009	1013	1016	1019	1022	1025	1027	1030	1033
3	1000	1000	1000	1006	1010	1014	1017	1020	1023	1026	1028	1031	1034
4	1000	1000	1002	1008	1012	1015	1018	1021	1024	1026	1029	1032	1035
5	1000	1000	1005	1009	1013	1016	1019	1022	1025	1027	1030	1033	1036
6	1000	1001	1006	1011	1014	1017	1020	1023	1026	1028	1031	1034	1037
7	1000	1003	1008	1012	1016	1019	1021	1024	1027	1029	1032	1035	1038
8	1000	1005	1010	1013	1017	1019	1022	1025	1028	1030	1033	1036	1039
9	1001	1007	1011	1015	1018	1021	1023	1026	1029	1031	1034	1037	1040
10	1004	1009	1013	1016	1019	1022	1024	1027	1030	1032	1035	1038	1041
11	1006	1010	1014	1017	1019	1023	1025	1028	1031	1033	1036	1039	1042
12	1007	1012	1015	1018	1021	1024	1026	1029	1032	1034	1037	1040	1044
13	1009	1013	1016	1019	1022	1025	1027	1030	1033	1035	1038	1042	1045
14	1010	1014	1017	1020	1023	1026	1028	1031	1034	1036	1039	1043	1046
15	1012	1015	1018	1021	1024	1026	1029	1032	1035	1037	1041	1044	1048
16	1013	1016	1019	1022	1025	1027	1030	1033	1036	1039	1042	1045	1049
17	1014	1017	1020	1023	1026	1028	1031	1034	1037	1039	1043	1047	1051
18	1016	1019	1021	1024	1027	1029	1032	1035	1038	1041	1044	1048	1052
19	1017	1019	1022	1025	1028	1030	1033	1036	1039	1042	1046	1050	1054
20	1018	1021	1023	1026	1029	1031	1034	1037	1040	1043	1047	1051	1055
21	1019	1022	1024	1027	1030	1032	1035	1038	1041	1045	1048	1053	1057
22	1019	1023	1025	1028	1031	1033	1036	1039	1042	1046	1050	1054	1059
23	1021	1024	1026	1029	1032	1034	1037	1040	1044	1047	1051	1056	1061
24	1022	1025	1027	1030	1033	1035	1038	1042	1045	1049	1053	1058	1063
25	1023	1026	1028	1031	1034	1036	1039	1043	1046	1050	1055	1059	1065
26	1024	1026	1029	1032	1035	1037	1041	1044	1048	1052	1056	1061	1067
27	1025	1027	1030	1033	1036	1039	1042	1045	1049	1053	1058	1063	1069
28	1026	1028	1031	1034	1037	1039	1043	1047	1051	1055	1060	1065	1072
29	1027	1029	1032	1035	1038	1041	1044	1048	1052	1057	1062	1068	1075
30	1028	1030	1033	1036	1039	1042	1046	1050	1054	1058	1063	1070	1079
31	1029	1031	1034	1037	1040	1043	1047	1051	1055	1060	1066	1073	1080
32	1030	1032	1035	1038	1041	1045	1048	1053	1057	1062	1068	1076	1080
33	1031	1033	1036	1039	1042	1046	1050	1054	1059	1064	1071	1080	1080

Table J-86. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Reading Grade 10, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	1000	1000	1000	1000	1003	1009	1013	1016	1019	1023	1026	1029	1032
1	1000	1000	1000	1000	1005	1010	1014	1018	1021	1024	1027	1030	1033
2	1000	1000	1000	1001	1007	1012	1016	1019	1022	1025	1028	1031	1034
3	1000	1000	1000	1004	1009	1013	1017	1020	1023	1026	1029	1032	1035
4	1000	1000	1000	1006	1011	1015	1018	1021	1024	1027	1030	1033	1036
5	1000	1000	1002	1008	1012	1016	1019	1022	1025	1028	1031	1034	1037
6	1000	1000	1004	1009	1013	1017	1020	1024	1027	1029	1032	1035	1038
7	1000	1000	1006	1011	1015	1018	1022	1025	1028	1031	1033	1036	1039
8	1000	1003	1008	1012	1016	1019	1023	1026	1029	1032	1035	1038	1041
9	1000	1005	1010	1014	1017	1021	1024	1027	1030	1033	1036	1039	1042
10	1001	1007	1011	1015	1019	1022	1025	1028	1031	1034	1037	1039	1043
11	1003	1009	1013	1016	1019	1023	1026	1029	1032	1035	1038	1041	1044
12	1005	1010	1014	1018	1021	1024	1027	1030	1033	1036	1039	1042	1046
13	1007	1012	1016	1019	1022	1025	1028	1031	1034	1037	1040	1043	1047
14	1009	1013	1017	1020	1023	1026	1029	1032	1035	1038	1041	1045	1048
15	1011	1015	1018	1021	1024	1027	1030	1033	1036	1039	1042	1046	1050
16	1012	1016	1019	1022	1025	1028	1031	1034	1037	1040	1044	1047	1051
17	1013	1017	1020	1024	1027	1029	1032	1035	1038	1042	1045	1049	1053
18	1015	1018	1022	1025	1028	1031	1033	1036	1039	1043	1046	1050	1054
19	1016	1019	1023	1026	1029	1032	1035	1038	1041	1044	1048	1051	1056
20	1017	1021	1024	1027	1030	1033	1036	1039	1042	1045	1049	1053	1057
21	1019	1022	1025	1028	1031	1034	1037	1039	1043	1047	1050	1054	1059
22	1019	1023	1026	1029	1032	1035	1038	1041	1044	1048	1052	1056	1061
23	1021	1024	1027	1030	1033	1036	1039	1042	1046	1049	1053	1058	1063
24	1022	1025	1028	1031	1034	1037	1040	1043	1047	1051	1055	1059	1065
25	1023	1026	1029	1032	1035	1038	1041	1045	1048	1052	1056	1061	1067
26	1024	1027	1030	1033	1036	1039	1042	1046	1050	1054	1058	1063	1069
27	1025	1028	1031	1034	1037	1040	1044	1047	1051	1055	1060	1065	1072
28	1027	1029	1032	1035	1038	1042	1045	1049	1053	1057	1062	1067	1075
29	1028	1031	1033	1036	1039	1043	1046	1050	1054	1059	1063	1070	1078
30	1029	1032	1035	1038	1041	1044	1048	1051	1056	1060	1066	1072	1080
31	1030	1033	1036	1039	1042	1045	1049	1053	1057	1062	1068	1075	1080
32	1031	1034	1037	1039	1043	1047	1050	1054	1059	1064	1070	1079	1080
33	1032	1035	1038	1041	1044	1048	1052	1056	1061	1066	1073	1080	1080

Table J-87. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	403	408	411	415	418	421	424	426	429
1	400	400	400	400	400	400	400	401	406	409	413	416	419	422	425	428	431
2	400	400	400	400	400	400	400	403	408	411	415	418	421	424	426	429	432
3	400	400	400	400	400	400	401	406	409	413	416	419	422	425	428	431	433
4	400	400	400	400	400	400	403	408	411	415	418	421	424	426	429	432	435
5	400	400	400	400	400	401	406	409	413	416	419	422	425	428	431	433	436
6	400	400	400	400	400	403	408	411	415	418	421	424	426	429	432	435	438
7	400	400	400	400	401	406	409	413	416	419	422	425	428	431	433	436	439
8	400	400	400	400	403	408	411	415	418	421	424	426	429	432	435	438	441
9	400	400	400	401	406	409	413	416	419	422	425	428	431	433	436	439	442
10	400	400	400	403	408	411	415	418	421	424	426	429	432	435	438	441	444
11	400	400	401	406	409	413	416	419	422	425	428	431	433	436	439	442	446
12	400	400	403	408	411	415	418	421	424	426	429	432	435	438	441	444	447
13	400	401	406	409	413	416	419	422	425	428	431	433	436	439	442	446	449
14	400	403	408	411	415	418	421	424	426	429	432	435	438	441	444	447	451
15	401	406	409	413	416	419	422	425	428	431	433	436	439	442	446	449	453
16	403	408	411	415	418	421	424	426	429	432	435	438	441	444	447	451	455
17	406	409	413	416	419	422	425	428	431	433	436	439	442	446	449	453	457
18	408	411	415	418	421	424	426	429	432	435	438	441	444	447	451	455	459
19	409	413	416	419	422	425	428	431	433	436	439	442	446	449	453	457	462
20	411	415	418	421	424	426	429	432	435	438	441	444	447	451	455	459	465
21	413	416	419	422	425	428	431	433	436	439	442	446	449	453	457	462	468
22	415	418	421	424	426	429	432	435	438	441	444	447	451	455	459	465	471
23	416	419	422	425	428	431	433	436	439	442	446	449	453	457	462	468	475
24	418	421	424	426	429	432	435	438	441	444	447	451	455	459	465	471	479
25	419	422	425	428	431	433	436	439	442	446	449	453	457	462	468	475	480
26	421	424	426	429	432	435	438	441	444	447	451	455	459	465	471	479	480
27	422	425	428	431	433	436	439	442	446	449	453	457	462	468	475	480	480
28	424	426	429	432	435	438	441	444	447	451	455	459	465	471	479	480	480
29	425	428	431	433	436	439	442	446	449	453	457	462	468	475	480	480	480
30	426	429	432	435	438	441	444	447	451	455	459	465	471	479	480	480	480
31	428	431	433	436	439	442	446	449	453	457	462	468	475	480	480	480	480
32	429	432	435	438	441	444	447	451	455	459	465	471	479	480	480	480	480

Table J-88. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	401	405	409	413	417	419	423	426	429	432
1	400	400	400	400	400	400	400	403	407	411	415	418	421	424	427	430	433
2	400	400	400	400	400	400	401	405	409	413	417	419	423	426	429	432	434
3	400	400	400	400	400	400	403	407	411	415	418	421	424	427	430	433	436
4	400	400	400	400	400	401	405	409	413	417	419	423	426	429	432	434	437
5	400	400	400	400	400	403	407	411	415	418	421	424	427	430	433	436	439
6	400	400	400	400	401	405	409	413	417	419	423	426	429	432	434	437	440
7	400	400	400	400	403	407	411	415	418	421	424	427	430	433	436	439	442
8	400	400	400	401	405	409	413	417	419	423	426	429	432	434	437	440	443
9	400	400	400	403	407	411	415	418	421	424	427	430	433	436	439	442	445
10	400	400	401	405	409	413	417	419	423	426	429	432	434	437	440	443	447
11	400	400	403	407	411	415	418	421	424	427	430	433	436	439	442	445	448
12	400	401	405	409	413	417	419	423	426	429	432	434	437	440	443	447	450
13	400	403	407	411	415	418	421	424	427	430	433	436	439	442	445	448	452
14	401	405	409	413	417	419	423	426	429	432	434	437	440	443	447	450	454
15	403	407	411	415	418	421	424	427	430	433	436	439	442	445	448	452	456
16	405	409	413	417	419	423	426	429	432	434	437	440	443	447	450	454	458
17	407	411	415	418	421	424	427	430	433	436	439	442	445	448	452	456	459
18	409	413	417	419	423	426	429	432	434	437	440	443	447	450	454	458	463
19	411	415	418	421	424	427	430	433	436	439	442	445	448	452	456	459	465
20	413	417	419	423	426	429	432	434	437	440	443	447	450	454	458	463	468
21	415	418	421	424	427	430	433	436	439	442	445	448	452	456	459	465	471
22	417	419	423	426	429	432	434	437	440	443	447	450	454	458	463	468	474
23	418	421	424	427	430	433	436	439	442	445	448	452	456	459	465	471	478
24	419	423	426	429	432	434	437	440	443	447	450	454	458	463	468	474	480
25	421	424	427	430	433	436	439	442	445	448	452	456	459	465	471	478	480
26	423	426	429	432	434	437	440	443	447	450	454	458	463	468	474	480	480
27	424	427	430	433	436	439	442	445	448	452	456	459	465	471	478	480	480
28	426	429	432	434	437	440	443	447	450	454	458	463	468	474	480	480	480
29	427	430	433	436	439	442	445	448	452	456	459	465	471	478	480	480	480
30	429	432	434	437	440	443	447	450	454	458	463	468	474	480	480	480	480
31	430	433	436	439	442	445	448	452	456	459	465	471	478	480	480	480	480
32	432	434	437	440	443	447	450	454	458	463	468	474	480	480	480	480	480

Table J-89. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	405	409	413	416	419	422	425	428	431
1	400	400	400	400	400	400	400	403	407	411	414	418	421	424	427	429	432
2	400	400	400	400	400	400	400	405	409	413	416	419	422	425	428	431	434
3	400	400	400	400	400	400	403	407	411	414	418	421	424	427	429	432	435
4	400	400	400	400	400	400	405	409	413	416	419	422	425	428	431	434	437
5	400	400	400	400	400	403	407	411	414	418	421	424	427	429	432	435	438
6	400	400	400	400	400	405	409	413	416	419	422	425	428	431	434	437	439
7	400	400	400	400	403	407	411	414	418	421	424	427	429	432	435	438	442
8	400	400	400	400	405	409	413	416	419	422	425	428	431	434	437	439	443
9	400	400	400	403	407	411	414	418	421	424	427	429	432	435	438	442	445
10	400	400	400	405	409	413	416	419	422	425	428	431	434	437	439	443	447
11	400	400	403	407	411	414	418	421	424	427	429	432	435	438	442	445	449
12	400	400	405	409	413	416	419	422	425	428	431	434	437	439	443	447	450
13	400	403	407	411	414	418	421	424	427	429	432	435	438	442	445	449	453
14	400	405	409	413	416	419	422	425	428	431	434	437	439	443	447	450	455
15	403	407	411	414	418	421	424	427	429	432	435	438	442	445	449	453	457
16	405	409	413	416	419	422	425	428	431	434	437	439	443	447	450	455	459
17	407	411	414	418	421	424	427	429	432	435	438	442	445	449	453	457	462
18	409	413	416	419	422	425	428	431	434	437	439	443	447	450	455	459	464
19	411	414	418	421	424	427	429	432	435	438	442	445	449	453	457	462	467
20	413	416	419	422	425	428	431	434	437	439	443	447	450	455	459	464	470
21	414	418	421	424	427	429	432	435	438	442	445	449	453	457	462	467	473
22	416	419	422	425	428	431	434	437	439	443	447	450	455	459	464	470	477
23	418	421	424	427	429	432	435	438	442	445	449	453	457	462	467	473	480
24	419	422	425	428	431	434	437	439	443	447	450	455	459	464	470	477	480
25	421	424	427	429	432	435	438	442	445	449	453	457	462	467	473	480	480
26	422	425	428	431	434	437	439	443	447	450	455	459	464	470	477	480	480
27	424	427	429	432	435	438	442	445	449	453	457	462	467	473	480	480	480
28	425	428	431	434	437	439	443	447	450	455	459	464	470	477	480	480	480
29	427	429	432	435	438	442	445	449	453	457	462	467	473	480	480	480	480
30	428	431	434	437	439	443	447	450	455	459	464	470	477	480	480	480	480
31	429	432	435	438	442	445	449	453	457	462	467	473	480	480	480	480	480
32	431	434	437	439	443	447	450	455	459	464	470	477	480	480	480	480	480

Table J-90. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431
1	400	400	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432
2	400	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434
3	400	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435
4	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437
5	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438
6	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439
7	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438	441
8	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443
9	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438	441	445
10	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443	446
11	400	400	402	406	410	414	417	420	423	426	429	432	435	438	441	445	448
12	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443	446	450
13	400	402	406	410	414	417	420	423	426	429	432	435	438	441	445	448	452
14	400	404	408	412	415	419	422	425	428	431	434	437	439	443	446	450	454
15	402	406	410	414	417	420	423	426	429	432	435	438	441	445	448	452	456
16	404	408	412	415	419	422	425	428	431	434	437	439	443	446	450	454	459
17	406	410	414	417	420	423	426	429	432	435	438	441	445	448	452	456	461
18	408	412	415	419	422	425	428	431	434	437	439	443	446	450	454	459	463
19	410	414	417	420	423	426	429	432	435	438	441	445	448	452	456	461	466
20	412	415	419	422	425	428	431	434	437	439	443	446	450	454	459	463	469
21	414	417	420	423	426	429	432	435	438	441	445	448	452	456	461	466	472
22	415	419	422	425	428	431	434	437	439	443	446	450	454	459	463	469	475
23	417	420	423	426	429	432	435	438	441	445	448	452	456	461	466	472	479
24	419	422	425	428	431	434	437	439	443	446	450	454	459	463	469	475	480
25	420	423	426	429	432	435	438	441	445	448	452	456	461	466	472	479	480
26	422	425	428	431	434	437	439	443	446	450	454	459	463	469	475	480	480
27	423	426	429	432	435	438	441	445	448	452	456	461	466	472	479	480	480
28	425	428	431	434	437	439	443	446	450	454	459	463	469	475	480	480	480
29	426	429	432	435	438	441	445	448	452	456	461	466	472	479	480	480	480
30	428	431	434	437	439	443	446	450	454	459	463	469	475	480	480	480	480
31	429	432	435	438	441	445	448	452	456	461	466	472	479	480	480	480	480
32	431	434	437	439	443	446	450	454	459	463	469	475	480	480	480	480	480

Table J-91. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431
1	400	400	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432
2	400	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434
3	400	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435
4	400	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437
5	400	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438
6	400	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439
7	400	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438	442
8	400	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443
9	400	400	400	402	406	410	414	417	420	423	426	429	432	435	438	442	445
10	400	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443	447
11	400	400	402	406	410	414	417	420	423	426	429	432	435	438	442	445	449
12	400	400	404	408	412	415	419	422	425	428	431	434	437	439	443	447	451
13	400	402	406	410	414	417	420	423	426	429	432	435	438	442	445	449	453
14	400	404	408	412	415	419	422	425	428	431	434	437	439	443	447	451	455
15	402	406	410	414	417	420	423	426	429	432	435	438	442	445	449	453	457
16	404	408	412	415	419	422	425	428	431	434	437	439	443	447	451	455	459
17	406	410	414	417	420	423	426	429	432	435	438	442	445	449	453	457	462
18	408	412	415	419	422	425	428	431	434	437	439	443	447	451	455	459	465
19	410	414	417	420	423	426	429	432	435	438	442	445	449	453	457	462	468
20	412	415	419	422	425	428	431	434	437	439	443	447	451	455	459	465	471
21	414	417	420	423	426	429	432	435	438	442	445	449	453	457	462	468	475
22	415	419	422	425	428	431	434	437	439	443	447	451	455	459	465	471	478
23	417	420	423	426	429	432	435	438	442	445	449	453	457	462	468	475	480
24	419	422	425	428	431	434	437	439	443	447	451	455	459	465	471	478	480
25	420	423	426	429	432	435	438	442	445	449	453	457	462	468	475	480	480
26	422	425	428	431	434	437	439	443	447	451	455	459	465	471	478	480	480
27	423	426	429	432	435	438	442	445	449	453	457	462	468	475	480	480	480
28	425	428	431	434	437	439	443	447	451	455	459	465	471	478	480	480	480
29	426	429	432	435	438	442	445	449	453	457	462	468	475	480	480	480	480
30	428	431	434	437	439	443	447	451	455	459	465	471	478	480	480	480	480
31	429	432	435	438	442	445	449	453	457	462	468	475	480	480	480	480	480
32	431	434	437	439	443	447	451	455	459	465	471	478	480	480	480	480	480

Table J-92. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 4, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	400	400	400	400	400	400	400	400	400	405	409	413	416	419	423	426	429
1	400	400	400	400	400	400	400	400	402	407	411	415	418	421	424	428	431
2	400	400	400	400	400	400	400	400	405	409	413	416	419	423	426	429	432
3	400	400	400	400	400	400	400	402	407	411	415	418	421	424	428	431	434
4	400	400	400	400	400	400	400	405	409	413	416	419	423	426	429	432	435
5	400	400	400	400	400	400	402	407	411	415	418	421	424	428	431	434	437
6	400	400	400	400	400	400	405	409	413	416	419	423	426	429	432	435	438
7	400	400	400	400	400	402	407	411	415	418	421	424	428	431	434	437	440
8	400	400	400	400	400	405	409	413	416	419	423	426	429	432	435	438	442
9	400	400	400	400	402	407	411	415	418	421	424	428	431	434	437	440	444
10	400	400	400	400	405	409	413	416	419	423	426	429	432	435	438	442	445
11	400	400	400	402	407	411	415	418	421	424	428	431	434	437	440	444	447
12	400	400	400	405	409	413	416	419	423	426	429	432	435	438	442	445	449
13	400	400	402	407	411	415	418	421	424	428	431	434	437	440	444	447	451
14	400	400	405	409	413	416	419	423	426	429	432	435	438	442	445	449	453
15	400	402	407	411	415	418	421	424	428	431	434	437	440	444	447	451	456
16	400	405	409	413	416	419	423	426	429	432	435	438	442	445	449	453	458
17	402	407	411	415	418	421	424	428	431	434	437	440	444	447	451	456	461
18	405	409	413	416	419	423	426	429	432	435	438	442	445	449	453	458	463
19	407	411	415	418	421	424	428	431	434	437	440	444	447	451	456	461	466
20	409	413	416	419	423	426	429	432	435	438	442	445	449	453	458	463	469
21	411	415	418	421	424	428	431	434	437	440	444	447	451	456	461	466	472
22	413	416	419	423	426	429	432	435	438	442	445	449	453	458	463	469	476
23	415	418	421	424	428	431	434	437	440	444	447	451	456	461	466	472	480
24	416	419	423	426	429	432	435	438	442	445	449	453	458	463	469	476	480
25	418	421	424	428	431	434	437	440	444	447	451	456	461	466	472	480	480
26	419	423	426	429	432	435	438	442	445	449	453	458	463	469	476	480	480
27	421	424	428	431	434	437	440	444	447	451	456	461	466	472	480	480	480
28	423	426	429	432	435	438	442	445	449	453	458	463	469	476	480	480	480
29	424	428	431	434	437	440	444	447	451	456	461	466	472	480	480	480	480
30	426	429	432	435	438	442	445	449	453	458	463	469	476	480	480	480	480
31	428	431	434	437	440	444	447	451	456	461	466	472	480	480	480	480	480
32	429	432	435	438	442	445	449	453	458	463	469	476	480	480	480	480	480

Table J-93. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	704	710	715	720	724	728	732	735	738	742
1	700	700	700	700	700	700	700	707	713	718	722	726	730	733	737	740	743
2	700	700	700	700	700	700	704	710	715	720	724	728	732	735	738	742	745
3	700	700	700	700	700	700	707	713	718	722	726	730	733	737	740	743	746
4	700	700	700	700	700	704	710	715	720	724	728	732	735	738	742	745	748
5	700	700	700	700	700	707	713	718	722	726	730	733	737	740	743	746	749
6	700	700	700	700	704	710	715	720	724	728	732	735	738	742	745	748	751
7	700	700	700	700	707	713	718	722	726	730	733	737	740	743	746	749	752
8	700	700	700	704	710	715	720	724	728	732	735	738	742	745	748	751	754
9	700	700	700	707	713	718	722	726	730	733	737	740	743	746	749	752	756
10	700	700	704	710	715	720	724	728	732	735	738	742	745	748	751	754	757
11	700	700	707	713	718	722	726	730	733	737	740	743	746	749	752	756	759
12	700	704	710	715	720	724	728	732	735	738	742	745	748	751	754	757	760
13	700	707	713	718	722	726	730	733	737	740	743	746	749	752	756	759	762
14	704	710	715	720	724	728	732	735	738	742	745	748	751	754	757	760	764
15	707	713	718	722	726	730	733	737	740	743	746	749	752	756	759	762	766
16	710	715	720	724	728	732	735	738	742	745	748	751	754	757	760	764	767
17	713	718	722	726	730	733	737	740	743	746	749	752	756	759	762	766	769
18	715	720	724	728	732	735	738	742	745	748	751	754	757	760	764	767	771
19	718	722	726	730	733	737	740	743	746	749	752	756	759	762	766	769	773
20	720	724	728	732	735	738	742	745	748	751	754	757	760	764	767	771	776
21	722	726	730	733	737	740	743	746	749	752	756	759	762	766	769	773	778
22	724	728	732	735	738	742	745	748	751	754	757	760	764	767	771	776	780
23	726	730	733	737	740	743	746	749	752	756	759	762	766	769	773	778	780
24	728	732	735	738	742	745	748	751	754	757	760	764	767	771	776	780	780
25	730	733	737	740	743	746	749	752	756	759	762	766	769	773	778	780	780
26	732	735	738	742	745	748	751	754	757	760	764	767	771	776	780	780	780
27	733	737	740	743	746	749	752	756	759	762	766	769	773	778	780	780	780
28	735	738	742	745	748	751	754	757	760	764	767	771	776	780	780	780	780
29	737	740	743	746	749	752	756	759	762	766	769	773	778	780	780	780	780
30	738	742	745	748	751	754	757	760	764	767	771	776	780	780	780	780	780
31	740	743	746	749	752	756	759	762	766	769	773	778	780	780	780	780	780
32	742	745	748	751	754	757	760	764	767	771	776	780	780	780	780	780	780

Table J-94. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	702	709	715	719	724	728	732	735	739	742
1	700	700	700	700	700	700	700	706	712	717	722	726	730	734	737	740	744
2	700	700	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745
3	700	700	700	700	700	700	706	712	717	722	726	730	734	737	740	744	747
4	700	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745	749
5	700	700	700	700	700	706	712	717	722	726	730	734	737	740	744	747	750
6	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745	749	752
7	700	700	700	700	706	712	717	722	726	730	734	737	740	744	747	750	754
8	700	700	700	702	709	715	719	724	728	732	735	739	742	745	749	752	755
9	700	700	700	706	712	717	722	726	730	734	737	740	744	747	750	754	757
10	700	700	702	709	715	719	724	728	732	735	739	742	745	749	752	755	759
11	700	700	706	712	717	722	726	730	734	737	740	744	747	750	754	757	760
12	700	702	709	715	719	724	728	732	735	739	742	745	749	752	755	759	762
13	700	706	712	717	722	726	730	734	737	740	744	747	750	754	757	760	764
14	702	709	715	719	724	728	732	735	739	742	745	749	752	755	759	762	766
15	706	712	717	722	726	730	734	737	740	744	747	750	754	757	760	764	768
16	709	715	719	724	728	732	735	739	742	745	749	752	755	759	762	766	770
17	712	717	722	726	730	734	737	740	744	747	750	754	757	760	764	768	772
18	715	719	724	728	732	735	739	742	745	749	752	755	759	762	766	770	774
19	717	722	726	730	734	737	740	744	747	750	754	757	760	764	768	772	776
20	719	724	728	732	735	739	742	745	749	752	755	759	762	766	770	774	779
21	722	726	730	734	737	740	744	747	750	754	757	760	764	768	772	776	780
22	724	728	732	735	739	742	745	749	752	755	759	762	766	770	774	779	780
23	726	730	734	737	740	744	747	750	754	757	760	764	768	772	776	780	780
24	728	732	735	739	742	745	749	752	755	759	762	766	770	774	779	780	780
25	730	734	737	740	744	747	750	754	757	760	764	768	772	776	780	780	780
26	732	735	739	742	745	749	752	755	759	762	766	770	774	779	780	780	780
27	734	737	740	744	747	750	754	757	760	764	768	772	776	780	780	780	780
28	735	739	742	745	749	752	755	759	762	766	770	774	779	780	780	780	780
29	737	740	744	747	750	754	757	760	764	768	772	776	780	780	780	780	780
30	739	742	745	749	752	755	759	762	766	770	774	779	780	780	780	780	780
31	740	744	747	750	754	757	760	764	768	772	776	780	780	780	780	780	780
32	742	745	749	752	755	759	762	766	770	774	779	780	780	780	780	780	780

Table J-95. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	707	713	719	723	727	731	735	738	741	744
1	700	700	700	700	700	700	703	710	716	721	725	729	733	736	739	743	746
2	700	700	700	700	700	700	707	713	719	723	727	731	735	738	741	744	747
3	700	700	700	700	700	703	710	716	721	725	729	733	736	739	743	746	749
4	700	700	700	700	700	707	713	719	723	727	731	735	738	741	744	747	750
5	700	700	700	700	703	710	716	721	725	729	733	736	739	743	746	749	752
6	700	700	700	700	707	713	719	723	727	731	735	738	741	744	747	750	753
7	700	700	700	703	710	716	721	725	729	733	736	739	743	746	749	752	755
8	700	700	700	707	713	719	723	727	731	735	738	741	744	747	750	753	756
9	700	700	703	710	716	721	725	729	733	736	739	743	746	749	752	755	758
10	700	700	707	713	719	723	727	731	735	738	741	744	747	750	753	756	759
11	700	703	710	716	721	725	729	733	736	739	743	746	749	752	755	758	761
12	700	707	713	719	723	727	731	735	738	741	744	747	750	753	756	759	763
13	703	710	716	721	725	729	733	736	739	743	746	749	752	755	758	761	764
14	707	713	719	723	727	731	735	738	741	744	747	750	753	756	759	763	766
15	710	716	721	725	729	733	736	739	743	746	749	752	755	758	761	764	768
16	713	719	723	727	731	735	738	741	744	747	750	753	756	759	763	766	770
17	716	721	725	729	733	736	739	743	746	749	752	755	758	761	764	768	772
18	719	723	727	731	735	738	741	744	747	750	753	756	759	763	766	770	774
19	721	725	729	733	736	739	743	746	749	752	755	758	761	764	768	772	776
20	723	727	731	735	738	741	744	747	750	753	756	759	763	766	770	774	778
21	725	729	733	736	739	743	746	749	752	755	758	761	764	768	772	776	780
22	727	731	735	738	741	744	747	750	753	756	759	763	766	770	774	778	780
23	729	733	736	739	743	746	749	752	755	758	761	764	768	772	776	780	780
24	731	735	738	741	744	747	750	753	756	759	763	766	770	774	778	780	780
25	733	736	739	743	746	749	752	755	758	761	764	768	772	776	780	780	780
26	735	738	741	744	747	750	753	756	759	763	766	770	774	778	780	780	780
27	736	739	743	746	749	752	755	758	761	764	768	772	776	780	780	780	780
28	738	741	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780
29	739	743	746	749	752	755	758	761	764	768	772	776	780	780	780	780	780
30	741	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780	780
31	743	746	749	752	755	758	761	764	768	772	776	780	780	780	780	780	780
32	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780	780	780

Table J-96. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	700	708	714	719	724	728	732	736	739	743
1	700	700	700	700	700	700	700	704	711	717	722	726	730	734	738	741	745
2	700	700	700	700	700	700	700	708	714	719	724	728	732	736	739	743	746
3	700	700	700	700	700	700	704	711	717	722	726	730	734	738	741	745	748
4	700	700	700	700	700	700	708	714	719	724	728	732	736	739	743	746	749
5	700	700	700	700	700	704	711	717	722	726	730	734	738	741	745	748	751
6	700	700	700	700	700	708	714	719	724	728	732	736	739	743	746	749	753
7	700	700	700	700	704	711	717	722	726	730	734	738	741	745	748	751	754
8	700	700	700	700	708	714	719	724	728	732	736	739	743	746	749	753	756
9	700	700	700	704	711	717	722	726	730	734	738	741	745	748	751	754	757
10	700	700	700	708	714	719	724	728	732	736	739	743	746	749	753	756	759
11	700	700	704	711	717	722	726	730	734	738	741	745	748	751	754	757	761
12	700	700	708	714	719	724	728	732	736	739	743	746	749	753	756	759	762
13	700	704	711	717	722	726	730	734	738	741	745	748	751	754	757	761	764
14	700	708	714	719	724	728	732	736	739	743	746	749	753	756	759	762	766
15	704	711	717	722	726	730	734	738	741	745	748	751	754	757	761	764	768
16	708	714	719	724	728	732	736	739	743	746	749	753	756	759	762	766	769
17	711	717	722	726	730	734	738	741	745	748	751	754	757	761	764	768	771
18	714	719	724	728	732	736	739	743	746	749	753	756	759	762	766	769	773
19	717	722	726	730	734	738	741	745	748	751	754	757	761	764	768	771	775
20	719	724	728	732	736	739	743	746	749	753	756	759	762	766	769	773	777
21	722	726	730	734	738	741	745	748	751	754	757	761	764	768	771	775	780
22	724	728	732	736	739	743	746	749	753	756	759	762	766	769	773	777	780
23	726	730	734	738	741	745	748	751	754	757	761	764	768	771	775	780	780
24	728	732	736	739	743	746	749	753	756	759	762	766	769	773	777	780	780
25	730	734	738	741	745	748	751	754	757	761	764	768	771	775	780	780	780
26	732	736	739	743	746	749	753	756	759	762	766	769	773	777	780	780	780
27	734	738	741	745	748	751	754	757	761	764	768	771	775	780	780	780	780
28	736	739	743	746	749	753	756	759	762	766	769	773	777	780	780	780	780
29	738	741	745	748	751	754	757	761	764	768	771	775	780	780	780	780	780
30	739	743	746	749	753	756	759	762	766	769	773	777	780	780	780	780	780
31	741	745	748	751	754	757	761	764	768	771	775	780	780	780	780	780	780
32	743	746	749	753	756	759	762	766	769	773	777	780	780	780	780	780	780

Table J-97. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	706	712	718	722	726	730	734	737	740	744
1	700	700	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745
2	700	700	700	700	700	700	706	712	718	722	726	730	734	737	740	744	747
3	700	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745	748
4	700	700	700	700	700	706	712	718	722	726	730	734	737	740	744	747	750
5	700	700	700	700	702	709	715	719	724	728	732	735	739	742	745	748	751
6	700	700	700	700	706	712	718	722	726	730	734	737	740	744	747	750	753
7	700	700	700	702	709	715	719	724	728	732	735	739	742	745	748	751	754
8	700	700	700	706	712	718	722	726	730	734	737	740	744	747	750	753	756
9	700	700	702	709	715	719	724	728	732	735	739	742	745	748	751	754	758
10	700	700	706	712	718	722	726	730	734	737	740	744	747	750	753	756	759
11	700	702	709	715	719	724	728	732	735	739	742	745	748	751	754	758	761
12	700	706	712	718	722	726	730	734	737	740	744	747	750	753	756	759	763
13	702	709	715	719	724	728	732	735	739	742	745	748	751	754	758	761	764
14	706	712	718	722	726	730	734	737	740	744	747	750	753	756	759	763	766
15	709	715	719	724	728	732	735	739	742	745	748	751	754	758	761	764	768
16	712	718	722	726	730	734	737	740	744	747	750	753	756	759	763	766	770
17	715	719	724	728	732	735	739	742	745	748	751	754	758	761	764	768	772
18	718	722	726	730	734	737	740	744	747	750	753	756	759	763	766	770	774
19	719	724	728	732	735	739	742	745	748	751	754	758	761	764	768	772	776
20	722	726	730	734	737	740	744	747	750	753	756	759	763	766	770	774	778
21	724	728	732	735	739	742	745	748	751	754	758	761	764	768	772	776	780
22	726	730	734	737	740	744	747	750	753	756	759	763	766	770	774	778	780
23	728	732	735	739	742	745	748	751	754	758	761	764	768	772	776	780	780
24	730	734	737	740	744	747	750	753	756	759	763	766	770	774	778	780	780
25	732	735	739	742	745	748	751	754	758	761	764	768	772	776	780	780	780
26	734	737	740	744	747	750	753	756	759	763	766	770	774	778	780	780	780
27	735	739	742	745	748	751	754	758	761	764	768	772	776	780	780	780	780
28	737	740	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780
29	739	742	745	748	751	754	758	761	764	768	772	776	780	780	780	780	780
30	740	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780	780
31	742	745	748	751	754	758	761	764	768	772	776	780	780	780	780	780	780
32	744	747	750	753	756	759	763	766	770	774	778	780	780	780	780	780	780

Table J-98. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 7, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	700	700	700	700	700	700	700	707	714	719	724	728	732	735	739	742	745
1	700	700	700	700	700	700	704	711	717	722	726	730	734	737	740	744	747
2	700	700	700	700	700	700	707	714	719	724	728	732	735	739	742	745	748
3	700	700	700	700	700	704	711	717	722	726	730	734	737	740	744	747	749
4	700	700	700	700	700	707	714	719	724	728	732	735	739	742	745	748	751
5	700	700	700	700	704	711	717	722	726	730	734	737	740	744	747	749	752
6	700	700	700	700	707	714	719	724	728	732	735	739	742	745	748	751	754
7	700	700	700	704	711	717	722	726	730	734	737	740	744	747	749	752	755
8	700	700	700	707	714	719	724	728	732	735	739	742	745	748	751	754	757
9	700	700	704	711	717	722	726	730	734	737	740	744	747	749	752	755	758
10	700	700	707	714	719	724	728	732	735	739	742	745	748	751	754	757	760
11	700	704	711	717	722	726	730	734	737	740	744	747	749	752	755	758	761
12	700	707	714	719	724	728	732	735	739	742	745	748	751	754	757	760	763
13	704	711	717	722	726	730	734	737	740	744	747	749	752	755	758	761	764
14	707	714	719	724	728	732	735	739	742	745	748	751	754	757	760	763	766
15	711	717	722	726	730	734	737	740	744	747	749	752	755	758	761	764	768
16	714	719	724	728	732	735	739	742	745	748	751	754	757	760	763	766	769
17	717	722	726	730	734	737	740	744	747	749	752	755	758	761	764	768	771
18	719	724	728	732	735	739	742	745	748	751	754	757	760	763	766	769	773
19	722	726	730	734	737	740	744	747	749	752	755	758	761	764	768	771	775
20	724	728	732	735	739	742	745	748	751	754	757	760	763	766	769	773	777
21	726	730	734	737	740	744	747	749	752	755	758	761	764	768	771	775	780
22	728	732	735	739	742	745	748	751	754	757	760	763	766	769	773	777	780
23	730	734	737	740	744	747	749	752	755	758	761	764	768	771	775	780	780
24	732	735	739	742	745	748	751	754	757	760	763	766	769	773	777	780	780
25	734	737	740	744	747	749	752	755	758	761	764	768	771	775	780	780	780
26	735	739	742	745	748	751	754	757	760	763	766	769	773	777	780	780	780
27	737	740	744	747	749	752	755	758	761	764	768	771	775	780	780	780	780
28	739	742	745	748	751	754	757	760	763	766	769	773	777	780	780	780	780
29	740	744	747	749	752	755	758	761	764	768	771	775	780	780	780	780	780
30	742	745	748	751	754	757	760	763	766	769	773	777	780	780	780	780	780
31	744	747	749	752	755	758	761	764	768	771	775	780	780	780	780	780	780
32	745	748	751	754	757	760	763	766	769	773	777	780	780	780	780	780	780

Table J-99. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143
1	1100	1100	1100	1100	1100	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144
2	1100	1100	1100	1100	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145
3	1100	1100	1100	1100	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147
4	1100	1100	1100	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148
5	1100	1100	1100	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150
6	1100	1100	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151
7	1100	1100	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152
8	1100	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154
9	1100	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155
10	1100	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156
11	1101	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158
12	1105	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159
13	1108	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160
14	1111	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162
15	1113	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163
16	1116	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165
17	1118	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166
18	1119	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168
19	1122	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169
20	1124	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171
21	1126	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173
22	1127	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174
23	1129	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173	1176
24	1131	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174	1179
25	1132	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173	1176	1180
26	1134	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174	1179	1180
27	1135	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173	1176	1180	1180
28	1137	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174	1179	1180	1180
29	1138	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173	1176	1180	1180	1180
30	1139	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174	1179	1180	1180	1180
31	1141	1144	1147	1150	1152	1155	1158	1160	1163	1166	1169	1173	1176	1180	1180	1180	1180
32	1143	1145	1148	1151	1154	1156	1159	1162	1165	1168	1171	1174	1179	1180	1180	1180	1180

Table J-100. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143
1	1100	1100	1100	1100	1100	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145
2	1100	1100	1100	1100	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146
3	1100	1100	1100	1100	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148
4	1100	1100	1100	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149
5	1100	1100	1100	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150
6	1100	1100	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152
7	1100	1100	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153
8	1100	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155
9	1100	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156
10	1100	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157
11	1100	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159
12	1102	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160
13	1106	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162
14	1109	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163
15	1112	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165
16	1114	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166
17	1117	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168
18	1119	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169
19	1121	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171
20	1123	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173
21	1125	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175
22	1127	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177
23	1129	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175	1179
24	1130	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177	1180
25	1132	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175	1179	1180
26	1134	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177	1180	1180
27	1135	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175	1179	1180	1180
28	1137	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177	1180	1180	1180
29	1139	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175	1179	1180	1180	1180
30	1140	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177	1180	1180	1180	1180
31	1142	1145	1148	1150	1153	1156	1159	1162	1165	1168	1171	1175	1179	1180	1180	1180	1180
32	1143	1146	1149	1152	1155	1157	1160	1163	1166	1169	1173	1177	1180	1180	1180	1180	1180

Table J-101. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143
1	1100	1100	1100	1100	1100	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145
2	1100	1100	1100	1100	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146
3	1100	1100	1100	1100	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147
4	1100	1100	1100	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149
5	1100	1100	1100	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150
6	1100	1100	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151
7	1100	1100	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152
8	1100	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154
9	1100	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155
10	1100	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156
11	1102	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158
12	1105	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159
13	1108	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160
14	1111	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161
15	1114	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162
16	1116	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164
17	1119	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166
18	1121	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167
19	1123	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169
20	1125	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170
21	1127	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172
22	1128	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174
23	1130	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172	1176
24	1132	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174	1178
25	1133	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172	1176	1180
26	1135	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174	1178	1180
27	1136	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172	1176	1180	1180
28	1138	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174	1178	1180	1180
29	1139	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172	1176	1180	1180	1180
30	1141	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174	1178	1180	1180	1180
31	1142	1145	1147	1150	1152	1155	1158	1160	1162	1166	1169	1172	1176	1180	1180	1180	1180
32	1143	1146	1149	1151	1154	1156	1159	1161	1164	1167	1170	1174	1178	1180	1180	1180	1180

Table J-102. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144
1	1100	1100	1100	1100	1100	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145
2	1100	1100	1100	1100	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146
3	1100	1100	1100	1100	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148
4	1100	1100	1100	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149
5	1100	1100	1100	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151
6	1100	1100	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152
7	1100	1100	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153
8	1100	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155
9	1100	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156
10	1100	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157
11	1100	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159
12	1104	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160
13	1107	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162
14	1110	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162
15	1113	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164
16	1115	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166
17	1117	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167
18	1119	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169
19	1122	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170
20	1123	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172
21	1125	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174
22	1127	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176
23	1129	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174	1178
24	1131	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176	1180
25	1132	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174	1178	1180
26	1134	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176	1180	1180
27	1136	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174	1178	1180	1180
28	1137	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176	1180	1180	1180
29	1139	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174	1178	1180	1180	1180
30	1141	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176	1180	1180	1180	1180
31	1142	1145	1148	1151	1153	1156	1159	1162	1164	1167	1170	1174	1178	1180	1180	1180	1180
32	1144	1146	1149	1152	1155	1157	1160	1162	1166	1169	1172	1176	1180	1180	1180	1180	1180

Table J-103. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141
1	1100	1100	1100	1100	1100	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143
2	1100	1100	1100	1100	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144
3	1100	1100	1100	1100	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146
4	1100	1100	1100	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147
5	1100	1100	1100	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149
6	1100	1100	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150
7	1100	1100	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151
8	1100	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153
9	1100	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154
10	1100	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156
11	1100	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157
12	1101	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158
13	1104	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160
14	1107	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161
15	1110	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162
16	1112	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164
17	1115	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166
18	1117	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167
19	1119	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169
20	1121	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170
21	1123	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172
22	1125	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174
23	1126	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172	1176
24	1128	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174	1178
25	1130	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172	1176	1180
26	1132	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174	1178	1180
27	1133	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172	1176	1180	1180
28	1135	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174	1178	1180	1180
29	1137	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172	1176	1180	1180	1180
30	1138	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174	1178	1180	1180	1180
31	1139	1143	1146	1149	1151	1154	1157	1160	1162	1166	1169	1172	1176	1180	1180	1180	1180
32	1141	1144	1147	1150	1153	1156	1158	1161	1164	1167	1170	1174	1178	1180	1180	1180	1180

