Kentucky Model Curriculum Framework
Kentucky Board of Education Vision

Each and every student is empowered and equipped to pursue a successful future.

Kentucky Department of Education's Mission

Partner with districts, schools, families, students, business and industry and communities to provide leadership and support to ensure success for each and every student.
What is the purpose of the curriculum framework?
The purpose of the Kentucky Model Curriculum Framework (KMCF) for district- and school-level administrators is to serve as a guide for systemic district focus on student learning. It also should inspire creative problem-solving and develop effective curriculum and instructional methods that support intervention as well as enrichment opportunities for all students.

How can this resource help my school/students to achieve at high levels?
As district and school leaders, many obstacles are confronted daily. The KMCF will be a tool for school leaders to find curriculum, assessment, instruction and professional development ideas in a single source. The KMCF can serve as a foundation for professional learning communities among administrators across the state to share effective instructional practices. The framework creates a common language and common goal for all schools in the state.

Why should I lead staff in the use of the KMCF?
This resource facilitates shared problem-solving and creativity to rethink and reshape learning in Kentucky. It will act as an impetus for educators to effectively share successful ideas.

How is the Kentucky Model Curriculum Framework relevant to my school?
As educators prepare students for the future, the KMCF provides the model and resources for developing curriculum in one place.

How do I use this resource as a tool?
The KMCF provides a common language for all educators to better facilitate effective teaching and learning and to promote collegiality. It is vital for all schools and districts to work together, sharing effective curricular strategies so all Kentucky students can succeed.

The KMCF creates a common language and shared model framework, providing a consistent message so that all groups such as school-based decision making councils, parent groups and boards of education have a shared goal. Embedded in the KMCF, school leaders will find several activities to engage staff and other stakeholders in conversations promoting high-quality teaching and learning. The KMCF creates an ideal model by which educators implement a rigorous and effective curriculum that generates student achievement. It consistently establishes what professional educators are expected to do for the next generation of learners of the Commonwealth of Kentucky.

What is the intended outcome of this information for district personnel?
District personnel can use this information as they guide schools in considering local district curriculum decisions and in planning professional learning to support implementation of the curriculum. The process of curriculum planning can inform local context for resources and supports.
Local Curriculum

**Why**
- Four Powerful Forces Converging
- Student Outcomes and Support Systems
- Generating a Curriculum Vision

**How**
- Planning and Building Curriculum
- Action Steps for Design and Review of Curriculum

**What**
- Effective Teaching and Opportunities for Learning
- Models and Resources
- Assessment, Professional Learning
Districts and schools are at different places in the curriculum design conversation and may choose to enter this resource anywhere in the cycle. The sections enable a quick reference to different parts of the resource.
Inside this section
Why revisit curriculum planning?
Student Outcomes and Support Systems
What is your vision for the next-generation learner?
"The complexities of today’s world require all people to be equipped with a new set of core knowledge and skills to solve difficult problems, gather and evaluate evidence, and make sense of information they receive from varied print and, increasingly, digital media."

**STEM 2025: A Vision for Innovation in STEM Education**

"Today we live in a technology and media-suffused environment with: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology."

**Framework for 21st Century Learning**

"Today’s students are different: more diverse, tech savvy and tech dependent, impatient multitaskers. And more. When it comes to learning, their needs extend beyond traditional curricula, the “Three R’s”—reading, writing, and arithmetic—to incorporate new skills, dispositions and literacies. Schools that embrace 21st century learning environments must also transform their concept of learning. See how you can enable and support this new vision of learning by aligning your school’s leadership, culture, teaching, assessment and infrastructure."

**P21 Roadmap**

"If we teach today’s students as we did yesterday’s, we are robbing them of tomorrow."

**John Dewey**
Why Revisit Curriculum Planning?

We need to prepare students for a vastly different future than we have known. Our understanding of the focus of education also needs to shift to reflect an understanding and acknowledgment of the changing nature of the challenges and demands that continue to shape the student of today and tomorrow. Our conversations around curriculum must consider the four powerful forces converging and leading us toward new ways of learning:

- **Knowledge work**—educational systems around the world continue in their quest to provide opportunities for students that address what is needed and valued in learning, work and life.

- **Thinking tools**—technology and the digital devices and services that fill a knowledge worker’s toolkit—the thinking tools of our time—may be the most potent forces for change. The speed at which the underlying information and communications technologies are developing is truly astounding. We have access to much of the world’s available information at our fingertips.

- **Digital lifestyles**—this is the first generation of young people to have experienced the most powerful tools for change in our society—digital information and communications technologies. This is changing both family and school dynamics, as students switch roles and become digital mentors, and teachers and parents become part-time students of our young digital experts.

- **Learning research**—five key findings from research in the science of learning can be used to direct and guide our efforts to reshape learning: authentic learning, mental model building, internal motivation, multiple intelligences and social learning.

These forces are simultaneously creating the need for new forms of learning in the 21st century and supplying the tools, environments, and guiding principles required to support 21st century learning practices.

*(21st Century Skills: Learning for Life in Our Times, Trilling and Fadel, 2009)*

Take time to focus on the four powerful forces (featured in the diagram above) that are converging with and influencing education. Divide participants into four groups. Assign each group one of the four forces. Have each group identify specific examples of how each of the four forces has changed from 2000 to the present. Share and compare responses from each group. Note any similarities in responses.
Think & Apply

How has the ease of access to information evolved?

What effect, if any, does speed in a digitized world have on communication and thinking?

How does the convergence of the four powerful forces impact our knowledge of how we learn and teach?
The Partnership for 21st Century Skills (P21) is a national organization that advocates for 21st-century readiness for every student. The P21 has been working with states and communities since 2002 to reinvigorate learning to meet the demands of the 21st century. In 2010, Kentucky joined the P21 State Partnership Program, a multi-state coalition aimed at fusing the three Rs and four Cs (critical thinking and problem-solving; communication; collaboration; and creativity and innovation).
Context to the Learning Goals and Capacities

The chart below is neither exhaustive nor exclusive; however, it is grounded in the underlying beliefs in the Learning Goals and Capacities as outlined in legislation (KRS 158.645). The headings for each column are the student outcomes identified by the 21st Century Partnership as necessary for success in life and career. Considering these outcomes together with the four powerful forces (knowledge work, thinking tools, digital lifestyles, learning research) can serve as a starting point for expanding the use and further development of these foundational Learning Goals and Capacities to reflect a 21st-century context. As a result, educators, families and communities who find themselves in increasingly complex and unfamiliar situations will be better equipped to prepare students now and in the future.

<table>
<thead>
<tr>
<th>Life and Career Dispositions</th>
<th>Learning and Innovation</th>
<th>Information, Media, and Technology Readiness</th>
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<tbody>
<tr>
<td>Excellence—achieving at high levels and persevering regardless of circumstances</td>
<td>Think and Apply—using creative, critical and metacognitive (thinking about our thinking) processes to make sense of information, experiences and ideas. Through these processes develop understanding, make decisions, shape actions or construct knowledge</td>
<td>Multi-literacies—using languages and symbols to produce texts of all kinds: written, oral/aural, and visual; informative and imaginative; informal and formal; mathematical, scientific and technological</td>
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<td>Diversity—promoting an appreciation for one’s own cultural/historical background and respecting the history, language and tradition of other cultures</td>
<td>Intellectual curiosity—actively seeking, using and creating knowledge</td>
<td>Communication—recognizing how choices of language, symbol or text affect people’s understanding and the ways in which they respond—competent users interpret and use words, numbers, images, movement, metaphor and technologies in a range of contexts</td>
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<tr>
<td>Equity—exhibiting qualities of human worth and justice</td>
<td>Reflect—on own learning, drawing on personal knowledge and intuitions, asking questions and challenging the basis of assumptions and perceptions</td>
<td>ICT (information, communication technology) —using ICT (including, where appropriate, assistive technologies) to access and provide information and to communicate with others</td>
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<tr>
<td>Ethical behavior—willingness to think about, articulate and support beliefs, judgments, and behavior</td>
<td>Manage Self—seeing self as capable, self-motivated, a “can-do” attitude</td>
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<tr>
<td>Qualities of character—exhibiting altruism, citizenship, courtesy, hard work, responsibility</td>
<td>Independence—enterprising, resourceful, reliable and resilient</td>
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<tr>
<td>Relating to others—interacting effectively with a diverse range of people in a variety of contexts</td>
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</table>
Think of a recent lesson you taught or observed in a classroom or out-of-school experience. Chart examples of evidence that students were using the following skills.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Evidence</th>
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<tbody>
<tr>
<td><strong>Critical Thinking</strong></td>
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<td><strong>Problem Solving</strong></td>
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<td><strong>Good Communication</strong></td>
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<tr>
<td><strong>Good Collaboration</strong></td>
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<tr>
<td><strong>Information and Technology Literacy</strong></td>
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<tr>
<td><strong>Flexibility and Adaptability</strong></td>
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<tr>
<td><strong>Innovation and Creativity</strong></td>
<td></td>
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<tr>
<td><strong>Global Competency</strong></td>
<td></td>
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<tr>
<td><strong>Environmental Awareness</strong></td>
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</table>

In small groups, share responses and discuss the reflections of group members about opportunities offered to young people to exhibit these 21st-century readiness skills.
What is Your Vision for a 21st Century Learner?

What are districts/schools doing to shift their balance toward 21st-century learning? What does this shifting balance look like? What does this mean for teachers and other adults working with children in school classrooms and other community settings each day?

The following exercise will be helpful to district/school planning teams as a starting point in curriculum conversations leading to a curriculum vision. Following each question are some responses these questions have generated during similar conversations.

[Note to the facilitator(s): These responses may prove helpful in moving toward a “future oriented” conversation and curriculum, but they would not necessarily be shared with participants.]

The Four Question Exercise

Question #1: What will the world be like twenty or so years from now when your students have left school and are out in the world?

Think about what life was like twenty years ago and all the changes you have seen happen. Then imagine what will happen in the next twenty years.

For Facilitators:

Usually evokes responses that project current events, issues and challenges into the future. Samples of typical responses:

- a “smaller world,” more connected by technology and transport
- a mounting information and media tidal wave that needs taming
- global economic swings that affect everyone’s jobs and incomes
- strains on basic resources-water, food and energy
- the acute need for global cooperation on environmental challenges
- increasing concerns about privacy, security and terrorism
- the economic necessity to innovate to be globally competitive
- more work in diverse teams spanning languages, cultures, geographies and time zones
- the need for better ways to manage time, people, resources and projects
Question #2: What skills will students need to be successful in this world you have imagined twenty years from now?

[This question] Inevitably generates most of the 21st-century skills, [which also may spark conversation regarding the fact that these skills actually begin to develop in early childhood] including values and behaviors such as curiosity, caring, confidence and courage that often accompany the learning of these skills and can be placed in three useful categories:

Learning and Innovation Skills:
- Critical Thinking and Problem-Solving
- Communications and Collaboration
- Creativity and Innovation

Digital Literacy Skills:
- Information Literacy
- Media Literacy
- Information and Communication Technologies (ICT) Literacy

Career and Life Skills:
- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Interaction
- Productivity and Accountability
- Leadership and Responsibility

Question #3: Now think about your own life and the times when you were really learning, so much and so deeply, that you would call these the “peak learning experiences” of your life.

[Don’t limit your thinking to “school” learning experiences. Consider expanded learning opportunities and out-of-school time (after-school, summer programs, specific organizational groups, private and faith-based child care, home, preschool) as well.] What were the conditions that made your high-performance learning experiences so powerful?

Generates collective answers that are even more intriguing:
- very high levels of learning challenge, often coming from an internal personal passion
- equally high levels of external caring and personal support—a demanding but loving teacher, a tough but caring coach or an inspirational learning guide
- full permission to fail safely and with encouragement to apply the hard lessons learned from failure to continuing the struggle with the challenge at hand-failures, well-supported, can often be better teachers than easy successes (though this is certainly not a very popular approach in today’s “test success”-driven schools)

Before going on to Question #4, look over your answers to the first three questions and think about how most students currently spend each day in school, after school, and during the summer. Then consider the final question:
Question #4: What would learning be like if it were designed around your answers to the first three questions?

Consistently spotlights the distance between what we all know learning should be and what most schools end up doing each day:

- The world of work is increasingly made of teams working together to solve problems and create something new – why do students mostly work alone and compete with others for teacher approval?
- Technology is more a part of our children’s lives each day – why should they have to check their technology at the classroom door and compete for limited school computer time?
- The world is full of engaging, real-world challenges, problems, and questions - why spend so much time on disconnected questions at the end of a textbook chapter?
- Doing projects on something one cares about comes naturally to all learners - why are learning projects so scarce inside so many classrooms?
- Innovation and creativity are so important to the future success of our economy - why do schools spend so little time on developing creativity and innovation skills?
- Learning is an ongoing process that extends beyond the reach of the school day – why aren’t schools maximizing afterschool and expanded learning opportunities (ELO) through alignment and linkages to mainstream education goals?

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What next steps for planning the curriculum are indicated when considering responses to the questions?
Inside this section
What should comprise a curriculum for the next-generation learner?
The School Curriculum: Design and Review
What Should Comprise a Curriculum for a 21st Century Learner?

Curriculum is a shared responsibility of family, school, and community.

It is essential for educators to approach designs for teaching and learning with the understanding that curriculum is much more than the teaching of subject-area content or standards. Curriculum entails the systematic design of entire learning environments, including the knowledge, skills, abilities, and understandings learners are to acquire; it also includes considerations of classroom design for equal access, accessibility (e.g., use of captioning and sound field systems to meet the needs of diverse learners), school infrastructure and resources, engagement with the community, and the intentional modeling of social interactions around learning between teachers, learners, administrators, families and other shareholders.

