KENTUCKY PARAEDUCATOR ASSESSMENT

STUDY GUIDE

REVISED 2nd EDITION

KENTUCKY DEPARTMENT OF EDUCATION

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INSTRUCTIONS FOR
KENTUCKY PARAEDUCATOR ASSESSMENT STUDY GUIDE

This booklet is designed as a study guide for the *Kentucky Paraeducator Assessment* (KPA). It also will provide the applicant or existing paraeducator with information about the role of the paraeducator and strategies for assisting with student instruction in reading, writing, and mathematics. In addition, the Study Guide is designed as an initial step in a paraeducator's professional development and will provide strategies for working with teachers and students in the instructional setting.

Review of the guide will prepare you for taking the KPA. The KPA will cover material contained in the following sections of the KPA Study Guide: Literacy (Reading and Writing), Mathematics, Paraeducator Roles and Responsibilities, and Instructional Strategies. Information noted in the appendices also is covered in appropriate sections of the assessment.

INFORMATION ABOUT THE KENTUCKY PARAEDUCATOR ASSESSMENT

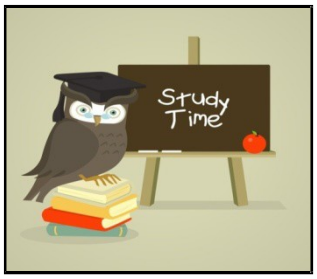
Check with the local school district to see where and when the KPA will be administered. Also, check to see if training will be provided using the KPA Study Guide. You should be prepared for the following when you go to take the KPA. A trained proctor will assist you.

1. You must provide a picture ID for the proctor to verify the identity of the test-taker.

2. The KPA will be administered at the local school district or adult education center. Contact the district or center in your area. For locations of adult education centers, see the Kentucky Adult Education Center website.

3. All questions are multiple-choice or true/false. There are three sections of the assessment: Literacy, Mathematics, and Instructional Strategies (including Paraeducator Roles & Responsibilities).

4. There are 20 questions in each section of the assessment for a total of 60 questions. You must correctly answer 48 out of 60 questions to pass the KPA.



5. Remember that there may be no undue assistance during the assessment – no talking, no calculator, no web browsing, no use of a phone, and no use of the Study Guide. You may have blank paper and pencil/pen for scratch work.

6. The test is not timed. However, the district or center may place consistent guidelines on time to complete the assessment.

7. If you do not correctly answer 48 out of 60 questions, then you may retake the entire assessment two additional times (for a total of three). There may be reasons for which a district makes an exception and allows the test-taker to take the test more than three times. The reason must be documented at the local level. The district or center may provide additional training if you do not pass the KPA

REQUIREMENTS FOR PARAEDUCATORS IN KENTUCKY

The *Elementary and Secondary Education Act (ESEA)* addresses educational qualifying factors for paraeducators. Specifically, all paraeducators working in a program supported with Title I, Part A funds must have a secondary school diploma or its recognized equivalent. **New employees must meet the ESEA educational requirement before they are hired to provide instructional support in a program supported with Title I, Part A funds.**

To provide consistency and ensure that all paraeducators are highly qualified, districts may choose to develop a policy in which **all** paraeducators with instructional duties are required to meet the ESEA educational requirement.

Paraeducators whose duties include instructional support and who work in a program supported with Title I, Part A funds must meet the ESEA educational requirement through **one** of the following:

1. completed two years of study at an institution of higher education ("Two years of study" means the equivalent of two years of full-time study as defined by the institution. For some institutions that may mean 12 credit hours per semester, requiring a total of 48 credit hours, while in others it may mean 15 credit hours a semester, requiring a total of 60 credit hours.); **or**

2. obtained an associate (or higher) degree; **or**

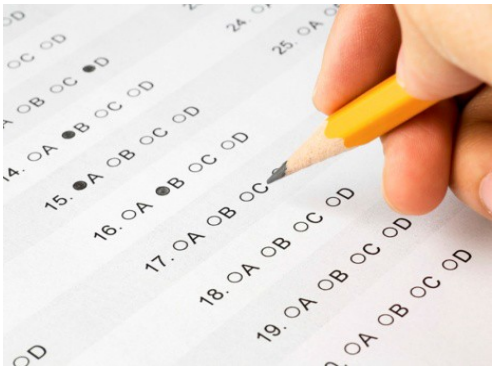
3. met a rigorous standard of quality and be able to demonstrate, through a formal state or local academic assessment, knowledge of and the ability to assist in the instruction of reading, writing, and mathematics (or as appropriate, reading readiness, writing readiness, and mathematics readiness).

Properly trained paraeducators play important roles in schools where they can magnify and reinforce instruction in the classroom. Unfortunately, studies often show that paraeducators are used to assist in teaching although their educational backgrounds may not qualify them for such responsibilities. ESEA includes higher standards to ensure that students who need the most help are assisted by highly qualified paraeducators. The law also requires that high-quality and ongoing professional development is provided for paraeducators working in programs supported by Title I, Part A funds. The training should enable paraeducators to assist children to meet the state's student academic achievement standards.

The Kentucky Department of Education (KDE) has chosen the *Kentucky Paraeducator Assessment* (KPA) as a means of assessing paraeducators who do not meet the higher education requirements stipulated in ESEA.

Candidates should check with the local school district in which they might be seeking employment to verify the acceptance of scores from the KPA or if the district is using a KDE- approved alternative assessment. A district may, at its discretion, determine that a paraeducator meets the ESEA educational requirement if the individual was previously determined to meet the requirement when employed by another district.

Content found throughout the Study Guide, including information noted in the appendices, may appear on the KPA.



INTRODUCTION TO ASSESSMENT CONTENT

Just as it is important to assess a paraeducator's abilities to instruct students in the areas of literacy (reading and writing), and mathematics, it is also important to assess his/her knowledge in these key areas of education. The KPA is designed to assess the paraeducator candidate's abilities to provide instruction as well as his/her knowledge of reading, writing, and mathematics.

LITERACY

Before beginning, take a moment to review a term frequently used by educators. **Literacy** is the ability to read, write, listen, speak, and observe to a competent level in all content areas. Thus, in instruction, all components should be integrated. The skills found in reading and writing are separated in this guide as a way to prepare you for the KPA.

READING

READING SKILLS – KNOWLEDGE

As a paraeducator, you should be able to understand, analyze and evaluate written messages.

The following reading skills may be evaluated in the KPA.

1. **Literal Comprehension**. Questions focus on the content of the text or passage that is directly stated or implied. Questions may be asked about the main idea of the passage, supporting details or ideas, the organization of the passage or statement, the use of language in the passage or statement, and the meanings of words presented in the passage or statement.

2. **Critical and Inferential Comprehension**. These questions will ask you to go beyond the explicit content to the implied meanings or underlying reasons for the statements. You will need to make careful judgments about the quality of the passage content. Questions may focus on strengths or weaknesses of the author's argument, relevance or appropriateness of the evidence the author presented to support the argument, the difference between fact and opinion, inferences that can be drawn from the passage or statement, the attitude of the author toward the subject matter discussed (tone), extensions or analysis of the ideas in the passage, or conclusions that can be drawn from the passage.

Guidelines for Preparing for Reading Comprehension and Analytical Reasoning

The following guidelines may assist you in preparing for reading comprehension and analytical reasoning questions. The questions contained in this section of the KPA are based solely on the passage provided and do not require a paraeducator to have outside knowledge of the material presented. The following techniques and strategies were adapted from Barron's *How to Prepare for the GRE – Graduate Record Examination* (1999).

1. **Read the passage**, and then **read the answers**. The following five-step technique might assist you in successfully completing the reading section:

    a. **Read as fast as you can with understanding.** Do not force yourself to be a speed-reader, but instead focus on the information the passage is relaying to you.

b. When you read opening sentences, try to **anticipate the passage's discussion points**. Whom or what is the author discussing? Look carefully at titles and subtitles of the passage for clues.

c. Attempt to identify the kind of writing utilized as you continue to read. **Identify techniques used, intended audience, and the author's feeling (if any) regarding the subject area.** Try to remember names, dates, and places for quick reference, along with where the author makes major points in the passage.

d. Your first reading of the passage should provide you the **general theme** of the passage as well as the location of its major subdivisions. You are strongly encouraged to refer back to the passage when answering the subsequent questions to verify your answer. It is not wise to rely upon your memory or knowledge gained from other sources to respond to the questions.

e. Now you are ready to read the first question. If you remember where to find the answer, go directly to that section of the passage. If you don't remember, **read the passage again**. It is not recommended that you jump around anticipating you will encounter the answer by chance. Decide on your answer, or, if you are indecisive about your choice, guess and proceed to the next question.

2. Learn to **recognize the major types of reading questions**. The following categories of reading questions may be encountered on the KPA.

Categories of Reading Questions

1. *Main Idea*
2. *Specific Details*
3. *Inference*
4. *Tone & Attitude*
5. *Technique*
6. *Context Clues*

a. **Main Idea.** Questions about the main idea assess your ability to find the central theme of the passage or to judge its significance.
Example of a question about the main idea:
The author's primary purpose in this passage from the Nutrition Action Health Letter is to
   A. calculate calories from fat.
   B. choose foods that promote good health.
   C. determine fat content of food.
   D. determine serving size.

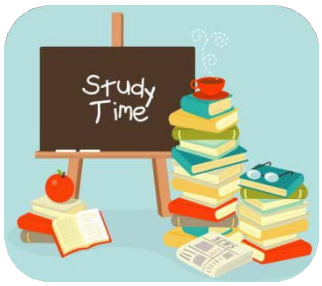
b. **Locating Specific Details.** Questions about locating specific details are designed to assess your ability to understand what the author explicitly states.
Example of a question about locating specific details:
According to the article, if a food contains 25% of the recommended daily value (DV), it is considered to be
   A. high in the nutrient.
   B. low in the nutrient.
   C. average in the nutrient.
   D. lacking in that nutrient.

c. **Drawing Inferences.** Inference questions assess your ability to look beyond what the author explicitly states in the passage and see what the author is implying in the passage.
Example of an inference question:
Under what conditions could one infer that a food would not be considered high in fat?
   A. if a food contains between 25% and 30% fat.
   B. if a food contains 55 fat grams.
   C. if a food contains 12% of the DV for fat.
   D. if a food provided 56% of its calories from fat.

d. **Tone and/or Attitude.** Questions about tone are designed to assess your ability to sense the author's or a character's emotional state.
Example of a question about tone:
When the British marched into Washington, D.C., the mood of the citizenry changed to that of
   A. confidence.
   B. panic.
   C. joy.
   D. frustration.

e. **Technique.** Questions about technique assess your ability to recognize a method or organization of an argument.
Example of a question about technique:
What purpose does repeating the phrase, "and Brutus is an honorable man," serve in Marc Antony's first speech?
   A. To raise doubt about whether Brutus is an honorable man.
   B. To emphasize that Marc Antony agrees with Brutus.
   C. To express Marc Antony's grief over Caesar's death.
   D. To praise Caesar's life and accomplishments.

f. **Determining the Meaning of Words from their Context.** Questions about context clues assess your ability to determine the meaning of an unfamiliar word from the words, phrases, or passages that come before and after the word and help to explain its full meaning.
Example of a question about using context clues:
In the beginning of the story the author writes, "the bear cuffed him…" What does the word cuffed mean?
   A. Bit
   B. Turned
   C. Hit
   D. Carried



3. **Check the opening and summary sentences** of each paragraph to **locate the main idea**. The opening summary sentences serve as indicators of the author's main idea. Generally, authors provide readers with a sentence that expresses the paragraph's main idea. Although the topic sentence may be located anywhere in the paragraph, it is typically located in the opening or closing sentence. However, in some instances the topic sentence may be implied.

   If you are unable to identify the topic sentence, use these two questions to guide you:
   a. "Who or what is this passage about?" The subject may be a person, place, thing, idea, a process, or something in motion.
   b. "What is the author trying to get across about this perspective?" This requires you to decide the most important thing the author is saying about the subject, and implies the subject is doing something or something is being done to the subject.

4. **Look for words that convey emotion, paint pictures, or express values** when determining questions of **tone, attitude, or mood**. When determining the tone, attitude and/or mood, look at the terms being used to describe the subject. Does the author use positive words or negative words to describe the subject? Remember, when we speak, our tone of voice conveys our emotion/mood. When we write, we must use descriptive phrases and images to inform the reader of our tone, attitudes, and mood.

6. **Spot key words** in the question and **scan the passage to find the key words or their synonyms** when answering questions about **specific details** in the passage. Authors will make statements to support their points when developing the main idea. When answering questions about supporting detail, you must find a word or group of words from the passage to support your answer choice. The use of phrases such as "according to the passage," or "according to the author," should help you to focus your attention on what the passage explicitly states.

   Questions regarding details of a passage often ask about a particular phrase or line. It might be helpful to use the following techniques:
   a. Search for key words in the answer choices. These will generally be nouns or verbs.
   b. Scan down the passage searching for these key words or their synonyms. Remember that the technique of scanning is similar to what you do when looking up someone's number in the phone book.
   c. Reread the sentence or passage when you locate the key word or its synonyms to determine if you have made the correct choice.

7. When you **make inferences**, remember to **base your answers on what the passage implies** and not what is explicitly stated. Inference questions require you to use your judgment and not rely upon direct statements made by the author. You must search for clues in the passage that may be used to derive your conclusion. Review the answer choices and eliminate those that obviously contradict what is stated or implied in the passage. When you make inferences, you must go beyond the obvious to look for logical implications.

8. **Search for context clues** when asked to give the **meaning of an unfamiliar word**. In reading comprehension, a question asking for the meaning of a word can usually be gotten from the word's context. This type of question is not meant to assess your general vocabulary, but rather your ability to extract meaning from the text. You must look for clues within the passage to determine the meaning of a word. An unfamiliar word contained in a part of a sentence may be defined or clarified in another part of the sentence.

9. **Pay close attention** to the presence of **signal words** in the question and in the argument. When reviewing the questions and passages, you should be aware of signal words that clarify the situation. Below are types and examples of typical signal words.

Cause and Effect Signal Words

Cause and effect signal words often indicate the conclusion of an argument. These words include:

- accordingly
- consequently
- hence
- therefore
- thus

Contrast Signal Words

Contrast signal words often indicate a reversal of thought within an argument or within the question asked. These words or phrases include:

- although
- but
- despite
- even though
- except
- however
- in contrast
- instead
- nevertheless
- not
- on the contrary
- on the other hand
- rather than
- unlike

Here is a shortened version of the guidelines to help you prepare for reading comprehension questions on the KPA. Try the tips out on the Sample Reading questions.

Quick Tips for Reading a Passage and Question

- **Read fast with understanding**
- **Anticipate discussion points**
- **Identify techniques, audience, and feelings**
- **Identify general theme**
- **Re-read as needed**

SAMPLE READING QUESTIONS

The following are sample test questions similar to those on the *Kentucky Paraeducator Assessment* (KPA). The passage and explanation are adapted from the *Pre-Professional Skills Test (PPST) Guide* (2002).

Lyndon Johnson's father once told him that he did not belong in politics unless he could walk into a roomful of people and tell immediately who was for him and who was against him. In fact, even the shrewd Johnson had not quite such occult power, but his liking for this story tells us something useful about him: he set much store by instinct. No wonder, then, that it would be to his instincts – honed in the Texas hill country, sharpened in a life of politics, confirmed in a long and respected congressional career – that he would often turn while in the White House.

This reliance on instinct enabled Johnson to put on the presidency like a suit of comfortable old clothes. John Kennedy, on the other hand, came to it with a historical, nearly theoretical view of what was required of a strong President – he knew exactly what Woodrow Wilson had said about the office and he had read Corwin and Neustadt. With eager confidence, Kennedy acquired a presidential suit off the rack and put on a little weight to make himself fit it.

1. In the passage, the author is primarily concerned with
   A. refuting an argument.
   B. listing facts.
   C. retelling a story.
   D. **making a comparison.**

Question 1 asked you to identify the author's **technique** or method. Since the author is comparing the approaches of Johnson and Kennedy in seeking the presidency, **Choice D** is the best answer.

2. Which of the following words, if substituted for the word occult in the first paragraph, would introduce the LEAST change in the meaning of the sentence?
   A. supernatural
   B. invisible
   C. persuasive
   D. subtle

> Question 2 asks you to identify the **meaning of a word** as it is used in the passage's content. Since the occult power referenced in the first paragraph is clearly not a power that people ordinarily have and can be best described as supernatural, **Choice A** is the best answer.

3. From reading this passage, it can be inferred that
   A. Lyndon Johnson was more studious than John Kennedy.
   B. John Kennedy was more studious than Lyndon Johnson.
   C. Lyndon Johnson often sought his father's advice.
   D. John Kennedy was a born natural leader.

> Question 3 asks you to **infer or draw a conclusion** from the passage. Since you infer that Kennedy was more studious than Johnson, **Choice B** is the best answer.

4. The purpose of this passage is to
   A. explain Lyndon Johnson's childhood.
   B. show that Kennedy was a stronger President than Johnson.
   C. persuade the reader to vote for John F. Kennedy.
   D. compare the leadership styles of two former Presidents: Lyndon Johnson and John Kennedy.

> Question 4 asks you to identify the **main idea** of the passage. Since the purpose is to compare the leadership styles, **Choice D** is the best answer.

5. According to the passage, Lyndon Johnson had a long career as a
   A. Congressman.
   B. Texas Ranger.
   C. father.
   D. writer.

> Question 5 asks you to locate key details in the passage. Since Johnson was a Congressman, **Choice A** is the best answer.

