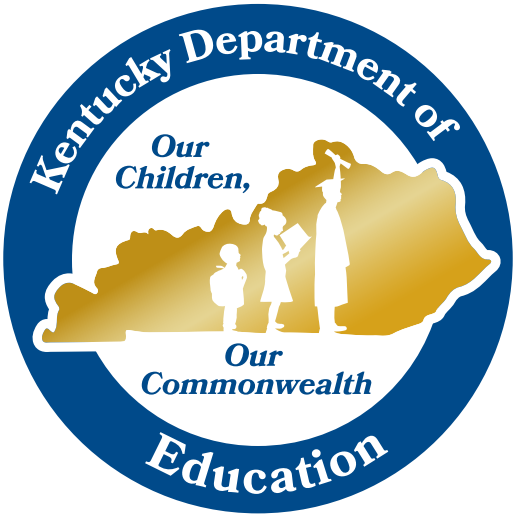

Kentucky Department of Education

Model Curriculum Framework

March 2020

Model Curriculum Framework

Introduction to the Model Curriculum Framework

The Role of Standards, Curriculum, and Instructional Resources

Now more than at any other point in history, there is a great need for schools and districts to develop coherent curriculum that intentionally connects standards, instruction and assessment across classrooms. In their book *Leaders of Learning*, Dufour and Marzano (2011) state how today's educators are being called upon to raise academic standards to the highest level in history and to help *every* student reach these higher levels of achievement. Within schools in America, large racial and socioeconomic gaps still exist among graduation rates, test scores and advanced proficiency. In order for educators to meet the challenge of helping all students master standards, they must have a clear vision of what best practice teaching and learning is and a clear road map to follow throughout the year (Ainsworth, 2010).

In the process of developing high-quality curriculum, Kentucky schools and districts must consider the following questions:

- What is the difference between standards and curriculum and instructional resources?
- What is meant by a guaranteed, viable curriculum?
- How do standards, curriculum and instructional resources work together to help create equity for all students in Kentucky?

In order to better understand the relationship between standards, curriculum and instructional resources, we must start with defining each term. The *Kentucky Academic Standards (KAS)* contain the minimum requirements of what students should know and be able to do by the end of each grade level. The standards address a foundational framework of what is to be learned. They help to answer the first question of the Professional Learning Community (PLC) process, "What do we want students to learn?" The purpose of the *KAS* is to ensure all students across Kentucky focus on a common set of standards and are provided opportunities to learn at high levels. While the standards address what is to be learned, they do not address how learning experiences are to be designed or what instructional resources are to be used.

Curriculum is derived from a Latin word meaning "a course or path run in small steps." It addresses how learning experiences are designed at the local level. The overall purpose of curriculum is to focus on and connect the work of classroom teachers within a school and/or district to standards, assessments and classroom practices in order to raise student achievement. Curriculum includes the vast array of pedagogy, readings, learning experiences, instructional resources and local mechanisms of assessment, including the full body of content knowledge to be covered, all of which are to be selected at the local level according to Kentucky law (KRS 160.345).

Instructional resources, as defined by 704 KAR 3:455, include all the print, nonprint or electronic mediums designed to assist student learning. Often times instructional resources, such as vendor programs, textbooks and online products are mistakenly referred to and/or utilized as a school or district ‘s curriculum. While these resources may support the implementation of a high-quality curriculum, they do not comprise the full scope of supports found in a true standards-aligned curriculum.

For schools and districts, translating the standards into a guaranteed, viable curriculum is critical to student success. In his book *What Works in Schools,* Robert Marzano (2003) states that this is the single most important initiative a school or district can engage in to raise student achievement. A lack of a clearly articulated curriculum not only hinders improvement, but may lead to curricular chaos (Schmoker, 2016). When this occurs, often times there is a great deal of redundancy and inconsistency in what is taught from one classroom to the next across all grade levels. There is little alignment between assessment and the standards. This discrepancy in what is actually taught results in lower achievement for students (Schmoker, 2006).

So, what does it mean to have a guaranteed and viable curriculum? To be *guaranteed*, the curriculum must ensure that specific content is taught in specific courses and at specific grade levels, regardless of the teacher assigned to the student. When schools and districts are unable to guarantee the curriculum being taught, it creates disparity in opportunities to learn for students. Opportunity to learn is a powerful, yet simple concept: If students do not have the opportunity to learn the content expected of them, there is little chance they will (Dufour & Marzano, 2011).

Not only must the curriculum be guaranteed, but it must also be *viable*. This means schools and districts must ensure enough instructional time is available to actually teach the content identified as essential. Regardless of the teacher assigned to a child, all parents have an assurance that the level of academic rigor is consistent and their child will receive the time and space needed to master essential content and skills.

The creation of a school or district curriculum aligned to the *KAS* does not guarantee students have access to the same knowledge and skills. A distinction must be made between the intended curriculum and the implemented curriculum. In many places, gaps exist between the school or district established curriculum and what is actually implemented by teachers in classrooms. For schools to truly implement a guaranteed and viable curriculum, it is imperative that the teachers accountable for delivering the content possess a common understanding of the curriculum and a commitment to teach it.

