
The Trailblazer

KENTON COUNTY SCHOOL DISTRICT



Now in its fourth year of Common Core implementation, Kenton County School District in northern Kentucky has made aggressive strides in integrating the new standards into its classrooms. The district supports secondary teachers with rich curricular resources that help them make the transition. By contrast, the lack of a common curriculum at the elementary level continues to be highly problematic for teachers in the early grades. At all grade levels, content specialists who deliver ongoing, school-based professional development have been an essential investment for teacher understanding of the new standards. Also critical are district-mandated “learning walks,” or informal observations, which require significant time from principals, but help to inform district-wide monitoring of Common Core implementation in every classroom.

02

State and District
Context

04

Detailed Research
Findings

08

Summary of
Findings

10

Appendix

14

Endnotes

State and District Context

In 2009, sweeping reform legislation in Kentucky’s Senate Bill 1 (S. B. 1) created systemic changes in the state’s education system and led to early adoption of the Common Core State Standards. Kentucky’s embrace of the new standards represented an effort to improve its historically lackluster education performance. The state was the first in the nation to implement the Common Core statewide, doing so in 2010–11 with strong support from state leaders, the Kentucky Chamber of Commerce, and the Prichard Committee (a statewide education advocacy group). The following year, it launched the Kentucky Performance Rating for Educational Progress (K-PREP) statewide assessment system (see timeline below). Kentucky is a participant in the multi-state PARCC assessment consortium (Partnership for Assessment of Readiness for College and Careers) and also administers the ACT in high school. As of January 2014, the state has yet to make a final decision about the assessments it will use in the 2014–15 school year.

KENTON COUNTY DEMOGRAPHICS

14,165 students

K–12: 11 elementary schools; 4 middle schools; 4 high schools, 6 three-year innovation and technology academies (operated within the high schools)

37.9% free- and reduced-lunch eligible

2.4% limited English proficient

3.2% Hispanic; 90.2% white; 1.4% Asian; 2.2% African American; 2.9% multiracial

Northern Kentucky/suburban Cincinnati-area district

The state is also pursuing major reforms in the areas of accountability and teacher quality. In 2013–2014, the state is piloting new teacher and principal evaluation systems designed to align to the Common Core. The evaluation systems will be fully implemented in the 2015–2016 school year, alongside a new district and school report card that tracks college- and career-readiness indicators. Most of the \$41 million in Race to the Top funds, which Kentucky won in December 2011, will go to support the implementation of these new accountability and assessment systems.

Kenton County School District is located in northern Kentucky, but its proximity to Cincinnati (about twelve miles away) makes it a commuter town for that Ohio city. The district is one of the earliest implementers of the Common Core in an already early-implementing state. Shortly after the release of the new standards in summer 2010, Kenton County began supporting and encouraging secondary teachers to pilot the Common Core in their classrooms, and moved to full implementation in all grades and schools the following school year.

Table 1. Kentucky CCSS Implementation Timeline				
2009–10	2011–12	2012–13	2013–14	2014–15
S. B. 1 mandating new assessment and accountability system became law in 2009; in February 2010, Kentucky adopted the Common Core; continued use of the ACT test as the state’s college- and career-ready (CCR) assessment	Full implementation of CCSS statewide; launch of K-PREP statewide	K-PREP assessment administered for second year; state adopted new school report card with new data relative to college- and career-readiness, accountability, and assessment scores	K-PREP administered for third year	PARCC assessments come online: at that time, Kentucky will determine whether the PARCC final assessments meet the assessment requirements of S. B. 1.; until then, the state plans to continue using the ACT as the CCR assessment

When statewide scores dropped after adopting the more rigorous (and Common Core-aligned) K-PREP assessment in 2011–2012, Kenton County’s did as well; since then, however, student scores in the district have been on the rise. Under the state’s new accountability system (also introduced in 2011–2012), the district’s overall college- and career-ready accountability score increased about five points (out of one hundred) between the 2011–2012 school year and the 2012–2013 school year, placing Kenton County at the 84th percentile for performance among districts in the state. As of the 2013–2014 school year, most of the district’s schools moved into the proficient or progressing categories, and the district expects that its few remaining focus schools will move up in within the next two school years. Kenton County officials will look at the third year of performance on the K-PREP to determine whether this rise in performance—concurrent with its Common Core implementation efforts—is in fact a pattern of growth.

