Bridging the Gap:

An Illinois Toolkit for Using the Common Core for Secondary and Postsecondary Alignment

Prepared for the Illinois Community College Board, Illinois Board of Higher Education, and Illinois State Board of Education by the Educational Policy Improvement Center

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About the Educational Policy Improvement Center

EPIC's mission is to improve educational policy and practice that will increase student success, particularly with students historically underserved by public schools. EPIC conducts a range of policy-related research studies and develops practical tools and techniques to support a dramatic improvement in college and career readiness for students. EPIC is distinguished by its pioneering use of state-of-the-art, criterion-based, standards-referenced methods of course and document analysis.

Table of Contents

Introduction

Bridging the Gap is a companion document to a series of three regional workshops, hosted by the Illinois Community College Board (ICCB), the Illinois Board of Higher Education (IBHE), and the Illinois State Board of Education (ISBE) and facilitated by the Educational Policy Improvement Center (EPIC). The workshops served as "train-the-trainer" sessions intended to equip participants with information necessary to launch or enhance local secondary-to-postsecondary alignment efforts. The sessions explored alignment approaches related to implementing the New Illinois State Learning Standards Incorporating the Common Core (hereafter, referred to as the Common Core) in English language arts and mathematics. The Common Core define the knowledge and skills students must acquire within their K–12 education to succeed in entry-level, credit-bearing college courses and in workforce training programs.

This Toolkit provides supplemental support for workshop participants as they return to their respective institutions and host local alignment meetings. The aim is for educators at both the secondary and postsecondary levels to not only increase familiarity with the Common Core, but also to use them as the foundation for creating curricula aligned to college and career readiness expectations. The ICCB, IBHE, and ISBE believe that successful implementation of the Common Core, through meaningful local secondary-postsecondary partnerships, will ensure that students move successfully along a college and career readiness trajectory and arrive prepared for postsecondary programs.

What is this Toolkit and How Should It Be Used?

The Illinois State Board of Education adopted the Common Core with the goal to better prepare Illinois students for success in college and the workforce in a competitive global economy. To achieve this goal, the K–12 education and higher education in Illinois must work closely to successfully implement the new standards. Recognizing this joint responsibility, this Toolkit serves to do the following:

- Increase awareness of the Common Core and the implications of the standards for professionals and students at all levels of education
- Articulate a common understanding of college and career readiness related to the Common Core
- Deepen an understanding of alignment strategies and concepts
- Provide strategies for standards-to-curriculum and standards-to-practice alignment
- Support successful partnerships between secondary and postsecondary systems to make measurable improvements in the college and career readiness of students

Why is Improving College and Career Readiness important?

Key Issues and Challenges

Between the years 2010 and 2018, Illinois will need to fill 2 million new job vacancies; 1.3 million of those will require a postsecondary credential.[1] However, today only about 41% of Illinois adults (age 25–64) have a two- or four-year college degree.[2] For all students to remain competitive and for Illinois to meet its future workforce needs, more students must graduate ready for postsecondary education.

* Historically, secondary and postsecondary educational systems have operated independently, creating gaps and misalignment between the two systems.

* The proportion of students going on to postsecondary education has steadily increased over the past 100 years and will likely continue to increase.

* Getting more students ready for college means succeeding with an increasingly challenging student population.

* Students in the US must negotiate the most complex system of admission to higher education in the world.

* Today's young people will need to be better educated and prepared as the US continues to move toward a knowledge and information-based economic model.

* National educational policy is emphasizing college and career readiness in addition to basic skills instruction.

* Illinois' adoption of the Common Core provides a timely opportunity to implement data-driven college and career readiness initiatives.

* Despite recent improvements, there remains an achievement gap among students in Illinois. In 2011, 64% of white students either met or exceeded the reading benchmark on the Prairie State Achievement Examination (PSAE), while only 25% of African American students and 33% of Hispanic students met or exceeded the target. Likewise in mathematics, 65% of white students either met or exceeded the benchmark level, while only 20.2 % of African American students and 35% of Hispanic students did.[3]

How can I use this information?

We are all in this challenge together. Everyone—students, educators, families, community leaders, and employers—has a contribution to make in building aligned educational pathways that span early childhood to adulthood. You can use these talking points to avoid the "blame game" that surfaces too often when communities discuss problems in school, college and career readiness. By emphasizing the need for shared responsibility, you can help shape constructive alignment conversations that pave the way for student and community success.

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1 Lumina Foundation. (2010). A stronger nation through higher education. http://www.luminafoundation.org/state_work.html
2 US Census Bureau. (2010) American Community Survey. http://www.census.gov/acs/www/
3 Illinois State Board of Education. (2011). Illinois State Report Card. http://www.isbe.net/assessment/report_card.htm

The Illinois Context
College and Career Readiness Data Indicators

The data indicators in this section provide some information on the level of college and career readiness in the state of Illinois. The purpose of this data is to surface issues and measure progress towards meeting goals. Data currently available do not provide a comprehensive picture of college and career readiness.

Level of Educational Attainment for Illinois Adults, Age 25-64[4]

- Associate degree 8%
- Bachelor's degree 21%
- Some college, no degree 22%
- Graduate/professional degree 12%
- High school graduate (including equivalency) 25%
- Less than high school diploma 12%
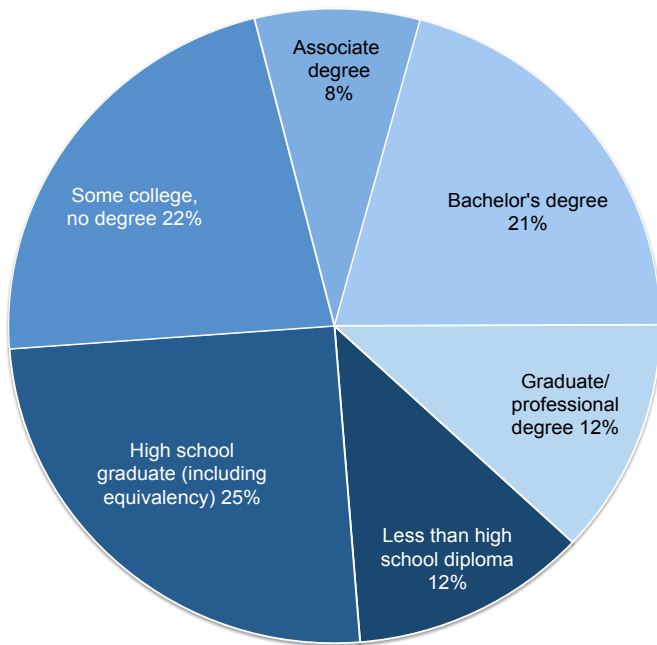
Postsecondary Degree Attainment Rate by Race/Ethnicity[5]

- White 45.8
- Black 28.2
- Hispanic 16.5
- Asian 71
- Native American 33.2
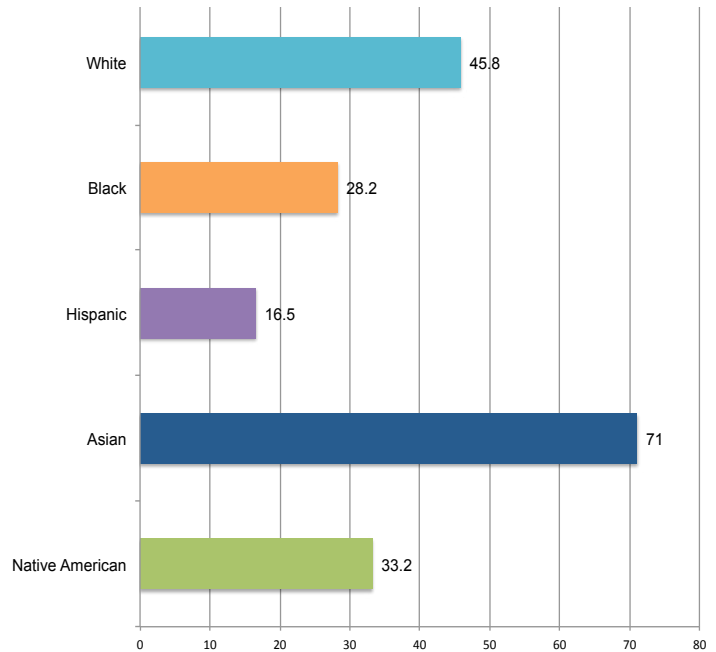
Percentage of Students Meeting ACT College Readiness Benchmarks[6]

- English 65
- Reading 48
- Math 42
- Science 28
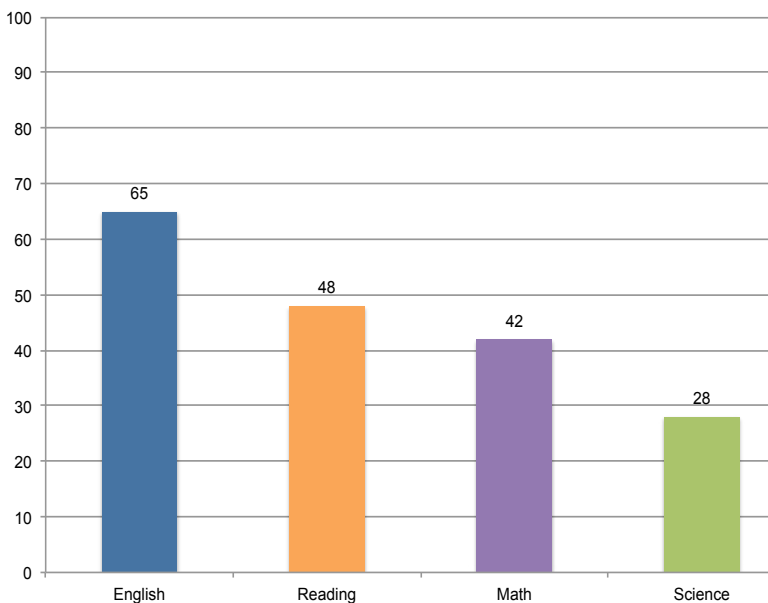
Percentage of 2011 ACT-Tested High School Graduates by Number of ACT College Readiness Benchmarks Attained[7]

- Met All 4 Benchmarks 23%
- Met No Benchmarks 30%
- Met 3 Benchmarks 14%
- Met 1 Benchmark 16%
- Met 2 Benchmarks 17%
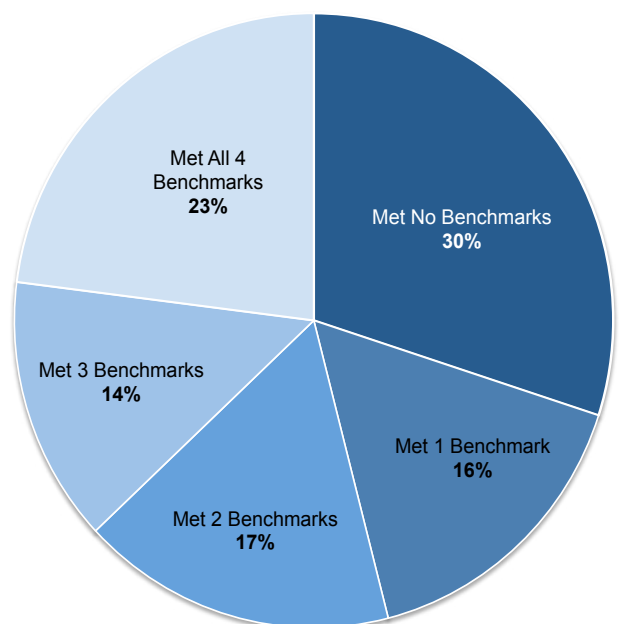
4 Lumina Foundation. (2010). A stronger nation through higher education. http://www.luminafoundation.org/state_work.html
5 Ibid.
6 ACT. (2011). The condition of college and career readiness: Illinois. Iowa City, IA: ACT. http://www.act.org/research/policymakers/cccr11/index.html
7 Ibid.