How then do we bridge the gap between the intended curriculum and what is actually implemented in the classroom? This is the role of Professional Learning Communities (PLCs). The collaborative team process of collective inquiry that occurs in a PLC is purposefully designed to ensure students have access to a guaranteed, viable curriculum. The collective inquiry is driven by four key questions:

1. What do we expect our students to learn?
2. How will we know if they are learning?
3. How will we respond when some students do not learn?
4. How will we enrich and extend learning for students who already know it?

As teachers work through the four questions of a PLC, they build a shared understanding of what students must know and be able to do to meet the standards, how to measure student learning and how to respond to student needs along the way (Dufour & Marzano, 2011).

When schools and districts across the state develop and implement a coherent, high-quality curriculum grounded in the *Kentucky Academic Standards*, they are providing a more equitable environment for all students. It ensures that each and every student has equal access to the same content, knowledge and skills regardless of the teacher or school they attend.

The *Model Curriculum Framework (MCF),* per KRS 158.6451, provides guidance for schools and districts in implementing educational best practice in a way that positively impacts student achievement. The first section focuses on developing a system-wide process for designing curriculum aligned to the *KAS* at the school or district level. The second section moves into implementation of curriculum at the school and classroom level. This section begins with the importance of teacher collaboration through the PLC process, then shifts to moving from curriculum into assessment and, finally, looks at current research around instructional best practice. The organization of this document mirrors the use of backward design, starting with what students must know and be able to do, how learning will be assessed and how that translates into daily teaching and learning.

References

Ainsworth, L. (2010). *Rigorous Curriculum Design*: *How to create curricular unit of study that align standards, instruction, and assessment.* Lead+Learn Press.

Dufour, R., & Marzano, R.J. (2011). *Leaders of Learning*. Solution Tree Press.

Marzano, R.J. (2003). *What Works in Schools: Translating research into action*. ASCD.

Schmoker, M. (2006). *Results Now: How We Can Achieve Unprecedented Improvement in Teaching and Learning*. ASCD.

Schmoker, M. (2016). *Leading with Focus*. ASCD.

Curriculum Development Process

Introduction

This section is designed for school and district leaders to provide guidance on developing and implementing a systematic process for translating standards into a coherent, high-quality curriculum. This approach focuses on three crucial phases: Planning and Professional Learning, Developing the Curriculum, and Implementing and Monitoring the Curriculum.

The development of an effective curriculum is a multi-step process that is ongoing and cyclical in nature. The process moves from evaluating the existing curriculum, to designing an improved curriculum, to implementing the new curriculum and back to monitoring and adjusting as needed. Figure 1.1 provides an example of a possible way to structure this process and serves as an outline for the remainder of this section.

Figure 1.1 Curriculum Development Process

Curriculum Development Process

Phase 1: Planning and Professional Learning

- ➢ Step 1: Create and Convene Curriculum Development Committee
- ➢ Step 2: Analyze Research to Develop a Shared Understanding of Evidence-Based Practices
- ➢ Step 3: Articulate a K-12 Program Philosophy

Phase 2: Developing the Curriculum

- ➢ Step 1: Analyze the *Kentucky Academic Standards* in Specific Content Area
- ➢ Step 2: Create Curriculum Document Template
- ➢ Step 3: Organize and Sequence Course Standards
- ➢ Step 4: Develop Grade-Level/Course Curriculum Supports
- ➢ Step 5: Identify Instructional Resources and Professional Learning to Support Implementation

Phase 3: Implementing and Monitoring the Curriculum

- ➢ Step 1: Implement the New Curriculum
- ➢ Step 2: Collect Quantitative and Qualitative Data to Monitor Implementation
- ➢ Step 3: Analyze Data to Adjust Curriculum and/or Professional Learning

Preparing for the Curriculum Development Process

There are some key decisions schools or districts should make to prepare for and support the work of the curriculum development process. Each decision is crucial to ensuring the process flows smoothly and that time and resources are used effectively and appropriately. Figure 1.2 highlights these four steps.

Figure 1.2 Preparing for the Curriculum Development Process

Preparing for the Curriculum Development Process

- ➢ Step 1: Review SBDM Policy
- ➢ Step 2: Establish a Curriculum Review Cycle
- ➢ Step 3: Develop a Timeline
- ➢ Step 4: Determine the Budget

Step 1: Review SBDM Policy

According to KRS 160.345, local school-based decision making (SBDM) councils are responsible for creating a policy addressing how the curriculum will be determined and developed at the local level and shall be based on a needs assessment. This includes the outline of responsibilities, design of the school's curriculum and the determination of appropriate instructional resources. The law requires the policy to be implemented by the principal and aligned to the *Kentucky Academic Standards*.

In regards to the outline of responsibilities of curriculum development, there are several possibilities that could be used by the SBDM. For example, the SBDM might delegate the curriculum development and determination process to a curriculum committee within the school. The curriculum policy might leave the determination up to each department or grade-level. Another option might include assigning representatives to a district-wide curriculum team for the determination and development of the curriculum. District leaders should consider how they can offer support and guidance to each school's SBDM in creation of the policy.

Step 2: Establish a Curriculum Review Cycle

To make the work more manageable, schools or districts should consider establishing a curriculum review cycle that focuses on a limited number of content areas per year in a

repeating cycle. The review cycle is critical in helping schools and districts to both manage the work and the budget in a way that is not overwhelming. Figure 1.3 shows an example of a curriculum review cycle.