Learning demands new ways of thinking and a new set of partnerships. Connections between schools, families, and the multiple resources that exist in a community to improve outcomes for students can promote a shared responsibility and a shared accountability between schools, families and community providers. Building partnerships with businesses, foundations, nonprofit educational organizations, community groups and other schools and educational institutions across the globe will bring new opportunities for students, educators, families and communities to collaborate and learn from a world of experts preparing for work and life.

“. . . curriculum requires standards-based, relevant tasks and engaging teaching strategies that complement contemporary students’ needs in terms of the activities they will participate in during their future lives and educations beyond P-12 schooling. Because learning occurs in a global context, it is important to have representation of these groups in conversations regarding curriculum planning.
Focus is on the learner.

Curriculum is defined in many ways: course of study; structured teaching plan for a course; both the content (the material to be learned), and process of learning (the actions and resources involved in teaching and learning); the planned interaction of pupils with instructional content, materials, resources and processes for evaluating the attainment of educational objectives. Based on this broad definition of curriculum, planning and implementation proceeds by systematically assessing where young people are in their individual learning and abilities, then designing evidence-based plans for helping them progress toward common standards and learning targets. Curriculum planning, from early childhood through graduation, involves using data about students’ needs and abilities to employ varying degrees of structure and pacing in concert with input from parents/guardians and other educators both inside and outside of the school. It requires systematic implementation of various instructional strategies, as well as a consistent focus on helping students to mature and be socialized in collaborative groups that support their growth as lifelong learners. The goal of such a curriculum is to produce students that are ethical citizens in a democratic global society, and to help them become self-sufficient individuals who are prepared to succeed in an ever-changing and diverse world. Design and implementation requires professionals to accommodate the needs of each student and focus on supporting the development of the whole child so that all students have equitable access to opportunities and support for maximum academic, emotional, social and physical development.

Curriculum is not to be treated as fixed or rigid.

Curriculum should be dynamic, and educators should constantly analyze new data to make adjustments that meet the needs of all students in a dynamic world. Students are most successful when the curriculum (organization, instructional strategies, programs, structure, pacing) is based on their readiness, needs and interests (Orb, 2001).

Contemporary society is radically different in the 21st century. Because of these differences, curriculum requires standards-based, relevant tasks and engaging teaching strategies that complement contemporary students’ needs in terms of the activities they will participate in during their lives and education beyond preschool-grade 12 learning. Because learning occurs in a global context, “educational systems must create a culture of inquiry and collaboration that enables all students and teachers to learn for their own sake and for the good of a culturally diverse democratic society in an interdependent world.” (From Principles for Learning: A foundation for transforming K-12 education by ACTE, COSN, NCSS, NCTE, NCTM, and NSTA).

What is effective for every learner is a systematic and ongoing assessment of their needs and using the data in collaborative conversations with parents/guardians and educators in the interests of preparing the student to live and work in a global society.
Building a Curriculum

There are important principles of learning to be considered and incorporated in any curriculum. These principles recognize that learning in all disciplines is complex and individualized. Applying the core concepts within and outside of a discipline and understanding how to teach these concepts effectively is integral to these six principles.

1. Being literate is at the heart of learning in every subject area.
2. Learning is a social act.
3. Learning about learning establishes a habit of inquiry important in life-long learning.
4. Assessing progress is part of learning.
5. Learning includes turning information into knowledge using multiple media.

(Principles for Learning: A foundation for transforming K-12 education May 2010 by ACTE, COSN, NCSS, NCTE, NCTM and NSTA)

It is important that the school develop and implement a curriculum that is rigorous, intentional and aligned with national, state and local standards and district requirements. Additionally curriculum planning considers development, environment and other differences.

Curriculum planning maps the process through which the learning will occur. Understanding how the curriculum planning processes (aligning, mapping and pacing) are defined and the recursive nature of these processes will be helpful in communicating the need to continuously revisit them in order to rethink what is effective for every learner.
## Curriculum Planning

<table>
<thead>
<tr>
<th></th>
<th>Curriculum Alignment</th>
<th>Curriculum Maps</th>
<th>Pacing Guides</th>
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<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>The process of interpreting learning standards and developing learning objectives that are directly targeted to the student (learning targets)</td>
<td>Vertical (K-12) Organizes the intended curriculum for K-12 The curriculum map offers a school year timeline of standards/targets to be learned as well as assessments of what is learned</td>
<td>Horizontal (grade level team) Enacted curriculum (Calendar-based) Documents the proposed design and delivery of curriculum, instruction and assessment for a course or grade level. Teachers record what will be taught, when and how instruction will be delivered, how instruction will be assessed and how the results of assessment will inform teaching and learning. The purpose is to plan curriculum for the year in order to include all the necessary material to meet the subject-area standards.</td>
</tr>
<tr>
<td><strong>Source</strong></td>
<td>K-12 Teams of educators</td>
<td>District, K-12 team of educators, grade level team</td>
<td>Local grade level or course-alike instructional teams, individual teachers</td>
</tr>
<tr>
<td><strong>Basis for Alignment</strong></td>
<td>K-12 KY Academic Standards, KY Early Childhood Standards</td>
<td>K-22 KY Academic Standards</td>
<td>Horizontal organization (by grade level or course) to develop a coherent curriculum</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>To specify what all students should know and be able to do at the completion of a grade level or course</td>
<td>To eliminate curriculum gaps and avoid duplications. Ensure knowledge and skills are built over time</td>
<td>Create a detailed timeline for instruction based on the school calendar. Assure sufficient time allocations for each standard.</td>
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</table>
# What should students learn?

<table>
<thead>
<tr>
<th>Key Concepts</th>
<th>Promising Directions</th>
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<tbody>
<tr>
<td><strong>Standards</strong></td>
<td>Using the Kentucky Academic Standards (KAS) as a base, as well as the Kentucky Early Childhood Standards as the foundational step to the KAS, integrate competencies that contribute to success, such as life and career skills, learning and innovation skills, and information, media and technology skills.</td>
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<tr>
<td>Skills and knowledge base expected of students for a particular subject area</td>
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<tr>
<td><strong>21st Century Skills (4 C’s)</strong></td>
<td>Integrate 21st Century Learning Skills including the “4 Cs” listed on the left which might also include learning and innovation skills, digital literacy skills, and career and life skills.</td>
</tr>
<tr>
<td>• Critical Thinking and Problem-Solving</td>
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<tr>
<td>• Communication*</td>
<td></td>
</tr>
<tr>
<td>• Collaboration*</td>
<td></td>
</tr>
<tr>
<td>• Creativity</td>
<td></td>
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<td><strong>Habits of Mind</strong></td>
<td>Teach and model “Habits of Mind” which are dispositions that are skillfully and mindfully employed by successful people when they are confronted with problems, the solutions to which are not immediately apparent. (<a href="https://www.instituteforhabits.com">The Institute for Habits of Mind</a>, 2011)</td>
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<tr>
<td>• Persisting</td>
<td></td>
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<tr>
<td>• Thinking and Communicating with Clarity and Precision*</td>
<td></td>
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<tr>
<td>• Managing Impulsivity*</td>
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<tr>
<td>• Gathering Data Through all Senses*</td>
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<tr>
<td>• Listening with Understanding, Empathy*</td>
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<td>• Creating, Imagining and Innovation</td>
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<tr>
<td>• Thinking Flexibly</td>
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<td>• Responding with Wonderment and Awe</td>
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<tr>
<td>• Thinking about Thinking (Meta-cognition)</td>
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<tr>
<td>• Taking Responsible Risks</td>
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<tr>
<td>• Striving for Accuracy*</td>
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<td>• Finding Humor</td>
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<td>• Questioning and Positing Problems</td>
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<td>• Thinking Interdependently</td>
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<tr>
<td>• Applying Past Knowledge to New Situations</td>
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<tr>
<td>• Remaining Open to Continuous Learning</td>
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<tr>
<td><strong>Life Skills &amp; Career Readiness</strong></td>
<td>Promote the development of student abilities to become competent, ethical, self-sufficient individuals in a global society.</td>
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<tr>
<td>• Flexibility and Adaptability</td>
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<tr>
<td>• Initiative and Self-Direction</td>
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<tr>
<td>• Social and Cross-Cultural Skills</td>
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<td>• Productivity and Accountability</td>
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<td>• Leadership and Responsibility</td>
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<td>• Ethics</td>
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*Items marked with an * in the column to the left have been identified as particularly difficult areas for deaf and hard of hearing students.*
# How will students experience learning?

<table>
<thead>
<tr>
<th>Key Concepts</th>
<th>Promising Directions</th>
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</table>
| **Rigorous and relevant**<br>Complex, real-world, inquiry-based learning that requires creativity, critical thinking and problem-solving. | Teachers promote and support students’ interests as they initiate complex, inquiry-based learning. Schools ensure:  
- flexible scheduling  
- extracurricular opportunities  
- project-based learning  
- problem-based learning  
- extended learning opportunities (e.g., work-based learning such as job shadowing, internships, cooperative education)  
- collaborative teacher planning  
- family and community engagement |
| **Differentiation**<br>A method of insuring continuous progress through which a specific, well-planned match is established between a student’s abilities, interests, needs and curriculum opportunities. | Differentiated education experiences supplement, replace or extend learning beyond the standard curriculum.  
Differentiation begins with pre-assessment to determine what students know. |
| **Inter-disciplinary**<br>Comprehensive integration of the curriculum by bringing together multiple discipline areas. | Teachers of various content areas and grade levels collaborate.  
Principals provide flexible scheduling and resources to encourage collaboration. |
| **Expanded/Extended Learning Opportunities**<br>Those experiences outside the regular school schedule that expand learning | Communities provide opportunities for:  
- service learning  
- internships/mentoring/shadowing/cooperative education  
- after-school programs  
- education enhancement opportunities  
- groups, clubs, organizations and co-curricular activities  
- language learning for new users of the English language, including some who are deaf or hard-of-hearing  
- incidental learning exposures critical for deaf students |
The School Curriculum: Design and Review

Who might be involved in planning and/or reviewing the curriculum?
The following categories of shareholders, reflective of the community being served, should be considered:

- Teachers
- Students
- Parents
- Administrators
- Community Leaders (i.e. business owners, city officials)
- Business and Industry Representatives
- Curriculum Specialists/Instructional Supervisors
- After-School Care Providers
- Early Childhood Professionals
- Library Media Specialists
- Technology Specialists
- Higher Education
- School Councils
- Special Educators / Therapists /
  Tutors

Curriculum design and review is a continuous process. Flexibility when determining the detail of the design and shape of the curriculum is given to each school in the Commonwealth so the teaching and learning is meaningful and beneficial to the particular communities of learners. The design of each district/school’s curriculum allows teachers to make interpretations in response to the particular needs, interests and talents of individuals and groups of students. While Kentucky’s Academic Standards define the minimum content that must be taught, it is not a regimented curriculum. In Kentucky, traditionally, districts have created a range of curriculum resources and components, ranging from pacing guides and maps to very detailed plans outlining specific instructional resources (books, articles, manipulatives), as well as specific common assessments for units and courses.

While the standards do define the content (or the WHAT), they do not prescribe HOW to teach or assess them. That is the function of the curriculum. Likewise, what is published on the KDE webpage as Kentucky’s Academic Standards defines the WHAT. Local districts will need to define the HOW.
Standards vs. Curriculum

- Standards are typically broader statements of what we want students to know/be able to do by a set time. They define the “what” of teaching and learning — but not the “how.” They are typically composed of multiple elements or dimensions (for example, ‘formulate a question and then design an investigation to … Presenting conclusions about…’ — in other words — they often involve multiple skills/reasoning abilities/knowledge)

- Standards define what we plan to ensure students have learned at key points in schooling—typically our end of year, high stakes tests focus on these.

- Curriculum is a ‘course or path run in small steps’ (origin of the term, going back to Roman times—Circus Maximus).

  1. A Curriculum takes the “what” and translates it into “how”—typically thru a backwards design process that views the standard as the end point, and considers all the steps it will take to get there.

  2. This is where we deconstruct standards—to define singularly focused targets that look at the particular knowledge, skills, reasoning, and products/performances demanded by the standard.

  3. Those standards and targets then are sequenced to maximize students’ learning (based on cognitive research, experience, etc.)—which begins to define a Curriculum Map.

  4. Once some sequence to the learning has been defined in a somewhat broader sense, then the process of Unit Development begins by looking at how to effectively cluster key standards/learning targets to engage students and provide additional clarity and context to the learning experience. Curriculum Maps might be finalized* after the units are clearly defined.

  5. At that point, Unit Assessments (formative and summative) are developed to decide how we will know the students have learned the standards/key targets in this unit and are ready to go forward.

  6. Material Resources—such as texts, equipment, etc., are then selected to support particular Lesson Designs/Plans. All of those things comprise a Curriculum.

*Ultimately, Curriculum Maps should be iterative/working documents—using real time data and evidence to inform revisions.
Getting Started

- Determine who may need to be a part of the curriculum conversation. See page 24 for suggestions in this resource.

- Establish a team and set a schedule for planning face-to-face and/or virtually.

- Review and reflect as a team on the sections: **Rationale for Revisiting Curriculum Planning** beginning on page 6 and **Planning Curriculum** beginning on page 17 of this resource to set the larger context for this work.

- Clarify the curriculum vision of the team using the team’s responses to **What is Your Vision for a 21st Century Learner** beginning on page 14 of this resource.