6. The overall tone of this passage is
   A. emotional.
   B. sarcastic.
   C. factual.
   D. biased.

> Question 6 is about the **tone/attitude** of the passage. Since the passage presents factual information, **Choice C** is the best answer.

WRITING

WRITING SKILLS – KNOWLEDGE

In the area of writing, paraeducators should be able to use correct grammar and punctuation and write messages that are clear and understandable. Paraeducators also should have the ability to revise and edit their writing products and the ability to create effective sentences that are varied in structure and length and are complete. Paraeducators should be able to use appropriate forms, styles, and conventions to communicate ideas and information to different audiences for different purposes.

Paraeducators should be able to use the following criteria from Kentucky's Core Content for Assessment 4.1 in their own writing:

1. **Purpose/Audience.** The writer establishes and maintains a focused purpose to communicate with an audience by
    - narrowing the topic to establish a focus;
    - analyzing and addressing the needs of the intended audience;
    - adhering to characteristics of the form;
    - employing a suitable tone; and
    - allowing voice to emerge when appropriate.
2. **Idea Development.** The writer develops and supports main ideas and deepens the audience's understanding by using
    - logical, justified, and suitable explanation;
    - relevant elaboration;
    - related connections and reflections; and
    - idea development strategies appropriate for the form.
3. **Organization.** The writer creates unity and coherence to accomplish the focused purpose by
    - engaging the audience and establishing a context for reading;
    - placing ideas and support in a meaningful order;
    - guiding the reader through the piece with transitions and transitional elements; and
    - providing effective closure.
4. **Sentences.** The writer creates effective sentences that are
    - varied in structure and length and
    - complete and correct.
5. **Language.** The writer demonstrates
    - effective word choice through strong verbs and nouns and concrete and/or sensory detail;
    - language appropriate to the content, purpose, and audience;
    - clear, concise use of language; and
    - correct usage/grammar such as the correct use the idiomatic expressions (fixed expressions with the non-literal meaning).

Writing Criteria from Core Content

1. *Purpose/Audience*
2. *Idea Development*
3. *Organization*
4. *Sentences*
5. *Language*
6. *Correctness*

6. **Correctness.** The writer demonstrates

- correct spelling;
- correct punctuation;
- correct capitalization; and
- appropriate documentation (e.g., citing authors or titles within the text, listing sources) of ideas and information from outside sources.

Guidelines for Preparing for Writing

1. The KPA is designed to assess a paraeducator's ability to recognize and use standard written English. The questions will assess the following areas:

   a. **Usage.** These questions will focus on your ability to recognize errors in verb tense, pronoun-antecedent agreement, parallel structure, subject-verb agreement, coordinator, subordination, punctuation, capitalization, and other conventions of standard written English. Some sentences will contain no error.

   b. **Sentence Correction.** These questions will require you to choose the best way to rewrite phrases or sentences. Many sentence correction questions present faults in the logic or structure of the sentence such as idiomatic expressions and would normally require rewriting. However, in the assessment, you are asked to select the best revision offered by reviewing the effectiveness and clarity of the expressions as well as correctness.

   c. **Writing Process.** These questions will focus on responding to a student's draft. You will choose the best way to improve the draft in the areas of purpose, audience, organization, and idea development.

2. When writing, you should understand the importance of complete sentences. This means that a complete thought is expressed. However, a sentence may contain several ideas, not just one. In this instance, you want to get the ideas to work together to form mature, colorful sentences that are of interest to the reader. Common errors in writing complete and effective sentences include fragments, comma splices, and run-on sentences. Listed below are each type, their definition, and an example:

   a. **Fragment.** A group of words used as a sentence although it lacks a subject, a verb, or some other essential component that causes it to be an incomplete thought.

      Example: The delicate, lacy colors of spring gradually.

      Corrected: The delicate, lacy colors of spring gradually covered the valley.

   b. **Comma splice or run-on sentence.** A mistake made when two independent clauses are spliced together with only a comma.

      Example: One of the players stands in front of the net and tries to keep the soccer ball from going in, he is called the goalie.

      Corrected: One of the players, called a goalie, stands in front of the net and tries to keep the soccer ball from going in.

      Corrections may be made using one of the following methods:

      1. Changing the comma to a period thereby making two complete sentences.
      2. Adding a coordinating conjunction.
      3. Changing the comma to a semicolon using the rule that each of the independent clauses could stand along as a separate sentence.
      4. Adding a needed word(s).

3. Most sentences contain several basic ideas that work together to form a complete thought. There are many possible ways to arrange or combine the ideas into one or more effective sentences. The following are some of the methods to effectively combine sentences:

    a. Use a series to combine three or more similar ideas.

    Example: The tornado struck the small town causing much damage, numerous serious injuries, and several deaths.

    b. Use a relative pronoun to introduce the subordinate ideas.

    Example: The tornado, which was completely unexpected, swept through the small town.

    c. Use an introductory phrase or clause for the less important ideas.

    Example: Because the tornado was completely unexpected, it caused a great deal of damage, numerous serious injuries, and several deaths.

Additional Study Tips for Literacy (Reading and Writing)

The following guidelines, adapted from Barron's *How to Prepare for the GRE – Graduate Record Examination* (1999), may be helpful when preparing for the KPA.

- Read the sentence and **think of a word that makes sense** before you review the options listed. This technique allows you to find the word that best completes the sentence in thought and style. Once you determine a word that makes a logical sentence in the context, check the options. If your word is among the choices, then select it. If your word is not an option, look for a synonym of that word and select that option.

  Using this technique allows you to summarize the sentence as a whole without becoming distracted by misleading answers. You are able to focus on spotting the key words or phrases in the body of the sentence and use your writing experience to arrive at the answer.

- Before making your final choice, **review all the possible answers**. It is highly recommended that you review all the possible choices before you make a final decision. You are searching for the word that best fits the meaning of the whole sentence.

- **Watch for signal words** that link one sentence part to another. Writers use transitions to logically link their ideas. These transitional words are signals or clues that will assist you in determining what the sentence means.

- To determine the meanings of unfamiliar words, **use your knowledge of word parts and parts of speech**. Parts of speech are further defined and illustrated in Appendix A.

- If you find a word used by the author that is unfamiliar to you, or if an answer choice is unknown to you, the following two (2) approaches may be beneficial.

    - **Breaking the word down** into its component parts to determine if they provide a clue to its meaning.

    - **Change the unfamiliar word** from one part of speech to another.

- **Break down complex sentences** into similar components.

- If a sentence contains a metaphor, **determine if the metaphor controls the writer's choice of words**.

- Review Appendix A for key terms in literacy (reading and writing).

Here is a shortened version of the study tips to help you prepare for writing questions on the KPA. Try the hints out on the Sample Writing Question.

Hints for Reading Questions and Choosing Answers	
Reading the Question… • Watch for signal words that link ideas • Use knowledge of parts of speech to determine meaning • Break down complex sentences into simpler components	**Choosing the Answer…** • Think of a response that makes sense • Review all possible answers to find a response that best fits

SAMPLE WRITING QUESTION

The following is a sample test question similar to those on the KPA. The question and explanation are adapted from the *PPST Guide* (2002). If the original is correct, choose answer *A* (no change). The answer should be clear and correct, without being awkward, ambiguous, or redundant.

1. What is the best way to state the underlined phrase in the following sentence? Martin Luther King, Jr., <u>spoke passionately</u> for the poor of all races.

A. no change
B. had spoken out passionate
C. spoke out passionate
D. has spoke out passionately
E. did speak out passionate

This sentence presents no problem of structure or logic. The verb tense is correct and the use of the adverb passionately is also correct in this context. Therefore, the best answer is **Choice A**.

MATHEMATICS

MATHEMATICS SKILLS – KNOWLEDGE

The paraeducator should be able to perform mathematical operations with whole numbers, fractions, decimals, and percents; calculate averages, proportions, simple ratios, and rates; be able to read charts, graphs, and diagrams; solve simple numeric and algebraic equations; use mathematical logic to solve problems involving patterns and sequences; and apply mathematical rules such as divisibility, orders of operation, and the distributive property. These are common concepts from elementary through the first year of high school mathematics.

There are several categories of mathematical questions that are addressed in the KPA. However, a single question may fit into more than one category. The categories and areas of potential assessment include the following:

1. **Number Properties and Operations**
   a. Number Sense (including place value and ordering of whole numbers, fractions, and decimals)
   b. Properties of Operations (order of operations, divisibility, commutative, associative, and distributive properties)
   c. Estimation (determining the reasonableness of the solution)
   d. Ratio, Proportion, and Percents (comparing relationships among numbers)
2. **Measurement**
   a. Systems of Measurement (customary and metric systems of measurement)
   b. Measuring Physical Attributes (solving measurement problems: i.e. perimeter, area, and volume)
3. **Geometry**
   a. Shapes and Relationships (angle identification; i.e. acute, obtuse, and right; identification of two and three dimensional shapes; i.e. rectangle, prism, circle, and cylinder)
   b. Transformations of Shapes (lines of symmetry, translations, rotations, and reflections)
   c. Coordinate Geometry (graphing of ordered pairs in all quadrants)
4. **Data Analysis and Probability**
   a. Data Representations (reading and interpreting graphs and charts)
   b. Characteristics of Data (measures of central tendency; i.e. mean, median, and mode)
   c. Experiments and Samples (making predictions and inferences from data)
   d. Probability (determining the likelihood of an event)

Categories of Mathematical Questions

1. *Number Properties & Operations*
2. *Measurement*
3. *Geometry*
4. *Data Analysis & Probability*
5. *Algebraic Thinking*

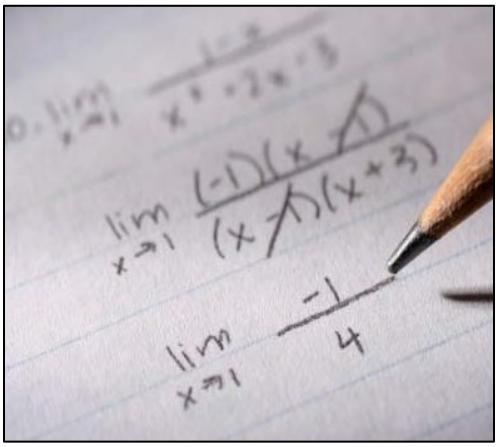
5. **Algebraic Thinking**
    a. Patterns, Relations, and Functions (explain how change in one quantity affects another)
    b. Variables, Expressions, and Operations (explore the use of variables and evaluate algebraic expressions)
    c. Equations and Inequalities (solve equations and inequalities)

Guidelines for Solving Mathematical Problems

1. Some problems may require you to **use reading, language comprehension, problem solving, and mathematical computation skills simultaneously**. The following five steps are involved:
    a. **Read the problem**. Restate the question by putting the question into your own words.
    b. **Determine the information you need** to produce the right answer. Oftentimes a problem contains more than enough information. Regardless of the situation, think about what information you need to answer the question.
    c. **Select the necessary strategy**. Choose a problem-solving method after you have determined the question being asked and the necessary information to solve the problem.
    d. **Estimate your answer**. A good estimate will often provide enough information to choose the correct answer from the choices provided. If it does, you have finished the item. If not, then you need to continue the problem-solving process.
    e. **Use the strategy to reach a solution (answer)**. Then check your answer. Your answer should be reasonably close to your estimation. You may use addition to verify subtraction and multiplication to verify division.

2. There is often **more than one way to solve a problem**. As a paraeducator, you should model a variety of problem-solving strategies for your students. In answering mathematical questions, you may consider using strategies such as:
    a. guess and check;
    b. work backwards;
    c. look for patterns;
    d. draw a diagram;
    e. make a table;
    f. solve a simpler problem; and/or
    g. use number sense

3. A glossary of topics, terms, phrases, and symbols which may be helpful to you as a paraeducator is included in Appendix B.



The best way to do well in mathematics is to never give up!

Here is a shortened version of the steps outlined in the guidelines to help you prepare for mathematics questions on the KPA. Try the steps out on the Sample Mathematics Questions.

Steps for Solving Mathematical Problems	
Read problem	⇨ Put question into your own words
Determine info needed	⇨ Problem may contain more than enough information
Select necessary strategy	⇨ Choose a problem-solving method
Estimate your answer	⇨ A good estimate may provide enough information to select answer
Use strategy to reach solution	⇨ Check your answer; it should be close to your estimation

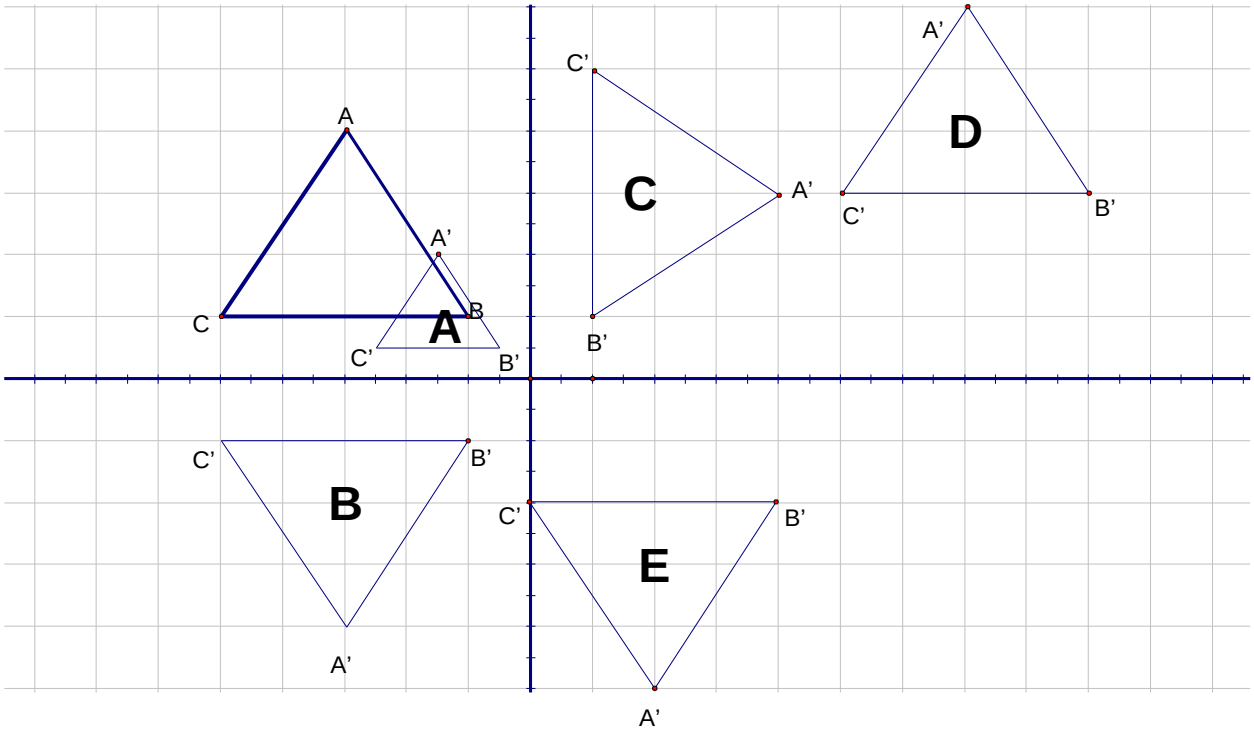
SAMPLE MATHEMATICS QUESTIONS

The following are examples of problems a paraeducator may be expected to solve and to assist students in learning. The information in Appendix B will assist you in preparing for the KPA.

1. The record low temperature in Kentucky is -21 degrees Fahrenheit. The record high temperature is 114 degrees Fahrenheit. What is the difference in the temperatures?
   A. -135 degrees
   B. -93 degrees
   C. 93 degrees
   D. 135 degrees
   E. 141 degrees

The correct answer for question 1 is **Choice D**. To solve the problem, you subtract 114 and -21 degrees.
114 – (-21) =
114 + 21 =
135 degrees

2. Which of the following translations of the bold triangle ABC is a rotation?



A. A
B. B
C. C
D. D
E. E

The correct answer for question 2 is **Choice C**. Triangle A is a dilation (an enlargement or a reduction). The triangle is reduced by ½. Triangle B is a reflection (flip) over the x-axis (horizontal axis). Triangle C is a rotation (turn). The triangle is turned clockwise 90 degrees. Triangle D is a translation (slide). The triangle has been slid over 9 places to the right and up 2 places. Triangle E is a glide reflection (both a slide and a flip). The triangle was slid over 5 places, up 1 place, and then flipped over the x-axis.

SAMPLE MATHEMATICS ASSESSMENT

The following are sample test questions similar to those on the KPA. Please work the following questions. Answers and explanations to the questions are found after the sample test section.

1. $12\frac{1}{5} - 5\frac{6}{7} =$

   A. $6\frac{12}{35}$

   B. $6\frac{1}{2}$

   C. $6\frac{23}{35}$

   D. $7\frac{5}{35}$

   E. $7\frac{23}{35}$

2. Simplify: $12 - 4 \cdot 11 \div 2 + 15$

   A. -15

   B. -1

   C. 5

   D. 31

   E. 59

3. Which is the best estimate for the product 63 x 29?

   A. 70 x 30

   B. 60 x 30

   C. 60 x 20

   D. (60 + 20) x 10

   E. (60 +30) x 10

4. A 4 in. by 6 in. photograph is enlarged so that the length of the new photo is 10.5 in. What is the width of the new photo?