Figure 1.3 Sample Curriculum Review Cycle

Content Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Reading and Writing	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor
Mathematics	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop
Social Studies	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan
Science	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust
World Language & Visual Performing Arts	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust
CTE & Health/PE	Year 2: Monitor & Adjust	Year 3: Monitor & Adjust	Year 4: Monitor & Adjust	Year 5: Monitor & Adjust	Year 6: Monitor & Plan	Year 1: Develop	Year 2: Implement & Monitor	Year 3: Monitor & Adjust

Schools or districts may want to consider establishing a cycle that aligns with the standards revision process at the KDE. In accordance with Senate Bill 175 (2019), the current schedule calls for one or two content areas to be reviewed each year and every six years after that on a rotating basis. The sample cycle in Figure 1.3 corresponds with this timeline. In determining the order of the content areas in the curriculum review cycle, schools or districts should utilize data from their annual needs assessment. This might include data on student achievement, analysis of student work and sample assessments and tasks, and feedback gathered from student voice surveys regarding classroom climate, school culture, engagement and learning experiences.

Step 3: Develop a Timeline

In addition to establishing a curriculum review cycle, the school or district should develop a timeline for the scope of the work and the expected outcomes to be completed at each point in the process. Several factors may play a role including allotted time frame for completing the process, team member availability, and allocation of resources. A sample timeline has been

provided in the toolkit located in Appendix A that aligns with the curriculum review cycle in Figure 1.3. Ideally, once the timeline is established, this would be repeated with each content area as it comes up in the school or district's curriculum review cycle.

Step 4: Determine the Budget

Prior to beginning the process, schools or districts should develop a budget for the scope of the work to be completed each year. To help prioritize this work, schools and districts should consider how curriculum development and implementation might be reflected in their Comprehensive Improvement Plans and how the various school or district funds may be utilized to support the curriculum development process each year. The following are some possible considerations when developing the budget:

- What resources are needed to support professional learning for the curriculum team at the beginning of the process?
- Will funds be required to pay stipends or substitutes for members of the curriculum team?
- Will funds be used to purchase instructional resources to support implementation of the new or revised curriculum?
- What resources are needed to support professional learning to build staff capacity of the new or revised curriculum?

To support schools and districts in implementing this process, the KDE has created a supplemental resource toolkit that includes a quick reference for each phase, templates, samples and other supporting documents. The resources are located in Appendix A: Preparing for the Curriculum Development Process Toolkit.

Phase 1: Planning and Professional Learning

Step 1: Create and Convene Curriculum Development Committee

The process of developing curriculum from standards begins with establishing the content area curriculum team. If the delegation of responsibilities for curriculum development involves a district-level team, the team should consist of teacher representatives from various schools and grade levels in the district, instructional coaches, as well as building and district administrators. It would also be beneficial to include teacher representatives from other areas such as special education, gifted and talented, English Learners and library media specialists. For a large district, consider dividing into elementary and secondary teams. However, it is important that

team members from transition grade levels have opportunities to meet to ensure vertical alignment of the curriculum.
If the delegation of responsibility remains at the school level, the team should consist of teacher representatives from each grade level, school-based instructional coaches/specialists, as well as building administrators. Similar to the district team, consideration should be given to teacher representatives from other areas. If possible, the school may want to consider including district administrators with curricular and/or specific content expertise.

When selecting members, consider choosing individuals that model a growth mindset, are able to inspire and influence others within their school and are committed to supporting a common agreed-upon message. The goal is to create a team of knowledgeable, committed members who gradually become the "experts" during the development process and throughout implementation of the curriculum.

Once team members have been selected, the school or district should pre-determine meeting dates and associated logistics. For each phase of the process, decide when and where the team will meet and the purpose of each meeting. To help determine the purpose, consider what the intended outcomes of each meeting are (i.e. expected learning outcomes, work to be accomplished). By determining and communicating the meeting logistics at the beginning of the process, it allows team members to plan accordingly to ensure they can commit to each step of the development process.

Step 2: Analyze Research to Develop a Shared Understanding of Evidence-Based Practices

Often when developing curriculum from the standards, a common starting point for the content team is to create curriculum maps, pacing guides, etc. However, as mentioned in the introduction, it is first critical to build an in-depth understanding of current evidence-based practices for the specific content area.

When gathering relevant research for the team to analyze, the most important place to start is the academic standards document itself. Within the introduction of each *KAS* document, there are two critical sections, "The Writer's Vision Statement" and "Design Considerations." Through analysis of these sections, the team will gain an understanding of the foundational beliefs that guided the development of the standards document and the design considerations of the specific components within the standards document.

Next, the team should focus on the foundational documents used in the development of the standards. These are also located in "The Writer's Vision Statement." Through examination of these foundational documents, the content team will develop a deeper understanding of the research that influenced the creation of the standards and the potential impact on classroom instruction and assessment. All of the *KAS* documents are accessible on KYstandards.org.

During this step, the team also needs to build a shared understanding of the *KAS* document itself, regarding both the overall architecture and its critical components. The architecture comprises the overall organizational structure of the document, the different ways to view the standards and the design considerations of the specific components within the standards document.