Politically, early and strong support from the business community and education advocates, such as the Prichard Committee, have thus far helped head off serious political challenges to implementation at the state or district level. While Kentucky is not immune to efforts to dismantle the Common Core, the district has been quite proactive in its communication with parents and the public. The superintendent routinely appears on local media outlets to discuss the new standards and district administrators use social media, newsletters, and parent meetings to communicate with parents about the Common Core.

Detailed Research Findings

Teachers and administrators in the secondary schools in Kenton County cite their curriculum as a critical resource in helping them to make the instructional shifts reflected in the Common Core standards. The secondary curriculum is a district-developed curriculum map and pacing guide heavily supported by lessons and materials from the College Board’s SpringBoard program. Although elementary teachers have district maps and guides, they are clearly challenged by the lack of a complete set of common curricular materials—as is the district. The time and effort needed to provide support across eleven different curricula at eleven different elementary schools stretches resources thin.

All middle and secondary schools in Kenton County use a common curriculum for ELA and math that has been adopted and revised for alignment to the Common Core. That curriculum is comprised of a district-developed curriculum map and pacing guide, paired with lessons and materials from the College Board’s SpringBoard program. By contrast, elementary schools do not have a single, Common Core-aligned curriculum, though the district provides supports (including a map and pacing guide, as well as coaching) to help elementary teachers adjust their instructional materials to support the new standards.

“ SpringBoard’s publisher, the College Board, touts the program as fully aligned to the Common Core. However, district leaders in Kenton County say that SpringBoard provides a “good first step” toward an aligned curriculum...but that the materials still require supplemental texts and lessons to support the new standards wholeheartedly. ”

Kenton County organized an inclusive process for curriculum development. Teachers helped create elementary and secondary curriculum maps that describe the standards to be taught in each unit, learning targets for each grade level, and a pacing guide that includes a timeline for teaching the units. Teachers and administrators report that all teachers were involved in creating the curriculum maps and district assessments through work within their common planning structures. These materials are also reviewed annually by administrators and lead teachers for quality and alignment to the Common Core. A number of educators report that these district-wide curriculum maps and assessments create greater coherence across grades; students now come to them much more prepared for the next level of work under the standards, and teachers are better able to identify gaps in student understanding.

The district’s elementary and secondary schools diverge, however, in the texts and materials used to buttress each standard. At the secondary level, all district middle and secondary schools have adopted SpringBoard, a College Board pre-advanced placement curriculum. The district-wide curriculum maps for secondary grades include SpringBoard-suggested materials to be used and recommendations for activities, as well as lessons developed by Kenton County teachers (see Appendix for an example of a secondary math curriculum map). By contrast, at the elementary level, multiple textbooks are in use across schools and the elementary curriculum map does not reference specific texts or materials. To maintain some coherence across elementary and secondary grade levels in spite of the curricular divergence, the district developed common assessments that align to both the elementary and secondary curriculum maps.¹

Additional detail on which materials are in use and how they were adopted follows.

- ◆ **Curriculum adoption throughout the district:** In Kenton County, site-based school councils choose curricular materials and set policies for instructional practices—such as mandating instructional block scheduling, or the use of particular reading strategies—for each school.
- ◆ **Selection of SpringBoard for the middle and high schools:** Kenton County administrators selected and encouraged the adoption of SpringBoard materials for English language arts and mathematics in the high schools and, later, in middle schools. SpringBoard’s publisher, the College Board, touts the program as fully aligned to the Common

Core. However, district leaders in Kenton County say that SpringBoard provides a “good first step” toward an aligned curriculum—especially with its emphasis on problem solving, academic language, and text analysis—but that the materials still require supplemental texts and lessons to support the new standards wholeheartedly.