   A. 5.5

   B. 7

   C. 8.5

   D. 9

   E. 15.75

5. What is the circumference of a circle with a radius of 9 inches ($C = 2\pi r$)

   A. 81π inches

   B. 18π inches

   C. 9π inches

   D. 13.5π inches

   E. 4.5π inches

6. The perimeter of a rectangular dog pen is 72 ft. The width of the pen is 12 ft. What is the area of the rectangular pen?

   A. 288 $ft.^2$

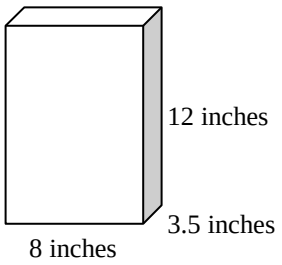
   B. 432 $ft.^2$

   C. 576 $ft.^2$

   D. 864 $ft.^2$

   E. 1152 $ft.^2$

7. Find the volume of the cereal box.



A. 23.5 in^3

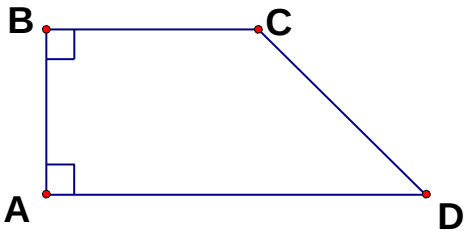
B. 70 in^3

C. 99.5 in^3

D. 332 in^3

E. 336 in^3

8. Name the obtuse angle.



A. ∠ABC

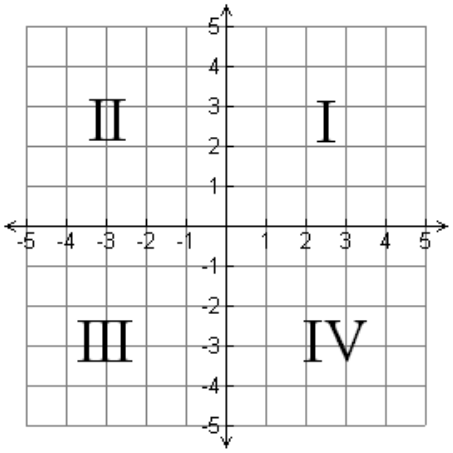
B. ∠DAB

C. ∠BCD

D. ∠CDA

E. ∠CBA

9. The point (-3, -5) is in which quadrant?



A. I

B. II

C. III

D. IV

E. none of the above

10. The table shows the total amount of money Karen saved during the summer.

Week	Total Amount
1	$15
2	$45
3	$75
4	$105
5	
6	

A. $135

B. $145

C. $150

D. $165

E. $170

11. Find the mean of the scores listed below:
60, 75, 62, 90, 82, 62

A. 61.6

B. 62

C. 68.5

D. 71.8

E. 86.2

12. What is the probability of rolling a multiple of 2 with one number cube?

A. $\frac{1}{2}$

B. $\frac{1}{3}$

C. $\frac{1}{4}$

D. $\frac{1}{5}$

E. $\frac{1}{6}$

13. Solve for x: 2x – 6 = 12

A. -9

B. -3

C. 0

D. 3

E. 9

14. Write an algebraic expression for the phrase.

The quantity 7 plus k divided by 3.

A. $k + \frac{7}{3}$

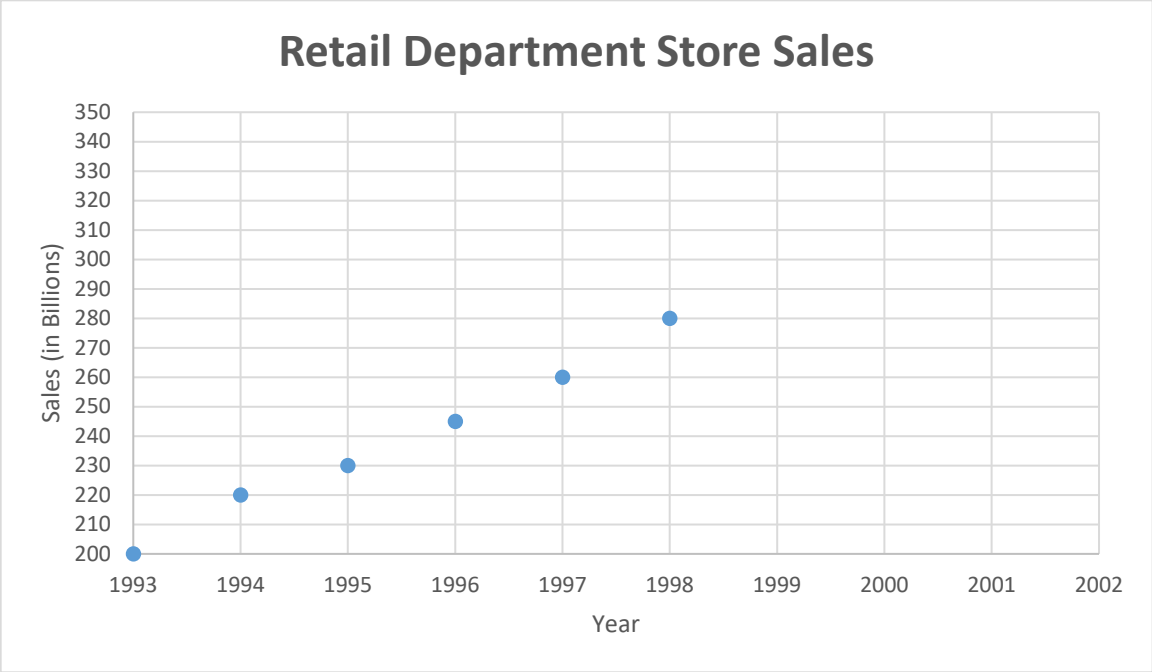
B. $\frac{(7+k)}{3}$

C. $\frac{k}{3} + 7$

D. $\frac{3}{7+k}$

E. none of the above

15. The graph below shows a relationship between years and department store retail sales.



Using the graph above, predict the total retail sales for 2001.

A. 295

B. 310

C. 325

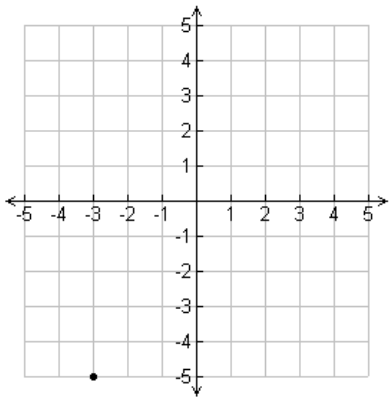
D. 340

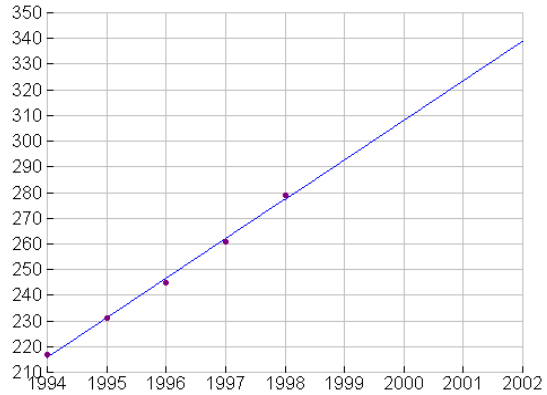
E. 355

SAMPLE MATHEMATICS ASSESSMENT ANSWERS

Use the following information to determine how to correctly solve the problems that you worked in the *Sample Mathematics Assessment*.

1. $12\frac{1}{5} - 5\frac{6}{7} =$ $12\frac{1}{5} \cdot \frac{7}{7} - 5\frac{6}{7} \cdot \frac{5}{5}$ $12\frac{7}{35} - 5\frac{30}{35}$ $11\frac{35}{35} - 5\frac{30}{35}$	**Skill assessed – number sense** Find the common denominator of 5 and 7, 35 Because 7 is less than 30, take one from 12 and change it to $\frac{35}{35}$. The answer is **Choice A**, $6\frac{12}{35}$
2. **Simplify** $12 - 4 \cdot 11 \ldots 2 + 15$ $12 - 4 \cdot 11 \ldots 2 + 15$ $12 - 44 \ldots 2 + 15$ $12 - 22 + 15$ $-10 + 15$	**Skill assessed – order of operations** In the order of operations, work from left to right doing multiplication and division. First step, multiply 4 and 11. Second step, divide 44 by 2. Work from left to right doing addition and subtraction. Third step, 12 minus 22. Fourth step, -10 plus 15. The answer is **Choice C**, 5.
3. **Estimate product of 63 x 29**	**Skill assessed – estimation** Round 63 to 60. Next, round 29 to 30. The answer is **Choice B**, 60 x 30.
4. **4 by 6 photo enlarged to 10.5** $\frac{4}{6}$ $\frac{x}{10.5}$ $\frac{4}{6} = \frac{x}{10.5}$ $6x = 42$	**Skill assessed – ratio, proportion, and percents** Set up the ratio for the first photo. Set up the ratio for the second photo. Set the ratios equal. Cross multiply. Solve for x by dividing both sides by 6. The answer is **Choice B**, x = 7
5. **Circumference of circle** $C = 2\pi \cdot 9$	**Skill assessed – measuring physical attributes** The formula for circumference is $C = 2\pi r$ Substitute the radius of 9 inches into the formula. Multiply 2 by 9. The answer is **Choice B**, 18π inches.

6. **Area of a rectangle** $2 \cdot 12 + 2 \cdot L = 72$ $24 + 2 \cdot L = 72$ $2 \cdot L = 48$ $L = 24$ $A = 12 \cdot 24$	**Skill assessed – measuring physical attributes** To solve this problem, first find the length by using the perimeter given; then determine the area. The formula for the perimeter for a rectangle is $2L + 2W = P$, where L is length and W is width. Substitute the width and perimeter into the formula. Multiply 2 and 12. Subtract 24 from both sides of the equation to solve for 2L. Solve for L by dividing both sides by 2. Substitute the length of 24 and the width of 12 into the formula for area of a rectangle. $A = W \cdot L$. Multiply 12 and 24. The answer is **Choice A**, 288 ft^2.
7. **Volume of box** $V = 8 \cdot 3.5 \cdot 12$	**Skill assessed – measuring physical attributes** The formula for the volume of a rectangular prism is $V = L \cdot W \cdot H$. Substitute the length, width, and height into the formula. Multiply 8, 3.5, and 12. The answer is **Choice E**, 336 in^3.
8. **Obtuse angle**	**Skill assessed – measuring physical attributes** Both ∠DAB and ∠ABC are right angles (90 degrees), indicated by the squares in the corners. ∠CDA is an acute angle (less than 90 degrees) and ∠BCD is an obtuse angle (greater than 90 degrees). The answer is **Choice C**, ∠BCD.
9. **Point in quadrant**  	**Skill assessed – measuring physical attributes** The point is plotted by going left to -3 on the horizontal axis (x-axis) and going down to -5 on the vertical axis (y-axis). The answer is **Choice C**, Quadrant III.

10. **Table showing money saved**	**Skill assessed – data analysis** Between weeks 1 and 2, Karen saved $30. She continued to save $30 more each week. So during week 5, she would have saved a total of $135 and in week 6 she would have saved a total of $165. The answer is **Choice D**, $165.
11. **Find the mean** $60 + 75 + 62 + 90 + 82 + 62 = 431$ $\frac{431}{6} = 71.8$	**Skill assessed – characteristics of data set** To find the mean, add all of the scores. Then divide the total by the number of scores. The answer is **Choice D**, 71.8.
12. **Probability of rolling**	**Skill assessed – probability** Of the numbers 1 through 6, the multiples of 2 are 2, 4, and 6. Therefore, 3 out 6 are multiples of 2 which can be represented by $\frac{3}{6}$ or $\frac{1}{2}$. The answer is **Choice A**, $\frac{1}{2}$.
13. **Solve for x $2x - 6 = 12$** $2x - 6 + 6 = 12 + 6$ $2x = 18$	**Skill assessed – equations** Add 6 to both sides to isolate 2x. Divide both sides by 2 to solve for x. The answer is **Choice E**, x = 9.
14. **7 plus k divided by 3**	**Skills assessed – variables, expressions, and operations** The quantity 7 plus k is written as $(7 + k)$. Divided by 3 would be written as $\frac{(7+k)}{3}$. The answer is **Choice B**, $\frac{(7+k)}{3}$.
15. **Graph showing relationship**  	**Skill assessed – making predictions and inferences from data** Draw a trend line that passes through as many points as possible (about as many points should be above the line as below). Extend the line to reach the year 2001. At the intersection of the trend line and the 2001 line, follow a line straight across to the left and the sales axis to determine the total sales. The answer is **Choice C**, 325.

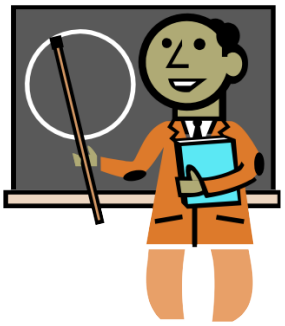
PARAEDUCATOR ROLES AND RESPONSIBILITIES

This section focuses on your role as a paraeducator in the classroom. Communication skills are essential when working with administrators, teachers, and students.

PARAEDUCATOR DEFINED

"Para" means "along-side" – so paraeducator means someone who works "alongside" an educator – similar to the way assistants in the medical and legal field are called "paramedics" and "paralegals." Districts may refer to such individuals as teacher aides, instructional assistants, paraprofessionals, educational technicians, or therapy aides or assistants.

A general job description of the paraeducator is a school employee whose primary responsibility is to:



Provide instructional or other support services to students, and

Work under the supervision of a certified/licensed staff member who is responsible for the design, implementation, assessment, and evaluation of student progress and instructional programs.

PARAEDUCATOR VS. TEACHER RESPONSIBILITIES

You can find paraeducators employed in a variety of education-related work settings. Paraeducators work in inclusive general and special education classrooms and early intervention programs, preschool programs, kindergarten programs, Title I targeted assistance school (TAS) programs, Title I schoolwide programs (SWP), libraries and computer labs, parent involvement programs, and supported employment or other vocational programs. They often are involved in the education of students with disabilities (e.g., assist with physical therapy, occupational therapy, speech/language therapy, health services, and social work case management).

Paraeducators do not function in isolation; they work in a team setting with teachers, administrators, or other certified staff or licensed professionals. The primary responsibility of a paraeducator is to provide instructional assistance to the supervising teacher by performing the tasks assigned by the teacher. Paraeducators may provide the following service under the supervision of teachers or other licensed personnel:

1. provide one-on-one tutoring for eligible students, if the tutoring is scheduled at a time when a student would not otherwise receive instruction from a teacher;
2. assist with classroom management;
3. provide instructional assistance in a computer lab;
4. conduct parent involvement activities;
5. provide support in a library or media center;
6. act as a translator; or
7. provide instructional services to students under the direct supervision of a teacher.

Paraeducators are responsible for assisting the teacher, as requested, with the tasks listed. Paraeducators are NOT to be put in a position of sole responsibility for an entire classroom or educational program or for performing certain types of assessments (e.g., subjective or essay tests or standardized tests). Paraeducators who provide instructional support must work under the direct supervision of a teacher. The following defines a paraeducator working under the direct supervision of a teacher:

1. The teacher prepares the lessons, plans the instructional support activities, and evaluates the achievement of the students with whom the paraeducator is working and
2. The paraeducator working within close proximity of a certified staff member would include the following:

Example A: *Jennifer is a paraeducator in the elementary school. She typically works with two of the 4th grade teachers, Naomi and John, by providing reinforcement of previously learned skills for small groups of approximately five students. She also works one-on-one with two students on reading comprehension. Because of the classroom/building layout, Jennifer pulls the students into a classroom in the 4th grade wing. Adjacent to Jennifer's designated work area is Melanie, another 4th grade teacher. Also adjoining Jennifer's room is another 4th grade teacher, Clint. He generally leaves the door ajar in case Jennifer has a discipline problem or a curriculum question. There is also a phone in the classroom in case Jennifer needs immediate assistance.*

Example B: *Jillian works in a middle school computer lab. The 6th through 8th grade teachers bring their students to the lab on a rotating schedule to accomplish various aspects of lessons. The teachers provide Jillian with the websites the students should access along with the information as to what the students are looking for and the work to be completed. Jillian facilitates the process by assisting students with accessing the Internet services, walking around the lab viewing the computer screens to ensure the students are in appropriate websites, and otherwise assisting students with finding material on the web. There are times that Jillian assists with the facilitation of ThinkLink as a way to assess student knowledge and content mastery. Generally the teachers do not stay with the class while in Jillian's computer lab; however, there is a certified staff member across the hall. Also, Jillian's computer lab is easily accessible to the guidance counselor's office.*

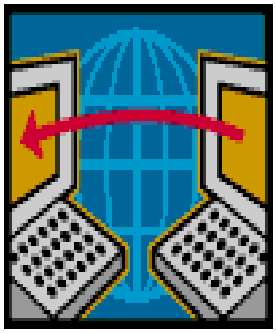
A program staffed entirely by paraeducators is **not** permitted. The teacher's main responsibility is to educate the students. This involves tasks such as:

1. diagnosing student education and support needs;
2. deciding what programs will meet their needs;
3. designing and implementing instructional programs and lesson plans;
4. evaluating program effectiveness and student performance; and

5. involving families in their children's education.

Paraeducators are part of an educational team, and a valuable part of the school staff. Working in a team situation requires frequent open communication between the administration, teacher(s) and paraeducator(s).