Focus on the Finish: A report on Illinois Community Colleges to Governor Pat Quinn and the Illinois General Assembly

Unlike many other states, Illinois does not have a single official who oversees early childhood education through postsecondary education. In response to this, Governor Pat Quinn appointed Lt. Governor Shelia Simon to fill this role and act as the state's point person on education reform. Lt. Governor Simon's duties include:

- serving as chair of the Joint Educational Leadership Committee for the P-20 Council;
- participating in various task forces that focus on improving learning opportunities for students; and
- leading statewide efforts to increase college completion rates.

One of Lt. Governor Simon's primary roles is to serve as a member of the state's Complete College America team. Complete College America is working to increase the proportion of working-age adults with college degrees or certificates to 60 percent by 2025. This team's mission is to help prepare the state's workforce for the highly skilled jobs of the future. In order to gain a first-hand perspective, Lt. Governor Simon conducted a statewide tour of all of 48 Illinois community colleges in 2011. She met with administrators, faculty, and students in order to gain a better understanding of how the state's community colleges are serving and educating students. During the tour, she gathered information on how the schools were working to increase their completion rates and what the state could do to help.

In January 2012, Lt. Governor Simon released *Focus on the Finish*. The report draws on her findings from the tour and details recommended steps to transform the state's community college system, reduce unemployment, and move Illinois closer to producing a globally competitive workforce. As reported in *Focus on the Finish*, community colleges to better connect students to the workforce, the state must:

Step 1: Start on the right path
- Diagnose and improve college readiness
- Add up the math courses
- Earn dual credits

Step 2: Know who we serve
- Reinvent remediation
- Provide wrap-around supports
- Recognize diversity

Step 3: Draw a better map
- Smooth transfers
- Audit associate degrees
- Target financial aid

Step 4: Reward success
- Measure milestones
- Increase transparency
- Tie funds to progress

To improve completion rates, community colleges need to work with partners who acknowledge and promote their missions and help students accomplish their educational goals. Community colleges are well positioned to anchor and coordinate efficient reform efforts because they connect high schools, four-year postsecondary institutions, and employers.

To read *Focus on the Finish: A Report on Illinois Community Colleges to Governor Pat Quinn and the Illinois General Assembly*, visit http://www2.illinois.gov/ltgov/Pages/ImprovingEducation.aspx

What is College and Career Readiness?

Operating with a shared definition of college and career readiness can maximize the effectiveness of local alignment efforts. For this Toolkit, college and career readiness is defined as students being prepared to succeed in credit-bearing entry-level general education courses or two-year certificate programs without needing remedial or developmental assistance. A crucial distinction is that college eligibility is not the same as college readiness. Historically, many high schools have emphasized getting students accepted to college by focusing on admissions criteria such as courses taken and grades received. College and career preparation extends beyond eligibility and emphasizes what students need to know in order to succeed in a postsecondary program. College and career readiness is a multi-faceted concept that includes factors both internal and external to the school environment.

Based on extensive research, David T. Conley, CEO of EPIC and professor at the University of Oregon, developed an operational definition of college and career readiness that went beyond course titles, grades, and test scores.[8] This model, termed the Four Keys of College and Career Readiness, includes: Key Content Knowledge, Key Cognitive Strategies, Key Learning Skills and Techniques, and Key Transition Knowledge and Skills. While other factors also influence college and career readiness, these four can be most directly affected by schools and are the areas for which schools can be reasonably expected to take primary responsibility.[9] The graphic below describes the Four Keys.

think:
Problem Formulation
Research
Interpretation
Communication
Precision & Accuracy

know:
Structure of Knowledge
Technical Knowledge & Skills
Challenge Level
Value
Attribution
Effort

Key Cognitive Strategies

Key Content Knowledge

Key Transition Knowledge and Skills

Key Learning Skills and Techniques

go:
Postsecondary Awareness
Postsecondary Costs
Matriculation
Career Awareness
Role and Identity
Self-advocacy

act:
Ownership of Learning
Learning Techniques

How can I use this information?

Share this definition with secondary and postsecondary colleagues. Use the Four Keys as a framework to discuss and guide conversations and activities. Sharing common language and a framework is critical to effective, comprehensive planning, including improving alignment of content and expectations. Without a comprehensive approach, efforts to prepare students for their postsecondary experiences may be fragmented, duplicative, or otherwise insufficient.

8 Conley, D.T. (2007). Redefining college readiness, volume 3. Eugene, OR: Educational Policy Improvement Center.
9 Conley, D.T. (2010). College and career ready: Helping all students succeed beyond high school. San Francisco: Jossey-Bass.

Key College and Career Readiness Terms and Concepts

Postsecondary: Any formal setting in which an individual pursues additional instruction beyond high school. These might include two- or four-year degree programs, certificate or licensure programs, apprenticeships, or military programs.

Work Ready: Individual meets basic expectations regarding workplace behavior and demeanor.

Job Ready: Individual possesses specific knowledge necessary to begin an entry-level position.

Career Ready: Individual possesses sufficient foundational knowledge, skills, and general learning strategies necessary to begin studies in a career pathway.

College Ready: Individual places into and passes, without remediation, a credit-bearing entry-level general education course.

College Eligible: Individual meets the admissions requirements for a two- or four-year college or university. This typically includes meeting high school graduation requirements, maintaining an acceptable grade point average in specified courses, and obtaining satisfactory SAT or ACT scores.

Are college readiness and career readiness the same?

Every distinct career pathway and college degree requires knowledge, skills, and abilities that are unique to that field of study. EPIC's analysis of nursing and computer programming courses in Texas[10] found that the prerequisite academic content necessary for success varied substantially between the two fields. For example, computer programming courses required significantly more mathematics skills than nursing courses; nursing courses required significantly more scientific knowledge than computer programming courses.

However, research indicates that although specific content for postsecondary success varies by field of study, institution, and certificate or degree program, both college[11] and career[12] share many important elements of readiness. These include skills all students need to be ready for a variety of postsecondary learning environments, such as study skills, time-management skills, persistence, and ownership of learning. Postsecondary instructors at a wide range of two- and four-year institutions stress the importance of these skills across subject areas and programs. Additionally, students need to have a range of cognitive strategies to help them tackle complex tasks and apply content knowledge in novel and non-routine ways. The goal is for high school graduates to be both college ready and career ready, enabling them to pursue a range of opportunities.

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10 Conley, D.T., McGauhgy, C., Brown, D., van der Valk, A., & Young, B. (2009). *Texas career and technical education career pathways analysis study.* Eugene, OR: Educational Policy Improvement Center.

11 Conley, D.T., McGaughy, C., Cadigan, K., Flynn, K., Forbes, J., Veach, D. (2008). Validation study I: Examining the alignment of the Texas College and Career Readiness Standards with entry-level general education courses at Texas postsecondary institutions. Eugene, OR: Educational Policy Improvement Center.

12 Conley, D.T., McGaughy, C., Cadigan, K., Forbes, J., & Young, B. (2009). Validation study II: Alignment of the Texas College and Career Readiness Standards with entry-level career and technical education college courses at Texas postsecondary institutions. Eugene, OR: Educational Policy Improvement Center.

Alignment Overview

Understanding Alignment

The overall purpose of this Toolkit is to serve as a resource for secondary and postsecondary faculty interested in collaborating to align current curriculum and performance expectations to the Common Core. For the purposes of this Toolkit, alignment refers to the coordination and calibration of educational programs to the knowledge and skills identified in the required standards. The goal is to create articulated, seamless curriculum, instruction, and assessment that connects high school to college and is aligned to common standards that culminate in 12th grade at the college and career ready level.

Secondary-to-Postsecondary Alignment

One of the most powerful yet challenging places to begin to improve the connections between high school and college is to align high school standards, course content, and student performance expectations with what students will experience in entry-level college courses. This diagram provides a conceptual model for thinking about this type of alignment.

Feedback

Senior Year High School

Content consistently builds

Entry-Level College

Expectations are clear and consistent

Feedback
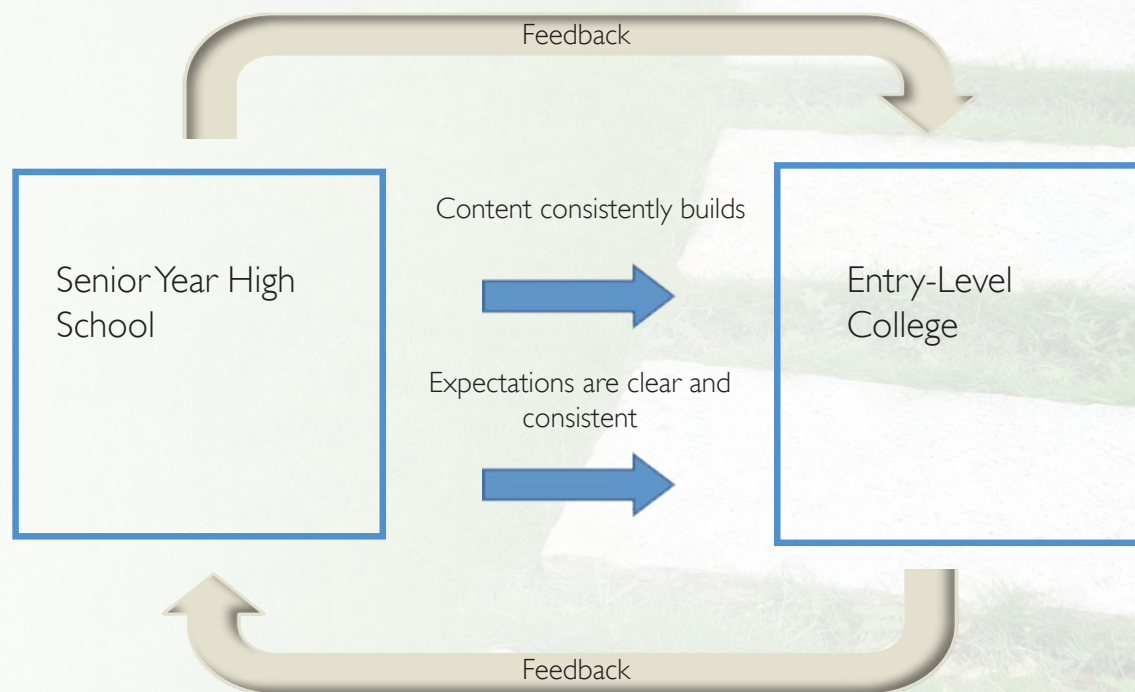
This Toolkit addresses two important dimensions of alignment: vertical and horizontal.

Vertical alignment

Vertical alignment refers to curriculum designs that build upon progressively more demanding performance expectations and content that leads to college and career readiness by the end of 12th grade.

Key vertical alignment questions

For secondary

- Does my school have a process to ensure that the content standards addressed in courses each successive year are increasingly challenging cognitively? In other words, are students moving from novice to emerging expert levels in terms of their cognitive and learning strategies, or are they remaining novice learners even as they are exposed to more complex content knowledge?

- Does my school have a process to ensure that the content students learn enables them to develop an understanding of the subject matter they are learning in a way that prepares them for entry-level college courses? Does this understanding go beyond factual recall of information to deeper awareness of the structure of knowledge in the subject area being studied?

For postsecondary

- Does my institution share information with area high schools that spells out the content and challenge expectations students will encounter in entry-level courses at my institution?

- Does my institution have a review process that examines the relationship between entry-level courses at my institution and exit-level high school standards generally and the Common Core specifically? Does the analysis identify gaps and overlaps in content coverage?

Horizontal alignment:

Horizontal alignment results when all courses at a particular grade level are consistent in terms of performance expectations or when all courses with the same title teach comparable content with comparable expectations.