Table J-104. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Science Grade 11, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143
1	1100	1100	1100	1100	1100	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145
2	1100	1100	1100	1100	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146
3	1100	1100	1100	1100	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147
4	1100	1100	1100	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149
5	1100	1100	1100	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150
6	1100	1100	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151
7	1100	1100	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153
8	1100	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154
9	1100	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155
10	1100	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157
11	1103	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158
12	1107	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159
13	1110	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161
14	1113	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162
15	1115	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163
16	1118	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165
17	1119	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166
18	1122	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168
19	1124	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170
20	1125	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171
21	1127	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173
22	1129	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175
23	1130	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173	1177
24	1132	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175	1180
25	1134	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173	1177	1180
26	1135	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180
27	1136	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173	1177	1180	1180
28	1138	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180	1180
29	1139	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173	1177	1180	1180	1180
30	1141	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180	1180	1180
31	1142	1145	1147	1150	1153	1155	1158	1161	1163	1166	1170	1173	1177	1180	1180	1180	1180
32	1143	1146	1149	1151	1154	1157	1159	1162	1165	1168	1171	1175	1180	1180	1180	1180	1180

Table J-105. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539
1	500	500	500	500	500	500	500	500	507	512	517	522	526	530	533	537	540
2	500	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542
3	500	500	500	500	500	500	500	507	512	517	522	526	530	533	537	540	544
4	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546
5	500	500	500	500	500	500	507	512	517	522	526	530	533	537	540	544	548
6	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550
7	500	500	500	500	500	507	512	517	522	526	530	533	537	540	544	548	552
8	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554
9	500	500	500	500	507	512	517	522	526	530	533	537	540	544	548	552	556
10	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558
11	500	500	500	507	512	517	522	526	530	533	537	540	544	548	552	556	560
12	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563
13	500	500	507	512	517	522	526	530	533	537	540	544	548	552	556	560	565
14	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563	568
15	500	507	512	517	522	526	530	533	537	540	544	548	552	556	560	565	570
16	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563	568	573
17	507	512	517	522	526	530	533	537	540	544	548	552	556	560	565	570	576
18	510	515	519	524	528	532	535	539	542	546	550	554	558	563	568	573	579
19	512	517	522	526	530	533	537	540	544	548	552	556	560	565	570	576	580
20	515	519	524	528	532	535	539	542	546	550	554	558	563	568	573	579	580
21	517	522	526	530	533	537	540	544	548	552	556	560	565	570	576	580	580
22	519	524	528	532	535	539	542	546	550	554	558	563	568	573	579	580	580
23	522	526	530	533	537	540	544	548	552	556	560	565	570	576	580	580	580
24	524	528	532	535	539	542	546	550	554	558	563	568	573	579	580	580	580
25	526	530	533	537	540	544	548	552	556	560	565	570	576	580	580	580	580
26	528	532	535	539	542	546	550	554	558	563	568	573	579	580	580	580	580
27	530	533	537	540	544	548	552	556	560	565	570	576	580	580	580	580	580
28	532	535	539	542	546	550	554	558	563	568	573	579	580	580	580	580	580
29	533	537	540	544	548	552	556	560	565	570	576	580	580	580	580	580	580
30	535	539	542	546	550	554	558	563	568	573	579	580	580	580	580	580	580
31	537	540	544	548	552	556	560	565	570	576	580	580	580	580	580	580	580
32	539	542	546	550	554	558	563	568	573	579	580	580	580	580	580	580	580

Table J-106. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	500	506	512	517	522	526	530	534	537
1	500	500	500	500	500	500	500	500	503	509	515	519	524	528	532	535	539
2	500	500	500	500	500	500	500	500	506	512	517	522	526	530	534	537	541
3	500	500	500	500	500	500	500	503	509	515	519	524	528	532	535	539	543
4	500	500	500	500	500	500	500	506	512	517	522	526	530	534	537	541	545
5	500	500	500	500	500	500	503	509	515	519	524	528	532	535	539	543	546
6	500	500	500	500	500	500	506	512	517	522	526	530	534	537	541	545	548
7	500	500	500	500	500	503	509	515	519	524	528	532	535	539	543	546	550
8	500	500	500	500	500	506	512	517	522	526	530	534	537	541	545	548	552
9	500	500	500	500	503	509	515	519	524	528	532	535	539	543	546	550	554
10	500	500	500	500	506	512	517	522	526	530	534	537	541	545	548	552	557
11	500	500	500	503	509	515	519	524	528	532	535	539	543	546	550	554	559
12	500	500	500	506	512	517	522	526	530	534	537	541	545	548	552	557	561
13	500	500	503	509	515	519	524	528	532	535	539	543	546	550	554	559	563
14	500	500	506	512	517	522	526	530	534	537	541	545	548	552	557	561	566
15	500	503	509	515	519	524	528	532	535	539	543	546	550	554	559	563	569
16	500	506	512	517	522	526	530	534	537	541	545	548	552	557	561	566	572
17	503	509	515	519	524	528	532	535	539	543	546	550	554	559	563	569	575
18	506	512	517	522	526	530	534	537	541	545	548	552	557	561	566	572	578
19	509	515	519	524	528	532	535	539	543	546	550	554	559	563	569	575	580
20	512	517	522	526	530	534	537	541	545	548	552	557	561	566	572	578	580
21	515	519	524	528	532	535	539	543	546	550	554	559	563	569	575	580	580
22	517	522	526	530	534	537	541	545	548	552	557	561	566	572	578	580	580
23	519	524	528	532	535	539	543	546	550	554	559	563	569	575	580	580	580
24	522	526	530	534	537	541	545	548	552	557	561	566	572	578	580	580	580
25	524	528	532	535	539	543	546	550	554	559	563	569	575	580	580	580	580
26	526	530	534	537	541	545	548	552	557	561	566	572	578	580	580	580	580
27	528	532	535	539	543	546	550	554	559	563	569	575	580	580	580	580	580
28	530	534	537	541	545	548	552	557	561	566	572	578	580	580	580	580	580
29	532	535	539	543	546	550	554	559	563	569	575	580	580	580	580	580	580
30	534	537	541	545	548	552	557	561	566	572	578	580	580	580	580	580	580
31	535	539	543	546	550	554	559	563	569	575	580	580	580	580	580	580	580
32	537	541	545	548	552	557	561	566	572	578	580	580	580	580	580	580	580

Table J-107. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	506	512	517	522	526	529	533	536	539
1	500	500	500	500	500	500	500	503	509	515	519	524	527	531	535	538	542
2	500	500	500	500	500	500	500	506	512	517	522	526	529	533	536	539	543
3	500	500	500	500	500	500	503	509	515	519	524	527	531	535	538	542	545
4	500	500	500	500	500	500	506	512	517	522	526	529	533	536	539	543	547
5	500	500	500	500	500	503	509	515	519	524	527	531	535	538	542	545	549
6	500	500	500	500	500	506	512	517	522	526	529	533	536	539	543	547	551
7	500	500	500	500	503	509	515	519	524	527	531	535	538	542	545	549	552
8	500	500	500	500	506	512	517	522	526	529	533	536	539	543	547	551	554
9	500	500	500	503	509	515	519	524	527	531	535	538	542	545	549	552	556
10	500	500	500	506	512	517	522	526	529	533	536	539	543	547	551	554	559
11	500	500	503	509	515	519	524	527	531	535	538	542	545	549	552	556	561
12	500	500	506	512	517	522	526	529	533	536	539	543	547	551	554	559	563
13	500	503	509	515	519	524	527	531	535	538	542	545	549	552	556	561	565
14	500	506	512	517	522	526	529	533	536	539	543	547	551	554	559	563	568
15	503	509	515	519	524	527	531	535	538	542	545	549	552	556	561	565	570
16	506	512	517	522	526	529	533	536	539	543	547	551	554	559	563	568	573
17	509	515	519	524	527	531	535	538	542	545	549	552	556	561	565	570	576
18	512	517	522	526	529	533	536	539	543	547	551	554	559	563	568	573	578
19	515	519	524	527	531	535	538	542	545	549	552	556	561	565	570	576	580
20	517	522	526	529	533	536	539	543	547	551	554	559	563	568	573	578	580
21	519	524	527	531	535	538	542	545	549	552	556	561	565	570	576	580	580
22	522	526	529	533	536	539	543	547	551	554	559	563	568	573	578	580	580
23	524	527	531	535	538	542	545	549	552	556	561	565	570	576	580	580	580
24	526	529	533	536	539	543	547	551	554	559	563	568	573	578	580	580	580
25	527	531	535	538	542	545	549	552	556	561	565	570	576	580	580	580	580
26	529	533	536	539	543	547	551	554	559	563	568	573	578	580	580	580	580
27	531	535	538	542	545	549	552	556	561	565	570	576	580	580	580	580	580
28	533	536	539	543	547	551	554	559	563	568	573	578	580	580	580	580	580
29	535	538	542	545	549	552	556	561	565	570	576	580	580	580	580	580	580
30	536	539	543	547	551	554	559	563	568	573	578	580	580	580	580	580	580
31	538	542	545	549	552	556	561	565	570	576	580	580	580	580	580	580	580
32	539	543	547	551	554	559	563	568	573	578	580	580	580	580	580	580	580

Table J-108. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	503	509	514	519	524	528	531	535	539
1	500	500	500	500	500	500	500	500	506	512	517	521	526	530	533	537	540
2	500	500	500	500	500	500	500	503	509	514	519	524	528	531	535	539	542
3	500	500	500	500	500	500	500	506	512	517	521	526	530	533	537	540	544
4	500	500	500	500	500	500	503	509	514	519	524	528	531	535	539	542	546
5	500	500	500	500	500	500	506	512	517	521	526	530	533	537	540	544	547
6	500	500	500	500	500	503	509	514	519	524	528	531	535	539	542	546	549
7	500	500	500	500	500	506	512	517	521	526	530	533	537	540	544	547	551
8	500	500	500	500	503	509	514	519	524	528	531	535	539	542	546	549	553
9	500	500	500	500	506	512	517	521	526	530	533	537	540	544	547	551	555
10	500	500	500	503	509	514	519	524	528	531	535	539	542	546	549	553	557
11	500	500	500	506	512	517	521	526	530	533	537	540	544	547	551	555	559
12	500	500	503	509	514	519	524	528	531	535	539	542	546	549	553	557	562
13	500	500	506	512	517	521	526	530	533	537	540	544	547	551	555	559	563
14	500	503	509	514	519	524	528	531	535	539	542	546	549	553	557	562	566
15	500	506	512	517	521	526	530	533	537	540	544	547	551	555	559	563	569
16	503	509	514	519	524	528	531	535	539	542	546	549	553	557	562	566	572
17	506	512	517	521	526	530	533	537	540	544	547	551	555	559	563	569	574
18	509	514	519	524	528	531	535	539	542	546	549	553	557	562	566	572	577
19	512	517	521	526	530	533	537	540	544	547	551	555	559	563	569	574	580
20	514	519	524	528	531	535	539	542	546	549	553	557	562	566	572	577	580
21	517	521	526	530	533	537	540	544	547	551	555	559	563	569	574	580	580
22	519	524	528	531	535	539	542	546	549	553	557	562	566	572	577	580	580
23	521	526	530	533	537	540	544	547	551	555	559	563	569	574	580	580	580
24	524	528	531	535	539	542	546	549	553	557	562	566	572	577	580	580	580
25	526	530	533	537	540	544	547	551	555	559	563	569	574	580	580	580	580
26	528	531	535	539	542	546	549	553	557	562	566	572	577	580	580	580	580
27	530	533	537	540	544	547	551	555	559	563	569	574	580	580	580	580	580
28	531	535	539	542	546	549	553	557	562	566	572	577	580	580	580	580	580
29	533	537	540	544	547	551	555	559	563	569	574	580	580	580	580	580	580
30	535	539	542	546	549	553	557	562	566	572	577	580	580	580	580	580	580
31	537	540	544	547	551	555	559	563	569	574	580	580	580	580	580	580	580
32	539	542	546	549	553	557	562	566	572	577	580	580	580	580	580	580	580

Table J-109. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	505	511	516	520	525	529	532	536	539
1	500	500	500	500	500	500	500	501	508	513	518	523	527	530	534	537	541
2	500	500	500	500	500	500	500	505	511	516	520	525	529	532	536	539	543
3	500	500	500	500	500	500	501	508	513	518	523	527	530	534	537	541	544
4	500	500	500	500	500	500	505	511	516	520	525	529	532	536	539	543	546
5	500	500	500	500	500	501	508	513	518	523	527	530	534	537	541	544	548
6	500	500	500	500	500	505	511	516	520	525	529	532	536	539	543	546	550
7	500	500	500	500	501	508	513	518	523	527	530	534	537	541	544	548	552
8	500	500	500	500	505	511	516	520	525	529	532	536	539	543	546	550	554
9	500	500	500	501	508	513	518	523	527	530	534	537	541	544	548	552	556
10	500	500	500	505	511	516	520	525	529	532	536	539	543	546	550	554	558
11	500	500	501	508	513	518	523	527	530	534	537	541	544	548	552	556	560
12	500	500	505	511	516	520	525	529	532	536	539	543	546	550	554	558	562
13	500	501	508	513	518	523	527	530	534	537	541	544	548	552	556	560	565
14	500	505	511	516	520	525	529	532	536	539	543	546	550	554	558	562	567
15	501	508	513	518	523	527	530	534	537	541	544	548	552	556	560	565	570
16	505	511	516	520	525	529	532	536	539	543	546	550	554	558	562	567	572
17	508	513	518	523	527	530	534	537	541	544	548	552	556	560	565	570	575
18	511	516	520	525	529	532	536	539	543	546	550	554	558	562	567	572	578
19	513	518	523	527	530	534	537	541	544	548	552	556	560	565	570	575	580
20	516	520	525	529	532	536	539	543	546	550	554	558	562	567	572	578	580
21	518	523	527	530	534	537	541	544	548	552	556	560	565	570	575	580	580
22	520	525	529	532	536	539	543	546	550	554	558	562	567	572	578	580	580
23	523	527	530	534	537	541	544	548	552	556	560	565	570	575	580	580	580
24	525	529	532	536	539	543	546	550	554	558	562	567	572	578	580	580	580
25	527	530	534	537	541	544	548	552	556	560	565	570	575	580	580	580	580
26	529	532	536	539	543	546	550	554	558	562	567	572	578	580	580	580	580
27	530	534	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580
28	532	536	539	543	546	550	554	558	562	567	572	578	580	580	580	580	580
29	534	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580	580
30	536	539	543	546	550	554	558	562	567	572	578	580	580	580	580	580	580
31	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580	580	580
32	539	543	546	550	554	558	562	567	572	578	580	580	580	580	580	580	580

Table J-110. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 5, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	500	500	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539
1	500	500	500	500	500	500	500	501	507	512	517	522	526	530	533	537	541
2	500	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542
3	500	500	500	500	500	500	501	507	512	517	522	526	530	533	537	541	544
4	500	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546
5	500	500	500	500	500	501	507	512	517	522	526	530	533	537	541	544	548
6	500	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550
7	500	500	500	500	501	507	512	517	522	526	530	533	537	541	544	548	552
8	500	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554
9	500	500	500	501	507	512	517	522	526	530	533	537	541	544	548	552	556
10	500	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558
11	500	500	501	507	512	517	522	526	530	533	537	541	544	548	552	556	560
12	500	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563
13	500	501	507	512	517	522	526	530	533	537	541	544	548	552	556	560	565
14	500	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563	567
15	501	507	512	517	522	526	530	533	537	541	544	548	552	556	560	565	570
16	504	510	515	519	524	528	532	535	539	542	546	550	554	558	563	567	573
17	507	512	517	522	526	530	533	537	541	544	548	552	556	560	565	570	575
18	510	515	519	524	528	532	535	539	542	546	550	554	558	563	567	573	578
19	512	517	522	526	530	533	537	541	544	548	552	556	560	565	570	575	580
20	515	519	524	528	532	535	539	542	546	550	554	558	563	567	573	578	580
21	517	522	526	530	533	537	541	544	548	552	556	560	565	570	575	580	580
22	519	524	528	532	535	539	542	546	550	554	558	563	567	573	578	580	580
23	522	526	530	533	537	541	544	548	552	556	560	565	570	575	580	580	580
24	524	528	532	535	539	542	546	550	554	558	563	567	573	578	580	580	580
25	526	530	533	537	541	544	548	552	556	560	565	570	575	580	580	580	580
26	528	532	535	539	542	546	550	554	558	563	567	573	578	580	580	580	580
27	530	533	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580
28	532	535	539	542	546	550	554	558	563	567	573	578	580	580	580	580	580
29	533	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580	580
30	535	539	542	546	550	554	558	563	567	573	578	580	580	580	580	580	580
31	537	541	544	548	552	556	560	565	570	575	580	580	580	580	580	580	580
32	539	542	546	550	554	558	563	567	573	578	580	580	580	580	580	580	580

Table J-111. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834
1	800	800	800	800	800	800	800	803	808	812	816	820	823	827	830	833	836
2	800	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837
3	800	800	800	800	800	800	803	808	812	816	820	823	827	830	833	836	839
4	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840
5	800	800	800	800	800	803	808	812	816	820	823	827	830	833	836	839	842
6	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843
7	800	800	800	800	803	808	812	816	820	823	827	830	833	836	839	842	845
8	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843	847
9	800	800	800	803	808	812	816	820	823	827	830	833	836	839	842	845	848
10	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843	847	850
11	800	800	803	808	812	816	820	823	827	830	833	836	839	842	845	848	852
12	800	800	806	810	814	818	822	825	828	831	834	837	840	843	847	850	854
13	800	803	808	812	816	820	823	827	830	833	836	839	842	845	848	852	856
14	800	806	810	814	818	822	825	828	831	834	837	840	843	847	850	854	858
15	803	808	812	816	820	823	827	830	833	836	839	842	845	848	852	856	860
16	806	810	814	818	822	825	828	831	834	837	840	843	847	850	854	858	862
17	808	812	816	820	823	827	830	833	836	839	842	845	848	852	856	860	864
18	810	814	818	822	825	828	831	834	837	840	843	847	850	854	858	862	867
19	812	816	820	823	827	830	833	836	839	842	845	848	852	856	860	864	869
20	814	818	822	825	828	831	834	837	840	843	847	850	854	858	862	867	872
21	816	820	823	827	830	833	836	839	842	845	848	852	856	860	864	869	875
22	818	822	825	828	831	834	837	840	843	847	850	854	858	862	867	872	878
23	820	823	827	830	833	836	839	842	845	848	852	856	860	864	869	875	880
24	822	825	828	831	834	837	840	843	847	850	854	858	862	867	872	878	880
25	823	827	830	833	836	839	842	845	848	852	856	860	864	869	875	880	880
26	825	828	831	834	837	840	843	847	850	854	858	862	867	872	878	880	880
27	827	830	833	836	839	842	845	848	852	856	860	864	869	875	880	880	880
28	828	831	834	837	840	843	847	850	854	858	862	867	872	878	880	880	880
29	830	833	836	839	842	845	848	852	856	860	864	869	875	880	880	880	880
30	831	834	837	840	843	847	850	854	858	862	867	872	878	880	880	880	880
31	833	836	839	842	845	848	852	856	860	864	869	875	880	880	880	880	880
32	834	837	840	843	847	850	854	858	862	867	872	878	880	880	880	880	880

Table J-112. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834
1	800	800	800	800	800	800	800	803	808	812	816	819	823	827	830	833	836
2	800	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837
3	800	800	800	800	800	800	803	808	812	816	819	823	827	830	833	836	839
4	800	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840
5	800	800	800	800	800	803	808	812	816	819	823	827	830	833	836	839	842
6	800	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843
7	800	800	800	800	803	808	812	816	819	823	827	830	833	836	839	842	845
8	800	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843	846
9	800	800	800	803	808	812	816	819	823	827	830	833	836	839	842	845	848
10	800	800	800	806	810	814	818	822	825	828	831	834	837	840	843	846	850
11	800	800	803	808	812	816	819	823	827	830	833	836	839	842	845	848	851
12	800	800	806	810	814	818	822	825	828	831	834	837	840	843	846	850	853
13	800	803	808	812	816	819	823	827	830	833	836	839	842	845	848	851	855
14	800	806	810	814	818	822	825	828	831	834	837	840	843	846	850	853	857
15	803	808	812	816	819	823	827	830	833	836	839	842	845	848	851	855	859
16	806	810	814	818	822	825	828	831	834	837	840	843	846	850	853	857	861
17	808	812	816	819	823	827	830	833	836	839	842	845	848	851	855	859	864
18	810	814	818	822	825	828	831	834	837	840	843	846	850	853	857	861	866
19	812	816	819	823	827	830	833	836	839	842	845	848	851	855	859	864	869
20	814	818	822	825	828	831	834	837	840	843	846	850	853	857	861	866	871
21	816	819	823	827	830	833	836	839	842	845	848	851	855	859	864	869	874
22	818	822	825	828	831	834	837	840	843	846	850	853	857	861	866	871	877
23	819	823	827	830	833	836	839	842	845	848	851	855	859	864	869	874	880
24	822	825	828	831	834	837	840	843	846	850	853	857	861	866	871	877	880
25	823	827	830	833	836	839	842	845	848	851	855	859	864	869	874	880	880
26	825	828	831	834	837	840	843	846	850	853	857	861	866	871	877	880	880
27	827	830	833	836	839	842	845	848	851	855	859	864	869	874	880	880	880
28	828	831	834	837	840	843	846	850	853	857	861	866	871	877	880	880	880
29	830	833	836	839	842	845	848	851	855	859	864	869	874	880	880	880	880
30	831	834	837	840	843	846	850	853	857	861	866	871	877	880	880	880	880
31	833	836	839	842	845	848	851	855	859	864	869	874	880	880	880	880	880
32	834	837	840	843	846	850	853	857	861	866	871	877	880	880	880	880	880

Table J-113. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	802	807	811	816	819	823	827	830	834
1	800	800	800	800	800	800	800	800	804	809	814	818	821	825	829	832	835
2	800	800	800	800	800	800	800	802	807	811	816	819	823	827	830	834	837
3	800	800	800	800	800	800	800	804	809	814	818	821	825	829	832	835	838
4	800	800	800	800	800	800	802	807	811	816	819	823	827	830	834	837	839
5	800	800	800	800	800	800	804	809	814	818	821	825	829	832	835	838	842
6	800	800	800	800	800	802	807	811	816	819	823	827	830	834	837	839	843
7	800	800	800	800	800	804	809	814	818	821	825	829	832	835	838	842	845
8	800	800	800	800	802	807	811	816	819	823	827	830	834	837	839	843	846
9	800	800	800	800	804	809	814	818	821	825	829	832	835	838	842	845	848
10	800	800	800	802	807	811	816	819	823	827	830	834	837	839	843	846	850
11	800	800	800	804	809	814	818	821	825	829	832	835	838	842	845	848	852
12	800	800	802	807	811	816	819	823	827	830	834	837	839	843	846	850	854
13	800	800	804	809	814	818	821	825	829	832	835	838	842	845	848	852	855
14	800	802	807	811	816	819	823	827	830	834	837	839	843	846	850	854	857
15	800	804	809	814	818	821	825	829	832	835	838	842	845	848	852	855	859
16	802	807	811	816	819	823	827	830	834	837	839	843	846	850	854	857	862
17	804	809	814	818	821	825	829	832	835	838	842	845	848	852	855	859	864
18	807	811	816	819	823	827	830	834	837	839	843	846	850	854	857	862	866
19	809	814	818	821	825	829	832	835	838	842	845	848	852	855	859	864	869
20	811	816	819	823	827	830	834	837	839	843	846	850	854	857	862	866	872
21	814	818	821	825	829	832	835	838	842	845	848	852	855	859	864	869	874
22	816	819	823	827	830	834	837	839	843	846	850	854	857	862	866	872	877
23	818	821	825	829	832	835	838	842	845	848	852	855	859	864	869	874	880
24	819	823	827	830	834	837	839	843	846	850	854	857	862	866	872	877	880
25	821	825	829	832	835	838	842	845	848	852	855	859	864	869	874	880	880
26	823	827	830	834	837	839	843	846	850	854	857	862	866	872	877	880	880
27	825	829	832	835	838	842	845	848	852	855	859	864	869	874	880	880	880
28	827	830	834	837	839	843	846	850	854	857	862	866	872	877	880	880	880
29	829	832	835	838	842	845	848	852	855	859	864	869	874	880	880	880	880
30	830	834	837	839	843	846	850	854	857	862	866	872	877	880	880	880	880
31	832	835	838	842	845	848	852	855	859	864	869	874	880	880	880	880	880
32	834	837	839	843	846	850	854	857	862	866	872	877	880	880	880	880	880

Table J-114. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	803	808	813	817	821	825	828	831	835
1	800	800	800	800	800	800	800	801	806	811	815	819	823	826	830	833	836
2	800	800	800	800	800	800	800	803	808	813	817	821	825	828	831	835	838
3	800	800	800	800	800	800	801	806	811	815	819	823	826	830	833	836	839
4	800	800	800	800	800	800	803	808	813	817	821	825	828	831	835	838	841
5	800	800	800	800	800	801	806	811	815	819	823	826	830	833	836	839	842
6	800	800	800	800	800	803	808	813	817	821	825	828	831	835	838	841	844
7	800	800	800	800	801	806	811	815	819	823	826	830	833	836	839	842	846
8	800	800	800	800	803	808	813	817	821	825	828	831	835	838	841	844	847
9	800	800	800	801	806	811	815	819	823	826	830	833	836	839	842	846	849
10	800	800	800	803	808	813	817	821	825	828	831	835	838	841	844	847	851
11	800	800	801	806	811	815	819	823	826	830	833	836	839	842	846	849	853
12	800	800	803	808	813	817	821	825	828	831	835	838	841	844	847	851	854
13	800	801	806	811	815	819	823	826	830	833	836	839	842	846	849	853	856
14	800	803	808	813	817	821	825	828	831	835	838	841	844	847	851	854	858
15	801	806	811	815	819	823	826	830	833	836	839	842	846	849	853	856	860
16	803	808	813	817	821	825	828	831	835	838	841	844	847	851	854	858	863
17	806	811	815	819	823	826	830	833	836	839	842	846	849	853	856	860	865
18	808	813	817	821	825	828	831	835	838	841	844	847	851	854	858	863	867
19	811	815	819	823	826	830	833	836	839	842	846	849	853	856	860	865	870
20	813	817	821	825	828	831	835	838	841	844	847	851	854	858	863	867	873
21	815	819	823	826	830	833	836	839	842	846	849	853	856	860	865	870	875
22	817	821	825	828	831	835	838	841	844	847	851	854	858	863	867	873	878
23	819	823	826	830	833	836	839	842	846	849	853	856	860	865	870	875	880
24	821	825	828	831	835	838	841	844	847	851	854	858	863	867	873	878	880
25	823	826	830	833	836	839	842	846	849	853	856	860	865	870	875	880	880
26	825	828	831	835	838	841	844	847	851	854	858	863	867	873	878	880	880
27	826	830	833	836	839	842	846	849	853	856	860	865	870	875	880	880	880
28	828	831	835	838	841	844	847	851	854	858	863	867	873	878	880	880	880
29	830	833	836	839	842	846	849	853	856	860	865	870	875	880	880	880	880
30	831	835	838	841	844	847	851	854	858	863	867	873	878	880	880	880	880
31	833	836	839	842	846	849	853	856	860	865	870	875	880	880	880	880	880
32	835	838	841	844	847	851	854	858	863	867	873	878	880	880	880	880	880

Table J-115. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	804	809	814	818	821	825	828	831	834
1	800	800	800	800	800	800	800	802	807	811	816	819	823	827	830	833	836
2	800	800	800	800	800	800	800	804	809	814	818	821	825	828	831	834	837
3	800	800	800	800	800	800	802	807	811	816	819	823	827	830	833	836	839
4	800	800	800	800	800	800	804	809	814	818	821	825	828	831	834	837	840
5	800	800	800	800	800	802	807	811	816	819	823	827	830	833	836	839	842
6	800	800	800	800	800	804	809	814	818	821	825	828	831	834	837	840	844
7	800	800	800	800	802	807	811	816	819	823	827	830	833	836	839	842	845
8	800	800	800	800	804	809	814	818	821	825	828	831	834	837	840	844	847
9	800	800	800	802	807	811	816	819	823	827	830	833	836	839	842	845	848
10	800	800	800	804	809	814	818	821	825	828	831	834	837	840	844	847	850
11	800	800	802	807	811	816	819	823	827	830	833	836	839	842	845	848	852
12	800	800	804	809	814	818	821	825	828	831	834	837	840	844	847	850	854
13	800	802	807	811	816	819	823	827	830	833	836	839	842	845	848	852	856
14	800	804	809	814	818	821	825	828	831	834	837	840	844	847	850	854	858
15	802	807	811	816	819	823	827	830	833	836	839	842	845	848	852	856	860
16	804	809	814	818	821	825	828	831	834	837	840	844	847	850	854	858	862
17	807	811	816	819	823	827	830	833	836	839	842	845	848	852	856	860	865
18	809	814	818	821	825	828	831	834	837	840	844	847	850	854	858	862	867
19	811	816	819	823	827	830	833	836	839	842	845	848	852	856	860	865	870
20	814	818	821	825	828	831	834	837	840	844	847	850	854	858	862	867	873
21	816	819	823	827	830	833	836	839	842	845	848	852	856	860	865	870	876
22	818	821	825	828	831	834	837	840	844	847	850	854	858	862	867	873	879
23	819	823	827	830	833	836	839	842	845	848	852	856	860	865	870	876	880
24	821	825	828	831	834	837	840	844	847	850	854	858	862	867	873	879	880
25	823	827	830	833	836	839	842	845	848	852	856	860	865	870	876	880	880
26	825	828	831	834	837	840	844	847	850	854	858	862	867	873	879	880	880
27	827	830	833	836	839	842	845	848	852	856	860	865	870	876	880	880	880
28	828	831	834	837	840	844	847	850	854	858	862	867	873	879	880	880	880
29	830	833	836	839	842	845	848	852	856	860	865	870	876	880	880	880	880
30	831	834	837	840	844	847	850	854	858	862	867	873	879	880	880	880	880
31	833	836	839	842	845	848	852	856	860	865	870	876	880	880	880	880	880
32	834	837	840	844	847	850	854	858	862	867	873	879	880	880	880	880	880

Table J-116. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 8, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	800	800	800	800	800	800	800	800	804	809	813	817	821	824	827	831	834
1	800	800	800	800	800	800	800	801	806	811	815	819	822	826	829	832	835
2	800	800	800	800	800	800	800	804	809	813	817	821	824	827	831	834	837
3	800	800	800	800	800	800	801	806	811	815	819	822	826	829	832	835	838
4	800	800	800	800	800	800	804	809	813	817	821	824	827	831	834	837	839
5	800	800	800	800	800	801	806	811	815	819	822	826	829	832	835	838	841
6	800	800	800	800	800	804	809	813	817	821	824	827	831	834	837	839	843
7	800	800	800	800	801	806	811	815	819	822	826	829	832	835	838	841	845
8	800	800	800	800	804	809	813	817	821	824	827	831	834	837	839	843	846
9	800	800	800	801	806	811	815	819	822	826	829	832	835	838	841	845	848
10	800	800	800	804	809	813	817	821	824	827	831	834	837	839	843	846	850
11	800	800	801	806	811	815	819	822	826	829	832	835	838	841	845	848	851
12	800	800	804	809	813	817	821	824	827	831	834	837	839	843	846	850	853
13	800	801	806	811	815	819	822	826	829	832	835	838	841	845	848	851	855
14	800	804	809	813	817	821	824	827	831	834	837	839	843	846	850	853	857
15	801	806	811	815	819	822	826	829	832	835	838	841	845	848	851	855	859
16	804	809	813	817	821	824	827	831	834	837	839	843	846	850	853	857	862
17	806	811	815	819	822	826	829	832	835	838	841	845	848	851	855	859	864
18	809	813	817	821	824	827	831	834	837	839	843	846	850	853	857	862	867
19	811	815	819	822	826	829	832	835	838	841	845	848	851	855	859	864	869
20	813	817	821	824	827	831	834	837	839	843	846	850	853	857	862	867	872
21	815	819	822	826	829	832	835	838	841	845	848	851	855	859	864	869	875
22	817	821	824	827	831	834	837	839	843	846	850	853	857	862	867	872	878
23	819	822	826	829	832	835	838	841	845	848	851	855	859	864	869	875	880
24	821	824	827	831	834	837	839	843	846	850	853	857	862	867	872	878	880
25	822	826	829	832	835	838	841	845	848	851	855	859	864	869	875	880	880
26	824	827	831	834	837	839	843	846	850	853	857	862	867	872	878	880	880
27	826	829	832	835	838	841	845	848	851	855	859	864	869	875	880	880	880
28	827	831	834	837	839	843	846	850	853	857	862	867	872	878	880	880	880
29	829	832	835	838	841	845	848	851	855	859	864	869	875	880	880	880	880
30	831	834	837	839	843	846	850	853	857	862	867	872	878	880	880	880	880
31	832	835	838	841	845	848	851	855	859	864	869	875	880	880	880	880	880
32	834	837	839	843	846	850	853	857	862	867	872	878	880	880	880	880	880

Table J-117. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score																
	0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
0	1100	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136
1	1100	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138
2	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139
3	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140
4	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142
5	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143
6	1100	1100	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145
7	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146
8	1100	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148
9	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149
10	1100	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151
11	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152
12	1100	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154
13	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156
14	1105	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158
15	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159
16	1110	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161
17	1112	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163
18	1114	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165
19	1116	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167
20	1118	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170
21	1119	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172
22	1121	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175
23	1123	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177
24	1125	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180
25	1126	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180
26	1128	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180
27	1129	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180
28	1131	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180	1180
29	1132	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180	1180
30	1133	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180	1180	1180
31	1135	1138	1140	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180	1180	1180
32	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180	1180	1180	1180

Table J-118. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136
1	1100	1100	1100	1100	1100	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137
2	1100	1100	1100	1100	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138
3	1100	1100	1100	1100	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139
4	1100	1100	1100	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141
5	1100	1100	1100	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143
6	1100	1100	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144
7	1100	1100	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146
8	1100	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147
9	1100	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149
10	1100	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151
11	1100	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152
12	1100	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154
13	1102	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156
14	1105	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157
15	1107	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159
16	1110	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161
17	1112	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163
18	1114	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165
19	1116	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167
20	1117	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170
21	1119	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172
22	1121	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175
23	1122	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177
24	1124	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175	1180
25	1125	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180
26	1127	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175	1180	1180
27	1128	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180
28	1130	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175	1180	1180	1180
29	1131	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180	1180
30	1133	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175	1180	1180	1180	1180
31	1134	1137	1139	1143	1146	1149	1152	1156	1159	1163	1167	1172	1177	1180	1180	1180	1180
32	1136	1138	1141	1144	1147	1151	1154	1157	1161	1165	1170	1175	1180	1180	1180	1180	1180

Table J-119. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137
1	1100	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138
2	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139
3	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141
4	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142
5	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144
6	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145
7	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147
8	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148
9	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150
10	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152
11	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153
12	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154
13	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157
14	1105	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158
15	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160
16	1110	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162
17	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164
18	1114	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166
19	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168
20	1118	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170
21	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172
22	1121	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174
23	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172	1177
24	1124	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174	1180
25	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172	1177	1180
26	1128	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174	1180	1180
27	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172	1177	1180	1180
28	1131	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174	1180	1180	1180
29	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172	1177	1180	1180	1180
30	1134	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174	1180	1180	1180	1180
31	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1168	1172	1177	1180	1180	1180	1180
32	1137	1139	1142	1145	1148	1152	1154	1158	1162	1166	1170	1174	1180	1180	1180	1180	1180

Table J-120. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135
1	1100	1100	1100	1100	1100	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136
2	1100	1100	1100	1100	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138
3	1100	1100	1100	1100	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139
4	1100	1100	1100	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141
5	1100	1100	1100	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142
6	1100	1100	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143
7	1100	1100	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145
8	1100	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146
9	1100	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148
10	1100	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149
11	1100	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151
12	1100	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153
13	1101	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154
14	1104	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156
15	1106	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158
16	1109	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160
17	1111	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161
18	1113	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163
19	1115	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165
20	1117	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168
21	1118	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170
22	1120	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172
23	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175
24	1123	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172	1177
25	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180
26	1126	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172	1177	1180
27	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180
28	1129	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172	1177	1180	1180
29	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180	1180
30	1132	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172	1177	1180	1180	1180
31	1134	1136	1139	1142	1145	1148	1151	1154	1158	1161	1165	1170	1175	1180	1180	1180	1180
32	1135	1138	1141	1143	1146	1149	1153	1156	1160	1163	1168	1172	1177	1180	1180	1180	1180

Table J-121. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135
1	1100	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136
2	1100	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138
3	1100	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139
4	1100	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141
5	1100	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142
6	1100	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144
7	1100	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145
8	1100	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147
9	1100	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148
10	1100	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150
11	1100	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151
12	1100	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153
13	1100	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154
14	1103	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157
15	1105	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158
16	1108	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160
17	1110	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162
18	1112	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164
19	1114	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166
20	1116	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169
21	1118	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171
22	1119	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174
23	1121	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176
24	1123	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179
25	1124	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180
26	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180
27	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180
28	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180	1180
29	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180	1180
30	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180	1180	1180
31	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180	1180	1180
32	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180	1180	1180	1180

Table J-122. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Social Studies Grade 11, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	1100	1100	1100	1100	1100	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134
1	1100	1100	1100	1100	1100	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135
2	1100	1100	1100	1100	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136
3	1100	1100	1100	1100	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138
4	1100	1100	1100	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139
5	1100	1100	1100	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141
6	1100	1100	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142
7	1100	1100	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144
8	1100	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145
9	1100	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147
10	1100	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148
11	1100	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150
12	1100	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151
13	1101	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153
14	1104	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154
15	1106	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157
16	1108	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158
17	1110	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160
18	1112	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162
19	1114	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164
20	1116	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166
21	1117	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169
22	1119	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171
23	1120	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174
24	1122	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176
25	1124	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179
26	1125	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180
27	1126	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180
28	1128	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180
29	1129	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180	1180
30	1131	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180	1180
31	1132	1135	1138	1141	1144	1147	1150	1153	1157	1160	1164	1169	1174	1179	1180	1180	1180
32	1134	1136	1139	1142	1145	1148	1151	1154	1158	1162	1166	1171	1176	1180	1180	1180	1180

Table J-123. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	504	508	511	514	516	518	519	522	523
1	500	500	500	504	508	511	514	516	518	519	522	523	525
2	500	500	504	508	511	514	516	518	519	522	523	525	527
3	500	504	508	511	514	516	518	519	522	523	525	527	528
4	504	508	511	514	516	518	519	522	523	525	527	528	530
5	508	511	514	516	518	519	522	523	525	527	528	530	532
6	511	514	516	518	519	522	523	525	527	528	530	532	534
7	514	516	518	519	522	523	525	527	528	530	532	534	536
8	516	518	519	522	523	525	527	528	530	532	534	536	538
9	518	519	522	523	525	527	528	530	532	534	536	538	540
10	519	522	523	525	527	528	530	532	534	536	538	540	543
11	522	523	525	527	528	530	532	534	536	538	540	543	545
12	523	525	527	528	530	532	534	536	538	540	543	545	548

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	525	527	528	530	532	534	536	538	540	543	545	548
1	527	528	530	532	534	536	538	540	543	545	548	551
2	528	530	532	534	536	538	540	543	545	548	551	555
3	530	532	534	536	538	540	543	545	548	551	555	559
4	532	534	536	538	540	543	545	548	551	555	559	563
5	534	536	538	540	543	545	548	551	555	559	563	567
6	536	538	540	543	545	548	551	555	559	563	567	571
7	538	540	543	545	548	551	555	559	563	567	571	575
8	540	543	545	548	551	555	559	563	567	571	575	579
9	543	545	548	551	555	559	563	567	571	575	579	580
10	545	548	551	555	559	563	567	571	575	579	580	580
11	548	551	555	559	563	567	571	575	579	580	580	580
12	551	555	559	563	567	571	575	579	580	580	580	580

Table J-124. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	502	505	507	509	512	514	516
1	500	500	500	500	500	502	505	507	509	512	514	516	518
2	500	500	500	500	502	505	507	509	512	514	516	518	520
3	500	500	500	502	505	507	509	512	514	516	518	520	522
4	500	500	502	505	507	509	512	514	516	518	520	522	524
5	500	502	505	507	509	512	514	516	518	520	522	524	527
6	502	505	507	509	512	514	516	518	520	522	524	527	529
7	505	507	509	512	514	516	518	520	522	524	527	529	531
8	507	509	512	514	516	518	520	522	524	527	529	531	534
9	509	512	514	516	518	520	522	524	527	529	531	534	536
10	512	514	516	518	520	522	524	527	529	531	534	536	539
11	514	516	518	520	522	524	527	529	531	534	536	539	542
12	516	518	520	522	524	527	529	531	534	536	539	542	545

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	518	520	522	524	527	529	531	534	536	539	542	545
1	520	522	524	527	529	531	534	536	539	542	545	548
2	522	524	527	529	531	534	536	539	542	545	548	552
3	524	527	529	531	534	536	539	542	545	548	552	557
4	527	529	531	534	536	539	542	545	548	552	557	562
5	529	531	534	536	539	542	545	548	552	557	562	567
6	531	534	536	539	542	545	548	552	557	562	567	573
7	534	536	539	542	545	548	552	557	562	567	573	580
8	536	539	542	545	548	552	557	562	567	573	580	580
9	539	542	545	548	552	557	562	567	573	580	580	580
10	542	545	548	552	557	562	567	573	580	580	580	580
11	545	548	552	557	562	567	573	580	580	580	580	580
12	548	552	557	562	567	573	580	580	580	580	580	580

Table J-125. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	501	507	510	513	516	518	519	521	523	524
1	500	500	501	507	510	513	516	518	519	521	523	524	526
2	500	501	507	510	513	516	518	519	521	523	524	526	528
3	501	507	510	513	516	518	519	521	523	524	526	528	529
4	507	510	513	516	518	519	521	523	524	526	528	529	531
5	510	513	516	518	519	521	523	524	526	528	529	531	533
6	513	516	518	519	521	523	524	526	528	529	531	533	535
7	516	518	519	521	523	524	526	528	529	531	533	535	537
8	518	519	521	523	524	526	528	529	531	533	535	537	539
9	519	521	523	524	526	528	529	531	533	535	537	539	542
10	521	523	524	526	528	529	531	533	535	537	539	542	545
11	523	524	526	528	529	531	533	535	537	539	542	545	548
12	524	526	528	529	531	533	535	537	539	542	545	548	551

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	526	528	529	531	533	535	537	539	542	545	548	551
1	528	529	531	533	535	537	539	542	545	548	551	555
2	529	531	533	535	537	539	542	545	548	551	555	559
3	531	533	535	537	539	542	545	548	551	555	559	563
4	533	535	537	539	542	545	548	551	555	559	563	567
5	535	537	539	542	545	548	551	555	559	563	567	572
6	537	539	542	545	548	551	555	559	563	567	572	578
7	539	542	545	548	551	555	559	563	567	572	578	580
8	542	545	548	551	555	559	563	567	572	578	580	580
9	545	548	551	555	559	563	567	572	578	580	580	580
10	548	551	555	559	563	567	572	578	580	580	580	580
11	551	555	559	563	567	572	578	580	580	580	580	580
12	555	559	563	567	572	578	580	580	580	580	580	580