- Preview the Models and Resources section of this resource beginning on page 49. Note any information or resources that may need further research.

- Communicate the results of this preliminary committee work with the district/school staff on a regular basis.

- Begin by reaffirming the premise that every student is an individual and that learning may call for different approaches, different resources and different goals (every student can learn and succeed).

- Consider how to encourage and/or monitor the development of
  - relevance for students
  - conditions that help or hinder development
  - the effectiveness of approaches
  - how students demonstrate learning
Action Steps

Action Step 1: Identify and communicate the content essential for all students. (Review the definition of curriculum alignment on page 20.)

Since content standards are incorporated into state regulation (704 KAR 3:303 Required Kentucky Academic Standards), all content areas must be addressed in an aligned curriculum.

- The Kentucky Academic Standards (KAS) for English Language Arts contain specific standards for reading and writing in Science, Social Studies, and Technical Subjects, so those areas should be included to reflect these standards as well.

- Consider decisions/policies of your local school board and school-based decision making councils regarding the access to all content that should be available for every student.

- Become familiar with the Kentucky Early Childhood Standards (KYECS) and their alignment to the KAS in order to best support students as they transition from preschool to kindergarten, primary to intermediate.

- Become familiar with the vertical alignment of standards in order to best support students as they transition from early learners to intermediate, intermediate to middle, middle to high, high to post-secondary/workforce/military.

Sample chart section below. See appendices for full editable chart.

<table>
<thead>
<tr>
<th>Updates needed to alignment including reading and writing in science, social studies, and technical subjects</th>
<th>Policies/decisions for local board and SBDM consideration (e.g., writing policy)</th>
<th>Transition support (preschool-K, primary to intermediate, intermediate to middle, middle to high, high to postsecondary/workforce/military)</th>
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</table>

Action Steps adapted from What Works in Schools: Translating Research into Action by Robert Marzano.
Action Step 2: Ensure that teachers address content standards.

- Compare your current local curriculum document (district and school) to KAS to determine if or where significant changes will need to occur.
- Begin to identify additional professional learning opportunities teachers will need to effectively implement the revised local curricula.
- Review the **Professional Learning Guidance** section beginning on page 55.

<table>
<thead>
<tr>
<th>Comparison of the current curricula to standards</th>
<th>Significant changes needed to current curricula (Gap Analysis)</th>
<th>Professional learning needs related to revised curricula</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

Action Step 3: Ensure that the content can be addressed in the amount of time available for instruction. (Review the definitions of curriculum mapping and pacing, p. 20.)

- Look at the collection of standards/other content determined locally for each grade level and organize it into chunks of learning based on topics.
- Determine the major chunks of learning, grade by grade, for an academic year. If curriculum pacing guides already exist, consider the alignment conducted in step 2 to ensure that any time adjustments necessary to incorporate new or different standards are made. Update curriculum pacing guides.
- Organize the set of *Learning Targets* by the courses/topics that have been identified grade by grade. Provide time for both horizontal and vertical grade level teams to discuss the standards and targets as chunks.

<table>
<thead>
<tr>
<th>Chunks of learning</th>
<th>Pace of instruction</th>
<th>Adjustments or new work to update pacing guides</th>
</tr>
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<tbody>
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</table>
Action Step 4: Sequence and organize the content in such a way that every student has ample opportunity to learn. (Review the definitions of curriculum mapping and pacing, p. 21.)

- Begin this process by considering the Kentucky Academic Standards (KAS) and/or the Kentucky Early Childhood Standards (KYECS), then consider any local expectations the district sets for the students (see Action Step 3).

- Compare previously used curriculum maps with what has been mapped to current standards. Consider what is already in place in terms of course or units. What can be kept? What needs to be adjusted? What needs to be added? If there are standards previously addressed by another grade level, what can be used that has already been developed?

- Discuss a system for documenting design and delivery of instruction for the purpose of continuous instructional improvement resulting in ample opportunity for learning.

<table>
<thead>
<tr>
<th>Curriculum Maps</th>
<th>Units of Study/Lessons</th>
<th>System of Documentation</th>
</tr>
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<tbody>
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</table>

For further study:

- Review the Balanced Assessment section of this resource beginning on page 51.
Action Step 5: Implementation and Delivery

- Identify the existing instructional and assessment resources that align well to the revised curricula; identify those that do not.

- Consider the additional instructional materials and resources that are needed to address the learning targets effectively.

- Incorporate other resources into the curricula as they are available (e.g., sample learning/assessment tasks aligned to particular standards/targets).

- Protect the instructional time that is available.

- Consider any policies or procedures that should be established to protect classrooms from unnecessary interruptions.

- Consider scheduling so that all teachers have regular opportunities to plan and reflect on their practice together. Examples could include common planning and communities of practice. Teachers of physical education, art, music, library media, school counseling/guidance, special education and out-of-school programs should be included.

<table>
<thead>
<tr>
<th>Policies or procedures that affect classroom instruction</th>
<th>Collaborative planning opportunities</th>
<th>Time for reflection on practice</th>
</tr>
</thead>
<tbody>
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</table>
Action Step 6: Generate an action plan for ongoing reflection and revision of the curricula.

Reflect on the curriculum plan.

Curriculum design begins with the premise that every student can learn and succeed and recognizes that each student is an individual. Learning may call for different approaches, different resources and different goals.

A district/school’s curriculum is well designed when:

- Students build on existing learning and attain higher levels of achievement.
- All students, including those with special needs, access quality learning experiences that enable them to achieve and engage in opportunities to work beyond formally described targets.
- Supports are provided for key lifelong skills, as well as opportunities for students to do well academically.
- Achievement objectives are realized and support for learning to learn is embedded.

All shareholders have the opportunity to participate in the continuous process of curriculum review and design.
Inside this section
What comprises Quality Teaching and Learning?
Engaging Family and Community
Models and Resources
What Comprises Quality Teaching and Learning?

Teaching and learning are the collaborative and reflective processes that promote success. The implementation of curriculum needs to accommodate every student and recognize the students’ experiences and knowledge. A collaborative environment lends itself to leadership roles for teachers, families and community members allowing for a culture of shared responsibility. As progress, choices and actions are analyzed and evaluated, all shareholders work together to determine that learning occurs.

The intended curriculum becomes a reality through all shareholders’ deep understanding of what the outcomes of learning should be. Bringing learning to life through effective instructional practices and relevant learning experiences supported by school, family and community partnerships ensures that what is taught is actually learned.

All shareholders must know, understand and assume a role in a personalized model of teaching and learning. A personalized learning model means that each learner will have someone in the family, school and/or community who can and will:

- help the student of today and tomorrow meet the expectations to be ready for life and career beyond high school,
- access resources to help meet the individual needs of the student,
- advocate for the educational rights of the student under Kentucky law and federal mandates such as the Individuals for Disabilities Education Act (IDEA),
- serve on committees, task forces, school-based decision making (SBDM) councils, parent organizations and advocacy groups to ensure a safe, personalized and equitable learning environment is provided.

This commitment to a personalized learning model will support the knowledge jobs of today and tomorrow, which will require complex skills, expertise and creativity. Many of the jobs of the future do not even exist today. However, two essential skills will remain at the top of the list of requirements for 21st-century work: the ability to quickly acquire and apply new knowledge; the know-how to apply essential readiness skills of problem-solving, communication, teamwork, technology use and innovation to every project.
Education should prepare students to:

● contribute to work and society by meeting needs and solving local and global issues and concerns
● engage in complex thinking and communicating
● exercise and develop personal talents throughout life
● contribute time and resources to fulfill civic responsibilities through informed participation
● create new services and new products by applying traditional knowledge and principles across other fields (innovation)
● blend traditions from a wide range of cultures to build a more harmonious, culturally rich and creative society
● manage demands for attention from many sources and apply critical thinking and information literacy skills to collaborative problem-solving, political action and community building

Students today have an expectation of learning approaches that are interactive, personalized, collaborative, creative and innovative. The questions for those engaged in curriculum conversations are:

● What shifts in thinking about instruction, assessment, accountability and professional development will be needed at every stage of learning to meet high demands on thinking and active use of knowledge?

● How do we prepare students for the future of work and careers that have not yet been invented?

Changes will continue to make new demands on education as the century progresses and highly effective educators will shift their practices to meet the needs of the student.
Learning Climate: A teacher supports a safe environment in which high, clear expectations and positive relationships are fostered; active learning is promoted.

Classroom Assessment and Reflection: The teacher and the student collaboratively gather information and reflect on learning through a systematic process that informs instruction.

Instructional Rigor and Student Engagement: A teacher supports and encourages a student's commitment to initiate and complete complex, inquiry-based learning requiring creative and critical thinking with attention to problem solving.

Instructional Relevance: A teacher has the ability to facilitate learning experiences that are meaningful to students and prepare them for their futures.

Knowledge of Content: A teacher has understanding and application of the current theories, principles, concepts, and skills of a discipline.
Providing Proficient Opportunities to Learn

21st-century teachers must provide sufficient opportunities for students to learn. In order to do this, teachers must understand who their students are, gauge their needs as learners, design instruction that meets students where they are and respond appropriately to the outcome of instructional delivery.

Teacher Behavior: Understanding Students

Related Knowledge, Skills and Competencies

Diverse Students
Diverse students with unique educational needs can include students with disabilities, students from racial and ethnic minorities, students from migrant or immigrant families, and non-native speakers. Additionally, all students can face gender-based challenges to reaching their educational potential. Acknowledging that students are diverse in their backgrounds and abilities simultaneously acknowledges that a one-size-fits-all approach cannot succeed for all students, but that it is possible for all students to meet high standards.

Cultural Responsiveness
Teachers can meet the needs of diverse learners through culturally responsive instruction. Culturally Responsive Instruction builds on students’ cultural knowledge to enhance academic success. Teachers must develop cultural competencies—skills related to awareness of issues of culture, language, race, disability (e.g., deaf culture) and ethnicity—to successfully utilize culturally responsive instruction.

Creating a Supportive Learning Environment
Educational researchers such as James H. Stronge have found that creating a supportive learning environment is critical for effective teaching and learning to occur. When creating a supportive learning environment, teachers convey a sense of immediacy, credibility and caring, and they communicate to students in both verbal and non-verbal ways that are essential to cultivating a positive and productive learning community.

Digital Natives
Today’s students are digital natives, born during a time when the Internet and mobile communication devices are the norm. Most students are “plugged in” to a technologically sophisticated world outside of schools. Teachers of digital natives must find ways to deliver instruction that capitalizes on technology.
Related Knowledge, Skills and Competencies

Making Connections to Prior Learning and Experiences
Students learn more effectively when they already know something about a content area and when concepts in that area mean something to them and to their particular background or culture. When prior knowledge is activated, instruction is infused with purpose through the student’s interest and curiosity. Prior knowledge acts as a lens through which we view and absorb new information. It is a composite of who students are, based on what they have learned from both academic and everyday experiences. (Kujawa and Huske, 1995) Teachers who link instruction to prior knowledge build on students’ familiarity with a topic (Beyer, 1991) and enable students to connect the curriculum content to their own culture and experience.

Universal Design for Learning (UDL)
Universal Design for Learning (UDL) is a curriculum designed approach to increase flexibility in teaching and decrease the barriers that frequently limit student access to materials and learning in classrooms (Rose & Meyer, 2002). UDL is based on research in the learning sciences, including cognitive neuroscience that guides the development of adaptable learning environments to accommodate individual learning differences.

Within this framework, universal design principles are applied to instructional materials, curricula and educational activities so that they are achievable and challenging for students with a wide range of abilities and needs. Universal access to learning includes captioning what is said in the classroom with voice recognition software, sound field systems, acoustically appropriate design and more.

Differentiation
Differentiated instruction is a process of teaching and learning for students of differing abilities in the same class. To differentiate instruction is to recognize students’ varying background knowledge, readiness, language, preferences in learning and interests and to react responsively. The intent of differentiating instruction is to maximize each student’s growth and individual success by meeting each student where he or she is and assisting in the learning process (Tomlinson 2001).

Teaching as Inquiry
Teaching as inquiry is a learning process through questions generated from the interests, curiosities, and perspectives or experiences of the student. Inquiry-based learning is often described as cyclical, beginning with the formulation of a question, followed by investigation, creation of a solution or an appropriate response, discussion and reflection in connection with results (Bishop et al., 2004). Student-centered and student-led, the purpose is to engage the students in active learning, ideally based on their own questions. Learning activities are organized cyclically, independent of the subject. Each question leads to the creation of new ideas and other questions.
**Online/Blended Learning**

Online/blended learning provides 21st century learning opportunities for Kentucky students that are rigorous, personalized, standards-based, and responsive to our increasing information rich, and rapidly expanding networked technological culture. Student learning experiences are based on the following: learning style and learning needs which allow for student choice, voice and pace. Online and blended learning courses by a highly qualified content teacher increases student engagement and achievement to close achievement gaps.

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**Teacher Behavior:** *Responding Appropriately and Adjusting Instruction*

**Related Knowledge, Skills and Competencies**

**Encouraging Reflective Thought and Action**

“The connection between experience, reflection, making meaning, and learning is clear. Reflection is an essential part of the learning process because it can result in extracting meaning from the experience. Participants who reflect on an experience are better able to extract lessons from the experience, to understand themselves in relation to the experience, and to apply the learning to other areas of their lives.” (*Reflective Practice*, Sugarman et al 2000).

**Intervention**

The [Kentucky System of Intervention (KSI) Guide](#) provides resources to help schools and districts analyze their current systems (human, physical and financial resources and materials) and refine their decision-making processes and procedures to move forward toward full implementation of a comprehensive instructional system.