Key horizontal alignment questions:

- Does my school or institution have a process to ensure that students taking similar courses have the opportunity to learn equivalent content and skills and are graded against comparable expectations?

- Do faculty members at my school or institution share or compare classroom policies and grading expectations with each other, and then make adjustments accordingly?

The Common Core are organized to achieve both vertical and horizontal alignment.

Types of Alignment

Tackling any potential misalignment between secondary and postsecondary systems requires: (a) documenting the content covered and the learning expectations present from middle school through high school completion; and (b) comparing it to a set of college readiness standards. This is done through a number of different means that are explained as follows.

Standard-to-Standard Alignment refers to a direct comparison between two or more sets of standards. This method results in a "gap analysis" that identifies the standards not being address in either system. Other analyses show the standards being taught in both systems and those being taught in one or the other, but not both.

After the Illinois State Board of Education (ISBE) adopted the Common Core State Standards, groups of teachers convened to produce a "crosswalk" from the 1997 Illinois Learning Standards to the Common Core. The groups worked to determine which of the Learning Standards covered skills and concept comparable with the Common Core and the grade level at which the concept was introduced. The crosswalk documents for ELA and mathematics are available on ISBE's website at:

http://www.isbe.net/common_core/htmls/gap_analysis.htm

These crosswalks are intended to help teachers become familiar with the concepts and content that is included in the Common Core. They do not provide information about how teachers will adjust instructional practices. They do, however, serve as an important reference to identify any gaps between the 1997 Illinois Learning Standards and the Common Core. This resource is available statewide, enabling educators to obtain a deeper understanding of the Common Core and to avoid having to duplicate the alignment process throughout the state.

Key Standard-to-Standard Alignment Questions:

- Do faculty understand the differences between the 1997 Illinois Learning Standards and the Common Core?
- Which knowledge and skills, by grade level, are new?
- Which knowledge and skills need to be expanded, replaced or resequenced?

For an example of a formal standard-to-standard alignment analysis of the Common Core State Standards and five sets of comparison standards, please see: https://www.epiconline.org/files/pdf/LiningUp-FullReport.pdf

Standard-to-Assessment Alignment refers to an analysis examining the relationship between one set of standards and all assessments that might measure the standards. The purpose is to determine the degree to which the various assessments are valid measures of the standards in question. Researchers have developed multiple methods for understanding the relationship between standards and assessments that vary in

complexity from simple content matches to scales that capture rigor and cognitive demand.

Educators will want to examine the relationship between how the Common Core are taught and how they are measured. Establishing this relationship is a key prerequisite to successful implementation of the Common Core and is also necessary to confirm test validity for any measure of the Common Core.

The state of Illinois is a governing state in the Partnership for Assessment of Readiness for College and Careers (PARCC), a consortium of 24 states working together to develop a common set of K–12 assessments in English and mathematics anchored to the Common Core. The PARCC standards-based assessment system will include optional diagnostic and formative assessments, performance-based assessments, and end-of-year comprehensive (summative) assessments. PARCC will provide support to help educators understand the various test items, methods, and interpretations as the assessments are released.[13] Additional information about PARCC is available at: http://www.parcconline.org/about-parcc.

Key Standard-to-Assessment Alignment Questions:

- Which Common Core are currently assessed at both the secondary and postsecondary levels?

- Are any Common Core missing or do any need to be added to ensure students have the opportunity to demonstrate proficiency in the knowledge and skills necessary for postsecondary readiness?

- Are the assessments used to determine college and career readiness aligned properly with the Common Core?

Standard-to-Curriculum Alignment examines the match between the standards to the curriculum being taught. The purpose of understanding the alignment between the Common Core and the curriculum is to ensure students will have the opportunity to learn the ELA and mathematics knowledge and skills they need to be college and career ready.

Identifying the gaps between what is currently taught and what the standards require helps define the curriculum development work needed. This analysis provides a key opportunity to look at curriculum both vertically and horizontally to determine that all students, regardless of what course they take or instructor they have, will be taught a curriculum aligned with the Common Core. **For the purpose of this Toolkit, educators are asked to think of curriculum along a secondary-to-postsecondary continuum, not in isolation by grade level, course title, or school level.**

PARCC is working to develop tools and resources to help curriculum directors and teachers define how the content and expectations of the Common Core can be translated into curriculum. In 2011, PARCC released Model Content Frameworks aimed at helping curriculum directors create aligned instructional materials by identifying the "big ideas" for each grade level. Currently PARCC is developing model instructional units that will provide concrete examples of ways to implement the Common Core in the classroom. Release of the units is anticipated to take place in Spring 2013.

PARCC builds on the work of other states that are creating sample curriculum maps and frameworks. For example, Ohio released draft K-12 Model Curricula for mathematics and ELA that break down the Standards by grade level and include content elaborations, expectations for learning, instructional strategies and resources, common misconceptions of students around specific skills and concepts, and differentiation ideas and techniques. The model curricula can be found at http://www.ode.state.oh.us.

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13 Partnership for Assessment of Readiness for College and Careers. (2011). *Higher education to help develop assessments. http://www.parcconline.org/higher-education-help-develop-and-implement-new-assessments*

Key Standard-to-Curriculum Alignment Questions:

- Which Common Core does the curriculum address currently? Are any Common Core identified as missing or in need of being added?

- Do faculty members at my school or institution develop curriculum in collaboration with one other to ensure alignment to the Common Core? Are curriculum documents exchanged between secondary and postsecondary institutions?

Standard-to-Practice Alignment analyzes the standards in relation to current instructional practice. The purpose is to understand the relationship of the standards to how they are being taught and learned in the classroom.

Whereas the Common Core offer a clear target for assessment development and curriculum planning, they do not identify how teachers should teach. The responsibility for how best to teach the Common Core ultimately lies with local educators.

Curriculum and instructional practice are interrelated, representing the "what and the how" of teaching and learning. Standard-to-practice alignment provides educators with the opportunity to think about the relationship between their instruction and Common Core and the degree to which the Common Core are a significant departure from the 1997 Learning Standards.

The teachers convened by the Illinois State Board of Education (ISBE) found that the Common Core were more clearly stated and focused with increased depth and rigor than the 1997 Illinois Learning Standards. Simply taking a procedural or checklist approach to implementing the Common Core, while maintaining previous practice, is likely to leave students unprepared for the increased expectations of the Common Core, which will result in fewer students being college and career ready by the end of high school.

As reported on the ISBE website, the state is working on fully implementing the Common Core and recognizes that:[14]

> The process to fully implement new standards touches numerous systems including assessment, curriculum, professional development, instruction and various support components such as RtI. As the details for implementation are determined, the many reform efforts and initiatives underway will be considered to ensure the work is aligned and coordinated. It is anticipated the development and implementation will span over the next eighteen to twenty four months with varying phases of work.

For updates on Common Core implementation efforts in Illinois and to download the Common Core, visit:

http://www.isbe.state.il.us/common_core/default.htm

Key Standard-to-Practice Alignment Questions:

- How are standards currently addressed in the classroom? How would instruction need to change to address the Common Core?

- Do faculty members at my school or institution share instructional practice (activities and techniques) with each other? Are instructional practices designed to teach the Common Core shared between secondary and postsecondary institutions?

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14 Illinois State Board of Higher Education. (2010). The New Illinois Learning Standards Incorporating the Common Core. http://www.isbe.state.il.us/common_core/default.htm

Overview of the Common Core

The Common Core State Standards

Overview

In June 2010, the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) released the Common Core State Standards©. The aim of the Standards is to define the knowledge and skills students should achieve in order to graduate from high school ready to succeed in entry-level, credit-bearing academic college courses and in workforce training programs.[15]

The Common Core State Standards provide an opportunity to voluntarily adopt common expectations in English language arts and literacy, and mathematics. With common standards in place, states can more easily and efficiently share best practices in curriculum and assessments, while still retaining flexibility on how best to teach these subjects locally.[16] The Illinois State Board of Education adopted the New Illinois State Learning Standards Incorporating the Common Core for English language arts and mathematics on June 24, 2010.

Organization of the Standards

English Language Arts (ELA) standards are:

- Listed by grade level in K–8
- Listed in two-year bands to allow flexibility in course design in grades 9–12
- Benchmarked to College and Career Readiness Anchor Standards
- Separated into four strands: Reading, Writing, Speaking and Listening, Language
- Specified in grades 6–12 with Standards for Literacy in History/Social Studies, and Science and Technical Subjects
- Elaborated upon in the Common Core appendices through text exemplars and sample performance tasks by grade-level bands

Mathematics standards are:

- K–8 standards presented by grade level
- Organized into domains that progress over several grades
- Grade introductions give 2–4 focal points at each grade level
- High school standards presented by conceptual theme (Number & Quantity, Algebra, Functions, Modeling, Geometry, Statistics & Probability)
- Supplemented by the Standards for Mathematical Practice
- Elaborated upon in the Common Core appendices through resources explaining how to design high school mathematics course based on the Common Core

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15 Council of Chief State School Officers & National Governors Association. (2011). Common Core State Standards Initiative. http://www.corestandards.org/
16 *Ibid.*

Anchor Standards and Standards for Mathematical Practice

The Common Core Standards are organized differently in English language arts and mathematics. In English language arts and literacy, the standards are organized into strands, including Reading, Writing, Speaking and Listening, and Language. Each strand is headed by a strand-specific set of College and Career Readiness anchor standards (CCR anchor standards) that is identical across all grades and content areas. Each grade-specific standard corresponds to the same-numbered CCR anchor standard. They include ten anchor standards for reading, ten for writing, six for speaking and listening, and six for language. The CCR Anchor Standards transcend all grade levels and define the literacy goals that students must meet in order to be prepared for college and career success.

An important additional consideration for the English language arts and literacy standards is that they are designed to be embedded in all disciplines.   They include grade-span specific Standards for Literacy in History/Social Studies, Science, and Technical Subjects, grades 6-12. The belief is that reading is critical for all fields, and all faculty members are responsible for teaching these standards within norms and conventions of each discipline. In short, all faculty members are responsible for teaching literacy skills within the context of their subject area.

Unlike the Common Core for English and Literacy, the mathematics standards do not include anchor standards; instead, they are organized into two sections: Standards for Mathematical Content and Standards for Mathematical Practice. The Standards for Mathematical Content are grade-specific statements defining what students should understand and be able to do from grades K-8. The high school standards are organized not by grades, but by conceptual categories portraying a coherent view of what students should study to be college and career ready. These conceptual categories include: Number and Quantity, Algebra, Functions, Modeling, Geometry, and Statistics and Probability.

The Standards for Mathematical Practice hone in on critical mathematical processes and proficiencies that students must understand for success in mathematics. These include eight standards that emphasize:

- Communication
- Conceptual understanding and practice
- Connections
- Mathematical modeling
- Precision and accuracy
- Procedural fluency
- Reasoning and proof
- Tools, strategies, and technology

These standards transcend grade levels and recognize the importance of overarching, critical-thinking skills for students' postsecondary success. Faculty members should explicitly address how to develop their students' expertise in mathematics in content, processes, and proficiencies.
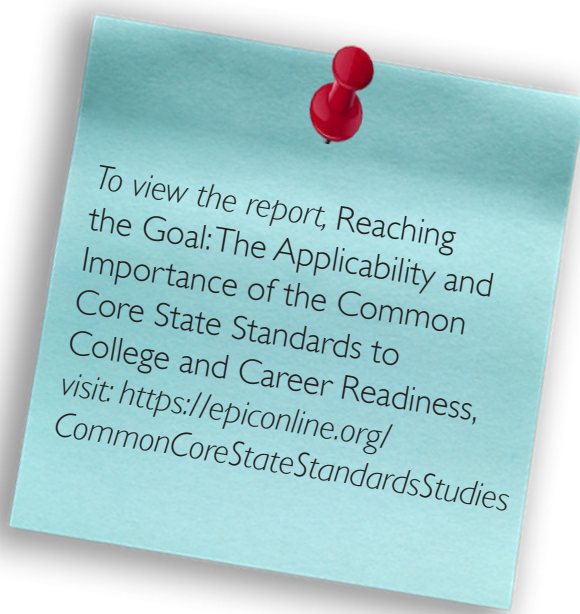
College and Career Readiness and the Common Core

EPIC recently completed a national study on the Common Core State Standards. We asked a national sample of postsecondary instructors who teach entry-level courses to rate the applicability of each Common Core State Standard to their courses. If the standard was applicable, we asked them to rate its importance.