Paraeducators frequently work with more than one teacher; therefore, they may be expected to perform different tasks with varying degrees of responsibility in similar programs. Teachers have different approaches to integrating paraeducators into the instructional process and other classroom activities. Without mutual awareness and understanding of specific school and classroom environments, the educational team is not as effective as it should or could be. Therefore, the paraeducator and teacher(s) may want to consider taking time to discuss the following topics:



- applicable program requirements;
- teaching style;
- use of teaching materials;
- supervisory style;
- behavior management strategies;
- curricular/instructional focus;
- classroom routines;
- role descriptions; and
- space and furniture to accommodate a variety of approaches.

Throughout this process, the paraeducator should also recognize the position of leadership between the teacher and students, paraeducator and students, and teacher and paraeducators. The paraeducator must remember the teacher should be respected as the leader or supervisor of the classroom.

COMMUNICATION

Effective communication is the cornerstone of education. Today's public schools are made up of a diverse group of people. Students and staff are different from each other in many ways – age, gender, ethnicity, economic background, religion, lifestyles, values, etc. School personnel, including paraeducators, are expected to have an attitude of acceptance and appreciate of diversity. Paraeducators who take an active interest in understanding the ways students are different are better able to understand students' behavior and interest. Each of us has our own unique style of communicating with others. We convey ideas and information, demonstrate competence, and provide support orally, in writing, and/or through sign language. We communicate respect or lack of it through body language and facial expressions.

Effective communication is an integral part of the social interaction skills required to make and keep friends, cope with stress, share feelings, and maintain control over our behavior. Effective communication involves clearly stated and received messages accurately helps us to be comfortable with other people and to let other people know that we are interested in them, respect their ideas, and care about them. A very important element in communication is being receptive to other people. This is known as "active listening" which has three main

Active Listening

"Active listening" techniques are helpful in interactions with students. Listening

1. helps students deal with and "defuse" strong feelings;
2. helps students understand their own emotions;
3. facilitates problem solving;
4. keeps the responsibility with the student;
5. makes students more willing to listen to others;
6. promotes a closer, more meaningful relationship between the paraeducator and the student.

components: keeping an open mind, concentrating, and being involved.

It is important to understand that communication styles vary depending on one's culture. Effective communication with diverse learners, especially English language learners (ELLs), requires some basic knowledge of verbal and nonverbal communication in cross-cultural interactions. The key is recognizing that one culture is not better than another; it is only different.

Several types of nonverbal communication are facial expression, gestures, tone of voice (including loudness and pitch), body language and posture, personal space, eye gaze, touch, and appearance. Meanings associated with nonverbal communication practices in various cultures can lead to more effective teaching and learning. Although all children rely on nonverbal signals to communicate, English language learners are *especially* sensitive to these signals when they are in the early stages of learning English and not yet able to communicate verbally or comprehend all they hear.

Teachers should effectively communicate responsibilities and roles to the paraeducator. The paraeducator should communicate information to the teacher. Ideas, directions, and thoughts are lost or misunderstood without effective communication.

CONFIDENTIALITY

Paraeducators have access to personal information about students and their families. The information may be contained in school records, learned from a student or family member, observed in class, student's home, or relayed by other school personnel. This information may include the following:

1. the results of formal and informal tests;
2. behavior in classrooms and other education settings;
3. performance and ability levels;
4. family relationships; and
5. family income or economic status and much more.

As a general rule, the only people with whom it is appropriate to share a student's personal information include personnel in the school or other agencies who require it to ensure that the rights, health, and physical well-being of the student are safeguarded. Be cognizant that parental consent may first be required. It may be tempting to discuss student's personal information with family members at home, in front of other children, with friends, or with other paraeducators, but remember that paraeducators are ethically bound to maintain students' privacy. If you are unsure about sharing specific student information, please refrain until you have spoken to your supervising teacher or appropriate administrator about the situation or request.

TESTING ACCOMMODATIONS

Paraeducators may be asked to assist in the provision of testing accommodations with English Language Learners (ELLs) and/or students with special needs. The information on these websites will **not** be covered on the KPA.

For additional information on testing accommodations for English Language Learners, please go to: Kentucky Department of Education's English Learner (EL) and Immigrant Students webpage.

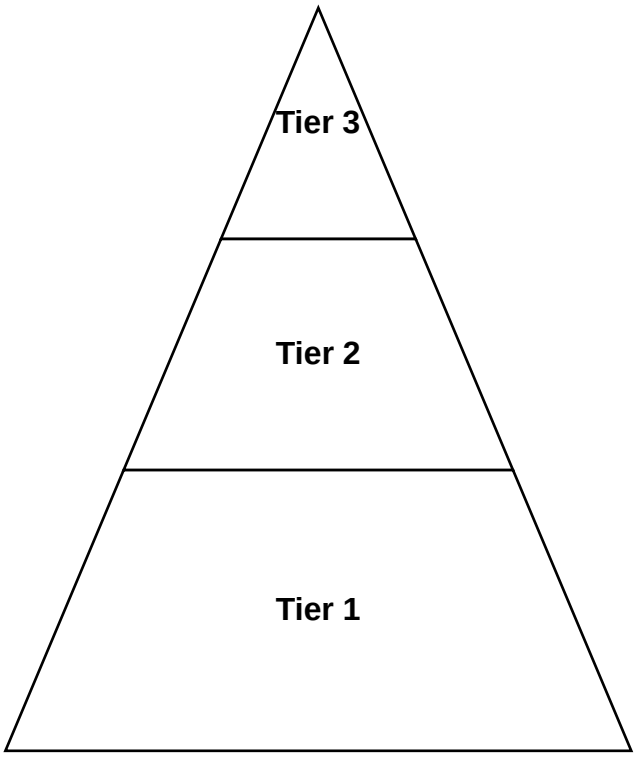
For additional information on testing accommodations and modifications for students with special needs, please go to: Kentucky Department of Education's Special Education Services webpage.

THE KENTUCKY SYSTEM OF INTERVENTIONS

Paraeducators will take an active role in the implementation of the Kentucky System of Intervention (KSI). The KSI framework for providing systematic, comprehensive services to address academic and behavioral needs for all students, preschool through grade 12. This comprehensive system addresses Response to Intervention (RTI), accelerated learning requirements, closing achievement gaps, high-quality instruction, readiness to learn, and student transitions. The KSI is best depicted using a pyramid diagram to highlight the three-tiered approach.

For additional information, see A Guide to the Kentucky System of Intervention available on the Kentucky System of Intervention webpage. Appendices D and E provide additional information about English language learners (ELLs) and students with special needs. The information on this website and in the guide will not be covered on the KPA.

System of Intervention Pyramid



TIER 3
Intensive interventions specifically designed to meet the individual needs of students who have not been successful in Tiers 1 and 2.

Approximately 5% of all students will respond with success to core, supplemental and intensive instruction.

TIER 2
Focused supplemental instruction for students who are not successful in Tier 1; supplemental instruction is in addition to core instruction.

Approximately 15% of all students will respond with success to core and supplemental instruction.

TIER 1
High quality classroom instruction based on state curriculum framework:

- research-based instructional strategies
- ongoing student assessment and professional development
- interventions within general framework of classroom

Approximately 80% of all students will respond with success to core instruction.

INSTRUCTIONAL STRATEGIES

The paraeducator entering the classroom setting should be prepared to serve a diverse group of students, including students with disabilities and English language learners. The presence of a disability or a language barrier does not mean the student is "different" in their abilities to experience emotions, participate in daily living activities or respond to events. People are alike in many ways as demonstrated by common characteristics and patterns of behavior.

CULTURALLY RESPONSIVE TEACHING

Culturally Responsive teaching uses the students' backgrounds to inform and design instruction that meets individual student academic and behavioral needs. A culturally responsive paraeducator understands the importance of building good relations and creating positive and supportive learning environments.

One of the basics behind working in culturally sensitive environments is the knowledge that we all have a culture with a certain set of norms, values, and beliefs that are collectively agreed upon in a community. Even though families, children and individuals are unique, they are influenced by their racial, ethnic, cultural and language backgrounds. In new geographic locations, cultures may evolve. Influences such as income, extended family and interactions with members of their own community as well as the new community may affect how a family decides to accept or reject the norms, values, and beliefs of their new environment. In our role as educators, we are obligated to make sure our interactions are culturally competent, which means that we respect other's values and beliefs while helping them negotiate the new culture.

General Tips to Promote Success of Diverse Learners

The attitudes and motivations of students and their parents, many of which are culture-specific, affect **learning**. Cultural attitudes and values also affect **teaching** because educators acquire these as members of their *own* cultural group and learn and generally adopt those of the dominant group in a pluralistic society. Educators may have different attitudes toward and expectations of students from minority cultures.

For example, paraeducators need to know that some English language learners (ELLs) are used to working cooperatively on assigned tasks in school environments. What may look like cheating is actually a culturally acquired learning style – an attempt to mimic, see, or model – what has to be done. This cultural trait can be used in positive ways in working with ELLs by assigning buddies or peer tutors so that ELLs are able to participate in all learning activities. Such cooperative learning strategies are very effective and reduce anxiety for children who are learning not only content but also the English language.

Teaching expectations

The teaching of expectations for classroom behavior as soon as possible helps to avoid misunderstandings, discipline problems, and feelings of low self-esteem. The following strategies may be effective:

- Use visuals like pictures, symbols, and reward systems to communicate your expectations in a positive and direct manner.
- Physically model language for English language learners in classroom routines and instructional activities; ELLs will need to see you or their peers model behavior when you want them to sit down, walk to the bulletin board, work with a partner, copy a word, etc.

Helping students adjust to school environment

Teachers and paraeducators can assist students in adjusting to the school environment in several ways:

1. Encourage students to share their language and culture with you and your class.
2. Have students participate in show-and-tell, providing an opportunity for students to bring in something representative of their culture.
3. Tell a popular story or folktale using words, pictures, gestures, and movements.
4. Allow students to teach the class some words from their native language.
5. Use materials related to students' cultures and labeling classroom objects in the students' native languages facilitates adaptation.
6. Be consistent and fair with all students; once students clearly understand what is expected, hold them equally accountable for their behavior.

Assisting children to learn

There are many ways to assist children, youth and adults to learn more easily and effectively. Reflect back on a time when you were in the best learning situation you had ever experienced.

- **Where did you learn the most?**
- **What did the teacher do to help you learn?**
- **In what type of atmosphere or learning environment were you?**
- **Was this environment a positive or negative one?**

The following intervention techniques and instructional strategies may assist the paraeducator in building a positive learning environment that reinforces and supports student engagement in activities that are meaningful to their lives.

BEHAVIORAL INTERVENTIONS

If unacceptable student behaviors are exhibited, there are a variety of ways to help the student learn more socially acceptable behavior patterns.

Reinforcement. Teachers and paraeducators seek to teach and assist students in learning the necessary skills to participate in the community. This includes helping students learn to make better choices and improve their

decision-making abilities. One method used to instruct students in learning these skills is a reinforcement of appropriate behaviors. Examples may include a positive comment such as "Well done," or simply smiling and nodding. Reinforcement may also be used when working with students in literacy and mathematics by verbally reinforcing the strategies they have learned to solve a problem. For example, during a reading session where a struggling student uses pictures to assist with unfamiliar words, the paraeducator would affirm the student's use of this strategy to complete the reading process.

Shaping. Shaping is a technique that rewards each successfully completed step of the desired behavior or skill. For example, a parent might use this technique when teaching a child to put away their toys, by giving the child a hug and/or kiss when they put the toy in the appropriate place for the first time. In some instances, the paraeducator may need to break the task down into individual steps and reward the student with each successful task completion.

Modeling. Modeling requires the paraeducator to demonstrate the skill or behavior by actions. This intervention is commonly used when helping students learn appropriate responses to frustrations or anxiety, especially in social situations. Modeling could be done with each skill that students need, especially those that are difficult to master. Using peer tutors, taking pictures of the skill modeled, and taping skills being accomplished appropriately are examples of techniques used in modeling.

Extinction. A powerful tool, extinction seeks to eliminate a specific behavior and at the same time rewarding other positive behaviors. This generally means the unacceptable behavior is completely ignored while other positive behaviors are reinforced. In utilizing this strategy, the paraeducator must practice his/her reactions. The effectiveness of a technique depends on the paraeducator's ability to ignore and reward positively. However, the paraeducator (and teacher) should be prepared for an initial escalation of the undesired behavior by the student. Generally, as soon as the student realizes the behavior no longer gains attention, he or she will make an effort to find a new behavior that receives positive recognition. Paraeducators and teachers are encouraged to practice their personal reactions to identified behaviors to make this technique more effective.

Proximity. Using proximity as an intervention means the paraeducator maintains a physical position that is close to a student or group of students who may have a tendency to act out (Henson, 2008). Both proximity and circulating require the physical movement of a paraeducator within the classroom. Circulating means that the paraeducator moves among the students in the classroom. This strategy is especially important when the paraeducator is supervising students in a nonacademic setting such as on the playground or in the cafeteria.

Circulating among students

Circulating among the students provides the paraeducator with the opportunity to ensure students are engaged in constructive activities. Circulating allows the following:

- prevention of accidents;
- prompt response to inappropriate behavior;
- positive reinforcement of responsible behavior;
- assisting students who need help;
- answering student questions; and
- positive feedback to students who are meeting expectations, academically or behaviorally.

Visual Scanning. It is highly recommended that on a continuous basis the paraeducator visually scan the environment in which he or she is working. Scanning the environment allows the paraeducator to identify student misbehavior before it becomes a class disruption. At the same time the paraeducator has an opportunity to acknowledge and encourage responsible behavior. Visual scanning also assists the paraeducator in determining if students have questions or need assistance in either completion of academic work or in dealing with conflict issues that may arise in the nonacademic setting.[i]

ACADEMIC INTERVENTIONS

If a student has difficulty learning new skills, there are a variety of techniques that can be used to enhance the student's learning.

Prompting. This technique provides varying degrees of guidance to the student as they practice their newly learned skills, and may utilize more than one approach. Typical prompting techniques include:

1. verbal prompts, giving directions, asking a question(s), or making a request;
2. visual prompts, touching or pointing;
3. demonstrating/modeling, an activity or task should be completed;
4. physical prompts, grasping a student's hand and assisting with pencil gripping to write or draw.

Other techniques to elicit student response include using age-appropriate vocabulary, various questioning techniques, and providing appropriate assistance should the student request it. However, it is crucial the paraeducator understand the distinction between assisting the student in using a process to determine a solution or answer and providing the answer to the student. Appropriate assistance from the paraeducator can reduce the student's frustration, keep the student on task, and enable the student to master a concept.[ii]

Task Analysis. Developed by Marc Gold, this technique breaks a task down into its component parts. This allows the student to grasp the task's concept instead of trying to learn the whole task at once. For example, teaching a student how to cook may be broken down into individual steps, from gathering materials and ingredients, to appropriately measuring the ingredients, to cooking the desired product, to actually eating the finished product.

Tutoring. A tutor is someone who assists the professional educator (teacher) by providing assistance to one or more students for achievement of instructional objectives. The tutor works under the direction of the supervising teacher, and should have an understanding of their roles and responsibilities.[iii]

Tutors deliver individualized instruction

Tutoring is the delivery of individualized instruction designed by the teacher to help the student(s) develop academic and non-academic skills, improved self-confidence, positive attitudes toward learning, and effective communication skills. Activities or tasks that may be used in a tutoring session include the following:

- reading materials to students;
- reviewing lessons and giving informal tests;
- supervising the practice of newly acquired skills;
- directing lessons through questions;
- observing, recording, and charting student behavior;
- practicing self-help skills;
- providing feedback and reinforcement; and
- preparing materials for tutoring.

Scaffolding. Struggling students often need some type of support to be successful. Scaffolding is a process in which students are given support until they can apply new skills and strategies independently. Scaffolding is not "watering down" the lesson but using strategies that make the assignment accessible. In order to incorporate scaffolding throughout the lesson, teachers may find the framework outlined by Ellis & Larkin (1998) helpful.

Scaffolding
1. **The teacher does it** – In other words, the teacher models how to perform a new or difficult task, such as how to use a graphic organizer. For example, the teacher may have a partially completed graphic organizer on an overhead transparency and "think aloud" as he or she describes how the graphic organizer illustrates the relationships among the information contained on it.
2. **The class does it** – The teacher and students work together to perform the task. For example, the students may suggest information to be added to the graphic organizer. As the teacher writes the suggestions on the transparency, students fill in their own copies of the organizer.
3. **The group does it** – Students work with a partner or a small cooperative group to complete a graphic organizer (i.e., either a partially completed or a blank one).
4. **The individual does it** – This is the independent practice stage where individual students can demonstrate their task mastery (e.g., successfully completing a graphic organizer to demonstrate appropriate relationships among information) and receive the necessary practice to help them perform the task automatically and quickly.

Corrective Feedback. Feedback is the sharing of specific information about the learner's performance in order to help him/her either continue or modify a behavior (e.g., perform a particular procedure a certain way). Providing regular feedback to a learner is one of the most powerful teaching tools a paraeducator has. The following are impacts of feedback:

- Effective feedback can accelerate learning.
- Learners want and value feedback.
- Without feedback, learners may discontinue positive behaviors.
- Without feedback, learners may make incorrect assumptions about their performance.

The following are characteristics and tips to ensure that feedback is effective:

- ***Self-Assessment***: Before giving feedback, ask the learner to self-assess. The teacher might say, "How do you think you did?"
- ***Balanced***: Provide both positive and corrective comments. Begin with positive comments. Then specify needed improvements and end with encouragement.
- ***Well-Timed***: Feedback should be given as close as possible to the performance.
- ***Based on Observation***: Feedback is often based on inference and hearsay. Feedback is more accurate and valuable if based on direct observation.
- ***Descriptive and Specific***: Focus on what the learner did and give a specific description. Generalizations such as, "That was a good presentation," are nice but not instructive. Alternatively, the teacher might say,

"That was a good case presentation because it was well organized and only essential information was included."