KSI is a comprehensive system for meeting the needs of all students by ensuring preventive measures for learners who struggle, as well as enrichment for those learners who surpass grade-level expectations and need extended learning opportunities. KSI encompasses Response to Intervention, accelerated learning requirements, closing the achievement gap, high-quality instruction, readiness to learn, and student transition.
Developmentally appropriate teaching practices provide a balance of student-initiated and teacher-directed experiences. The teacher in high quality programs takes responsibility for directing, stimulating and supporting the learning experiences each student needs. Teachers who shift their practices to meet the needs of our times are balancing the coverage of content with the discovery of ideas and concepts. They are working to achieve a balance of presentation and explanation (teacher directed) with guidance and support of research, discovery and sharing by the learner of their own findings in learning projects (student initiated). For students to achieve competence in any subject area means developing both the knowledge and the skills to apply the knowledge to the kinds of questions and problems experts in that field would tackle. Instead of thinking instruction must be either teacher-directed or student-initiated to be effective, consider these examples of both and thinking that achieve the needed balance of the two.

**Students:**
- both constructing their own learning and benefitting from teacher instruction
- benefitting both from engaging in self-initiated and from teacher-planned and structured activities and experiences
- benefitting both from learning experiences that challenge them and from opportunities that allow the practice of new skills

**Teachers:**
- both having high expectations for all students and supporting student-initiated opportunities and recognizing that all learners may at times need additional assistance and resources
- committed to both closing the achievement gap and providing what each student needs for school success

*(21st Century Skills: Learning for Life in Our Times, Trilling and Fadel, 2009)*
Learning Environment

In the 21st century, learning environments should be seen as the support systems that accommodate the unique needs of every student and support the positive human relationships needed for effective learning. Twenty-first century teachers understand and respect diversity, realizing that what learners bring to the classroom culturally, ethnically and through language are assets to be leveraged. By providing a supportive learning environment, teachers ensure academic as well as emotional, social and physical development.

Such development happens in classrooms, but it also takes place beyond the school walls. Teachers recognize the importance of student experiences outside the classroom and embed connections to those experiences in instruction. Additionally, teachers acknowledge the developmental learning level and habits for each individual student and understand that students need safe and supportive learning environments to thrive.

Relationships and Resiliency

Learning environment includes not only place and space, but the relationships that create a positive environment which supports every student’s development. The literature on resiliency (Richardson, 2002; Rutter, 1999) asserts that even students who experience multiple significant risk factors may be resilient and ultimately successful in life if even one adult invests in them, holds high expectations for them (i.e., values them and believes in their potential) and maintains a consistent supportive relationship over time. Relationships are extremely important protective factors.

Additional critical protective factors (social competency, problem-solving skills, self-esteem, and sense of purpose and future) are attributes which can be effectively developed or strengthened with coaching, guidance and support in the context of a positive learning environment (See SEARCH Institute website). Ultimately, relationships are as important to the learning environment as rigor and relevance (McNutly and Quaglia, 2007).
School Climate and Barriers to Learning

It is critical that educators establish and maintain a positive context that facilitates learning. School and classroom culture and climate impact important factors for learning such as engagement, behavior, self-efficacy, achievement and social-emotional development. The optimum learning environment is one of high expectations and low stress.

A positive learning environment is especially critical for at-risk students, due to factors like poverty, disability or abuse. If schools become a source of significant additional daily stress for students (e.g., over-demanding, overwhelming, full of opportunities for failure, over-controlling, non-supportive, boring, hostile or bully-ridden), students cannot learn. Neither can they grow or progress through life’s typical developmental stages and challenges, particularly in adolescence. The reality is that negative and stressful learning environments can themselves become barriers to learning (Adelman and Taylor, 2006; National School Climate Council, www.schoolclimate.org).

Engagement and Motivation

Motivation is a pre-requisite for attentiveness, involvement, learning and performance. In the context of a positive school climate, successful teaching mobilizes the student to engage in learning. Lack of academic or social engagement in school is a key factor predictive of dropping out (Rumberger, 2004). According to a study conducted by UCLA, “Increasing intrinsic motivation requires focusing on students’ thoughts, feelings, and decisions. In general the intent is to reduce negative and increase positive feelings, thoughts, and coping strategies” to enable active learning and motivated student performance (Center for Mental Health in the Schools-UCLA, http://smhp.psych.ucla.edu).
Learning environments must be perceived as caring, supportive places which offer activities that are valued and challenging, but doable. Motivation theory and research says that learners must both value an activity and expect that they will be able to successfully complete it if they are to attempt the task and expend substantial amounts of energy and the effort often necessary for learning.

Therefore, schools must carefully consider factors like the perceived relevance of content, fear of failure in the face of rigor, cultural competence of educators, peer climate for embarrassment, learning problems, emotional distress and other elements which affect student perceptions, values and expectancy. Students maintain expectations for success based on recent and historical school experience. High teacher expectations and rigorous learning activities also require high levels of scaffolding and personalized support to enable success for all. Protheroe suggests that “Reluctant learners must be both challenged and supported if they are to develop the self-efficacy they need to take the kind of risks required to learn and succeed.” (Protheroe, N., “Motivating Reluctant Learners,” Principal, Sept-Oct 2004, www.naesp.org).

Teaching and the Challenges of 21st-Century Life

Teachers must not only meet students where they are, but anticipate the kind of life and career skills that will be necessary to meet the challenges of the future. This includes anticipating the effects and importance of unintended influences which result from a 21st-century world. Despite obvious progress, the 21st-century way of life also includes rapid pace, greater complexity and information development, which potentially precipitate work and activity overload, sleep deprivation, higher rates of anxiety and depression, sedentary lifestyles, obesity, constant digital/virtual connections, the tyranny of immediacy, underdeveloped relational skills, little time to reflect, and a large dose of narcissism in our youth (Elmore, 2010; Kadison and DiGeronimo, 2004). See also “Whole School, Whole Community, Whole Child.”

In addition to commonly cited 21st-century skills like creativity, flexibility and initiative, students will likely need additional skills in critical thinking, problem-solving, time and self-management, prioritizing, digital wisdom, distinguishing the important from the trivial (e.g., because my cell phone just beeped, it seems vitally important/urgent because it’s immediate), valuing, self-awareness, reflection skills and coping skills for dealing productively with multiple competing life opportunities and demands.
Teaching Social and Life Skills
Adequate preparation for 21st-century lifestyles will necessitate more attention to social interaction, coping, self-management and ethical decision making skills (Cohen, 2006; Goleman, 2006).

Effective schools and teachers promote social-emotional learning and well-being by intentionally integrating social-emotional learning into the planned curricula, as well as by explicitly teaching and coaching these skills in the context of the natural opportunities related to students’ lives and in the ongoing transactions of each school day (e.g., responsibility and integrity, social interaction and relationship skills, self-regulation, health and safety behaviors, anger management, frustration and coping skills to handle stressors).

Structure and Supports for Learning
Structure in school must be viewed as the type of support, guidance and direction provided to the student as well as the daily learning activities and agenda for instruction. The type and degree of structure and support should vary to match the needs of the student. The level of structure is effective if the result is student confidence, motivation and success in academic/social learning. A variety of teaching and learning strategies now exist for assisting students who struggle to read, write, calculate, process information and behave appropriately.

When teachers work together in professional learning communities and routinely reflect on practice, they have opportunities to learn and discover when/how to use differentiated learning strategies to support diverse students.

Positive Behavior Support
Many students need explicit instruction in social skills and behavior. Instructional approaches to discipline (www.kycid.org; www.pbis.org; www.safeandcivilschools.com), when implemented with fidelity school-wide, provide the structure and skills needed to explicitly teach responsible behavior. By providing positive behavior support to all learners (which includes planned teaching of positive behavior skills and expectations, modeling, practice and feedback, review and reinforcement), schools can decrease disruptions, increase academic engaged time, improve the positive climate of the school and equip all learners with the social interaction skills needed for success in life and the workplace. These approaches focus on the long-term development of pro-social behavior and intrinsic motivation versus an overreliance on external control.
Think-Write-Pair-Share

Think back to a learning experience that presented difficulty for you. What made your learning experience easier? How did a significant adult or organization ensure you felt safe as you were learning? Place a check by the factors below that influenced your ability to overcome the difficulty.

Write your ideas about why or how these factors were helpful.

Relationship

Resiliency

School Climate

Barriers to Learning

Motivation

Engagement

Relevance

Social and Life Skills

Structure and Supports for Learning

Positive Behavior Supports

In pairs, share your response. Next, do the above exercise with one or more students in mind. What additions, shifts or modifications must be made in the learning environment(s) in your district/school(s) to match the needs of 21st-century learners?
Engaging Community and Family

Connections between schools and the multiple resources that exist in a community to improve outcomes for students can promote a shared accountability between schools and community providers. Engaging community and family resources involves utilizing community resources, developing strong family and school connections, and fostering community partnerships. Effectively engaging community and family resources is critical to school success. According to the Center for Parent Information and Resources, "Research over the past 30 years has shown that engaging families in their children's education increases student achievement and decreases dropout rates. Effective family engagement is not a one-time program or the choice of a good school, but rather a set of day-to-day practices, attitudes, beliefs and interactions that support learning at home, at school, afterschool and during the summer. To ensure that the students of today are ready for the careers of tomorrow, families, schools, and community groups need to work together to promote engagement that is systemic, sustained, and integrated into school improvement efforts" (http://www.parentcenterhub.org/).

Community Resources

<table>
<thead>
<tr>
<th>Key Concepts</th>
<th>Promising Directions</th>
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</thead>
<tbody>
<tr>
<td>Schools refer families to agencies and organizations to promote a comprehensive system to better serve the students in local communities. Often these resources help to remove barriers to learning and achievement.</td>
<td>Schools utilize community resources (e.g., Community Education, Family Resource and Youth Service Centers) to meet basic needs of students and families. Community resources increase parent involvement in the educational process.</td>
</tr>
<tr>
<td>Possible Community Resources Health and Welfare Agencies</td>
<td></td>
</tr>
<tr>
<td>Family Court</td>
<td>When appropriate, schools provide access and referrals for families to a variety of community resources. Family Resource and Youth Service Center (FRYSC) directors, community education directors, KY Head Start Association family advocates, child care resource and referral agencies and County Extension agencies often serve as the liaisons between families and community resources.</td>
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<tr>
<td>Public Libraries</td>
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<td>Housing Authority</td>
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<td>Faith-Based Organizations</td>
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<td>Boy/Girl Scouts</td>
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<td>Head Start</td>
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<td>United Way</td>
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<td>YMCA</td>
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<td>Boys Club—Big Brothers/Big Sisters</td>
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<td>Girls, Inc.</td>
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<td>Urban League</td>
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<td>Arts Organizations</td>
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<td>Governmental Agencies</td>
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<td>Advocacy Groups</td>
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### Family and School Connections

<table>
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<tr>
<th>Key Concepts</th>
<th>Promising Directions</th>
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</thead>
<tbody>
<tr>
<td>Family is identified as the adult(s) responsible for the child’s education.</td>
<td>• Educators develop reciprocal relationships with all families through home visits, parent/child activities, family involvement activities within or outside of the school facility and direct/indirect communications.</td>
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<tr>
<td>This could include but is not limited to: a parent, guardian, grandparent,</td>
<td>• The school has a system to track communication with a child’s family.</td>
</tr>
<tr>
<td>caregiver, after-school provider, or other relative.</td>
<td>• The student is included in the communication with the family and school when appropriate.</td>
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<td>• School culture promotes positive family/school relationships.</td>
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<td></td>
<td>• Teachers create and maintain “positive, interactive relationships with families as they participate in the education of their children.” (<a href="http://www.nbpts.org">www.nbpts.org</a>).</td>
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<td></td>
<td>• The school recruits and trains family members as volunteers.</td>
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<td>• Guidance is provided to families, emphasizing working with their children at home, parenting skills and family literacy.</td>
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<tr>
<td></td>
<td>• Understand that parent involvement changes as the child progresses from elementary to middle to high school.</td>
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<tr>
<td></td>
<td>• Community education and adult education services are made available to family members.</td>
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</tbody>
</table>

*The Missing Piece of the Proficiency Puzzle—Recommendations for Involving Families and Community in Improving Student Achievement*, published in June 2007 by the Kentucky Education Commissioner’s Parent Advisory Council (CPAC), is a comprehensive performance tool for assessing how well schools engage families and communities in the educational process. Specific school-level descriptors for novice, apprentice, proficient and distinguished performance are outlined for six objectives: relationship building, communications, decision-making, advocacy, learning opportunities and community partnerships. The language of the descriptors offers direction and guidance for improving the school, family and community connection so vital to students for success in learning and in life.
## Community Partnerships

<table>
<thead>
<tr>
<th>Key Concepts</th>
<th>Promising Directions</th>
</tr>
</thead>
</table>
| Schools engage in collaborative approaches by working jointly with community partners to better serve children through creating mechanisms to enhance services. | - Community partners are included in needs assessments of local areas to make recommendations for school improvements.  
- Community partners may help with creating extended learning opportunities for students. This could include creating physical spaces that are flexible and adaptable, enabling collaboration, interacting and sharing information.  
- Groups such as coalitions or advisory councils exist to enhance student learning opportunities and to galvanize all who support learning in the school and community.  
- Schools seek business and industry involvement for career readiness, internship/shadowing opportunities and development of industry certificates through community education directors, Service Learning grants, Family Resource and Youth Service directors, adult education directors, Kentucky Coalition of School Volunteer Organizations, Kentucky Workforce Investment Boards (KWIB) and 21st Century Community Learning Centers  
- School personnel (e.g., community education directors, Title I coordinators, Family Resource and Youth Service Center directors) may help coordinate community engagement with the schools. |

Students who participate and contribute in communities have a sense of belonging and confidence. They understand the importance of balancing rights, roles and responsibilities. They understand how they can contribute to the quality and sustainability of social, cultural, physical and economic environments.
Divide your team into three groups.