Table J-126. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	501	505	509	512	514	516	518	521	522
1	500	500	500	501	505	509	512	514	516	518	521	522	524
2	500	500	501	505	509	512	514	516	518	521	522	524	526
3	500	501	505	509	512	514	516	518	521	522	524	526	528
4	501	505	509	512	514	516	518	521	522	524	526	528	530
5	505	509	512	514	516	518	521	522	524	526	528	530	532
6	509	512	514	516	518	521	522	524	526	528	530	532	534
7	512	514	516	518	521	522	524	526	528	530	532	534	536
8	514	516	518	521	522	524	526	528	530	532	534	536	539
9	516	518	521	522	524	526	528	530	532	534	536	539	541
10	518	521	522	524	526	528	530	532	534	536	539	541	544
11	521	522	524	526	528	530	532	534	536	539	541	544	547
12	522	524	526	528	530	532	534	536	539	541	544	547	550

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	524	526	528	530	532	534	536	539	541	544	547	550
1	526	528	530	532	534	536	539	541	544	547	550	553
2	528	530	532	534	536	539	541	544	547	550	553	557
3	530	532	534	536	539	541	544	547	550	553	557	560
4	532	534	536	539	541	544	547	550	553	557	560	564
5	534	536	539	541	544	547	550	553	557	560	564	568
6	536	539	541	544	547	550	553	557	560	564	568	573
7	539	541	544	547	550	553	557	560	564	568	573	578
8	541	544	547	550	553	557	560	564	568	573	578	580
9	544	547	550	553	557	560	564	568	573	578	580	580
10	547	550	553	557	560	564	568	573	578	580	580	580
11	550	553	557	560	564	568	573	578	580	580	580	580
12	553	557	560	564	568	573	578	580	580	580	580	580

Table J-127. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	505	509	512	515	517	519	521	523	525
1	500	500	500	505	509	512	515	517	519	521	523	525	527
2	500	500	505	509	512	515	517	519	521	523	525	527	528
3	500	505	509	512	515	517	519	521	523	525	527	528	530
4	505	509	512	515	517	519	521	523	525	527	528	530	532
5	509	512	515	517	519	521	523	525	527	528	530	532	534
6	512	515	517	519	521	523	525	527	528	530	532	534	536
7	515	517	519	521	523	525	527	528	530	532	534	536	538
8	517	519	521	523	525	527	528	530	532	534	536	538	539
9	519	521	523	525	527	528	530	532	534	536	538	539	542
10	521	523	525	527	528	530	532	534	536	538	539	542	544
11	523	525	527	528	530	532	534	536	538	539	542	544	547
12	525	527	528	530	532	534	536	538	539	542	544	547	550

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	527	528	530	532	534	536	538	539	542	544	547	550
1	528	530	532	534	536	538	539	542	544	547	550	553
2	530	532	534	536	538	539	542	544	547	550	553	556
3	532	534	536	538	539	542	544	547	550	553	556	560
4	534	536	538	539	542	544	547	550	553	556	560	563
5	536	538	539	542	544	547	550	553	556	560	563	567
6	538	539	542	544	547	550	553	556	560	563	567	571
7	539	542	544	547	550	553	556	560	563	567	571	575
8	542	544	547	550	553	556	560	563	567	571	575	579
9	544	547	550	553	556	560	563	567	571	575	579	580
10	547	550	553	556	560	563	567	571	575	579	580	580
11	550	553	556	560	563	567	571	575	579	580	580	580
12	553	556	560	563	567	571	575	579	580	580	580	580

Table J-128. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	502	507	510	513	515	517	519	521	523
1	500	500	500	502	507	510	513	515	517	519	521	523	524
2	500	500	502	507	510	513	515	517	519	521	523	524	526
3	500	502	507	510	513	515	517	519	521	523	524	526	528
4	502	507	510	513	515	517	519	521	523	524	526	528	530
5	507	510	513	515	517	519	521	523	524	526	528	530	532
6	510	513	515	517	519	521	523	524	526	528	530	532	534
7	513	515	517	519	521	523	524	526	528	530	532	534	536
8	515	517	519	521	523	524	526	528	530	532	534	536	538
9	517	519	521	523	524	526	528	530	532	534	536	538	541
10	519	521	523	524	526	528	530	532	534	536	538	541	543
11	521	523	524	526	528	530	532	534	536	538	541	543	546
12	523	524	526	528	530	532	534	536	538	541	543	546	549

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	524	526	528	530	532	534	536	538	541	543	546	549
1	526	528	530	532	534	536	538	541	543	546	549	553
2	528	530	532	534	536	538	541	543	546	549	553	558
3	530	532	534	536	538	541	543	546	549	553	558	562
4	532	534	536	538	541	543	546	549	553	558	562	567
5	534	536	538	541	543	546	549	553	558	562	567	572
6	536	538	541	543	546	549	553	558	562	567	572	577
7	538	541	543	546	549	553	558	562	567	572	577	580
8	541	543	546	549	553	558	562	567	572	577	580	580
9	543	546	549	553	558	562	567	572	577	580	580	580
10	546	549	553	558	562	567	572	577	580	580	580	580
11	549	553	558	562	567	572	577	580	580	580	580	580
12	553	558	562	567	572	577	580	580	580	580	580	580

Table J-129. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 7

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	504	508	511	514	516	518	520	522	524
1	500	500	500	504	508	511	514	516	518	520	522	524	526
2	500	500	504	508	511	514	516	518	520	522	524	526	528
3	500	504	508	511	514	516	518	520	522	524	526	528	530
4	504	508	511	514	516	518	520	522	524	526	528	530	532
5	508	511	514	516	518	520	522	524	526	528	530	532	534
6	511	514	516	518	520	522	524	526	528	530	532	534	537
7	514	516	518	520	522	524	526	528	530	532	534	537	539
8	516	518	520	522	524	526	528	530	532	534	537	539	542
9	518	520	522	524	526	528	530	532	534	537	539	542	545
10	520	522	524	526	528	530	532	534	537	539	542	545	547
11	522	524	526	528	530	532	534	537	539	542	545	547	550
12	524	526	528	530	532	534	537	539	542	545	547	550	553

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	526	528	530	532	534	537	539	542	545	547	550	553
1	528	530	532	534	537	539	542	545	547	550	553	556
2	530	532	534	537	539	542	545	547	550	553	556	559
3	532	534	537	539	542	545	547	550	553	556	559	562
4	534	537	539	542	545	547	550	553	556	559	562	565
5	537	539	542	545	547	550	553	556	559	562	565	569
6	539	542	545	547	550	553	556	559	562	565	569	572
7	542	545	547	550	553	556	559	562	565	569	572	575
8	545	547	550	553	556	559	562	565	569	572	575	579
9	547	550	553	556	559	562	565	569	572	575	579	580
10	550	553	556	559	562	565	569	572	575	579	580	580
11	553	556	559	562	565	569	572	575	579	580	580	580
12	556	559	562	565	569	572	575	579	580	580	580	580

Table J-130. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 8

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	500	504	508	511	515	518	521
1	500	500	500	500	500	500	504	508	511	515	518	521	524
2	500	500	500	500	500	504	508	511	515	518	521	524	526
3	500	500	500	500	504	508	511	515	518	521	524	526	529
4	500	500	500	504	508	511	515	518	521	524	526	529	531
5	500	500	504	508	511	515	518	521	524	526	529	531	534
6	500	504	508	511	515	518	521	524	526	529	531	534	536
7	504	508	511	515	518	521	524	526	529	531	534	536	538
8	508	511	515	518	521	524	526	529	531	534	536	538	541
9	511	515	518	521	524	526	529	531	534	536	538	541	543
10	515	518	521	524	526	529	531	534	536	538	541	543	546
11	518	521	524	526	529	531	534	536	538	541	543	546	549
12	521	524	526	529	531	534	536	538	541	543	546	549	551

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	524	526	529	531	534	536	538	541	543	546	549	551
1	526	529	531	534	536	538	541	543	546	549	551	554
2	529	531	534	536	538	541	543	546	549	551	554	557
3	531	534	536	538	541	543	546	549	551	554	557	561
4	534	536	538	541	543	546	549	551	554	557	561	565
5	536	538	541	543	546	549	551	554	557	561	565	569
6	538	541	543	546	549	551	554	557	561	565	569	574
7	541	543	546	549	551	554	557	561	565	569	574	580
8	543	546	549	551	554	557	561	565	569	574	580	580
9	546	549	551	554	557	561	565	569	574	580	580	580
10	549	551	554	557	561	565	569	574	580	580	580	580
11	551	554	557	561	565	569	574	580	580	580	580	580
12	554	557	561	565	569	574	580	580	580	580	580	580

Table J-131. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 9

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	504	508	511	514	517	519	522
1	500	500	500	500	500	504	508	511	514	517	519	522	524
2	500	500	500	500	504	508	511	514	517	519	522	524	527
3	500	500	500	504	508	511	514	517	519	522	524	527	529
4	500	500	504	508	511	514	517	519	522	524	527	529	531
5	500	504	508	511	514	517	519	522	524	527	529	531	534
6	504	508	511	514	517	519	522	524	527	529	531	534	536
7	508	511	514	517	519	522	524	527	529	531	534	536	538
8	511	514	517	519	522	524	527	529	531	534	536	538	541
9	514	517	519	522	524	527	529	531	534	536	538	541	543
10	517	519	522	524	527	529	531	534	536	538	541	543	546
11	519	522	524	527	529	531	534	536	538	541	543	546	548
12	522	524	527	529	531	534	536	538	541	543	546	548	551

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	524	527	529	531	534	536	538	541	543	546	548	551
1	527	529	531	534	536	538	541	543	546	548	551	554
2	529	531	534	536	538	541	543	546	548	551	554	558
3	531	534	536	538	541	543	546	548	551	554	558	562
4	534	536	538	541	543	546	548	551	554	558	562	566
5	536	538	541	543	546	548	551	554	558	562	566	572
6	538	541	543	546	548	551	554	558	562	566	572	577
7	541	543	546	548	551	554	558	562	566	572	577	580
8	543	546	548	551	554	558	562	566	572	577	580	580
9	546	548	551	554	558	562	566	572	577	580	580	580
10	548	551	554	558	562	566	572	577	580	580	580	580
11	551	554	558	562	566	572	577	580	580	580	580	580
12	554	558	562	566	572	577	580	580	580	580	580	580

Table J-132. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 10

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	503	508	512	515	517	519	522	524	526
1	500	500	500	503	508	512	515	517	519	522	524	526	528
2	500	500	503	508	512	515	517	519	522	524	526	528	530
3	500	503	508	512	515	517	519	522	524	526	528	530	532
4	503	508	512	515	517	519	522	524	526	528	530	532	533
5	508	512	515	517	519	522	524	526	528	530	532	533	535
6	512	515	517	519	522	524	526	528	530	532	533	535	537
7	515	517	519	522	524	526	528	530	532	533	535	537	539
8	517	519	522	524	526	528	530	532	533	535	537	539	542
9	519	522	524	526	528	530	532	533	535	537	539	542	544
10	522	524	526	528	530	532	533	535	537	539	542	544	546
11	524	526	528	530	532	533	535	537	539	542	544	546	548
12	526	528	530	532	533	535	537	539	542	544	546	548	551

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	528	530	532	533	535	537	539	542	544	546	548	551
1	530	532	533	535	537	539	542	544	546	548	551	553
2	532	533	535	537	539	542	544	546	548	551	553	556
3	533	535	537	539	542	544	546	548	551	553	556	559
4	535	537	539	542	544	546	548	551	553	556	559	563
5	537	539	542	544	546	548	551	553	556	559	563	566
6	539	542	544	546	548	551	553	556	559	563	566	570
7	542	544	546	548	551	553	556	559	563	566	570	574
8	544	546	548	551	553	556	559	563	566	570	574	579
9	546	548	551	553	556	559	563	566	570	574	579	580
10	548	551	553	556	559	563	566	570	574	579	580	580
11	551	553	556	559	563	566	570	574	579	580	580	580
12	553	556	559	563	566	570	574	579	580	580	580	580

Table J-133. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 11

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	504	507	510	512	515	517	519
1	500	500	500	500	500	504	507	510	512	515	517	519	522
2	500	500	500	500	504	507	510	512	515	517	519	522	524
3	500	500	500	504	507	510	512	515	517	519	522	524	527
4	500	500	504	507	510	512	515	517	519	522	524	527	529
5	500	504	507	510	512	515	517	519	522	524	527	529	531
6	504	507	510	512	515	517	519	522	524	527	529	531	534
7	507	510	512	515	517	519	522	524	527	529	531	534	536
8	510	512	515	517	519	522	524	527	529	531	534	536	539
9	512	515	517	519	522	524	527	529	531	534	536	539	542
10	515	517	519	522	524	527	529	531	534	536	539	542	545
11	517	519	522	524	527	529	531	534	536	539	542	545	548
12	519	522	524	527	529	531	534	536	539	542	545	548	551

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	522	524	527	529	531	534	536	539	542	545	548	551
1	524	527	529	531	534	536	539	542	545	548	551	554
2	527	529	531	534	536	539	542	545	548	551	554	558
3	529	531	534	536	539	542	545	548	551	554	558	561
4	531	534	536	539	542	545	548	551	554	558	561	566
5	534	536	539	542	545	548	551	554	558	561	566	571
6	536	539	542	545	548	551	554	558	561	566	571	576
7	539	542	545	548	551	554	558	561	566	571	576	580
8	542	545	548	551	554	558	561	566	571	576	580	580
9	545	548	551	554	558	561	566	571	576	580	580	580
10	548	551	554	558	561	566	571	576	580	580	580	580
11	551	554	558	561	566	571	576	580	580	580	580	580
12	554	558	561	566	571	576	580	580	580	580	580	580

Table J-134. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 5, Scale Form 12

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	500	500	500	500	500	500	503	506	509	512	514	516	519
1	500	500	500	500	500	503	506	509	512	514	516	519	521
2	500	500	500	500	503	506	509	512	514	516	519	521	523
3	500	500	500	503	506	509	512	514	516	519	521	523	526
4	500	500	503	506	509	512	514	516	519	521	523	526	528
5	500	503	506	509	512	514	516	519	521	523	526	528	531
6	503	506	509	512	514	516	519	521	523	526	528	531	533
7	506	509	512	514	516	519	521	523	526	528	531	533	536
8	509	512	514	516	519	521	523	526	528	531	533	536	539
9	512	514	516	519	521	523	526	528	531	533	536	539	542
10	514	516	519	521	523	526	528	531	533	536	539	542	546
11	516	519	521	523	526	528	531	533	536	539	542	546	549
12	519	521	523	526	528	531	533	536	539	542	546	549	553

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	521	523	526	528	531	533	536	539	542	546	549	553
1	523	526	528	531	533	536	539	542	546	549	553	556
2	526	528	531	533	536	539	542	546	549	553	556	560
3	528	531	533	536	539	542	546	549	553	556	560	565
4	531	533	536	539	542	546	549	553	556	560	565	570
5	533	536	539	542	546	549	553	556	560	565	570	575
6	536	539	542	546	549	553	556	560	565	570	575	580
7	539	542	546	549	553	556	560	565	570	575	580	580
8	542	546	549	553	556	560	565	570	575	580	580	580
9	546	549	553	556	560	565	570	575	580	580	580	580
10	549	553	556	560	565	570	575	580	580	580	580	580
11	553	556	560	565	570	575	580	580	580	580	580	580
12	556	560	565	570	575	580	580	580	580	580	580	580

Table J-135. 2009–10 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 1

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	805	809	813	815	817	819	821	823	824
1	800	800	800	805	809	813	815	817	819	821	823	824	826
2	800	800	805	809	813	815	817	819	821	823	824	826	828
3	800	805	809	813	815	817	819	821	823	824	826	828	829
4	805	809	813	815	817	819	821	823	824	826	828	829	831
5	809	813	815	817	819	821	823	824	826	828	829	831	832
6	813	815	817	819	821	823	824	826	828	829	831	832	834
7	815	817	819	821	823	824	826	828	829	831	832	834	836
8	817	819	821	823	824	826	828	829	831	832	834	836	838
9	819	821	823	824	826	828	829	831	832	834	836	838	839
10	821	823	824	826	828	829	831	832	834	836	838	839	842
11	823	824	826	828	829	831	832	834	836	838	839	842	845
12	824	826	828	829	831	832	834	836	838	839	842	845	847

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	826	828	829	831	832	834	836	838	839	842	845	847
1	828	829	831	832	834	836	838	839	842	845	847	850
2	829	831	832	834	836	838	839	842	845	847	850	853
3	831	832	834	836	838	839	842	845	847	850	853	856
4	832	834	836	838	839	842	845	847	850	853	856	859
5	834	836	838	839	842	845	847	850	853	856	859	863
6	836	838	839	842	845	847	850	853	856	859	863	866
7	838	839	842	845	847	850	853	856	859	863	866	869
8	839	842	845	847	850	853	856	859	863	866	869	873
9	842	845	847	850	853	856	859	863	866	869	873	878
10	845	847	850	853	856	859	863	866	869	873	878	880
11	847	850	853	856	859	863	866	869	873	878	880	880
12	850	853	856	859	863	866	869	873	878	880	880	880

Table J-136. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 2

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	801	807	810	813	816	818	819	821	823	824
1	800	800	801	807	810	813	816	818	819	821	823	824	826
2	800	801	807	810	813	816	818	819	821	823	824	826	827
3	801	807	810	813	816	818	819	821	823	824	826	827	829
4	807	810	813	816	818	819	821	823	824	826	827	829	830
5	810	813	816	818	819	821	823	824	826	827	829	830	832
6	813	816	818	819	821	823	824	826	827	829	830	832	833
7	816	818	819	821	823	824	826	827	829	830	832	833	835
8	818	819	821	823	824	826	827	829	830	832	833	835	837
9	819	821	823	824	826	827	829	830	832	833	835	837	838
10	821	823	824	826	827	829	830	832	833	835	837	838	840
11	823	824	826	827	829	830	832	833	835	837	838	840	843
12	824	826	827	829	830	832	833	835	837	838	840	843	845

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	826	827	829	830	832	833	835	837	838	840	843	845
1	827	829	830	832	833	835	837	838	840	843	845	848
2	829	830	832	833	835	837	838	840	843	845	848	850
3	830	832	833	835	837	838	840	843	845	848	850	853
4	832	833	835	837	838	840	843	845	848	850	853	856
5	833	835	837	838	840	843	845	848	850	853	856	859
6	835	837	838	840	843	845	848	850	853	856	859	863
7	837	838	840	843	845	848	850	853	856	859	863	866
8	838	840	843	845	848	850	853	856	859	863	866	870
9	840	843	845	848	850	853	856	859	863	866	870	874
10	843	845	848	850	853	856	859	863	866	870	874	880
11	845	848	850	853	856	859	863	866	870	874	880	880
12	848	850	853	856	859	863	866	870	874	880	880	880

Table J-137. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 3

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	801	806	809	812	814	816	818	820	822
1	800	800	800	801	806	809	812	814	816	818	820	822	824
2	800	800	801	806	809	812	814	816	818	820	822	824	825
3	800	801	806	809	812	814	816	818	820	822	824	825	827
4	801	806	809	812	814	816	818	820	822	824	825	827	829
5	806	809	812	814	816	818	820	822	824	825	827	829	830
6	809	812	814	816	818	820	822	824	825	827	829	830	832
7	812	814	816	818	820	822	824	825	827	829	830	832	834
8	814	816	818	820	822	824	825	827	829	830	832	834	836
9	816	818	820	822	824	825	827	829	830	832	834	836	838
10	818	820	822	824	825	827	829	830	832	834	836	838	839
11	820	822	824	825	827	829	830	832	834	836	838	839	842
12	822	824	825	827	829	830	832	834	836	838	839	842	844

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	824	825	827	829	830	832	834	836	838	839	842	844
1	825	827	829	830	832	834	836	838	839	842	844	847
2	827	829	830	832	834	836	838	839	842	844	847	850
3	829	830	832	834	836	838	839	842	844	847	850	852
4	830	832	834	836	838	839	842	844	847	850	852	856
5	832	834	836	838	839	842	844	847	850	852	856	859
6	834	836	838	839	842	844	847	850	852	856	859	862
7	836	838	839	842	844	847	850	852	856	859	862	866
8	838	839	842	844	847	850	852	856	859	862	866	870
9	839	842	844	847	850	852	856	859	862	866	870	875
10	842	844	847	850	852	856	859	862	866	870	875	880
11	844	847	850	852	856	859	862	866	870	875	880	880
12	847	850	852	856	859	862	866	870	875	880	880	880

Table J-138. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 4

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	801	806	810	812	815	817	819	821	823
1	800	800	800	801	806	810	812	815	817	819	821	823	825
2	800	800	801	806	810	812	815	817	819	821	823	825	827
3	800	801	806	810	812	815	817	819	821	823	825	827	828
4	801	806	810	812	815	817	819	821	823	825	827	828	830
5	806	810	812	815	817	819	821	823	825	827	828	830	832
6	810	812	815	817	819	821	823	825	827	828	830	832	833
7	812	815	817	819	821	823	825	827	828	830	832	833	835
8	815	817	819	821	823	825	827	828	830	832	833	835	837
9	817	819	821	823	825	827	828	830	832	833	835	837	839
10	819	821	823	825	827	828	830	832	833	835	837	839	841
11	821	823	825	827	828	830	832	833	835	837	839	841	844
12	823	825	827	828	830	832	833	835	837	839	841	844	846

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	825	827	828	830	832	833	835	837	839	841	844	846
1	827	828	830	832	833	835	837	839	841	844	846	849
2	828	830	832	833	835	837	839	841	844	846	849	852
3	830	832	833	835	837	839	841	844	846	849	852	855
4	832	833	835	837	839	841	844	846	849	852	855	858
5	833	835	837	839	841	844	846	849	852	855	858	861
6	835	837	839	841	844	846	849	852	855	858	861	865
7	837	839	841	844	846	849	852	855	858	861	865	869
8	839	841	844	846	849	852	855	858	861	865	869	873
9	841	844	846	849	852	855	858	861	865	869	873	878
10	844	846	849	852	855	858	861	865	869	873	878	880
11	846	849	852	855	858	861	865	869	873	878	880	880
12	849	852	855	858	861	865	869	873	878	880	880	880

Table J-139. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 5

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	801	806	809	811	813	815	817	819	821
1	800	800	800	801	806	809	811	813	815	817	819	821	822
2	800	800	801	806	809	811	813	815	817	819	821	822	824
3	800	801	806	809	811	813	815	817	819	821	822	824	825
4	801	806	809	811	813	815	817	819	821	822	824	825	827
5	806	809	811	813	815	817	819	821	822	824	825	827	829
6	809	811	813	815	817	819	821	822	824	825	827	829	830
7	811	813	815	817	819	821	822	824	825	827	829	830	832
8	813	815	817	819	821	822	824	825	827	829	830	832	834
9	815	817	819	821	822	824	825	827	829	830	832	834	835
10	817	819	821	822	824	825	827	829	830	832	834	835	837
11	819	821	822	824	825	827	829	830	832	834	835	837	839
12	821	822	824	825	827	829	830	832	834	835	837	839	841

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	822	824	825	827	829	830	832	834	835	837	839	841
1	824	825	827	829	830	832	834	835	837	839	841	844
2	825	827	829	830	832	834	835	837	839	841	844	846
3	827	829	830	832	834	835	837	839	841	844	846	849
4	829	830	832	834	835	837	839	841	844	846	849	852
5	830	832	834	835	837	839	841	844	846	849	852	856
6	832	834	835	837	839	841	844	846	849	852	856	860
7	834	835	837	839	841	844	846	849	852	856	860	865
8	835	837	839	841	844	846	849	852	856	860	865	870
9	837	839	841	844	846	849	852	856	860	865	870	876
10	839	841	844	846	849	852	856	860	865	870	876	880
11	841	844	846	849	852	856	860	865	870	876	880	880
12	844	846	849	852	856	860	865	870	876	880	880	880

Table J-140. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 6

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	803	808	812	814	817	819	821	823	825
1	800	800	800	803	808	812	814	817	819	821	823	825	826
2	800	800	803	808	812	814	817	819	821	823	825	826	828
3	800	803	808	812	814	817	819	821	823	825	826	828	830
4	803	808	812	814	817	819	821	823	825	826	828	830	831
5	808	812	814	817	819	821	823	825	826	828	830	831	833
6	812	814	817	819	821	823	825	826	828	830	831	833	835
7	814	817	819	821	823	825	826	828	830	831	833	835	836
8	817	819	821	823	825	826	828	830	831	833	835	836	838
9	819	821	823	825	826	828	830	831	833	835	836	838	840
10	821	823	825	826	828	830	831	833	835	836	838	840	842
11	823	825	826	828	830	831	833	835	836	838	840	842	845
12	825	826	828	830	831	833	835	836	838	840	842	845	847

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	826	828	830	831	833	835	836	838	840	842	845	847
1	828	830	831	833	835	836	838	840	842	845	847	850
2	830	831	833	835	836	838	840	842	845	847	850	852
3	831	833	835	836	838	840	842	845	847	850	852	855
4	833	835	836	838	840	842	845	847	850	852	855	858
5	835	836	838	840	842	845	847	850	852	855	858	861
6	836	838	840	842	845	847	850	852	855	858	861	865
7	838	840	842	845	847	850	852	855	858	861	865	869
8	840	842	845	847	850	852	855	858	861	865	869	873
9	842	845	847	850	852	855	858	861	865	869	873	877
10	845	847	850	852	855	858	861	865	869	873	877	880
11	847	850	852	855	858	861	865	869	873	877	880	880
12	850	852	855	858	861	865	869	873	877	880	880	880

Table J-141. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 7

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	807	811	814	816	818	819	822	823	825
1	800	800	800	807	811	814	816	818	819	822	823	825	827
2	800	800	807	811	814	816	818	819	822	823	825	827	828
3	800	807	811	814	816	818	819	822	823	825	827	828	830
4	807	811	814	816	818	819	822	823	825	827	828	830	831
5	811	814	816	818	819	822	823	825	827	828	830	831	833
6	814	816	818	819	822	823	825	827	828	830	831	833	835
7	816	818	819	822	823	825	827	828	830	831	833	835	836
8	818	819	822	823	825	827	828	830	831	833	835	836	838
9	819	822	823	825	827	828	830	831	833	835	836	838	841
10	822	823	825	827	828	830	831	833	835	836	838	841	843
11	823	825	827	828	830	831	833	835	836	838	841	843	846
12	825	827	828	830	831	833	835	836	838	841	843	846	848

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	827	828	830	831	833	835	836	838	841	843	846	848
1	828	830	831	833	835	836	838	841	843	846	848	851
2	830	831	833	835	836	838	841	843	846	848	851	854
3	831	833	835	836	838	841	843	846	848	851	854	857
4	833	835	836	838	841	843	846	848	851	854	857	859
5	835	836	838	841	843	846	848	851	854	857	859	862
6	836	838	841	843	846	848	851	854	857	859	862	865
7	838	841	843	846	848	851	854	857	859	862	865	867
8	841	843	846	848	851	854	857	859	862	865	867	870
9	843	846	848	851	854	857	859	862	865	867	870	874
10	846	848	851	854	857	859	862	865	867	870	874	878
11	848	851	854	857	859	862	865	867	870	874	878	880
12	851	854	857	859	862	865	867	870	874	878	880	880

Table J-142. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 8

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	802	806	809	811	813	815	817	819	821
1	800	800	800	802	806	809	811	813	815	817	819	821	822
2	800	800	802	806	809	811	813	815	817	819	821	822	824
3	800	802	806	809	811	813	815	817	819	821	822	824	826
4	802	806	809	811	813	815	817	819	821	822	824	826	828
5	806	809	811	813	815	817	819	821	822	824	826	828	829
6	809	811	813	815	817	819	821	822	824	826	828	829	831
7	811	813	815	817	819	821	822	824	826	828	829	831	833
8	813	815	817	819	821	822	824	826	828	829	831	833	835
9	815	817	819	821	822	824	826	828	829	831	833	835	837
10	817	819	821	822	824	826	828	829	831	833	835	837	839
11	819	821	822	824	826	828	829	831	833	835	837	839	842
12	821	822	824	826	828	829	831	833	835	837	839	842	845

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	822	824	826	828	829	831	833	835	837	839	842	845
1	824	826	828	829	831	833	835	837	839	842	845	847
2	826	828	829	831	833	835	837	839	842	845	847	850
3	828	829	831	833	835	837	839	842	845	847	850	853
4	829	831	833	835	837	839	842	845	847	850	853	857
5	831	833	835	837	839	842	845	847	850	853	857	860
6	833	835	837	839	842	845	847	850	853	857	860	864
7	835	837	839	842	845	847	850	853	857	860	864	867
8	837	839	842	845	847	850	853	857	860	864	867	871
9	839	842	845	847	850	853	857	860	864	867	871	876
10	842	845	847	850	853	857	860	864	867	871	876	880
11	845	847	850	853	857	860	864	867	871	876	880	880
12	847	850	853	857	860	864	867	871	876	880	880	880

Table J-143. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 9

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	803	806	810	812	815	817	819	821
1	800	800	800	800	803	806	810	812	815	817	819	821	823
2	800	800	800	803	806	810	812	815	817	819	821	823	825
3	800	800	803	806	810	812	815	817	819	821	823	825	826
4	800	803	806	810	812	815	817	819	821	823	825	826	828
5	803	806	810	812	815	817	819	821	823	825	826	828	830
6	806	810	812	815	817	819	821	823	825	826	828	830	831
7	810	812	815	817	819	821	823	825	826	828	830	831	833
8	812	815	817	819	821	823	825	826	828	830	831	833	835
9	815	817	819	821	823	825	826	828	830	831	833	835	837
10	817	819	821	823	825	826	828	830	831	833	835	837	839
11	819	821	823	825	826	828	830	831	833	835	837	839	841
12	821	823	825	826	828	830	831	833	835	837	839	841	844

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	823	825	826	828	830	831	833	835	837	839	841	844
1	825	826	828	830	831	833	835	837	839	841	844	846
2	826	828	830	831	833	835	837	839	841	844	846	849
3	828	830	831	833	835	837	839	841	844	846	849	853
4	830	831	833	835	837	839	841	844	846	849	853	856
5	831	833	835	837	839	841	844	846	849	853	856	860
6	833	835	837	839	841	844	846	849	853	856	860	865
7	835	837	839	841	844	846	849	853	856	860	865	870
8	837	839	841	844	846	849	853	856	860	865	870	875
9	839	841	844	846	849	853	856	860	865	870	875	880
10	841	844	846	849	853	856	860	865	870	875	880	880
11	844	846	849	853	856	860	865	870	875	880	880	880
12	846	849	853	856	860	865	870	875	880	880	880	880

Table J-144. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 10

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	804	808	811	814	816	818	820	822
1	800	800	800	800	804	808	811	814	816	818	820	822	824
2	800	800	800	804	808	811	814	816	818	820	822	824	826
3	800	800	804	808	811	814	816	818	820	822	824	826	827
4	800	804	808	811	814	816	818	820	822	824	826	827	829
5	804	808	811	814	816	818	820	822	824	826	827	829	831
6	808	811	814	816	818	820	822	824	826	827	829	831	832
7	811	814	816	818	820	822	824	826	827	829	831	832	834
8	814	816	818	820	822	824	826	827	829	831	832	834	836
9	816	818	820	822	824	826	827	829	831	832	834	836	838
10	818	820	822	824	826	827	829	831	832	834	836	838	839
11	820	822	824	826	827	829	831	832	834	836	838	839	842
12	822	824	826	827	829	831	832	834	836	838	839	842	844

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	824	826	827	829	831	832	834	836	838	839	842	844
1	826	827	829	831	832	834	836	838	839	842	844	846
2	827	829	831	832	834	836	838	839	842	844	846	849
3	829	831	832	834	836	838	839	842	844	846	849	852
4	831	832	834	836	838	839	842	844	846	849	852	855
5	832	834	836	838	839	842	844	846	849	852	855	858
6	834	836	838	839	842	844	846	849	852	855	858	862
7	836	838	839	842	844	846	849	852	855	858	862	866
8	838	839	842	844	846	849	852	855	858	862	866	870
9	839	842	844	846	849	852	855	858	862	866	870	875
10	842	844	846	849	852	855	858	862	866	870	875	880
11	844	846	849	852	855	858	862	866	870	875	880	880
12	846	849	852	855	858	862	866	870	875	880	880	880

Table J-145. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 11

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	804	808	811	813	815	817	819	821	822
1	800	800	800	804	808	811	813	815	817	819	821	822	823
2	800	800	804	808	811	813	815	817	819	821	822	823	825
3	800	804	808	811	813	815	817	819	821	822	823	825	826
4	804	808	811	813	815	817	819	821	822	823	825	826	828
5	808	811	813	815	817	819	821	822	823	825	826	828	829
6	811	813	815	817	819	821	822	823	825	826	828	829	831
7	813	815	817	819	821	822	823	825	826	828	829	831	832
8	815	817	819	821	822	823	825	826	828	829	831	832	834
9	817	819	821	822	823	825	826	828	829	831	832	834	836
10	819	821	822	823	825	826	828	829	831	832	834	836	838
11	821	822	823	825	826	828	829	831	832	834	836	838	839
12	822	823	825	826	828	829	831	832	834	836	838	839	842

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	823	825	826	828	829	831	832	834	836	838	839	842
1	825	826	828	829	831	832	834	836	838	839	842	844
2	826	828	829	831	832	834	836	838	839	842	844	847
3	828	829	831	832	834	836	838	839	842	844	847	850
4	829	831	832	834	836	838	839	842	844	847	850	853
5	831	832	834	836	838	839	842	844	847	850	853	856
6	832	834	836	838	839	842	844	847	850	853	856	860
7	834	836	838	839	842	844	847	850	853	856	860	864
8	836	838	839	842	844	847	850	853	856	860	864	869
9	838	839	842	844	847	850	853	856	860	864	869	874
10	839	842	844	847	850	853	856	860	864	869	874	880
11	842	844	847	850	853	856	860	864	869	874	880	880
12	844	847	850	853	856	860	864	869	874	880	880	880

Table J-146. 2010–11 KCCT: Raw Score to Scaled Score Correspondence – Writing Grade 8, Scale Form 12

Multiple-Choice Raw Score	Open-Response Score 0	1	2	3	4	5	6	7	8	9	10	11	12
0	800	800	800	800	800	804	807	811	813	816	818	819	822
1	800	800	800	800	804	807	811	813	816	818	819	822	824
2	800	800	800	804	807	811	813	816	818	819	822	824	826
3	800	800	804	807	811	813	816	818	819	822	824	826	827
4	800	804	807	811	813	816	818	819	822	824	826	827	829
5	804	807	811	813	816	818	819	822	824	826	827	829	831
6	807	811	813	816	818	819	822	824	826	827	829	831	833
7	811	813	816	818	819	822	824	826	827	829	831	833	835
8	813	816	818	819	822	824	826	827	829	831	833	835	837
9	816	818	819	822	824	826	827	829	831	833	835	837	839
10	818	819	822	824	826	827	829	831	833	835	837	839	841
11	819	822	824	826	827	829	831	833	835	837	839	841	844
12	822	824	826	827	829	831	833	835	837	839	841	844	846

Multiple-Choice Raw Score	Open-Response Score 13	14	15	16	17	18	19	20	21	22	23	24
0	824	826	827	829	831	833	835	837	839	841	844	846
1	826	827	829	831	833	835	837	839	841	844	846	849
2	827	829	831	833	835	837	839	841	844	846	849	852
3	829	831	833	835	837	839	841	844	846	849	852	855
4	831	833	835	837	839	841	844	846	849	852	855	858
5	833	835	837	839	841	844	846	849	852	855	858	861
6	835	837	839	841	844	846	849	852	855	858	861	865
7	837	839	841	844	846	849	852	855	858	861	865	869
8	839	841	844	846	849	852	855	858	861	865	869	874
9	841	844	846	849	852	855	858	861	865	869	874	879
10	844	846	849	852	855	858	861	865	869	874	879	880
11	846	849	852	855	858	861	865	869	874	879	880	880
12	849	852	855	858	861	865	869	874	879	880	880	880

Appendix K—Scaled Score to Performance Level Lookup Tables

Table K-1. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	6	1
305	7	1
306	8	1
307	8	1
308	8	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	8	1
316	8	1
317	8	1
318	8	1
319	7	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	7	2
328	7	2
329	7	2
330	7	2
331	7	2
332	7	2
333	7	2
334	7	2
335	7	2
336	7	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	7	3
350	7	3
351	8	3
352	8	3
353	8	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	9	3
364	9	4
365	9	4
366	9	4
367	9	4
368	9	4
369	9	4
370	9	4
371	9	4
372	9	4
373	9	4
374	8	4
375	8	4
376	8	4
377	8	4
378	6	4
379	6	4
380	5	4

Table K-2. 2010–10 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	6	1
302	6	1
303	6	1
304	7	1
305	7	1
306	7	1
307	7	1
308	9	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	9	1
316	9	1
317	9	1
318	9	1
319	8	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	8	2
328	8	2
329	8	2
330	8	2
331	8	2
332	8	2
333	7	2
334	7	2
335	7	2
336	7	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	7	3
350	7	3
351	7	3
352	7	3
353	7	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	9	3
364	9	4
365	9	4
366	9	4
367	9	4
368	9	4
369	9	4
370	9	4
371	9	4
372	9	4
373	9	4
374	8	4
375	8	4
376	8	4
377	8	4
378	8	4
379	6	4
380	5	4

Table K-3. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	6	1
301	6	1
302	6	1
303	6	1
304	7	1
305	7	1
306	7	1
307	9	1
308	9	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	9	1
316	9	1
317	9	1
318	9	1
319	8	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	8	2
328	8	2
329	8	2
330	8	2
331	8	2
332	8	2
333	7	2
334	7	2
335	7	2
336	7	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	7	3
350	7	3
351	7	3
352	7	3
353	7	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	8	3
364	8	4
365	8	4
366	8	4
367	8	4
368	8	4
369	9	4
370	9	4
371	9	4
372	9	4
373	8	4
374	8	4
375	8	4
376	8	4
377	6	4
378	6	4
379	6	4
380	5	4

Table K-4. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	6	1
305	8	1
306	8	1
307	8	1
308	8	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	9	1
316	9	1
317	9	1
318	9	1
319	8	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	8	2
328	8	2
329	8	2
330	8	2
331	8	2
332	7	2
333	7	2
334	8	2
335	8	2
336	8	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	8	3
350	7	3
351	7	3
352	8	3
353	8	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	8	3
364	8	4
365	8	4
366	8	4
367	9	4
368	9	4
369	9	4
370	9	4
371	9	4
372	9	4
373	9	4
374	8	4
375	8	4
376	8	4
377	8	4
378	6	4
379	6	4
380	5	4

Table K-5. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	6	1
301	6	1
302	6	1
303	6	1
304	7	1
305	7	1
306	7	1
307	9	1
308	9	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	9	1
316	9	1
317	8	1
318	8	1
319	8	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	8	2
328	8	2
329	8	2
330	8	2
331	8	2
332	7	2
333	7	2
334	7	2
335	7	2
336	7	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	7	3
350	7	3
351	7	3
352	7	3
353	8	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	8	3
364	8	4
365	8	4
366	8	4
367	9	4
368	9	4
369	9	4
370	9	4
371	9	4
372	9	4
373	9	4
374	8	4
375	8	4
376	8	4
377	8	4
378	6	4
379	6	4
380	5	4

Table K-6. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 3, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	5	1
303	6	1
304	6	1
305	6	1
306	8	1
307	8	1
308	8	1
309	9	1
310	9	1
311	9	1
312	9	1
313	9	1
314	9	1
315	8	1
316	8	1
317	8	1
318	8	1
319	8	1
320	8	2
321	8	2
322	8	2
323	8	2
324	8	2
325	8	2
326	8	2
327	8	2
328	7	2
329	7	2
330	7	2
331	7	2
332	7	2
333	7	2
334	7	2
335	7	2
336	7	2
337	7	2
338	7	2
339	7	2
340	7	3
341	7	3
342	7	3
343	7	3
344	7	3
345	7	3
346	7	3
347	7	3
348	7	3
349	7	3
350	7	3
351	8	3
352	8	3
353	8	3
354	8	3
355	8	3
356	8	3
357	8	3
358	8	3
359	8	3
360	8	3
361	8	3
362	8	3
363	9	3
364	9	4
365	9	4
366	9	4
367	9	4
368	9	4
369	9	4
370	9	4
371	9	4
372	9	4
373	9	4
374	8	4
375	8	4
376	8	4
377	8	4
378	8	4
379	6	4
380	5	4

Table K-7. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	7	1
403	7	1
404	7	1
405	7	1
406	8	1
407	8	1
408	8	1
409	10	1
410	10	1
411	10	1
412	9	1
413	9	1
414	9	1
415	9	1
416	9	1
417	9	1
418	9	1
419	8	1
420	8	2
421	8	2
422	8	2
423	8	2
424	7	2
425	7	2
426	7	2
427	7	2
428	7	2
429	7	2
430	7	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	7	2
437	6	2
438	6	2
439	6	2
440	6	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	6	4
465	6	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	8	4
473	8	4
474	8	4
475	6	4
476	6	4
477	6	4
478	5	4
479	5	4
480	5	4

Table K-8. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	6	1
402	6	1
403	6	1
404	6	1
405	8	1
406	8	1
407	8	1
408	9	1
409	9	1
410	9	1
411	10	1
412	10	1
413	10	1
414	9	1
415	9	1
416	9	1
417	9	1
418	9	1
419	8	1
420	8	2
421	8	2
422	8	2
423	8	2
424	8	2
425	8	2
426	8	2
427	8	2
428	7	2
429	7	2
430	7	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	7	2
437	6	2
438	6	2
439	6	2
440	6	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	7	3
461	7	3
462	7	3
463	7	3
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	7	4
473	7	4
474	7	4
475	7	4
476	7	4
477	6	4
478	6	4
479	6	4
480	5	4

Table K-9. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	7	1
402	7	1
403	7	1
404	7	1
405	8	1
406	8	1
407	8	1
408	9	1
409	9	1
410	9	1
411	10	1
412	10	1
413	10	1
414	9	1
415	9	1
416	9	1
417	9	1
418	9	1
419	9	1
420	9	2
421	9	2
422	8	2
423	8	2
424	8	2
425	8	2
426	8	2
427	8	2
428	8	2
429	8	2
430	7	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	7	2
437	7	2
438	6	2
439	6	2
440	6	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	7	3
462	7	3
463	7	3
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	6	4
478	5	4
479	5	4
480	5	4

Table K-10. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	6	1
401	6	1
402	6	1
403	6	1
404	8	1
405	8	1
406	8	1
407	8	1
408	9	1
409	9	1
410	9	1
411	10	1
412	10	1
413	10	1
414	9	1
415	9	1
416	9	1
417	9	1
418	9	1
419	9	1
420	9	2
421	9	2
422	8	2
423	8	2
424	8	2
425	8	2
426	8	2
427	8	2
428	7	2
429	7	2
430	7	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	6	2
437	6	2
438	7	2
439	7	2
440	7	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	7	4
465	7	4
466	6	4
467	6	4
468	6	4
469	6	4
470	6	4
471	6	4
472	7	4
473	7	4
474	7	4
475	7	4
476	6	4
477	6	4
478	5	4
479	5	4
480	5	4

Table K-11. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	7	1
402	7	1
403	7	1
404	7	1
405	9	1
406	9	1
407	9	1
408	9	1
409	10	1
410	10	1
411	10	1
412	10	1
413	10	1
414	10	1
415	9	1
416	9	1
417	9	1
418	9	1
419	9	1
420	9	2
421	9	2
422	9	2
423	8	2
424	8	2
425	8	2
426	8	2
427	8	2
428	8	2
429	8	2
430	8	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	7	2
437	7	2
438	7	2
439	7	2
440	7	3
441	7	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	7	3
461	7	3
462	7	3
463	7	3
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	8	4
473	8	4
474	8	4
475	7	4
476	7	4
477	7	4
478	5	4
479	5	4
480	5	4