- ***Regularly Provi***ded: Feedback should not be a surprise. It is often provided only when the learner has done something wrong. Establishing a routine of regular feedback prevents this.[iv]

Using the ARCH Feedback Model

By using the ARCH feedback model, paraeducators can support learners and help them strengthen their skills. The model is especially useful for a formal feedback situation.

A = Ask for self-assessment
R = Reinforcement
C = Correct
H = Help learner develop improvement plan

The arch is symbolic of strength and support. The following explains each aspect of the ARCH model:

- Ask the learner to self-assess relative to his/her performance facilitates the learner's development of an important life-long learning skill. A session could start with questions such as, "How do you think you are doing?" or "What do you feel are your strengths and weaknesses at this time?"
- Reinforcement is an important feedback skill. Learners often say that the only time they get feedback is when they do something "wrong." Reinforcement is the provision of feedback when they do something "right."
- Corrective feedback provided by the paraeducator is also critical. Suggestions for improvement need to be specific.
- Helping the learner develop a plan for improvement is very important.

Technology Integration. Teachers, along with paraeducators, need to train all students to be comfortable and capable to use all types of technology in the workplace. It is current practice to use computers as an integral part of the learning process. Research in the area of technology-assisted learning revealed the following outcomes of the use of computers in the classroom:[v]

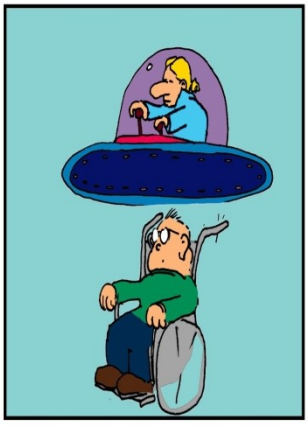
- Student enthusiasm and motivation to learn increased dramatically.
- Student productivity in all subject areas increased.
- Struggling writers became more proficient on the keyboard.
- Struggling students using technology have demonstrated superior results on standardized tests.
- Graduation and college participation of high school students who routinely use technology increased.

DIFFERENTIATED INSTRUCTION

Differentiated instruction is a process of teaching and learning that begins with the premise that not all students are alike. Based on the readiness, learning preferences and interests of the student, it requires a teacher to vary the

approach and presentation of the curriculum and student assessments to provide students access to multiple paths in order to reach the same goals or outcomes.

In a differentiated classroom the paraeducator partners with the teacher during the implementation of instruction. This might be accomplished by assisting with the organization of the classroom setting to effectively utilize materials and space for instruction and activities. It may also mean the paraeducator uses the techniques of circulating and visually scanning the classroom to identify students who may be off-task, have questions, or are otherwise unengaged in the lesson. The paraeducator may then use interventions such as close proximity, questioning, or other previously identified strategies to redirect the student(s). The paraeducator observes and reflects on individual and small groups of students and shares these reflections with the teacher as a means of enhancing student achievement.[vi]



HOVERCRAFT

Giangreco

A paraeducator facilitates student learning by providing opportunities for peer interaction. The paraeducator does not become a "Hovercraft" or appear to be "Velcroed" to the student(s) but, instead, gives the student a voice in the classroom. However, this does not mean the paraeducator does not assist the student. It implies the paraeducator has worked with the teacher to think of what might go wrong in an activity or task and have structured the work to avoid potential problems. This also takes into consideration the paraeducator always seeks clarification for tasks/activities for which they do not know how to implement or have doubt about the implementation process.

STUCK LIKE GLUE

Giangreco

Differentiated Instructional Strategies

The paraeducator is responsible for becoming familiar with the teacher's methods of classroom instruction and seeking clarification or instruction on any strategy he or she does not understand or fully know how to implement. A paraeducator may be asked to implement the following strategies determined by the teacher in a differentiated classroom:

Scaffolding. Scaffolding may be compared to a construction project where supports and frameworks are built so workers can reach the challenging areas to erect brick walls, paint, install windows, etc. Scaffolding provides support needed by the student to succeed in challenging work. Examples of scaffolds include directions that give more structure, re-teaching/extended learning, icons to help interpret print, modeling, use of study guides, and reading buddies.

Independent Projects. Independent projects use a process where the student and teacher identify problems or topics of interest to the student. A plan is devised of how the student will investigate the problem/topic and the type of product the student will develop to demonstrate the application of the knowledge and skills associated with the problem/topic. In this setting, the paraeducator will likely assist the student in implementation of the investigative plan and product development. The key word is **assist**, which means the student completes the work, not the paraeducator. The paraeducator provides support as needed.

Interest Centers/Interest Groups. Interest centers are often used with younger learners (primary/elementary), whereas interest groups are often used with older learners (middle/high school). In either setting, interest centers/groups allow students a choice in the study of topics not in the regular curriculum and helps them to

explore the how's and why's of something of interest to them. The role of the paraeducator is to serve as facilitator and assist the teacher in classroom management techniques to ensure the classroom remains a positive learning environment.

Tiered Assignments. Tiered assignments are developed by teachers. These assignments allow students to begin learning from where they are. Students work with appropriately challenging material using a variety of resource materials at differing levels of complexity and learning modes to reinforce or extend learning based on student readiness.

Flexible Grouping. Students are part of many different groups. In the classroom, teachers may use flexible grouping to match the task to student readiness, interest, or learning style. Flexible grouping may be teacher assigned or student selected, depending on the activity and desired outcome proposed by the teacher. The use of flexible grouping allows for both collaborative and independent student work, gives students opportunities to work with a variety of peers, and helps to reduce the labeling of students as those who need help and those who provide help. The role of the paraeducator is to assist the teacher in ensuring all students learn to work cooperatively, collaboratively, and independently.

Varying Questions. In class discussions and on tests, teachers vary the sorts of questions posed to learners based on their readiness, interests, and learning styles. All students need to be accountable for information and thinking at high levels. Appropriately varying questions helps nurture motivation throughout the learning process.

When asking instructional questions, both the teacher and paraeducator should use the following guidelines:

- Target some questions to particular students and "open the floor" to other questions;
- Use open-ended questions whenever possible;
- Use wait time before taking answers;
- When appropriate, allow students the opportunity to talk with thinking partners before giving answers;
- Encourage students to build on one another's answers;
- Require students to explain and defend their answers.

Sheltered English Instruction. Sheltered English instruction is an instructional approach that engages English language learners (ELLs) above the beginner level in developing grade-level content-area knowledge, academic skills, and increased English proficiency. In sheltered English classes, teachers and paraeducators use clear, direct, simple English and a wide range of scaffolding strategies to communicate meaningful input in the content area to students. Content and language objectives are clear in each lesson. Learning activities that connect new content to students' prior knowledge, that require collaboration among students, and that spiral through curriculum material, offer ELLs the grade-level content instruction of their English-speaking peers, while adapting lesson delivery to suit their English proficiency level.[vii]

Providing Sheltered Instruction

Teachers and paraeducators may use the following techniques to provide sheltered instruction:

- Speak clearly and slowly;
- Use pauses, short sentences, simple syntax, few pronouns and idioms;
- Use repetition and discourse markers (first, then, in conclusion);
- Provide keywords and outlines;
- Provide examples and descriptions, not definitions;
- Use visuals, hands-on resources, gestures and graphic organizers;
- Provide content texts at multiple language proficiency levels.

READING – INSTRUCTIONAL SUPPORT

What is reading? As defined by Webster's dictionary (1984), reading is to "look through and take on the meaning of written or printed words or symbols."

In the same way that children learn to talk, they also learn to read. They see and hear others reading, they listen as others read to them, they read along with others, and then they read independently and to others (Mooney, 1990). There is no definitive time frame in which children learn to read; however, they may become motivated to increase and improve reading through support and encouragement much like that received when they were learning to talk (Mooney).

When children are learning how to read, adults should not view mistakes as "failures" but as "nearly rights" (Mooney, 1990). The attitudes expressed by adults assisting children in the learning process will have lasting impact upon the student's desire to learn how to read. Approaches that might be used to guide children through the learning process include reading to children and reading with children.

When assisting students in learning to read, paraeducators should be familiar with the stages of reading development. The familiarity may be beneficial in providing feedback to the teacher or in identifying the student's progress or lack thereof. Mooney describes the three states of reading development in the following manner:

1. **Emergent**. This is the starting stage and emphasizes reading as something that is enjoyable. During this stage, books may be shared repeatedly with increased exploration of the text each time in an effort to gradually move the student up to independent reading.
2. **Early**. At this stage children become readers. The children and the paraeducator discuss the story's background to reveal the story's theme and plot. The children are learning to search out the structure and meaning of sentences. During this stage, the following skills emerge and should be reinforced: reading for meaning (comprehension), taking risks, making predictions, confirming the use of letter-sound associations, self-correcting when reading, and re-reading when the meaning has been lost or not established.

3. **Fluency**. The fluency stage implies the children are ready to read by themselves. During this stage, teachers emphasize the child's development of confidence and competence in the integration of cues, maintenance of the meaning through lengthy and complex structures, and the adjustment of the reading rate with each change of purpose. The paraeducator boosts the child's confidence and competency using such techniques as the integration of cues and adjusting reading rates to complement the purpose of the reading exercise.

Encouraging Comments

Routman provides the following examples of comments that may encourage a student:

- I like the way you tried to help yourself.
- Good for you. I saw you checking the word with the picture to see if you were right.
- I like the way you worked out the hard part.
- I noticed you tried…when you had trouble. Good for you. That's what good readers do.

The paraeducator's attitude toward reading is as important as the decision of which approach to use with a student. The idea of reading needs to be presented as something that is enjoyable, satisfying, and rewarding. In this instance, the paraeducator becomes the reader's voice, the listener, and the author; he or she demonstrates to children how they can also assume the three roles with enthusiasm (Mooney, 1990). The paraeducator's tole in assisting the student in developing good reading and writing habits may be the student's motivating factor in wanting to learn. Therefore, it is important to acknowledge what the child knows, the strategies used by the child when reading, and praising and building the self-esteem and confidence of the student, especially in utilization of strategies in reading (Routman, 1994).

WRITING SKILLS – INSTRUCTIONAL SUPPORT

An important communication tool is the written message. Thoughts, ideas and important information are generally put into a written format in order to preserve them. Writing is something that is incorporated in all content areas through the use of symbols, letters and words.

Paraeducators may find themselves working with a range of students who are just learning the concepts of writing to those who are distinguished writers. While there are varying approaches to enhance to student's mastery of writing, the paraeducator must have the ability to perform writing tasks or learn new strategies to improve the quality of services provided to students. Although the paraeducator will rely upon the supervising teacher to develop a classroom system, the paraeducator may also need to use some (or all) of the following strategies during the school year with individual or small groups of students.

A modeling strategy that may be used at any grade level is writing aloud. This technique gets the students' attention and demonstrates various aspects of writing at the same time. The paraeducator writes in front of the students while verbalizing what he or she is thinking and writing. Students observe the paraeducator in the act of writing while the paraeducator explicitly talks through the process – covering the components of thinking, format, spacing, layout, spelling, punctuation, handwriting, and vocabulary. This approach may take formats; however, it is known to increase student interest and motivation in writing as well as improve the quality of writing. (Routman, 1994)

A second approach to writing is the "Morning Message." Generally written by the teacher to the students, the message may provide details of the day's events, classroom news about topics of study, or even events that have happened or about to happen in a teacher's life. This gives the students an opportunity to problem-solve and figure out the answers instead of the explanation and answers being given to them. (Routman, 1994)

Morning Message
The message may be tied to writing activities through questions about the conventions of writing such as the following:

- Why did I capitalize…?
- Why did I begin a new paragraph here?
- Why did I use a comma…?

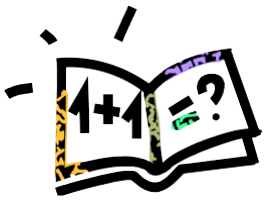
The topics, meanings, and word choices are discussed and agreed upon by the students and paraeducators. The role of the paraeducator is to be a supportive one that enables, encourages, and invites students to participate in the process. This method often comes as a natural response to shared reading and is a way to reinforce and support the reading process. (Routman, 1994).

The approach of guided writing places the paraeducator in the role of facilitator, a guide in assisting the students in the process of discovery of what they want to say and how to meaningfully say it with "clarity, coherence, interest, style, form, and individual voice (Routman, 1994, p 66)."

MATHEMATICS SKILLS – INSTRUCTIONAL SUPPORT

The language of mathematics is just as symbolic as the language of reading. Some students have difficulty with symbolic language. Students struggling in mathematics may exhibit the following characteristics:

- They may be able to recite numbers fairly well, but they lack understanding about numbers and what they represent. They have very little "number sense."
- They have difficulty remembering number facts or vocabulary, problem-solving procedures or previously learned materials.
- Word problems are particularly difficult because they include three layers of symbols: numbers, words and operations. Students lose their train of thought in the problem-solving process.
- They do the same problem over and over or use only one problem-solving method repeatedly.



The paraeducator should stay with hands-on learning until understanding is achieved and then help students "discover" the skills they need to solve the same problem. In other words, students should see and manipulate the problem first with concrete objects. They can then "translate" the information into the symbolic language of numbers.

<u>Strageties to Differentiate Instruction</u>
Strategies to differentiate instruction to meet the needs of all students include the following:

- modeling, demonstrating the process for completing a problem or task;
- working backwards, starting with the solution or end result to understand the relationships and pattern;
- using estimation to determine the reasonableness of answers;
- reviewing ideas, revising previously taught content and re-teaching if necessary (i.e. flashbacks);
- thinking aloud, verbalizing the thought processes for attacking the problem;
- representing answers in multiple ways, showing work in words, numbers, pictures, diagrams, charts; and
- using technology, computer lab, calculators, interactive boards, laptops, software programs.

SAMPLE INSTRUCTIONAL STRATEGIES QUESTIONS

The following are examples of questions that might be asked on the Kentucky Paraeducator Assessment related to Paraeducator Roles and Responsibilities and Instructional Strategies. An explanation is given for each question.

Select the **best** answer for each of the following questions.

1. General job descriptions convey the paraeducator's primary responsibility is to
   A. provide instructional or other support services to students.
   B. maintain a position that requires them to be solely responsible for an entire classroom.
   C. work under the supervision of a certified/licensed staff member who is responsible for the design, implementation, assessment, and evaluation of student progress and instructional programs.
   D. **both *A* and *C***

The paraeducator is responsible for **assisting** the teacher and should **not** be put in a position that requires the paraeducator to be solely responsible for an entire classroom. The best answer for question 1 is **Choice D** since it covers both A and C.

2. Which of these are ways we communicate with others?
   A. speaking with one another
   B. body language
   C. written messages
   D. **all of the above**

The paraeducator should keep in mind how he or she communicates with other throughout the day. Since a paraeducator may use all three methods in a day, **Choice D** is the correct response.

3. Culturally responsive teaching focuses on
   A. Assessment.
   B. Title I.
   C. **students' backgrounds**.
   D. writing across the curriculum.

Students' background are used to inform and design instruction that meets individual student academic and behavioral needs. Therefore, **Choice C** is correct.

4. Approximately _____% of all students will respond with success to core instruction
   A. 5%
   B. **80%**
   C. 15%
   D. 75%

Choice B is correct based on the System of Intervention Pyramid.

5. Carla is a paraeducator who works with children with disabilities. She meets the aunt of one of her students in the local grocery store. Carla knows there is an on-going family dispute with the aunt and she has been specifically instructed by her supervising teacher not to discuss the student's progress with anyone. The aunt asks for an update on the student's progress. How should Carla respond?
    A. tell the aunt the latest events of the classroom
    B. change the subject immediately
    C. **advise the aunt she can't answer her questions and refer her to the teacher**
    D. ignore the aunt

Carla is bound by rules of confidentiality that have been further emphasized by her supervising teacher. this prevents her from discussing any of her students with others, regardless of the person's relationship to the student, especially in public settings. Therefore, **Choice C** is the best response to this question.

6. The paraeducator may use the technique of circulating and visually scanning the classroom to identify students who may
    A. be off task.
    B. have questions.
    C. **both *A* and *B***
    D. none of the above

By circulating and visually scanning the room, the paraeducator could identify students who may be off task or have questions. Therefore, **Choice C** is correct since it contains both correct choices.

7. Directions that give more structure, icons to help interpret print, and the use of study guides are all examplse of which strategy used in differentiated instruction?
    A. independent projects
    B. interest centers
    C. tiered assignments
    D. **scaffolding**

All of the choices are strategies used in differentiated instruction. However, the examples listed are scaffolding, so **Choice D** is correct.

8. Differentiated instruction offers a range of learning options and support systems through the use of
    A. one technique for all students.
    B. **a variety of teaching and learning strategies**.
    C. a variety of materials only for gifted students.
    D. none of the above

Choice B is correct because a variety of teaching and learning strategies is an element of differentiated instruction.

9. Josh is learning how to better control his temper. Nancy, the paraeducator who assists in Josh's room has been using different techniques developed by the teacher to assist Josh with anger management. She notices Andrew trying to start an argument with Josh, who is trying to remember how to not respond in anger. What should be her response?
    A. separate Josh and Andrew and reprimand both of them
    B. separate Josh and Andrew and only speak to Andrew about his behavior
    C. **separate Josh and Andrew, reprimand Andrew for his behavior, and provide reinforcement to Josh for not acting out in anger**
    D. let Josh and Andrew work out their disagreement

Choice C is the most appropriate response. Not only is Andrew reprimanded appropriately, but Josh is given some necessary reinforcement in his response to the situation.