Assign each group one of the following topics:

- Community Resources
- Family-to-School Connections
- Community Partnerships

Each group will create a list of possible implementation experiences for each of the Promising Directions listed in the charts on the preceding pages. Share lists with the larger group. Consider adding these experiences to curriculum maps and/or Comprehensive District/School Improvement Plans.
Models and Resources

For students to succeed, their natural inclination to learn must be systematically supported and actively engaged, creating the foundation for 21st-century skills which encompass problem solving, effective communication, collaboration and innovation. The 21st-century readiness skills associated with information, media and technology make cognitive and social demands that require capabilities in a wide variety of tasks. Students must “demonstrate safe, legal, and ethical creating and sharing of knowledge products independently while engaging in a community of practice and an interconnected world.” (AASL Standards Framework for Learners, 2017)

Prensky writes that “Digital wisdom can be, and must be, learned and taught. As we offer more courses in digital literacy, we should also offer students guidance in developing digital wisdom. Parents and educators are digitally wise when they recognize this imperative and prepare the children in their care for the future-educators by letting students learn by using new technologies, putting themselves in the role of guides, context providers, and quality controllers, and parents by recognizing the extent to which the future will be mediated by technology and encouraging their children to use digital technology wisely.” (Prensky, 2009)

Curricula that addresses the needs and interests of the next-generation learner must refer to the powerful forces cited previously. The integration of 21st-century themes (global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; and health literacy) and the four Cs (creativity and innovation, critical thinking and problem-solving, communication and collaboration) along with an increasing amount of available data will enhance the ability to create, interpret and evaluate. District/school curriculum planning teams are then able to:

- match the standards to the curriculum which has considered the knowledge work needed for success in a knowledge economy
- initiate conversations with out-of-school partners and parents in the design of programs to assist in addressing multiple standards
- make those links between and among learning areas leading to units of study using learning research around authentic learning, mental model building, internal motivation, multiple intelligences and social learning
- provide authentic experiences using the thinking tools (technology, digital devices, services) of our time with learners engaged in a digital lifestyle
- prepare learners for meeting the challenges of the 21st century
Consider the four converging forces (knowledge work, digital lifestyles, thinking tools and learning research). Chart and share examples of how each force will influence curriculum planning and implementation within your own classroom or content area.

**Four Powerful Forces - Converging & Leading toward new ways of learning for life in the 21st century**

<table>
<thead>
<tr>
<th>Knowledge Work</th>
<th>Thinking Tools</th>
<th>Digital Lifestyles</th>
<th>Learning research</th>
</tr>
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</table>
Inside this section:
Balanced Assessment Defined
Processes, Knowledge & Skills for Formative Assessment
Elements of Assessment
Balanced Assessment

A balanced assessment system is one in which a variety of assessments are used, for a variety of purposes and communication about results facilitates student involvement and ownership of learning. The key to differentiating the types of assessment is the use of the data. Examining evidence from multiple data sources and understanding the intended use of the data helps educators to gain deeper insight into students’ learning needs.
Formative Assessment:

Ongoing process to provide opportunities for seeking and interpreting evidence of learning for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there ["it is not necessarily a ‘thing’ (i.e., a test) but rather a process used by both teachers AND students of gathering information, analyzing the information, and using it to move teaching and learning forward]

<table>
<thead>
<tr>
<th>Uses</th>
<th>Limitations/ Challenges</th>
</tr>
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</table>
| Teachers:  
Day to day decisions regarding ‘next best steps’ for instruction and adjusting learning experiences to close the performance gap with useful feedback that supports each student  
Provide insight to improve achievement  
Self-assess and keep track of progress  
Contribute to setting goals | Teacher capacity for understanding of assessment literacy – especially the capacity to engage in the process of formatively assessing student learning by 1. Clarifying, sharing, and understanding learning intentions and criteria for success; 2. Engineering effective classroom discussions, activities and learning tasks that elicit evidence of learning; 3. Providing feedback that moves learning forward; 4. Activating learners as instructional resources for one another; 5. Activating learners as owners of their own learning. (Black and Wiliam, *Inside the Black Box, 1998, 2010*) |
| Students:  
Act on classroom assessment results to do better next time |  
| Students/Teachers:  
Involve students in assessment |  
| Real time information/feedback for students (and teachers) to let them know how they are doing against a defined target and how to continue to advance (‘next best steps’ for learning/studying) |  
| Parents:  
Meaningful and descriptive information to help parents see progress over time; help parents support learning |  
Examples: using rubrics with students; student self-assessment; descriptive feedback to students |  
| Administrator capacity for:  
- acknowledging and reinforcing the fundamental value of formative assessment—not just a thing, but a process manifested in practice  
- resolving the need for teachers to collaborate to make sense of student work/adjust their day to day practice in response to student work |  

“Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited.”  
(Wiliam, 2009)
**Summative Assessment:**

Document individual or group achievement or mastery of standards; measure achievement status at a point in time for purposes of reporting; accountability.

<table>
<thead>
<tr>
<th><strong>Uses</strong></th>
<th><strong>Limitations/ Challenges</strong></th>
</tr>
</thead>
</table>
| **School District:** Determine program effectiveness; revise/refine curriculum; identify priorities for improvement/professional learning/growth; communicate the status of the school’s program to community members | Single Statewide Summative Assessment’s capacity to:  
- Sample standards vs complete ‘coverage’ (due to time constraints)  
- Ensure fidelity of results for individual students as well as the system |
| **State:** Assign accountability ratings; comparison of schools and districts | KDE capacity to:  
- Communicate the purpose for which the summative assessment is designed and the appropriate (vs inappropriate) uses of the resulting information  
- Establish timeline for reporting information in a timely manner |
| **State, District, Community Members:** Explore access and opportunities for students | Vendor capacity to:  
- Provide expertise and work within budget constraints |
| **Parents, Students, Schools, Districts:** Identify their child’s/student(s)’ level of achievement/proficiency against the expected standards; identify needed supports for individuals or groups of students as they consider expectations for the next year’s teaching and learning |
Inside this section:

- Professional Learning
- Professional Learning Communities
- Professional Learning Networks

Professional Learning Guidance
Pages 55-78

Rationale for Revisiting Curriculum Planning
Pages 6-16

Balanced Assessment
Pages 51-54

Planning Curriculum
Pages 17-31

Implementing Curriculum
Pages 32-50
Professional Learning
Kentucky Professional Learning Standards Guidance

About this resource
Professional learning for educators is moving into more authentic settings— including professional learning communities, lesson study groups and just-in-time coaching support. This transition to job-embedded professional learning is occurring because educators are engaging in reflective practices and identifying their own learning and instructional practices. When districts align the systems of certified personnel evaluation and professional learning, it offers educators coherent opportunities to enhance their instructional and leadership practices so students can meet the expectations needed to be college, career and transition ready. In October 2011, Kentucky was selected by Learning Forward to be the Demonstration State for the nation in “Transforming Professional Learning to Prepare College- and Career-Ready Students.” As part of this effort, a Professional Learning Task Force of key stakeholders was formed to make recommendations to policy and practice that would improve Kentucky’s system of professional learning. This resource is in response to recommendations by the Task Force.

Professional Learning Guidance
Excellence in teaching and leadership is a career-long process. A commitment to continuous learning and professional development is required. Through district determined processes, teachers and leaders identify their learning needs, engage in learning to improve their effectiveness and increase student results. Continuous focus on implementation and refinement of professional learning contributes to high levels of success.

What is effective professional learning?
Professional learning is defined in 704 KAR 3:035 Section 1 as “an individual and collective responsibility that fosters shared accountability among the entire education workforce for student achievement, and

a) aligns with Kentucky’s Academic Standards in 704 KAR 3:303, educator effectiveness standards, individual growth goals, and school, school district, and state goals for student achievement;

b) focuses on content, pedagogy, pedagogical content-knowledge, as specified in certification requirements and other related job-specific performance standards and expectations; and

c) occurs among educators at school who share accountability for student results;

d) is facilitated by well-prepared school and district leaders including curriculum specialists, principals, coaches, mentors or other teacher leaders;

e) serves simultaneously three purposes: individual improvement, school improvement and program implementation; and

f) occurs several times per week.”

Professional learning occurs among collegial groups of administrators and school staff who are united in their commitment to student learning. They share a vision, work and learn collaboratively, visit and review other classrooms and participate in decision making. The benefits to the educators and
students include reduced isolation of educators, better informed and committed educators and academic gains for students.

**How does professional learning differ from professional development?**

Changing the name from development to learning may seem a small change, but the goal is to change the perception of educator development from one that is a passive process, removed from the daily work in schools, disconnected from student and educator standards and designed by those outside the school. Professional learning is continuous and occurs daily in schools, facilitated and designed by educators and supported by external assistance when necessary. It is important to remember that the name is less important than the practices and results.

The meaning associated with the term professional *development* conveys more about the design, logistics and materials needed for learning than the outcomes of the learning for both educators and their students. It is primarily the sharing or dissemination of information, skills and strategies without the intentionality or accountability for implementation, data-based focus or expected results that the term conveys. While it is assumed that exposure to new information and ideas will transfer to practice, the reality is, it typically does not without:

- A degree of accountability for implementing new knowledge, ideas and strategies with time for reflection, analysis and feedback;
- A focus on topics, skills or strategies chosen out of a desire or need to improve practice as evidenced by observations, reflections and educator performance standards and student content standards;
- An increased expectation for professional learning results on educator effectiveness and results for all students.

Professional *learning* emphasizes that learning is a process that continues over time, extends into practice and expects results for both educators and students.

Professional *development*, typically a short-term event often focused on awareness building rather than shaping practice, may be a component of professional learning, but without intentional follow-up in terms of implementation, analysis of impact, and further reflection and revision, professional development may never manifest as true professional learning.

Professional *learning* is ongoing, relevant and job-embedded learning for educators at all stages of career development. Professional learning provides opportunities for individual and collaborative professional study, analysis, application and reflection relevant to ongoing improvements in professional practice and student achievement.

To ensure all students meet school, college and career readiness, district and school leaders need to transform the way they approach educator learning. The shift from professional development to professional learning signals a transition from educators as passive recipients of information to educators as active partners with peers in determining and addressing their learning needs based on student learning goals and their own professional goals.

Joellen Killion, of Learning Forward, discusses Professional Learning versus Professional Development in the white paper *Terms Carry Meaning*. 
What are Kentucky's Professional Learning Standards?
The Kentucky Professional Learning Standards delineate the research-based attributes of effective professional learning that leads to increases in educator effectiveness and student success. Each standard works interactively with others to guide planning, implementation and evaluation of professional learning. *The absence of any one standard has potentially negative consequences for the overall effectiveness and results of professional learning.*

**Learning Community:** Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility and goal alignment. Within genuine learning communities educators experience a culture of continuous improvement, goal alignment, shared accountability and collective responsibility for student success.

**Leadership:** Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate and create support systems for professional learning. Leaders who include teacher leaders and school and district administrators commit to developing the capacity of others for leading and learning, advocate for effective professional learning designed to improve educator practice and student learning and create the systems and structures within schools and districts to support continuous learning.

**Resources:** Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring and coordinating resources for educator learning. Effective professional learning requires an investment of sufficient resources to accomplish its goals. Leaders must monitor and coordinate all resources such as funding, staff, time, technology and materials allocated to professional learning to ensure optimal use and benefit.

**Data:** Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator and system data to plan, assess and evaluate professional learning. Planning, implementing and evaluating professional learning requires student, educator and system data. Data analysis and interpretation identify areas of need and offer evidence of progress toward established goals and of changes that result from professional learning.

**Learning Designs:** Professional learning that increases educator effectiveness and results for all students integrates theories, research and models of human learning to achieve its intended outcomes. Learning for educators occurs in multiple forms of in-person, blended and online learning. Effective learning experiences, whether formal or informal, integrate research, models and theories about learning in ways that are appropriate for the intended goals and respectful of educator learning preferences.

**Implementation:** Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change. Implementing new learning requires support that is based on change research, sustained over time and differentiated to align with educators’ level of use. It includes constructive feedback designed to strengthen and refine educator practice.

**Outcomes:** Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards. The purpose of professional learning is to expand, strengthen and refine educator performance and student learning. The outcomes of effective professional learning align with student content standards, educator performance standards and goals of high-priority initiatives to build coherence between educator learning and student success.

For detailed information, visit [Professional Learning Standards](#) or the [Professional Learning Webpages](#)
**Why is professional learning essential for Teacher and Leader Effectiveness?**

As a collective unit, the Kentucky Professional Learning Standards define the conditions, attributes and elements for effective professional learning that leads to successful student learning. Professional learning serves simultaneously three purposes:

| Focuses Individual Learning | Three questions to ask when developing a Professional Growth Plan (PGP):
|                           | 1. What do I want to change about my practice that will effectively impact student learning?
|                           | 2. How can I develop a plan of action to address my professional learning?
|                           | 3. How will I know I accomplished my objective?
|                           | Kentucky educators must consider their own practice, using evidence and data, in the context of their performance criteria aligned to the four measures of Planning, Environment, Instruction and Professionalism. When educators identify areas for growth, develop their own relevant and purposeful growth goals and are given support to pursue the goals, then greater educator effectiveness occurs and student learning is a potential outcome.

| Fosters Team Collaboration for School Improvement | Patterns in student data point to strengths and needs across grade levels or a school. The Comprehensive School Improvement Plan (CSIP) can address these issues. A school’s professional learning plan is embedded and reflected in the CSIP.
|                                              | Each professional learning plan shall contain the following:
|                                              | • statement of school or district mission
|                                              | • representation of all persons affected by the plan
|                                              | • needs assessment analysis;
|                                              | • objectives focused on the school or district mission, derived from needs assessment, and that specify changes in educator practice needed to improve student achievement
|                                              | • process for evaluating impact on student learning and improving professional learning, using evaluation results.