Table K-12. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 4, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	6	1
401	6	1
402	7	1
403	7	1
404	7	1
405	7	1
406	9	1
407	9	1
408	9	1
409	9	1
410	10	1
411	10	1
412	10	1
413	10	1
414	10	1
415	10	1
416	9	1
417	9	1
418	9	1
419	9	1
420	9	2
421	8	2
422	8	2
423	8	2
424	8	2
425	8	2
426	8	2
427	8	2
428	7	2
429	7	2
430	7	2
431	7	2
432	7	2
433	7	2
434	7	2
435	7	2
436	7	2
437	6	2
438	6	2
439	6	2
440	6	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	5	3
449	6	3
450	6	3
451	5	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	6	4
465	6	4
466	6	4
467	6	4
468	6	4
469	6	4
470	6	4
471	6	4
472	7	4
473	7	4
474	7	4
475	7	4
476	6	4
477	6	4
478	6	4
479	5	4
480	5	4

Table K-13. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	6	1
502	6	1
503	6	1
504	8	1
505	8	1
506	8	1
507	9	1
508	9	1
509	9	1
510	10	1
511	10	1
512	10	1
513	9	1
514	9	1
515	9	1
516	9	1
517	9	1
518	9	1
519	9	1
520	8	2
521	8	2
522	8	2
523	8	2
524	8	2
525	8	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	7	3
558	7	3
559	6	3
560	6	3
561	6	3
562	6	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	7	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-14. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	6	1
504	7	1
505	7	1
506	7	1
507	9	1
508	9	1
509	9	1
510	10	1
511	10	1
512	9	1
513	9	1
514	9	1
515	9	1
516	9	1
517	9	1
518	9	1
519	8	1
520	8	2
521	8	2
522	8	2
523	8	2
524	8	2
525	8	2
526	8	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	6	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	8	4
572	8	4
573	7	4
574	7	4
575	7	4
576	6	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-15. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	6	1
502	6	1
503	6	1
504	7	1
505	7	1
506	7	1
507	9	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	9	1
515	9	1
516	9	1
517	9	1
518	9	1
519	9	1
520	9	2
521	9	2
522	8	2
523	8	2
524	8	2
525	8	2
526	8	2
527	8	2
528	8	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	6	2
540	6	3
541	6	3
542	7	3
543	7	3
544	7	3
545	6	3
546	6	3
547	6	3
548	6	3
549	7	3
550	7	3
551	7	3
552	7	3
553	7	3
554	6	3
555	6	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	7	4
575	7	4
576	6	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-16. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	7	1
502	7	1
503	7	1
504	7	1
505	8	1
506	8	1
507	8	1
508	9	1
509	9	1
510	9	1
511	10	1
512	10	1
513	10	1
514	10	1
515	10	1
516	9	1
517	9	1
518	9	1
519	9	1
520	9	2
521	9	2
522	9	2
523	8	2
524	8	2
525	8	2
526	8	2
527	8	2
528	8	2
529	8	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	6	2
540	6	3
541	7	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	8	4
573	8	4
574	8	4
575	7	4
576	7	4
577	7	4
578	5	4
579	5	4
580	5	4

Table K-17. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	7	1
504	7	1
505	7	1
506	9	1
507	9	1
508	9	1
509	10	1
510	10	1
511	10	1
512	9	1
513	9	1
514	9	1
515	9	1
516	9	1
517	9	1
518	9	1
519	9	1
520	9	2
521	9	2
522	9	2
523	9	2
524	8	2
525	8	2
526	8	2
527	8	2
528	8	2
529	8	2
530	8	2
531	8	2
532	8	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	7	3
542	7	3
543	7	3
544	7	3
545	6	3
546	6	3
547	6	3
548	7	3
549	7	3
550	6	3
551	6	3
552	6	3
553	6	3
554	7	3
555	7	3
556	7	3
557	7	3
558	7	3
559	6	3
560	6	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	7	4
575	7	4
576	7	4
577	6	4
578	6	4
579	6	4
580	5	4

Table K-18. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 5, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	7	1
504	7	1
505	7	1
506	8	1
507	8	1
508	8	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	9	1
515	9	1
516	8	1
517	8	1
518	8	1
519	8	1
520	8	2
521	8	2
522	8	2
523	8	2
524	8	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	8	4
568	8	4
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	8	4
575	7	4
576	7	4
577	7	4
578	6	4
579	6	4
580	5	4

Table K-19. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	7	1
604	7	1
605	7	1
606	7	1
607	8	1
608	8	1
609	8	1
610	9	1
611	9	1
612	9	1
613	9	1
614	9	1
615	9	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	8	2
622	8	2
623	7	2
624	7	2
625	7	2
626	7	2
627	7	2
628	7	2
629	7	2
630	7	2
631	6	2
632	6	2
633	7	2
634	7	2
635	7	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	5	3
653	5	3
654	6	3
655	5	3
656	5	3
657	6	3
658	5	3
659	5	3
660	6	3
661	6	4
662	6	4
663	5	4
664	5	4
665	6	4
666	6	4
667	6	4
668	6	4
669	6	4
670	6	4
671	6	4
672	6	4
673	6	4
674	6	4
675	6	4
676	5	4
677	5	4
678	4	4
679	4	4
680	5	4

Table K-20. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	7	1
604	7	1
605	7	1
606	7	1
607	8	1
608	8	1
609	8	1
610	9	1
611	9	1
612	9	1
613	8	1
614	8	1
615	8	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	8	2
622	8	2
623	7	2
624	7	2
625	7	2
626	7	2
627	7	2
628	7	2
629	6	2
630	6	2
631	6	2
632	6	2
633	6	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	6	3
645	6	3
646	6	3
647	5	3
648	5	3
649	5	3
650	5	3
651	5	3
652	5	3
653	5	3
654	5	3
655	5	3
656	5	3
657	5	3
658	5	3
659	5	3
660	5	3
661	5	4
662	5	4
663	5	4
664	5	4
665	5	4
666	5	4
667	5	4
668	6	4
669	6	4
670	6	4
671	6	4
672	6	4
673	6	4
674	6	4
675	6	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-21. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	6	1
602	6	1
603	6	1
604	6	1
605	8	1
606	8	1
607	8	1
608	8	1
609	9	1
610	9	1
611	9	1
612	9	1
613	9	1
614	9	1
615	8	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	8	2
622	8	2
623	8	2
624	8	2
625	7	2
626	7	2
627	7	2
628	7	2
629	7	2
630	7	2
631	7	2
632	7	2
633	7	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	5	3
645	5	3
646	6	3
647	5	3
648	6	3
649	6	3
650	5	3
651	5	3
652	5	3
653	5	3
654	5	3
655	5	3
656	5	3
657	5	3
658	5	3
659	5	3
660	5	3
661	5	4
662	5	4
663	5	4
664	5	4
665	5	4
666	5	4
667	5	4
668	5	4
669	5	4
670	6	4
671	6	4
672	5	4
673	5	4
674	6	4
675	6	4
676	5	4
677	5	4
678	4	4
679	4	4
680	5	4

Table K-22. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	6	1
602	6	1
603	6	1
604	6	1
605	8	1
606	8	1
607	8	1
608	9	1
609	9	1
610	9	1
611	9	1
612	9	1
613	9	1
614	8	1
615	8	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	7	2
622	7	2
623	7	2
624	7	2
625	7	2
626	7	2
627	7	2
628	7	2
629	6	2
630	6	2
631	6	2
632	6	2
633	6	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	6	3
658	6	3
659	5	3
660	6	3
661	6	4
662	6	4
663	6	4
664	6	4
665	6	4
666	6	4
667	6	4
668	6	4
669	6	4
670	6	4
671	6	4
672	6	4
673	6	4
674	6	4
675	6	4
676	5	4
677	5	4
678	5	4
679	4	4
680	5	4

Table K-23. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	6	1
603	6	1
604	6	1
605	8	1
606	8	1
607	8	1
608	9	1
609	9	1
610	9	1
611	9	1
612	9	1
613	9	1
614	8	1
615	8	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	7	2
622	7	2
623	7	2
624	7	2
625	7	2
626	7	2
627	7	2
628	7	2
629	7	2
630	6	2
631	6	2
632	6	2
633	6	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	5	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	5	3
652	5	3
653	6	3
654	5	3
655	5	3
656	6	3
657	5	3
658	5	3
659	6	3
660	6	3
661	6	4
662	5	4
663	5	4
664	6	4
665	6	4
666	6	4
667	6	4
668	6	4
669	6	4
670	6	4
671	6	4
672	6	4
673	7	4
674	7	4
675	7	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-24. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 6, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	7	1
604	7	1
605	7	1
606	8	1
607	8	1
608	8	1
609	9	1
610	9	1
611	9	1
612	9	1
613	9	1
614	9	1
615	8	1
616	8	1
617	8	1
618	8	1
619	8	1
620	8	2
621	8	2
622	7	2
623	7	2
624	7	2
625	7	2
626	7	2
627	7	2
628	7	2
629	7	2
630	7	2
631	7	2
632	7	2
633	6	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	6	3
644	6	3
645	6	3
646	6	3
647	5	3
648	5	3
649	6	3
650	5	3
651	5	3
652	6	3
653	5	3
654	5	3
655	6	3
656	5	3
657	5	3
658	6	3
659	5	3
660	5	3
661	5	4
662	6	4
663	6	4
664	5	4
665	5	4
666	6	4
667	6	4
668	6	4
669	6	4
670	6	4
671	6	4
672	6	4
673	6	4
674	6	4
675	6	4
676	5	4
677	5	4
678	5	4
679	4	4
680	5	4

Table K-25. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	8	1
711	8	1
712	8	1
713	8	1
714	8	1
715	8	1
716	8	1
717	7	1
718	7	1
719	7	1
720	7	2
721	7	2
722	6	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	6	2
730	6	2
731	5	2
732	6	2
733	6	2
734	6	2
735	5	2
736	5	2
737	6	2
738	6	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	5	3
757	6	3
758	5	3
759	6	3
760	6	3
761	5	3
762	5	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	6	4
778	5	4
779	5	4
780	5	4

Table K-26. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	6	1
704	6	1
705	6	1
706	8	1
707	8	1
708	8	1
709	8	1
710	8	1
711	8	1
712	8	1
713	8	1
714	7	1
715	7	1
716	7	1
717	7	1
718	7	1
719	7	1
720	7	2
721	6	2
722	6	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	6	2
730	5	2
731	6	2
732	6	2
733	6	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	5	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	7	4
769	7	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	7	4
776	7	4
777	6	4
778	6	4
779	6	4
780	5	4

Table K-27. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	6	1
702	6	1
703	6	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	8	1
711	8	1
712	7	1
713	7	1
714	7	1
715	7	1
716	7	1
717	7	1
718	7	1
719	6	1
720	6	2
721	6	2
722	7	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	5	2
730	6	2
731	6	2
732	6	2
733	5	2
734	6	2
735	6	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	6	3
757	5	3
758	5	3
759	6	3
760	6	3
761	5	3
762	5	4
763	5	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	7	4
774	7	4
775	6	4
776	6	4
777	6	4
778	6	4
779	5	4
780	5	4

Table K-28. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	6	1
704	6	1
705	6	1
706	7	1
707	7	1
708	7	1
709	8	1
710	8	1
711	7	1
712	7	1
713	7	1
714	7	1
715	7	1
716	7	1
717	7	1
718	7	1
719	6	1
720	6	2
721	6	2
722	6	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	6	2
730	6	2
731	6	2
732	6	2
733	6	2
734	5	2
735	5	2
736	5	2
737	6	2
738	5	2
739	5	2
740	5	3
741	6	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	6	3
754	6	3
755	5	3
756	5	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	7	4
769	7	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	7	4
776	6	4
777	6	4
778	6	4
779	4	4
780	5	4

Table K-29. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	6	1
702	6	1
703	6	1
704	6	1
705	7	1
706	7	1
707	7	1
708	8	1
709	8	1
710	8	1
711	8	1
712	8	1
713	8	1
714	8	1
715	7	1
716	7	1
717	7	1
718	7	1
719	7	1
720	6	2
721	6	2
722	6	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	5	2
730	5	2
731	5	2
732	6	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	6	3
757	5	3
758	5	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	7	4
776	6	4
777	6	4
778	6	4
779	5	4
780	5	4

Table K-30. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 7, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	8	1
711	8	1
712	8	1
713	8	1
714	7	1
715	7	1
716	7	1
717	7	1
718	7	1
719	7	1
720	7	2
721	6	2
722	6	2
723	6	2
724	6	2
725	6	2
726	6	2
727	6	2
728	6	2
729	6	2
730	6	2
731	6	2
732	6	2
733	5	2
734	6	2
735	6	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	5	3
757	5	3
758	5	3
759	5	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	6	4
778	5	4
779	5	4
780	5	4

Table K-31. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	5	1
805	7	1
806	7	1
807	8	1
808	8	1
809	8	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	7	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	5	2
833	5	2
834	6	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	6	3
862	6	3
863	6	4
864	6	4
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	6	4
872	7	4
873	7	4
874	7	4
875	7	4
876	7	4
877	7	4
878	5	4
879	5	4
880	5	4

Table K-32. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	6	1
805	6	1
806	6	1
807	7	1
808	7	1
809	8	1
810	8	1
811	8	1
812	8	1
813	8	1
814	7	1
815	7	1
816	7	1
817	7	1
818	7	1
819	7	1
820	7	2
821	7	2
822	7	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	6	2
833	6	2
834	6	2
835	6	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	5	3
862	5	3
863	5	4
864	6	4
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	6	4
872	7	4
873	7	4
874	7	4
875	7	4
876	7	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-33. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	5	1
805	7	1
806	7	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	7	1
818	7	1
819	7	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	6	2
833	6	2
834	6	2
835	6	2
836	6	2
837	6	2
838	5	2
839	6	2
840	6	3
841	5	3
842	5	3
843	6	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	6	3
860	6	3
861	5	3
862	5	3
863	6	4
864	6	4
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	7	4
872	7	4
873	7	4
874	7	4
875	7	4
876	7	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-34. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	6	1
806	8	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	8	1
813	8	1
814	7	1
815	7	1
816	7	1
817	7	1
818	7	1
819	7	1
820	7	2
821	7	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	6	2
833	5	2
834	5	2
835	6	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	5	3
862	5	3
863	5	4
864	5	4
865	5	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	6	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-35. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	6	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	9	1
810	9	1
811	8	1
812	8	1
813	8	1
814	8	1
815	8	1
816	7	1
817	7	1
818	7	1
819	7	1
820	7	2
821	7	2
822	7	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	6	2
833	6	2
834	6	2
835	6	2
836	6	2
837	5	2
838	5	2
839	6	2
840	6	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	5	3
862	5	3
863	5	4
864	5	4
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	6	4
872	6	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-36. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 8, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	8	1
810	8	1
811	8	1
812	8	1
813	8	1
814	7	1
815	7	1
816	7	1
817	7	1
818	7	1
819	7	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	6	2
833	6	2
834	6	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	5	3
862	5	3
863	5	4
864	5	4
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	6	4
872	6	4
873	6	4
874	6	4
875	6	4
876	6	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-37. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	6	1
1104	6	1
1105	6	1
1106	6	1
1107	8	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	4	3
1147	4	3
1148	5	3
1149	5	3
1150	5	3
1151	4	3
1152	4	3
1153	5	3
1154	5	3
1155	5	3
1156	4	3
1157	5	3
1158	5	3
1159	5	3
1160	5	3
1161	5	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	5	4
1177	5	4
1178	5	4
1179	4	4
1180	5	4

Table K-38. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	6	1
1104	6	1
1105	6	1
1106	6	1
1107	8	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	8	1
1114	8	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	6	2
1133	6	2
1134	6	2
1135	5	2
1136	6	2
1137	6	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	4	3
1150	5	3
1151	5	3
1152	5	3
1153	4	3
1154	5	3
1155	5	3
1156	5	3
1157	5	3
1158	4	3
1159	5	3
1160	5	3
1161	5	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	5	4
1176	5	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-39. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	6	1
1103	6	1
1104	6	1
1105	6	1
1106	7	1
1107	7	1
1108	7	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	8	1
1114	8	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	7	2
1122	7	2
1123	7	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	6	2
1133	5	2
1134	5	2
1135	6	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	4	3
1151	4	3
1152	5	3
1153	5	3
1154	5	3
1155	4	3
1156	4	3
1157	5	3
1158	5	3
1159	5	3
1160	5	3
1161	4	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	6	4
1173	6	4
1174	6	4
1175	5	4
1176	5	4
1177	5	4
1178	4	4
1179	4	4
1180	5	4

Table K-40. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	6	1
1103	6	1
1104	6	1
1105	6	1
1106	7	1
1107	7	1
1108	7	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	8	1
1114	8	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	7	2
1122	7	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	4	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	4	3
1152	4	3
1153	5	3
1154	5	3
1155	5	3
1156	5	3
1157	4	3
1158	5	3
1159	5	3
1160	5	3
1161	5	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-41. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	7	1
1105	7	1
1106	7	1
1107	8	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	7	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	6	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	4	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	4	3
1149	4	3
1150	4	3
1151	5	3
1152	5	3
1153	4	3
1154	4	3
1155	4	3
1156	4	3
1157	4	3
1158	4	3
1159	5	3
1160	4	3
1161	4	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	5	4
1177	5	4
1178	4	4
1179	4	4
1180	5	4

Table K-42. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Mathematics Grade 11, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	6	1
1104	6	1
1105	6	1
1106	7	1
1107	7	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	7	1
1113	7	1
1114	7	1
1115	7	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	4	3
1148	5	3
1149	5	3
1150	5	3
1151	4	3
1152	5	3
1153	5	3
1154	5	3
1155	4	3
1156	4	3
1157	4	3
1158	5	3
1159	4	3
1160	5	3
1161	5	3
1162	5	3
1163	5	3
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-43. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	7	1
305	7	1
306	7	1
307	8	1
308	8	1
309	7	1
310	7	1
311	7	1
312	7	1
313	7	1
314	7	1
315	6	1
316	6	1
317	6	1
318	6	1
319	6	1
320	6	2
321	6	2
322	5	2
323	6	2
324	6	2
325	6	2
326	6	2
327	6	2
328	6	2
329	5	2
330	5	2
331	5	2
332	5	2
333	5	2
334	5	2
335	5	2
336	5	2
337	5	2
338	5	2
339	5	2
340	5	3
341	5	3
342	5	3
343	5	3
344	5	3
345	5	3
346	5	3
347	5	3
348	6	3
349	6	3
350	6	3
351	6	3
352	6	3
353	6	3
354	6	3
355	6	3
356	6	3
357	6	3
358	6	3
359	7	3
360	7	3
361	7	3
362	7	3
363	7	3
364	7	3
365	8	3
366	8	3
367	8	3
368	8	3
369	9	3
370	9	3
371	8	3
372	8	3
373	8	4
374	8	4
375	7	4
376	7	4
377	7	4
378	7	4
379	6	4
380	5	4

Table K-44. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	7	1
305	7	1
306	7	1
307	8	1
308	8	1
309	7	1
310	7	1
311	7	1
312	7	1
313	7	1
314	7	1
315	7	1
316	6	1
317	6	1
318	6	1
319	6	1
320	6	2
321	6	2
322	6	2
323	6	2
324	6	2
325	6	2
326	5	2
327	6	2
328	6	2
329	6	2
330	6	2
331	5	2
332	6	2
333	5	2
334	5	2
335	5	2
336	5	2
337	5	2
338	5	2
339	5	2
340	5	3
341	5	3
342	5	3
343	5	3
344	5	3
345	5	3
346	6	3
347	6	3
348	5	3
349	6	3
350	5	3
351	6	3
352	6	3
353	6	3
354	6	3
355	6	3
356	6	3
357	6	3
358	7	3
359	7	3
360	7	3
361	7	3
362	7	3
363	7	3
364	8	3
365	8	3
366	8	3
367	8	3
368	8	3
369	8	3
370	9	3
371	9	3
372	9	3
373	8	4
374	8	4
375	7	4
376	7	4
377	7	4
378	6	4
379	6	4
380	5	4

Table K-45. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	6	1
305	7	1
306	7	1
307	7	1
308	7	1
309	7	1
310	7	1
311	7	1
312	7	1
313	6	1
314	6	1
315	6	1
316	6	1
317	6	1
318	6	1
319	6	1
320	5	2
321	6	2
322	6	2
323	6	2
324	6	2
325	5	2
326	5	2
327	5	2
328	5	2
329	5	2
330	5	2
331	5	2
332	5	2
333	5	2
334	5	2
335	5	2
336	5	2
337	5	2
338	5	2
339	5	2
340	5	3
341	5	3
342	6	3
343	6	3
344	6	3
345	5	3
346	6	3
347	6	3
348	6	3
349	6	3
350	6	3
351	6	3
352	6	3
353	6	3
354	6	3
355	6	3
356	7	3
357	7	3
358	7	3
359	7	3
360	7	3
361	7	3
362	7	3
363	8	3
364	8	3
365	8	3
366	8	3
367	8	3
368	8	3
369	9	3
370	9	3
371	9	3
372	8	3
373	8	4
374	8	4
375	7	4
376	7	4
377	7	4
378	6	4
379	6	4
380	5	4

Table K-46. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	6	1
302	6	1
303	6	1
304	7	1
305	7	1
306	8	1
307	8	1
308	8	1
309	8	1
310	7	1
311	7	1
312	7	1
313	7	1
314	7	1
315	7	1
316	6	1
317	6	1
318	6	1
319	6	1
320	6	2
321	6	2
322	6	2
323	6	2
324	6	2
325	5	2
326	6	2
327	6	2
328	5	2
329	6	2
330	6	2
331	6	2
332	5	2
333	5	2
334	5	2
335	5	2
336	5	2
337	5	2
338	5	2
339	5	2
340	5	3
341	5	3
342	6	3
343	6	3
344	5	3
345	6	3
346	6	3
347	6	3
348	6	3
349	6	3
350	6	3
351	6	3
352	6	3
353	6	3
354	6	3
355	7	3
356	7	3
357	7	3
358	7	3
359	7	3
360	7	3
361	7	3
362	8	3
363	8	3
364	8	3
365	8	3
366	8	3
367	8	3
368	9	3
369	9	3
370	9	3
371	9	3
372	9	3
373	9	4
374	8	4
375	8	4
376	7	4
377	7	4
378	7	4
379	6	4
380	5	4

Table K-47. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	5	1
303	6	1
304	6	1
305	7	1
306	7	1
307	8	1
308	7	1
309	7	1
310	7	1
311	7	1
312	6	1
313	7	1
314	6	1
315	6	1
316	6	1
317	6	1
318	6	1
319	6	1
320	6	2
321	6	2
322	6	2
323	6	2
324	6	2
325	6	2
326	6	2
327	6	2
328	5	2
329	6	2
330	5	2
331	6	2
332	5	2
333	6	2
334	5	2
335	6	2
336	6	2
337	6	2
338	5	2
339	6	2
340	6	3
341	6	3
342	6	3
343	6	3
344	6	3
345	6	3
346	6	3
347	6	3
348	6	3
349	6	3
350	6	3
351	6	3
352	6	3
353	7	3
354	7	3
355	7	3
356	7	3
357	7	3
358	7	3
359	7	3
360	7	3
361	8	3
362	8	3
363	8	3
364	8	3
365	8	3
366	8	3
367	8	3
368	9	3
369	9	3
370	9	3
371	9	3
372	8	3
373	8	4
374	8	4
375	8	4
376	7	4
377	6	4
378	6	4
379	6	4
380	5	4

Table K-48. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 3, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
300	5	1
301	5	1
302	6	1
303	6	1
304	6	1
305	7	1
306	7	1
307	8	1
308	8	1
309	8	1
310	7	1
311	7	1
312	7	1
313	7	1
314	7	1
315	7	1
316	7	1
317	6	1
318	6	1
319	6	1
320	6	2
321	6	2
322	6	2
323	6	2
324	6	2
325	6	2
326	5	2
327	6	2
328	6	2
329	6	2
330	6	2
331	6	2
332	6	2
333	5	2
334	5	2
335	6	2
336	5	2
337	6	2
338	5	2
339	6	2
340	6	3
341	6	3
342	5	3
343	6	3
344	6	3
345	6	3
346	5	3
347	6	3
348	6	3
349	6	3
350	6	3
351	6	3
352	6	3
353	6	3
354	6	3
355	7	3
356	7	3
357	7	3
358	7	3
359	7	3
360	7	3
361	7	3
362	7	3
363	7	3
364	8	3
365	8	3
366	8	3
367	8	3
368	8	3
369	8	3
370	9	3
371	9	3
372	9	3
373	8	4
374	8	4
375	7	4
376	7	4
377	7	4
378	6	4
379	6	4
380	5	4

Table K-49. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4 Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	8	1
409	7	1
410	8	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	7	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	6	2
425	6	2
426	6	2
427	6	2
428	5	2
429	6	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	5	3
444	5	3
445	5	3
446	5	3
447	5	3
448	5	3
449	5	3
450	5	3
451	6	3
452	5	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	6	3
465	6	3
466	7	3
467	6	3
468	7	3
469	7	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-50. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	8	1
409	7	1
410	8	1
411	8	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	7	1
418	7	1
419	7	1
420	6	2
421	7	2
422	7	2
423	7	2
424	6	2
425	6	2
426	6	2
427	6	2
428	6	2
429	6	2
430	6	2
431	6	2
432	6	2
433	6	2
434	6	2
435	6	2
436	6	2
437	6	2
438	6	2
439	6	2
440	6	3
441	6	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	6	3
465	6	3
466	6	3
467	6	3
468	6	3
469	7	3
470	7	3
471	7	4
472	7	4
473	7	4
474	6	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-51. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	8	1
409	7	1
410	8	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	6	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	6	2
425	6	2
426	6	2
427	6	2
428	5	2
429	6	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	6	3
444	5	3
445	6	3
446	5	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	7	3
464	6	3
465	7	3
466	7	3
467	7	3
468	7	3
469	7	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-52. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	7	1
409	7	1
410	7	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	6	1
417	6	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	5	2
425	6	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	5	3
444	5	3
445	5	3
446	5	3
447	5	3
448	5	3
449	5	3
450	5	3
451	5	3
452	5	3
453	6	3
454	5	3
455	5	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	6	3
465	6	3
466	6	3
467	7	3
468	7	3
469	6	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-53. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	6	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	8	1
409	7	1
410	8	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	7	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	6	2
425	6	2
426	6	2
427	6	2
428	6	2
429	6	2
430	5	2
431	6	2
432	5	2
433	5	2
434	5	2
435	6	2
436	5	2
437	6	2
438	6	2
439	5	2
440	6	3
441	5	3
442	6	3
443	5	3
444	5	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	7	3
462	7	3
463	6	3
464	7	3
465	6	3
466	7	3
467	7	3
468	7	3
469	7	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-54. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	6	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	7	1
409	8	1
410	7	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	6	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	5	2
425	6	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	5	3
444	5	3
445	5	3
446	5	3
447	5	3
448	5	3
449	5	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	6	3
464	7	3
465	6	3
466	7	3
467	6	3
468	7	3
469	6	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	6	4
476	6	4
477	5	4
478	5	4
479	4	4
480	5	4

Table K-55. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 4, Scale Form 7

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	6	1
403	6	1
404	6	1
405	7	1
406	7	1
407	8	1
408	8	1
409	7	1
410	8	1
411	7	1
412	7	1
413	7	1
414	7	1
415	7	1
416	7	1
417	7	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	6	2
424	6	2
425	6	2
426	6	2
427	6	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	5	3
444	5	3
445	5	3
446	5	3
447	5	3
448	5	3
449	5	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	6	3
460	6	3
461	6	3
462	6	3
463	7	3
464	7	3
465	7	3
466	7	3
467	7	3
468	7	3
469	7	3
470	7	3
471	7	4
472	7	4
473	7	4
474	7	4
475	7	4
476	6	4
477	5	4
478	5	4
479	5	4
480	5	4

Table K-56. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	4	1
502	5	1
503	6	1
504	6	1
505	6	1
506	7	1
507	7	1
508	7	1
509	7	1
510	6	1
511	6	1
512	6	1
513	6	1
514	6	1
515	6	1
516	6	1
517	6	1
518	6	1
519	6	1
520	5	2
521	6	2
522	5	2
523	5	2
524	5	2
525	5	2
526	5	2
527	5	2
528	5	2
529	5	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	6	2
538	5	2
539	5	2
540	5	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	7	3
554	7	3
555	6	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	8	3
565	8	3
566	8	3
567	8	3
568	8	3
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	7	4
575	7	4
576	7	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-57. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	6	1
506	7	1
507	7	1
508	7	1
509	7	1
510	7	1
511	7	1
512	7	1
513	7	1
514	7	1
515	6	1
516	6	1
517	6	1
518	6	1
519	6	1
520	6	2
521	6	2
522	6	2
523	5	2
524	6	2
525	6	2
526	5	2
527	6	2
528	5	2
529	5	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	5	2
538	5	2
539	6	2
540	5	3
541	6	3
542	5	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	7	3
554	6	3
555	7	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	8	3
563	8	3
564	8	3
565	8	3
566	8	3
567	8	3
568	9	3
569	9	4
570	9	4
571	9	4
572	8	4
573	8	4
574	8	4
575	7	4
576	7	4
577	6	4
578	6	4
579	6	4
580	5	4

Table K-58. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	7	1
506	7	1
507	8	1
508	8	1
509	7	1
510	7	1
511	7	1
512	7	1
513	7	1
514	7	1
515	7	1
516	7	1
517	7	1
518	7	1
519	6	1
520	6	2
521	6	2
522	6	2
523	6	2
524	6	2
525	6	2
526	6	2
527	6	2
528	6	2
529	6	2
530	5	2
531	6	2
532	5	2
533	6	2
534	5	2
535	6	2
536	5	2
537	6	2
538	5	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	7	3
556	7	3
557	7	3
558	6	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	3
565	8	3
566	7	3
567	8	3
568	8	3
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	7	4
575	7	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-59. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	6	1
503	6	1
504	6	1
505	7	1
506	7	1
507	7	1
508	8	1
509	8	1
510	7	1
511	7	1
512	7	1
513	7	1
514	7	1
515	7	1
516	6	1
517	6	1
518	6	1
519	6	1
520	6	2
521	6	2
522	6	2
523	6	2
524	6	2
525	6	2
526	5	2
527	6	2
528	5	2
529	6	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	5	2
538	5	2
539	5	2
540	6	3

Scaled Score	*Conditional Standard Error*	*Performance Level*
541	5	3
542	5	3
543	6	3
544	5	3
545	6	3
546	6	3
547	5	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	6	3
561	7	3
562	7	3
563	7	3
564	6	3
565	7	3
566	7	3
567	7	3
568	7	3
569	7	4
570	7	4
571	8	4
572	7	4
573	7	4
574	7	4
575	6	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-60. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	6	1
503	6	1
504	7	1
505	7	1
506	7	1
507	8	1
508	8	1
509	8	1
510	7	1
511	8	1
512	7	1
513	7	1
514	7	1
515	7	1
516	7	1
517	7	1
518	7	1
519	6	1
520	6	2
521	6	2
522	6	2
523	6	2
524	6	2
525	6	2
526	6	2
527	5	2
528	6	2
529	5	2
530	6	2
531	5	2
532	6	2
533	5	2
534	5	2
535	6	2
536	5	2
537	6	2
538	5	2
539	6	2
540	5	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	7	3
554	6	3
555	7	3
556	7	3
557	6	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	8	3
565	7	3
566	8	3
567	8	3
568	8	3
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	8	4
575	7	4
576	6	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-61. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 5, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	7	1
506	7	1
507	7	1
508	7	1
509	7	1
510	7	1
511	7	1
512	7	1
513	7	1
514	7	1
515	6	1
516	6	1
517	6	1
518	6	1
519	6	1
520	6	2
521	6	2
522	6	2
523	6	2
524	6	2
525	6	2
526	5	2
527	6	2
528	6	2
529	5	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	5	2
538	5	2
539	5	2
540	6	3
541	5	3
542	5	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	7	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	7	3
563	7	3
564	8	3
565	8	3
566	8	3
567	8	3
568	8	3
569	8	4
570	8	4
571	8	4
572	9	4
573	8	4
574	7	4
575	7	4
576	7	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-62. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	6	1
604	6	1
605	6	1
606	7	1
607	7	1
608	7	1
609	6	1
610	6	1
611	6	1
612	6	1
613	6	1
614	6	1
615	6	1
616	6	1
617	5	1
618	5	1
619	5	1
620	5	2
621	5	2
622	5	2
623	5	2
624	5	2
625	5	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	5	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	5	2
639	5	2
640	5	3
641	6	3
642	5	3
643	5	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	7	3
658	6	3
659	7	3
660	7	3
661	6	3
662	7	3
663	7	3
664	7	3
665	7	3
666	7	3
667	7	3
668	7	4
669	7	4
670	7	4
671	7	4
672	8	4
673	7	4
674	7	4
675	6	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-63. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	5	1
604	6	1
605	6	1
606	7	1
607	7	1
608	7	1
609	7	1
610	7	1
611	6	1
612	6	1
613	6	1
614	6	1
615	6	1
616	6	1
617	5	1
618	6	1
619	6	1
620	5	2
621	5	2
622	5	2
623	5	2
624	5	2
625	5	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	5	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	5	2
639	5	2
640	5	3
641	6	3
642	6	3
643	5	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	7	3
658	6	3
659	7	3
660	7	3
661	7	3
662	7	3
663	7	3
664	7	3
665	7	3
666	7	3
667	7	3
668	7	4
669	7	4
670	8	4
671	7	4
672	7	4
673	8	4
674	7	4
675	7	4
676	6	4
677	5	4
678	5	4
679	5	4
680	5	4

Table K-64. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	6	1
603	6	1
604	6	1
605	7	1
606	7	1
607	8	1
608	8	1
609	8	1
610	7	1
611	7	1
612	7	1
613	7	1
614	7	1
615	7	1
616	7	1
617	6	1
618	6	1
619	6	1
620	6	2
621	6	2
622	6	2
623	6	2
624	6	2
625	6	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	5	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	5	2
639	5	2
640	5	3
641	5	3
642	5	3
643	5	3
644	5	3
645	5	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	6	3
658	6	3
659	7	3
660	7	3
661	7	3
662	7	3
663	7	3
664	7	3
665	7	3
666	7	3
667	8	3
668	8	4
669	7	4
670	8	4
671	7	4
672	8	4
673	8	4
674	7	4
675	7	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-65. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	6	1
604	6	1
605	6	1
606	7	1
607	7	1
608	7	1
609	7	1
610	7	1
611	7	1
612	7	1
613	6	1
614	6	1
615	6	1
616	6	1
617	6	1
618	6	1
619	6	1
620	6	2
621	6	2
622	6	2
623	6	2
624	5	2
625	6	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	6	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	6	2
639	5	2
640	5	3
641	6	3
642	6	3
643	6	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	7	3
658	6	3
659	7	3
660	6	3
661	7	3
662	6	3
663	7	3
664	7	3
665	6	3
666	7	3
667	7	3
668	7	4
669	7	4
670	7	4
671	7	4
672	7	4
673	7	4
674	7	4
675	6	4
676	6	4
677	5	4
678	5	4
679	4	4
680	5	4

Table K-66. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	6	1
604	6	1
605	7	1
606	7	1
607	7	1
608	7	1
609	7	1
610	7	1
611	7	1
612	7	1
613	7	1
614	7	1
615	6	1
616	6	1
617	6	1
618	6	1
619	6	1
620	6	2
621	6	2
622	6	2
623	5	2
624	6	2
625	6	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	5	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	5	2
639	5	2
640	5	3
641	5	3
642	5	3
643	5	3
644	5	3
645	5	3
646	5	3
647	5	3
648	5	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	6	3
658	6	3
659	6	3
660	6	3
661	7	3
662	6	3
663	7	3
664	7	3
665	7	3
666	7	3
667	7	3
668	7	4
669	7	4
670	7	4
671	8	4
672	7	4
673	8	4
674	7	4
675	7	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-67. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	5	1
603	6	1
604	6	1
605	7	1
606	7	1
607	8	1
608	7	1
609	7	1
610	7	1
611	7	1
612	6	1
613	6	1
614	6	1
615	6	1
616	6	1
617	6	1
618	6	1
619	6	1
620	5	2
621	6	2
622	5	2
623	5	2
624	5	2
625	5	2
626	5	2
627	5	2
628	5	2
629	5	2
630	5	2
631	5	2
632	5	2
633	5	2
634	5	2
635	5	2
636	5	2
637	5	2
638	5	2
639	5	2
640	5	3
641	5	3
642	6	3
643	5	3
644	6	3
645	6	3
646	6	3
647	6	3
648	6	3
649	6	3
650	6	3
651	6	3
652	6	3
653	6	3
654	6	3
655	6	3
656	6	3
657	6	3
658	7	3
659	6	3
660	7	3
661	7	3
662	6	3
663	7	3
664	7	3
665	7	3
666	7	3
667	7	3
668	7	4
669	7	4
670	7	4
671	7	4
672	7	4
673	7	4
674	7	4
675	6	4
676	6	4
677	5	4
678	5	4
679	4	4
680	5	4

Table K-68. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 6, Scale Form 7

Scaled Score	*Conditional Standard Error*	*Performance Level*
600	5	1
601	5	1
602	6	1
603	6	1
604	7	1
605	7	1
606	7	1
607	8	1
608	8	1
609	8	1
610	8	1
611	7	1
612	7	1
613	7	1
614	7	1
615	7	1
616	7	1
617	7	1
618	7	1
619	7	1
620	6	2
621	6	2
622	6	2
623	6	2
624	6	2
625	6	2
626	6	2
627	6	2
628	6	2
629	6	2
630	6	2
631	6	2
632	6	2
633	6	2
634	6	2
635	6	2
636	6	2
637	6	2
638	6	2
639	6	2
640	6	3
641	6	3
642	6	3
643	7	3
644	6	3
645	7	3
646	6	3
647	7	3
648	6	3
649	7	3
650	7	3
651	7	3
652	7	3
653	7	3
654	7	3
655	7	3
656	7	3
657	7	3
658	7	3
659	7	3
660	7	3
661	7	3
662	7	3
663	7	3
664	7	3
665	7	3
666	7	3
667	8	3
668	8	4
669	8	4
670	8	4
671	8	4
672	7	4
673	8	4
674	7	4
675	7	4
676	6	4
677	6	4
678	5	4
679	5	4
680	5	4

Table K-69. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	4	1
702	5	1
703	5	1
704	6	1
705	6	1
706	7	1
707	7	1
708	7	1
709	6	1
710	6	1
711	6	1
712	6	1
713	6	1
714	6	1
715	6	1
716	6	1
717	5	1
718	6	1
719	6	1
720	5	2
721	5	2
722	5	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	6	3
744	5	3
745	6	3
746	6	3
747	5	3
748	6	3
749	6	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	3
763	6	3
764	6	3
765	6	3
766	6	4
767	6	4
768	7	4
769	6	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	5	4
778	5	4
779	4	4
780	5	4

Table K-70. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	6	1
705	6	1
706	7	1
707	7	1
708	7	1
709	7	1
710	7	1
711	7	1
712	7	1
713	6	1
714	6	1
715	6	1
716	6	1
717	6	1
718	6	1
719	6	1
720	6	2
721	5	2
722	6	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	7	3
760	6	3
761	6	3
762	7	3
763	6	3
764	7	3
765	7	3
766	7	4
767	7	4
768	7	4
769	7	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	5	4
778	5	4
779	4	4
780	5	4

Table K-71. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	4	1
702	5	1
703	5	1
704	6	1
705	6	1
706	6	1
707	7	1
708	6	1
709	6	1
710	6	1
711	6	1
712	6	1
713	6	1
714	6	1
715	5	1
716	6	1
717	5	1
718	5	1
719	5	1
720	5	2
721	5	2
722	5	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	6	3
748	6	3
749	6	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	3
763	6	3
764	6	3
765	7	3
766	6	4
767	7	4
768	6	4
769	7	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	5	4
778	5	4
779	5	4
780	5	4

Table K-72. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	4	1
702	5	1
703	5	1
704	6	1
705	6	1
706	6	1
707	6	1
708	6	1
709	6	1
710	6	1
711	6	1
712	5	1
713	6	1
714	6	1
715	5	1
716	5	1
717	5	1
718	5	1
719	5	1
720	5	2
721	5	2
722	5	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	6	3
746	6	3
747	6	3
748	6	3
749	6	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	7	3
759	6	3
760	7	3
761	7	3
762	7	3
763	7	3
764	7	3
765	7	3
766	7	4
767	7	4
768	7	4
769	7	4
770	7	4
771	7	4
772	8	4
773	7	4
774	7	4
775	6	4
776	6	4
777	6	4
778	5	4
779	5	4
780	5	4

Table K-73. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	4	1
702	5	1
703	5	1
704	5	1
705	6	1
706	6	1
707	7	1
708	6	1
709	6	1
710	6	1
711	6	1
712	6	1
713	6	1
714	6	1
715	5	1
716	6	1
717	6	1
718	5	1
719	5	1
720	5	2
721	5	2
722	5	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	6	3
742	5	3
743	6	3
744	6	3
745	6	3
746	6	3
747	6	3
748	6	3
749	6	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	6	3
760	6	3
761	7	3
762	7	3
763	7	3
764	6	3
765	7	3
766	7	4
767	7	4
768	7	4
769	7	4
770	7	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	5	4
778	5	4
779	4	4
780	5	4

Table K-74. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 7, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	4	1
702	5	1
703	5	1
704	6	1
705	6	1
706	6	1
707	6	1
708	6	1
709	6	1
710	6	1
711	6	1
712	6	1
713	5	1
714	6	1
715	5	1
716	5	1
717	5	1
718	5	1
719	5	1
720	5	2
721	5	2
722	5	2
723	5	2
724	5	2
725	5	2
726	5	2
727	5	2
728	5	2
729	5	2
730	5	2
731	5	2
732	5	2
733	5	2
734	5	2
735	5	2
736	5	2
737	5	2
738	5	2
739	5	2
740	5	3
741	5	3
742	5	3
743	5	3
744	5	3
745	5	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	3
763	6	3
764	6	3
765	6	3
766	6	4
767	7	4
768	6	4
769	7	4
770	6	4
771	7	4
772	7	4
773	7	4
774	7	4
775	6	4
776	6	4
777	5	4
778	5	4
779	4	4
780	5	4

Table K-75. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	7	1
806	7	1
807	8	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	5	2
824	6	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	4	2
833	5	2
834	4	2
835	4	2
836	4	2
837	4	2
838	4	2
839	4	2
840	4	3
841	4	3
842	4	3
843	4	3
844	4	3
845	4	3
846	4	3
847	4	3
848	4	3
849	4	3
850	4	3
851	5	3
852	4	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	5	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	7	4
867	6	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-76. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	6	1
810	6	1
811	6	1
812	6	1
813	6	1
814	6	1
815	6	1
816	6	1
817	5	1
818	5	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	4	2
830	4	2
831	4	2
832	4	2
833	4	2
834	4	2
835	4	2
836	4	2
837	4	2
838	4	2
839	4	2
840	4	3
841	4	3
842	4	3
843	4	3
844	5	3
845	5	3
846	4	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	6	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	6	4
867	6	4
868	6	4
869	6	4
870	6	4
871	7	4
872	6	4
873	7	4
874	7	4
875	6	4
876	6	4
877	5	4
878	5	4
879	4	4
880	5	4

Table K-77. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	4	1
802	5	1
803	5	1
804	5	1
805	6	1
806	6	1
807	6	1
808	6	1
809	6	1
810	6	1
811	6	1
812	6	1
813	5	1
814	5	1
815	5	1
816	5	1
817	5	1
818	5	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	4	2
828	4	2
829	4	2
830	5	2
831	4	2
832	4	2
833	4	2
834	5	2
835	4	2
836	4	2
837	4	2
838	4	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	6	4
867	7	4
868	6	4
869	7	4
870	6	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	6	4
879	4	4
880	5	4

Table K-78. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	7	1
806	7	1
807	7	1
808	8	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	5	2
824	6	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	4	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	6	3
859	6	3
860	6	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	6	4
867	7	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	7	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-79. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	6	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	4	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	5	3
860	6	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	6	4
867	6	4
868	6	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	5	4
878	5	4
879	4	4
880	5	4