The purpose of the critical components found in each *KAS* document is to provide greater clarity in what the standards are specifically asking students to know and be able to do to meet the expectations of the standards. For example, within the *KAS for Reading and Writing* document, the multidimensionality component highlights the three dimensions built within each standard - content, comprehension, and analysis. By specifying the three dimensions separately, the standards document better communicates the intent of each standard so that local instruction and assessment will align to the intended depth. The team should focus on examining each component and the connections between the components and the standards, as well as how those components can support teachers in designing standards-aligned instruction and grade-level assignments (Mausbach & Mooney, 2008). A valuable resource to build this in-depth understanding is the Getting to Know the KAS Modules available from the KDE on the Professional Learning Modules webpage.

After examination of these critical documents, other useful resources for deepening understanding of evidence-based best practice include resources from content-specific national and professional organizations, as well as educational experts in the respective subject area.

Step 3: Articulate a K-12 Program Philosophy

Once the curriculum team has collaboratively analyzed current research and have a shared understanding of the depth and rigor of the standards, they work to develop a philosophy of teaching and learning for that content area. The philosophy becomes more than what the school or district thinks should be happening in classrooms. Rather, the articulated philosophy is what the curriculum is striving to reflect in all classrooms across the school or district. The articulated philosophy sets the vision for teaching and learning in the content area and serves

as an ongoing point of reference throughout implementation that drives decision-making around professional learning and resource development (CT Department of Education, n.d.).

In articulating the program philosophy, the curriculum team starts with determining the school or district's research-based foundational beliefs regarding teaching and learning in the specific content area. These belief statements become the driver for the rest of the curriculum development process. It is imperative that each member supports the agreed-upon beliefs, understands the rationale for each belief and is committed to implementing those into his/her classroom practice.

Once established, the team should consider how those beliefs impact areas such as:

- Curriculum Design
- Tier I Instruction
- Assessment

For curriculum design, the team must determine what elements of the foundational beliefs need to be made explicit in the curriculum documents created by the team. For example, if a foundational belief for science is that bundled standards should be tied together using an anchor phenomenon, then the curriculum documents should reflect this belief. If a foundational belief in mathematics is the use of rich mathematical tasks, then this should be reflected in the mathematics curriculum documents. If a foundational belief in English Language Arts (ELA) is that students must be writing about text regularly, then this should be reflected in the ELA curriculum documents.

When articulating the impact of foundational beliefs on Tier I instruction, the team should consider how those beliefs would look and sound in the classroom setting. What would a school or district administrator be able to observe in a classroom where those beliefs are put into practice? What types of instructional strategies would support student understanding of the standards?

In terms of assessment, how do the beliefs impact the types of assessments given to students? What types of evidence would teachers need to elicit from students that align with the expectations within the standards?

Once the team has developed its philosophy of teaching and learning for the specific content area, the team would then consider how that might be articulated in writing in a way that is clear and easily understood by all stakeholders that, at a minimum, includes a summary of the team's thinking regarding foundational beliefs, curriculum design, Tier I instruction and

assessment. This written philosophy grounds the work of the content team as they move into the next step of creating the curriculum documents and identifying professional learning needs and resources necessary to move toward that articulated vision (Connecticut Department of Education, n.d.)

To support schools and districts in implementing this process, the KDE has created a supplemental resource toolkit that includes a quick reference for each phase, templates, samples and other supporting documents. The resources are located in Appendix A: Phase 1 Toolkit .

Phase 2: Developing the Curriculum

Step 1: Analyze *Kentucky Academic Standards* in the Specific Content Area

Prior to creating the curriculum documents, the team should spend time analyzing the K-12 progression of the standards. According to Jacobs and Johnson (2009), schools and districts need to consider two lenses to gain a better understanding of student experiences over time: a zoom lens that focuses on the standards for a particular grade level and a wide-angle lens to see the K-12 perspective. The content team needs to develop a shared understanding of the big picture of the standards in order to gain clarity into how their grade-level standards support the overall progression.

The *KAS* documents were written by teachers with an intentional focus on providing support to determine where a specific standard fits into the overall progression. Whether this is through mini-progressions, coherence statements or complete K-12 progressions, the documents can guide the content team in developing both a microscopic and macroscopic view of the standards. Understanding the big picture of K-12 progressions of knowledge and skills within the standards will help the team as they move into the next steps of developing the curriculum.

Step 2: Create Curriculum Document Template

It is important for the team to create a curriculum document template that plans a coherent instructional experience within and across grade levels that systematically builds student understanding of the KAS and reflects the beliefs of the articulated philosophy. The documents should include enough detail to support teachers in the development of weekly plans and designing daily lessons (Ainsworth, 2010).

The curriculum document serves as the central guidance for all instructional staff who support and supervise teaching and student learning. The document should be designed in a way that

allows for broad-based access and ease of use. Possible areas of emphasis in the curriculum document include (Council of Great City Schools, 2017):

- An articulation of the depth at which students need to learn, demonstrate their understanding of, and apply a given concept
- Identification of and support for implementing evidence-based practices into classroom instruction aligned to the articulated philosophy
- Instructional strategies for teaching standards
- Scope and sequence of the curriculum that specifies what content knowledge and skills should be taught, and at approximately which point during a school year in order to create a coherent learning experience
- Best practices for delivering content at key points in the curriculum, particularly for concepts and skills that have traditionally proven challenging for students
- Time required to address essential content with flexibility for teachers to respond to student needs
- Assessments aligned to depth of standards
- When and how to use assessments, including formative assessments, to determine whether students are making progress in attaining a particular standard or set of standards
- Specific instructional resources to support standards-based instruction
- Culturally responsive texts and resources that respect and celebrate the cultural, ethnic, and linguistic diversity of students
- Concepts and skills where large numbers of students are likely to have learning gaps, with suggested guidance that will help students fill those gaps while simultaneously accessing grade-level material
- Possible interdisciplinary connections
- Natural coherence within and across content areas and across grade levels

If revising an existing curriculum, the team should analyze the current document to determine if the elements necessary to support the vision of the KAS and the articulated philosophy are present. If not, what revisions are necessary to reach that vision?