10. Sheltered instruction is a strategy used in a differentiated classroom to assist
    A. students with autism.
    B. **English language learners**.
    C. students in learning technology.
    D. none of the above.

According to information provided in the section on differentiated instructional strategies, sheltered instruction assists English language learners. Therefore, **Choice B** is the correct response.

APPENDIX A

LITERACY TERMINOLOGY

KEY TERMS IN LITERACY

This appendix contains a glossary of literacy terms that you should be familiar with as a paraeducator. The terms may assist you in preparing for the KPA.

- **analogy** – comparison of two or more similar objects so as to suggest that if they are alike in certain respects, they will probably be alike in other ways as well
- **argumentation** – writing or speaking in which reasons or arguments are presented in a logical way
- **association** – connection between words to help explain the meaning
- **audience** – those people who read or hear what you have written
- **body** – paragraphs between introduction and conclusion that develop the main idea(s) of writing
- **cause and effect** – connections between events and their causes
- **central idea** – main point or purpose, often stated in thesis statement or topic sentence
- **character** – a person in a story or poem
- **characterization** – method an author uses to reveal or describe his characters and their various personalities
- **classify** – places persons or things together in a group because they are alike or similar
- **climax** – the highest point or turning point in a work, usually the most intense point
- **coherence** – arrangement of ideas in such as way that the reader can easily follow from one point to the next
- **compare and contrast** – brings both points of similarity and differences
- **conclusion** – judgment or opinion based on information an author provides
- **conflict** – "problem" of a story which triggers the action
- **connotation** – all the emotions or feelings a word can arouse, such as the negative or bad feeling associated with the word *hate* or the positive or good feeling associated with the word *love*
- **context** – environment of a word; that is, the words, sentences, and paragraphs which surround a particular word and help to determine or deepen its meaning
- **criticize** – point out the good points and the bad points of a situation or idea
- **define** – give a clear, concise meaning for a term; generally consists of identifying the class to which a term belongs and how it differs from others in that class
- **denotation** – literal or dictionary meaning of a word
- **describe** – recount, sketch, or relate something in sequence or story format
- **discuss** – examine and talk about an issue from all sides
- **emphasis** – placing greater stress on the most important idea in a piece of writing by giving it special treatment; emphasis can be achieved by placing the important idea in a special position, by repeating a key word or phrase, or by simply writing more about this idea than the others
- **evaluate** – make a value judgment, a statement of negative and/or positive worth
- **explain** – to make clear, to analyze, and to clarify; implies more of an emphasis on cause-effect relationships or step-by-step sequences
- **figurative language** – imaginative words and phrases that create vivid language; language which cannot be taken literally since it was written to create a special effect or feeling
- **figure of speech** – literary device used to create a special meaning through emotional use of words
    - hyperbole – exaggeration or overstatement

  - metaphor – comparison of two unlike things in which no words of comparison are used
  - simile – comparison of two unlike things in which a word of comparison such as *like* or *as* is used
  - symbol – a concrete object used to represent an idea
- **focus –** concentrating on a specific subject to give it emphasis or clarity
- **generalization –** idea or statement that emphasizes the general characteristics rather than the specific details of a subject
- **genre –** French word often used as a synonym for *form* or *type* when referring to literature; the novel, essay, and poem are three main genres or forms of literature
- **idiom (idiomatic expression) –** fixed expression with non-literal meaning; natural way of using language
- **illustrate –** show by means of a picture, a diagram, or some other graphic aid
- **image –** mental picture created for the reader by a skillful choice of words
- **interpret –** explain, translate, or show a specific application of a given fact or principle
- **irony –** using a word or phrase to mean the exact opposite of its literal or normal meaning
- **justify –** tell why a position or point of view is good, right, or proper
- **list –** formal numbering or sequencing
- **logic –** science of correct reasoning, correctly using facts, examples, and reasons to support your point
- **modifier –** word, phrase, or clause that limits or describes another word or group of words
- **narrator –** person or character who tells the story
- **narration –** writing that tells a story or recounts an event
- **objective –** relating information in an impersonal manner; without feelings or opinions
- **observation –** paying close attention to people, places, things, and events to collect details for later use
- **overview –** general idea of what is being covered in a piece of writing
- **paradox –** statement that is seemingly contrary to common sense; yet the statement is, in fact, true
- **parts of speech –** grammatical category or word group in a language to which words may be assigned on the basis of how they are used in sentences; the traditional main parts of speech in English are
  - **noun –** naming word; a word or group of words used as the name of a class of people, places, or things, or of a specific person, place, or thing, e.g. *president, White House, inauguration*

    Example of a noun used in a sentence: The *president* walked into the *White House*.
  - **verb –** word indicating action or state; a word used to show that an action is taking place or to indicate the existence of a state or condition, e.g. *walked, is*

    Example of a verb used in a sentence: The president *walked* into the White House.
  - **adjective –** word describing noun; a word that describes or qualifies a noun or pronoun, e.g. *key, this*

    Example of an adjective used in a sentence: Students are able to quickly identify *key* information in texts.
  - **adverb –** word modifying a verb or adjective; a word that modifies a verb, an adjective, another adverb, a sentence, e.g. *quickly, very*

    Example of an adverb used in a sentence: Students are able to *quickly* identify key information in texts.
  - **pronoun –** word replacing noun; a word that substitutes for a noun or a noun phrase, e.g. *I, you, them, it, ours, who, which, myself,* and *anybody*; English pronouns differ from nouns in sometimes having an objective form, e.g. *her* for *she* and *me* for *I*

Example of a pronoun used in a sentence: *She* made sure to tell *him* the best directions.

- **preposition –** word used before noun; a member of a set of words used in close connection with, and usually before, nouns and pronouns to show their relation to another part of a clause, e.g. *in, on, off, to, under*

  Example of a preposition used in a sentence: The boy fell *off* his bike, but he was not hurt.
- **conjunction –** connecting word; a word that is used to link sentences, clauses, phrases, or words, e.g. *and, but, if*

  Example of a conjunction used in a sentence: The boy fell off his bike, *but* he was not hurt.
- **interjection –** exclamation expressing emotion; a sound, word, or phrase that expresses a strong emotion such as pain or surprise but otherwise has no meaning, e.g. *wow*

  Example of an interjection used in a sentence: *Gosh,* that dog looks hungry.

- **persuasion –** writing that is meant to change the way the reader thinks or acts
- **point of view –** perspective of the narrator; the vantage point from which the story is told:
  - first-person point of view – the story is told by one of the characters and will include the pronoun *I*
  - third-person point of view – the story is told by someone outside the story and will include the pronoun, *he, she,* or *they*
- **prove –** give evidence, to present facts, to use logic as a base for clear, forthright argumentation
- **purpose –** specific reason a person has for writing; the goal of writing
- **relate –** show how two or more things are connected or similar
- **setting –** time and place in which the action of a literary work occurs
- **state –** to say; to present a brief, concise statement of a position, fact, or point of view
- **structure –** form or organization a writer uses for his literary work
- **style –** how the author writes, rather than what the author writes
- **subjective –** thinking or writing that includes personal feelings, attitudes, and opinions
- **summarize –** present the main points of an issue in condensed, shortened form; details, illustrations, and examples are not given
- **supporting idea –** a fact that provides more information about a main idea
- **symbol –** something used to represent something else
- **symbolism –** figurative language in which an object, person, or event represents a larger, more abstract idea
- **synonym –** one of two or more words or expressions that have the same or similar meaning
- **theme –** central idea in a piece of writing (lengthy writings may have several themes); a term used to describe a short essay
- **time order –** explaining the order of events
- **tone –** attitude or feeling that a piece of writing conveys; the attitude of the author toward his audience and characters; a writer's tone can be serious, sarcastic, tongue-in-cheek, solemn, objective, etc.
- **transitions –** words or phrases that help the ideas together

APPENDIX B

MATHEMATICAL GLOSSARY & REVIEW

MATHEMATICAL GLOSSARY AND REVIEW

This appendix contains a glossary of mathematical topics, terms, phrases and symbols that you should be familiar with as a paraeducator. The terms may assist you in preparing for the KPA.

Acute Angle – an angle that has less than 90 degrees

Adding Decimal Numbers – add a collection of decimal numbers

1. Write the decimal numbers in a column with the decimal points vertically aligned.
2. Add enough zeroes to the right of the decimal point so that every number has a place holder in each column to the right of the decimal point.
3. Add the numbers the same way as whole numbers.
4. Place a decimal point in the sum so that it is directly beneath the decimal points in the decimal numbers added.

Adding Fractions – with fractions that have the same denominator, the denominator is known as the *common denominator*

Add the numberators, and use this sum as the new numerator, retaining the common denominator as the denominator of the new fraction. Simplify the new fraction to lowest terms using the technique outlined in **Simplifying Fractions to Lowest Terms**.

If the fractions do not have the same denominator, you must find a common denominator. One method is to multiply the denominators together. Once you have found a common denominator, then express each fraction as an equivalent fraction with the common denominator, and add as you did when the fractions had the same denominator.

Example: $\frac{1}{2}+\frac{1}{3}+\frac{3}{8}=$

$2\cdot 3\cdot 8=48$

$\frac{1}{2}=\frac{24}{48}$

$\frac{1}{3}=\frac{16}{48}$

$\frac{3}{8}=\frac{18}{48}$

$\frac{24}{48}+\frac{16}{48}+\frac{18}{48}=\frac{58}{48}=\frac{29}{24}=1\frac{5}{24}$

Adding Signed Numbers – three different cases of adding signed numbers

Case I: Adding *Same Signed* numbers:

1. The sign of the sum is the same as the sign of the numbers being added.
2. Add the absolute values (the distance of the number from 0)
3. Put the sign from Step 1 in front of the number you obtained in Step 2.

Case II: Adding two numbers with *Different Signs*:

1. The sign of the sum is the sign of the number that is largest in absolute value.
2. Subtract the absolute value of the number with the smaller absolute value from the absolute value of the number with the larger absolute value.
3. The answer is the number you obtained in Step 2 preceded by the sign from Step 1.

Case III: Adding more than two numbers with *Different Signs*:

1. Add all the positive numbers; the result is positive (as in Case I).
2. Add all the negative numbers; the result is negative (as in Case II).
3. Add the result of Step 1 to the result of Step 2 by using Case II

Algebra – a branch of mathematics in which symbols are used to represent numbers and express mathematical relationships.

Algebraic Expressions – an algebraic expression consists of one or more variables
It usually contains some constants and one or more operations. A letter in an algebraic expression always stands for a number. Therefore, you can add, subtract, multiply, divide, and perform other mathematical operations on a letter.

Examples: $2x + y$; $5x + 2y$ $(6x - 4y + z)$. When letters or numbers are written together without any sign or symbol between them, then multiplication is assumed. Thus 6xy means 6 times x times y.

Area – the number of square units in a region; the area of a rectangle equals length times width.

Arithmetic – a branch of mathematics where problems are solved by calculating with numbers, using any one or a combination of the operations of addition, subtraction, multiplication, and division.

Average (mean) – the average or mean of N numbers is the sum of the N numbers divided by N

Example: To determine a student's average grade for a specific course during a 9-week period, you could add the test scores together and divide by the number of tests given.

Bar Graphs – vertical and horizontal bars used to represent quantities
It is essential that all labels and legends are read, with the base and sides of the graph carefully reviewed, to determine what the bars are measuring and how much they are increasing or decreasing. Before answering any questions, familiarize yourself with the graph and what it means.

Circumference – the perimeter of a circle
The formula is πd or 2πr, where d is the length of diameter and r is the length of a radius.

Example: If O is the center of a circle and $\mathrm{OP} = 5$ feet, then the circumference of the circle is $2 \cdot 5\pi$ or 10π feet.

Composite Number – integer that has more than 2 factors

Example: 10 is a composite number because its factors are 1, 2, 5, and 10

Consecutive integers – integers in sequence, such as 3, 4, 5, or -1, 0, 1
They can be represented in general as n, $n + 1$, $n + 2\ldots$ (where n is any integer).

Data Organization and Interpretation – the interpretation of graphs, tables, stem-and-leaf plots, scatters plot, and other visual displays of data

Decimal – a whole number plus a decimal fraction
The decimal point separates the whole number from the decimal fraction.

Decimal Fraction – a collection of digits after a period known as the *decimal point*

Example: .503, 7.50, and 2.5 are known as decimal fractions. Every *decimal fraction* represents a fraction. To find the fraction, remember the following:

1. The denominator is $10 \cdot 10 \cdot 10 \ldots \cdot 10$. The number of 10's is equal to the number of digits to the right of the decimal point.
2. The numerator is the number represented by the digits to the right of the decimal point.
   Example: .503 is represented by the following fraction: $\frac{503}{1000}$

Denominator – the bottom number of a fraction that tells you how many equal parts there are in the whole

Dilation (Reducing or Enlarging) – moving a geometric figure by reducing or enlarging

Distance Problems – basic formula to determine distance: $\text{Distance Traveled} = \text{Rate} \cdot \text{Time}$

The distance an object travels is the product of its average speed, or rate, and the time it is traveling. This formula can be readily converted to express time in terms of distance and rate by dividing each side by Rate: $\text{Time} = \frac{\text{Distance}}{\text{Rate}}$

It can also be converted to determine Rate by dividing Distance by Time: $\text{Rate} = \frac{\text{Distance}}{\text{Time}}$

Dividing Decimals – divide one decimal, known as the dividend, by another decimal, known as the divisor

Example: $2.4 \div 0.3$

1. Move the decimal point in the divisor to the right until there is no decimal fraction in the divisor.
   $2.4 \div 3$
2. Move the decimal point in the dividend the same number of places to the right as you moved the decimal in Step 1.
   $24 \div 3$
3. Divide the result by Step 2 by the result of Step 1 as they were whole numbers.
   $24 \div 3 = 8$
4. The number of decimal points in the result, also known as the quotient, should be equal to the number of decimal places in the result of Step 2.

Dividing Fractions – divide one fraction, known as the dividend, by another fraction, known as the divisor

Invert the divisor and multiply (to invert a fraction, turn it upside down).

Example: $\frac{3}{4}$ would become $\frac{4}{3}$. Use the following steps to assist in dividing fractions:

Step 1: Invert (turn upside down) the second fraction in the problem. Convert to a multiplication problem.

$$\frac{3}{8} \div \frac{3}{4} = \frac{3}{8} \cdot \frac{4}{3}$$

Step 2: Multiply the numerators and the denominators.

$$\frac{3}{8} \cdot \frac{4}{3} = \frac{12}{24}$$

Step 3: Simplify, if necessary.

$$\frac{12}{24} = \frac{1}{2}$$

Even Number – Any integer divisible by 2; that is, $0, \pm 2, \pm 4, \pm 6, \pm 8$ ...

Exponent – in the expression x^n (read: x to the nth power), n is the exponent

The exponent tells how many times to use the base number as a factor.

Example: $3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$

Factor – a factor of an integer is a divisor of that integer

Example: 1, 3, 5, and 15 are factors of 15, but 2 is not a factor of 15 (-1, -3, -5, and -15 are, however, factors of 15). Zero is not a factor of an integer.

Fraction – a number that represents a ratio or division of two numbers

A fraction is written in the form of $\frac{a}{b}$. The number on the top is called the *numerator*; the number on the bottom is called the *denominator*. The denominator tells how many equal parts there are and the numerator tells how many of these equal parts are taken. A fraction cannot have 0 as a denominator since division by 0 is not defined. A fraction with 1 as the denominator is the same as the whole number that is the numerator.

Geometry – includes spatial relationships such as parallel and perpendicular lines, intersections of sets of points (a line and a circle, for example). and order along a path; properties of common geometric figures (rectangles and cubes, for example); special triangles (isosceles, equilateral, and right); locating points on a coordinate grid

Glide Reflection (Slide and flip) – moving a geometric figure by sliding and then flipping

Integers – whole numbers and their opposites …-4, -3, -2, -1, 0, 1, 2, 3, 4…

Interest and Discount – two of the most common uses of percent are in calculating interest and discount problems
The rate of interest is generally given as a percent.

Basic formula for interest problems: $\text{Interest} = \text{Amount} \cdot \text{Time} \cdot \text{Rate}$
Basic formula for discount problems: $\text{Discount} = \text{Cost} \cdot \text{Rate of Discount}$
Calculate the rate of discount with the following formula: $\text{Rate of Discount} = \frac{\text{Cost}-\text{Price}}{\text{Cost}}$

Mean (See average).

Measurement – using various units to assign numerical values to properties of objects, such as length, weight, and so on
There are two basic systems of measurement in the United States: customary and metric

Median – (if a group of numbers is arranged in order) the middle number if N numbers are odd and the average of the two middle numbers if N is even

Mixed Numbers – consist of a whole number and a fraction

Example: $6\frac{1}{2}$ is a mixed number

The following steps should be used to change a mixed number into a fraction:

1. Multiply the whole number by the denominator of the fraction. (Using $6\frac{1}{2}$ as the mixed number you would multiply $6 \cdot 2$).
2. Add the numerator of the fraction to the result of 1 above. $(12 + 1)$
3. Use the result of Step 2 as the numerator, and use the denominator of the fractional part of the mixed number as the denominator. This fraction is equal to the mixed number. $(\frac{13}{2})$

A fraction whose numerator is larger than its denominator can be changed into a mixed number using the following steps:

1. Divide the denominator into the numerator; the result is the whole number of the mixed number. $(\frac{13}{2} = 6)$
2. Put the remainder from Step 1 over the denominator; this becomes the fractional part of the mixed number. $(\frac{1}{2})$ The mixed number will be written as $6\frac{1}{2}$.
   In calculations with mixed numbers, change the mixed numbers into fractions.