**704 KAR 3:035** annual professional development plan Section 3.

| Impacts Program Implementation | Implementation of new or different standards, curricula, practices, policies and programs are opportunities for professional learning experiences. District, regional and statewide initiatives can benefit from coordination of opportunities for sharing and providing feedback, while also moving more students toward success.
|                              | **Professional Development Coordinators** in each district are available to provide technical assistance to the school council or personnel:
|                              | · assisting with needs assessments
|                              | · analyzing school data;
|                              | · planning and evaluation assistance and coordinating activities

**KRS 156.095 (2)**
What is the relationship between teacher effectiveness and student results?

1. When professional learning is standards-based, it has greater potential to change what educators know, are able to do and believe.

2. When educators’ knowledge, skills and dispositions change, they have a broader repertoire of effective strategies to use to adapt their practices to meet performance expectations and student learning needs.

3. When educator practice improves, students have a greater likelihood of achieving results.

4. When student results improve, the cycle repeats for continuous improvement.

This cycle works two ways: If educators are not achieving the results they want, they determine what changes in practice are needed and then what knowledge, skills and dispositions are needed to make the desired changes. They then consider how to apply the standards so that they can engage in the learning needed to strengthen their practice.

**Outcomes Standard:** Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards.

**Resources Standard:** Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring and coordinating resources for educator learning.
**Who shares responsibility for effective professional learning?**

The work of defining responsibility begins with establishing policies that set high expectations and provide the support necessary to achieve them. So, teachers, principals, school councils, district leaders, school boards, educational cooperatives, third-party providers, institutions of higher education, professional associations and state education agencies all have a role.

The chart below, adapted from a blog post by Stephanie Hirsh, Executive Director of Learning Forward, may help to start the conversation at the local district/school level to transform professional learning policies.

<table>
<thead>
<tr>
<th>Not only requiring professional learning as a core component of every newly adopted initiative and program,</th>
<th>But also, developing a comprehensive system to support effective professional learning.</th>
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</thead>
<tbody>
<tr>
<td>Not only adopting a definition and Standards for Professional Learning,</td>
<td>But also, assessing the implementation of the definition and Standards for Professional Learning.</td>
</tr>
<tr>
<td>Not only some support and/or resources for professional learning,</td>
<td>But also, significant investments in resources and support for implementing state and district priorities.</td>
</tr>
<tr>
<td>Not only occasional days set aside for professional learning,</td>
<td>But also, time embedded in the school day and calendar year for educator collaboration and support.</td>
</tr>
<tr>
<td>Not only setting annual requirements in days or hours for educator engagement in professional development,</td>
<td>But also, requiring educators to collect evidence demonstrating improved practice and student results.</td>
</tr>
<tr>
<td>Not only registering third-party professional learning providers,</td>
<td>But also, establishing more stringent requirements so third-party professional learning providers use evidence to demonstrate impact of their services.</td>
</tr>
<tr>
<td>Not only seeking occasional input from stakeholders,</td>
<td>But also, establishing formal feedback and advisory systems to tap expertise and insights of educators, especially those with primary responsibility for implementing initiatives.</td>
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</table>

Use this scoring system to help you determine how your school/district measures up to the seven policy shifts. Use the number system below to determine your score and inform future policy work.

- **3** - The “But Also” category defines our current system.
- **2** - Our policies are moving closer to the “But Also” side.
- **1** - The “Not Only” category is most characteristic of our policies.
Score ranges and how they inform future policy work regarding professional learning:

**Score of 18-21** - Policy and decision makers are doing good work!

**Score of 14-17** - Feel good about being on the right track and recognize what is essential for professional learning to achieve better outcomes.

**Score of 10-13** - Write a plan on possible steps to take in the next few months to address required policy shifts.

**Score of 7-9** - See some help from others who have the policies in place viewed as important.

**Score of 7** - It is time to focus on policies. Convene stakeholders and studies resources available.

A Roles and Responsibilities Chart for consideration is found in Appendix A of this resource.

**Stephanie Hirsh**, Executive Director, Learning Forward

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**Leadership Standard**: Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate and create support systems for professional learning.

Full implementation of a professional learning plan requires that leaders and learners have a view that includes follow-up and long-term support to yield refined levels of use of the learning. Professional learning plans that focus on sustaining implementation spread differentiated support for implementation over three to five years and incorporate coaching, feedback, extended learning and formative assessment.

Research shows that sustained and intensive professional learning for teachers is related to student-achievement gains. An analysis of well-designed experimental studies found that a set of programs which offered substantial contact hours of professional development (ranging from 30 to 100 hours in total) spread over six to 12 months showed a positive and significant effect on student achievement gains. According to the research, these intensive professional development efforts that offered an average of 49 hours in a year boosted student achievement by approximately 21 percentile points. Other efforts that involved a limited amount of professional development (ranging from 5 to 14 hours in total) showed no statistically significant effect on student learning. (Yoon et al., 2007)

An example of tools available to district leadership teams are configuration maps that support innovation and continuous improvement efforts in schools and districts through the pursuit of three goals: equity, achievement, and integrity. The Kentucky Department of Education, Appalachia Regional Education Laboratory and Learning Forward collaborated with representatives of district leadership teams (educators including superintendents, curriculum and instructional specialists,
school coaches and teachers) on the development of these Innovation Configuration maps to inform how best to assist and support educators’ successful use of new practices.

**Innovation Configuration Maps**

Planners, leaders and others facilitate and support learners to select and use learning designs appropriate to the learning goals and learner preferences. Learners ultimately are responsible for implementing the professional learning. Giving choice and voice to educators in their professional learning designs empowers educators, respects their professionalism, and provides autonomy (Knight, 2011).

**How new educators are supported**

Due to budgetary constraints and lack of available funds, the Kentucky Teacher Internship Program (KTIP) is suspended until 2020. The decision to offer a year-long internship to first year teachers now rests with Kentucky school districts. Although there is no requirement for induction, Kentucky supports districts in their development of induction programs. Resources are available to districts on the Education Professional Standards Board’s (EPSB) KTIP webpage. Research shows that quality, educator induction experiences that include individualized mentoring and time to reflect on one’s own practice as well as professional collaboration are necessary for effective teaching (Smith and Ingersoll, 2004). The New Teacher Center released its latest iteration of new teacher induction program standards in 2018; districts will find this resource helpful when designing induction programs and developing mentoring programs.

**Think & Apply**

How are educators supported to become highly effective?

How are educators in new roles supported?

How are mentoring, induction, and orientation programs defined?

How long do mentoring, induction, and orientation supports last?

What are included in the mentoring and induction programs for staff members?

How does mentoring and induction align with both system-wide goals and individual educator needs?
How do educators plan, implement and evaluate professional needs?

The table below identifies the seven steps for planning, implementing and evaluating professional learning. These steps are applicable for use by individual educators (Professional Growth Plans), teams, school leadership teams and district leadership teams (Annual Professional Learning Plans).

To review the seven steps IN ACTION, a model example, see Appendix B of this resource.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Analyze student learning needs</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>To plan, implement and evaluate effective professional learning, individual educators, school-based learning teams, school leadership teams and/or district leadership teams.</td>
<td>Gather and analyze multiple forms of student data. Identify trends, patterns and areas of need.</td>
<td>Learning Communities, Leadership, Resources, Data, Learning Design, Implementation, Outcomes</td>
</tr>
</tbody>
</table>

| Data Standard |

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<tr>
<th>Step 2</th>
<th>Identify characteristics of the classroom, department, school and district community</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Gather data about the learning community. Identify the features of the community (culture, processes, census estimates, perceptions, etc.) that influence student, educator and system learning.</td>
<td>Data and Learning Communities Standards</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Step 3</th>
<th>Review student growth and school and district improvement goals</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Review school and district SMART goals for student learning. Identify the focus for educator learning.</td>
<td>Outcomes Standard</td>
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</table>

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<thead>
<tr>
<th>Step 4</th>
<th>Develop educator professional growth/learning goals based on steps 1-3</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Develop teacher professional growth goals. Use knowledge, aspirations, skills, attitudes and behaviors (KASAB) needed to help write goals. Develop professional learning goals for school/team focus.</td>
<td>Data and Outcomes Standards</td>
</tr>
</tbody>
</table>

Steps 1-4 constitute the required needs assessment as defined in 704 KAR 3:035, informs the Comprehensive District Improvement Plan (CDIP)/Comprehensive School Improvement Plan (CSIP), and informs 30-60-90 day plan.

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Study available research and evidence-based professional learning options.</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Identify research - or evidence-based practices. Explore available professional learning related to goal(s). Determine available resources.</td>
<td>Learning Communities, Leadership, Resources, Learning Designs, Implementation, Outcomes Standards</td>
</tr>
</tbody>
</table>

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<tr>
<th>Step 6</th>
<th>Create the professional learning plan.</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Identify the learning experiences to achieve goals. Develop strategies for applying and refining learning over time. Identify indicators of achieving the goal(s). Submit budgets for approval.</td>
<td>Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes Standards</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 7</th>
<th>Implement, evaluate and sustain the professional learning.</th>
<th>Tasks</th>
<th>Relevant Kentucky Standards for Professional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To accomplish each step, individual educators, school-based learning teams, school leadership teams and/or district leadership teams . . .</td>
<td>Carry out the plan. Implement learning over time. Reflect on progress and adjust as needed. Identify evidence of change in educator practice. Evaluate progress and results.</td>
<td>Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes Standards</td>
</tr>
</tbody>
</table>
How do educators assess and evaluate the quality and effectiveness of their professional learning?

Evaluation of professional learning requires formative and summative evaluation of the equity, effectiveness and efficiency of professional learning for both accountability and improvement.

In response to KRS 158.6451 (Senate Bill 163, 2010), the Kentucky Department of Education designed professional learning resources to help schools evaluate a high-impact professional learning plan.

A Guide for Evaluating the Impact of Professional Learning – a process guide to be used in conjunction with the three feedback tools.

Contents:

- 5 Critical Levels of Professional Learning Evaluation: guiding questions, evidence suggestions, and intended purpose for improvement efforts in each of Guskey’s 5 critical levels of PL evaluation
- 12 Guidelines for Evaluating Professional Learning: 12 steps, divided into “Planning Guidelines” and “Formative and Summative Guidelines,” to help think through each step from planning to reporting of PL
- 3 Participant Reflection Questionnaires: guidance on collecting participant reflections on professional learning, outcomes of the professional learning, and supporting continuous use

See Appendix C for Kentucky’s Rubric for Exemplary Professional Learning

When educators use the Kentucky Standards for Professional Learning as they plan, implement and evaluate educator learning, changes in educator practice and student outcomes are more likely to occur.

Remember three important points:

1. Each professional learning standard works interactively with the other professional learning standards to guide the planning, implementing and evaluating of professional learning.
2. The absence of any one professional learning standard has potentially negative consequences for professional learning’s overall effectiveness and results.
3. Effective professional learning is embedded within a comprehensive system aligned with other school system and school improvement initiatives.

Five Questions for Improving Professional Learning

Improving the quality and results of professional learning requires attention. Individual educators use the results of professional learning as evidence of achieving their professional growth goals. Teams of educators and school and district leadership teams evaluate professional learning to know if they achieved their goals to increase their instructional effectiveness and to make ongoing improvements in their professional learning practices.

The questions below offer a process for ongoing, frequent assessment of professional learning. When the questions are framed to include specific goals, they provide the data needed by educators to make adjustments to their professional learning plans.

Questions:

1. What is working in our professional learning efforts?
2. How do we know? What evidence supports our responses?
3. What is not working in our professional learning efforts?
4. How do we know? What evidence supports our responses?
5. What will we do to improve both the effectiveness and results of our professional learning efforts?
How are professional learning communities and networks supported?

**Community Standard**: Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility and goal alignment.

Professional Learning Communities and Networks rest on assumptions about how staff in schools and districts learn and change their practice:

1. Teaching is complex, so learning throughout the career is necessary.
2. A great deal of untapped knowledge exists in schools and districts.
3. Many challenges staff face are local challenges and need to be addressed ‘on the ground.’
4. Staff improve their practice by reflecting, analyzing, evaluating, and revising with peers.

**Professional Learning Communities (PLC)**
The term professional learning community describes a collegial group of administrators and school staff who are united in their commitment to student learning. An effective PLC fosters a school climate for educators to engage in applying their learning to problem-solve teaching and learning issues. PLCs that are self-directed can be highly productive because educators lead their own learning. Conversely, when the actions of a PLC are dictated by others, educators contribute as part of a work team. The outcome of professional learning communities is student learning improves due to educators improving their practices. Being a part of an effective professional learning community positively impacts educators’ work lives, their learning, and the school.

**Professional Learning Networks (PLN)**
Today, with the use of real-time social networking, educators are connecting globally. Educators can discuss and evaluate various solutions to educational challenges, share resources and ideas, discuss topics of interest, plan events and more.