Table K-80. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 8, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	4	1
802	5	1
803	5	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	6	1
810	6	1
811	6	1
812	6	1
813	6	1
814	6	1
815	6	1
816	5	1
817	5	1
818	5	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	4	2
827	5	2
828	5	2
829	4	2
830	4	2
831	4	2
832	4	2
833	4	2
834	4	2
835	4	2
836	4	2
837	4	2
838	4	2
839	4	2
840	4	3
841	4	3
842	5	3
843	5	3
844	4	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	6	3
859	6	3
860	6	3
861	6	3
862	6	3
863	6	3
864	6	3
865	6	4
866	6	4
867	6	4
868	6	4
869	7	4
870	6	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-81. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	4	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	5	1
1011	4	1
1012	5	1
1013	4	1
1014	4	1
1015	4	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	4	3
1051	4	3
1052	4	3
1053	4	3
1054	4	3
1055	4	3
1056	4	3
1057	4	3
1058	4	3
1059	5	3
1060	5	3
1061	5	3
1062	5	3
1063	5	3
1064	5	4
1065	5	4
1066	5	4
1067	5	4
1068	5	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	6	4
1074	6	4
1075	6	4
1076	6	4
1077	6	4
1078	6	4
1079	4	4
1080	5	4

Table K-82. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	4	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	5	1
1011	4	1
1012	5	1
1013	4	1
1014	4	1
1015	4	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	4	3
1051	4	3
1052	4	3
1053	4	3
1054	5	3
1055	4	3
1056	5	3
1057	5	3
1058	5	3
1059	5	3
1060	5	3
1061	5	3
1062	5	3
1063	5	3
1064	5	4
1065	5	4
1066	6	4
1067	5	4
1068	6	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	6	4
1074	6	4
1075	6	4
1076	6	4
1077	6	4
1078	5	4
1079	4	4
1080	5	4

Table K-83. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	5	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	4	1
1011	5	1
1012	4	1
1013	4	1
1014	4	1
1015	4	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	5	3
1051	4	3
1052	5	3
1053	5	3
1054	5	3
1055	5	3
1056	5	3
1057	5	3
1058	5	3
1059	5	3
1060	5	3
1061	5	3
1062	6	3
1063	6	3
1064	5	4
1065	6	4
1066	5	4
1067	5	4
1068	6	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	7	4
1074	7	4
1075	7	4
1076	6	4
1077	5	4
1078	5	4
1079	5	4
1080	5	4

Table K-84. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	4	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	5	1
1011	5	1
1012	5	1
1013	4	1
1014	4	1
1015	4	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	4	3
1051	4	3
1052	4	3
1053	4	3
1054	4	3
1055	4	3
1056	4	3
1057	5	3
1058	5	3
1059	5	3
1060	5	3
1061	5	3
1062	5	3
1063	5	3
1064	5	4
1065	5	4
1066	5	4
1067	5	4
1068	6	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	6	4
1074	6	4
1075	6	4
1076	5	4
1077	5	4
1078	5	4
1079	4	4
1080	5	4

Table K-85. 2009–10 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	4	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	5	1
1011	4	1
1012	4	1
1013	4	1
1014	4	1
1015	4	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	4	3
1051	5	3
1052	4	3
1053	5	3
1054	4	3
1055	5	3
1056	5	3
1057	5	3
1058	5	3
1059	5	3
1060	5	3
1061	5	3
1062	5	3
1063	5	3
1064	5	4
1065	5	4
1066	5	4
1067	5	4
1068	6	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	6	4
1074	6	4
1075	6	4
1076	5	4
1077	5	4
1078	5	4
1079	4	4
1080	5	4

Table K-86. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Reading Grade 10, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
1000	5	1
1001	4	1
1002	4	1
1003	5	1
1004	5	1
1005	5	1
1006	5	1
1007	5	1
1008	5	1
1009	5	1
1010	5	1
1011	5	1
1012	5	1
1013	5	1
1014	4	1
1015	5	1
1016	4	1
1017	4	1
1018	4	1
1019	4	1
1020	4	2
1021	4	2
1022	4	2
1023	4	2
1024	4	2
1025	4	2
1026	4	2
1027	4	2
1028	4	2
1029	4	2
1030	4	2
1031	4	2
1032	4	2
1033	4	2
1034	4	2
1035	4	2
1036	4	2
1037	4	2
1038	4	2
1039	4	2
1040	4	3
1041	4	3
1042	4	3
1043	4	3
1044	4	3
1045	4	3
1046	4	3
1047	4	3
1048	4	3
1049	4	3
1050	4	3
1051	4	3
1052	4	3
1053	5	3
1054	5	3
1055	4	3
1056	5	3
1057	5	3
1058	5	3
1059	5	3
1060	5	3
1061	5	3
1062	5	3
1063	5	3
1064	5	4
1065	5	4
1066	5	4
1067	6	4
1068	5	4
1069	6	4
1070	6	4
1071	6	4
1072	6	4
1073	6	4
1074	6	4
1075	6	4
1076	6	4
1077	6	4
1078	5	4
1079	4	4
1080	5	4

Table K-87. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	4	1
402	4	1
403	5	1
404	5	1
405	5	1
406	6	1
407	6	1
408	7	1
409	6	1
410	6	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	6	1
417	6	1
418	5	1
419	5	1
420	5	2
421	5	2
422	5	2
423	5	2
424	5	2
425	5	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	5	3
444	5	3
445	5	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	7	3
458	7	3
459	7	3
460	7	4
461	7	4
462	7	4
463	7	4
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	8	4
472	8	4
473	8	4
474	8	4
475	7	4
476	7	4
477	7	4
478	7	4
479	5	4
480	5	4

Table K-88. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	4	1
402	4	1
403	5	1
404	5	1
405	6	1
406	6	1
407	7	1
408	7	1
409	7	1
410	7	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	6	1
417	6	1
418	6	1
419	5	1
420	5	2
421	6	2
422	6	2
423	5	2
424	5	2
425	5	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	5	3
443	6	3
444	6	3
445	5	3
446	5	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	7	3
460	7	4
461	7	4
462	7	4
463	7	4
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	8	4
472	8	4
473	8	4
474	7	4
475	7	4
476	7	4
477	7	4
478	5	4
479	5	4
480	5	4

Table K-89. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	5	1
404	5	1
405	6	1
406	6	1
407	6	1
408	6	1
409	6	1
410	6	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	5	1
417	5	1
418	6	1
419	5	1
420	5	2
421	5	2
422	5	2
423	5	2
424	5	2
425	5	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	6	3
443	5	3
444	5	3
445	5	3
446	5	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	6	3
458	6	3
459	7	3
460	7	4
461	7	4
462	7	4
463	7	4
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	7	4
473	7	4
474	7	4
475	7	4
476	7	4
477	6	4
478	6	4
479	6	4
480	5	4

Table K-90. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	5	1
404	6	1
405	6	1
406	7	1
407	7	1
408	6	1
409	6	1
410	6	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	6	1
417	5	1
418	5	1
419	6	1
420	5	2
421	5	2
422	5	2
423	5	2
424	5	2
425	5	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	6	3
442	6	3
443	5	3
444	5	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	7	3
457	7	3
458	7	3
459	7	3
460	7	4
461	7	4
462	7	4
463	7	4
464	7	4
465	7	4
466	7	4
467	7	4
468	7	4
469	7	4
470	7	4
471	7	4
472	8	4
473	8	4
474	8	4
475	7	4
476	7	4
477	7	4
478	7	4
479	5	4
480	5	4

Table K-91. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	5	1
404	6	1
405	6	1
406	7	1
407	7	1
408	6	1
409	6	1
410	6	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	6	1
417	5	1
418	5	1
419	6	1
420	5	2
421	5	2
422	5	2
423	5	2
424	5	2
425	5	2
426	5	2
427	5	2
428	5	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	5	2
439	5	2
440	5	3
441	5	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	6	3
454	6	3
455	6	3
456	6	3
457	7	3
458	7	3
459	7	3
460	7	4
461	7	4
462	8	4
463	8	4
464	8	4
465	8	4
466	8	4
467	8	4
468	8	4
469	8	4
470	8	4
471	8	4
472	8	4
473	8	4
474	8	4
475	7	4
476	7	4
477	7	4
478	5	4
479	5	4
480	5	4

Table K-92. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 4, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
400	5	1
401	5	1
402	5	1
403	5	1
404	5	1
405	6	1
406	6	1
407	7	1
408	7	1
409	6	1
410	6	1
411	6	1
412	6	1
413	6	1
414	6	1
415	6	1
416	6	1
417	6	1
418	6	1
419	6	1
420	6	2
421	6	2
422	6	2
423	5	2
424	6	2
425	6	2
426	5	2
427	5	2
428	6	2
429	5	2
430	5	2
431	5	2
432	5	2
433	5	2
434	5	2
435	5	2
436	5	2
437	5	2
438	6	2
439	6	2
440	5	3
441	5	3
442	6	3
443	6	3
444	6	3
445	6	3
446	6	3
447	6	3
448	6	3
449	6	3
450	6	3
451	6	3
452	6	3
453	7	3
454	7	3
455	7	3
456	7	3
457	7	3
458	7	3
459	7	3
460	7	4
461	7	4
462	7	4
463	7	4
464	7	4
465	7	4
466	8	4
467	8	4
468	8	4
469	8	4
470	8	4
471	8	4
472	8	4
473	8	4
474	8	4
475	8	4
476	7	4
477	7	4
478	7	4
479	7	4
480	5	4

Table K-93. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	8	1
711	8	1
712	8	1
713	8	1
714	8	1
715	8	1
716	8	1
717	8	1
718	7	1
719	7	1
720	7	2
721	7	2
722	7	2
723	7	2
724	7	2
725	7	2
726	7	2
727	7	2
728	6	2
729	6	2
730	6	2
731	6	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	5	3
741	5	3
742	6	3
743	5	3
744	5	3
745	6	3
746	5	3
747	5	3
748	5	3
749	6	3
750	6	3
751	5	3
752	6	3
753	6	3
754	5	3
755	5	3
756	6	3
757	5	3
758	5	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	7	4
774	7	4
775	7	4
776	6	4
777	6	4
778	5	4
779	5	4
780	5	4

Table K-94. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	6	1
703	6	1
704	6	1
705	6	1
706	8	1
707	8	1
708	8	1
709	9	1
710	9	1
711	9	1
712	8	1
713	8	1
714	8	1
715	8	1
716	8	1
717	8	1
718	8	1
719	7	1
720	7	2
721	7	2
722	7	2
723	7	2
724	7	2
725	7	2
726	6	2
727	6	2
728	6	2
729	6	2
730	6	2
731	6	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	6	3
741	6	3
742	6	3
743	6	3
744	6	3
745	6	3
746	6	3
747	5	3
748	5	3
749	6	3
750	6	3
751	6	3
752	6	3
753	6	3
754	6	3
755	6	3
756	6	3
757	6	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	6	4
774	6	4
775	6	4
776	5	4
777	5	4
778	5	4
779	4	4
780	5	4

Table K-95. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	7	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	9	1
711	9	1
712	9	1
713	8	1
714	8	1
715	8	1
716	8	1
717	8	1
718	8	1
719	7	1
720	7	2
721	7	2
722	7	2
723	7	2
724	7	2
725	7	2
726	7	2
727	7	2
728	7	2
729	6	2
730	6	2
731	6	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	6	3
741	6	3
742	6	3
743	6	3
744	6	3
745	6	3
746	5	3
747	5	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	6	3
757	6	3
758	5	3
759	6	3
760	6	3
761	5	3
762	5	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	6	4
774	6	4
775	6	4
776	6	4
777	6	4
778	4	4
779	4	4
780	5	4

Table K-96. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	7	1
705	7	1
706	7	1
707	7	1
708	9	1
709	9	1
710	9	1
711	8	1
712	8	1
713	8	1
714	8	1
715	8	1
716	8	1
717	8	1
718	8	1
719	8	1
720	8	2
721	8	2
722	7	2
723	7	2
724	7	2
725	7	2
726	7	2
727	7	2
728	7	2
729	7	2
730	7	2
731	7	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	6	3
741	6	3
742	6	3
743	6	3
744	6	3
745	6	3
746	5	3
747	5	3
748	5	3
749	6	3
750	6	3
751	5	3
752	5	3
753	6	3
754	5	3
755	5	3
756	5	3
757	6	3
758	6	3
759	5	3
760	5	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	6	4
774	6	4
775	6	4
776	6	4
777	5	4
778	5	4
779	5	4
780	5	4

Table K-97. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	6	1
703	6	1
704	6	1
705	6	1
706	8	1
707	8	1
708	8	1
709	9	1
710	9	1
711	9	1
712	8	1
713	8	1
714	8	1
715	8	1
716	8	1
717	8	1
718	8	1
719	7	1
720	7	2
721	7	2
722	7	2
723	7	2
724	7	2
725	7	2
726	7	2
727	7	2
728	7	2
729	7	2
730	6	2
731	6	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	6	3
741	6	3
742	5	3
743	5	3
744	6	3
745	5	3
746	5	3
747	6	3
748	5	3
749	5	3
750	5	3
751	5	3
752	5	3
753	5	3
754	6	3
755	6	3
756	5	3
757	5	3
758	6	3
759	6	3
760	6	3
761	6	3
762	6	4
763	6	4
764	6	4
765	6	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	6	4
774	6	4
775	6	4
776	5	4
777	5	4
778	4	4
779	4	4
780	5	4

Table K-98. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 7, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
700	5	1
701	5	1
702	5	1
703	5	1
704	7	1
705	7	1
706	7	1
707	8	1
708	8	1
709	8	1
710	8	1
711	9	1
712	9	1
713	9	1
714	8	1
715	8	1
716	8	1
717	8	1
718	8	1
719	7	1
720	7	2
721	7	2
722	8	2
723	8	2
724	7	2
725	7	2
726	7	2
727	7	2
728	6	2
729	6	2
730	6	2
731	6	2
732	6	2
733	6	2
734	6	2
735	6	2
736	6	2
737	6	2
738	6	2
739	6	2
740	6	3
741	6	3
742	5	3
743	5	3
744	6	3
745	5	3
746	5	3
747	6	3
748	5	3
749	6	3
750	6	3
751	5	3
752	5	3
753	5	3
754	5	3
755	5	3
756	5	3
757	5	3
758	5	3
759	5	3
760	5	3
761	5	3
762	5	4
763	6	4
764	5	4
765	5	4
766	6	4
767	6	4
768	6	4
769	6	4
770	6	4
771	6	4
772	6	4
773	6	4
774	6	4
775	6	4
776	6	4
777	5	4
778	5	4
779	5	4
780	5	4

Table K-99. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	7	1
1106	7	1
1107	7	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	5	2
1130	5	2
1131	6	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	4	3
1156	5	3
1157	5	3
1158	5	3
1159	4	3
1160	5	3
1161	5	3
1162	5	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	6	4
1175	6	4
1176	5	4
1177	5	4
1178	5	4
1179	4	4
1180	5	4

Table K-100. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	6	1
1103	6	1
1104	6	1
1105	6	1
1106	7	1
1107	7	1
1108	7	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	8	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	5	2
1133	5	2
1134	6	2
1135	6	2
1136	6	2
1137	5	2
1138	5	2
1139	6	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	5	3
1156	5	3
1157	5	3
1158	5	3
1159	5	3
1160	5	3
1161	5	3
1162	5	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	5	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	4	4
1180	5	4

Table K-101. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	7	1
1106	7	1
1107	7	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	8	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	5	2
1131	5	2
1132	6	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	4	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	4	3
1156	5	3
1157	5	3
1158	5	3
1159	4	3
1160	5	3
1161	5	3
1162	5	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	5	4
1175	5	4
1176	5	4
1177	5	4
1178	4	4
1179	4	4
1180	5	4

Table K-102. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	6	1
1105	6	1
1106	6	1
1107	8	1
1108	8	1
1109	8	1
1110	7	1
1111	7	1
1112	7	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	7	1
1120	7	2
1121	7	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	5	2
1130	5	2
1131	6	2
1132	6	2
1133	6	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	4	3
1153	5	3
1154	5	3
1155	5	3
1156	4	3
1157	5	3
1158	5	3
1159	5	3
1160	4	3
1161	4	3
1162	5	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	5	4
1175	5	4
1176	5	4
1177	5	4
1178	4	4
1179	4	4
1180	5	4

Table K-103. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	6	1
1105	6	1
1106	6	1
1107	8	1
1108	8	1
1109	8	1
1110	7	1
1111	7	1
1112	7	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	6	2
1130	6	2
1131	6	2
1132	6	2
1133	6	2
1134	6	2
1135	5	2
1136	5	2
1137	6	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	5	3
1156	5	3
1157	4	3
1158	5	3
1159	5	3
1160	5	3
1161	5	3
1162	5	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	5	4
1175	5	4
1176	5	4
1177	5	4
1178	4	4
1179	4	4
1180	5	4

Table K-104. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Science Grade 11, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	6	1
1104	6	1
1105	6	1
1106	6	1
1107	8	1
1108	8	1
1109	8	1
1110	8	1
1111	8	1
1112	8	1
1113	7	1
1114	7	1
1115	7	1
1116	7	1
1117	7	1
1118	7	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	6	2
1127	6	2
1128	6	2
1129	5	2
1130	6	2
1131	6	2
1132	5	2
1133	5	2
1134	6	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	4	3
1151	5	3
1152	5	3
1153	5	3
1154	4	3
1155	5	3
1156	5	3
1157	5	3
1158	5	3
1159	5	3
1160	5	3
1161	5	3
1162	4	3
1163	5	4
1164	5	4
1165	5	4
1166	5	4
1167	5	4
1168	5	4
1169	5	4
1170	5	4
1171	5	4
1172	5	4
1173	5	4
1174	5	4
1175	5	4
1176	5	4
1177	4	4
1178	4	4
1179	4	4
1180	5	4

Table K-105. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	5	1
504	7	1
505	7	1
506	7	1
507	8	1
508	8	1
509	8	1
510	9	1
511	9	1
512	8	1
513	8	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	7	4
576	6	4
577	6	4
578	6	4
579	5	4
580	5	4

Table K-106. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	6	1
506	8	1
507	8	1
508	8	1
509	8	1
510	8	1
511	8	1
512	8	1
513	8	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	8	1
520	8	2
521	8	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	7	3
555	7	3
556	7	3
557	6	3
558	6	3
559	6	3
560	6	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	7	4
576	7	4
577	7	4
578	5	4
579	5	4
580	5	4

Table K-107. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	6	1
506	8	1
507	8	1
508	8	1
509	9	1
510	9	1
511	9	1
512	8	1
513	8	1
514	8	1
515	8	1
516	8	1
517	7	1
518	7	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	7	3
560	7	3
561	7	3
562	7	3
563	6	3
564	6	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	7	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-108. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	6	1
504	6	1
505	6	1
506	8	1
507	8	1
508	8	1
509	9	1
510	9	1
511	9	1
512	8	1
513	8	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	5	3
543	5	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	6	3
561	6	3
562	7	3
563	6	3
564	6	4
565	6	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	7	4
576	7	4
577	5	4
578	5	4
579	5	4
580	5	4

Table K-109. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	6	1
502	6	1
503	6	1
504	6	1
505	7	1
506	7	1
507	7	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	8	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	8	1
520	8	2
521	8	2
522	8	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	6	3
561	6	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	8	4
573	8	4
574	8	4
575	6	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-110. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 5, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	5	1
504	7	1
505	7	1
506	7	1
507	8	1
508	8	1
509	8	1
510	8	1
511	8	1
512	8	1
513	8	1
514	8	1
515	7	1
516	7	1
517	8	1
518	8	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	6	3
552	6	3
553	6	3
554	6	3
555	6	3
556	6	3
557	6	3
558	6	3
559	6	3
560	7	3
561	7	3
562	7	3
563	7	3
564	7	4
565	7	4
566	7	4
567	7	4
568	7	4
569	7	4
570	7	4
571	7	4
572	7	4
573	7	4
574	7	4
575	6	4
576	6	4
577	6	4
578	5	4
579	5	4
580	5	4

Table K-111. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	5	1
805	5	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	6	3
855	6	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	6	4
867	7	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-112. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	5	1
805	5	1
806	6	1
807	6	1
808	7	1
809	7	1
810	7	1
811	7	1
812	6	1
813	6	1
814	6	1
815	6	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	5	3
857	5	3
858	5	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	6	4
867	6	4
868	6	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	6	4
875	6	4
876	6	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-113. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	6	1
805	6	1
806	6	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	7	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	6	2
829	6	2
830	6	2
831	6	2
832	5	2
833	5	2
834	6	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	6	3
855	6	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	7	4
867	7	4
868	7	4
869	6	4
870	6	4
871	6	4
872	7	4
873	7	4
874	7	4
875	7	4
876	7	4
877	5	4
878	5	4
879	5	4
880	5	4

Table K-114. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	4	1
802	4	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	6	2
827	6	2
828	5	2
829	5	2
830	6	2
831	6	2
832	6	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	6	3
854	6	3
855	6	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	6	4
867	7	4
868	7	4
869	7	4
870	6	4
871	6	4
872	6	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-115. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	6	1
805	6	1
806	6	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	7	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	5	2
826	5	2
827	6	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	5	3
852	5	3
853	5	3
854	5	3
855	5	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	6	4
867	7	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	7	4
876	6	4
877	6	4
878	6	4
879	4	4
880	5	4

Table K-116. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 8, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	6	1
814	6	1
815	6	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	5	2
825	5	2
826	5	2
827	6	2
828	6	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	5	3
847	5	3
848	5	3
849	5	3
850	5	3
851	6	3
852	6	3
853	6	3
854	6	3
855	6	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	4
861	6	4
862	6	4
863	6	4
864	6	4
865	6	4
866	6	4
867	7	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	6	4
876	6	4
877	6	4
878	5	4
879	5	4
880	5	4

Table K-117. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	7	1
1106	7	1
1107	7	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	7	1
1113	7	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	5	2
1124	5	2
1125	6	2
1126	5	2
1127	5	2
1128	5	2
1129	5	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	6	3
1153	6	3
1154	5	3
1155	5	4
1156	5	4
1157	5	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	6	4
1163	6	4
1164	6	4
1165	6	4
1166	6	4
1167	6	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-118. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	6	1
1106	6	1
1107	7	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	6	1
1113	6	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	5	2
1125	5	2
1126	5	2
1127	5	2
1128	5	2
1129	5	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	6	3
1152	5	3
1153	5	3
1154	5	3
1155	5	4
1156	6	4
1157	6	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	6	4
1163	6	4
1164	6	4
1165	6	4
1166	6	4
1167	6	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-119. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	6	1
1106	6	1
1107	6	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	6	1
1113	6	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	5	2
1127	5	2
1128	6	2
1129	5	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	5	4
1156	5	4
1157	6	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	5	4
1163	5	4
1164	6	4
1165	6	4
1166	6	4
1167	6	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	6	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-120. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	6	1
1105	6	1
1106	7	1
1107	7	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	7	1
1113	6	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	5	2
1126	6	2
1127	6	2
1128	5	2
1129	5	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	5	4
1156	5	4
1157	5	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	6	4
1163	6	4
1164	6	4
1165	6	4
1166	6	4
1167	6	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	7	4
1173	7	4
1174	7	4
1175	6	4
1176	6	4
1177	5	4
1178	5	4
1179	5	4
1180	5	4

Table K-121. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	5	1
1102	5	1
1103	5	1
1104	5	1
1105	6	1
1106	6	1
1107	6	1
1108	7	1
1109	7	1
1110	7	1
1111	7	1
1112	6	1
1113	6	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	6	1
1120	6	2
1121	6	2
1122	6	2
1123	6	2
1124	6	2
1125	6	2
1126	5	2
1127	5	2
1128	6	2
1129	5	2
1130	5	2
1131	6	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	6	3
1152	6	3
1153	5	3
1154	5	3
1155	5	4
1156	5	4
1157	6	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	6	4
1163	6	4
1164	6	4
1165	6	4
1166	7	4
1167	7	4
1168	7	4
1169	7	4
1170	7	4
1171	6	4
1172	6	4
1173	6	4
1174	7	4
1175	7	4
1176	6	4
1177	6	4
1178	6	4
1179	4	4
1180	5	4

Table K-122. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Social Studies Grade 11, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
1100	5	1
1101	4	1
1102	4	1
1103	4	1
1104	5	1
1105	5	1
1106	6	1
1107	6	1
1108	6	1
1109	6	1
1110	6	1
1111	6	1
1112	6	1
1113	6	1
1114	6	1
1115	6	1
1116	6	1
1117	6	1
1118	6	1
1119	5	1
1120	6	2
1121	6	2
1122	5	2
1123	5	2
1124	6	2
1125	5	2
1126	5	2
1127	5	2
1128	5	2
1129	5	2
1130	5	2
1131	5	2
1132	5	2
1133	5	2
1134	5	2
1135	5	2
1136	5	2
1137	5	2
1138	5	2
1139	5	2
1140	5	3
1141	5	3
1142	5	3
1143	5	3
1144	5	3
1145	5	3
1146	5	3
1147	5	3
1148	5	3
1149	5	3
1150	5	3
1151	5	3
1152	5	3
1153	5	3
1154	5	3
1155	5	4
1156	5	4
1157	6	4
1158	6	4
1159	6	4
1160	6	4
1161	6	4
1162	6	4
1163	6	4
1164	6	4
1165	6	4
1166	6	4
1167	6	4
1168	6	4
1169	6	4
1170	6	4
1171	6	4
1172	6	4
1173	6	4
1174	7	4
1175	7	4
1176	6	4
1177	6	4
1178	6	4
1179	4	4
1180	5	4

Table K-123. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	5	1
504	7	1
505	7	1
506	7	1
507	7	1
508	8	1
509	8	1
510	8	1
511	7	1
512	7	1
513	7	1
514	6	1
515	6	1
516	6	1
517	6	1
518	5	1
519	5	1
520	5	2
521	5	2
522	5	2
523	5	2
524	5	2
525	5	2
526	5	2
527	5	2
528	5	2
529	5	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	5	2
538	5	2
539	5	2
540	5	3
541	5	3
542	5	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	7	3
557	7	3
558	7	3
559	8	3
560	8	3
561	8	3
562	8	3
563	8	3
564	8	4
565	8	4
566	8	4
567	8	4
568	8	4
569	8	4
570	8	4
571	8	4
572	8	4
573	8	4
574	8	4
575	7	4
576	7	4
577	7	4
578	7	4
579	5	4
580	5	4

Table K-124. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	5	1
501	5	1
502	5	1
503	5	1
504	5	1
505	6	1
506	6	1
507	7	1
508	7	1
509	7	1
510	7	1
511	7	1
512	7	1
513	7	1
514	6	1
515	6	1
516	6	1
517	6	1
518	6	1
519	6	1
520	6	2
521	6	2
522	6	2
523	6	2
524	6	2
525	6	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	6	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	7	3
546	7	3
547	7	3
548	7	3
549	7	3
550	7	3
551	7	3
552	8	3
553	8	3
554	8	3
555	8	3
556	8	3
557	9	3
558	9	3
559	9	3
560	9	3
561	9	3
562	10	3
563	10	3
564	10	4
565	10	4
566	10	4
567	11	4
568	11	4
569	11	4
570	11	4
571	11	4
572	11	4
573	9	4
574	9	4
575	9	4
576	9	4
577	9	4
578	9	4
579	9	4
580	6	4

Table K-125. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	6	1
504	6	1
505	6	1
506	6	1
507	8	1
508	8	1
509	8	1
510	8	1
511	8	1
512	8	1
513	7	1
514	7	1
515	7	1
516	6	1
517	6	1
518	6	1
519	6	1
520	6	2
521	5	2
522	5	2
523	5	2
524	5	2
525	5	2
526	5	2
527	5	2
528	5	2
529	5	2
530	5	2
531	5	2
532	5	2
533	5	2
534	5	2
535	5	2
536	5	2
537	5	2
538	5	2
539	6	2
540	6	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	7	3
549	7	3
550	7	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	7	3
557	7	3
558	7	3
559	8	3
560	8	3
561	8	3
562	8	3
563	8	3
564	8	4
565	8	4
566	8	4
567	9	4
568	9	4
569	9	4
570	9	4
571	9	4
572	9	4
573	9	4
574	9	4
575	9	4
576	9	4
577	9	4
578	6	4
579	6	4
580	5	4

Table K-126. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	7	1
502	7	1
503	7	1
504	7	1
505	8	1
506	8	1
507	8	1
508	8	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	8	1
515	8	1
516	8	1
517	8	1
518	7	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	6	2
525	6	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	7	3
542	7	3
543	7	3
544	7	3
545	7	3
546	7	3
547	8	3
548	8	3
549	8	3
550	8	3
551	8	3
552	8	3
553	8	3
554	8	3
555	8	3
556	8	3
557	9	3
558	9	3
559	9	3
560	10	3
561	10	3
562	10	3
563	10	3
564	11	4
565	11	4
566	11	4
567	11	4
568	12	4
569	12	4
570	12	4
571	12	4
572	12	4
573	10	4
574	10	4
575	10	4
576	10	4
577	10	4
578	9	4
579	9	4
580	7	4

Table K-127. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	8	1
501	8	1
502	8	1
503	8	1
504	8	1
505	9	1
506	9	1
507	9	1
508	9	1
509	10	1
510	10	1
511	10	1
512	9	1
513	9	1
514	9	1
515	8	1
516	8	1
517	7	1
518	7	1
519	7	1
520	7	2
521	7	2
522	7	2
523	6	2
524	6	2
525	6	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	6	2
537	6	2
538	5	2
539	5	2
540	5	3
541	5	3
542	5	3
543	5	3
544	5	3
545	5	3
546	5	3
547	6	3
548	6	3
549	6	3
550	8	3
551	8	3
552	8	3
553	9	3
554	9	3
555	9	3
556	10	3
557	10	3
558	10	3
559	10	3
560	11	3
561	11	3
562	11	3
563	12	3
564	12	4
565	12	4
566	12	4
567	12	4
568	12	4
569	12	4
570	12	4
571	11	4
572	11	4
573	11	4
574	11	4
575	9	4
576	9	4
577	9	4
578	9	4
579	8	4
580	6	4

Table K-128. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	7	1
501	7	1
502	8	1
503	8	1
504	8	1
505	8	1
506	8	1
507	9	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	9	1
515	8	1
516	8	1
517	7	1
518	7	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	6	2
525	6	2
526	6	2
527	6	2
528	6	2
529	6	2
530	6	2
531	6	2
532	6	2
533	6	2
534	6	2
535	6	2
536	5	2
537	5	2
538	5	2
539	5	2
540	5	3
541	5	3
542	5	3
543	5	3
544	5	3
545	5	3
546	6	3
547	6	3
548	6	3
549	8	3
550	8	3
551	8	3
552	8	3
553	9	3
554	9	3
555	9	3
556	9	3
557	9	3
558	11	3
559	11	3
560	11	3
561	11	3
562	13	3
563	13	3
564	13	4
565	13	4
566	13	4
567	13	4
568	13	4
569	13	4
570	13	4
571	13	4
572	12	4
573	12	4
574	12	4
575	12	4
576	12	4
577	9	4
578	9	4
579	9	4
580	7	4

Table K-129. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 7

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	7	1
501	7	1
502	7	1
503	7	1
504	8	1
505	8	1
506	8	1
507	8	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	8	1
520	8	2
521	8	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	7	3
542	7	3
543	7	3
544	7	3
545	7	3
546	7	3
547	7	3
548	7	3
549	7	3
550	7	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	7	3
557	7	3
558	7	3
559	7	3
560	7	3
561	7	3
562	8	3
563	8	3
564	8	4
565	9	4
566	9	4
567	9	4
568	9	4
569	10	4
570	10	4
571	10	4
572	9	4
573	9	4
574	9	4
575	8	4
576	8	4
577	8	4
578	8	4
579	7	4
580	5	4

Table K-130. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 8

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	7	1
501	7	1
502	7	1
503	7	1
504	8	1
505	8	1
506	8	1
507	8	1
508	9	1
509	9	1
510	9	1
511	10	1
512	10	1
513	10	1
514	10	1
515	9	1
516	9	1
517	9	1
518	9	1
519	9	1
520	9	2
521	8	2
522	8	2
523	8	2
524	8	2
525	8	2
526	8	2
527	8	2
528	8	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	7	3
542	7	3
543	7	3
544	7	3
545	7	3
546	7	3
547	7	3
548	7	3
549	7	3
550	7	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	7	3
557	8	3
558	8	3
559	8	3
560	8	3
561	8	3
562	8	3
563	8	3
564	8	4
565	10	4
566	10	4
567	10	4
568	10	4
569	11	4
570	11	4
571	11	4
572	11	4
573	11	4
574	10	4
575	10	4
576	10	4
577	10	4
578	10	4
579	10	4
580	8	4

Table K-131. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 9

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	7	1
501	7	1
502	7	1
503	7	1
504	8	1
505	8	1
506	8	1
507	8	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	9	1
515	9	1
516	9	1
517	9	1
518	9	1
519	8	1
520	8	2
521	8	2
522	8	2
523	8	2
524	8	2
525	8	2
526	8	2
527	8	2
528	8	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	6	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	7	3
557	7	3
558	9	3
559	9	3
560	9	3
561	9	3
562	11	3
563	11	3
564	11	4
565	11	4
566	13	4
567	13	4
568	13	4
569	13	4
570	13	4
571	13	4
572	12	4
573	12	4
574	12	4
575	12	4
576	12	4
577	10	4
578	10	4
579	10	4
580	7	4

Table K-132. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 10

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	7	1
501	7	1
502	7	1
503	8	1
504	8	1
505	8	1
506	8	1
507	8	1
508	10	1
509	10	1
510	10	1
511	10	1
512	10	1
513	10	1
514	10	1
515	9	1
516	9	1
517	8	1
518	8	1
519	8	1
520	8	2
521	8	2
522	8	2
523	8	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	7	2
535	7	2
536	7	2
537	7	2
538	7	2
539	7	2
540	7	3
541	7	3
542	6	3
543	6	3
544	6	3
545	6	3
546	6	3
547	6	3
548	6	3
549	6	3
550	6	3
551	7	3
552	7	3
553	7	3
554	7	3
555	7	3
556	8	3
557	8	3
558	8	3
559	9	3
560	9	3
561	9	3
562	9	3
563	10	3
564	10	4
565	10	4
566	11	4
567	11	4
568	11	4
569	11	4
570	11	4
571	11	4
572	11	4
573	11	4
574	10	4
575	10	4
576	10	4
577	10	4
578	10	4
579	8	4
580	7	4

Table K-133. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 11

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	6	1
504	8	1
505	8	1
506	8	1
507	9	1
508	9	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	9	1
515	8	1
516	8	1
517	8	1
518	8	1
519	7	1
520	7	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	7	2
532	7	2
533	7	2
534	8	2
535	8	2
536	8	2
537	8	2
538	8	2
539	8	2
540	8	3
541	8	3
542	8	3
543	8	3
544	8	3
545	8	3
546	8	3
547	8	3
548	8	3
549	8	3
550	8	3
551	8	3
552	8	3
553	8	3
554	8	3
555	8	3
556	8	3
557	8	3
558	9	3
559	9	3
560	9	3
561	10	3
562	10	3
563	10	3
564	10	4
565	10	4
566	11	4
567	11	4
568	11	4
569	11	4
570	11	4
571	11	4
572	11	4
573	11	4
574	11	4
575	11	4
576	9	4
577	9	4
578	9	4
579	9	4
580	7	4

Table K-134. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 5, Scale Form 12

Scaled Score	*Conditional Standard Error*	*Performance Level*
500	6	1
501	6	1
502	6	1
503	7	1
504	7	1
505	7	1
506	8	1
507	8	1
508	8	1
509	9	1
510	9	1
511	9	1
512	9	1
513	9	1
514	8	1
515	8	1
516	8	1
517	8	1
518	8	1
519	8	1
520	8	2
521	7	2
522	7	2
523	7	2
524	7	2
525	7	2
526	7	2
527	7	2
528	7	2
529	7	2
530	7	2
531	8	2
532	8	2
533	8	2
534	8	2
535	8	2
536	8	2
537	8	2
538	8	2
539	8	2
540	8	3
541	8	3
542	9	3
543	9	3
544	9	3
545	9	3
546	9	3
547	9	3
548	9	3
549	9	3
550	9	3
551	9	3
552	9	3
553	9	3
554	9	3
555	9	3
556	9	3
557	9	3
558	9	3
559	9	3
560	10	3
561	10	3
562	10	3
563	10	3
564	10	4
565	11	4
566	11	4
567	11	4
568	11	4
569	11	4
570	12	4
571	12	4
572	12	4
573	12	4
574	12	4
575	10	4
576	10	4
577	10	4
578	10	4
579	10	4
580	8	4

Table K-135. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 1

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	9	1
801	9	1
802	9	1
803	9	1
804	9	1
805	10	1
806	10	1
807	10	1
808	10	1
809	10	1
810	10	1
811	10	1
812	10	1
813	10	1
814	10	1
815	8	1
816	8	1
817	7	1
818	7	1
819	7	1
820	7	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	6	2
840	6	3
841	6	3
842	6	3
843	6	3
844	6	3
845	7	3
846	7	3
847	8	3
848	8	3
849	8	3
850	8	3
851	8	3
852	8	3
853	9	3
854	9	3
855	9	3
856	10	3
857	10	3
858	10	3
859	10	3
860	10	3
861	10	3
862	10	4
863	11	4
864	11	4
865	11	4
866	11	4
867	11	4
868	11	4
869	12	4
870	12	4
871	12	4
872	12	4
873	10	4
874	10	4
875	10	4
876	10	4
877	10	4
878	9	4
879	9	4
880	8	4

Table K-136. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 2

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	10	1
801	9	1
802	9	1
803	9	1
804	9	1
805	9	1
806	9	1
807	10	1
808	10	1
809	10	1
810	11	1
811	11	1
812	11	1
813	9	1
814	9	1
815	9	1
816	8	1
817	8	1
818	7	1
819	7	1
820	7	2
821	6	2
822	6	2
823	6	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	6	2
839	6	2
840	6	3
841	6	3
842	6	3
843	6	3
844	6	3
845	7	3
846	7	3
847	7	3
848	8	3
849	8	3
850	8	3
851	8	3
852	8	3
853	9	3
854	9	3
855	9	3
856	9	3
857	9	3
858	9	3
859	10	3
860	10	3
861	10	3
862	10	4
863	11	4
864	11	4
865	11	4
866	11	4
867	11	4
868	11	4
869	11	4
870	11	4
871	11	4
872	11	4
873	11	4
874	10	4
875	10	4
876	10	4
877	10	4
878	10	4
879	10	4
880	9	4

Table K-137. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 3

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	6	1
802	6	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	7	1
814	6	1
815	6	1
816	6	1
817	6	1
818	6	1
819	6	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	4	2
828	4	2
829	4	2
830	5	2
831	5	2
832	4	2
833	4	2
834	4	2
835	4	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	6	3
845	6	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	7	3
862	8	4
863	8	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	8	4
870	8	4
871	8	4
872	8	4
873	8	4
874	8	4
875	8	4
876	8	4
877	8	4
878	8	4
879	8	4
880	5	4

Table K-138. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 4

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	6	1
802	6	1
803	6	1
804	6	1
805	6	1
806	8	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	7	1
813	7	1
814	7	1
815	6	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	6	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	4	2
831	4	2
832	4	2
833	4	2
834	4	2
835	4	2
836	4	2
837	4	2
838	4	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	6	3
845	6	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	8	3
862	8	4
863	8	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	8	4
870	8	4
871	8	4
872	8	4
873	8	4
874	8	4
875	8	4
876	8	4
877	8	4
878	6	4
879	6	4
880	5	4

Table K-139. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 5

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	6	1
802	6	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	7	1
812	7	1
813	6	1
814	6	1
815	6	1
816	6	1
817	6	1
818	6	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	4	2
828	4	2
829	5	2
830	5	2
831	5	2
832	4	2
833	4	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	8	3
861	8	3
862	8	4
863	8	4
864	8	4
865	9	4
866	9	4
867	9	4
868	9	4
869	9	4
870	10	4
871	10	4
872	10	4
873	10	4
874	10	4
875	10	4
876	7	4
877	7	4
878	7	4
879	7	4
880	5	4

Table K-140. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 6

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	7	1
804	7	1
805	7	1
806	7	1
807	7	1
808	9	1
809	9	1
810	9	1
811	9	1
812	8	1
813	8	1
814	7	1
815	7	1
816	7	1
817	6	1
818	6	1
819	6	1
820	6	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	4	2
832	4	2
833	4	2
834	4	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	6	3
846	6	3
847	5	3
848	5	3
849	5	3
850	6	3
851	6	3
852	6	3
853	6	3
854	6	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	8	3
862	8	4
863	8	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	8	4
870	8	4
871	8	4
872	8	4
873	8	4
874	8	4
875	8	4
876	8	4
877	6	4
878	6	4
879	6	4
880	5	4

Table K-141. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 7

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	6	1
801	6	1
802	6	1
803	6	1
804	6	1
805	6	1
806	6	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	8	1
813	8	1
814	7	1
815	7	1
816	6	1
817	6	1
818	5	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	4	2
826	4	2
827	5	2
828	4	2
829	4	2
830	4	2
831	4	2
832	4	2
833	4	2
834	4	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	6	3
853	6	3
854	6	3
855	6	3
856	6	3
857	6	3
858	6	3
859	6	3
860	6	3
861	6	3
862	6	4
863	6	4
864	6	4
865	7	4
866	7	4
867	7	4
868	7	4
869	7	4
870	7	4
871	7	4
872	7	4
873	7	4
874	7	4
875	7	4
876	7	4
877	7	4
878	5	4
879	5	4
880	5	4

Table K-142. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 8

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	6	1
803	6	1
804	6	1
805	6	1
806	7	1
807	7	1
808	7	1
809	7	1
810	7	1
811	6	1
812	6	1
813	6	1
814	6	1
815	6	1
816	6	1
817	6	1
818	6	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	6	3
846	6	3
847	6	3
848	6	3
849	6	3
850	7	3
851	7	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	7	3
862	7	4
863	7	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	8	4
870	8	4
871	9	4
872	9	4
873	9	4
874	9	4
875	9	4
876	7	4
877	7	4
878	7	4
879	7	4
880	5	4

Table K-143. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 9

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	6	1
804	6	1
805	6	1
806	8	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	7	1
813	7	1
814	7	1
815	7	1
816	7	1
817	7	1
818	7	1
819	6	1
820	6	2
821	6	2
822	6	2
823	6	2
824	6	2
825	6	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	4	2
834	4	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	6	3
842	6	3
843	6	3
844	6	3
845	6	3
846	6	3
847	6	3
848	6	3
849	7	3
850	7	3
851	7	3
852	7	3
853	7	3
854	7	3
855	7	3
856	8	3
857	8	3
858	8	3
859	8	3
860	9	3
861	9	3
862	9	4
863	9	4
864	9	4
865	9	4
866	9	4
867	9	4
868	9	4
869	9	4
870	10	4
871	10	4
872	10	4
873	10	4
874	10	4
875	8	4
876	8	4
877	8	4
878	8	4
879	8	4
880	5	4

Table K-144. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 10

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	7	1
805	7	1
806	7	1
807	7	1
808	8	1
809	8	1
810	8	1
811	7	1
812	7	1
813	7	1
814	7	1
815	7	1
816	6	1
817	6	1
818	6	1
819	6	1
820	6	2
821	6	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	4	2
830	4	2
831	5	2
832	4	2
833	4	2
834	4	2
835	4	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	5	3
843	5	3
844	5	3
845	5	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	6	3
853	6	3
854	6	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	7	3
862	8	4
863	8	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	8	4
870	9	4
871	9	4
872	9	4
873	9	4
874	9	4
875	7	4
876	7	4
877	7	4
878	7	4
879	7	4
880	5	4