As the team moves into developing the curriculum for their specific grade-level or course, the curriculum document template helps to ensure that all members are focused on the same supporting elements. It allows the organization and sequencing of the standards to be grounded in both the beliefs of the articulated philosophy and common curricular supports for instructional experiences within and across grade levels.

Step 3: Organize and Sequence Course Standards

The process of organizing and sequencing standards focuses on addressing what standards are taught and when they are taught. As the team members work with specific course standards, it is helpful to begin by organizing standards together in a way that can anchor student learning. For example, team members working on organizing social studies standards for a specific grade level or course may group standards based on a compelling question. In science, it might be grouping standards around an anchor phenomenon. Within English/language arts, they may group several reading and writing standards around specific literary and informational print and non-print texts and/or text sets. For mathematics, the team might organize standards based on connections across the different domains.

Creating units that contain a group of content standards organized around big ideas or questions helps to deepen student understanding and engagement with the content in a more meaningful way. This helps to avoid students seeing the standards as a set of isolated information, skills or processes. It can also provide a way to identify places for interdisciplinary connections. Since the standards represent what students should know and be able to do at the conclusion of a course, it is important to note that some standards may appear in multiple units in order to deepen understanding over time.

Once all standards for a specific course have been organized into units, the team then sequences the units in a way that fosters and deepens students' understanding through the school year. There is no one correct way to organize content course standards. However, it is important that the team organizes the standards in a way that reflects the school or district's philosophy and upholds the instructional intent of the *KAS* document for the specific content area. For standards that appear in multiple units, it is important to decide at what point those particular standards will be assessed for mastery and when they become supporting standards.

After organizing and sequencing the standards, the team determines appropriate pacing for delivering the instructional units. The duration of each unit will vary based on the complexity of certain standards assigned to a particular unit or its intended learning outcomes (Ainsworth, 2010). In order for the curriculum to be viable, the school and district must ensure that enough instructional time is available to actually teach the content. Consideration should also be given to including enough time in a unit for teachers to respond to student learning needs. Ainsworth (2010) recommends building in a short interval between each unit referred to as a "buffer" period that provides flexibility to meet students' needs.

Step 4: Develop Grade-Level/Course Curriculum Supports

Once the grade-level or course standards have been organized and sequenced, the team must work to develop the curriculum supports identified in the curriculum document template. Each area of support must reflect the beliefs outlined in the articulated philosophy and designed to help students meet the KAS grade-level or course expectations.

Throughout the process of developing the curriculum, the team should utilize a process for reviewing and revising so that all aspects of the curriculum are viewed by both the vertical and grade-level teams. This helps to ensure that the entire curriculum for the content area maintains coherence and quality across all grade levels (Mausbach & Mooney, 2008).

Step 5: Identify Instructional Resources and Professional Learning to Support Implementation

The first step in ensuring the intended curriculum developed by the school or district becomes the actual curriculum implemented in the classroom is to identify the instructional resources and professional learning necessary to develop teacher understanding of the curricular vision.

During this phase, the curriculum team identifies and analyzes instructional resources currently available in the school or district to determine how well those resources align to the articulated philosophy and the content area standards. Instructional resources are defined as any print, non-print or electronic medium designed to assist student learning (704 KAR 3:455). Some helpful tools to assist in determining alignment of resources to the standards include the Instructional Resources Alignment Rubrics and the Kentucky Digital Learning Guidelines. Another useful resource to examine the research-based effectiveness of potential instructional resources is Elevating Evidence: Clearinghouses and Databases. To help support curriculum implementation, the team may need to seek out additional standards-aligned, high-quality instructional resources to fill any gaps in existing resources.

Based on the *KAS* and the articulated philosophy, the team identifies areas of professional learning necessary to help teachers implement the curriculum. Questions the team may consider include:

1. Are there areas of identified best practice in the articulated philosophy in which there is currently little evidence of implementation in classrooms across the school or district?
2. Are there specific needs for elementary versus secondary?
3. What type of professional learning is needed to support school leaders in understanding the curriculum and monitoring for evidence of implementation in the classrooms?

4. Is professional learning needed to assist teachers in selecting and utilizing instructional resources to engage students in standards-based, grade-appropriate assignments?

Once the team has identified the professional learning needs, the next step is to develop a professional learning plan. The team prioritizes the identified areas to determine where to begin the work, funds that will be used to support the professional learning and possible timelines for completion. It is helpful for school and district leaders to consider potential impacts of the work as it relates to the Comprehensive Improvement Plan at the school or district level.

To support schools and districts in implementing this process, the KDE has created a supplemental resource toolkit that includes a quick reference for each phase, templates, samples and other supporting documents. The resources are located in Appendix A: Phase 2 Toolkit.