“Who dares to teach must never cease to learn.” - John Cotton Dana

If you participate in a professional learning community or professional learning network, share how this participation has changed your professional practice.

Reflect on the information offered in this section. What revisions, if any, are you considering to your planning for and practices of professional learning?
Resources
In the design of this section of the Kentucky Model Curriculum Framework that provides professional learning guidance to schools and districts across the Commonwealth of Kentucky, the Learning Forward organization has granted permission for the use of several of their documents.

Many other resources, freely available to educators have been informed by the Transforming Professional Learning initiative which has included more than two years of on-the-ground work in partnership with the Kentucky Department of Education and with support from the Bill & Melinda Gates, Sandler, and MetLife Foundations.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPREHENSIVE PROFESSIONAL LEARNING SYSTEM: A WORKBOOK for STATES and DISTRICTS</td>
<td><a href="http://learningforward.org/docs/default-source/commoncore/comprehensive-professional-learningsystem.pdf">http://learningforward.org/docs/default-source/commoncore/comprehensive-professional-learningsystem.pdf</a></td>
</tr>
<tr>
<td>PROFESSIONAL LEARNING INITIATIVE ANALYSIS: A WORKBOOK for STATES and DISTRICTS</td>
<td><a href="http://learningforward.org/docs/default-source/commoncore/professional-learning-initiativeanalysis.pdf?sfvrsn=4">http://learningforward.org/docs/default-source/commoncore/professional-learning-initiativeanalysis.pdf?sfvrsn=4</a></td>
</tr>
<tr>
<td>PROFESSIONAL LEARNING PLANS: A WORKBOOK STATES, DISTRICTS, AND SCHOOLS</td>
<td><a href="http://learningforward.org/docs/default-source/commoncore/professional-learningplans.pdf?sfvrsn=4">http://learningforward.org/docs/default-source/commoncore/professional-learningplans.pdf?sfvrsn=4</a></td>
</tr>
</tbody>
</table>


Kentucky Department of Education Professional Development Standards http://education.ky.gov/teachers/PD/Pages/Professional-Development-Standards.aspx

# Appendix A

## Roles and Responsibilities

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Other Professionals (Librarians, Counselors, Speech Pathologists, etc.)</th>
<th>School Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a yearly Professional Growth Plan (PGP) that aligns to district and school improvement plans and student proficiency and growth needs</td>
<td>Develop a yearly Professional Growth Plan (PGP) that aligns to district and school improvement plans and student proficiency and growth needs</td>
<td>Develop a yearly Professional Growth Plan (PGP) that aligns to district and school improvement plans and student proficiency and growth needs</td>
</tr>
<tr>
<td>Select and engage in multiple designs of professional learning consistent with research that supports the PGP</td>
<td>Select and engage in multiple designs of professional learning consistent with research that supports the PGP</td>
<td>Support building staff in the development of professional learning plans</td>
</tr>
<tr>
<td>Support colleagues in the transfer of professional learning to the classroom</td>
<td>Support colleagues in the transfer of professional learning to the classroom</td>
<td>Ensure that all building staff are engaged in professional learning consistent with research and best practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support colleagues in the transfer of their professional learning to their job-related responsibilities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School-based Decision Making Council (SBDM)</th>
<th>District</th>
<th>Professional Development Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affirm through policy and communications the value of professional learning consistent with research and effective practices for all staff throughout their careers in support of student proficiency and growth</td>
<td>Support district staff and building administrators in the development of professional learning plans</td>
<td>Develop a yearly individual learning plan, in collaboration with supervisory staff, to support specific job responsibilities and align with district and school improvement plans</td>
</tr>
<tr>
<td>Collaborate with education stakeholders to support and provide professional learning about the cultural context of students and families in the school community</td>
<td>Support colleagues in the transfer of their professional learning to their job-related responsibilities</td>
<td>Select and engage in multiple designs of professional learning consistent with research and effective practices that supports individual professional learning plans</td>
</tr>
<tr>
<td></td>
<td>Ensure all district staff and building administrators are engaged in professional learning consistent with research and effective practices</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State Education Agency</th>
<th>Institutions of Higher Education</th>
<th>Third-party Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishes policy and guidance to support the development of individual professional learning plans</td>
<td>Establish expectations and provide support for aspiring and practicing educators to demonstrate proficiency in the development of professional learning plans aligned student proficiency and growth needs</td>
<td>Provide professional learning consistent with research and effective practices to support Kentucky policy and guidance</td>
</tr>
<tr>
<td>Identifies, develops and disseminates resources to support a professional learning system</td>
<td>Conduct and disseminate research to identify best practices to support professional learning Identify and provide professional learning consistent with research and effective practices to support Kentucky policy and guidance</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B
The seven steps IN ACTION for developing a plan (an example)

Example of Step 1
In Action: Analyze student learning needs
When a representative group of mathematics teachers from each school in the district, along with their curriculum coordinator, analyzed student data, they found some students had some misconceptions about ratios and proportional relationships. The teachers reviewed the curriculum to determine where those related standards were taught, then examined student outcomes needed to be proficient at those standards. This detailed analysis of student performance provided the specific information needed to identify the essential understandings, skills, practices, and dispositions educators need to improve instruction to impact student performance in ratios and proportional relationships.
Using student data to identify professional learning needs is essential to align continuous educator growth and student success.

Key Questions:
• What areas of student performance are meeting or exceeding expectations; are below expectations; similar/different in various grade levels, content areas, and individual classes?
• How did various groups of students perform?

Example of Step 2
In Action: Identify characteristics of the classroom, department, school, and district community
Planners of professional learning gather information about educators and their working environments from the Teaching, Empowering, Leading and Learning (TELL) survey data and other sources to design of the learning. For example, after the mathematics teachers engaged in data analysis to identify their student’s learning needs, they were ready to identify their own learning needs and where to make adjustments in their instruction. Steps 1 and 2 provide a level of understanding that allows for the professional learning planning team to establish a districtwide improvement goal in mathematics with a specific focus on ratios and proportional relationships. This same process then occurs at each school, grade level, department and course-specific teams.

Key Questions:
• What effective teaching practices in mathematics are educators currently using in the classroom?
• What are some key dispositions of teacher leaders in the district/school?
• What are the characteristics of the culture within the school system and school?(e.g., embrace new practices or resist changes; support to implement new strategies)

Example of Step 3
In Action: Develop improvement goals and student outcomes
Explicit goals for professional learning to achieve intended outcomes must be set as these goals inform decisions about the design of professional learning, its implementation and its evaluation. The goal of the professional learning should be stated in terms of student success; the changes in practice educators make toward the achievement of student success is the focus (see example in Step 4 below).

Effective professional learning, as defined by the Kentucky Standards for Professional Learning and supported by research, focuses on the content that students are expected to master and the performance expectations educators are expected to achieve. Once the most significant contributing factors, or causes, are clear, the goal can be written to change the current status.

Key Questions:
• What results for students are desired?
• What are the potential contributors to the current results and which have priority? Why?
• What else must change in order to achieve the student results desired?

Example of Step 4
In Action: Identify educator needs and develop professional learning goals
Professional learning that increases educator effectiveness and results for all students is part of a continuous improvement cycle where educators engage in collaborative learning primarily at their worksite with additional opportunities outside their worksite.

<table>
<thead>
<tr>
<th>School or Team Focus (example)</th>
<th>School or District Goal (example)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of the first year, educators working in collaborative teams will deepen their own content knowledge and acquire effective teaching practices appropriate to ratios and proportional relationships. Being knowledgeable of the progressions of learning in mathematics that support the understanding of ratio and proportional relationships, they will be able to develop, implement, reflect on and revise common units of instruction on ratios and proportional relationships. These units will apply the newly acquired learning and engage students in using their understanding of proportional relationships to model, reason and solve problems in a variety of contexts.</td>
<td>Throughout the units, students in grades 6 will respond to educator created high quality tasks around ratio and proportional relationships or students will formulate their own questions about ratio and proportional relationships that lead to inquiry and development of high quality tasks. On district common embedded assessments, 90% of students in grades 6 will achieve proficiency or above on items in the area of ratios and proportional relationships. The summative math assessment in grade 6 will show 90% of the students achieving proficiency or above on items in the areas of ratios and proportional relationships.</td>
</tr>
</tbody>
</table>

Student learning increases when educators acquire and apply knowledge, attitudes, skills, aspirations and behaviors (practices) aligned with what students are expected to know and be able to do.

The use of KASAB is an important aspect of writing goals when targeting professional learning. Changes in educator knowledge, attitude, skills, aspirations, and behavior are the means to changes in student learning. The following example of a KASAB builds upon the sustained mathematics teacher example.

Knowledge: The information, concepts, principles and theories educators need to acquire to have the foundation for making sound decisions and implementing effective practices. Knowledge outcomes are often called awareness building and are insufficient alone to change practice.

<table>
<thead>
<tr>
<th>Knowledge (Example)</th>
<th>Kentucky Framework for Personnel Evaluation Performance Criteria</th>
</tr>
</thead>
</table>
| Understanding of the concepts of ratio and proportional relationships and how the student learning in previous grade levels provides the scaffold toward this understanding. | Kentucky Framework for Teaching  
1A Knowledge of Content and Pedagogy |
**Attitudes:** The beliefs that support educators’ commitment to continuous learning as a means to student success. Some examples are persistence, efficacy, growth-oriented, inquiry-oriented, etc. Attention to attitudes in professional learning addresses mental models educators hold, those internal theories or beliefs that drive their actions.

<table>
<thead>
<tr>
<th>Attitudes (Example)</th>
<th>Kentucky Framework for Personnel Evaluation Performance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Belief in the significant importance of this content in students’ success in mathematics and beyond school</td>
<td>Kentucky Framework for Teaching</td>
</tr>
<tr>
<td>· Belief that all students are capable of learning these concepts with effective teaching practices</td>
<td>3E Demonstrating Flexibility and Responsiveness</td>
</tr>
<tr>
<td>· Belief that applying mathematics concepts in authentic situations supports students’ ability to reason and problem solve in life.</td>
<td>4A Reflecting on Teaching</td>
</tr>
<tr>
<td>· Belief that mathematics includes productive struggle</td>
<td>4E Growing and Developing Professionally</td>
</tr>
<tr>
<td>· Belief that success in mathematics means less content and deeper learning</td>
<td>2B Establish a Culture for Learning</td>
</tr>
<tr>
<td>· Belief that continuous formative assessment and meaningful feedback with students promotes deep learning</td>
<td>3C Engaging Student in Learning</td>
</tr>
<tr>
<td>· Belief that by working collaboratively educators can be more effective</td>
<td>3D Using Assessment in Instruction</td>
</tr>
<tr>
<td></td>
<td>4D Participating in a Professional Community</td>
</tr>
</tbody>
</table>

**Skills:** The capacities an educator needs to achieve the intended professional learning. This is sometimes considered procedural learning or the know-how behind new learning. Developing skills builds educators’ capacity, but is often insufficient alone to promote the transfer of learning to practice.

<table>
<thead>
<tr>
<th>Skills (Example)</th>
<th>Kentucky Framework for Personnel Evaluation Performance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Collaboration skills</td>
<td>Kentucky Framework for Teaching</td>
</tr>
<tr>
<td>· Content-specific instructional skills including questioning to elicit student thinking</td>
<td>4D Participating in a Professional Community</td>
</tr>
<tr>
<td>· Unit planning skills</td>
<td>3B Questioning and Discussion Techniques</td>
</tr>
<tr>
<td>· Reflection and self-analysis skills</td>
<td>1E Designing Coherent Instruction</td>
</tr>
<tr>
<td>· Setting rigorous student growth goals</td>
<td>4A Reflecting on Teaching</td>
</tr>
<tr>
<td>· Data analysis skills</td>
<td>4E Growing and Developing Professionally</td>
</tr>
</tbody>
</table>
**Aspirations:** The motivation that supports educators as they engage in learning to improve their practice and student success. Deep change is difficult and often unsuccessful because insufficient attention is given to developing the will to succeed and providing adequate support to achieve consistent practice and results. Professional learning should extend beyond transmitting knowledge and developing skills to cultivating the desire to engage in making required changes.

<table>
<thead>
<tr>
<th>Aspirations (Example)</th>
<th>Kentucky Framework for Personnel Evaluation Performance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Desire to increase effectiveness as an educator</td>
<td>Kentucky Framework for Teaching</td>
</tr>
<tr>
<td>· Commitment to adapt instruction and content to align with high quality content standards</td>
<td>4E Growing and Developing Professionally</td>
</tr>
<tr>
<td>· Persistence to examine one’s own practice and adjust so that all students succeed</td>
<td>1B Demonstrating Knowledge of Students</td>
</tr>
<tr>
<td>· Commitment to the professional growth of colleagues</td>
<td>1C Selecting Instructional Outcomes</td>
</tr>
<tr>
<td></td>
<td>3E Demonstrating Flexibility and Responsiveness</td>
</tr>
<tr>
<td></td>
<td>4D Participating in a Professional Community</td>
</tr>
</tbody>
</table>

**Behaviors/Practices:** What educators do with their learning; application of the learning and refinements to adapt and adjust the learning in unique contexts. The implementation of learning that has been cultivated through developing knowledge and skill and cultivating attitudes and aspirations that increases educators’ effectiveness and student success.