Table K-145. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 11

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	6	1
801	6	1
802	6	1
803	6	1
804	7	1
805	7	1
806	7	1
807	7	1
808	8	1
809	8	1
810	8	1
811	7	1
812	7	1
813	7	1
814	7	1
815	6	1
816	6	1
817	6	1
818	6	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	5	3
842	6	3
843	6	3
844	6	3
845	6	3
846	6	3
847	6	3
848	6	3
849	6	3
850	7	3
851	7	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	8	3
861	8	3
862	8	4
863	8	4
864	9	4
865	9	4
866	9	4
867	9	4
868	9	4
869	10	4
870	10	4
871	10	4
872	10	4
873	10	4
874	8	4
875	8	4
876	8	4
877	8	4
878	8	4
879	8	4
880	6	4

Table K-146. 2010–11 KCCT: Scaled Score to Performance Level Correspondence – Writing Grade 8, Scale Form 12

Scaled Score	*Conditional Standard Error*	*Performance Level*
800	5	1
801	5	1
802	5	1
803	5	1
804	7	1
805	7	1
806	7	1
807	8	1
808	8	1
809	8	1
810	8	1
811	8	1
812	8	1
813	7	1
814	7	1
815	7	1
816	6	1
817	6	1
818	6	1
819	5	1
820	5	2
821	5	2
822	5	2
823	5	2
824	5	2
825	5	2
826	5	2
827	5	2
828	5	2
829	5	2
830	5	2
831	5	2
832	5	2
833	5	2
834	5	2
835	5	2
836	5	2
837	5	2
838	5	2
839	5	2
840	5	3
841	6	3
842	6	3
843	6	3
844	6	3
845	6	3
846	6	3
847	6	3
848	6	3
849	6	3
850	6	3
851	6	3
852	7	3
853	7	3
854	7	3
855	7	3
856	7	3
857	7	3
858	7	3
859	7	3
860	7	3
861	8	3
862	8	4
863	8	4
864	8	4
865	8	4
866	8	4
867	8	4
868	8	4
869	9	4
870	9	4
871	9	4
872	9	4
873	9	4
874	8	4
875	8	4
876	8	4
877	8	4
878	8	4
879	6	4
880	5	4

Appendix L—Performance-Level Score Distributions

Table L-1. 2010–11 KCCT: Performance-Level Distributions by Grade—Mathematics

Grade	*Performance Level*	*Percent in Level*		
		2010–11	*2009–10*	*2008–09*
3	4	41	39	37
	3	37	38	38
	2	15	16	17
	1	7	7	8
4	4	37	36	33
	3	38	39	39
	2	17	17	19
	1	8	8	9
5	4	30	30	28
	3	37	38	37
	2	22	21	22
	1	12	11	12
6	4	30	29	27
	3	40	39	38
	2	21	21	23
	1	9	10	11
7	4	25	26	25
	3	41	38	39
	2	24	24	25
	1	10	12	12
8	4	22	19	19
	3	38	37	37
	2	26	28	28
	1	14	16	16
11	4	9	11	9
	3	37	30	33
	2	32	35	33
	1	22	25	26

Table L-2. 2010–11 KCCT: Performance-Level Distributions by Grade—Reading

Grade	*Performance Level*	*Percent in Level*		
		2010–11	*2009–10*	*2008–09*
3	4	22	18	19
	3	59	59	58
	2	15	18	17
	1	5	5	6
4	4	13	19	18
	3	61	60	56
	2	21	16	20
	1	5	4	6
5	4	20	18	16
	3	54	56	55
	2	20	20	23
	1	6	5	6
6	4	20	19	17
	3	52	52	52
	2	22	23	24
	1	6	7	7
7	4	16	14	15
	3	51	55	50
	2	27	25	28
	1	6	5	7
8	4	17	17	15
	3	55	55	54
	2	23	24	26
	1	5	4	6
10	4	12	9	9
	3	54	53	53
	2	29	33	32
	1	5	6	5

Table L-3. 2010–11 KCCT: Performance-Level Distributions by Grade—Science

Grade	*Performance Level*	*Percent in Level*		
		2010–11	*2009–10*	*2008–09*
4	4	29	29	29
	3	42	41	42
	2	23	23	24
	1	6	6	6
7	4	21	18	20
	3	44	39	43
	2	26	31	26
	1	10	12	11
11	4	5	6	6
	3	36	35	35
	2	40	39	38
	1	19	20	20

Table L-4. 2009–10 KCCT: Performance-Level Distributions by Grade—Social Studies

Grade	*Performance Level*	*Percent in Level*		
		2010–11	*2009–10*	*2008–09*
5	4	16	13	16
	3	44	43	45
	2	29	32	28
	1	11	12	10
8	4	19	17	17
	3	41	39	39
	2	30	32	32
	1	10	11	12
11	4	13	13	14
	3	28	27	27
	2	39	41	40
	1	19	19	20

Table L-5. 2009–10 KCCT: Performance-Level Distributions by Grade—Writing

Grade	*Performance Level*	*Percent in Level*		
		2010–11	*2009–10*	*2008–09*
5	4	9	8	10
	3	51	51	46
	2	35	36	38
	1	5	4	6
8	4	6	6	5
	3	40	36	37
	2	49	51	50
	1	6	7	8
12	4	6	6	6
	3	34	29	29
	2	55	56	56
	1	5	9	9

Appendix M—CLASSICAL RELIABILITY

Table M-1. 2010–11 KCCT: Subgroup Reliabilities—Mathematics

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
3	All Students	8,364	48	33.02	8.19	0.87	2.95
	Female	4,100	48	33.03	8.24	0.87	2.96
	Male	4,263	48	33.02	8.15	0.87	2.94
	American Indian	14	48	31.71	10.17	0.90	3.18
	Asian	134	48	36.53	7.50	0.87	2.73
	Black	1,100	48	28.83	8.99	0.88	3.07
	Hispanic	365	48	31.50	7.76	0.85	3.00
	Pacific Islander	11	48	32.27	7.60	0.86	2.86
	White	6,728	48	33.72	7.86	0.86	2.92
	Ethnic-Other	12	48	33.58	5.43	0.71	2.90
	Low SES	4,952	48	31.05	8.40	0.87	3.02
	IEP	1,310	48	28.99	9.85	0.90	3.17
	LEP	276	48	29.11	9.18	0.88	3.15
	Migrant	17	48	31.18	7.74	0.81	3.34
4	All Students	8,609	48	32.19	9.16	0.88	3.18
	Female	4,151	48	32.16	9.09	0.88	3.20
	Male	4,458	48	32.22	9.22	0.88	3.16
	American Indian	25	48	30.40	9.53	0.88	3.30
	Asian	144	48	35.15	9.91	0.91	2.99
	Black	1,049	48	27.85	9.02	0.87	3.31
	Hispanic	362	48	30.43	8.82	0.86	3.25
	Pacific Islander	13	48	28.92	9.81	0.90	3.05
	White	7,011	48	32.88	8.97	0.88	3.16
	Ethnic-Other	5	48				
	Low SES	5,042	48	29.97	9.10	0.87	3.27
	IEP	1,406	48	27.25	10.46	0.89	3.41
	LEP	209	48	26.32	9.17	0.86	3.40
	Migrant	18	48	26.17	11.45	0.92	3.34
5	All Students	8,555	48	30.22	9.64	0.88	3.39
	Female	4,136	48	30.34	9.50	0.87	3.39
	Male	4,419	48	30.10	9.78	0.88	3.38
	American Indian	16	48	29.69	7.05	0.78	3.31
	Asian	152	48	34.20	10.84	0.91	3.23
	Black	1,072	48	25.64	9.44	0.87	3.45
	Hispanic	321	48	27.49	10.01	0.88	3.42
	Pacific Islander	9	48				
	White	6,979	48	30.97	9.40	0.87	3.37
	Ethnic-Other	6	48				
	Low SES	4,947	48	27.85	9.47	0.87	3.43
	IEP	1,292	48	24.87	10.35	0.88	3.53
	LEP	198	48	23.76	9.98	0.88	3.50
	Migrant	12	48	26.75	11.22	0.90	3.53
6	All Students	8,755	48	27.88	9.26	0.88	3.20
	Female	4,203	48	28.11	9.09	0.88	3.20
	Male	4,552	48	27.67	9.41	0.89	3.19
	American Indian	19	48	24.58	5.21	0.64	3.15
	Asian	134	48	30.54	11.08	0.92	3.14
	Black	1,095	48	22.97	8.95	0.87	3.25

continued

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
6	Hispanic	297	48	25.16	8.60	0.86	3.26
	Pacific Islander	10	48	28.60	9.19	0.86	3.38
	White	7,195	48	28.71	9.04	0.88	3.18
	Ethnic-Other	5	48				
	Low SES	5,056	48	25.55	8.96	0.87	3.25
	IEP	1,504	48	22.29	9.70	0.88	3.33
	LEP	194	48	20.59	8.83	0.86	3.32
	Migrant	18	48	21.67	9.37	0.86	3.50
7	All Students	8,742	48	29.63	10.52	0.90	3.39
	Female	4,204	48	30.25	10.35	0.89	3.39
	Male	4,538	48	29.05	10.65	0.90	3.39
	American Indian	19	48	30.21	10.91	0.91	3.31
	Asian	116	48	33.92	11.43	0.92	3.28
	Black	1,093	48	23.49	10.02	0.88	3.50
	Hispanic	280	48	27.60	10.09	0.88	3.44
	Pacific Islander	8	48				
	White	7,219	48	30.56	10.26	0.89	3.34
	Ethnic-Other	7	48				
	Low SES	4,927	48	26.65	10.19	0.88	3.48
	IEP	1,506	48	22.79	11.05	0.89	3.62
	LEP	166	48	20.02	9.77	0.87	3.52
	Migrant	15	48	27.67	11.06	0.89	3.70
8	All Students	8,578	48	29.56	10.31	0.89	3.37
	Female	4,095	48	30.29	9.90	0.89	3.33
	Male	4,483	48	28.90	10.63	0.90	3.38
	American Indian	20	48	28.65	12.09	0.93	3.31
	Asian	123	48	33.19	12.06	0.93	3.20
	Black	1,047	48	23.85	9.98	0.88	3.45
	Hispanic	260	48	26.75	9.72	0.88	3.42
	Pacific Islander	4	48				
	White	7,116	48	30.44	10.05	0.89	3.33
	Ethnic-Other	8	48				
	Low SES	4,721	48	26.62	10.09	0.88	3.44
	IEP	1,456	48	22.40	10.74	0.89	3.51
	LEP	165	48	20.40	9.18	0.86	3.44
	Migrant	19	48	26.00	10.33	0.88	3.58
11	All Students	7,978	48	23.61	10.32	0.90	3.24
	Female	3,815	48	24.24	10.13	0.90	3.24
	Male	4,163	48	23.02	10.46	0.91	3.22
	American Indian	10	48	23.70	9.86	0.90	3.15
	Asian	104	48	30.85	11.48	0.92	3.23
	Black	946	48	19.09	9.32	0.89	3.15
	Hispanic	220	48	23.04	9.78	0.89	3.21
	Pacific Islander	5	48				
	White	6,685	48	24.15	10.26	0.90	3.23
	Ethnic-Other	8	48				
	Low SES	3,796	48	20.39	9.39	0.88	3.23
	IEP	1,367	48	15.45	8.72	0.87	3.18
	LEP	77	48	16.45	8.96	0.88	3.10
	Migrant	3	48				

Table M-2. 2010–11 KCCT: Subgroup Reliabilities—Reading

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
3	All Students	8,364	46	34.21	7.63	0.90	2.37
	Female	4,100	46	34.82	7.45	0.90	2.33
	Male	4,263	46	33.62	7.74	0.90	2.40
	American Indian	14	46	33.21	7.43	0.88	2.58
	Asian	134	46	36.22	8.54	0.94	2.12
	Black	1,100	46	30.49	8.75	0.91	2.64
	Hispanic	365	46	32.75	7.34	0.88	2.52
	Pacific Islander	11	46	34.18	4.67	0.75	2.32
	White	6,728	46	34.86	7.24	0.90	2.32
	Ethnic-Other	12	46	35.42	4.29	0.65	2.54
	Low SES	4,952	46	32.41	7.97	0.90	2.51
	IEP	1,310	46	30.13	9.01	0.91	2.65
	LEP	276	46	29.93	8.68	0.90	2.70
	Migrant	17	46	31.76	7.94	0.88	2.76
4	All Students	8,610	45	30.49	7.16	0.88	2.51
	Female	4,151	45	31.17	6.85	0.87	2.49
	Male	4,459	45	29.86	7.38	0.88	2.52
	American Indian	25	45	30.80	8.75	0.92	2.45
	Asian	145	45	31.08	8.04	0.90	2.48
	Black	1,049	45	27.15	7.81	0.88	2.69
	Hispanic	362	45	29.38	7.21	0.87	2.59
	Pacific Islander	13	45	30.23	6.86	0.88	2.36
	White	7,011	45	31.04	6.88	0.87	2.48
	Ethnic-Other	5	45				
	Low SES	5,043	45	28.89	7.29	0.87	2.59
	IEP	1,406	45	26.91	8.11	0.89	2.70
	LEP	210	45	24.95	8.28	0.89	2.76
	Migrant	18	45	24.33	9.00	0.90	2.81
5	All Students	8,555	45	32.55	6.51	0.86	2.45
	Female	4,136	45	33.58	6.13	0.85	2.41
	Male	4,419	45	31.59	6.70	0.86	2.47
	American Indian	16	45	33.94	4.61	0.75	2.32
	Asian	153	45	33.33	8.80	0.92	2.42
	Black	1,072	45	29.54	7.26	0.87	2.66
	Hispanic	320	45	30.63	7.13	0.87	2.54
	Pacific Islander	9	45				
	White	6,979	45	33.09	6.15	0.85	2.41
	Ethnic-Other	6	45				
	Low SES	4,946	45	31.01	6.81	0.86	2.56
	IEP	1,292	45	28.61	7.73	0.88	2.69
	LEP	198	45	26.60	8.47	0.90	2.73
	Migrant	12	45	26.92	8.87	0.91	2.63
6	All Students	8,755	45	31.05	7.34	0.88	2.56
	Female	4,202	45	32.16	6.99	0.87	2.54
	Male	4,553	45	30.02	7.50	0.88	2.57
	American Indian	19	45	30.37	5.08	0.73	2.66
	Asian	134	45	30.28	10.68	0.94	2.59
	Black	1,096	45	27.60	8.14	0.89	2.75

continued

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
6	Hispanic	295	45	28.53	7.68	0.88	2.69
	Pacific Islander	10	45	30.30	9.46	0.93	2.55
	White	7,196	45	31.69	6.94	0.87	2.52
	Ethnic-Other	5	45				
	Low SES	5,055	45	29.26	7.55	0.88	2.66
	IEP	1,505	45	26.38	8.11	0.88	2.76
	LEP	193	45	22.48	8.29	0.88	2.93
	Migrant	18	45	26.67	8.06	0.88	2.80
7	All Students	8,743	45	29.54	7.29	0.86	2.69
	Female	4,204	45	30.61	6.96	0.85	2.67
	Male	4,539	45	28.55	7.46	0.87	2.68
	American Indian	19	45	30.47	6.20	0.84	2.52
	Asian	116	45	29.72	9.04	0.91	2.77
	Black	1,093	45	25.78	7.39	0.85	2.86
	Hispanic	280	45	28.08	7.22	0.85	2.80
	Pacific Islander	8	45				
	White	7,220	45	30.16	7.07	0.86	2.66
	Ethnic-Other	7	45				
	Low SES	4,928	45	27.53	7.28	0.86	2.77
	IEP	1,506	45	25.07	7.64	0.87	2.80
	LEP	166	45	22.21	7.03	0.81	3.04
	Migrant	15	45	27.40	6.77	0.82	2.84
8	All Students	8,582	45	30.83	8.44	0.90	2.61
	Female	4,096	45	32.40	7.93	0.90	2.54
	Male	4,486	45	29.40	8.63	0.91	2.63
	American Indian	20	45	32.90	7.70	0.90	2.44
	Asian	123	45	31.70	10.86	0.95	2.52
	Black	1,049	45	26.95	8.78	0.90	2.82
	Hispanic	260	45	28.59	8.87	0.91	2.73
	Pacific Islander	4	45				
	White	7,118	45	31.46	8.16	0.90	2.57
	Ethnic-Other	8	45				
	Low SES	4,723	45	28.44	8.55	0.90	2.74
	IEP	1,456	45	24.34	8.72	0.89	2.83
	LEP	165	45	21.74	7.77	0.85	3.01
	Migrant	19	45	26.00	7.72	0.86	2.84
10	All Students	8,779	45	30.71	8.37	0.90	2.68
	Female	4,121	45	32.05	7.96	0.89	2.64
	Male	4,658	45	29.53	8.55	0.90	2.68
	American Indian	20	45	26.80	9.80	0.91	2.91
	Asian	123	45	29.43	11.58	0.94	2.74
	Black	1,072	45	27.18	8.87	0.90	2.86
	Hispanic	284	45	29.15	8.44	0.89	2.81
	Pacific Islander	9	45				
	White	7,262	45	31.32	8.08	0.89	2.65
	Ethnic-Other	9	45				
	Low SES	4,491	45	28.37	8.53	0.89	2.78
	IEP	1,553	45	23.76	8.59	0.89	2.90
	LEP	168	45	20.36	7.90	0.85	3.05
	Migrant	14	45	25.50	9.08	0.91	2.78

Table M-3. 2010–11 KCCT: Subgroup Reliabilities—Science

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
4	All Students	8,609	48	34.40	7.46	0.87	2.66
	Female	4,151	48	34.29	7.44	0.87	2.69
	Male	4,458	48	34.51	7.49	0.88	2.64
	American Indian	25	48	34.00	9.31	0.91	2.74
	Asian	144	48	34.92	8.20	0.89	2.68
	Black	1,049	48	29.69	8.36	0.88	2.91
	Hispanic	362	48	32.17	7.54	0.86	2.80
	Pacific Islander	13	48	32.77	7.65	0.89	2.59
	White	7,011	48	35.22	6.99	0.86	2.60
	Ethnic-Other	5	48				
	Low SES	5,042	48	32.56	7.70	0.87	2.77
	IEP	1,406	48	30.68	8.85	0.89	2.92
	LEP	209	48	28.23	8.35	0.87	3.01
	Migrant	18	48	30.17	9.81	0.91	2.94
7	All Students	8,743	48	26.81	8.56	0.87	3.11
	Female	4,205	48	26.46	8.31	0.86	3.13
	Male	4,538	48	27.13	8.78	0.88	3.08
	American Indian	19	48	26.63	9.23	0.89	3.08
	Asian	116	48	28.11	9.95	0.90	3.10
	Black	1,094	48	21.20	7.61	0.82	3.19
	Hispanic	280	48	24.69	8.22	0.85	3.15
	Pacific Islander	8	48				
	White	7,219	48	27.71	8.35	0.86	3.08
	Ethnic-Other	7	48				
	Low SES	4,927	48	24.31	8.21	0.85	3.15
	IEP	1,506	48	21.77	8.73	0.87	3.18
	LEP	166	48	18.49	7.11	0.80	3.16
	Migrant	15	48	25.13	7.05	0.79	3.23
11	All Students	7,977	48	22.04	8.43	0.87	3.06
	Female	3,815	48	21.81	8.11	0.85	3.09
	Male	4,162	48	22.25	8.71	0.88	3.03
	American Indian	10	48	22.70	9.14	0.88	3.13
	Asian	104	48	26.29	9.68	0.89	3.14
	Black	946	48	17.47	7.24	0.82	3.05
	Hispanic	220	48	20.45	8.05	0.86	3.02
	Pacific Islander	5	48				
	White	6,684	48	22.68	8.35	0.87	3.06
	Ethnic-Other	8	48				
	Low SES	3,795	48	19.53	7.74	0.84	3.05
	IEP	1,367	48	16.10	7.29	0.83	3.02
	LEP	77	48	13.36	5.52	0.72	2.94
	Migrant	3	48				

Table M-4. 2010–11 KCCT: Subgroup Reliabilities—Social Studies

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
5	All Students	8,555	48	28.43	7.70	0.86	2.89
	Female	4,136	48	28.46	7.67	0.85	2.96
	Male	4,419	48	28.40	7.72	0.87	2.81
	American Indian	16	48	28.00	5.54	0.72	2.92
	Asian	152	48	30.22	10.01	0.91	2.94
	Black	1,072	48	24.39	7.50	0.84	3.00
	Hispanic	321	48	26.26	7.64	0.85	3.00
	Pacific Islander	9	48				
	White	6,979	48	29.11	7.47	0.85	2.86
	Ethnic-Other	6	48				
	Low SES	4,947	48	26.42	7.60	0.85	2.94
	IEP	1,291	48	24.38	8.34	0.87	2.95
	LEP	198	48	21.97	8.12	0.86	3.01
	Migrant	12	48	21.58	8.33	0.89	2.80
8	All Students	8,581	48	29.04	8.64	0.89	2.81
	Female	4,098	48	29.09	8.52	0.89	2.87
	Male	4,483	48	28.99	8.75	0.90	2.74
	American Indian	20	48	29.50	9.18	0.90	2.89
	Asian	123	48	29.98	11.74	0.94	2.97
	Black	1,048	48	23.99	8.49	0.87	3.01
	Hispanic	260	48	26.70	8.11	0.87	2.93
	Pacific Islander	4	48				
	White	7,118	48	29.84	8.36	0.89	2.77
	Ethnic-Other	8	48				
	Low SES	4,724	48	26.57	8.49	0.88	2.89
	IEP	1,456	48	22.90	8.85	0.89	2.92
	LEP	165	48	19.68	7.35	0.83	3.06
	Migrant	19	48	26.63	7.51	0.86	2.85
11	All Students	7,979	48	24.80	9.02	0.88	3.07
	Female	3,815	48	24.59	8.87	0.87	3.14
	Male	4,164	48	24.99	9.15	0.89	2.99
	American Indian	10	48	26.10	10.37	0.90	3.23
	Asian	104	48	27.66	10.37	0.91	3.11
	Black	947	48	21.26	8.29	0.86	3.13
	Hispanic	220	48	24.15	8.71	0.87	3.10
	Pacific Islander	5	48				
	White	6,685	48	25.28	8.98	0.88	3.05
	Ethnic-Other	8	48				
	Low SES	3,796	48	22.01	8.45	0.87	3.09
	IEP	1,368	48	18.45	8.24	0.87	3.02
	LEP	77	48	15.61	6.60	0.78	3.08
	Migrant	3	48				

Table M-5. 2010–11 KCCT: Subgroup Reliabilities—Writing

Grade	Description	Number of Students	Raw Score			Alpha	Standard Error
			Maximum	Mean	Standard Deviation		
5	All Students	6,254	36	20.97	5.40	0.78	2.51
	Female	3,134	36	22.18	5.12	0.78	2.40
	Male	3,120	36	19.75	5.40	0.78	2.53
	American Indian	18	36	19.83	5.43	0.75	2.73
	Asian	117	36	22.44	6.59	0.83	2.75
	Black	823	36	19.05	5.79	0.79	2.64
	Hispanic	238	36	19.85	5.26	0.76	2.56
	Pacific Islander	9	36				
	White	5,041	36	21.30	5.23	0.78	2.47
	Ethnic-Other	8	36				
	Low SES	3,678	36	19.78	5.41	0.78	2.54
	IEP	932	36	17.69	5.98	0.78	2.78
	LEP	158	36	17.60	6.15	0.78	2.88
	Migrant	10	36	20.20	3.97	0.63	2.43
8	All Students	5,337	36	20.56	5.70	0.79	2.62
	Female	2,568	36	22.33	5.23	0.77	2.48
	Male	2,769	36	18.92	5.63	0.79	2.59
	American Indian	19	36	19.68	5.21	0.77	2.50
	Asian	44	36	22.80	5.82	0.82	2.46
	Black	660	36	18.28	5.73	0.78	2.68
	Hispanic	149	36	19.17	5.65	0.78	2.65
	Pacific Islander	5	36				
	White	4,450	36	20.92	5.61	0.78	2.60
	Ethnic-Other	10	36	22.70	5.06	0.83	2.06
	Low SES	2,891	36	18.96	5.64	0.78	2.65
	IEP	574	36	15.56	6.00	0.78	2.79
	LEP	66	36	15.52	5.36	0.72	2.83
	Migrant	7	36				
12	All Students	5,056	48	26.36	7.18	0.95	1.67
	Female	2,540	48	28.36	6.81	0.94	1.65
	Male	2,514	48	24.33	6.98	0.94	1.68
	American Indian	12	48	29.67	5.97	0.89	1.98
	Asian	39	48	28.49	7.96	0.95	1.82
	Black	618	48	25.18	7.02	0.95	1.62
	Hispanic	120	48	25.39	7.62	0.95	1.77
	Pacific Islander	3	48				
	White	4,239	48	26.54	7.15	0.95	1.67
	Ethnic-Other	25	48	26.08	9.00	0.98	1.35
	Low SES	2,323	48	25.06	6.88	0.94	1.66
	IEP	414	48	19.48	7.34	0.94	1.74
	LEP	37	48	22.70	7.38	0.94	1.85
	Migrant	13	48	20.69	6.97	0.92	1.94

Appendix N—Decision Accuracy and Consistency Results

Table N-1. 2010–11 KCCT: Summary of Decision Accuracy (and Consistency) Results by Subject and Grade—Overall and Conditional on Performance Level

Subject	*Grade*	*Overall*	*Kappa*	*Conditional on Level*			
				Novice	*Nearing Proficiency*	*Proficient*	*Advanced*
Mathematics	3	0.77 (0.70)	0.54	0.72 (0.61)	0.61 (0.51)	0.65 (0.58)	0.92 (0.85)
	4	0.77 (0.70)	0.55	0.74 (0.63)	0.63 (0.53)	0.68 (0.61)	0.92 (0.84)
	5	0.74 (0.66)	0.51	0.75 (0.66)	0.61 (0.52)	0.66 (0.58)	0.90 (0.79)
	6	0.75 (0.67)	0.53	0.74 (0.63)	0.66 (0.57)	0.67 (0.59)	0.90 (0.81)
	7	0.76 (0.68)	0.55	0.76 (0.67)	0.68 (0.59)	0.70 (0.63)	0.90 (0.80)
	8	0.75 (0.67)	0.54	0.78 (0.69)	0.68 (0.59)	0.71 (0.64)	0.89 (0.77)
	11	0.77 (0.69)	0.57	0.82 (0.76)	0.71 (0.63)	0.76 (0.68)	0.87 (0.71)
Reading	3	0.81 (0.74)	0.57	0.73 (0.60)	0.68 (0.58)	0.81 (0.79)	0.89 (0.75)
	4	0.81 (0.74)	0.55	0.73 (0.59)	0.71 (0.62)	0.83 (0.81)	0.86 (0.68)
	5	0.77 (0.69)	0.51	0.71 (0.56)	0.66 (0.56)	0.77 (0.73)	0.88 (0.72)
	6	0.78 (0.70)	0.54	0.72 (0.59)	0.68 (0.59)	0.78 (0.74)	0.88 (0.74)
	7	0.78 (0.70)	0.54	0.73 (0.59)	0.72 (0.63)	0.80 (0.75)	0.86 (0.71)
	8	0.79 (0.72)	0.56	0.73 (0.57)	0.73 (0.65)	0.80 (0.76)	0.87 (0.72)
	10	0.82 (0.74)	0.59	0.74 (0.59)	0.78 (0.70)	0.84 (0.79)	0.85 (0.69)
Science	4	0.76 (0.68)	0.53	0.73 (0.58)	0.70 (0.61)	0.70 (0.62)	0.89 (0.79)
	7	0.74 (0.65)	0.51	0.73 (0.60)	0.68 (0.60)	0.72 (0.65)	0.88 (0.74)
	11	0.76 (0.67)	0.51	0.77 (0.68)	0.73 (0.65)	0.77 (0.69)	0.83 (0.60)
Social Studies	5	0.74 (0.65)	0.50	0.74 (0.63)	0.68 (0.59)	0.74 (0.67)	0.87 (0.71)
	8	0.77 (0.68)	0.55	0.77 (0.66)	0.73 (0.65)	0.73 (0.66)	0.88 (0.77)
	11	0.74 (0.65)	0.52	0.79 (0.72)	0.73 (0.66)	0.64 (0.53)	0.86 (0.73)
Writing	5	0.76 (0.66)	0.44	0.66 (0.44)	0.71 (0.63)	0.79 (0.73)	0.79 (0.52)
	8	0.77 (0.69)	0.48	0.69 (0.50)	0.75 (0.69)	0.80 (0.73)	0.79 (0.51)

Table N-2. 2010–11 KCCT: Summary of Decision Accuracy (and Consistency) Results by Subject and Grade—Conditional on Cutpoint

Subject	*Grade*	*Novice/Nearing Proficiency*			*Nearing Proficiency/Proficient*			*Proficient/Advanced*		
		Accuracy (consistency)	*False positive*	*False negative*	*Accuracy (consistency)*	*False positive*	*False negative*	*Accuracy (consistency)*	*False positive*	*False negative*
Mathematics	3	0.96 (0.95)	0.02	0.02	0.92 (0.90)	0.04	0.03	0.88 (0.85)	0.08	0.03
	4	0.96 (0.95)	0.02	0.02	0.92 (0.89)	0.05	0.03	0.89 (0.85)	0.08	0.03
	5	0.94 (0.92)	0.03	0.03	0.90 (0.87)	0.06	0.04	0.89 (0.85)	0.08	0.03
	6	0.96 (0.94)	0.02	0.02	0.91 (0.87)	0.05	0.04	0.89 (0.85)	0.08	0.03
	7	0.95 (0.93)	0.02	0.02	0.91 (0.87)	0.05	0.04	0.90 (0.87)	0.07	0.03
	8	0.94 (0.92)	0.03	0.03	0.90 (0.87)	0.06	0.04	0.91 (0.88)	0.07	0.03
	11	0.92 (0.89)	0.04	0.04	0.90 (0.87)	0.06	0.04	0.94 (0.92)	0.04	0.01
Reading	3	0.98 (0.97)	0.01	0.01	0.93 (0.91)	0.04	0.03	0.90 (0.86)	0.08	0.02
	4	0.97 (0.96)	0.01	0.02	0.91 (0.88)	0.05	0.04	0.92 (0.89)	0.06	0.02
	5	0.97 (0.95)	0.01	0.02	0.91 (0.87)	0.05	0.04	0.89 (0.85)	0.09	0.02
	6	0.97 (0.95)	0.01	0.02	0.91 (0.88)	0.05	0.04	0.90 (0.87)	0.08	0.02
	7	0.97 (0.95)	0.01	0.02	0.90 (0.86)	0.05	0.04	0.92 (0.89)	0.06	0.02
	8	0.97 (0.96)	0.01	0.02	0.91 (0.87)	0.05	0.04	0.91 (0.88)	0.06	0.02
	10	0.98 (0.96)	0.01	0.02	0.90 (0.87)	0.05	0.04	0.94 (0.91)	0.05	0.02
Science	4	0.97 (0.95)	0.01	0.02	0.91 (0.87)	0.05	0.04	0.89 (0.85)	0.08	0.04
	7	0.95 (0.93)	0.02	0.03	0.89 (0.85)	0.06	0.05	0.90 (0.86)	0.07	0.03
	11	0.92 (0.89)	0.04	0.04	0.88 (0.84)	0.07	0.04	0.95 (0.94)	0.04	0.01
Social Studies	5	0.95 (0.92)	0.03	0.03	0.89 (0.85)	0.07	0.05	0.91 (0.88)	0.07	0.02
	8	0.95 (0.93)	0.02	0.03	0.90 (0.86)	0.06	0.04	0.91 (0.88)	0.06	0.03
	11	0.92 (0.89)	0.04	0.04	0.89 (0.85)	0.07	0.04	0.93 (0.90)	0.05	0.02
Writing	5	0.97 (0.95)	0.01	0.02	0.86 (0.80)	0.08	0.06	0.93 (0.91)	0.06	0.01
	8	0.96 (0.94)	0.01	0.03	0.86 (0.80)	0.08	0.06	0.96 (0.94)	0.03	0.01

Appendix O—Interrater Agreement

Table O-1. 2010–11 KCCT: Item-Level Interrater Agreement Statistics by Grade—Mathematics

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
3	47264	5	178	71.91	27.53	0.91	0.56
	52081	5	990	85.76	13.23	0.95	1.11
	52144	5	175	82.86	16.00	0.93	1.14
	52189	5	177	73.45	23.73	0.84	2.82
	52301	5	1,038	78.52	19.56	0.88	2.12
	76638	5	1,059	77.62	20.87	0.90	1.51
	94308	5	176	80.68	17.61	0.89	1.70
	94329	5	164	78.05	15.24	0.82	7.32
	94349	5	175	84.57	12.00	0.92	3.43
4	50263	5	1,044	79.02	17.72	0.91	2.97
	50285	5	1,136	64.44	31.69	0.79	4.58
	51057	5	192	65.10	31.77	0.90	3.13
	52519	5	204	72.55	24.51	0.88	2.94
	52741	5	203	86.21	11.82	0.95	1.97
	52748	5	1,101	73.75	24.34	0.88	1.73
	52865	5	190	80.00	18.42	0.90	1.58
	93916	5	196	83.67	15.31	0.91	1.02
	93969	5	218	82.11	16.97	0.93	0.92
5	142893	5	1,068	74.25	24.72	0.89	0.94
	142896	5	1,085	75.67	20.92	0.92	3.50
	144160	5	1,038	66.47	29.77	0.81	3.66
	144219	5	200	78.50	18.50	0.94	3.00
	55354	5	218	73.39	24.77	0.90	1.83
	57539	5	201	86.57	12.44	0.97	1.00
	93769	5	196	68.37	27.04	0.81	4.59
	93875	5	203	74.88	23.65	0.87	1.48
	93918	5	200	79.50	20.00	0.90	0.50
6	51966	5	995	88.34	10.65	0.93	1.01
	51975	5	187	75.40	21.93	0.88	2.14
	51983	5	198	74.75	24.24	0.92	1.01
	52020	5	223	77.58	20.63	0.93	2.24
	76673	5	1,010	83.37	15.05	0.93	1.49
	93146	5	203	67.98	31.03	0.84	0.99
	93379	5	189	67.72	30.69	0.89	1.59
	93417	5	196	73.98	25.51	0.90	0.51
	93455	5	1,104	77.81	21.65	0.90	0.63
7	138168	5	1,099	73.89	23.57	0.87	2.55
	138233	5	1,141	77.39	19.89	0.91	2.89
	50464	5	989	88.07	10.92	0.95	1.01
	54983	5	206	81.55	16.02	0.93	2.43
	55360	5	192	83.33	15.63	0.91	1.04
	94472	5	192	75.52	22.92	0.83	1.56
	95523	5	189	70.90	28.57	0.87	0.53
	95562	5	197	88.32	10.66	0.97	1.02
	95577	5	200	66.50	29.50	0.87	3.50
8	151798	5	1,072	77.05	21.36	0.91	1.49
	151992	5	184	77.72	20.65	0.91	1.63

continued

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
8	153214	5	1,007	83.71	12.91	0.93	3.28
	58430	5	201	84.58	14.93	0.95	0.50
	58618	5	976	81.76	17.52	0.94	0.82
	58621	5	184	93.48	6.52	0.98	0.00
	58622	5	180	72.78	25.00	0.92	2.22
	58839	5	194	81.44	18.04	0.85	0.52
	94431	5	211	73.93	25.59	0.85	0.47
11	130623	5	907	73.54	24.26	0.79	2.21
	152097	5	171	70.18	28.07	0.86	1.75
	51106	5	916	82.10	16.70	0.94	1.20
	51109	5	165	77.58	21.21	0.93	1.21
	51124	5	164	79.88	18.29	0.89	1.22
	51216	5	918	78.43	20.48	0.87	1.20
	51400	5	157	82.17	16.56	0.94	1.27
	51554	5	176	84.66	14.77	0.96	0.57
	51568	5	168	65.48	29.76	0.84	4.76

Table O-2. 2010–11 KCCT: Item-Level Interrater Agreement Statistics by Grade—Reading

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
3	47108	5	1,038	75.92	23.60	0.72	0.39
	94010	5	1,085	69.95	28.48	0.78	1.57
4	137724	5	1,088	61.12	36.40	0.70	2.11
	138299	5	1,085	63.96	34.93	0.65	1.11
	52678	5	186	65.59	31.72	0.60	2.15
	52767	5	182	62.09	34.62	0.73	3.30
	94962	5	190	62.11	36.84	0.68	1.58
	95052	5	180	68.89	29.44	0.67	1.67
	95475	5	187	53.48	45.45	0.60	1.07
	95524	5	181	67.40	32.04	0.72	0.55
5	151562	5	1,127	56.70	40.91	0.69	2.40
	57563	5	185	61.08	35.14	0.66	3.78
	95793	5	200	69.00	28.50	0.71	2.50
	95905	5	1,022	63.21	35.62	0.68	1.17
	96027	5	196	54.08	41.84	0.59	3.57
	96067	5	195	71.28	27.18	0.81	1.54
	96096	5	192	63.02	35.42	0.86	1.56
	96156	5	197	58.38	38.58	0.74	3.05
6	152169	5	1,024	65.23	33.59	0.70	1.07
	51952	5	185	64.86	34.05	0.71	1.08
	76697	5	182	59.89	37.36	0.79	2.75
	95813	5	1,051	60.23	38.06	0.73	1.71
	95914	5	177	68.36	29.38	0.76	2.26
	95941	5	176	72.16	27.84	0.81	0.00

continued

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
6	95995	5	177	63.28	36.16	0.85	0.56
	96028	5	191	62.83	36.13	0.77	1.05
7	138336	5	1,026	61.79	36.74	0.75	1.36
	53408	5	176	65.91	34.09	0.72	0.00
	54877	5	179	74.86	24.58	0.80	0.56
	94543	5	177	75.14	24.86	0.64	0.00
	94902	5	178	61.24	35.96	0.65	2.25
	95040	5	178	69.10	29.78	0.73	1.12
	95346	5	995	62.71	34.97	0.73	2.11
	95512	5	192	68.23	30.73	0.78	1.04
8	153709	5	177	61.02	36.16	0.72	2.82
	58176	5	176	77.84	20.45	0.90	1.70
	58188	5	1,077	63.14	35.65	0.70	1.58
	58752	5	175	68.57	29.71	0.79	1.71
	95019	5	173	64.74	35.26	0.71	0.00
	95612	5	197	67.51	28.93	0.72	3.05
	95664	5	980	65.92	31.94	0.70	1.94
	95735	5	183	61.75	33.33	0.67	4.92
10	110781	5	194	59.28	37.63	0.76	3.09
	110802	5	963	59.92	37.18	0.72	2.70
	50730	5	172	72.67	25.00	0.81	2.33
	50800	5	176	67.61	30.68	0.77	1.70
	50851	5	180	63.33	33.89	0.76	2.22
	50864	5	172	59.30	37.79	0.78	2.91
	50884	5	171	59.65	39.18	0.66	1.17
	92861	5	1,036	64.67	34.17	0.77	1.35

Table O-3. 2010–11 KCCT: Item-Level Interrater Agreement Statistics by Grade—Science

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
4	138050	5	1,048	71.37	28.15	0.76	0.38
	138098	5	185	62.16	36.76	0.71	1.08
	138120	5	1,046	61.76	34.61	0.70	3.73
	150341	5	200	64.50	30.00	0.82	4.50
	52819	5	193	63.21	32.64	0.69	4.15
	52923	5	185	61.08	37.30	0.65	1.62
	93714	5	1,034	70.41	28.72	0.85	0.87
	93765	5	196	57.65	39.29	0.68	3.06
	93798	5	195	66.67	31.28	0.82	2.05
7	138115	5	979	72.42	25.43	0.83	2.15
	138157	5	973	69.27	28.98	0.78	1.85
	153021	5	176	56.82	31.25	0.66	11.93
	50605	5	188	82.98	15.43	0.91	1.60
	55040	5	982	74.03	23.93	0.83	2.04
	55478	5	178	64.04	29.78	0.78	6.18

continued

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
	94527	5	180	77.78	21.11	0.92	1.11
7	94610	5	171	83.04	16.37	0.91	0.58
	94644	5	171	70.18	28.07	0.76	1.17
	130678	5	891	58.92	36.14	0.73	4.71
	130691	5	167	46.11	48.50	0.62	5.39
	130703	5	895	73.30	23.58	0.54	2.91
	152666	5	158	56.33	41.77	0.74	1.90
11	49736	5	888	69.03	29.39	0.81	1.58
	51321	5	162	58.02	35.80	0.76	6.17
	51325	5	154	62.99	33.12	0.87	3.90
	51479	5	157	60.51	35.67	0.72	3.82
	51596	5	155	54.84	38.06	0.80	7.10

Table O-4. 2010–11 KCCT: Item-Level Interrater Agreement Statistics by Grade—Social Studies

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
	142498	5	190	60.00	36.84	0.73	2.63
	142577	5	194	67.01	32.47	0.65	0.52
	57202	5	191	66.49	31.94	0.72	1.57
	57258	5	1,001	60.04	37.76	0.65	2.20
5	57481	5	196	67.35	31.12	0.79	1.02
	57487	5	1,064	55.26	39.47	0.65	5.17
	93373	5	196	52.04	45.41	0.70	2.55
	93447	5	1,022	61.94	36.79	0.67	1.27
	93480	5	198	64.14	32.83	0.69	3.03
	151185	5	1,005	59.10	37.71	0.67	3.18
	151188	5	969	63.88	34.67	0.66	1.24
	151226	5	212	61.32	34.91	0.68	3.77
	151265	5	2,424	61.18	36.80	0.64	1.77
8	58729	5	202	66.83	30.69	0.74	2.48
	58845	5	167	54.49	38.32	0.53	5.99
	58899	5	190	63.16	33.68	0.72	3.16
	59017	5	189	54.50	40.74	0.62	3.70
	94301	5	178	61.80	35.96	0.65	2.25
	132449	5	912	66.23	31.69	0.75	1.97
	134025	5	168	69.64	30.36	0.87	0.00
	134049	5	1,006	64.31	33.60	0.82	2.09
	152511	5	162	64.81	33.95	0.78	1.23
11	51162	5	155	67.10	29.68	0.87	3.23
	51163	5	156	60.26	37.82	0.79	1.92
	51503	5	149	63.09	34.23	0.77	2.01
	51585	5	910	67.69	31.21	0.78	0.88
	51619	5	161	55.28	39.13	0.62	6.21

Table O-5. 2010–11 KCCT: Item-Level Interrater Agreement Statistics by Grade—Writing

Grade	*Item*	*Number of Score Categories*	*Number of Responses Scored Twice*	*Percent Exact*	*Percent Adjacent*	*Correlation*	*Percent of Third Scores*
5	30272C	5	4,954	67.72	31.11	0.64	1.76
	30272S	4	4,954	66.01	32.92	0.63	1.76
	30272V	4	4,954	68.19	31.35	0.59	1.76
	30298C	5	2,577	66.08	32.56	0.63	2.17
	30298S	4	2,577	64.03	34.38	0.63	2.17
	30298V	4	2,577	65.85	32.87	0.56	2.17
	30334C	5	5,418	65.25	34.26	0.57	1.64
	30334S	4	5,418	64.34	34.87	0.55	1.64
	30334V	4	5,418	63.66	35.35	0.52	1.64
	30414C	5	2,040	63.09	35.39	0.60	2.21
	30414S	4	2,040	69.02	30.34	0.65	2.21
	30414V	4	2,040	69.02	30.25	0.57	2.21
	30512C	5	3,646	61.49	36.97	0.59	3.84
	30512S	4	3,646	57.30	40.43	0.62	3.84
	30512V	4	3,646	61.49	36.83	0.53	3.84
	30580C	5	6,078	59.16	39.08	0.60	3.49
	30580S	4	6,078	55.63	41.54	0.62	3.49
	30580V	4	6,078	60.15	38.20	0.56	3.49
	30582C	5	4,349	62.80	36.26	0.56	2.05
	30582S	4	4,349	66.75	32.42	0.59	2.05
	30582V	4	4,349	65.65	33.57	0.52	2.05
	30583C	5	5,539	62.41	36.31	0.61	3.01
	30583S	4	5,539	61.92	36.67	0.61	3.01
	30583V	4	5,539	61.65	36.72	0.55	3.01
	32312C	5	4,724	58.34	39.39	0.57	4.09
	32312S	4	4,724	57.77	39.86	0.60	4.09
	32312V	4	4,724	61.77	36.54	0.54	4.09
	37875C	5	2,796	63.63	35.26	0.64	2.47
	37875S	4	2,796	65.77	33.19	0.68	2.47
	37875V	4	2,796	64.77	34.05	0.58	2.47
	38129C	5	3,322	53.16	42.44	0.59	6.56
	38129S	4	3,322	52.80	41.93	0.58	6.56
	38129V	4	3,322	55.72	40.22	0.52	6.56
	38134C	5	3,193	59.25	37.30	0.60	4.70
	38134S	4	3,193	57.41	39.21	0.61	4.70
	38134V	4	3,193	62.14	35.17	0.56	4.70
8	31118C	5	5,084	58.24	39.38	0.65	3.62
	31118S	4	5,084	59.17	38.85	0.65	3.62
	31118V	4	5,084	60.72	37.37	0.57	3.62
	31199C	5	3,898	60.26	37.51	0.67	3.90
	31199S	4	3,898	58.26	39.12	0.66	3.90
	31199V	4	3,898	63.29	35.30	0.62	3.90
	31230C	5	3,445	51.93	43.28	0.57	6.47
	31230S	4	3,445	51.70	43.92	0.56	6.47
	31230V	4	3,445	54.51	42.03	0.50	6.47
	31428C	5	4,682	66.34	32.81	0.66	1.75
	31428S	4	4,682	65.42	33.34	0.65	1.75

continued

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
	31428V	4	4,682	68.86	30.50	0.60	1.75
	31501C	5	4,066	53.44	42.87	0.62	5.02
	31501S	4	4,066	56.20	41.20	0.61	5.02
	31501V	4	4,066	58.12	39.70	0.55	5.02
	31574C	5	2,835	66.98	32.20	0.71	1.69
	31574S	4	2,835	63.67	35.20	0.70	1.69
	31574V	4	2,835	69.10	29.95	0.63	1.69
	31581C	5	4,255	65.41	33.70	0.72	1.69
	31581S	4	4,255	64.37	34.43	0.72	1.69
	31581V	4	4,255	69.33	29.99	0.65	1.69
	31585C	5	2,901	57.67	39.26	0.65	5.07
	31585S	4	2,901	56.39	40.57	0.65	5.07
8	31585V	4	2,901	62.67	35.57	0.59	5.07
	32348C	5	3,674	55.61	40.61	0.57	5.50
	32348S	4	3,674	54.22	41.21	0.60	5.50
	32348V	4	3,674	57.70	38.81	0.54	5.50
	32364C	5	4,582	61.20	37.30	0.65	2.29
	32364S	4	4,582	60.50	38.11	0.63	2.29
	32364V	4	4,582	62.27	36.51	0.60	2.29
	37679C	5	3,871	60.35	37.64	0.66	3.64
	37679S	4	3,871	57.35	39.78	0.64	3.64
	37679V	4	3,871	64.09	34.44	0.60	3.64
	37719C	5	2,408	56.06	40.03	0.65	4.78
	37719S	4	2,408	60.05	38.04	0.66	4.78
	37719V	4	2,408	62.17	36.46	0.62	4.78
	102645C	5	2,156	60.90	37.24	0.56	3.99
	102645S	4	2,156	60.48	37.15	0.56	3.99
	102645V	4	2,156	61.73	36.78	0.52	3.99
	31664C	5	4,311	61.08	37.25	0.62	3.34
	31664S	4	4,311	59.80	38.34	0.60	3.34
	31664V	4	4,311	61.98	36.58	0.56	3.34
	31668C	5	2,602	66.72	32.40	0.66	2.00
	31668S	4	2,602	65.60	33.09	0.64	2.00
	31668V	4	2,602	67.45	31.40	0.61	2.00
	31675C	5	43,222	60.88	37.13	0.60	4.06
	31675S	4	43,222	58.03	39.39	0.59	4.06
12	31675V	4	43,222	59.31	38.52	0.56	4.06
	31807C	5	2,737	63.32	34.89	0.67	2.92
	31807S	4	2,737	63.46	34.86	0.67	2.92
	31807V	4	2,737	67.56	31.35	0.63	2.92
	31817C	5	4,976	66.60	32.30	0.64	2.05
	31817S	4	4,976	64.65	33.92	0.63	2.05
	31817V	4	4,976	64.87	33.92	0.59	2.05
	31824C	5	4,722	62.11	36.11	0.66	3.83
	31824S	4	4,722	58.32	39.39	0.64	3.83
	31824V	4	4,722	59.93	37.91	0.61	3.83
	31825C	5	3,546	63.48	35.08	0.59	2.59
	31825S	4	3,546	63.09	35.25	0.59	2.59

continued

Grade	Item	Number of Score Categories	Number of Responses Scored Twice	Percent Exact	Percent Adjacent	Correlation	Percent of Third Scores
12	31825V	4	3,546	63.76	34.97	0.54	2.59
	32365C	5	2,521	60.10	37.68	0.64	4.40
	32365S	4	2,521	58.03	39.39	0.62	4.40
	32365V	4	2,521	59.58	38.64	0.59	4.40
	32378C	5	4,446	65.36	33.60	0.64	1.87
	32378S	4	4,446	64.82	34.41	0.66	1.87
	32378V	4	4,446	63.32	35.83	0.58	1.87
	32383C	5	2,719	66.61	32.51	0.66	2.17
	32383S	4	2,719	63.96	34.90	0.67	2.17
	32383V	4	2,719	67.49	31.56	0.63	2.17
	44520C	5	4,449	61.36	37.13	0.61	2.74
	44520S	4	4,449	59.99	38.30	0.62	2.74
	44520V	4	4,449	62.24	36.41	0.58	2.74
	44524C	5	3,494	59.70	38.72	0.60	3.69
	44524S	4	3,494	59.79	37.84	0.62	3.69
	44524V	4	3,494	61.05	37.55	0.56	3.69

Appendix P—Parent Guide to Reports

Kentucky Core Content Test
Individual Student Report
Parent Guide

Kentucky Core Content Test Overview

The Kentucky Core Content Test and the Kentucky Alternate Assessment Program produce individual student information.