Mode – the number or numbers that occur the most often in a set of data

Multiple – the product of an integer and another integer
Some multiples of 4 are -8, -4, 0, 4, 8, 12, and 16, but 2 is not a multiple of 4 (2 is, however, a factor of 4)

Multiplying Decimal Numbers – multiple decimal numbers like whole numbers
The decimal point of the product is placed so that the number of decimal places in the product is equal to the total number of decimal places in all of the numbers multiplied.

Multiplying Fractions – multiply the numerators to form the numerator of the product; multiply the denominators to form the denominator of the product

Example: Nathan contributes $\frac{1}{10}$ of \$950 to his favorite charity on a monthly basis. How much does Nathan contribute?

$$\frac{1}{10} \cdot \frac{950}{1} = \frac{950}{10} = \$95$$

Multiplying Numbers Expressed in Scientific Notation – multiply numbers expressed in scientific notation using the steps below

In scientific notation, a positive number is written as the product of a number greater than or equal to 1 and less than 10 and an integer power of 10.

Example: $(4.1 \times 10^2)(3.8 \times 10^4)$

Step 1: Multiply the non-exponential terms in the usual way.

$(4.1 \cdot 3.8) = 15.58$

Step 2: Multiply the exponential terms by adding their exponents.

$(10^{-2} \cdot 10^4) = 10^2$

Step 3: Write your answers to Steps 1 and 2 in an equation:

$(15.58)(10^2) = 15.58 \times 10^2$

Step 4: Express you result in a scientific notation by moving your decimal point one place to the left and add one to the exponent, resulting in:

1.558×10^3

Multiplying Signed Numbers – two different cases when multiplying signed numbers

Case I: Multiplying two numbers:

1. Multiply the absolute values of the numbers.
2. If both numbers have the same sign, the result of Step 1 is the answer and the product is positive. If the numbers have different signs, the result of Step 1 becomes negative.

Case II: Multiplying more than two numbers:

1. Multiply the first two factors using Case I.
2. Multiply the result of Step 1 by the third factor.
3. Multiply the result of Step 2 by the fourth factor.
4. Continue until you have used each factor.

Negative Integers – the numbers -1, -2, -3, -4…

Numerator – the top number of a fraction that tells you how many parts you have

Obtuse Angle – an angle that is greater than 90 degrees

Odd Numbers – the numbers $\pm 1, \pm 3, \pm 5, \pm 7$ ...

Order of Operations – an order to solving a problem that asks you to do addition, subtraction, multiplication, division, exponents, and some work in parentheses

Use the following steps:

Step 1: Do all the operations with parentheses first

Step 2: Simplify all numbers with exponents

Step 3: Multiplication and Division in order from left to right

Step 4: Addition and subtraction in order from left to right

Percent – another method of expressing fractions or parts of an object

Percents are expressed in terms of hundredths, so that 100% means 100 hundredths or 1. A decimal is converted into a percent by multiplying the decimal by 100. To convert a percent into a decimal, divide by 100 which will move the decimal point two places to the left. A fraction is converted into a percent by changing the fraction to a decimal and then changing the decimal to a percent. A percent is changed into a fraction by first converting the percent into a decimal and then changing the decimal to a fraction.

Perimeter – the distance around the outside of a shape or figure

Positive Integers – the numbers 1, 2, 3, 4…

Prime Number – an integer that has exactly two different positive divisors, 1 and itself

Example: 2, 3, 5, 7, 11, 13 (1 is neither prime nor composite because it has only one factor. The only even prime number is 2)

Probability – the chance of an event occurring

Probability can be expressed as a decimal, percent, fraction or ratio. The number of favorable outcomes divided by the total number of all possible outcomes determines the probability of an event.

Proportion – a statement that two ratios are equal

In a proportion, the product of the extremes is equal to the product of the means.

Ratio – a comparison of two numbers by division

The ratio of *a* to *b* is written as a:b or a/b. Ratios may be handled as fractions, and b can never be zero. To find the ratio of two quantities, the numbers must represent the same units. If two numbers measure different quantities, their quotient is usually called a rate.

Rectangular Prism – a solid with two parallel congruent rectangular bases and with rectangular lateral sides

Reflection (Flip) – moving a geometric figure by flipping

Right Angle – an angle that is exactly 90 degrees

Rotation (Turn) – moving a geometric figure by turning

Scientific Notation – a method used by scientists to covert very large or very small numbers to more manageable ones

To convert a very large number, use the following steps:

Example: 96,000,000

Step 1: Starting at the "imaginary" decimal point to the right of the last zero, move the decimal point until only one digit remains to the left.

96,000,000 becomes 9.6

Step 2: Count the number of places the decimal was moved left. It is 7 places, which is expressed as:

10^7

Step 3: Express the full answer in scientific notation this way:

$96{,}000{,}000 = 9.6 \times 10^7$

To convert a very small number, use the following steps:

Example: .000075

Step 1: Move the decimal point to the right until there is one digit other than zero to the left of the decimal.

.000075 becomes 7.5

Step 2: Count the number of places the decimal was moved right. It is 5, which is expressed using a negative sign with the exponent:

10^{-5}

Step 3: Express the full answer in scientific notation this way:

$.000075 = 7.5 \times 10^{-5}$

Signed Number – a number preceded by either a plus or a minus sign

If a sign (+ or -) is not given, the plus sign is assumed.

Simplify a Fraction to Lowest Terms – a fraction is reduced to lowest terms when the numerator and denominator have no common factors

Example: $\frac{1}{2}$ is reduced to lowest terms, but $\frac{2}{4}$ is not because 2 is a common factor of 2 and 4.

Simplifying Algebraic Expressions – two general methods for simplifying algebraic expressions

Case I: Simplifying expressions without parentheses

1. Perform any multiplications or divisions before performing additions or subtractions. The expression $6x + \frac{y}{x}$ means add 6x to the quotient of y divided by x.
2. The order in which you multiply numbers and letters in a term does not matter, so 6xy is the same as 6yx.
3. The order in which you add terms does not matter, for example: $6x - 2y - x = 6x - x + 2y$
4. If there are roots or powers in any terms, you may be able to simplify the term by using the law of exponents (see **Exponents of this section**). Example: $5xy \cdot 3x^2y = 15x^3y^2$
5. Combine like terms. Like terms are terms that have exactly the same letters raised to the same powers. In combining terms, you simply add or subtract the coefficients of the like terms and the result is the coefficient of that term in the simplified expression.

Case II: Simplifying expressions with parentheses:

1. Perform the operations inside the parentheses before doing the others.
2. Use the distributive law to remove the parentheses.
3. Proceed with the steps found in Case I to determine the answer.

Subtracting Decimal Numbers – subtract one decimal number from another

1. Put the decimal numbers in a column so that the decimal points are vertically aligned.
2. Add zeros so that every decimal has a place holder in each column to the right of the decimal point.
3. Subtract the numbers as you would whole numbers.
4. Place the decimal point in the result so that it is directly beneath the decimal points of the numbers subtracted.

Subtracting Fractions – when fractions have the same denominator, subtract the numerators and place the result over the denominator

When fractions have different denominators, use the following process to complete the subtraction:

1. Find a common denominator.
2. Express each fraction as an equivalent fraction with the common denominator.
3. Subtract the numerators and place the result over the denominator.

Subtracting Fractions (Renaming) – to subtract mixed numbers you must be able to rename the fraction as a whole number plus a fraction

Complete the following process when renaming in mixed numbers:

Example: $5\frac{3}{8} - 2\frac{7}{8}$

You will need to borrow from the column to the left, just as you do when working with whole numbers. You will borrow 1 from 5 which becomes 4, and then convert the borrowed 1 into a fraction that is $\frac{8}{8}$. Add the borrowed $\frac{8}{8}$ to the $\frac{3}{8}$, which now becomes $\frac{11}{8}$. Then complete the subtraction process.

$5\frac{3}{8} - 2\frac{7}{8} =$

$4\frac{8}{8} + \frac{3}{8} = 4\frac{11}{8}$

$4\frac{11}{8} - 2\frac{7}{8} =$

$2\frac{4}{8} =$

$2\frac{1}{2}$

Subtracting Signed Numbers – use these steps when subtracting signed numbers

1. Change the sign of the number you are subtracting (the number to the right of the subtraction sign)
   Example: 5— 3 would change to 5 + 3
2. Add the result of Step 1 to the number being subtracted using the rules of **Adding Signed Numbers**.

Symbols

= is equal to	< is less than	≤ is less than or equal to
≠ is not equal to	> is greater than	≥ is greater than or equal to
· or x is multiplication	÷ or / is division	‖ is parallel to

Translation (Slide) – moving a geometric figure by sliding

Volume – the measure of the interior of a space (three dimensional) figure
A unit for measuring volume is the cubic unit.

APPENDIX C

ACRONYMS & GLOSSARY

Kentucky Department of Education

ACRONYMS

This appendix contains acronyms and a glossary of terms you may encounter as a paraeducator. The terms will **not** be covered on the KPA.

A

ADA Average Daily Attendance
ADD Attention Deficit Disorder
ADHD Attention Defiicit Hyperactivity Disorder
ARC Admissions and Release Committee

C

CATS Commonwealth Accountability System
CDC Centers for Disease Control
CDIP Comprehensive District Improvement Plan
CEC Council for Exceptional Children
CIP Comprehensive Improvement Planning
CSIP Comprehensive School Improvement Plan

D

DAC District Assessment Coordinator
DOK Depth of Knowledge

E

EBD Emotional Behavior Disorder
ELL English Language Learner
ELP English Language Proficiency
EPSB Education Professional Standards Board
ESEA Elementary and Secondary Education Act
ESL English as a Second Language
ESS Extended School Services

F

FRYSC Family Resource and Youth Services Center

G

GSSP Gifted Student Services Plan

H

HSE Highly Skilled Educator

I

IC Infinite Campus
IDEA Individuals with Disabilities Education Act
IECE Interdisciplinary Early Childhood Education
IEP Individual Education Plan
IFSP Individual Family Service Plan
IGP Individual Graduation Plan

K

KAC Kentucky Arts Council
KAGC Kentucky Association of Governmental Communicator
KAGE Kentucky Association for Gifted Education
KAMC Kentucky Accessible Materials Consortium
KAR Kentucky Administrative Regulation
KBE Kentucky Board of Education
KEA Kentucky Education Association
KEES Kentucky Educational Excellence Scholarship (handled by KHEAA)
KELP Kentucky Early Learning Profile
KEPS Kentucky Educator Placement System
KERS Kentucky Employees Retirement System
KET Kentucky Educational Television
KETS Kentucky Education Technology System
KHEAA Kentucky Higher Education Assistance Authority
KIDS Kentucky Instructional Discipline Support
KIRIS Kentucky Instructional Results Information System
KRS Kentucky Revised Statute
KSB Kentucky School for the Blind (Louisville)
KSBA Kentucky School Boards Assocation
KSD Kentucky School for the Deaf (Danville)
KTIP Kentucky Teacher Internship Program
KTRS Kentucky Teachers Retirement System
KVHS Kentucky Virtual High School
KVL Kentucky Virtual Library

L

LEA Local Education Agency
LEAD Leadership for Educational Achievement in Districts
LEP Limited English Proficiency
LMC Library Media Center
LMS Library Media Specialist
LRC Legislative Research Commission

M

MEP Migrant Education Program (Title I, Part C)
MUNIS Municipal Information Systems

N
NAEP National Assessment of Education Progress
NBCT National Board Certified Teacher
NCLB No Child Left Behind
NELB Non-English Language Background

P
PAC Parent's Advisory Council
PL/VS Practical Living/Vocational Studies
PRAXIS I, II, III A Series of Content Area Teacher Exams

S
SBDM School Based Decision Making
SEEK Support Education Excellence in Kentucky
SISI Standards and Indicators for School Improvement
STI Software Technology Incorporated
STLP Student Technology Leadership Program

T
TRT Technology Resource Teachers
TSA Technology Student Association

U
UDL Universal Design for Learning
USDOE United States Department of Education

Kentucky Department of Education
GLOSSARY

A

ACT Assessment – a common college admissions test

ADA (Average Daily Attendance) – the average of a set number of months' attendance, used to determine funding

Alternative schools – schools that serve students who are not succeeding in the traditional public school environment due to academic problems, learning disabilities or behavioral problems

Assessment – an exercise—such as a written test, portfolio, or experiment—that seeks to measure a student's skills or knowledge in a subject area

At-risk – a student with socioeconomic challenges that place him or her at a disadvantage in achieving academic, social, or career goals

Authentic assessment – assessment that is authentically connected to instruction

B

Basic skills – the traditional building blocks of a curriculum that are most commonly associated with explicit instruction in early elementary language arts and mathematics, including teaching the letters of the alphabet, how to sound out words, spelling, grammar, counting, adding, subtracting and multiplying

Block scheduling – rearranging time within the six-hour instructional day

C

CATS (Commonwelath Accountability Testing System) – the state's assessment and accountability system, mandated by the 1998 General Assembly

Continuous progress – a student's unique progression through the primary program at his or her own rate without being compared to others in the program and without links to age or number of years in school

Cooperative learning – a method of instruction that encourages students to work in small groups, learning material then presenting what they have learned to other small groups

Core content – content that has been identified as essential for all students to know and that will be included on the state assessment; the content is used with Kentucky's Academic Expectations to provide parameters for test developers as they design the assessments, including multiple choice, open response, and both on-demand writing and writing portfolios.

Curriculum – the subject matter that schools plan for and students experience in classroom and other learning environments

Comprehensive Improvement Planning – (formerly called Consolidated Planning) a process that integrates instructional improvement with student learning results

CTBS – the Comprehensive Test of Basic Skills, which is a component of Kentucky's assessment and accountability system. CTBS tests are given to students in EP (exiting primary or 3rd grade), 6th and 9th grades and assess reading, language arts and mathematics.

D

Distance learning – the use of telecommunications technologies, including satellites, telephones and cable-television systems, to broadcast instruction from one central site to one or more remote locations

E

ELL – English language learner is a student whose first language is not English and who is in the process of learning English. As a group, ELLs represent one of the fastest-growing groups amount the school-aged population in the nation.

Enrichment programs – programs intended to supplement the regular academic curriculum for students to optimally meet the needs of every student

ESL – English as a Second Language, a program that provides instruction for students whose first language is not English

ESS (Extended School Services) – programs providing additional instruction and support through longer days, weeks or years for students who are at risk of not meeting academic expectations

F

FRYSC (Family Resource/Youth Services Center) – center established in or near schools where at least 20 percent of students qualify for free or reduced-price meals. Family resource centers serve elementary schools; youth services centers serve middle and high schools. Centers provide resources and referrals for students and families.

G

Growth Factor Report – attendance information reported by school, grade level and transportation code

H

High Schools That Work – a cooperative effort with the Southern Regional Education Board that integrates challenging academic courses and modern vocational studies to raise the achievement levels of career-bound high school students

Highly Skilled Educators (HSE) – a voluntary assistance program that is part of the new Commonwealth Accountability Testing System (CATS). The HSEs are teachers, administrators and other certified staff who support improved teaching and learning; help school staff who support improved teaching and learning; help school staffs align curriculum with core content, the new assessment, best practices and national standards; advise

school staffs on techniques to meet the CATS improvement goals; advise school staffs on developing, implementing and monitoring the school improvement plan and expenditure of monies from the Commonwealth School Improvement Fund; and build capacity among school staffs.

I

IEP – Individual Education Program, a process that outlines educational goals and recommendations, primarily for students with special needs

IGP – Individual Graduation Plan, a process that outlines the unique set of steps to graduation for individual students

Inclusion – the practice—sometimes called "full inclusion"—of educating children with disabilities alongside their non-disabled peers, often in a regular classroom. The Individuals with Disabilities Education Act (IDEA) requires that disabled children be educated in the "least restrictive environment" possible.

K

KERA (Kentucky Education Reform Act) – the systematic overhaul of the state's K-12 public education system, passed in 1990

KETS (Kentucky Education Technology System) – the statewide technology network that links schools, districts, government agencies, state libraries, the Internet and other resources

KIRIS (Kentucky Instructional Results Information System) – the statewide assessment and accountability sstem from 1990 to 1998

L

LEP – Limited English Proficiency, which describes students who come from a non-English language background and who have limited knowledge of English; federal legislation defines students with limited English proficiency[1] as children who

- Are aged 3 through 21;
- Are enrolled or preparing to enroll in an elementary school or secondary school;
- Were not born in the United States or whose native language is a language other than English;
- Are a Native American or Alaska Native, or a native resident of the outlying areas, and come from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency or
- Are migratory, whose native language is a language other than English, and who come from an environment where a language other than English is dominant; and
- Have difficulties in speaking, reading, writing, or understanding the English language that may be sufficient to deny the individual-
    - The ability to meet the state's proficient level of achievement on state assessments;
    - The ability to successfully achieve in classrooms where the language of instruction is English; or
    - The opportunity to participate fully in society.