Respondents included ELA, mathematics, social sciences, and science instructors in entry-level courses from two- and four-year institutions. They also included instructors in business management, computer technology, and healthcare CTE courses.

Key findings suggest:

- Most Common Core State Standards received high ratings meaning the Common Core are applicable to and important for postsecondary readiness.
- ELA and literacy standards with highest ratings include:
  - mastering comprehension of nonfiction text with grade-appropriate complexity
  - extracting key ideas and details from text
  - possessing general writing skills and writing routinely Variations exist among content areas and across different strands
  - using research to support written analysis
- Mathematics standards with highest ratings include those with an emphasis on thinking, reasoning, problem solving:
  - reasoning quantitatively
  - interpreting functions
  - The Standards for Mathematical Practice (emphasizing problem solving, analytic thinking, and other thinking skills).
- 96% of respondents agree that the Common Core State Standards sufficiently challenge students to engage higher-level cognitive skills.
- Respondents tended to rate the reading and writing standards at the same applicability level for both baccalaureate and career-oriented courses.
- Respondents from career-oriented course categories rated the Standards for Mathematical Practices importance nearly as high as mathematics and science instructors.

To view the report, Reaching the Goal: The Applicability and Importance of the Common Core State Standards to College and Career Readiness, visit: https://epiconline.org/CommonCoreStateStandardsStudies

Common Core Implementation in Illinois

Implementation of the Common Core in Illinois has already begun and will impact the entire educational system including assessment, curriculum, professional development, instruction, teacher preparation, and various support components. Many reform efforts and initiatives are ensuring the work is aligned and coordinated. The development and implementation began at the end of the 2011 school year and will span over the next eighteen months with varying phases of work.

The new assessment system will be in place by 2014-15.

PHASE I:
Adoption, Communication, and Coordination (End of 2011 school year)

PHASE II:
Communication, Resource Design, and Design of Implementation System (ongoing)

PHASE III:
Transition, Implementation, and Technical Assistance (ongoing)
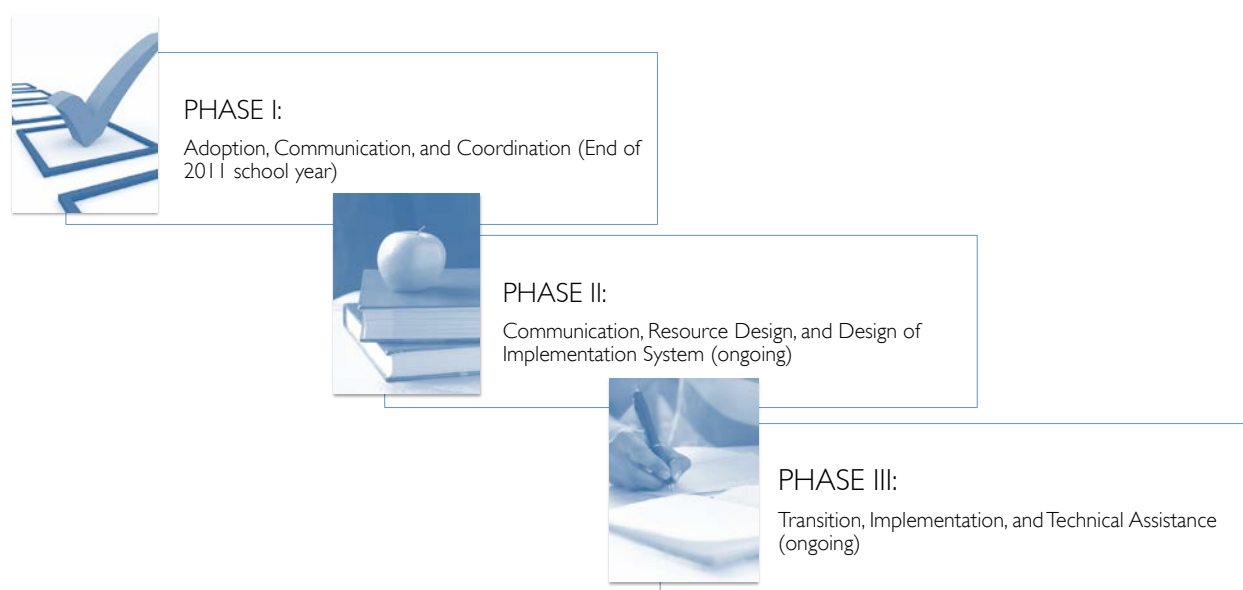
In Phase I, for example, the Illinois State Board of Education convened classroom teachers to analyze the Common Core and determine where curriculum and instructional changes might be needed. The teachers used a web-based tool developed by Achieve, Inc. to complete a gap analysis between the 1997 Learning Standards for Mathematics and ELA and the newly adopted Common Core. The teachers agreed that the new standards were more clearly stated and focused with increased depth and rigor. In some cases, the content was found in a lower grade level, which provided more opportunities for deeper understanding in the upper grades.

To view the gap analysis, Realizing Illinois: Introduction to the Gap Analysis, visit: http://www.isbe.net/common_core/htmls/gap_analysis.htm

Implications of the Common Core

Helping students attain the knowledge and skills contained within the Common Core and preparing all students for college, workforce training, and life require far-reaching changes in the way high schools and colleges operate and collaborate.
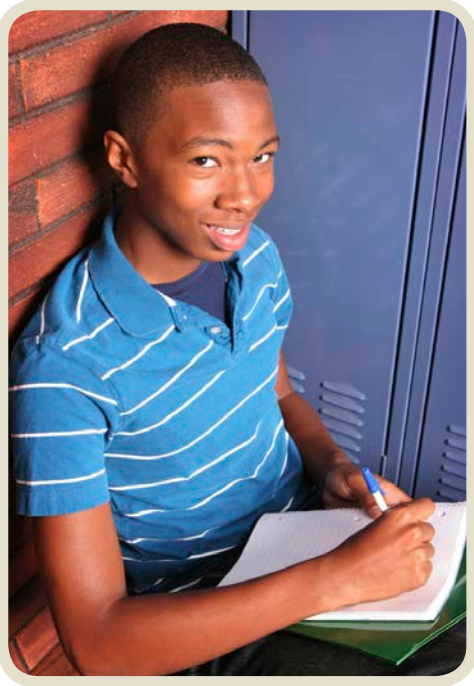
Implications for Secondary Education

The Common Core offer clear and consistent goals for learning across the K–12 continuum. Successful implementation involves:

- Aligning instructional materials and curricular units
- Developing a deep understanding of the depth, rigor, and progression of the new knowledge and skills
- Developing effective student supports for all students
- Providing effective professional development and training to support these transformational elements
- Redesigning data, assessment, accountability, and evaluation systems

Implications for Postsecondary Education and Training:

While much of the focus of the Common Core tends to be in the K–12 arena, successful implementation of the Common Core has clear implications for the higher education arena. They represent the new target for which the K–12 educational system will be aiming. Educators around Illinois already engaged in secondary-postsecondary partnership activities that the adoption of the Common Core is an opportunity to re-envision college and career readiness as more than just a K–12 "problem." Several key policy areas and instructional planning practices within higher education could benefit from alignment with the Common Core, including:

Aligning key policies
- Graduation requirements
- Admission requirements
- Placement requirements

Aligning curricula and instructional materials
- Secondary-to-postsecondary alignment
- Adult/developmental/general education alignment
- Teacher preparation and in-service teacher professional development

The Importance of Partnerships

Guiding Questions for Partnership Work

For secondary:

1. Which local colleges do the largest number of students from my school typically attend?

2. What relationships has my school already established with these institutions?

3. What information do I wish I had about my students' performances in postsecondary settings?

For postsecondary:

1. Which local high schools typically send students to my institution?

2. What relationships has my institution already established with these schools?

3. In which specific knowledge and skill areas do I see entry-level students at my institution consistently struggle?

Building Partnerships

Vertical partnerships are efforts that enable secondary and postsecondary educators to collaborate. These efforts benefit instructors at both levels, and most importantly, they benefit students by creating a deeper understanding of what is expected at both levels. As curriculum and expectations become more aligned, more students will arrive prepared to succeed in their postsecondary careers.

The key question facing educators who want to partner in support of greater alignment is "where do we start?"

1. Find a point of contact.

Educators at both the secondary and postsecondary levels have initiated successful partnerships. A good point of contact might be the head of a particular department at a college or the dean of curriculum and instruction at a high school.

2. Start small.

Initial partnership activities might start with small events that are relatively easy to organize such as:

- Classroom visits and tours
- Data sharing
- Joint scoring sessions
- Quarterly breakfast/dinner meetings

While these do not take the place of comprehensive action planning, they can provide a forum for partners to establish relationships and begin to assess priorities.

3. Establish leadership.

Successful partnerships lead to more substantive and deeper relationships. These can be difficult to establish. Due to the historical separation between secondary and postsecondary, dangers include focusing on blame or becoming defensive about lack of student readiness. A skilled college and career readiness partnership leader (or leadership team) can help navigate these conversations and move beyond them to focus productively on the priorities and experiences educators have in common.

4. Engage in comprehensive action planning.

Illinois' adoption of the Common Core provides a timely opportunity to establish vertical partnerships to prioritize curriculum alignment and implementation planning. See the blank templates in Appendices B-E. These templates are a guide to the process of collaborating to determine what knowledge and skills are currently being taught, what is missing, and what might need to be adjusted for students to be on a trajectory to become college and career ready.

Alignment in Action: Elgin Community College

The Alliance for College Readiness: Building Transitions to College and Career Readiness

In 2006, Elgin Community College (ECC) and four area public school districts formed the Alliance for College Readiness, a collaborative partnership with the goal of preparing students in Community College District 509 for college-level courses and success after high school. The Alliance for College Readiness provides curriculum, programs, and support services focused on increasing academic success, improving students' transition to college, and reducing the number of students requiring developmental coursework in college.

Over 250 Alliance members worked in teams composed of secondary and postsecondary faculty, staff, and administrators. The teams work to establish a common understanding of college and career readiness, to better align curriculum and instruction, and to foster effective communication systems between students, educators, and parents. Efforts include:

- **Instructional Alignment:** Five teams composed of high school and college faculty and staff meet monthly to improve alignment.
- **Student Development:** High school and college student services staff help build a regional college-going culture. The team has created college readiness parent guides printed in English and Spanish and hosts an annual college-going event called PLANS (Plan, Learn, and Navigate Success) for high school students and their parents/guardians.
- **College Transition:** Developed and taught by teams of high school and college faculty, the three-week Summer Bridge Program is designed for high school students (and adult learners) who "just missed" placement into college-level coursework based on ACT and ECC placement scores. The program provides small classes and one-on-one interaction with teachers in reading, writing, and mathematics. It also provides a forum for professional collaboration between the instructional staff at area institutions. The program received an Illinois Council of Community College Administrators Innovations award in 2008 and has a four-year success rate. As of 2011, 111 students participated in the program and 73 percent increased their placement by at least one level at the end of the program.
- **Professional Development:** High school and college faculty create and lead workshops for their peers during county-wide professional development days. The workshops disseminate college and career readiness learning beyond the Alliance partnership.
- **Data:** Through the Alliance, ECC shares "grade 12–to–13 transition data" with its feeder high schools. This data, aggregated by high school, correlates high school grades and course-taking patterns with college placement trends to assist high schools in curriculum planning.