KCCT This test is taken by students in grades 3-8, 10 and 11 in the spring of the school year and by students in grade 12 in the fall of the same school year. The table below provides the content areas tested in each grade level.

	Content Areas				
Grade	**Reading**	**Mathematics**	**Science**	**Social Studies**	**On-Demand Writing**
3	✓	✓			
4	✓	✓	✓		
5	✓	✓		✓	✓
6	✓	✓			
7	✓	✓	✓		
8	✓	✓		✓	✓
10	✓				
11		✓	✓	✓	
12					✓

The reading, mathematics, science, and social studies tests contain multiple-choice and open-response (essay-like) questions. For the grades 5 and 8 on-demand writing tests, students respond to one of two writing tasks and answer passage-based multiple-choice editing/revising items. For the grade 12 on-demand writing task, students respond to two writing tasks only.

Kentucky Alternate Assessment Program This program is an assessment process developed for students with the most severe disabilities and who are not able to participate within the general curriculum, even when they are provided all possible accommodations and assistive supports. Kentucky's Alternate Assessment Program includes less than 1% of the total tested student population.

Performance Level Descriptions

Summaries of the language used to describe the performance levels of Novice, Apprentice, Proficient, and Distinguished are included on the Individual Student Report. The performance levels are used in reporting student results within the KCCT. The Proficient level is the goal for all students. *For more explicit and detailed descriptions it is best to consult the descriptions for each particular grade level and content area.* These descriptions can be found on the Kentucky Department of Education's (KDE) web site at: http://www.education.ky.gov.

To communicate a more specific indication of how close a student's work is to the next performance level, for reporting purposes in reading, mathematics, science, social studies, and on-demand writing, the performance levels of Novice and Apprentice are subdivided into the following categories:

* Novice Low
* Novice Medium
* Novice High
* Apprentice Low
* Apprentice Medium
* Apprentice High

Scale Scores

There is a wide range of performance within each performance level. Therefore, KCCT results are also reported as scale scores to provide additional information about the location of student achievement within each performance level. KCCT scores are reported on separate 80-point scales corresponding to each grade level (300-380, 400-480, …, 800-880). Each content area scale within an individual grade level has been developed so that at every grade a score of 40 represents Proficient performance at that grade level. Scores of 40 and higher indicate a level of performance at or above the Proficient level. Scores below 40 indicate performance below the Proficient level. For example, scores of 340 at grade 3, 540 at grade 5, and 840 at grade 8 each indicate Proficient performance at these grades.

Score Range On the Individual Student Report, a student's scale score is graphed as a diamond surrounded by a bar. The point of the diamond indicates the score that the student earned. The bar is the *score range*, which shows the range of scores the student would likely have received if he/she had taken the same test, or a different version of the test, on another day.

Kentucky Alternate Assessment Program
Individual Student Report
Parent Guide

The Kentucky Alternate Assessment Program (KAAP) is an assessment process developed for students with the most severe disabilities and who are not able to participate within the general curriculum, even when they are provided all possible accommodations and assistive supports. KAAP includes less than 1% of the total tested student population.

KAAP includes three major components:

1. The *Alternate Assessment Portfolio* measures student performance on specified standards for reading, mathematics, and science, and includes work samples for each content area. Students are assessed in:
   - reading at grades 3-8 and grade 10;
   - mathematics at grades 3-8 and grade 11; and
   - science at grades 4, 7, and 11.
2. *Attainment Tasks* are designed to provide an alternate means of assessment to the KCCT in the content areas of social studies and writing. These are performance events or tasks completed one-on-one with the student's teacher.
3. The *Transition Attainment Record* is designed to provide an alternate means of assessment to the readiness exams required statewide in the content areas of reading, English, mathematics, and science. This includes a checklist of skills in these content areas, student interview questions, and team interview questions completed by the Admissions and Release Committee (ARC) or a subgroup of the ARC.

The table on the next page provides the components of the KAAP used to test each content area by grade level.

General Performance Level Descriptions

Summaries of the language used to describe general performance levels of Novice, Apprentice, Proficient, and Distinguished are included on the Individual Student Report for the KAAP. These same general performance levels are used in reporting student results on the KCCT. The Proficient level is the goal for all students.

Performance levels are reported for both the Alternate Assessment Portfolio and the Attainment Tasks components. The Transition Attainment Record is reported as a numerical score in each content area and an overall composite score as well as state average scores for each. In addition, the results of the student's interview are included on the report form.

Students participate through Performance Dimension A or B, depending upon the student's mode of communication. Performance Dimension A includes all portfolio performance levels, while "Distinguished" is not an attainable performance level for Portfolio Performance Dimension B. Additional information can be found on the Kentucky Department of Education's web site at: http://www.education.ky.gov.

Alternate Assessment Components

	Alternate Assessment for KCCT					Alternate Assessment for EXPLORE/PLAN/ACT
Grade	**Reading**	**Mathematics**	**Science**	**Social Studies**	**Writing**	**English, Mathematics, Science, Reading**
End of Primary (grade 3)	**P**	**P**				
4	**P**	**P**	**P**			
5	**P**	**P**		**AT**	**AT**	
6	**P**	**P**				
7	**P**	**P**	**P**			
8	**P**	**P**		**AT**	**AT**	**Transition Attainment Record in English, Mathematics, Reading, Science**
9						
10	**P**					**Transition Attainment Record in English, Mathematics, Reading, Science**
11		**P**	**P**	**AT**		**Transition Attainment Record in English, Mathematics, Reading, Science**
12					**AT**	

LEGEND:
P = Portfolio **AT** = Attainment Tasks

Appendix Q—SAMPLE REPORTS

Performance Levels and Score Ranges

Student performance on the KCCT is classified into one of four performance levels describing students' level of proficiency on the content and skills achieved in each content area. There is a wide range of student proficiency within each performance level. KCCT results are also reported as scale scores to provide additional information about the location of student performance within each performance level. Refer to the general performance level descriptions provided below.

General Performance Level Descriptions

Distinguished

- Student demonstrates an in-depth, extensive, or comprehensive knowledge of content.
- Student communication is complex, concise, and sophisticated with thorough support, explicit examples, evaluations, and justifications.
- Student consistently and successfully implements appropriate strategies.
- Student demonstrates insightful reasoning and makes connections where appropriate.

Proficient

- Student demonstrates broad content knowledge and is able to apply it.
- Student communication is accurate, clear, and organized with relevant details and evidence.
- Student uses appropriate strategies to solve problems and make decisions.
- Student demonstrates effective use of critical thinking skills.

Apprentice

- Student demonstrates basic content knowledge and reasoning ability.
- Student communicates reasonably well but draws weak conclusions or only partially solves or describes.
- Student attempts appropriate strategies with limited success.

Novice

- Student demonstrates minimal, underdeveloped, and at times inaccurate content knowledge and reasoning.
- Student communication is ineffective and lacks detail with no evidence of connections within or between content areas.
- Student uses strategies that are inappropriate.

Kentucky UNBRIDLED SPIRIT

EVERY CHILD PROFICIENT & PREPARED FOR SUCCESS KENTUCKY DEPARTMENT OF EDUCATION

2010–2011 Kentucky Core Content Test Individual Student Report

Student: ARCHY S BARTOLOME
School: Demonstration School 2
District: Demonstration District A
Code: DEADE2
Grade: 7

The Kentucky Core Content Test (KCCT) is designed to improve teaching and student learning in Kentucky. The overriding goal of KCCT is for all students in Kentucky to reach proficiency as defined by the Kentucky Board of Education. Student performance on Reading and Mathematics is the basis of federal accountability reporting required by No Child Left Behind. For more information visit http://www.education.ky.gov.

Kentucky UNBRIDLED SPIRIT

2010–2011 Kentucky Core Content Test Results

Student	DOB	State Student ID
ARCHY S BARTOLOME	03/25/1998	D071000141

Subject Area	Your Performance Level	Your Scale Score	Display of Your Scale Score and Probable Range of Scores	State Avg. Scale Score	Your Lexile/Quantile Score
Reading	Proficient	749	Novice / Apprentice / Proficient / Distinguished; 700 720 740 766 780	748	1070L*
Mathematics	Distinguished	765	Novice / Apprentice / Proficient / Distinguished; 700 720 740 762 780	747	1025Q**
Science	Apprentice	737	Novice / Apprentice / Proficient / Distinguished; 700 720 740 762 780	746	

Interpretation of Graphic Display

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to take this test many times. This statistic is called the standard error of measurement. See the reverse side for a description of the performance levels.

This Student's Performance Level Compared to School, District, and State Performance (Percentage of Students at Each Performance Level)

	Reading				Mathematics				Science			
	Student	School	District	State	Student	School	District	State	Student	School	District	State
Distinguished		11	10	16	✓	23	23	25		15	18	20
Proficient	✓	49	53	51		35	34	41		51	45	44
Apprentice		29	29	27		25	25	24	✓	17	21	26
Novice		11	8	6		17	18	11		17	16	10

NOTE: Percentages may not sum to 100% due to rounding.

Description of the Student's Results

Reading: Your Performance Level is Proficient. A proficient scale score for this subject area begins at 740.

Mathematics: Your Performance Level is Distinguished. A proficient scale score for this subject area begins at 740.

Science: Your Performance Level is Apprentice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at 740.

*Lexiles:

The Lexile Framework for Reading provides a common, developmental scale for matching reader ability and text complexity. Lexile measures enable educators, parents and students to select targeted materials that can improve reading skills and to monitor reading growth across the curriculum, in the library and at home. More information for using Lexiles at home can be found using this link: http://www.lexile.com.

**Quantiles:

The Quantile Framework for Mathematics is a measure that indicates which mathematical skills a student is prepared to learn and which ones will require further instruction. Teachers and parents are able to use this measure to determine how likely a student is to successfully solve more complex problems on a continuum when provided with targeted instruction. More information for using Quantiles at home can be found using this link: http://www.quantiles.com.

Kentucky Core Content Test

Student Listing Report

Spring 2011

School: Demonstration School 2
District: Demonstration District A
School Code: DEADE2
Grade: 7

NCLB Accountability Status*	Number of Students	Student Status	Number of Students		
			KCCT	Alternate Assessment	Total
Accountable	48	Participated at this school	48	0	48
		Participated at another school (AN)	0	0	0
Not Accountable	22	Participated at this school and accountable to another school (NA)	14	8	22

Exempt from NCLB Accountability at This School	
KCCT	1
Alternate Assessment Portfolio	0
Alternate Assessment Attainment Tasks	0

Student Name	State Student ID (SSID)	Lithocode	Alternate Assessment	Testing Accommodations	Student Status	Accountable/ Tested School	Reading			Mathematics			Science	
							Scale Score	Performance Level	Lexile Score	Scale Score	Performance Level	Quantile Score	Scale Score	Performance Level
ALSHRAFI, AHMAD L	D071000062	D071000062					730	A-med	835L	726	A-low	725Q	741	P
BAGGS, JOSEPH J	D071000139	D071000139					746	P	1025L	738	A-high	820Q	747	P
BALLOU, BRAXTON C	D071000135	D071000135					749	P	1070L	758	P	970Q	773	D
BANE, RYANNE L	D071000021	D071000021					750	P	1075L	755	P	945Q	759	P
BARTOLOME, ARCHY S	D071000141	D071000141					749	P	1070L	765	D	1025Q	737	A-high
BOLDUC, TIMOTHY S	D071000069	D071000069					726	A-low	785L	716	N-high	650Q	723	A-low
CALDWELL, TERRENCE L	D071000104	D071000104					726	A-low	790L	734	A-high	785Q	740	P
CAPOARROM, BERNAT W	D071000115	D071000115					748	P	1050L	742	P	850Q	744	P
CAREY, SIERRA C	D071000012	D071000012			NA	DEBDE4	780	D	1370L	770	D	1065Q	771	D
CHIU, MATTHEW H	D071000013	D071000013			NA	DEBDE4	759	P	1185L	763	D	1005Q	771	D
CHUTE, ANNALEE	D071000004	D071000004			NA	DEBDE4	773	D	1350L	746	P	880Q	746	P
CLAPP, JESSICA J	D071000116	D071000116					759	P	1180L	780	D	1120Q	763	D
CONWAY, NICHOLAS A	D071000001	D971000001	YES	YES	NA	DEBDE4		P			P			P
COPPLE, VICTORIA	D071000013	D971000013	YES	YES	NA	DEBDE4		P			P			P
CORDERO, EVONY C	D071000093	D071000093					758	P	1170L	745	P	870Q	749	P
DAVIS, JUSTIN	D071000071	D071000071					748	P	1050L	747	P	890Q	759	P
DIAZ, AIREMI M	D071000010	D071000010		YES	NA	DEBDE4	713	N-high	635L	712	N-med	625Q	700	N-low

Legend

AN: Participated at another school and accountable to this school

NA: Participated at this school and accountable to another school

EXEMPTED: Student Exempted from Testing
D: Distinguished
P: Proficient

A-high: Apprentice High
A-med: Apprentice Medium
A-low: Apprentice Low

N-high: Novice High
N-med: Novice Medium
N-low: Novice Low

*NCLB accountability applies only to the content areas of reading and mathematics.

Kentucky Core Content Test

Student Listing Report

Spring 2011

School: Demonstration School 2
District: Demonstration District A
School Code: DEADE2
Grade: 7

Student Name	State Student ID (SSID)	Lithocode	Alternate Assessment	Testing Accommodations	Student Status	Accountable/ Tested School	Reading			Mathematics			Science	
							Scale Score	Performance Level	Lexile Score	Scale Score	Performance Level	Quantile Score	Scale Score	Performance Level
DIJKHOFF, ZACHARY J	D071000019	D071000019			NA	DEBDE4	757	P	1165L	764	D	1015Q	759	P
DOMINGUEZ, STEPHANIE A	D071000024	D071000024					750	P	1080L	725	A-low	720Q	733	A-high
DONAHUE, LIAM T	D071000031	D071000031					748	P	1055L	773	D	1080Q	754	P
DULIEU, RYAN	D071000007	D971000007	YES	YES	NA	DEBDE4		N-med			N-med			N-med
DUMAS, JONATHAN J	D071000015	D071000015			NA	DEBDE4	724	A-low	770L	710	N-med	605Q	700	N-low
DUNCAN, CHARLOTTE N	D071000023	D071000023					741	P	975L	750	P	910Q	742	P
FRIAS, ROLANDO B	D071000059	D071000059					733	A-high	880L	730	A-med	755Q	725	A-low
GAYTANFRENC, JAYDE	D071000125	D071000125					739	A-high	955L	735	A-high	795Q	732	A-med
GUILD, RYAN A	D071000143	D071000143					734	A-high	885L	714	N-high	635Q	700	N-low
HELMKE, ADAM D	D071000101	D071000101					710	N-med	605L	733	A-high	775Q	726	A-low
HYYTI, KENDALL L	D071000112	D071000112					752	P	1100L	726	A-low	725Q	732	A-med
JACOBS, TAYSON T	D071000002	D071000002			NA	DEBDE4	728	A-med	810L	700	N-low	525Q	718	N-high
KREUZBURG, JAMES D	D071000003	D071000003		YES	NA	DEBDE4	719	N-high	720L	714	N-high	635Q	700	N-low
KREYSER, DAMIEN A	D071000002	D971000002	YES	YES	NA	DEBDE4		N-high			A-low			N-high
LACAPRUCIA, THOMAS T	D071000022	D071000022					739	A-high	940L	747	P	890Q	742	P
LAYTON, TANNER D	D071000011	D071000011			NA	DEBDE4	733	A-high	870L	750	P	910Q	760	P
LEE, TIFFANY K	D071000053	D071000053					780	D	1370L	777	D	1115Q	768	D
LENOX, DYLAN A	D071000048	D071000048					762	P	1215L	766	D	1030Q	772	D
LEZAMA, MELISSA R	D071000065	D071000065					780	D	1370L	780	D	1120Q	778	D
LIBBY, JESSICA C	D071000107	D071000107					761	P	1205L	741	P	840Q	750	P
LIIMATAINEN, RHODERICK P	D071000124	D071000124					716	N-high	665L	700	N-low	505Q	702	N-med
MAJANOSANDOVAL, KAITLYNELIZABE M	D071000084	D071000084					738	A-high	935L	731	A-med	760Q	743	P
MARIN, DEVON A	D071000005	D071000005			NA	DEBDE4	754	P	1125L	770	D	1065Q	752	P
MCFADDEN, KATELYN	D071000006	D971000006	YES	YES	NA	DEBDE4		A-med			A-med			P
MCNEIL, RICHARD M	D071000012	D971000012	YES	YES	NA	DEBDE4		A-low			N-high			N-med

Legend

AN: Participated at another school and accountable to this school

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EXEMPTED: Student Exempted from Testing
D: Distinguished
P: Proficient

A-high: Apprentice High
A-med: Apprentice Medium
A-low: Apprentice Low

N-high: Novice High
N-med: Novice Medium
N-low: Novice Low

*NCLB accountability applies only to the content areas of reading and mathematics.

Kentucky Core Content Test

Student Listing Report

Spring 2011

School: Demonstration School 2
District: Demonstration District A
School Code: DEADE2
Grade: 7

Student Name	State Student ID (SSID)	Lithocode	Alternate Assessment	Testing Accommodations	Student Status	Accountable/ Tested School	Reading			Mathematics			Science	
							Scale Score	Performance Level	Lexile Score	Scale Score	Performance Level	Quantile Score	Scale Score	Performance Level
MEEKER, ASHLEY M	D071000050	D071000050		YES			739	A-high	955L	744	P	860Q	760	P
MEYER, MITCHELL M	D071000037	D071000037					744	P	1010L	738	A-high	815Q	752	P
MONZIONE, MELINDA	D071000007	D071000007			NA	DEBDE4		EXEMPTED			EXEMPTED			EXEMPTED
MORENO, DAMARIS E	D071000110	D071000110					729	A-med	830L	728	A-med	740Q	730	A-med
MOREY, TIMOTHY K	D071000066	D071000066						EXEMPTED			EXEMPTED			EXEMPTED
MOSER, NICHOLAS S	D071000034	D071000034					763	P	1230L	755	P	945Q	750	P
NASCIMENTO, NATALIA L	D071000113	D071000113					736	A-high	910L	756	P	950Q	726	A-low
NELSON, ROBERT T	D071000061	D071000061					730	A-med	840L	719	N-high	675Q	700	N-low
OLDHAM, STEPHANIE C	D071000145	D071000145					747	P	1045L	752	P	920Q	749	P
ORTEGA, DANIEL S	D071000096	D071000096					719	N-high	715L	700	N-low	505Q	714	N-high
PACHECO, LILIANA B	D071000109	D071000109					751	P	1090L	741	P	840Q	744	P
PAPKA, AUSTIN J	D071000142	D071000142					749	P	1060L	752	P	920Q	752	P
POLITANO, JESSICA M	D071000147	D071000147					749	P	1070L	761	P	995Q	748	P
PORTER, MATTHEW R	D071000120	D071000120					767	D	1275L	780	D	1120Q	768	D
PORTNER, MICHAELA M	D071000010	D971000010	YES	YES	NA	DEBDE4		EXEMPTED			EXEMPTED			EXEMPTED
RICHARDSON, CHELSEY	D071000001	D071000001			NA	DEBDE4		EXEMPTED			EXEMPTED			EXEMPTED
RIPLEY, ROYCE T	D071000126	D071000126					755	P	1135L	780	D	1120Q	772	D
RIVELAND, ERIC S	D071000056	D071000056					736	A-high	915L	733	A-high	775Q	749	P
RODRIGUEZ, GEORGE L	D071000008	D971000008	YES	YES	NA	DEBDE4		D			D			D
ROSARIO, ANDREA M	D071000075	D071000075					763	P	1230L	730	A-med	755Q	749	P
ROY, DAKOTA A	D071000055	D071000055					746	P	1030L	751	P	910Q	755	P
RUSSELL, MADISON M	D071000114	D071000114					753	P	1115L	780	D	1120Q	747	P
TILLETTJR, MARK S	D071000030	D071000030					748	P	1055L	780	D	1120Q	759	P
TOLSON, MITCHELL L	D071000025	D071000025					745	P	1015L	752	P	925Q	757	P
TOSCANO, ELIZABETH A	D071000118	D071000118					780	D	1370L	741	P	840Q	739	A-high

Legend

AN: Participated at another school and accountable to this school

NA: Participated at this school and accountable to another school

EXEMPTED: Student Exempted from Testing
D: Distinguished
P: Proficient

A-high: Apprentice High
A-med: Apprentice Medium
A-low: Apprentice Low

N-high: Novice High
N-med: Novice Medium
N-low: Novice Low

*NCLB accountability applies only to the content areas of reading and mathematics.

Kentucky Core Content Test

Student Listing Report

Spring 2011

School: Demonstration School 2
District: Demonstration District A
School Code: DEADE2
Grade: 7

Student Name	State Student ID (SSID)	Lithocode	Alternate Assessment	Testing Accommodations	Student Status	Accountable/ Tested School	Reading			Mathematics			Science	
							Scale Score	Performance Level	Lexile Score	Scale Score	Performance Level	Quantile Score	Scale Score	Performance Level
WALTS, LEAH L	D071000020	D071000020			NA	DEBDE4		EXEMPTED			EXEMPTED			EXEMPTED
WEDRICK, JAX M	D071000014	D071000014			NA	DEBDE4	745	P	1010L	739	A-high	820Q	737	A-high
WILLSON, BRETT C	D071000117	D071000117					723	A-low	760L	753	P	930Q	744	P

Legend

AN: Participated at another school and accountable to this school

NA: Participated at this school and accountable to another school

EXEMPTED: Student Exempted from Testing
D: Distinguished
P: Proficient

A-high: Apprentice High
A-med: Apprentice Medium
A-low: Apprentice Low

N-high: Novice High
N-med: Novice Medium
N-low: Novice Low

*NCLB accountability applies only to the content areas of reading and mathematics.

Appendix R—Decision Rules

Analysis and Reporting Decision Rules
Kentucky Core Content Test (KCCT)
Grade 12 On-Demand Writing (ODW) Fall 10-11 Administration

This document details rules for analysis and reporting. The final student level data set used for analysis and reporting is described in the "Data Processing Specifications." This document is considered a draft until the Kentucky Department of Education (KDE) signs off. If there are rules that need to be added or modified after said sign-off, KDE sign off will be obtained for each rule. Details of these additions and modifications will be in the Addendum section.

I. General Information

A. *Contract Number*

The contract number is 138650.

B. *Tests administered:*

Grade	Subject	Test items used for Scaling
12	On-Demand Writing	Common, Matrix

C. *Reports Produced:*

1. Individual Student Report (ISR) - *print*
2. School Student Listing Report - *web*

D. *Files Produced:*

1. Online Data Verification System (ODVS)
   a. Raw ODVS Data – Student Level Export
2. Raw Student Data
3. Student Results
4. Scale Score Lookup
5. State Results for Approval of Equating
6. Student Listing Data Export:
   a. School
   b. District

E. *Post Reporting Tasks:*

1. State Accountability Level Distribution

   This file will contain the accountability performance level distribution of the total number of students assessed via the KCCT by grade and content area.

2. Rescore Request Procedure

Rescore Requests are submitted to KDE after results are released. KDE compiles the requests into one document and forwards them to Measured Progress for processing at scheduled rerun dates. In instances of additional requests that are submitted after the initial requests, KDE will forward additional requests to Measured Progress for Processing, the schedule to be determined.

The following steps outline the rescore request procedure:

a. Measured Progress will provide KDE with a file layout for rescore requests

b. KDE and Measured Progress will approve the file layout

c. KDE will submit rescore requests to Measured Progress Program Management using the approved file layout.

d. Program management will provide DP the rescore request

e. DP will request the rescores from scoring.

f. DP will process the rescores as follows:

    1. Include the original and the rescore results
    2. Take the higher of the two scores for each OR item
    3. Take the higher of the subdomain scores for ODW

g. Data Analysis will calculate the rescore results

h. For students whose scores are changed:

    1. The student data file will be updated
    2. A new parent letter will be issued if the rescore is within one year of the test administration

i. Measured Progress will provide KDE with an updated rescore file

j. All rescore requests will be maintained in one file

F. *School Type:*

SchType (KDE)	Source (ICore Subtype)	Description (KDE)	Included in aggregate data School	District	State
A1	1	A school under administrative control of a principal or head teacher and eligible to establish a school-based decision-making council. An A-1 school is not a program operated by, or part of, another school.	Yes	Yes	Yes
A2	14	A district-operated, totally vocational/ technical program whose membership is counted in other schools.	Yes	Yes	Yes
A3	15	A district-operated, totally special education program.	Yes	Yes	Yes
A5	17	An alternative program in a district-operated and district-controlled facility, with no definable attendance boundaries, that is designed to provide services to at-risk populations with unique needs. Its population composition and characteristics change frequently and are controlled by the local school district's student assignment practices and policies.	Yes	Yes	Yes
A6	18	A district-operated instructional program in a non-district-operated institution or school.	Yes	Yes	Yes
B1	9	Academy for Mathematics and Science at Western Kentucky University (WKU)	Yes	Yes	Yes
D1	19	State KDE operated.	Yes	Yes	Yes

Note: Schools designated by Kentucky as A4 (District operated, totally pre-school program) or F1 (Federally operated general school) are not included.

G. *Alternate Assessment*

Grade 12 students assessed via the Alternate Assessment are not submitted or reported during the Fall On-Demand Writing administration. Only Grade 12 students assessed via the general assessment (KCCT) are included in the data and reported.

H. *Other Information*

1. The special education variable is set equal to "1" (SpecialEd="1") if the student has an IEP or Plan 504.
2. Students having tested with one or more Limited English Proficiency (LEP) or Disability Accommodation(s) are considered accommodated (Accom = "1")

II. Student Participation / Exclusions

A. *Test Attempt Rules*

All students submitting a response booklet via the KCCT are considered participants, even if there is no evidence of an attempted response (KCCTPartStatus = “A”).

B. *Not Tested Reasons*

1. Valid reasons for exemption from the KCCT are:
   a. Foreign exchange student (KCCTExempt = ‘F’)
   b. Medical exemption (KCCTExempt = ‘M’)
   c. Expelled and not receiving services as provided for in KRS 158.150(2) (KCCTExempt = ‘E’)
   d. Limited English proficient student who is in the first year of enrollment in a U.S. school (KCCTExempt = ‘L’)
   e. Moved out of Kentucky public schools during testing window (KCCTExempt = ‘V’)
   f. Other (KCCTExempt = ‘O’)

2. Exemption Data Source
   a. All exemptions except for “Medical” and “Other” are collected via ODVS.
   b. The final ODVS data are sent to KDE prior to reporting, allowing for KDE to add “Medical” and “Other” exemptions to students, as well as make any other necessary changes to student exemptions, and returned to MP.
   c. See Data File Rules: ODVS for details.

3. Impact of Exemption
   a. If a student is exempted from the KCCT (KCCTExempt ne “X”), they are exempted from the Grade 12 Fall ODW assessment.
   b. Scores for exempted students are reported as follows:

Exemption Impact on Reporting										
Exemption	**Raw Score**			**Scale Score/ Composite Score**			**Performance/ Accountability Level**			**Student Receives ISR**
	Data File	**ISR**	**Listing**	**Data File**	**ISR**	**Listing**	**Data File**	**ISR**	**Listing**	
KCCT	**Yes**	No	No	**Yes**	No	No	**Yes**	No	No	**Yes**

III. Calculations

A. *KCCT: Assignment of Scale Score, Scale Score Probable Range, Performance Level and Accountability Level*

1. Scale Form creation

The scaling is accomplished by defining the unique set of test forms for each grade/subject. A test form may contain matrix items which are repeated across several but not all test forms. In order to determine the unique test forms, the positional test items (i.e. Form 1A, position 02) are translated into the unique item numbers. This is accomplished as follows:

a. Use the IREF (item information) dataset to identify the unique item number assigned to each form/ position.

b. Order the items by:

   i. Type – multiple choice, short answer, constructed response, extended response, writing prompt.

   ii. Form – common, then by ascending form number.

   iii. Position

c. Translate the positional test items into new variables named by the unique item numbers. For example, if forms 1A and 1B have the same itemnumber (1234) at position 02, then a new variable is created which contains data for only itemnumber 1234. In this example, the new variable contains the item response for forms 1A and 1B at position 02 (either multiple choice or an open response score) and the data are missing for all other forms of the test.

d. If the new item number variable contains an 'X' (item is not included in scaling) then set the item number to '.'. This removes the item number from the test form. Set the Exception field to '1' to indicate this is not an original test form.

e. Once all of the new item number variables are created, compress all of the variables together into one field in the order defined in step (1.b.) to create the test for the student.

f. Select the distinct set of tests from the student data and order them by the exception field and the descending test field.

g. Check to see if the test has already been assigned a scale form by looking in the tblScaleForm table. If the test exists then assign the existing scale form. Otherwise assign the next available scale form number. All scale form numbering starts at 01 and increments by 1 up to 99.

2. Writing Prompts (Grade 12 On-Demand Writing)
   a. The first writing prompt is common and is required for all students.
   b. Students have the option of responding to either prompt 2 or prompt 3. They do not respond to both.
   c. All writing prompts are 100% double scored, resulting in 2 sets of final scores per prompt.
   d. Writing prompts are scored across 3 dimensions:
      i. Content (C)
      ii. Structure (S)
      iii. Conventions (V)
   e. The 3 dimensions are translated into 3 separate variables for each prompt, each equal to the sum of the 2 final scores at each dimension.
   f. If one or more dimensions are considered not scorable, the prompt will be considered not scorable.
   g. See *Writing Prompt Score Field* Layout included in the DP Layout for detailed information on score locations.

3. Scale Score, Scale Score Probable Range and Performance Level

   Psychometrics provides Data Analysis with a lookup table for each scale form associated with a grade/subject. The lookup table contains the raw score, resulting scale score, scale score probable range and performance level.

4. Accountability Level
   a. Accountability Level coding is done using an algorithm provided by KDE and the student's scale score. The algorithm is described in detail below. Please refer to Appendix A for the original email communication from John Wickizer dated April 20, 2007.
      i. For Reading, Mathematics, Science, Social Studies and On-Demand Writing, the Novice Performance Level is broken into Novice Low, Novice Medium and Novice High and the Apprentice Performance Level is broken into Apprentice Low, Apprentice Medium and Apprentice High.
      ii. Students are assigned to their respective Accountability Level based upon the *Performance and Accountability Level* table (see below, section III.A.4.b).

b. Performance and Accountability Level Coding Table:

Performance Level			Accountability Level			
Code	**ISR Text**	**Definition**	**Code**	**Listing Text**	**Level**	**Definition**
1	Novice	Earned a scale score greater than or equal to the lowest possible scale score and less than the first cut score.	NL	N-low	Novice Low	Earned scale score X00.
			NM	N-med	Novice Medium	Earned a scale score greater than or equal to X01 and less than or equal to X12.
			NH	N-high	Novice High	Earned a scale score greater than or equal to X13 and less than or equal to X19.
2	Apprentice	Earned a scale score equal to or greater than the first cut score and less than the second cut score.	AL	A-low	Apprentice Low	Earned a scale score greater than or equal to X20 and less than or equal to X26.
			AM	A-med	Apprentice Medium	Earned a scale score greater than or equal to X27 and less than or equal to X32.
			AH	A-high	Apprentice High	Earned a scale score greater than or equal to X33 and less than or equal to X39.
3	Proficient	Earned a scale score equal to or greater than the second cut score and less than the third cut score.	P	P	Proficient	Accountability level is same as performance level.
4	Distinguished	Earned a scale score equal to or greater than the third cut score.	D	D	Distinguished	Accountability level is same as performance level.

B. *Number of Students*

1. The Number of Students Tested is equal to the number of students who are not exempt (KCCTExempt = “X”).
2. The number of student Exempt from Testing is equal to the number of students who are exempted (KCCTExempt ne “X”).
3. Data are stored in tblEnrollment.

C. *State Average Scale Score*

Students are excluded from the calculation of the State Average Scale Score if they were exempted (KCCTExempt ne “X”).

D. *School, District, and State Performance Level Distributions*

1. Students are excluded from the calculation of School, District, and State Performance Level Distributions if they were exempted (KCCTExempt ne ‘X’).
2. Students are aggregated with their testing district and testing school.
3. Data are stored in tblPerfSummary.

E. *Psychometric Analysis*

1. Only students participating via the KCCT and who are not exempt (KCCTExempt=”X”) are included in psychometric analysis.
2. An exclusion flag in the Student Results file will indicate, by subject, if a student was included in psychometric analysis. (Exclusion = “1” indicates a student was not included in psychometric analysis).
3. Open Response Items are not weighted for On-Demand Writing.

F. *Rounding Table*

Report	**Calculation**	**Rounded (to the nearest)**
Individual Student Report	State Average Scale Score	Whole value
	School, District, State Performance (Percentage of Students at Each Performance Level)	Whole value (Percent)

IV. Report Specific Rules

A. *KCCT Individual Student Report (ISR)*

1. All students assessed during the Fall ODW administration receive a KCCT ISR, regardless of any exemption status.
2. ISR's are sent to the tested school. The tested school's information is included on the report.
3. The student grade is 12.
4. Incomplete Demographic Information:
   a. If a Date of Birth is null, "Information Not Provided" is printed on the ISR. Otherwise, the Date of Birth is printed from tblStuDemo, with no justification, suppression of blanks or additional formatting.
   b. If a State ID (StudentID) is null, "Information Not Provided" is printed on the ISR. Otherwise, the student ID is printed from tblStuDemo, with no justification, suppression of blanks or additional formatting.
   c. If a student's first name, middle initial and last name are null, "Information Not Provided" is printed on the report. Otherwise, the name is printed from tblStuDemo, with no justification, suppression of blanks, or additional formatting.
5. The student performance level for On-Demand Writing is displayed as the ISR Text from the *Performance and Achievement Level Coding* table (See Section III.A.4.b).
6. Exempted Students:
   a. The scale score and probable range of scores are suppressed.
   b. The performance level is "Not Tested".
   c. The State Average Scale Score is reported.
   d. No performance level will be marked in the comparison of student, school, and district performances.
7. Description of the Student's Results:
   a. If the student is exempt (KCCTExempt ne "X") the text "Not tested students include students with approved exemptions or for whom test materials were not returned." will be inserted to the right of the appropriate subject heading(s).
   b. For all other performance levels, the student's performance level for On-Demand Writing will be inserted into the text, "Your Performance Level is <insert>."
   c. If the student receives Novice as their performance level for On-Demand Writing and Novice Low as their accountability level, the text "You scored in the low range of this performance level. Low performance can include attempted or blank responses to test questions." will appear on the report.
   d. If the student receives Novice or Apprentice as their performance level for On-Demand Writing and their Accountability is not Novice Low, the student's accountability level will be used to look-up the value (high,

medium, or low) inserted within the text, “You scored in the <insert> range of this performance level.”

e. Otherwise, the lowest scale score for the Proficient performance level for Grade 12 On-Demand Writing will be inserted after the text, “A proficient scale score for this subject area begins at <insert>.”

B. *School Student Listing Report*

1. Includes student results from the KCCT regardless of any exemption status.
2. Students are included on the Listing for the Testing School and Testing District only.
3. The Grade is 12.
4. The performance level displayed is the Accountability Level Listing Text from *Performance and Achievement Level Coding* table (See Section III.A.4.b) for each subject.
5. Alternately Assessed Students

   Alternately Assessed students are not included in the fall reporting, therefore, the column indicating Alternate Assessment is blank for all students.

10. Accommodated Students (Accommodations = “1”)

    The text “Yes” appears in the Testing Accommodations column.

11. Exempt Students (KCCTExempt ne “X”)

    a. The Content, Structure, Conventions, and Scale Score are blank.

    b. “EXEMPTED” is displayed under the performance level.

12. Students are listed in alphabetical order by last name, first name and middle initial. If the student’s last name or first name is missing, they are included at the top of the listing report.

C. *File Naming Conventions*

File	Current Naming Convention	CPI Source
Student Report – Parent Copy	*#####*[*DiscodeSchcode*] KY 1011 Fall Sr Parent.pdf	CPIStudentParent
Student Report – School Copy	*#####*[*DiscodeSchcode*] KY 1011 Fall Sr School.pdf	CPIStudentSchool
School Student Listing	KY Ro 12.pdf	Web only

= incremental number, starting with 00001.

DiscodeSchcode = first district and school code included in the file.

VI. Data File Rules

A. *Online Data Verification System*

1. Raw ODVS Data – Student Level Export
   a. Contains all ODVS records, including active and inactive, as taken directly from ODVS.
   b. KDE will make any necessary updates to the data and apply exemptions to this data prior to returning the data to MP for reporting.

B. *Raw Student Data*

1. All rules associated with the creation of the data elements from the raw data file are documented in the Data Processing Specifications (DOE_DPSpec.pdf).
2. Alternate assessment students are not included.

C. *Student Results*

1. All rules outlined above that impact the student demographic table and the student score table will also apply to the Student Results File.
2. Alternate assessment students do not exist in the Fall On-Demand Writing administration.
3. The sending school and sending district will be set to the testing school and testing district for all students.
4. Incorrect responses of A, B, C, D will be translated to 1, 2, 3, 4, respectively. Correct responses will be translated from "+" to the key.

D. *Scale Score Lookup*

1. All rules outlined above that impact the Scale Score Lookup table will also apply to the Scale Score Lookup file.

D. *State Results for Approval of Equating Results*

1. The Performance Level distribution at the State level is calculated.
2. Students are excluded from the calculation of the State Results if they were exempted (KCCTExempt ne "X").
3. Data are stored in the Kentucky historical database.
4. Data for the current year and the two prior years are printed in pdf for KDE review of equating results prior to reporting.

E. *State Accountability Level Distribution*

1. The number and percent of students at each Accountability level is calculated.
2. Students are excluded from the calculation of the Accountability Level Distribution if they are exempted (KCCTExempt ne “X”).
3. The percent of students at each Accountability Level is rounded to the nearest tenth.
4. Data for the current year is provided to KDE in an excel file.