<table>
<thead>
<tr>
<th>Behaviors/Practices (Example)</th>
<th>Kentucky Framework for Personnel Evaluation Performance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Consistent use and refinement of new effective teaching practices in mathematics until proficiency is achieved</td>
<td>Kentucky Framework for Teaching</td>
</tr>
<tr>
<td>· Adaptation of effective teaching practices to meet needs of students</td>
<td>4E Growing and Developing Professionally</td>
</tr>
<tr>
<td>· Classroom environment, engagement and responsiveness to students</td>
<td>1B Knowledge of Students</td>
</tr>
<tr>
<td>· Daily self-analysis and collaborative analysis of practice at least once a week</td>
<td>3E Demonstrating Flexibility and Responsiveness</td>
</tr>
<tr>
<td>· Use of student work as an artifact for reflection on the effectiveness of instruction</td>
<td>2A Creating an Environment of Respect and Rapport</td>
</tr>
<tr>
<td>· Monthly unit planning integrating new effective teaching practices</td>
<td>4A Reflecting on Teaching</td>
</tr>
<tr>
<td>· Development of and reflection on the effectiveness of high quality tasks for students to reason and problem solve with ratios and proportional relationships</td>
<td>3D Using Assessment in Instruction</td>
</tr>
<tr>
<td></td>
<td>1F Designing Student Assessment</td>
</tr>
</tbody>
</table>

“Needs assessment” means the gathering, sorting, and analysis of student, educator, and system data that lead to conclusions regarding the needed content and learning designs for professional development in identified area related to educator performance and student achievement (704 KAR 3:035).
Example of Step 5

**In Action: Study Research/Evidence-based options for guidance about professional learning**

To increase the likelihood for success, planners want to integrate into the professional plan actions that are grounded in evidence or research, aligned most closely with the learning outcomes, and responsive to adult learners and the context in which their learning will take place. Studying research to choose appropriate learning designs requires thought, input and thorough discussion from those who are primarily responsible for implementing the professional learning. The decisions about the choice of a learning design are a collaborative decision with strong priority given to those who will engage in the learning and apply it in their work. Using educator input and learning preferences along with the context factors identified in Step 2 as criteria for selecting and/or designing the approach to the professional learning assures a greater likelihood of achieving the intended outcomes.

An informal approach provides designs that incorporate a wide variety of flexible, informal job-embedded learning with smaller amounts of formal professional learning to address the current level of expertise and experience of educators. Yet, when new initiatives are launched and foundational knowledge and skills built, more structure may be needed to ensure adequate support is available for implementation.

**Key Questions:**

- What professional learning designs best address the outcomes identified for educators?
- What types of effective professional learning accommodate the unique features of the school or students?
- What are the strengths and weaknesses of the professional learning studied/researched in order to identify the most appropriate approaches to achieve the outcomes sought?
- What school, district, and community support is required to make the professional learning successful?
### Example of Step 6

#### In Action: Create the school or team plan

<table>
<thead>
<tr>
<th>Examples of Goals</th>
<th>Examples of Professional learning experiences to achieve the goals</th>
<th>Examples of Strategies for applying/refining the professional learning over time</th>
<th>Examples of Indicators of achieving the goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughout the unit, students in grade 6 will respond to high quality tasks around ratio and proportional relationships. Students will formulate their own questions about ratio and proportional relationships that lead to reasoning/problem solving and development of high quality tasks. On district common embedded assessments, 90% of students in grade 6 will achieve proficiency or above on items in the area of ratios and proportional relationships. The summative math assessment in grade 6 will show 90% of the students achieving proficiency or above on items in the areas of ratios and proportional relationships.</td>
<td>Educators will deepen their knowledge and acquire effective teaching practices (skills) e.g., application of a collaborative protocol for: (1) examining student work to identify strengths and gaps in student learning and (2) observing peers teaching ratios and proportional relationships. Develop, implement, reflect on and revise units of instruction on ratios and proportional relationships that engage students in using their understanding of proportional relationships to model, reason and solve problems in a variety of contexts.</td>
<td>Math teams will seek opportunities for professional learning to enhance math content knowledge and pedagogical skill, with emphasis on working with special needs students, including limited English proficiency. Math teams will be provided a minimum of three hours per week for learning, planning developing and revising of a ratio and proportional relationships common units. School instructional resource specialists will work with other subject area teachers to determine how ratio and proportional relationships might have authentic connections and applications for the content of areas other than math. Team members will share leadership of the work with feedback from school resource specialists, building everyone’s capacity to facilitate meaningful professional learning. Math teams will use the Lesson Study learning design to promote the cycle of continuous improvement for collaborative learning and planning. Colleagues and supervisors will observe and offer feedback on the degree of student engagement, the rigor of the content, the design of the lessons and the teaching practices observed. Observations are shared providing insight on the implementation of the unit and any revisions needed.</td>
<td>Completion of the ratio and proportional relationships unit. Observational data and/or video footage indicate explanation of content follows a clear and accurate progression, and connects with students’ knowledge and experiences. Observational data and/or video footage indicate that during the explanation of content, the educators invite student intellectual engagement. Observational data and/or video footage of questioning and discussion techniques employed by educators indicate that assistance to students in formulating their own questions that lead to inquiry and high quality tasks is occurring. Observational data and/or video footage of class discussions of ratio and proportional relationships and their connections to other areas of study are animated, engaging all students in important content and in using their own language to deepen and extend their understanding. A culture of collaboration, collective responsibility, and learning will have an overall score of 80% or higher in these areas on the working conditions survey. Math teams can make an accurate assessment of the effectiveness of the lessons in the units and the extent to which the units achieved the instructional outcomes and can cite general references to support the judgment.</td>
</tr>
</tbody>
</table>
Example of Step 7

In Action: Implement, evaluate, and sustain the learning

<table>
<thead>
<tr>
<th>Implement the Learning (Example)</th>
<th>Evaluate the Learning (Example)</th>
<th>Sustain the Learning (Example)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators reach agreement on an acceptable level of implementation. One tool, an Innovation Configuration (IC) map, will be used. These maps describe and define the specific practices related to an innovation so that when implementing or supporting implementers there is a common understanding about what it means to implement and what varying levels of implementation look like in practice to guide continuous improvement (Hard &amp; Hord, 2011).</td>
<td>Educators identify what data will be collected, sources of that data (e.g., student work samples, peer observations, video footage of lessons taught and team meetings), and a timeline for evaluating the data. Throughout the duration of the units, revisions to the units will be addressed based on evidence in student work samples and assessments and peer classroom observations using protocols established earlier. Formative assessments of the professional learning with educators implementing and administrators supporting address how well the units are being implemented and identify how and why adjustments have been made. At the end of the units, a summative evaluation conference with the students, educators and administrators presenting evidence and conferring to determine whether the professional learning had the intended impact.</td>
<td>The value of professional learning occurs when that learning becomes routine practice. Educators continue to fine tune the application of the ratio and proportional relationships learning and use the collaborative learning processes (offering constructive feedback, using protocols for peer observations, and analyzing student work, etc.). Educators and administrators invest in deep implementation of professional learning as differentiated coaching supported by state, local and agencies conducting high-quality professional learning and extended learning is integrated into professional learning plans. Innovation configuration maps continue to be used for providing self-assessment and coaching.</td>
</tr>
</tbody>
</table>

Steps 5, 6 and 7 specifically address the following Kentucky Standards for Professional Learning:

**Implementation:** Professional learning that increases educator effectiveness and results for students applies research on change and sustains support for implementation of professional learning for long-term change

**Learning Designs:** Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes.

Think & Apply

The sample professional learning plan outlined above concentrates primarily on the team and classroom levels. What are the necessary changes at the district and school levels for the plan to be successful? Roles at each level have specific actions and accountabilities. How will the actions of one contributor interact with others so that goals and objectives are met? For example, district staff may coach teachers as well as provide instructional resources.
## Kentucky’s Exemplary Professional Learning Rubric

<table>
<thead>
<tr>
<th>Criteria for Effective Professional Learning (Standards for Professional Learning)</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student data (Data)</strong></td>
<td>Gathers and analyzes multiple types and sources of student data (3 or more) and explains how the data analyses determine student learning needs.</td>
<td>Gathers and analyzes two types and sources of student data and explains how the data analyses determine student learning needs.</td>
<td>Gathers and analyzes one type or source of student data to determine student learning needs.</td>
<td>Fails to explain how student data are used to determine student learning needs.</td>
</tr>
<tr>
<td><strong>Educator Learning Factors (Resources, Data and Learning Community)</strong></td>
<td>Identifies and analyzes factors or circumstances (policies, resources, schedule, etc.) that contribute to the educator learning context and explains in detail how they are considered in planning and implementation of professional learning.</td>
<td>Identifies and analyzes factors or circumstances (policies, resources, schedule, etc.) that contribute to the educator learning context and explains how they influence planning of professional learning.</td>
<td>Identifies factors or circumstances (policies, resources, schedule, etc.) that contribute to the educators’ learning context.</td>
<td>Fails to identify, analyze, and explain factors or circumstances that contribute the educators’ learning context.</td>
</tr>
<tr>
<td><strong>Alignment of professional learning with school (CSIP) and district (CDIP) improvement plan(s) (Learning Community and Outcomes)</strong></td>
<td>Makes explicit the alignment of team and/or school professional learning with district and school improvement plan(s).</td>
<td>Aligns team and/or school professional learning with district and school improvement plan(s).</td>
<td>Identifies the related goal(s) from the school or district improvement plan.</td>
<td>Fails to align team and/or school professional learning with school and district improvement plan(s).</td>
</tr>
</tbody>
</table>

How do student learning data inform determination of student learning needs?
<table>
<thead>
<tr>
<th>Improvement Plan Goals?</th>
<th>Outcomes for Professional Learning (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What specific changes are expected as a result of the professional learning for both educators and students?</td>
<td>Develops measurable educator professional learning goals, based on student data, factors or circumstances of the educator learning context, and the school and/or district improvement plan(s), that specify changes in educator practice and student growth.</td>
</tr>
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<td></td>
<td>Develops educator professional learning goals, based on student data, factors or circumstances of the educator learning context, and the school and/or district improvement plan(s) that specify changes in educator practice.</td>
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<tr>
<td></td>
<td>Identifies topics for professional learning based on student data, factors or circumstances of the educator learning context, and the school and/or district improvement plan(s).</td>
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<tr>
<td></td>
<td>Fails to specify changes in educator practice and student growth as a result of professional learning.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Professional Learning Practices (Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes Standards)</th>
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</thead>
<tbody>
<tr>
<td>What professional learning designs and implementation supports are appropriate for the intended outcomes?</td>
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<table>
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<tr>
<th>Professional Learning Plan (Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes Standards)</th>
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<tbody>
<tr>
<td>What is the professional learning plan including the underlying assumptions,</td>
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<tr>
<td>Resources, roles and responsibilities, and adherence to the standards for professional learning to achieve the intended goals?</td>
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<tr>
<td><strong>Implements plan and evaluates progress</strong> (Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes Standards)</td>
</tr>
<tr>
<td><strong>How is the implementation of the professional learning plan monitored and evaluated?</strong></td>
</tr>
<tr>
<td>Enacts professional learning plan to achieve changes in educator practice and student growth; conducts formative assessment and summative evaluation of professional learning; adjusts plan based on data; sustains differentiated and personalized support for deep implementation; and reports on progress and results to multiple audiences.</td>
</tr>
<tr>
<td>Enacts professional learning plan to achieve changes in educator practice and student growth; adjusts plan as needed; sustains support for implementation; and reports on progress and results to multiple audiences.</td>
</tr>
<tr>
<td>Enacts professional learning plan to achieve changes in educator practice and student growth; conducts formative assessment and summative evaluation of professional learning; adjusts plan based on data; sustain differentiated and personalized support for deep implementation; and reports on progress and results to multiple audiences.</td>
</tr>
<tr>
<td>Fails to enact professional learning plan to achieve changes in educator practice and student growth; conduct formative assessment and summative evaluation of professional learning; adjust plan based on data; sustain differentiated and personalized support for deep implementation; and report on progress and results to multiple audiences.</td>
</tr>
<tr>
<td>Resources to achieve results.</td>
</tr>
</tbody>
</table>
Acknowledgements

Curriculum Framework Committee Members

The following people have given time and energy toward the development of this curriculum framework. Without their contributions, this document could not have been written. Listed are the expertise they brought and their place of employment at the time of their participation in the framework development.

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Kentucky Historical Society
Kentucky Council of Teachers of English
Kentucky School Media Association
Kentucky Center for Instructional Discipline
Kentucky Community Education Association
National Center for Family Literacy
Kentucky Parent Information and Resource Center
Kentucky Special Education Cooperatives
Commonwealth Institute for Parent Leadership

Kentucky Music Educators Association
Kentucky Association for Career and Tech Education
Kentucky Association for Gifted Education
Kentucky Reading Association
Kentucky Heritage Council
Kentucky Arts Council
Kentucky Association of School Councils

Kentucky Association of School Administrators
Kentucky Science Teachers Association
Kentucky Association for Environmental Education
Kentucky Council on Economic Education
Kentucky Association of Health, PE, Recreation and Dance

Kentucky Association of Educational Supervisors
Institutions of Higher Ed-Early Childhood Faculty

Kentucky Educational Speech and Drama

Kentucky Association for Early Childhood Education
New Cities Institute/ Kentucky League of Cities for the Partnership for Successful School
Kentucky Center for the Performing Arts
Kentucky Council for Social Studies
Kentucky Council for Exceptional Children
Kentucky Society for Technology in Education
Kentucky Educational Television
Kentucky Educational Cooperatives
Prichard Committee
Kentucky Theater Association
Kentucky Out-of-School Alliance
Kentucky Parent-Teacher Association
Kentucky World Language Association
Kentucky Center for School Safety
Kentucky School Board Association
Kentucky Council of Teachers of Math
Instructional Supervisors Leadership Network
Kentucky Education Association