Phase 3: Implementing and Monitoring the Curriculum

Step 1: Implement the New Curriculum

As mentioned previously, one goal of the content area team is to create knowledgeable, committed members who gradually become the school or district's "experts" during the development process. The members of the team now help to build understanding of the curriculum in their respective schools. Teachers and school leaders throughout the school or district need time and opportunity to develop an understanding of the new curriculum, its overall design and how it differs from the past (Connecticut Department of Education n.d.). This includes sharing the philosophy and its rationale, explaining the way in which the standards were organized and sequenced and ensuring teachers know how to utilize both the *KAS* document and school or district curriculum documents to guide the work of the grade-level or course Professional Learning Communities (PLCs).

To support the vision that the intended curriculum truly becomes the implemented curriculum, it is important for school and district leaders to create a plan for supporting and monitoring implementation. Curriculum monitoring is a process of gathering information to analyze the effectiveness of the curriculum to ensure that the intended, implemented and attained curricula are aligned. This involves collecting data to determine what is working, what is not working and what is needed to improve. The plan should clearly define what data will be collected that will provide evidence of implementation at the classroom level aligned to the articulated philosophy and the curriculum documents. Data should also be gathered to ensure

students have attained the learning outcomes of the curriculum aligned to the appropriate depth of the *Kentucky Academic Standard*s.

When developing the monitoring plan, it is important to also consider the person(s) responsible for collecting the evidence, as well as those responsible for analyzing the data. Finally, consider how often the data will be analyzed in order to make decisions in a timely manner regarding adjustments and/or supports needed to ensure effective implementation of the curriculum.

Step 2: Collect Quantitative and Qualitative Data to Monitor Implementation

In general, the data gathered should represent overall student performance that is closely linked to daily instruction. Quantitative data might include grade-level or course assessment results, samples of student work, as well as samples of assessments, tasks and assignments to examine for alignment to the standards.

Qualitative data might include insights gathered from classroom observations, including informal and formal principal observations, as well as instructional rounds, learning walks or other similar processes conducted by school and/or district leadership. Other possible sources of qualitative data include feedback from surveys and on-going conversations with students and school and district staff.

Step 3: Analyze Data to Adjust Curriculum and/or Professional Learning

The data gathered is analyzed on a continual basis to determine the level of implementation. Though no single data point is able to provide a full analysis of student achievement, the triangulation of data can provide information to identify where the curriculum is having positive impacts and where adjustments may be needed. That is why it is important to look at both quantitative and qualitative data. Mausbach and Mooney (2008) recommend that the content team meet twice a year to analyze the data to determine strengths and areas of growth. School and district leaders may also spend time as a PLC analyzing the data to identify school and district trends at various times throughout the school year. As teachers work collaboratively through the PLC process, they are able to monitor student attainment of the curriculum as they analyze data from common formative and summative assessments.

Based on the data analysis, the content team determines next steps to help teaching and learning continually move toward the vision laid out in the articulated philosophy. In their book *Align the Design*, Mausbach and Mooney (2008) share that one of the reasons curriculum work can be challenging is that it is never done. The curriculum is a living document that changes over time based upon data analysis. Sometimes the data may indicate teacher confusion on

wording in the curriculum documents requiring the team to change the language to provide more clarity. As teachers become more familiar with the standards and the depth needed for students to reach mastery, it may require small tweaks to the pacing or sequencing of the standards within the curriculum for a particular grade level.

Sometimes the data indicate lack of understanding and inconsistency in the teaching of the standards, not with the curriculum itself. In this case, the team uses the data analysis to indicate areas of professional learning needed to support teacher understanding and use of specific best-practice instruction outlined in the articulated philosophy.

To support schools and districts in implementing this process, the KDE has created a supplemental resource toolkit that includes a quick reference for each phase, templates, samples and other supporting documents. The resources are located in Appendix A: Phase 3 Toolkit.

In their research, Hattie (2009) and Marzano (2003) both indicate the importance of two factors that significantly impact student achievement: a guaranteed and viable curriculum and quality classroom instruction. In order for alignment to exist between the intended curriculum and the instruction that actually occurs in the classroom, teachers need to work collaboratively within PLCs to reach this goal. The next section of the *MCF,* which will be available summer 2020*,* will address the role of PLCs, why they are important and offer suggestions to support implementation.

References

Ainsworth, L. (2010). *Rigorous Curriculum Design*: *How to create curricular unit of study that align standards, instruction, and assessment.* Lead+Learn Press.

Connecticut Department of Education. *A Guide to Curriculum Development: Purposes, Practices, Procedures*. (n.d.). Retrieved from https://portal.ct.gov/-/media/SDE/Health-Education/curguide_generic.pdf.

Hattie, J. (2009). *Visible Learning*. Routledge.

Jacobs, H.H., & Johnson, A. (2009). *Curriculum Mapping Planner: Templates, Tools and Resources for Effective Professional Developmen*t. ASCD.

Marzano, R.J. (2003). *What Works in Schools: Translating research into action*. ASCD.

Mooney, N.J, & Mausbach, A.T. (2008). *Align the Design: A Blueprint for School Improvement*. ASCD.

Squires, D.A. (2009). *Curriculum Alignment: Researched-based Strategies for Increasing Student Achievemen*t. Corwin Press.