E. *School Student Listing Data Export*

1. All rules outlined above that impact the Student Listing tables will also apply to the Student Listing Data Export file.
2. Alternate Assessment students do not exist in the Fall ODW administration.
3. Students are included on the listing for their tested school only.

F. *District Student Listing Data Export*

1. All rules outlined above that impact the Student Listing tables will also apply to the District Student Listing Data Export file.
2. Alternate assessment students do not exist in the Fall ODW administration.
3. Students are included on the listing for their tested district only.

G. *Data File Table*

File	Layout	Naming Convention	File Type
ODVS – Raw Data (All Students)	KCCTS1011ODVSFileLayout.xls	KCCT1011FODVSExport_RawAll	SAS dataset
Raw Student Data	KCCT1011fDPLayout.xls	RawStuDataG12	SAS dataset
Student Results	KCCT1011fStudentResultsFileLayout.xls	StuResultsG12.sas StuResultsG12.csv	SAS dataset, CSV
Scale Score Lookup	KCCT1011fScaleScoreLookUpLayout.xls	ScaleScoreLookupG12.sas ScaleScoreLookupG12.csv	SAS dataset, CSV
State Results for Approval of Equating Results	N/A	StateResults*Date*.pdf	PDF
School Student Listing Data Export - *web*	KCCT1011fSchoolSliceFileLayout.xls	KCCT1011fG12Sch*YYYZZZ*Listing.xls KCCT1011fG12Sch*YYYZZZ*Listing.csv	Excel, CSV
District Student Listing Data Export - *web*	KCCT1011fDistrictSliceFileLayout.xls	KCCT1011fG12Dis*YYY*Listing.sas KCCT1011fG12Dis*YYY*Listing.csv	Excel, CSV
State Accountability Level Distribution	N/A	KCCT1011FAccountabilityDistribution.xls	Excel

"*YYY*" is equal to the testing district code and "*ZZZ*" is equal to the testing school code.

VII. Appendix A: Documentation of Accountability Level Assignment

NOTE: Since the receipt of this documentation, Novice Non-Performance has become Novice Low.

From: Wickizer, John – Assessment Implementation [mailto:John.Wickizer@education.ky.gov]
Sent: Friday, April 20, 2007 2:16 PM
To: Kevin Haley
Cc: Marcia Tibbetts; Kelly Scanlon; Hill, Kevin – Assessment Implementation; Ervin, Roger – Office of Assessment & Accountability; Rogers, Pamela – Office of Assessment & Accountability; Tim Crockett
Subject: Cut Scores
Importance: High

Novice and Apprentice are both divided in 3 sublevels: Novice Non-performance (NN), Novice Medium (NM), Novice High (NH), Apprentice Low (AL), Apprentice Medium (AM) and Apprentice High (AH). The cut for each are assigned in the following method using the standard set values that are assigned to the start of the Apprentice (A1) and Proficient (P1) Performance Levels:

- Novice Non-performance is assigned the lowest Scaled Score.
- Novice Medium is a range from NN+1 to [(A1-NN)/3 * 2] + NN – 1.
- Novice High is a range from [(A1-NN)/3 * 2] + NN to A1 – 1.
- Apprentice Low is a range from A1 to [(P1-A1)/3] + A1 – 1
- Apprentice Medium is a range from [(P1-A1)/3] + A1 to [(P1-A1)/3 * 2] + A1 – 1
- Apprentice Medium is a range from [(P1-A1)/3 * 2] + A1 to P1 – 1.

Example: if the Cut Scores are set so that Apprentice starts at 129, Proficient at 212 and Distinguished at 276 on a scale from 0 to 300.

NN=0
NM=1 to 85
NH=86 to 128
AL= 129 to 156
AM=157 to 183
AH = 184 to 211
Proficient = 212 to 275
Distinguished = 276 to 300

Note: the results from the computation of the equations are all rounded to the reporting level of accuracy

John Wickizer

Kentucky Department of Education
Division of Assessment and Accountability
Office: (502) 564-9853
Fax: (502) 564-7749

Appendix B: Documentation of Individual Student Report Messages

NOTE: Since the receipt of this documentation, Novice Non-Performance has become Novice Low.
NOTE: April 2009- Arts and Humanities, Practical Living, and the Writing Portfolio are no longer reported.

From: Ervin, Roger – Office of Assessment & Accountability [mailto:Roger.Ervin@education.ky.gov]
Sent: Friday, February 29, 2008 2:17 PM
To: Marcia Tibbetts
Cc: Sims, Rhonda – Assessment Support; Shuttleworth, Phyllis – Assessment Support; Hill, Kevin – Assessment Implementation; Wickizer, John – Assessment Implementation
Subject: CATS 2008 – Individual Student Reports – Messages

Marcia,
Attached are the revised performance level messages for 2008 that appear on the Individual Student Report (Parent Report). The changes are very minor, thus tracking is on to assist the programmers with the changes.
Roger

Roger W. Ervin
Kentucky Department of Education
Office of Assessment and Accountability
500 Mero Street, C.P.T., 18th floor
Frankfort, KY 40601
Telephone: 502-564-2256
Fax: 502-564-7749
email: roger.ervin@education.ky.gov

On-demand Writing (grades 5, 8 and 12)

Your Performance Level is Distinguished. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Proficient. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the low range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the low range of this performance level. Low performance can include attempted or blank responses to test questions. A proficient scale score for this subject area begins at ZZZ9.

Not tested students include students with approved exemptions, blank or non scoreable test booklets.

Analysis and Reporting Decision Rules
Kentucky Core Content Test (KCCT) Spring 10-11 Administration

This document details rules for analysis and reporting. The final student level data set used for analysis and reporting is described in the "Data Processing Specifications." This document is considered a draft until the Kentucky Department of Education (KDE) signs off. If there are rules that need to be added or modified after said sign-off, KDE sign off will be obtained for each rule. Details of these additions and modifications will be in the Addendum section.

I. General Information

A. *Contract Number*

The reporting contract number is 138651

B. *Tests administered:*

Grade	Subject	Test items used for Scaling
03	Mathematics	Common, Matrix
	Reading	Common, Matrix
04	Mathematics	Common, Matrix
	Reading	Common, Matrix
	Science	Common, Matrix
05	Mathematics	Common, Matrix
	Reading	Common, Matrix
	Social Studies	Common, Matrix
	On-Demand Writing	Common, Matrix
06	Mathematics	Common, Matrix
	Reading	Common, Matrix
07	Mathematics	Common, Matrix
	Reading	Common, Matrix
	Science	Common, Matrix
08	Mathematics	Common, Matrix
	Reading	Common, Matrix
	Social Studies	Common, Matrix
	On-Demand Writing	Common, Matrix
10	Reading	Common, Matrix
11	Mathematics	Common, Matrix
	Science	Common, Matrix
	Social Studies	Common, Matrix

1. Kentucky Core Academic Standards (KCAS):
   a. Math and Reading in Grades 03-08 have a separate field test session labeled KCAS, referred to as Section D in this document.
   b. The items in Section D are considered embedded field test items and are excluded from scaling.
   c. Since Section D is administered separately, the item numbering restarts at position 01. For all data files that contain item positions in the field names, the section letter will prefix the position number for Section D items only, ie: "matMCD01" representing the first KCAS Math MC item in Section D.

C. *Reports Produced*:

1. KCCT Individual Student Report (ISR)
    a. Produced for KCCT assessed grades: 03-08, 10, and 11.
    b. Only produced for students assessed via the KCCT.
    c. Printed and shipped.

2. School Student Listing Report – *(by grade)*
    a. Produced for KCCT assessed grades: 03-08, 10 and 11.
    b. Includes both KCCT and Alternately Assessed Students.
    c. Only includes subjects assessed via the KCCT at the listed grade.
    d. Posted online only.

D. *Files Produced:*

1. Online Data Verification System (ODVS)
    a. Accommodation Kit Request Data
        i. Number of accommodation kits requested, by grade and school
        ii. Number of accommodation kits requested statewide, by grade
        iii. Student Level Data Export
    b. Label Data Student Level Data Export
    c. Preliminary Roster Data Student Level Data Export
    d. Roster Data Student Level Data Export for Exemptions
2. Raw Scanned Student Data – (*by grade*)
3. Raw Student Data – (*by grade*)
4. Student Results – (*by grade*)
5. Scale Score Lookup – (*by grade*)
6. Student Listing Data Export – (*by grade*)
    i. School
    ii. District
7. State Testing Summary

E. *Rescore Requests*

1. Scheduled Rescore Request dates will be agreed upon for each administration by KDE and MP.
2. A Rescore Request File Layout provided by MP will be approved by KDE and used when providing all rescore request files.
3. Rescore requests are submitted to KDE after results are released. KDE will compile the requests into one document and provide them to MP by the agreed upon rescore request hand-off date for processing.
4. All rescore requests submitted to KDE after the scheduled hand-off date will be compiled by KDE and submitted to MP at the next scheduled rescore request hand off date for processing.
5. The following steps outline the rescore request procedure:
    a. KDE will compile all rescore requests.
    b. KDE will submit rescore requests using the approved file layout to MP Program Management.
    c. Program Management will provide the rescore requests to DP.
    d. DP will request the rescores from scoring.
    e. DP will process as follows:
        i. Record the original and rescore results.
        ii. Use the higher of the two scores for each OR item.
        iii. For each ODW item, use the higher of the two scores for each subdomain.
    f. Data Analysis will calculate the rescore results.
    g. For students whose scores are changed:
        i. The student level data files will be rerun.
        ii. A new ISR will be produced if the rescore is within one year of the original test administration.
        iii. Aggregate data will <u>not</u> be updated. This includes aggregate data appearing on the student reports.
    h. Rescore Request Deliverables:
        i. Updated Individual Student Reports.
        ii. Raw Reporting Student Data files (impacted grades only, by grade).
        iii. Student Results Data files (impacted grades only, by grade).

F. *School Type:*

SchType (KDE)	Source (ICore Subtype)	Description (KDE)	Included in aggregate data School	District	State
A1	1	A school under administrative control of a principal or head teacher and eligible to establish a school-based decision-making council. An A-1 school is not a program operated by, or part of, another school.	Yes	Yes	Yes
A2	14	A district-operated, totally vocational/ technical program whose membership is counted in other schools.	Yes	Yes	Yes
A3	15	A district-operated, totally special education program.	Yes	Yes	Yes
A5	17	An alternative program in a district-operated and district-controlled facility, with no definable attendance boundaries, that is designed to provide services to at-risk populations with unique needs. Its population composition and characteristics change frequently and are controlled by the local school district's student assignment practices and policies.	Yes	Yes	Yes
A6	18	A district-operated instructional program in a non-district-operated institution or school.	Yes	Yes	Yes
B1	9	Academy for Mathematics and Science at Western Kentucky University (WKU)	Yes	Yes	Yes
D1	19	State KDE operated.	Yes	Yes	Yes

Note: Schools designated by Kentucky as A4 (District operated, totally pre-school program) or F1 (Federally operated general school) are not included.

G. *Alternate Assessment*

1. Data Source

   Alternate Assessment data for grades 03-08, 10, 11, and 12 are stored in the Kentucky 10-11 AA database. See *Kentucky1011AltDecisionRules.doc* for details on data sources and processing.

2. Students are either assessed via the KCCT or the Alternate Assessment, not both, determined in the following manner:

   a. All students included in the final Alternate Assessment Results data from KDE are considered participants via the Alternate Assessment.

   b. All students submitting only a KCCT response booklet are considered participants via the KCCT.

   c. If a student is included in the Alternate Assessment data from KDE and also submits a KCCT response booklet (with or without complete responses), the KCCT book is suppressed from the data and the student is considered a participant via the Alternate Assessment.

   Further details on the process and rules for obtaining the final student data set for the KCCT are outlined in the Data Processing Specifications document, *KY1011DPSpec.pdf*.

3. The Alt indicator collected via ODVS is used during label production and to aid student identification. The final determination to report a student as participating through the General Assessment or participating through the Alternate Assessment is dependent upon the source of the reported scores, not ODVS.

   For analysis pertaining to both KCCT and Alternately Assessed students in KCCT assessed grades: 03-08, 10, and 11, student level data sets are set together prior to analysis and stored in the KCCT database.

   i. Alternately Assessed students will be indicated by setting the Alt variable equal to “1”.

   ii. KCCT Assessed students will be indicated by setting the Alt variable equal to “0”.

   iii. Grade 12 students assessed via the Alternate Assessment will only be stored in the Alternate Assessment database since they are not included in any combined KCCT analysis or reports.

H. *Other Information*

1. The special education variable for use in technical report data is set equal to “1” (SpecialEd=”1”) if the student has an IEP or Plan 504.
2. The economic disadvantage variable for use in technical report data is set equal to “1” if the student is Free or Reduced Lunch Program (EconDis = “1” or “2”).
3. Accommodations
   a. KCCT students having tested with one or more Limited English Proficiency (LEP) or Disability Accommodation(s) are considered accommodated (Accom = “1”).
   b. All students assessed via the Alternate Assessment are considered accommodated (Accom = “1”).
4. Sending District and School
   a. Students in Grades 03-08, 10, and 11 have the school and district to which they are “accountable to” stored as their sending district and sending school.
   b. If no accountable (sending) district or school information is provided, or the student is unable to be linked to the student demographics data, the student will be made accountable to their testing district and school by setting the accountable (sending) district and school equal to the testing district and testing school prior to all analysis.
   c. TestSCH indicates the relationship between the student’s testing school and sending school, determined in the following manner:
      i. If the student’s testing district equals the student’s sending district and:
         - The testing school equals the sending school, then TestSch = “1”.
         - The testing school does not equal the sending school, and the sending school does not equal “000” then TestSch = “2”.
         - The testing school does not equal the sending school and the sending school is “000” then TestSch = “3”.
      ii. If the student’s testing district does not equal the sending district and:
         - The sending district does not equal “999” and the sending school does not equal “000” then TestSch = “4”.
         - The sending district does not equal “999” and the sending school code is “000” then TestSch = “5”.
         - The sending district is “999” and the sending school is “000” then TestSch = “6”.

II. Student Participation / Exclusions

A. *Test Attempt Rules*

Regardless of exemption status, all students included in the final KCCT student data set are considered participants (KCCTPartstatus = "A"), even if there is no evidence of an attempted response.

B. *Not Tested Reasons*

1. Valid reasons for exemption from the KCCT are:
   a. Foreign exchange student (KCCTExempt = 'F')
   b. Medical exemption (KCCTExempt = 'M')
   c. Expelled and not receiving services as provided for in KRS 158.150(2) (KCCTExempt = 'E')
   d. Limited English proficient student who is in the first year of enrollment in a U.S. school (KCCTExempt = 'L')
   e. Moved out of Kentucky public schools during testing window (KCCTExempt = 'V')
   f. Other (KCCTExempt = 'O')

2. Valid reasons for exemption from the Alternate Assessment Portfolio (AltPortfolioExempt), the Alternate Assessment Attainment Tasks (AltAttainmentExempt) and Transition Attainment Tasks are:
   a. Foreign exchange student
   b. Medical exemption
   c. Expelled and not receiving services as provided for in KRS 158.150(2)
   d. Limited English proficient student who is in the first year of enrollment in a U.S. school
   e. Moved out of Kentucky public schools during testing window (Attainment Task <u>only)</u>
   f. Enrolled in Kentucky Public Schools for less than 100 days combined this year (Portfolio <u>only)</u>
   g. Other

3. Exemption Data Source
   a. All exemptions except for "Medical" and "Other" are collected via ODVS.
   b. The Roster Data Student Level Data Export is sent to KDE prior to reporting, allowing for KDE to add "Medical" and "Other" exemptions to students, as well as make any other necessary changes to student information.

4. Impact of Exemption
    a. If a student is exempted from the KCCT (KCCTExempt ne “X”), they are exempted from all subjects assessed at their testing grade.
    b. An alternately assessed student can be exempted from the Alternate Assessment Attainment Tasks, Alternate Assessment Portfolio, or both.
    c. If a student is exempted from the Alternate Assessment Portfolio, they are exempted from Reading, Mathematics and Science portions of the Alternate Assessment, if those subjects are assessed at their testing grade via the KCCT.
    d. If a student is exempted from the Alternate Assessment Attainment Tasks, they are exempted from Social Studies and Writing portions of the Alternate Assessment, if those subjects are assessed at their testing grade via the KCCT, and subsequently exempted from the TAR where required.
    e. Scores for exempted students are reported as follows:

Exemption Impact on Reporting										
Exemption	**Raw Score**			**Scale Score/ Composite Score**			**Performance/ Accountability Level**			**Student Receives ISR**
	Data File	**ISR**	**Listing**	**Data File**	**ISR**	**Listing**	**Data File**	**ISR**	**Listing**	
KCCT	**Yes**	No	No	**Yes**	No	No	**Yes**	No	No	**Yes**[1]
Alternate Portfolio	**Yes**	No	No	No	No	No	**Yes**	No	No	**Yes**[2]
Alternate Attainment Tasks	**Yes**	No	No	No	No	No	**Yes**	No	No	**Yes**[2]

[1] KCCT ISR
[2] Alternate Assessment Individual Student Report

III. Calculations

A. *KCCT: Assignment of Scale Score, Scale Score Probable Range, Performance Level and Accountability Level*

1. Scale Form creation

The scaling is accomplished by defining the unique set of test forms for each grade/subject. A test form may contain matrix items which are repeated across several but not all test forms. In order to determine the unique test forms, the positional test items (i.e. Form 01, position 02) are translated into the unique item numbers. This is accomplished as follows:

a. Use the IREF (item information) dataset to identify the unique item number assigned to each form/ position.

b. Order the items by:

   i. Type – multiple choice, short answer, constructed response, extended response, writing prompt.

   ii. Form – common, then by ascending form number.

   iii. Position.

c. Translate the positional test items into new variables named by the unique item numbers. For example, if forms 01 and 02 have the same itemnumber (1234) at position 02, then a new variable is created which contains data for only itemnumber 1234. In this example, the new variable contains the item response for forms 01 and 02 at position 02 (either multiple choice or an open response score) and the data are missing for all other forms of the test.

d. If the new item number variable contains an 'X' (item is not included in scaling) then set the item number to '.'. This removes the item number from the test form. Set the Exception field to '1' to indicate this is not an original test form.

e. Once all of the new item number variables are created, compress all of the variables together into one field in the order defined in step (1.b.) to create the test for the student.

f. Select the distinct set of tests from the student data and order them by the exception field and the descending test field.

g. Check to see if the test has already been assigned a scale form by looking in the tblScaleForm table. If the test exists then assign the existing scale form. Otherwise assign the next available scale form number. All scale form numbering starts at 01 and increments by 1 up to 99.

2. Scale Score, Scale Score Probable Range and Performance Level

   Psychometrics provides Data Analysis with a lookup table for each scale form associated with a grade/subject. The lookup table contains the raw score, resulting scale score, scale score probable range and performance level.

3. Accountability Level

   a. Accountability Level coding is done using an algorithm provided by KDE and the student's scale score. The algorithm is described in detail below. Please refer to Appendix A for the original email communication from John Wickizer dated April 20, 2007.

      i. For Reading, Mathematics, Science, Social Studies and On-Demand Writing, the Novice Performance Level is broken into Novice Low, Novice Medium and Novice High and the Apprentice Performance Level is broken into Apprentice Low, Apprentice Medium and Apprentice High.

      ii. Students are assigned to their respective Accountability Level based upon the *Performance and Accountability Level* table (see below, section III.A.4.b).

4. Lexile and Quantile Scores

   a. Metametrics will provide a Scale Score to Lexile /Quantile Score Lookup by grade for Reading and Mathematics (respectively). The lookup will contain one report-ready Lexile score for each attainable scale score in Reading, and one report-ready Quantile score for each attainable scale score in Mathematics.

   b. Measured Progress will assign these scores at the student level based on grade, subject, and scale score. These scores will be reported as-is on the Individual Student Reports and the Student Listing Reports.

5. Performance and Accountability Level Coding Table:

Performance Level			**Accountability Level**			
Code	**ISR Text**	**Definition**	**Code**	**Listing Text**	**Level**	**Definition**
1	Novice	Earned a scale score greater than or equal to the lowest possible scale score and less than the first cut score.	NL	N-low	Novice Low	Earned scale score X00.
			NM	N-med	Novice Medium	Earned a scale score greater than or equal to X01 and less than or equal to X12.
			NH	N-high	Novice High	Earned a scale score greater than or equal to X13 and less than or equal to X19.
2	Apprentice	Earned a scale score equal to or greater than the first cut score and less than the second cut score.	AL	A-low	Apprentice Low	Earned a scale score greater than or equal to X20 and less than or equal to X26.
			AM	A-med	Apprentice Medium	Earned a scale score greater than or equal to X27 and less than or equal to X32.
			AH	A-high	Apprentice High	Earned a scale score greater than or equal to X33 and less than or equal to X39.
3	Proficient	Earned a scale score equal to or greater than the second cut score and less than the third cut score.	P	P	Proficient	Accountability level is same as performance level.
4	Distinguished	Earned a scale score equal to or greater than the third cut score.	D	D	Distinguished	Accountability level is same as performance level.

B. *Writing Prompts (On-Demand Writing, Grades 5 & 8)*

1. Students have the option of responding to either prompt 1 or prompt 2. They do not respond to both. If a student responds to both prompts only the first prompt is scored.
2. All writing prompts are 100% double scored, resulting in 2 sets of final scores per prompt.
3. Writing prompts are scored across 3 dimensions:
    i. Content (C)
    ii. Structure (S)
    iii. Conventions (V)
4. The 3 dimensions are translated into 3 separate variables for each prompt, each equal to the sum of the 2 final scores at each dimension.
5. If one or more dimensions are considered not scorable, the prompt will be considered not scorable.
6. See *Prompt Score Field* tab within the *KCCT1011DPLayout.xls* file for detailed information on score locations.

C. *State Average Scale Score*

Students are excluded from the calculation of the State Average Scale Score if they were alternately assessed (Alt="1"), or exempted (KCCTExempt ne "X").

D. *School, District, and State Performance Level Distributions*

1. Students who participated via the KCCT (Alt="0") are excluded from the calculation of School, District and State Performance Level Distributions if they are exempt (KCCTExempt ne "X").
2. Student who participated via the Alternate Assessment (Alt="1") are excluded from the calculation of School, District and State Performance Level Distributions if they are exempt (AltAttainmentExempt ne "X" or AltPortfolioExempt ne "X"). The exemption which is evaluated is dependant upon which subject the distribution is being calculated for. (See Section II.B.4.)
3. Students are aggregated with their testing district and testing school.
4. Data are stored in tblPerfSummary.

E. *State Results for Approval of Equating Results*

1. Performance level distributions are calculated by grade for all subjects.
2. Students are excluded from the calculation of the State Results if they were alternately assessed (Alt="1") or exempted (KCCTExempt ne "X").
3. Data are stored in the Kentucky Historical database.

F. *Psychometric Analysis*

1. Only students participating via the KCCT and who are not exempt (KCCTExempt="X") are included in psychometric analysis.
2. An exclusion flag in the Student Results file will indicate, by subject, if a student was included in psychometric analysis. (Exclusion = "1" indicates a student was not included in psychometric analysis).
3. Weights
   a. Varying weights are applied to open response items to affect the percent of points they contribute to a student's raw score for a subject, as required by Kentucky Department of Education regulations.
      i. Open response items are not weighted for On-Demand Writing.
      ii. Open response items are weighted to contribute 33% of the raw score for all subjects assessed in Grade 3.
      iii. Open response items are weighted to contribute 50% of the raw score for all other grades/ subjects.

G. *Rounding Table*

Rounding Data		
Report	**Calculation**	**Rounded (to the nearest)**
Individual Student Report	State Average Scale Score	Whole value
	School, District, State Performance (Percentage of Students at Each Performance Level)	Whole value

IV. Report Specific Rules

A. *KCCT Individual Student Report (ISR – print only)*

1. All students assessed via the KCCT receive a KCCT ISR, regardless of any exemption status. Alternately assessed students will receive an Alternate Assessment ISR instead (see the *Kentucky1011AltDecisionRules.doc* for information pertaining to the Alternate Assessment ISR).
2. ISR's are sent to the testing school. The testing school's information is included on the report.
3. The student's grade is the grade associated with the assessment. For grade 3, print "End of Primary (Grade 3)". For all other grades, print the grade.
4. Incomplete Demographic Information:
   a. If a Date of Birth is null, "Information Not Provided" is printed on the ISR. Otherwise, the Date of Birth is printed from tblStuDemo, with no justification, suppression of blanks or additional formatting.

b. If a State ID (StudentID) is null, “Information Not Provided” is printed on the ISR. Otherwise, the student ID is printed from tblStuDemo, with no justification, suppression of blanks or additional formatting.

c. If a student’s first name, middle initial and last name are null, “Information Not Provided” is printed on the report. Otherwise, the name is printed from tblStuDemo, with no justification, suppression of blanks, or additional formatting.

5. The student performance level for each subject is displayed as the ISR Text from the *Performance and Achievement Level Coding* table (See Section III.A.4.b).

6. Exempted Students:

   a. The scale score and probable range of scores are suppressed.

   b. The performance level is “Not Tested”.

   c. The State Average Scale Score is reported.

   d. The Lexile and Quantile Scores are each “No Score”.

   e. No performance level will be marked in the comparison of student, school, and district performances.

7. Description of the Student’s Results:

   a. If the student is exempt (KCCTExempt ne “X”) the text “Not tested students include students with approved exemptions or for whom test materials were not returned.” Will be inserted to the right of the appropriate subject heading(s).

   b. For all other subject and performance level combinations, the student’s performance level for the subject will be inserted into the text, “Your Performance Level is <insert>.”

   c. For Reading, Mathematics, Science, Social Studies and On-Demand Writing, if the student receives Novice as their performance level for the subject and Novice Low as their accountability level, the text “You scored in the low range of this performance level. Low performance can include attempted or blank responses to test questions.” will appear on the report.

   d. For Reading, Mathematics, Science, Social Studies and On-Demand Writing, if the student receives Novice or Apprentice as their performance level for the subject and their Accountability is not Novice Low, the student’s accountability level will be used to lookup the value (high, medium, or low) inserted within the text, “You scored in the <insert> range of this performance level.”

   e. Otherwise, the lowest scale score for the Proficient performance level for the grade and subject will be inserted after the text, “A proficient scale score for this subject area begins at <insert>.”

8. The Lexile and Quantile informational footnotes (text provided by KDE) will always appear at the bottom of the report, regardless of the student’s performance or any exemption status.

9. File Naming Convention:

Report	Print File Naming Convention
Student Report – School Copy	KY 1011 Spring SR School GG [*xxxxxx-yyyyyy*].pdf
Student Report – Parent Copy	KY 1011 Spring SR Parent GG [*xxxxxx-yyyyyy*].pdf

xxxxxx = first district and school code in the file.

yyyyyy= last district and school code in the file.

B. *School Student Listing Report (web only)*

1. Includes students from the KCCT and Alternate Assessments, regardless of any exemption status in KCCT assessed grades 03-08, 10, and 11.
2. The student's grade is the grade level associated with the assessment. For grade 3, print "End of Primary (Grade 3)". For all others, just print the grade.
3. Accountable to the School

   If a student's testing school and accountable school are different, the student will appear on the school listing for both the school they tested at and the school they are accountable to.
4. Accountable to the District
   a. If a student's accountable school code is "000" and the first three digits of the accountable district code are not "999" the student is accountable only to the district and not to a school. A School Student Listing Report is produced for districts that have students accountable only to them.
   b. The student will also appear on the School Student Listing Report for the school they tested at.
5. Accountable to the State
   a. If a student's accountable school code is "000" and the first three digits of the accountable district code are "999" the student is accountable only to the state and not to a district or a school. A School Student Listing Report is produced for the state if there are students accountable to the state.
   b. The student will also appear on the School Student Listing Report for the school they tested at.
6. Student Accountability Status
   a. Participated and accountable at this school:
      i. Defined as having a testing district code and an accountable district code equal to the listing district code, and a testing school code and accountable school code equal to the listing school code.
      ii. The Student Status will be blank.
      iii. The Accountable/Tested School column will be blank.

b. Participated at another school, accountable to this school:

   i. Defined as having an accountable district and school code equal to the listing district and school code, and a testing school code that is not equal to the listing school code.

   ii. The Student Status will be displayed as “AN”.

   iii. The Accountable/Tested School column will display the testing school code.

c. Participated at this school, accountable to another school:

   i. Defined as having a testing district code equal to the listing district code and a testing school code equal to the listing school code and the accountable district and school code are not blank and the accountable school code is not equal to the testing school code.

   ii. The Student Status will be displayed as “NA”.

   iii. The Accountable/Tested School column will display the accountable school code.

7. The performance level displayed is the Accountability Level Listing Text from *Performance and Achievement Level Coding* table (See Section III.A.3.b) for each subject.

8. Alternately Assessed Students (Alt = “1”)

   a. The text “Yes” will appear in the Alternate Assessment column.

   b. The Scale Score will be blank.

   c. The Lexile and/ or Quantile Score will be blank.

10. Accommodated Students (Accom = “1”)

    The text “Yes” will appear in the Testing Accommodations column.

11. Exempt Students

    a. If a student is Exempt from the KCCT (KCCTExempt ne “X”) the scale score will be blank and “EXEMPTED” will be displayed under the performance level for each subject.

    b. The Lexile and / or Quantile Score will be blank.

    c. If the student is exempted from the Alternate Assessment Portfolio (AltPortfolioExempt ne “X”), the scale score will be blank and the text “EXEMPTED” will appear under the performance level for Reading, Mathematics and Science, if those subjects were tested via the KCCT at the testing grade.

    d. If the student is exempted from the Alternate Assessment Attainment Tasks (AltAttainmentExempt ne “X”), the scale score will be blank and the text “EXEMPTED” will appear under the performance level for Social Studies and Writing, if those subjects were tested via the KCCT at the testing grade.

12. The Number of Students (by Assessment Method)

    a. The following student counts are calculated by method of assessment (KCCT, Alternate Assessment, Total) and Student Accountability Status in relation to the listed school or district:

        i. The number of students who participated via the KCCT is equal to the number of students who were not alternately assessed (Alt="0"), including exempted students, broken out by Student Accountability Status.

        ii. The number of students who participated via the Alternate Assessment is equal to the number of students who were alternately assessed (Alt="1") including exempted students, broken out by Student Accountability Status.

        iii. The total number of students is calculated by summing the number of students that participated via the KCCT and via the Alternate Assessment for each Student Accountability Status, including exempted students.

    b. Data are stored in tblSummary.

13. The Number of Students (by Overall Accountability Status)

    a. The following student counts are calculated in relation to the listed school:

        i. The number of students "Accountable" is equal to the total number of students assessed (via the KCCT or the Alternate Assessment) that have an accountable district and accountable school code equal to the listed district and school code, regardless of their testing school code. This includes exempted students.

        ii. The number of students "Not Accountable" is equal to the number of students assessed (via the KCCT or the Alternate Assessment) that have a testing district and school code equal to the listed district and school, but have a accountable school code that is different than the listed school code (Accountability Status = "AN"). This includes exempted students.

    b. Data are stored in tblSummary.

14. Exempt Students (by Assessment Method)

    a. Students are counted as "Exempt from Accountability at This School" if both of the following conditions are true:

        i. They have a valid exemption status as outlined in Section II.B "Not Tested Reasons".

        ii. They have an accountable school and district code equal to the listed school and district code.

    b. Student Exemptions for the Alternate Assessment Attainment Task will only be computed for grades that contain at least one KCCT subject that is alternately assessed through the Alternate Assessment Attainment Task (Social Studies, Writing). Otherwise, the Attainment Task Exemptions will be set to 0.

c. Data are stored in tblExSummary.

15. Students are listed in alphabetical order by last name, first name and middle initial. If the student's last name or first name is missing, they are included at the top of the listing report.

V. Data File Rules

A. *Online Data Verification System (ODVS)*

Exports from the Online Data Verification System are produced when ODVS is closed for the following phases: to order special forms, for label production, and at the end of the period to update student information after testing for reporting.

1. *Accommodation Kit Ordering Data*

   a. ODVS Data Export for KDE will contain all student records, including active, inactive, and off-grade students.

   b. School Accommodation Kit Counts:

      i. General Assessment counts only include students in grades 03-08, 10 and 11. Alternate Assessment counts only include students in grades 03-08, 10-12.

      ii. Exclude all inactive student records (Active = "0") from all counts.

      iii. Non-A1 Schools:

         – Do not set enrollment counts for Non-A1 schools in 10-11. Only data that has been submitted via ODVS will be counted.

         – KDE School (code "999 000") and Marcia Independent (code "888-121") should be included in counts if data exists in ODVS. If data does not exist in ODVS, it will not be counted. Do not set enrollment.

   c. State Accommodation Kit Counts:

      i. The State level counts are based on the final School Level counts, including Marcia Independent and KDE School, if they existed.

2. *Label Data*

   a. ODVS Data will be exported to KDE containing all student records.

   b. KDE will make necessary updates to the student demographics data and return one complete file containing both KCCT and Alternate Assessment student records prior to label production.

   c. Labels will be produced for all active KCCT students (Alt = "0") in grades 03-08, 10 and 11, based on the final data returned by KDE. All records indicated as Alt = "1" or that are still off-grade (including grade 09 and grade 12) will be excluded from label production.

   d. All student records (including Alt, Off-grade, inactive) in the file returned by KDE will be loaded into ODVS for the roster phase.

3. *Preliminary Roster Data*

   a. ODVS Data Export will contain all records for both KCCT and Alternate Assessment students (active and inactive).

   b. This file is for informational purposes only for KDE to determine if schools or districts have not yet made necessary updates in ODVS prior to the close of ODVS roster window for field updates.

4. *Roster Data for Exemptions*

   a. ODVS Data Export will contain all records for both KCCT and Alternate Assessment students (active and inactive) at the close of the Roster Phase.

   b. KDE will apply necessary "Medical" and "Other" exemptions for KCCT students prior to returning the file to MP as the final KCCT Reporting Student Demographics file. The Alt indicator in this data will be ignored. All records in this file (including those indicated as Alt = "1") will only be used when linked to KCCT student response booklets. Only records marked as Active will be used.

   c. KDE will provide the final reporting student demographics for alternate assessment students (updated as needed, from the ODVS Roster Data) along with the Alternate Assessment Results to MP according to the agreed upon layouts.

   d. See the Data Processing Specifications document *KY1011DPSpec.pdf* for details on linking student response booklets to the final Student Demographics File.

B. *Raw Scanned Student Data*

1. This export is produced prior to the receipt of OR scores, the start of data clean up, and before the student response booklets have been officially linked to ODVS data.

2. The export will contain the following raw information meant only to assist KDE in determining student participation in the KCCT vs. the Alternate Assessment:

   a. All bubbled data for use in student identification from the KCCT Student Response Booklets.

   b. If a label exists, the distinct label ID will be used to also provide the corresponding student information from ODVS.

   c. A subject specific indicator of whether or not at least 1 multiple choice item was attempted in the SRB.

3. This file will not contain any student responses or results.

4. This data will not have student identification discrepancies or duplicate response booklets resolution completed, or any other processing rules that are applied prior to obtaining the final KCCT data set.

5. Refer to the layout *KY1011SScanDataFileLayout.xls* for details.

C. *Raw Student Data*

1. All rules associated with the creation of the data elements from the raw data file are documented in the Data Processing Specifications document (*KY1011DPSpec.pdf*).
2. Alternate assessment students are not included.
3. Produced for KCCT assessed grades only: 03-08, 10, and 11.
4. All students will have accountable (sending) district and school codes provided, even if it is the same as their testing district and school codes.
5. The subjects will appear in test administration order (as applicable by grade):

   Reading, Math, Science, Social Studies, On-Demand Writing

D. *Student Results*

1. All rules outlined above that impact the student demographic table, the student score table, or the student item table will also apply to the Student Results File.
2. Alternate assessment students are not included.
3. Incorrect responses of A, B, C, D will be translated to 1, 2, 3, 4, respectively. Correct responses will be translated from "+" to the key.
4. Produced for KCCT assessed grades only: 03-08, 10, and 11.
5. All students will have accountable (sending) district and school codes provided, even if they are they same as the testing district and school codes.
6. Subjects will appear in test administration order (as applicable by grade):

   Reading, Math, Science, Social Studies, On-Demand Writing

E. *Scale Score Lookup*

1. All rules outlined above that impact the Scale Score Lookup table will also apply to the Scale Score Lookup file.
2. Produced for KCCT assessed grades only: 03-08, 10, and 11.

F. *School Student Listing Data Export*

1. All rules outlined above that impact the Student Listing tables will also apply to the Student Listing Data Export file.
2. Alternate assessment students are included.
3. Produced for KCCT assessed grades only: 03-08, 10, and 11.
4. All students will have both their testing school (TestSch) and Accountable school (AcctSch) information provided, even if they are the same.
5. Subjects will appear in test administration order (as applicable by grade):

   Reading, Math, Science, Social Studies, On-Demand Writing

G. *District Student Listing Data Export*

1. All rules outlined above that impact the School Student Listing Data Export files will also apply to the District Student Listing Data Export files with the exception of the Student Status, which will be based on the District Student Status definitions below.
2. Student Status (in relation to the listed district)
   a. Participated at the listed district and accountable to the listed district (AT) is defined as having a testing district code and an accountable district code equal to the listed district code.
   b. Participated at the listed district and accountable to another district (NA) is defined as having a testing district code equal to the listed district code and an accountable district code not equal to the listing district.
   c. Participated at another district and accountable to the listed district (AN) is defined as having an accountable district code equal to the listed district code and a testing district code not equal to the listed district code.
3. All students will have both their testing school code (TestSch) and Accountable school code (AcctSch) information provided, even when they are the same.
4. Subjects will appear in test administration order (as applicable by grade):

   Reading, Math, Science, Social Studies, On-Demand Writing

H. *State Testing Summary*

This file will contain the achievement level distribution of the total number of students assessed via the KCCT and Alternate Assessment by grade.

I. *Data File Table*

File	Layout	Data File Naming Convention	File Type
Special Forms Summary, State Level	KCCT1011SAccommodationKitsFileLayout.xls	CountAccommodationKitsSTA	Excel
Special Forms Summary, School Level	KCCT1011SAccommodationKitsFileLayout.xls	CountAccommodationKitsSCH	Excel
ODVS – Special Forms	KCCT1011SODVSFileLayout.xls	KCCT1011SODVSExport_AccKits	SAS dataset
ODVS– Label	KCCT1011SODVSFileLayout.xls	KCCT1011SODVSExport_Label	SAS dataset
ODVS– Preliminary Roster	KCCT1011SODVSFileLayout.xls	KCCT1011SODVSExport_PrelimRoster	SAS dataset
ODVS– Roster	KCCT1011SODVSFileLayout.xls	KCCT1011SODVSExport_Exemptions	SAS dataset
Raw Scanned Data	KCCT1011SScanDataFileLayout.xls	ScannedStuDataGXX	SAS dataset
Raw Student Data	KCCT1011SDPLayout.xls	RawStuDataGXX	SAS dataset
Student Results	KCCT1011sStudentResultsFileLayout.xls	StuResultsGXX	SAS dataset
Student Results	KCCT1011sStudentResultsFileLayout.xls	StuResultsGXX	CSV
Scale Score Lookup	KCCT1011sScaleScoreLookUpLayout.xls	ScaleScoreLookupGXX	SAS dataset
Scale Score Lookup	KCCT1011SscaleScoreLookUpLayout.xls	ScaleScoreLookupGXX	CSV
School Student Listing Data Export	KCCT1011SSchoolSliceFileLayout.xls	KCCT1011SGXXSchYYYZZZListing	Excel, CSV
District Student Listing Data Export	KCCT1011SDistrictSliceFileLayout.xls	KCCT1011SGXXDisYYYListing	Excel, CSV

File	Layout	Data File Naming Convention	File Type
Testing Summary	N/A	KCCT1011STestingSummary	Excel

“XX” is equal to the assessed grade, “YYY” is equal to the testing district code and “ZZZ” is equal to the testing school code.

Appendix A: Documentation of Accountability Level Assignment

NOTE: Since the receipt of this documentation, Novice Non-Performance has become Novice Low.

From: Wickizer, John – Assessment Implementation [mailto:John.Wickizer@education.ky.gov]
Sent: Friday, April 20, 2007 2:16 PM
To: Kevin Haley
Cc: Marcia Tibbetts; Kelly Scanlon; Hill, Kevin – Assessment Implementation; Ervin, Roger – Office of Assessment & Accountability; Rogers, Pamela – Office of Assessment & Accountability; Tim Crockett
Subject: Cut Scores
Importance: High

Novice and Apprentice are both divided in 3 sublevels: Novice Non-performance (NN), Novice Medium (NM), Novice High (NH), Apprentice Low (AL), Apprentice Medium (AM) and Apprentice High (AH). The cut for each are assigned in the following method using the standard set values that are assigned to the start of the Apprentice (A1) and Proficient (P1) Performance Levels:

- Novice Non-performance is assigned the lowest Scaled Score.
- Novice Medium is a range from NN+1 to [(A1-NN)/3 * 2] + NN – 1.
- Novice High is a range from [(A1-NN)/3 * 2] + NN to A1 – 1.
- Apprentice Low is a range from A1 to [(P1-A1)/3] + A1 – 1
- Apprentice Medium is a range from [(P1-A1)/3] + A1 to [(P1-A1)/3 * 2] + A1 – 1
- Apprentice High is a range from [(P1-A1)/3 * 2] + A1 to P1 – 1.

Example: if the Cut Scores are set so that Apprentice starts at 129, Proficient at 212 and Distinguished at 276 on a scale from 0 to 300.

NN=0
NM=1 to 85
NH=86 to 128
AL= 129 to 156
AM=157 to 183
AH = 184 to 211
Proficient = 212 to 275
Distinguished = 276 to 300

Note: the results from the computation of the equations are all rounded to the reporting level of accuracy

John Wickizer
Kentucky Department of Education
Division of Assessment and Accountability
Office: (502) 564-9853
Fax: (502) 564-7749

Appendix B: Documentation of Individual Student Report Messages

NOTE: Since the receipt of this documentation, Novice Non-Performance has become Novice Low.
NOTE: April 2009- Arts and Humanities, Practical Living, and the Writing Portfolio are no longer reported.

From: Ervin, Roger – Office of Assessment & Accountability [mailto:Roger.Ervin@education.ky.gov]
Sent: Friday, February 29, 2008 2:17 PM
To: Marcia Tibbetts
Cc: Sims, Rhonda – Assessment Support; Shuttleworth, Phyllis – Assessment Support; Hill, Kevin –

Assessment Implementation; Wickizer, John – Assessment Implementation
Subject: CATS 2008 – Individual Student Reports – Messages

Marcia,
Attached are the revised performance level messages for 2008 that appear on the Individual Student Report (Parent Report). The changes are very minor, thus tracking is on to assist the programmers with the changes.
Roger

Roger W. Ervin
Kentucky Department of Education
Office of Assessment and Accountability
500 Mero Street, C.P.T., 18th floor
Frankfort, KY 40601
Telephone: 502-564-2256
Fax: 502-564-7749
email: roger.ervin@education.ky.gov

Attachment:

Reading, Mathematics, Science, Social Studies

Your Performance Level is Distinguished. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Proficient. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the low range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the low range of this performance level. Low performance can include attempted or blank responses to test questions. A proficient scale score for this subject area begins at ZZZ9.

Not tested students include students with approved exemptions, blank or non scoreable test booklets.

On-demand Writing (grades 5 and 8)

Your Performance Level is Distinguished. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Proficient. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Apprentice. You scored in the low range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the high range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the medium range of this performance level. A proficient scale score for this subject area begins at ZZZ9.

Your Performance Level is Novice. You scored in the low range of this performance level. Low performance can include attempted or blank responses to test questions. A proficient scale score for this subject area begins at ZZZ9.

Not tested students include students with approved exemptions, blank or non scoreable test booklets.