[1] The term 'limited English proficient' has been defined in Title IX of the Elementary & Secondary Act as reauthorized by the No Child Left Behind Act under the General Provisions Part

M

Magnet schools – schools that place special emphasis on academic achievement or on a particular field such as science, designed to attract students from elsewhere in the school district

Matrix – the surrounding environment

MAX – Enterprise Data System

Migrant education – education programs established mainly to meet the needs of children of farm laborers, who often face such challenges as poverty, poor health care and the readjustments of moving often from school to school

Multi-age/multi-ability grouping – grouping children who have been in school different numbers of years in the same classroom

Multicultural education – interdisciplinary, cross-curricular education that prepares students to live and work in a diverse world

N

Non-cognitive data – data used in the statewide assessments that is not academic, including attendance, retention, and dropout and successful transition to adult life rates

O

OEA (Office of Education Accountability) – an office in the Legislative Research Commission that monitors school reform

P

Performance-based assessment – requires students to perform tasks, such as writing an essay or conducting a science experiment

Performance levels – the four levels at which students may perform (novice, apprentice, proficient and distinguished)

PERKS Portfolio – a collection of a student's best work throughout his or her school years that is included in the scoring of the statewide assessments

PSAT/NMSQT – Preliminary Scholastic Achievement Test/National Merit Scholarship Qualifying Test, often described as rehearsal for the SAT. The NMSQT is used to select students for National Merit Scholarships and the National Assistance Scholarship Program for Outstanding Negro Students. The tests may be given together or separately.

R

Reading First – a federal initiative within the Elementary and Secondary Education Act: No Child Left Behind to improve reading for primary age (K-3) children throughout the state (Title I, Part B, Subpart 1)

Rubric – a model, rule, custom, or guidance establishing performance levels

S

SAT – Scholastic Achievement Test, which many colleges and universities require for admission

School-based decision making – a system of governance at each school composed of the principal, three teachers and two parents who make decisions regarding the day-to-day running of the school, including calendars, instructional materials, hiring of the principal, extracurricular programs and other items

School-to-Work – a system of school-based learning, work-based learning and connecting activities that is created by partnerships between education, employers, government and economic development agencies

SEEK (Support Education Excellence in Kentucky) – the state's school funding program, which provides money to schools through state and local taxes

Service learning – programs in which students perform community service to develop knowledge, skills and citizenship values

Standards – subject-matter benchmarks to measure students' academic achievement

T

Title I – the nation's largest federal education program that provides supplemental educational funds to schools with disadvantaged children (Title I, Part A)

Title III – federal program under ESEA for language and academic instruction of limited English proficient (LEP) and immigrant students

Title IX – bars gender discrimination in education facilities that receive federal funds

Title VII – a federal program to make limited-English proficient students proficient in the English language

Y

Year-round scheduling – also known as alternative calendar scheduling, this program rearranges the traditional school calendar to provide college-semester-like breaks every nine weeks of school. Students do not actually attend school for more days than in a traditional calendar.

APPENDIX D

ENGLISH LANGUAGE LEARNERS

ENGLISH LANGUAGE LEARNERS

This appendix contains information about English language learners (ELLs) that may assist you as a paraeducator. The information will **not** covered on the KPA.

COMMON MYTHS ABOUT ELLS AND LANGUAGE LEARNING

Myth 1: Learning two languages during the early childhood years will overwhelm, confuse and/or delay a child's acquisition of English.

No, sometimes preschoolers insert their home language into their English sentence or they may go back and forth between the languages in conversations with their peers. This "code switching" is not a sign that they are confused. Children may switch between languages because they feel that a word in one language better fits their communication needs or because they don't yet have the exact word in the new language.

Learning a language is a huge task; however, many young children throughout the world learn more than one language. Our brains are wired for language. Recent brain research has shown that learning two languages during early years is doable. Children are able to separate out each language and distinguish which context to use each language. In fact, there is increased brain activity related to language processing with dual language learners. Speaking more than one language does not delay learning English when both languages have support (Espinosa, 2008).

Myth 2: Total English immersion in preschool and kindergarten is the best way for young English language learners to learn English.

While this may be true for older students and adults who have mastered the fundamentals of language, this isn't true for younger students. Research has shown that young children in English immersion programs who have not yet mastered the elements of their first language struggle. This "sink or swim" strategy has been shown to have a negative effect upon children's English fluency and academic achievement. Also, children may lose their ability to communicate in their first language, posing communication problems with their families with negative cultural effects. One example of this is children who learn English in one generation and refuse to speak their home language, which could result in their not being ablt to communicate with family members.

Myth 3: ELLs are so-called "border crossers/"

More than half of children in schools identified as ELLs were born in the United States. Currently children defined as second-generation students, or those children born in the United States to at least one immigrant parent, make up approximately 23% of the children in the US. (Flannery, 2009).

Myth 4: Immigrants don't want to learn English.

Even though some immigrants may lack education, they may also lack the opportunity to go back to school to advance their education. Some immigrants are wary of the educational system in the United States, especially if they do not have legal status as immigrants and do not want to accept services. Others may be working long hours and are not able to attend classes offered by the community (Flannery, 2009).

Myth 5: You can't get families involved in their children's education.

Many of the families value education for their children, which is why many of them relocated to the United States. They may have cultural differences, such as the belief that their job at home is to make sure the children are fed, clothed and have good manners. Some cultures believe the role of the teacher is to educate the children, and they do not want to interfere with the teacher's role. Many families are uncomfortable when teachers express the idea of becoming partners in their child's education. Also it's important to understand that some immigrants

may lack formal education or they may have had a negative experience with school. It is the teacher's role to help the family members feel comfortable in the school environment (Flannery, 2009).

Myth 6: These newcomers all want to live in a community with others from their native country; they don't "fit in."

Even though many newcomers may live in neighborhoods close to others who speak the same language, most immigrants want to be in the United States to have a new opportunity for themselves and their children. Many are eager to learn English and become assimilated. Even though they may start off speaking their home language, often the home language is lost within one generation. Many second generation children usually use English as their language of choice even at home (Flannery, 2009).

FREQUENTLY ASKED QUESTIONS ABOUT ENGLISH LANGUAGE LEARNERS (ELLs)

1. **What is the definition of a Limited English Proficient (LEP) student? An immigrant student? Can a student be both?**
   Yes, a student may be both an immigrant and a LEP student (also called English language learner, or ELL). The term **'limited English proficient'** has been defined in the Title IX of the Elementary and Secondary Education Act as reauthorized by No Child Left Behind as an individual who is aged 3 through 21; who is enrolled or preparing to enroll in an elementary school or secondary school; who was not born in the United States or whose native language is a language other than English; who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the ability to successfully achieve in classrooms where the language of instruction is English. An **immigrant** students who is one who is aged 3 through 21, was not born in the United States, and who has not been attending one or more schools in the United States for more than three full academic years.

2. **What is the Home Language Survey (HLS) and why is it necessary?**
   All local school districts are required to administer a home language survey to students enrolled in the district as a first screening process to identify students with limited English language proficiency, the W-APT. The results of the W-APT and the instructional plan (Program Services Plan/PSP) must be **shared with the parents within the <u>first 30 days</u> of the school year or <u>within two weeks</u> of enrollment during the school year**. Written documentation and/or oral interpretation should be provided to parents/guardians, to the extent practical, in a language that they can understand.
   A district or school **PSP committee** (e.g., ELL and mainstream teachers/specialists, an instructional leader, counselor, parent, student) must design a PSP for each student identified as LEP. The PSP should include the following: the reasons for identification (results of the W-APT and, when appropriate, annual language assessment), level of English proficiency, previous academic background and experience, cultural and language history, service delivery model/s for English language instruction, and all appropriate instructional and assessment accommodations and/or modifications. The PSP should be shared with all stakeholders involved in the ELL's academic and language education to guide placement and instruction and consistently monitored for updating. Individualized accommodations used for state testing must be implemented throughout the instructional year and evaluated for appropriateness or revision <u>at least</u> once a year, using the annual ***ACCESS*** results.

3. **What is the W-APT assessment and when is it administered?**
   The ***WIDA ACCESS Placement Test (W-APT)*** is the screener that is based upon the ACCESS for ELLs. Its purposes include the following:

a. to identify students who may be candidates for English as a Second Language (ESL) and/or bilingual services;
b. to determine the academic English language proficiency levels of students new to a school or to the U.S. school system in order to determine appropriate levels and amount of instructional services; and
c. to accurately assign students identified as ELLs to one of the tiers for ACCESS for ELLs.

4. **What is the ACCESS for ELLs™ assessment, who administers it and what is done with the results?**
Assessing Comprehension and Communication in English State-to-State (*ACCESS*) *for ELLs*™ is an English language assessment tied to the state's English language proficiency standards. For Title III District Assessment Coordinator (DAC) in each district is responsible for coordinating the *ACCESS* test administration. Test administrators must be trained by completing an online course and quizzes to be considered eligible to administer the test. Some districts employ paraeducators to administer ACCESS, in addition to teachers, counselors and other qualified personnel. One of the *ACCESS* reports that schools receive is the **Teacher Report**. Paraeducators working with ELLs should use this report along with other information in the Program Services Plan (PSP) to assist them in ELL instruction.

5. **What is a Program Services Plan for LEP students?**
In Kentucky an individual Program Services Plan (PSP) is required for all students identified as having limited English proficiency. The plan indicates the student's level of English proficiency, the level of academic achievement, the method of instruction, how the instructional program will address the student's English language development and academic progress and the expected rate for the student's exit from LEP status.

6. **What ar the WIDA English language proficiency standards and how are they used?**
The World-Class Instructional Design and Assessment (WIDA) *English Language Proficiency Standards for English Language Learners in Kindergarten through 12th Grade* serve as Kentucky's ESEA-required English language proficiency standards. These standards will act as a companion document to *The Program of Studies for Kentucky Schools Primary – 12 (2006)* in guiding instruction for Kentucky's English Language Learners (ELLs).

   The WIDA standards will help paraeducators understand what to expect ELLs to be able to do in listening, speaking, reading and writing based on their English proficiency level. There are six levels of proficiency with performance expectations for each level in social and instructional English, language arts, mathematics, science and social studies. The 2007 edition of the WIDA ELP Standards is available online at WIDA's English Language Development (ELD) Standards webpage.

7. **Where can I find more information abou the education of ELLs in Kentucky?**

   Information about serving the educational needs of ELLs in Kentucky is available on the KDE website at the following English Language Learning link: English Learner (EL) and Immigrant Students webpage.

APPENDIX E

STUDENTS WITH SPECIAL NEEDS

STUDENTS WITH SPECIAL NEEDS

This appendix contains information about students with special needs that may assist you as a paraeducator. The information will **not** be covered on the KPA.

DEFINITIONS

"Child with a disability" means a child evaluated in accordance with 707 KAR 1:300, as meeting the criteria listed in the definitions in this section for autism, deaf-blindness, developmental delay, emotional-behavior disability, hearing impairment, mental disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, or visual impairment which has an adverse effect on the child's educational performance and who, as a result, needs special education and related services.

"Special education" means specially designed instruction, at no cost to the parents, to meet the unique needs of the child with a disability including instruction in the classroom, in the home, in hospitals and institutions, and in other settings. Special education means speech-language pathology services, (if the service is considered special education rather than a related service), travel training, and vocational education.

"Specially-designed instruction" means adapting as appropriate the content, methodology, or delivery of instruction to address the unique needs of the child with a disability and to ensure access of the child to the general curriculum included in Kentucky's Program of Studies, 704 KAR 3:303.

DISABILITY CATEGORIES

Kentucky has 13 disability categories children can be found eligible for:

1. **"Autism"** means a developmental disability significantly affecting and nonverbal communication and social interaction, generally evident before age three that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child's educational performance is adversely affected primarily because the child has an emotional-behavior disability.
2. **"Deaf-blindness"** means hearing and visual impairments that have an adverse effect on the child's education performance, the combination of which causes severe communication and other developmental and educational needs that cannot be accommodated in special education programs solely for children with blindness, unless supplementary assistance is provided to address educational needs resulting from the two disabilities.
3. **"Developmental delay" or "DD"** means that a child within the ages of three through eight has not acquired skills, or achieved commensurate with recognized performance expectations for his age in one or more of the following developmental areas: cognition, communication, motor development, social-emotional development, or self-help-adaptive behavior. Developmental delay includes a child who demonstrates a measurable, verifiable discrepancy between expected performance for the child's chronological age and current level of performance.
4. **"Emotional-behavioral disability" or "EBD"** means that a child, when provided with interventions to meet instructional and social-emotional needs, continues to exhibit one or more of the following, when compared to the child's peer and cultural reference groups, across settings, over a long period of time and to a marked degree:
    a. severe deficits in social competence or appropriate behavior which cause an inability to build or maintain satisfactory interpersonal relationships with adults or peers;

b. severe deficits in academic performance which are not commensurate with the student's ability level and are not solely a result of intellectual, sensory, or other health factors but are related to the child's social-emotional problem;

c. a general pervasive mood of unhappiness or depression; or

d. a tendency to develop physical symptoms or fears associated with personal or school problems.

5. **"Hearing impairment",** sometimes referred to as "deaf" or "hard of hearing", means a hearing loss that

   a. may be mild to profound, unilateral or bilateral, permanent or fluctuating;

   b. results in difficulty identifying linguistic information through hearing; and

   c. has an adverse effect on the child's educational performance.

6. **"Mental disability"** means that a child has one of the following:

   a. mild mental disability (MMD) in which

      - cognitive functioning is at least two but no more than three standard deviations below the mean;
      - adaptive behavior deficit is at least two standard deviations below the mean;
      - a severe deficit exists in overall academic performance including acquisition, retention, and application of knowledge; and
      - manifestation is typically during the developmental period; or

   b. functional mental disability (FMD) in which

      - cognitive functioning is at least three or more standard deviations below the mean;
      - adaptive behavior deficits are at least three or more standard deviations below the mean;
      - a severe deficit exists in overall academic performance including acquisition, retention, and application of knowledge; and
      - manifestation is typically during the developmental period.

7. **"Multiple disabilities" or "MD"** means concomitant impairments that have an adverse effect on the child's educational performance, the combination of which causes severe educational needs that cannot be accommodated in special education programs solely for one of the impairments. Examples of MD include mental disability-blindness, and mental disability-orthopedic impairment. The term multiple disabilities does not mean deaf-blindness nor does it mean a speech or language impairment in combination with another category of disability.

8. **"Orthopedic impairment" or "OI"** means a severe impairment of the bones, joints, ligaments, or muscles that adversely affects a child's educational performance. The term includes the following:

   a. impairment caused by a variance present at birth such as clubfoot, or absence of some member;

   b. impairment caused by disease such as poliomyelitis, or bone tuberculosis; and

   c. impairment from other causes such as cerebral palsy, amputations, and fractures or burns that cause contractures.

9. **"Other health impairment" or "OHI"** means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that

   a. is due to a chronic or acute health problem, such as acquired immune deficiency syndrome, asthma, attention deficit disorder, attention deficit hyperactivity disorder, diabetes, epilepsy, a

heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, Tourette's syndrome, or tuberculosis; and

b. adversely affects a child's educational performance.

10. **"Specific learning disability" or "LD"** means a disorder that adversely affects the ability to acquire, comprehend, or apply reading, mathematical, writing, reasoning, listening, or speaking skills to the extent that specially designed instruction is required to benefit from education. The specific learning disability (LD) may include dyslexia, dyscalculia, dysgraphia, developmental aphasia, and perceptual/motor disabilities. The term does not include deficits that are the result of other primary determinant or disabling factors such as vision, hearing, motor impairment, mental disability, emotional-behavioral disability, environmental or economic disadvantaged, cultural factors, limited English proficiency, or lack of relevant research-based instruction in the deficit area.

11. **"Speech of language impairment"** means a communication disorder, including stuttering, impaired articulation, a language impairment, a voice impairment, delayed acquisition of language, or an absence of language, that adversely affects a child's educational performance.

12. **"Traumatic brain injury" or "TBI"** means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. Traumatic brain injury does not mean brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma. Traumatic brain injury means open or closed head injuries resulting in impairments in one or more areas, including the following:

    a. cognition
    b. language
    c. memory
    d. attention
    e. reasoning
    f. abstract thinking
    g. judgment
    h. problem-solving
    i. sensory, perceptual, & motor abilities
    j. psychosocial behavior
    k. physical functions
    l. information processing
    m. speech

13. **"Visual impairment" or "VI"** means a vision loss, even with correction that

    a. requires specialized materials, instruction in orientation and mobililty, Braille, visual efficiency, or tactile exploration;

    b. has an adverse effect on the child's educational performance; and

    c. meets the following:

        - The child has visual acuity with prescribed lenses that is 20/70 or worse in the better eye; or
        - The child has visual acuity that is better than 20/70 and the child has one of the following conditions:
            a) medically-diagnosed progressive loss of vision; A visual field of twenty degrees or worse;
            b) medically-diagnosed condition or cortical blindness; or
            c) functional vision loss.

APPENDIX F

REFERENCES, RESOURCES, & ENDNOTES

REFERENCES, RESOURCES, & ENDNOTES

This appendix contains references and resources used to develop the KPA Study Guide. They may provide you information as a paraeducator. The information will **not** be covered on the KPA.

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[v] Information in section adapted from: S. Winebrenner (1996). *Teaching Kids with Learning Difficulties in the Regular Classroom*. Minneapolis, MN: Free Spirit Publishing Inc. 73-76.

[vi] Cartoon from: M.F. Giangreco, illustration K. Ruelle, Peytral Publications, Inc.

[vii] Information in section adapted from: The Education Alliance (2006). *Teaching Diverse Learners.* Brown University. https://www.brown.edu/academics/education-alliance/teaching-diverse-learners/.