Council of Great City Schools. (2017). *Supporting Excellence: A Framework for Developing, Implementing, and Sustaining a High-Quality District Curriculum.* Retrieved from: https://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/4/Curriculum%20Framework%20First%20Edition%20Final.pdf

Appendix A

Preparing for the Curriculum Development Process Toolkit

Step	Purpose	Considerations	Actions	Tools/Resources

Review SBDM Policy	• Per KRS 160.345, the school council shall adopt a policy to be implemented by the principal in regards to curriculum development	• Does the policy address:
		  ○ how the curriculum will be determined?
		  ○ how the curriculum will be developed?
		  ○ delegation of responsibilities?
		  ○ based on a needs assessment?
			☐ Ensure SBDM policy addresses key areas	• KRS 160.345

Establish a Curriculum Review Cycle	• Allow schools and districts to better manage curriculum work and the budget in a way that is not overwhelming	• To determine order of content areas in the curriculum cycle, utilize data from the most recent needs assessment.	☐ Establish a Curriculum Review Cycle	• Curriculum Review Cycle Template
Develop a Timeline	• Develop a plan that includes the dates and actions for completing the work that can be communicated to stakeholders.	• What is the overall timeline for completing the curriculum development process from creating and convening the team to the point of implementing the curriculum in the school and/or district? • What factors need to be considered that may impact the timeline? • Based on the established timeline, how might the phases of the process be broken into manageable chunks that still ensures each step is included?	☐ Create a Timeline for Completion of Curriculum Development Process	• Sample Timeline • Timeline for Curriculum Development Process Template
Determine Budget	• Develop the budget for the scope of the work for the selected content area.	• What resources are needed to support professional learning for the curriculum team at the beginning of the process? • Will funds be required to pay stipends or substitutes for members of the curriculum team? • Will funds be used to purchase instructional resources to support implementation of revised curriculum? • What resources are needed to support professional learning to build staff capacity of the curriculum?	☐ Create a Budget for Curriculum Development Process	• Curriculum Development Budget Template

Phase 1: Planning and Professional Learning Toolkit

Step	Purpose	Considerations	Actions	Tools/Resources

Create and Convene a Curriculum Development Committee	• Create a team of knowledgeable, committed members who gradually become the "experts" during the development process and throughout implementation of the curriculum	• Possible Team Members might include:
		  ○ Teacher Representatives from Various Schools and/or Grade Levels
		  ○ Instructional Coaches/Specialists
		  ○ School Administrators
		  ○ District Administrators
		  ○ Representatives from Special Education, Gifted and Talented, English Learners, and Media Specialists
		• Possible Considerations When Selecting Team Members:
		  ○ Demonstrate a growth mind-set
		  ○ Able to inspire and influence colleagues
		  ○ Committed to supporting agreed-upon message
		• Given the timeline for completion of the process and availability of team members, what are the logistics for the meetings/professional learning sessions?
			☐ Establish Content Area Curriculum Team
			
			☐ Determine Meeting Dates, Times and Locations
				• Curriculum Development Team Template
				
				• Meeting Schedule Template

Analyze Research to Develop Shared Understanding of Best-Practice	• Build an in-depth understanding of current evidence-based best practices necessary to help students meet the expectations of the standards and determine the implications for work in developing the school or district's curriculum.	• What resources will be utilized to build the team's understanding?
		  ○ Important Resources to Utilize
		  ▪ Writer's Vision Statement and Design Considerations from the front matter of the KAS document
		  ▪ Foundational documents referenced in the Writer's Vision Statement in the front matter of KAS document
		  ▪ Getting to Know the KAS Professional Learning Modules
		• What content-specific resources from national organizations and educational experts in the respective area might be useful?
		• How will the resources be utilized? What is the specific purpose of each?
			☐ Select Resources for Professional Learning and Determine the Purpose of Each
			
			☐ Plan Professional Learning Sessions
				• Selecting Professional Learning Resources Template
				
				• KAS Documents
				
				• Getting to Know the *KAS* Modules
				
				• Discussion Protocols

Step	Purpose	Considerations	Actions	Tools/Resources
Articulate a K-12 Program Philosophy	• Set the vision for teaching and learning in the content area and serves as an ongoing point of reference throughout implementation that drives decision-making around professional learning and resource development	• What are the school or district's research-based foundational beliefs regarding teaching and learning in the specific content area? • How do the foundational beliefs impact curriculum design, tier 1 instruction and assessment? • How might a summary of the philosophy of teaching and learning in the specific content area be articulated in writing in a way that is clearly and easily understood by all stakeholders?	☐ Generate Possible Foundational Belief Statements Based on Readings/Professional Learning ☐ Reach Group Consensus on Foundational Belief Statements ☐ Draft Sections of Articulated Philosophy Based on Foundational Beliefs ☐ Written Summary of Articulated Philosophy of Teaching and Learning for Specific Content Area	• Placemat Consensus • Jot Thoughts • Forced Choice Stickers • Rule of One-Third • Carousel Brainstorming • Big Paper: Building a Silent Conversation • Consensus • Articulated Philosophy Template • Sample Articulated Philosophy