Data show that the Alliance's efforts have had an impact on student success. The biggest improvement is found in college readiness rates at ECC in the area of mathematics. In 2006, 28.8 percent of high school graduates were college ready in mathematics. In 2010, 37.3 percent placed into college-level mathematics. College readiness in writing improved from 56.7 percent in 2006 to 62.8 percent in 2010. College readiness in reading has improved from 73.2 percent in 2006 to 76.9 percent in 2010.

For more information, please visit: www.elgin.edu/collegereadiness

How to Align Curriculum to the Common Core

Aligning Standards to Curriculum

Since the adoption of the Common Core, the state of Illinois is focused on supporting educators in successful implementation of the standards. This section of the Toolkit serves to orient secondary and postsecondary partners to the collaborative process of integrating the Common Core, and aligning curricula to college and career readiness expectations.

Based on existing research and EPIC's alignment work around the country, this section outlines a five-step process to align curriculum to standards:

Step 1: Document Existing Curriculum

Step 2: Conduct Gap Analysis

Step 3: Align Content

Step 4: Calibrate Student Performance Expectations

Step 5: Direct Ongoing Efforts

"Rarely, if ever, do college instructional faculty and program designers sit down with or include their secondary peers in any consideration of the content and structure of entry-level college courses. College instructors rely largely on their own experiences with freshman as the reference point for the expectations that accompany their entry-level courses. None of this is communicated to high school educators in any systematic fashion."

—Dr. David T. Conley
from College and Career Ready

For the purposes of this Toolkit, curriculum refers to an explicit plan of what content will be taught. For postsecondary faculty, traditionally this curriculum documentation is in the format of a course syllabus. For high school faculty, the format of curriculum typically has greater variance, ranging from a formal district- or school-written curriculum to more informal individually developed lesson plans.

Frequently Asked Questions Before Beginning the Alignment Process

Who should participate in the alignment process?

Alignment should be a collaborative effort between instructors and school leaders. Within each subject-area department at individual schools, it is important that multiple instructors reflecting a variety of teaching approaches, document their curricula, and conduct gap analyses. A smaller number of individuals representing more experienced faculty or those with a particular interest in standards-to-curriculum alignment should be present for subsequent horizontal alignment discussions. Both faculty and administrative representatives from each participating institution should attend vertical alignment meetings so they can serve as champions of the work.

Who should lead these efforts?

Department heads or curriculum leaders typically spearhead horizontal alignment efforts, sharing curriculum documents and gap analyses, facilitating horizontal alignment discussions, and documenting the results. Vertical alignment leadership depends on the circumstances of the cluster schools that wish to align their secondary-to-postsecondary curricula. For communities with an established college and career readiness alliance or task force, this body may rely on existing leadership and planning processes to coordinate vertical alignment. In communities just beginning their alignment partnership efforts, school leaders from the individual institutions will need to collaborate to map out timelines, recruit participants, plan convenings, and track the completion of the alignment. In Illinois, department heads at community colleges are encouraged to play a leadership role in local vertical alignment efforts.

How can leaders bring the appropriate participants together?

In Illinois, the ICCB has provided community colleges with resources to convene vertical teams of instructors. These resources can be used to pay substitute fees, provide transportation reimbursements, or purchase materials for use in the alignment process. Convening participants during weekends, professional development days, or scheduled school breaks may increase the likelihood of participation. Exploring electronic options for communication between convenings or using software such as CourseCreate™ may also expedite the alignment process (see description on page 30 for more information about CourseCreate™).

This stage of the standards-to-curriculum alignment process involves revising curriculum to be vertically and horizontally aligned to the Common Core. The prior steps enabled educators to understand what is currently being taught in relation to the Common Core. This stage enables educators to collaborate about whom should be teaching what, and what changes need to be made to existing curriculum to achieve content alignment.

This is a multi-faceted process that involves facilitating the work done by individuals and institutions, across course titles and course pathways. Ideally, department heads and instructional leaders from participating institutions would meet to map out the timelines for each of the steps described below so that the individual and institution-specific work can be completed concurrently to enable all parties to be in similar stages of development when collaboration across organizations is needed.

Step 1: Document Existing Curriculum

Who should do this?

Secondary and postsecondary mathematics and ELA faculty document their curriculum individually.

To begin aligning curriculum to the Common Core, educational leaders should identify appropriate faculty members to participate in the process. This group should include all postsecondary faculty members within higher education departments teaching entry-level math and ELA courses, combined with their high school faculty counterparts from feeder schools and districts. All participating faculty members should then thoroughly document existing curricular practices and materials. The purpose of documenting this information is to have a starting point for the alignment analysis. Identifying current course content is a prerequisite for eventually being able to share and collaborate effectively with colleagues to determine how the content relates to the Common Core, and identify who is teaching what content. Accompanying documents such as student assignments, assessments, work samples, and grading rubrics helpfully illustrate the content, sequencing, pacing, rigor, and expectations of courses at all levels, enabling participants to conduct more comprehensive alignment analyses. For this reason, effective course documentation should include these types of supplemental documents.

After existing curricula are documented, all course materials can be analyzed and explicitly aligned to the Common Core (following the process described in subsequent steps). Developers can then identify student work and other supporting materials that illustrate what college and career readiness looks like in practice. Once this process is complete, departments can analyze course sequences and student performance expectations to determine horizontal and vertical alignment. The result is more transparent, standards-based course development, and an established system that allows for ongoing review and improvement.

Recommended Tool/Strategy: *Develop and maintain detailed course syllabi.*

One tool that is useful to the process of documenting curriculum is a detailed course syllabus. When properly developed and maintained, a syllabus communicates to students, parents, administrators, and other instructors a set of highly relevant details that can be used to improve both horizontal and vertical alignment of content knowledge and student expectations. Benefits of using syllabi include:

- Consolidating information about a course into a single document
- Familiarizing students with a document used by postsecondary institutions to help better prepare students for college and career readiness
- Increasing student and parent understanding of course content and expectations
- Providing an efficient and consistent way to gather information on an institution's curriculum
- Providing a professional development experience to create, compare, and critique course content, encouraging collaboration among instructors

Using a common format for all instructors (ideally across high schools and colleges) is one strategy for streamlining curriculum alignment. These documents significantly simplify the process of comparing syllabi and mapping course content to college and career readiness standards, making them the building blocks for a curriculum aligned to aspects of college and career readiness. A common format should include the following features:

a.   Assessments planned for each unit and their weight relative to course grade

b.   Classroom policies

c.   Course objectives

d.   Course schedule

e.   Grading policies

f.   In-class and homework assignments for each unit and their weight relative to course grade

g.   Prerequisite knowledge and skills necessary for success

h.   Required texts

i.   Standards (Common Core plus other standards, such as science, Career and Technical Education, Fine Arts, etc.) addressed in each unit

j.   Teaching methods employed

k.   Unit descriptions broken down by topics and activities

Appendix B provides a blank syllabus template that instructors can use for creating standardized syllabi. Additionally, EPIC has developed CourseCreate™, an online system for generating high quality syllabi consistently across a department or institution. The system enables educators to create a detailed course syllabus, and electronically select the Common Core taught within the course. Instructors who complete CourseCreate™ can generate a PDF or html file of the syllabus for downloading, posting, and sharing. The system then serves as an online repository of course syllabi, allowing instructors to share, comment, and edit each other's work if desired. In addition, the syllabi created through this process can immediately be analyzed against the Common Core, generating a curriculum map (course pathway) of who is teaching what standards in which course. To see an example of a course pathways report, see page 39. For more information, please visit the 'Tools' tab of **www.epiconline.org**.

Overall, the adoption of the Common Core provides an excellent opportunity for all secondary and postsecondary instructors to begin using syllabi to document which standards are addressed within a course and to detail how and at what level they are being taught.

This is an example of a typical syllabus. It conveys only basic information, and lacks the detail and content that make expectations transparent. See the following page for an example of a detailed syllabus aligned to college and career readiness.

English 11

Teacher: John Smith
Classroom: 204

Required Supplies
Please bring the following items with you EVERY DAY:
1. Pen/Pencil
2. Journal
3. Book

Grading policy
Grades are based on 70% writing portfolio and 30% free write journal/participation.

Late Work: ALL LATE WORK will receive an immediate 30-point deduction. No late work will be accepted after the 3rd class from the time when it was due. Absent work that is not turned in within time allowed for absenteeism will be treated as late work.
Absenteeism Work: If you are absent it is your responsibility to obtain all work from the teacher. Please see me before, after, or during passing periods to obtain missed assignments. All absent work is due no later than the number of days you missed plus one.

Quality of Work
You will be required and expected to turn work in that is high quality and neat in appearance. This includes clean paper, legible writing, a full title, and a heading on EVERYTHING that is turned in. Any work submitted that is not neat and/or does not include a title and heading will be deducted 10 points.

A: 94-100
A-: 90-93
B: 84-89
B-: 81-83
C: 74-79
C-: 70-73
F: 0-69

Writing Portfolio
Each student is required to create and keep a writing portfolio using original work from each unit, which demonstrates your growth as a creative writer. Each piece will also include a self- and peer-evaluation.

Behavior and Discipline

All school rules outlined in the handbook must be strictly followed and enforced. Additionally, you are held accountable for coming to class prepared with your required supplies (pen, book, journal). You may feel free to use supplies from the student resource desk. No food or drink is allowed in the classroom. A seating chart is provided and enforced at all times. Off-topic chatter or speaking while someone else has the floor is not tolerated. Students are expected to be respectful toward other students and their work.

Class Schedule
Sept 10–14: Introduction to literature
September 17–October 18: Shakespeare—Hamlet
October 19: Hamlet final
October 11–November 1: Poetry
November 2: Poetry anthology due
November 5–December 3: Plays and playwrights
December 4: A Doll's House performance (field trip)

This syllabus clearly communicates expectations to students and contains enough detail to be used effectively in both vertical and horizontal alignment efforts.

English 11 Course Syllabus

Teacher: John Smith   Classroom: 204
Available after school: 3-4PM M, W, Th

Required Texts

Shakespeare, W. (1992). The tragedy of Hamlet, prince of Denmark (B.A. Mowat & P. Werstine, Eds.). New York: Washington Square-Pocket.

Conrad, J. (2011). Heart of darkness. New York: Tribeca Books.

Orwell, G. (2003). 1984. New York: Penguin Books.

Grading Policy

A: 94-100   C: 74-79

A-: 90-93   C-: 70-73

B: 84-89   F: 0-69

B-: 81-83

Course Objectives

- Students will independently develop compositions and other pieces of writing through a series of drafts, utilizing editing and outlining techniques.
- Students will understand the context and environment in which pieces of literature were composed.
- Students will analyze effects of irony, tone, mood, language choice, theme, imagery, personification, and figures of speech in literary works.

Prerequisite Knowledge and Skills

Students are expected to have basic familiarity with literary styles and techniques, including mood, word choice, imagery, etc. Students must also have experience identifying themes in literature and citing textual example of such themes. Extensive reading and writing is required outside of class, so students must be able to effectively manage time. Additionally, group work will be required; students must be able to work cooperatively in collaborative learning environments.

Classroom Policies

Assignments are due at the beginning of class. Include your full name, the course name, period number, and the assignment title. Daily attendance means coming to class on time and being prepared for the lesson. Doctor's notes must be provided to the main office and must include the doctor's office number.