- **Adoption of SpringBoard at the middle and high schools:** Once the district identified SpringBoard as a promising Common Core-aligned program, administrators went to each secondary school council to ask them to approve it. To encourage adoption, the district first offered a carrot—the district would pay for the materials and training. Then came the stick—any schools that elected not to adopt SpringBoard would be required to create a Common Core-aligned curriculum themselves (complete with assessments and materials). As a result, in 2010–2011, all of the middle and high schools in the district adopted the SpringBoard program.
- **Supplementing SpringBoard:** As teachers and administrators worked with the SpringBoard curriculum, they recognized the need to adjust, rewrite, and further supplement the program. They began to use materials from Student Achievement Partners (SAP) and from the Literacy Design Collaborative (LDC) and Mathematics Design Collaborative (MDC)² to supplement SpringBoard content and adjust the sequencing of lessons within their curriculum maps. The district supports teachers in rewriting and refining lessons, and maintains online wiki pages for each subject area, where teachers publish and share their curriculum revisions.³
- **Multiple, pre-Common Core textbooks in use at the elementary level:** At the elementary level, district-wide maps and pacing guides are in use but are not supported by a single textbook or program. To date, district leaders report that they haven’t found a program they believe to be well-aligned with the Common Core for the elementary grades—even a program that provides a promising foundation for revisions, as does SpringBoard—and that they do not want to invest major funds in an ill-aligned ELA or math program. As a result, individual elementary schools operate with different textbooks and curricula that must be supplemented in different ways to support the new standards.

Though they lack a shared, Common Core-aligned curriculum, elementary teachers do receive district support to align their curricular materials. Three district “consultants” (content specialists) work with them to supplement the guides with instructional materials, pulling from what is available in their schools and online (such as resources from the Basal

“ The time and effort needed to provide support across so many schools may result in much shallower support for elementary teachers compared to their secondary counterparts, leading to fragmented or poor implementation in the early grades. ”

Alignment Project).⁴ But consultants who serve the district’s eleven elementary schools report that they sometimes struggle to keep up with all of the different needs and contexts for these schools and feel stretched thin. Unlike their secondary counterparts, elementary teachers convey that their collaborative lesson planning and evaluation of materials happens within, not across, schools, because textbooks differ across schools. And while principals work hard to provide common planning time, the level of support at the elementary level appears uneven.

Kenton County’s lack of good options for a single, well-aligned curricular program at the elementary level reflects the broader field’s lack of vetted, nationally recognized Common Core programs. It also poses problems for deepening educator

understanding of the standards at the elementary level. The time and effort needed to provide support across so many schools may result in much shallower support for elementary teachers compared to their secondary counterparts, leading to fragmented or poor implementation in the early grades.

Kenton County’s investments in professional development are helping teachers make the instructional shifts required by the Common Core. The deliberate use of internal content specialists or “consultants” to deliver site-based professional development across all schools provides a consistent and unified focus on the content of the standards. The choice to invest heavily in content experts creates a valuable resource for the district, but raises questions of sustainability and turnover. The district has also invested in a collaborative team structure, supported by content specialists, to improve teachers’ application of the standards in the classroom.

Kenton County has organized its professional learning to focus on understanding and practicing the instructional shifts required by the Common Core.⁵ Consultants and building administrators provide most of the school-level coaching and leadership for the Common Core. The district’s literacy consultant was hired in 2006, and the math and science/STEM consultants were hired in 2008. Selected for their strong content expertise, the consultants were trained on the Common Core through the district’s membership in the LDC and MDC (see Appendix for descriptions of both), and continue to receive training on the Common Core through national conferences led by Student Achievement Partners and others.

Paid directly by the district out of a mix of the general operating budget and some Title I and Title II funds, consultants are full-time district employees. They spend their time in school buildings developing and facilitating trainings, and supporting individual teachers with curriculum planning, modeling instruction, analyzing student work, and creating assessments. Although they collaborate daily with administrators as well as teachers, consultants do not evaluate educator performance. They have been trained and certified to teach the SpringBoard curriculum used in the middle and high schools and to represent the district at PARCC trainings and other state meetings. Using consultants in this way helps the district keep its teachers and administrators in classrooms working directly with students, and develops a set of content experts—conversant with both standards and curriculum—who are available to all teachers in the district. However, this model also has significant drawbacks: the district loses its investment when turnover occurs, and replacing such expertise and familiarity is difficult.