Phase 2: Developing the Curriculum Toolkit

Step	Purpose	Considerations	Actions	Tools/Resources
Analyze *Kentucky Academic Standards* in the Specific Content Area	• Develop a shared understanding of the big picture of the standards in order to gain clarity into how grade-level standards support the overall progression	• Using the progressions in the *KAS* document for the specific content area, how do the skills and knowledge progress from K-12? • How do specific grade-level standards support the overall progression?	☐ Analyze K-12 Progressions for Content Area	• *Kentucky Academic Standards* Documents
Create Curriculum Document Template	• Create a curriculum document template that plans a coherent instructional experience within and across grade levels that systematically builds student understanding of the *KAS* and reflects the beliefs of the articulated philosophy.	• What major areas of support and practice need to be included in the template to help teaching and learning move toward the articulated philosophy? • How will the documents include enough detail to support teachers in the development of weekly plans and designing daily lessons?	☐ Create a Curriculum Document Template	• Considerations for Creating a Curriculum Document
Organize and Sequence Course Standards	• Create units of instruction that addresses what standards are taught and when they are taught • Organize content standards around big ideas or questions to help deepen student understanding and engagement with the content in a more meaningful way	• How might standards be organized in a way that can deepen student understanding and engagement with content in a more meaningful way (i.e. compelling questions, phenomena, big ideas)? • Are there standards that need to be included in multiple units? • What is the appropriate pacing of the units throughout the year or course that builds in time for teachers to respond to student needs?	☐ Organize and Sequence Grade-Level Standards to Create Units ☐ Determine Appropriate Pacing	• Guiding Questions for Organizing and Sequencing Standards

Step	Purpose	Considerations	Actions	Tools/Resources
Develop Grade-Level/Course Curricular Supports	• Develop support for teachers around the "how" in order for the school or district's articulated philosophy to translate into the teaching and learning in the classroom	• Provide time for team members to create the necessary supports for each grade-level or course as outlined in the curriculum document template. • How might opportunities be structured to allow for both horizontal and vertical feedback of all work completed? • Do the curriculum supports reflect the intent of the KAS and the articulated philosophy?	☐ Develop Curriculum Supports for Grade-Level/Course Curriculum Template ☐ Provide Feedback to Ensure K-12 Coherence and Clarity	• Considerations for Creating a Curriculum Document Template • RISE Model for Peer Feedback
Identify Instructional Resources and Professional Learning to Support Implementation	• Identify the instructional resources and professional learning necessary to develop teacher understanding of the curricular vision	• What is the level of alignment between existing resources to the articulated philosophy and the content area standards? Are there gaps in existing resources that might require purchasing new resources? • Are there areas of identified best practice in the articulated philosophy in which there is currently little evidence of implementation in classrooms across the school or district? • Is professional learning needed to assist teachers in selecting and utilizing instructional resources to engage students in standards-based, grade-appropriate assignments? • What type of professional learning is needed to support school leaders in understanding the curriculum and monitoring for evidence of implementation in the classrooms?	☐ Evaluate Existing or Potential Resources ☐ Create a Professional Learning Plan to Build Staff Capacity of New/Revised Curriculum	• Instructional Resources Alignment Rubrics • Professional Learning Plan Template

Phase 3: Implementing and Monitoring the Curriculum Toolkit

Step	Purpose	Considerations	Actions	Tools/Resources
Implement the New/Revised Curriculum	• Build understanding of the curriculum with staff and to create a plan for supporting and monitoring implementation	• What data will be collected to determine what is working, what is not working and what is needed to improve to ensure alignment between the intended and the implemented curriculum? • What data will be collected to ensure student attainment of the curriculum aligned to the depth of the Kentucky Academic Standards?	☐ Provide Professional Learning for Staff ☐ Develop a Monitoring Plan	• Professional Learning Plan Template • Curriculum Implementation Monitoring Plan Template
Collect Quantitative and Qualitative Data to Monitor Implementation	• Gather evidence to determine level of implementation as outlined in the school or district's Curriculum Implementation Monitoring Plan	• What data should be gathered that would represent overall student performance closely linked to daily instruction? • Possible sources of quantitative data: ○ grade-level or course assessment results, ○ samples of student work ○ sample tasks, assignments and assessments to look for alignment to standards • Possible sources of qualitative data: ○ Information gathered from classroom observations, including informal and formal principal observations ○ information gathered from instructional rounds, learning walks or other similar processes conducted by school and/or district leadership ○ feedback from surveys and on-going conversations with students and school and district staff	☐ Gather Evidence as Indicated in the Monitoring Plan	• Curriculum Implementation Monitoring Plan Template

Step	Purpose	Considerations	Actions	Tools/Resources
Analyze Data to Adjust Curriculum and/or Professional Learning	• Analyze data to determine next steps to help teaching and learning continually move toward the vision laid out in the articulated philosophy	• Does the data indicate teacher confusion around wording in the curriculum documents that may require the team to change the language to provide more clarity? • Does the data indicate a need for adjustments to the pacing or sequencing of the standards within the curriculum for a particular grade-level or course? • Does the data indicate areas of professional learning needed to support teacher understanding and use of specific best-practice instruction outlined in the articulated philosophy?	☐ Analyze data gathered from ongoing monitoring of curriculum implementation ☐ Revise Professional Learning Plan as needed ☐ Revise Curriculum as Needed	• Data Analysis Protocol • Data Analysis Template • Professional Learning Plan Template