Course Schedule

Topic 1: Hamlet—Journal

Standards:
    A. Range of Reading and Level of Text Complexity: Read and comprehend literature [RL.11-12.10]
    B. Range of Writing: Write routinely over shorter time frames [W.11-12.10]

Assignment: *Reading Journal (20% of course grade)*

Students will keep a journal while reading Hamlet, answering a prompt the teacher has provided for each reading assignment, and including their own observations about the text. This journal will form the basis of class discussions.

Topic 2: Hamlet—Language

Standards:
    A. Craft and Structure: Determine the meanings of words and phrases [RL.11-12.4]
    B. Craft and Structure: Analyze impact of specific words [RL.11-12.4]

Assignment: *Analyzing Language (5% of course grade)*

Students will discuss an assigned passage from Hamlet, which analyzes the passage for use of language including: (a) The meanings of important words, both connotative and denotative; (b) The possible meanings of figurative language; (c) How the language choices affect meaning; what interpretations of the meaning of the passage change, depending on how the word is defined, or depending on the figure of speech; (d) How the language choices affect tone. Does the tone change based on the definition of the word or the interpretation of the figure of speech?

Students will discuss why William Shakespeare might have chosen a particular word and why he included a particular figure of speech. Results of the discussion will be synthesized in a paper.

Step 2: Conduct Gap Analysis

Who should do this?

> Secondary and postsecondary mathematics and ELA faculty map their curriculum to the Common Core individually in preparation for the collaborative work outlined in Steps 3, 4, and 5. It should also be noted that the process documented here is a manual alternative to the process automated by the CourseCreate™ system, described in Step 1.

To align curriculum to the Common Core, educators must identify the Common Core that are present, duplicated, and missing in the existing curriculum. This is called a gap analysis. After determining where duplication and gaps exist, planning for addressing these issues can begin.

This section outlines one approach to conducting a gap analysis, broken into five sections.

A. Review and understand the Common Core.

B. Map the Common Core to the existing curriculum documents collected in Step 1.

   Optional: If the existing curriculum is already mapped to the previous Learning Standards, use the crosswalks developed by the Illinois Board of Education to map the Common Core to existing curriculum.

C. Match the Anchor Standards and Standards for Mathematical Practice to the existing curriculum.

D. Determine the degree of alignment between the Common Core and the existing curriculum.

E. Identify the missing Common Core.

Several of the instructions reference Tables 1 and 2, example templates for organizing the information recorded and discussed during the process of conducting a gap analysis. Appendix C provides blank versions of these gap analysis templates.

> Templates pre-populated with the Common Core are available for download at:
> www.epiconline.org/illinois_templates

A. Review and understand the Common Core.

Educators who are familiar with the structure and content of the Common Core will be better equipped to identify how the content they are already teaching aligns to these new expectations. Information about the Common Core can be located and the standards downloaded here: **http://www.isbe.net/common_core/default.htm**.

Participants should consider the following recommendations when reviewing the Common Core:

- Become familiar with how the standards are organized. The organization varies by subject area and grade level.

- Review the relevant grade-level standards in the desired subject area. This should include all of the College and Career Readiness Anchor Standards for ELA instructors, and the Standards for Mathematical Practice for those who teach mathematics.

  - In addition to the Anchor Standards, postsecondary ELA faculty should review the standards in the 11–12 grade bands.

  - In addition to the Standards for Mathematical Practice, postsecondary mathematics faculty would review the standards in the high school conceptual categories.

  - All faculty in all subject areas should read and review the Reading Standards for Literacy in History/Social Studies and Science and Technical Subjects, the College and Career Readiness Anchor Standards for Writing, and the Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects.

- Review the appendices to the Common Core for exemplars, sample text complexity, and sample performance tasks.

- Examine how standards progress over the grade levels. Determine what is implied in one grade span because it is previously articulated in another. Note when redundancy is assumed and not stated, and determine the significance of a redundancy.

Because the ELA Anchor Standards and Standards for Mathematical Practice should be central to the alignment process, reflecting on the relationships between these higher-level standards and the existing curriculum is critical. These relationships are slightly different for mathematics than for ELA.

ELA: Before locating standards within the curriculum, ELA instructors should note the one-to-one relationships between the individual ELA and literature standards and the Anchor Standards (see discussion on page 18). Because of the nature of this relationship, Anchor Standards are very useful in considering the broader themes of the discipline that individual ELA or literature standards are intended to reinforce, thus making it easier to determine if individual assignments effectively address these themes. Instructors are asked to do this in Section C and again in Step 4.

Mathematics: Unlike the Common Core for English and Literacy, the mathematics standards do not include Anchor Standards; instead, the Standards for Mathematical Practice identify critical mathematical processes and proficiencies that students must understand for successful application of all mathematical content. Because of their cross-disciplinary nature, the Standards for Mathematical Practice are very useful for considering how students are asked to demonstrate thinking skills in combination with their computation skills. Instructors are asked to do this in Section C and again in Step 4.

B. Map the Common Core to the existing curriculum documents documented in Step 1.

Tables 1 and 2 below are sample excerpts of a template that contains the entire Common Core for the purpose of mapping individual standards to the current curriculum. This section describes how to use columns A and B of Table 1 and columns A, B, and C of Table 2.

As mentioned in Step 1, educators who use syllabi can use them as reference tools to guide this process. Based on the review of the Common Core and of the course documents, each standard listed in column A in the template can be considered and its location within the curriculum noted in the column labeled *Location within the Curriculum*. Educators should consider the course themes, units of study, and essential questions addressed by the course as currently documented when selecting what Common Core are represented in the curriculum.

Table 1: Example Gap Analysis Map

A	B	C	D	E	F
New Illinois Learning Standards Incorporating the Common Core	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	College and Career Readiness Anchor Standard(s) for Reading Addressed in Column B	Common Core Not Addressed in Course
RST.11-12.5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.	Unit 2, Activity 2	Match	Activity 2 requires this skill	5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	
RST.11-12.6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	Unit 2	Partial Match	Analysis of purpose demonstrated, but student is not required to identify unresolved issues.	6. Assess how point of view or purpose shapes the content and style of a text.	
RST.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	GAP	No Match	Not addressed	GAP	X

Optional: If the course curriculum is already mapped to the Illinois Learning Standards, the existing crosswalk document (located at **http://www.isbe.net/common_core/htmls/gap_analysis.htm**) can be used to assist in the process of selecting which Common Core should be mapped to the curriculum. Using the pre-populated standards in Table 2 column A, educators can fill in column B with the IL Learning Standards that have been matched to the Common Core in the crosswalk. Please note that in some cases, multiple Common Core will align to the same Illinois Learning Standard.

Table 2: Example Gap Analysis Map for Curriculum Aligned to Previous Illinois Learning Standards

Note: There are numerous Common Core Standards that align to this one Illinois Learning Standard.

A	B	C	D	E	F	G
New Illinois Learning Standards Incorporating the Common Core	Illinois Learning Standards (previous version)	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	Standard(s) for Mathematical Practice Addressed in Column C	Common Core Not Addressed in Course
S.CP. Use the rules of probability to compute probabilities of compound events in a uniform probability model.						
S.CP.6. Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.	IL.9-12.10.19	Unit 3, Activity 1	Match	Activity 1 requires this skill	1, 4, 6	
S.CP.7. Apply the Addition Rule, P(A or B) = P(A) + P(B) – P(A and B), and interpret the answer in terms of the model.	IL.9-12.10.19	Unit 3	Partial Match	Addition rule problem demonstrated, but no student work required	1, 4, 6	
S.CP.8. Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.	IL.9-12.10.19	Unit 3	Partial Match	Multiplication rule problem demonstrated, but no student work required	1, 4, 6	
S.CP.9. Use permutations and combinations to compute probabilities of compound events and solve problems.	IL.9-12.10.19	GAP	No Match	Not addressed	GAP	X

C. Match the Anchor Standards and Standards for Mathematical Practice to the existing curriculum.

Once the *Location within the Curriculum* column (unit, page number, etc.) is complete, instructors should think about whether the activities they have identified address only the content of the Common Core to which they mapped it, or also the broader themes, skills, and thinking strategies contained within the Anchor Standards and Standards for Mathematical Practice. They can then use column E in Table 1 and column F in Table 2 to identify the Anchor Standards and Standards for Mathematical Practice addressed by the activities listed and mapped. This exercise will be useful when conducting Section D of Step 2, and also Step 4, Align Student Performance Expectations.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Pictured to the left are the Standards for Mathematical Practice. See page 18 for more discussion about these and the Anchor Standards for English and Literacy.

D. Determine the degree of alignment between the Common Core and the existing curriculum.

This section describes how to use columns C and D of Table 1 and columns D and E of Table 2.

After instructors have considered which Anchor Standards or Standards for Mathematical Practice are addressed in the curricular activities, the relationship between the Common Core standard and the specific related curriculum components should be analyzed. Examining the Common Core in the context of specific curricular elements (units, activities, etc.) enables educators to think about the level of detail or degree of coverage addressed in the curriculum as currently designed. Educators can utilize Appendix C, column C (first and third tables) or Column D (second and fourth tables) to make a determination of whether each Common Core standard is fully matched, partially matched, or not matched to the curriculum. Columns D or E can be used to record the explanation for each decision.

Alignment Decision Rules

Match: Curriculum addresses the depth and coverage of the standard as written

Partial Match: Curriculum partially addresses the standard, but does not fully match the depth and coverage as written

No Match: Curriculum does not address the standard

E. Identify the missing Common Core.

After noting the degree of alignment between the Common Core and the existing curriculum, educators can make note of which standards do not appear in the course by placing an X in either column E or F wherever there is a gap in column B or C and, thus, a No Match in columns C or D.

Please note that a single course would not necessarily be expected to address every Common Core. The intent is for instructors to identify which standards are addressed in individual courses in preparation for further alignment activities. During the process outlined in Step 3, all instructors within a department, and eventually across institutions, examine a sequence of courses (or course pathway) to determine if all standards are being taught across this combination of courses.

Considering (a) which Common Core are not present in the curriculum, (b) which Anchor Standards or Standards for Mathematical Practices are not present in the curriculum, and (c) areas where the degree of match between the Common Core and the curriculum are only partial (meaning that the standard would not be adequately addressed currently) reveals the "gaps" that will be addressed in Step 3. Conversely, noting what Common Core are addressed repeatedly within a single course or among a combination of courses along a typical course pathway identifies the duplication that also needs consideration during Step 3.

Step 3: Align Content

Who should do this?

Section A: Individuals. Section B: Horizontal subject area teams within institutions. Sections C & D: Vertical subject area teams involving multiple partner institutions

This step outlines one approach to content alignment, broken into four sections.

A. Review individually the results of the Gap Analysis from Step 2.

B. Convene subject area teams within an institution.

C. Convene subject area vertical teams.

D. Revise curriculum to align to the Common Core.

A. Review individually the results of the Gap Analysis from Step 2 (a sample template is provided in Appendix C).

This involves clearly identifying what Common Core are being taught in each individual's course, and more importantly, whether the course provides sufficient opportunities for students to learn and demonstrate the designated content.

B. Convene subject area teams within an institution.

While the ultimate goal is to work collaboratively between secondary and postsecondary institutions, an important step prior to vertical collaboration is to have faculty members within a high school or college meet to agree on what content should be taught within a similar course title and between the sequence of courses in that subject area. This is a particularly important conversation for faculty members who teach the same course but might not have previously collaborated to reach agreement about what content should be taught in the course. Please note, this conversation requires faculty members to agree on *what*, not *how*, content is taught.

Participating faculty members should bring their individual work from Step 2 for comparison. The subject area teams need to agree about what standards should be taught in what courses, both horizontally and vertically. The faculty members teaching the same course should work together to reach horizontal agreement, meaning that all faculty members teaching the same class should agree on similar content (although the instructional plans, activities, and assessments may vary). Once consensus has been reached on the content of individual courses, subject area departments need to reach vertical agreement, meaning that the department should determine the correct sequencing of content, and address duplication and omissions

Critical standards-to-curriculum questions:

1. What Common Core are being taught in what courses?

2. When standards are duplicated across a course sequence, is it intentional? Repetitive? Building upon prior learning to increase rigor and depth of understanding?