Kenton County has also made collaborative teams a key part of its strategy to improve teacher practice. Consistent with the district’s site-based decision-making model, each school decides how often teacher teams will meet and the organization of the teams varies. Elementary and middle school teams meet in grade-level and content bands, and high school teachers meet in departments or course-specific teams.

Irrespective of the structure, however, teachers, administrators, and consultants independently report that the teams are tightly focused on Common Core instruction. Teachers analyze student work and plan lessons or units together using MDC or LDC guidance. Teachers and administrators stress that the emphasis on collaboration holds them accountable to one another. They also believe that sharing the work of redesigning and planning lessons, changing their classroom practices, and monitoring student achievement is critical, and they couldn’t make these changes independently. As one district leader explained, “[The teachers] have realized they have to lean on each other for this [transition]. Those that aren’t choosing to be part of the team are sinking. There’s just no way to encompass and plan for...the standards by yourself.”

Kenton County mandates frequent formative assessments of teacher practice in the form of administrator “learning walks.” These learning walks illustrate the challenges of ensuring Common Core-aligned instruction in every classroom. They require major investments of principal time, plus prowess in instructional leadership. Another challenge? Kenton County developed and refined its own instrument for assessing fidelity to the Common Core standards in classrooms—and subsequently had to defend its choice to the state, which had its own (somewhat similar) measure.

As part of its strategy to align teacher practice to the Common Core, Kenton County requires that administrators conduct classroom observations and “learning walks” (see sidebar above) that enable them to see what is happening in classrooms and understand exactly where teachers need support. Starting with the 2013–2014 school year, building administrators must conduct fifty walks per week in their schools. Learning walks must be fifteen to twenty minutes each, focus on observing instruction, and include a “feedback conversation” with the teacher after the walk. District leaders are asking principals or other building administrators to be in classrooms at least sixteen hours—more than one-third of their time—each week. This is an enormous shift in focus for principals, who, prior to this policy, didn’t spend nearly as much time in classrooms conducting observations.⁶

The learning walks demand not only time, but also serious skill to recognize and improve Common Core-aligned instruction. Kenton County has been laying the groundwork for this change in instructional leadership since it began

LEARNING WALKS

An informal but organized visit to classrooms to see how teachers teach and students learn. Learning walks focus on specific instructional activities and generally conclude with a reflective activity or discussion for observers to compare or calibrate their observations.

implementing the Common Core. Almost all the new principal hires in elementary schools have a background in coaching or consulting. They bring with them experience in instructional leadership and knowledge of the Common Core and related instructional shifts, augmented by the district through intensive administrator training. At the same time, many principals are young, at the beginning of their careers, and filled with enthusiasm for the work. District leaders acknowledge the long hours and weekends that principals put in to get the job done. Although district leaders are excited about the changes they see in principals' ability to recognize Common Core elements in classrooms and to have targeted, instructional conversations with teachers, it is questionable whether the demand on principal time and capacity can be sustained.

Though the walks are separate from formal teacher evaluations, principals use the same evaluation rubric for informal reviews and coaching. The Kenton County Professional Practice Rubric (PPR), originally developed in 2005–2006 by the district's teachers' association, is based on the Charlotte Danielson Framework for Teaching and has since been customized with language from the LDC and MDC initiatives to ensure better alignment to the Common Core. Because teachers requested that the district's evaluation and coaching systems be combined, administrators now use the PPR as the primary observation form for both formal evaluations and learning walks.

Starting in 2013–2014, the district directors of elementary education and secondary education are also required to conduct two learning walks per week in schools, accompanied by the principal. These jaunts help the directors and principals calibrate what they are seeing in the classrooms with the specific requirements in the PPR. "Really those walks are practicing what we've learned in district CIA [curriculum, instruction, assessment] meetings," one district leader explained. "We're talking about what good instruction looks like with our leaders, but it's learning for principals and teachers. We get a snapshot of what is happening in all schools across the district." Principals and district leaders use the information to direct targeted supports to teachers and schools as needed, including extra coaching or additional resources.

Both because their PPR predates the state's newly developed teacher evaluation system and observation rubric, *and* the district's educators and administrators are already invested in their own rubric, Kenton County leaders requested a waiver from the requirement to use the state's rubric.⁷ The district will adopt all of the other components of the state's new evaluation system, including the student growth component, but wants to use its own customized observation rubric (the PPR). Before making its final decision, the state asked that Kenton County provide a qualitative analysis and comparison of the two rubrics, which it did. The state has not rendered its decision as of this writing.

“ Districts like Kenton County already have processes and tools for evaluating Common Core-aligned instruction in place, and local educators feel strong ownership of these tools, which were largely created with their input. States may have to tread lightly in order not to frustrate or disenfranchise those who sprinted out of the implementation gate. ”

This issue highlights a common difficulty that early implementers and their states face: how to leverage the work of the early implementers while building common systems across the state. Districts like Kenton County already have processes and tools for evaluating Common Core-aligned instruction in place, and local educators feel strong ownership of these tools, which were largely created with their input. States may have to tread lightly in order not to frustrate or disenfranchise those who sprinted out of the implementation gate. As Kentucky and Kenton County move through this waiver conversation, the state-local balance that they negotiate will be instructive for other states and districts grappling with similar issues.

“ District leaders are asking principals or other building administrators to be in classrooms at least sixteen hours—more than one-third of their time—each week. ”

Summary of Findings

Kenton County school district offers an encouraging look into the future for many districts embarking on the Common Core path: now in their fourth year of implementing the standards, teachers in the district describe the new standards as the basis for all their instruction. They are both supported in and held accountable for delivering instruction that reflects the Common Core shifts through significant investment in coaching, instructional leadership, and classroom observation tools. Even four years in, however, Kenton County is still contending with knotty implementation challenges. These include balancing new teacher evaluation requirements with formative feedback on instruction and ensuring that all teachers—especially those in the elementary grades—have sufficient access to a Common Core-aligned curriculum.

Table 2. At a Glance: CCSS Implementation in Kenton County

<p>Access to CCSS-aligned Curricula and Instructional Materials</p>	<ul style="list-style-type: none"> ◆ In 2007, the district received a grant to join the Gates Foundation-funded Literacy Design Collaborative (LDC) and Math Design Collaborative (MDC) in middle and high school (and has since expanded this program to fifth grade). LDC modules are incorporated into social studies and science to meet the CCSS literacy requirement in those subjects (see Appendix for description of LDC and MDC frameworks). ◆ Middle and high schools use the College Board’s SpringBoard curriculum for English language arts and math, revised and re-sequenced to align to the CCSS. Elementary schools do not use a common curriculum. ◆ The district (with input from state content experts and local teachers) created a CCSS-aligned curriculum map and pacing guide that incorporates all of the standards and gives learning targets by grade level. Intentionally, there are no references to specific texts at the elementary level, but the secondary map refers to the SpringBoard curriculum used by all middle and high schools. The map is posted on a wiki site for teachers to access easily. Timelines are revisited every year to check for alignment. ◆ Supplemental materials are drawn from Student Achievement Partners (SAP), the Basal Alignment Project (which has developed text-dependent questions), or from teacher-developed materials on online wiki sites for each subject. ◆ Teachers, consultants (content experts), and district curriculum leaders use LDC/MDC frameworks and materials from SAP’s www.achievethecore.org website to determine the quality of instructional materials and their alignment to CCSS. ◆ Site-based school councils determine the curriculum for each site. These decisions vary by individual school. ◆ The district worked with elementary teachers to create a new standards-based report card for kindergarten and grades 1–3. These were implemented in 2012–2013. All other grades continue to use the report cards that have been in place for years.
<p>Use of CCSS-aligned Formative and Interim Assessments</p>	<ul style="list-style-type: none"> ◆ The district administers common formative assessments in all grades. District content specialists write the assessments with input from teachers, and exams are based on the district’s curriculum guide and timeline. Consultants and principals review these regularly to track student performance and to check for continued alignment to CCSS. ◆ MAP assessments are administered three times per year across the district in grades 1–10 for diagnostic purposes. Teachers use MAP to set learning goals with students. ◆ Formative assessments are built into the LDC, MDC, and SpringBoard curricula. ◆ All students take the K-PREP, the CCSS-aligned state assessment. The district now has two years of K-PREP data so it can begin looking for trends in student performance with the CCSS. ◆ High school juniors take the ACT test, as mandated by state policy. ACT may be replaced by the PARCC assessment, but the state has not yet made a decision to adopt PARCC. It is unclear whether the state will replace the K-PREP test with PARCC.