3. When standards are missing, is that intentional? When should those standards be addressed?

4. When courses are only partially addressing a standard, is the missing part being taught in another course? What additional content needs to be added in what course to completely address the standard?

of standards across the sequence of courses (see Pathway Summary image). Faculty should consider the prerequisite and subsequent courses, course themes and/or essential questions, and identify the standards that should be addressed throughout the sequence of courses. Students learn and retain best when the standards are sequenced in a way that builds on student knowledge and skills throughout the subject area course pathway.

Pathway Summary: As described in the CourseCreate™ discussion on page 30, a course pathway is an excellent point of reference for subject area teams working to align curricula. This image reveals where gaps in standards coverage exist within a typical ELA course sequence.

Legend: ● Standard met   ◐ Standard partially met

English/Language Arts Common Core Standards	Pathway Confirmed	English I	English II	English III	English IV
RL.9-10.1	●	●	◐		
RL.9-10.2	●	●			
RL.9-10.3	◐		◐		
RL.9-10.4	●	◐	◐		
RL.9-10.5					
RL.9-10.6	●		●		

English II
RL.9-10.3

__X__   Analyze the cumulative impact of specific word choices on meaning.

_____   Analyze the cumulative impact of specific word choices on tone.

C. Convene subject area vertical teams.

The process for aligning curriculum vertically across educational levels should mirror the process for reaching internal agreement detailed in Section B. After various partner institutions reach internal agreement about course content, vertical teams should meet to align the courses across institutions. Ideally postsecondary faculty members within a department teaching entry-level courses would meet with their high school faculty counterparts from feeder districts. In large areas with multiple school districts and high schools, subject area vertical teams can be convened with representatives from the various institutions. These representatives not only work to reach consensus about seamless alignment between courses, they also serve as instructional leaders to share findings and collect input and feedback from their colleagues back at their campuses.

D. Revise curriculum to align to the Common Core.

Once faculty across institutions agree on what should be taught in each course, faculty members should revise curriculum accordingly to ensure that students are provided the opportunity to learn the agreed-upon content. The ultimate goal is a fully articulated curriculum aligned to the Common Core for all the students within the institution of higher education's feeder pattern.

Step 4: Align Student Performance Expectations

All faculty teaching similar content across grade levels within schools or postsecondary institutions. Ideally, collaboration occurs across a variety of institutions (e.g., aligning expectations between exit-level high school and entry-level postsecondary courses).

This step outlines one approach to alignment of student performance expectations, broken into four sections.
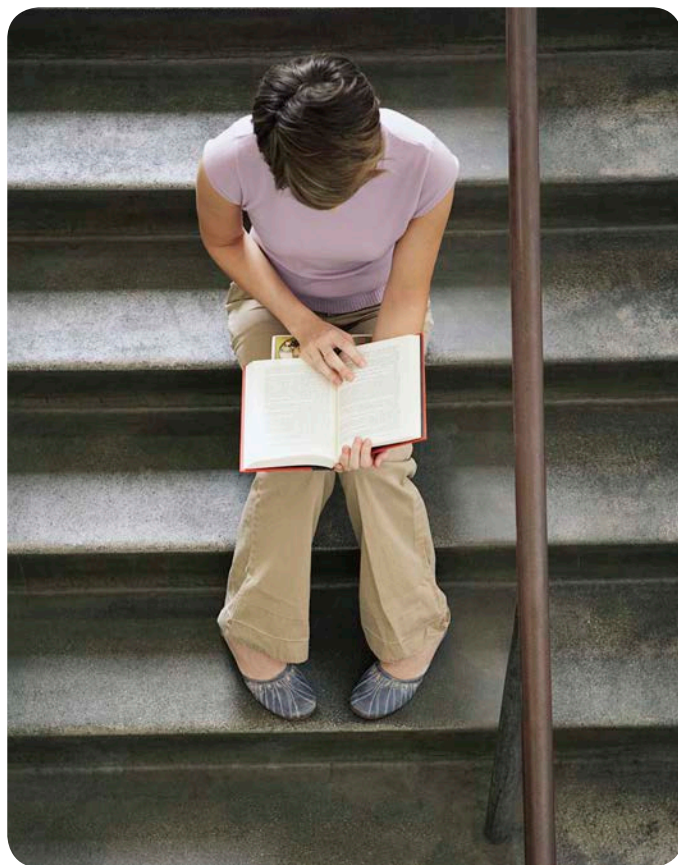
A. Engage in benchmarking.
B. Establish a scoring system.
C. Review curricular activities.
D. Engage in vertical calibration.

The purpose of this step is to improve the clarity and consistency of expectations among secondary and postsecondary faculty members to ensure students are prepared for the rigor of postsecondary work. Frequently, instructors at both the high school and college levels assess student work in isolation, largely relying on personal experience as the reference point. This leads to the misalignment of performance expectations at three levels:
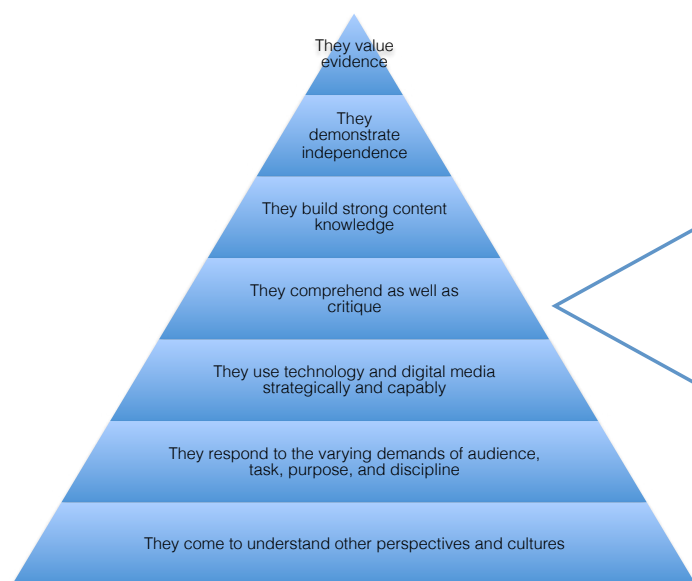
- *Instructor to instructor*: Are some instructors are more demanding and some are more lenient in grading practices?

- *Campus to campus*: Is an A at one educational institution equivalent to an A at another?

- *Secondary to postsecondary*: Would a 12th-grade student receive the same grade on a same assignment in a high school course versus an entry-level college course?

The Common Core require students to demonstrate their knowledge and skills in increasingly complex ways in order to be prepared for postsecondary success by the time they leave high school. Steps 1 through 3 prompted educators to map and sequence the content of the Common Core, creating a horizontally and vertically aligned curriculum. During Step 4, educators have the opportunity to collaboratively discuss student work, review their curriculum activities to identify the levels of challenge and cognitive demand, and develop a shared and consistent understanding of student performance levels. By engaging in this step of the alignment process, educators will confirm that they are not only teaching progressively challenging content, but also measuring student performance with commonly understood performance expectations. At the end of Step 4, instructors will have developed a calibrated scoring system, and identified a set of student work exemplars that illustrate each of the benchmark levels of the system.

Educators working through Step 4 should keep in mind that the adoption of the Common Core affords an opportunity to align and implement curriculum in a manner that encourages college and career readiness behaviors. The graphic on the following page illustrates the types of behaviors and abilities that students should possess, and sample curriculum activities that require demonstration of the knowledge and skills necessary for postsecondary success.

Example descriptions of college and career ready students:[17]

Pyramid (bottom to top):
- They come to understand other perspectives and cultures
- They respond to the varying demands of audience, task, purpose, and discipline
- They use technology and digital media strategically and capably
- They comprehend as well as critique
- They build strong content knowledge
- They demonstrate independence
- They value evidence

Curriculum activities that college and career ready students can do:

- Read with understanding a range of non-fiction publications, textbooks, and technical materials
- Incorporate feedback effectively
- Produce written products that are consistently free of errors and reflect proper writing conventions
- Collect and analyze data precisely and accurately
- Interpret conflicting explanations of an event or phenomenon
- Write a three- to five-page research paper structured around a cogent, coherent line of reasoning
- Complete successfully an assignment that requires two weeks of independent work and extensive research
- Utilize technological tools including appropriate online and desktop applications

By using a systematic process, such as the *Common Core Performance Expectation Calibration Process* below, faculty can collaborate to develop a shared understanding of the complexity of the learning tasks in their curriculum, and begin to identify where their curriculum activities fall along a college and career readiness trajectory. Educators planning vertically within the Common Core strands and grade span standard sets can then appropriately align their activities and tasks to give students a progressive learning experience within their course pathways. Ideally, as with Step 3 of the alignment process, the faculty engaging in this process should teach similar content and represent all grade levels in the schools or postsecondary institutions that serve the community.

Recommended Strategy: *Common Core Performance Expectation Calibration Process*

A. Engage in benchmarking.

Prior to establishing aligned expectations for student performance, it is useful to engage in benchmarking as a method for developing a shared mental model upon which the subsequent steps can be based. Benchmarking is a process used in a variety of educational settings to provide reference points for subjective evaluations. Evaluating student work is a particularly complex and challenging task for educators due to the reliance on professional judgment, experience, and variance in curriculum.

Engaging in a benchmarking process helps to reduce the variance in performance expectations by providing reference points for scoring evidence of student learning. Often the process includes scoring a variety of documents in collaboration with secondary and postsecondary colleagues, and allowing the group to come to agreement over time about what constitutes evidence of successful student performance. This collective agreement can, in turn, influence the development of curriculum that is more aligned to college and career readiness. Increasing the consistency and transparency of student performance expectations improves the development and selection of curricular activities that will prepare students to meet them.

One approach to benchmarking begins with collecting student work samples representing a variety of abilities. (It is critical to gain necessary consents and remove all identifying information.) During this work session, faculty members group the student work samples into low, medium, or high categories based on

17 Council of Chief State School Officers & National Governors Association. (2011). Common Core State Standards Initiative: Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects. http://www.corestandards.org/

the students' demonstrated ability to complete the task as assigned. For example, the work sample excerpt in Table 3 demonstrates three different examples of student competency in the production of clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience (CCSS-**W9-10.4**).

Table 3: Student Work Samples

Final Verdict: Morality in *Of Mice and Men* Conclusion

In this task, students act as members of a grand jury who have to decide whether George should be charged with a crime and, if so, which crime. Students research the possible charges that could be brought against George and look at the evidence required to convict a defendant of each charge. They then write an argumentative report to the judge in which they state whether they plan to charge George with a crime. If students choose to charge him with a crime, they state the charges and lay out a case that should include convincing evidence from the text. If they choose not to charge him with a crime, they state the charges they considered and explain why those charges do not apply, backing up their claims with evidence from the text.

Sample A	Sample B	Sample C
The protagonist George Milton from John Steinbeck's novel, Of Mice and Men is being charged with first-degree murder, for Lennie's death. The trial is the state of California vs. George Milton. The charge being brought on George Milton is due to the fact that he was found at the crime scene, sitting on the bank looking at his right hand that fired and dropped the gun. My recommendation for the verdict is that George should be found guilty and there are several pieces of evidence to back up my opinion.	Mr. George Milton is guilty of committing first-degree murder of his best friend, Mr. Lennie Small. The gun which Mr. Milton used was a World War I German Luger P08 gun to commit this inhumane crime. Mr. Small was found dead with a bullet stuck in the back of his head, lying in a pool of blood by the Salinas River. Various clues found on the crime scene and comments made by others and the suspect himself gives us conclusive evidence, proving that Mr. George Milton is guilty of first-degree murder.	Under the law of the state of California George Milton is not guilty of second-degree murder of the crime of killing Lennie Smalls. While George did commit the crime, his reasons were not out of hate or vengeance. His reasons for committing the crime were not to hurt Lennie, but to save him from any more pain coming his way. George would have rather killed Lennie than have Lennie suffer anymore. George Milton is not guilty of second-degree murder because he doesn't want to kill him, but it seems like he has no choice.