Table 2. At a Glance: CCSS Implementation in Kenton County (cont'd)

<p>Teacher- and Principal-level Accountability for Results</p>	<ul style="list-style-type: none"> ◆ The state’s Professional Growth and Effectiveness System (PGES) for teachers uses the Danielson Framework for Teaching and includes a student survey and a student growth component. Kenton County is requesting a waiver from the state to be able to use its own version of the Danielson framework, which the district adapted locally and has been using for three years. The district’s current evaluation system includes its version of the Danielson rubric, teacher self-reflections, observations, and professional growth plans. Student growth is not currently a part of teacher evaluations in Kenton County. To date there has been no decision from the state. ◆ In 2013–2014, two district principals will participate in the state’s pilot of PGES for principals, a rubric-based system with seven performance standards. The PGES for principals includes a student growth component and data from the Kentucky Teaching, Empowering, Leading and Learning (TELL) survey reflecting teacher perspectives on working conditions. PGES will be fully implemented for teachers and principals in 2015–2016. ◆ District leaders, consultants, principals, and teachers use “learning walks” to monitor Common Core implementation. Principals are required to observe classrooms fifty times per week. District supervisors are required “to walk” twice a week. Teachers are given opportunities for peer observation and learning walks during collaborative time. ◆ Consultants and principals use evidence from teacher work, student work, and formative assessments to monitor and support implementation.
<p>Data-driven, CCSS-aligned PD for Teachers and Principals</p>	<ul style="list-style-type: none"> ◆ Collaborative teams are in place in middle and high schools, although the structure varies depending on the school. Elementary school teachers are provided with common planning periods. Principals also give teachers common planning time during faculty meetings. ◆ Most district professional development is designed and conducted by district-paid consultants, who provide school-based support through on-site training, observation, and coaching for teachers and administrators. The consultant role is non-evaluative. Consultants also attend the state regional instructional support network meetings and other national trainings (SpringBoard, PARCC, etc.). ◆ Principals participate in collaborative teams within their schools and also attend a weekly principals’ meeting and a weekly curriculum and instruction meeting. ◆ The district keeps records on professional development participation at the school level. If a school is not performing (based on test scores) and is not participating in professional development to address problem areas, district leaders will intervene. ◆ Each summer the district hosts a three-day Professional Growth Academy with hundreds of offerings developed by consultants. Modules offered at the Academy are designed to align to CCSS.
<p>Communication and Buy-in</p>	<ul style="list-style-type: none"> ◆ District leaders send a consistent message to educators and the public that the Common Core supports the overarching district goal of college- and career-readiness for all students. The focus of communication is on rigorous instruction and CCSS support of such instruction. ◆ Kenton County leaders use public radio, local TV, local newspapers, social media, district and school websites, and blogs to communicate about the CCSS. The superintendent has appeared on local TV and in newspapers talking about the CCSS.

Appendix: Excerpt From Kenton County's Customized and Annotated Springboard Curriculum

MATH SPRINGBOARD CURRICULUM MAP – COURSE 3

Curriculum Map Year At-A-Glance <i>Total Days: 157.5</i>			
APPROXIMATE DATES	DURATION	UNIT	INSTRUCTIONAL FOCUS
8/14-10/2	32	Unit 1	Patterns and Numerical Relationships
10/3-11/8	24	Unit 2	Expressions, Equations, and Inequalities in One Variable
11/9-2/21	57	Unit 3	Equations and the Coordinate Plane
2/22-4/4	27.5	Unit 4	Proportional Relationships
4/5-5/9	17	Unit 6	Three-Dimensional Geometry

Please read this before looking through the map: The “approximate dates” include a few non-instructional days to help plan for field trips, MAP testing, Explore testing, shortened schedule days, etc. Any highlighted sections under the “SpringBoard Activities” columns need close attention. They include added sections from other courses, deleted sections, and Mathematics Design Collaborative tasks, added fluency practice or anything that is a change to the flow of the book. There are many references to “the Wiki.”

Unit 1: Patterns and Numerical Relationships <i>Duration: 32 Days • Approximate Dates: 8/14-10/2</i>			
UNIT OVERVIEW	ESSENTIAL QUESTIONS	ACADEMIC VOCABULARY	ALGEBRA/AP/COLLEGE READINESS
In previous courses, students have learned to investigate patterns, apply number and operation procedures to specific situations, and analyze solutions as reasonable or unreasonable. This unit expands upon fundamental and procedural aspects of number and operations through contextual applications of pattern investigation, laws of exponents, decimal and fraction operations, scientific notation, and properties of rational and irrational numbers.	<p>How are fractions, percents and decimals related?</p> <p>Why is it important to understand the procedures for working with different kinds of numbers?</p>	<ul style="list-style-type: none"> ◆ power ◆ reciprocal ◆ scientific notation 	<p>Unit 1 builds a deeper student understanding of number and operations and expands to concepts of arithmetic and geometric sequences, inverse, limits, and infinity by:</p> <ul style="list-style-type: none"> ◆ Allowing students to explore and explain patterns involving both arithmetic and geometric sequences. ◆ Using manipulatives in a contextual situation to introduce students to the concepts of limits and infinity. ◆ Modeling the concept of inverses through analysis of patterns and multiple representations. ◆ Encouraging students to communicate about mathematics and explain solutions both verbally and in written sentences. ◆ Giving students opportunities to analyze data and make predictions about further applications.

SPRINGBOARD ACTIVITIES	DURATION	CONTENT FOCUS	COMMON CORE STANDARDS AND LEARNING OBJECTIVES	COMMENTS
<p>1st Day Activity- MDC Chicken Nuggets AND Administrative/Procedural/ Expectations Related Items</p>	3 days total			<p>Materials</p> <ul style="list-style-type: none"> ◆ Copies of MDC "Chicken Nuggets"- On Wiki
<p>Getting Ready Assignment Unpack Unit 1- EA1 Patterns and Exponents (EDITED Version)-On wiki</p>	.5 day			<p>Getting Ready Assignment can be worked in as homework or warm-ups. There is not class time built into the map for this.</p>
<p>SKIP 1.1</p>				
<p>1.2 Properties of Exponents (INVESTIGATIVE) Then complete Algebra I</p>	4 days	<ul style="list-style-type: none"> ◆ Laws of exponents 	<p>8.NS.1-Supporting 8.EE.1-Major 8.EE.3-Major 8.EE.4-Major</p>	<p>Possible HW or Enrichment: Math Shell Center Task- 'Apprentice' task: "A Million Dollars"</p>
<p>Unit 1-EA1 Patterns and Exponents (EDITED)-On wiki Formative Quiz over 1.2 and 1.4 (Course2)-Self Created</p>	<p>1 day 1 day</p>	<ul style="list-style-type: none"> ◆ Laws of exponents 	8.EE.1- Major	

LITERACY DESIGN COLLABORATIVE⁸

The Literacy Design Collaborative, a project funded by the Bill and Melinda Gates Foundation, offers an instructional system for developing the college- and career-ready levels of reading, writing, and thinking called for by the Common Core State Standards for English Language Arts and Literacy in History, Social Studies, and Science & Technical Subjects. This Framework document establishes the technical specifications for that instructional system for use by current and potential LDC partners.

The LDC Framework offers a common “language”—in the broadest sense—useful for capturing and sharing instructional expertise. At the same time, the Framework takes a minimalist approach, holding the system together with a lean model while being clear enough to give users a framework for building out their own instructional choices. The LDC Framework consists of these items:

- ◆ **LDC Template Task Collections**, providing approved, partially built task templates with scoring rubrics, all aligned to the Common Core State Standards.
- ◆ **LDC Module Specifications**, spelling out requirements and options for designing LDC Modules and using LDC template tasks. LDC modules consist of four sections in which educators engage to design Common Core-aligned assignments they will teach:
 - » **Section 1: What task?** What tasks set clear, rigorous goals for learning?
 - » **Section 2: What skills?** What skills do students need to succeed on the teaching task?
 - » **Section 3: What instruction?** How will you teach students to succeed on the teaching task?
 - » **Section 4: What results?** How good is good enough?
- ◆ **LDC Terminology**, defining the required terms and definitions used by LDC.
- ◆ **Jurying Rubric for LDC Tasks and Modules**, specifying the criteria that make tasks and modules exemplary and “good-to-go,” as well as the features that qualify modules as being works-in-progress. Only work that meets the requirements of the LDC Module Specifications is eligible for jurying.

For more information, see the *1.0 Guidebook to LDC*, available at www ldc.org. Ultimately, the LDC Framework is pragmatic in its purpose: literacy skills are so important in the lives of students that they must be intentionally and frequently taught. If students are to acquire and refine their ability to use language as readers, writers, and speakers to achieve their personal and professional goals, literacy instruction must become the staple of all instruction. LDC aims to assist teachers in the core disciplines and beyond by meeting them partway in the effort to deliver quality literacy instruction in classrooms. It is teachers and our partners who bring their expertise to the crafting of a completed teaching task and its module. Accordingly, LDC views teachers as co-designers in transforming LDC templates into quality teaching tasks and modules.

MATHEMATICS DESIGN COLLABORATIVE⁹

The Mathematics Design Collaborative (MDC), a project funded by the Bill and Melinda Gates Foundation, provides schools with instructional tools needed to help teachers understand and implement the Common Core State Standards (CCSS) or other rigorous standards effectively, while allowing teachers the flexibility to select topics and adapt assignments to their specific instructional plans. MDC helps teachers embed the new standards into instruction and engage students in assignments that address math understanding.

MDC uses formative assessment lessons (FALs) to engage students in a productive struggle that builds fluency with their procedural skills, and deepens mathematical reasoning and understanding. Students participate in both individual and group learning as teachers use FALs and questions to check for students' math understanding and correct common misunderstandings. Rather than following predetermined steps to find an answer (the "GPS" approach), students are supported to deepen their math reasoning to solve problems.

Formative Assessment Lessons

Central to MDC are sets of FALs. The FALs are aligned to the CCSS and other rigorous standards and are designed to be embedded within courses. The FALs represent a major innovation in teaching and learning math by:

- ◆ Focusing on student understanding of math concepts
- ◆ Allowing students to have a productive struggle and make sense of math concepts
- ◆ Assisting teachers in determining what changes in content and instructional strategies are needed to allow students to master rigorous standards
- ◆ Engaging students in reasoning and increasing their ability to think through math problems

Endnotes

1. Separate from the statewide K-PREP, Kenton County has used its own district interim assessments since 2008–2009, and recently revised them to align to the Common Core. Revisions included re-sequencing concepts to match when they are taught according to the CCSS, retooling questions to ensure they are related to standards-based content, and revising multiple choice options to be more rigorous.
2. More information on the Math Design Collaborative is available at <http://collegeready.gatesfoundation.org/LearningMathDesignCollaborative> and on the Literacy Design Collaborative at <http://www.ldc.org/>. Please also see the Appendix for descriptions of the two initiatives.
3. A *wiki* is a web application that allows people to add, modify, or delete content in a text in collaboration with others.
4. The Basal Alignment Project is a national, collaborative initiative coordinated by Student Achievement Partners, a national nonprofit organization founded by the primary writers of the Common Core State Standards.
5. Please see "The Depth of the Change" (Appendix B to the main report) for a more detailed discussion of the Common Core "shifts" and implications for teacher practice.
6. District curriculum directors, who monitor the walks and accompany principals twice a month, report that 95 percent of principals met the fifty-walks-a-week goal in the first semester.
7. The observation tool that the state developed is very similar to Kenton County's—it is based on the Danielson Framework for Teaching and includes four levels of improvement. However, the state rubric has assigned numeric values to its evaluation model and does not include the customized elements that the district added.
8. Excerpted from the project description here: <http://www.literacydesigncollaborative.org/intro/>.
9. See http://publications.sreb.org/2013/MDC_Brochure.pdf.