Faculty members should work together to rate the quality of student work as low, medium, and high. This process can be conducted in one work session, or instructors can rate work over a period of time, and come back together to reach agreement and document common characteristics that represent different levels of work. These common characteristics represent reference points that can be used in the next step to establish a scoring system. Finally, faculty can use their discussion and reflection to establish benchmarks, agreed-upon performance levels that can be shared and sustained to gauge student growth over time. Ideally, these types of group scoring sessions will occur regularly, to continue to recalibrate, within departments, between campuses, and among secondary and postsecondary vertical alignment teams. This practice eventually results in a robust collection of low, medium, and high samples with clearly defined common characteristics for each category.

B. Establish a scoring system.

The next phase in aligning student performance expectations is establishing a scoring system that faculty can use to score student work. A scoring system explains how the benchmark levels established in the first phase can be used to calibrate grading. To establish a scoring system, educators must articulate the learning progression indicated by the benchmark performance levels and identify the reference points that describe each level. The goal of this articulation stage is to come to an agreement and understanding about which type of scale or scoring system will be used to calibrate curricular performance expectations.

The pyramid graphic on page 41 lists behaviors and abilities that students should demonstrate as a result of the Common Core Standards, such as students should "demonstrate independence". The sample scoring system in Table 4 provides example performance levels (a four-point system) that can be used to score student work. For this particular example, the scoring system is measuring how the student(s) "produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience". Now faculty can grade student work with confidence as they are well calibrated with their colleagues from this extensive benchmarking process.

Table 4: Example Performance Levels

STANDARD: W.9-10.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Performance Levels:

❏ Exceeding College Ready (4)	❏ College Ready (3)	❏ Approaching College Ready (2)	❏ Initiating College Ready (1)
Performs substantially above the College Ready level.	Shows proficiency in addressing all aspects of the Performance Expectation.	Shows some proficiency, but is not consistently at the College Ready level.	Shows little or no evidence of performing at the College Ready level.
❏ Cannot Score (0)			

The process for articulating the scale for college and career readiness includes a discussion or series of discussions convened solely for this purpose:

- First, the faculty team will need to clarify what standards will be measured using the scoring system. The scoring system should reflect the set of skills and behaviors that are expected in the assignment(s). For example, a scoring system may have five to six different "standards" that need to be measured using the scoring system. The example in Table 4 above, only reflects one standard.

- The discussion should center on developing levels, and explanations, that articulate a continuum with a progressive scale. This scale should include descriptors that progress towards a college and career ready target, such as *initiating*, *approaching*, and *college and career ready*.

- During this meeting, facilitators will work to balance the voices of each of the participants in order to develop or identify a set of performance levels that can be generalized across grade levels and subjects.

- Educators should practice using the scoring criteria and explanations to score student work several times to ensure consistent application.

- The deliverable at the end of this stage should be a rubric or set of performance levels and explanations for each level that can be used to assess student performance. In order to maximize the reliability of scoring, faculty should spend a significant amount of time defining the scoring criteria and explanations for each of the benchmark levels.[18]

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18 For more information and examples of performance levels, see Chapter 6 of: Johnson, R.L., Penny, J.A., & Gordon, B. (2009). Assessing Performance: Designing, Scoring, and Validating Performance Tasks. New York: Guilford Press.

C. Review curriculur activities.

Another key part of this process is for faculty to review their current learning activities and tasks to determine how, and at what level, the students might demonstrate the Common Core. Learning tasks become more cognitively demanding as students are asked to move from basic levels of cognitive demand (memorization, recall, matching, identification) to more complex applications of knowledge and skills (independent data collection, synthesis, evaluation). Ideally, students will be assigned progressively challenging tasks that move them along a college and career readiness trajectory. Table 5 contains sample criteria for analyzing a college and career readiness trajectory. These criteria can be used to ensure diverse and engaging learning activities that provide students opportunities to learn in increasingly cognitively demanding ways (a blank template is available in Appendix D: Scale for Analyzing a College- and Career-Readiness Trajectory Template for use when working with vertical teams of participating faculty members).

Table 5: Sample Scale for Analyzing a College- and Career-Readiness Level Trajectory

Level of Challenge	Explanation
Emerging toward college and career ready	The content and cognitive demand of the activity addresses the standard at an introductory level.
Approaching college and career ready	The content and cognitive demand of the activity is beyond the introductory level, but not consistently at the college- and career-readiness level described in the standard.
College and career ready	The content and cognitive demand of the activity is at the college- and career-readiness level described in the standard.

This rating process should occur during a discussion or series of discussions convened solely for this purpose.

- The discussion should focus the teacher's attention on the curriculum activities and application and selection of matching performance levels for each of the curriculum activities and learning tasks they have chosen to share.

- During this discussion, facilitators will help the educators share out sample activities into a list. This can be done via a laptop and projected, or chart paper, but faculty should be able to see the sample activities for the next part of the activity.

- The deliverable at the end of this stage should be a set of performance levels and explanations for each level that can be used to assess curriculum activities and tasks. Educators should have a clear understanding of how to apply the performance levels to their curriculum activities. For an example, please refer to Table 6: Performance Expectations Organizer (a blank template is provided in Appendix E: Performance Expectations Organizer).

Table 6: Performance Expectations Organizer

Curriculum Activities/Task	Level of Challenge	Explanation
Students write a teen magazine article on an aspect of popular culture. Before writing the article, students will read an article about writing for teenagers and hear the teacher describe rhetorical techniques that are especially effective for a teen audience.	Approaching	The task asks students to approach the assignment based on a given purpose or theme. To become a college- and career-ready level task, the students would independently choose the topic or make a decision on a topic to demonstrate more in-depth understanding.
Students read *To Kill a Mockingbird*, analyze Atticus' courtroom speeches, and describe his arguments to defend Tom Robinson.	Emerging	The task asks the student to describe evidence from the text. To be a college- and career-ready level task, students should critically analyze the strength, quality, and credibility, citing evidence, of the arguments presented.
Students solve linear inequalities.	Emerging	The task asks students to identify a solution for the inequality. To be a college- and career-ready level task, students should solve, explain and graph the inequality.
Students make conjectures on properties of polygons and then use two-column proofs to prove or disprove the conjectures.	College and Career Ready	The task asks students to make and prove or disprove geometric conjectures.

D. Engage in vertical calibration.

The final stage involves calibrating student work and performance expectations across courses and institutions.

- Instructors should arrive to this meeting having completed a self-review of their curriculum activities using an organizer like the "Performance Expectations Organizer" above

- During this meeting, educators should analyze their activities vertically by course sequence. Participants should address the following questions:

  - Are there opportunities for students to engage in a wide variety of curriculum activities preparing them for the range of activities at the postsecondary level?

  - Do students have increasing responsibility and independence is demonstrating their learning?

  - Do the activities from course to course progress in challenge and cognitive demand, culminating at college and career readiness level?

  - Is duplication purposeful or redundant?

- By the end of this stage, the educators should work to ensure their curriculum activities and tasks follow a logical progression. Teachers may have to recalibrate some of their curriculum to fit within the vertical sequence and properly fit within the learning continuum.

Step 5: Direct Ongoing Efforts

Who should do this?

Existing leadership such as department heads, curriculum specialists, or the leadership of any established college and career readiness alliance or task force.

After this initial vertical and horizontal alignment process, ongoing moderation and calibration of student performance expectations will help to continually maintain and improve curriculum alignment. Examples of these types of behaviors include:

- Conducting classroom visits to high schools and colleges

- Examining and grading student work samples in vertical teams

- Monitoring postsecondary success indicators such as decreased remedial/development education placements, higher entry-level college course grades, increased student retention and graduation rates

- Participating in ongoing course planning across levels

- Reviewing scoring rubrics in vertical teams

- Sharing assignments, assessments, and placement exams across levels

This section has described a process for standards-to-curriculum alignment. A critical future consideration is the necessity to prepare for the standards-to-assessment alignment analysis. This curriculum alignment work is foundational to preparing instructors and students for the new assessments (PARCC) that are under development to measure the Common Core. Since the new assessments have yet to be released, educators are unable to directly address these new expectations. Upon the release of sample items and supporting assessment materials, vertical teams with an aligned curriculum and strong existing relationships will be ideally positioned to work together to prepare students to succeed on the new assessments.

Engaging in the complex, multi-faceted alignment process outlined in this section may require further support. The following appendices provide helpful resources and templates for alignment work. Additionally, EPIC offers a wide range of tools and services to aid in alignment efforts. For more information, visit **www.epiconline.org**.

Appendices

Appendix A: Resources

Illinois Agency Homepages

Illinois Board of Higher Education

    http://www.ibhe.org/

Illinois Community College Board

    http://www.iccb.org/index.html

Illinois State Board of Education

    http://www.isbe.state.il.us/

Illinois P-20 Council

    http://www2.illinois.gov/gov/P20/Pages/default.aspx

Lt. Governor Sheila Simon

    http://www2.illinois.gov/ltgov/pages/improvingeducation.aspx

National Agency Homepages

Common Core State Standards (CCSS)

    http://www.corestandards.org/

The Partnership for Assessment of Readiness for College and Careers (PARCC)

    http://www.parcconline.org/about-parcc

The Council of Chief State School Officers (CCSSO)

    http://www.ccsso.org/

Achieve

    http://www.achieve.org/

Achieve on Science Standards

    http://www.achieve.org/next-generation-science-standards

National Board for Professional Teaching Standards:

    http://www.nbpts.org/the_standards/standards_development

The National Academy

    http://www7.nationalacademies.org/bose/

Assessment

Blythe, T., Allen, D., & Powell, B. S. (1999). Looking together at student work. New York: Teachers College Press.

    This book provides strategies and protocols for teachers and administrators who are engaging in a collaborative review process of student learning.

Heritage, M. (2007). Formative assessment: What do teachers need to know and do? Phi Delta Kappan, 89(2), 140–145.

    Proper use of formative assessments can provide teachers with the information they need to increase student achievement. This article describes the key aspects of formative assessments and the knowledge and skills teachers need to effectively integrate and implement those assessments in their classrooms.

Popham, W. J. (2009). Assessing student affect. Educational Leadership, 66(8), 85–86. Retrieved from http://www.ascd.org/publications/educationalleadership/may09/vol66/num08/Assessing-Student-Affect.aspx

   A student's attitudes, interests, and values can have a profound impact on his or her postsecondary life. This article describes the role of student affect in education and how teachers can assess and measure it.

ASCD. (2010). Giving students meaningful work. Educational Leadership, 68(1). Retrieved from http://www.ascd.org/publications/educationalleadership/sept10/vol68/num01/toc.aspx

   This issue of Educational Leadership focuses on promoting students' love of learning and resilience when confronted with challenges through meaningful work. Article topics include project-based learning, literature circles, peer-to-peer teaching, student internships, and empowerment through educational choices.

Stein, M. K., Smith, M. S., Henningsen, M. A., and Silver, E. A., (2000). Implementing standards-based mathematics instruction: A casebook for professional development. New York: Teachers College Press.

   Though focused on mathematical tasks and their enactment, this book can foster insights in teachers of all subjects. Using the authors' Mathematical Tasks Framework, drawn from research of nearly 500 lessons, readers learn to analyze the level of cognitive demand of a task as well as ways the cognitive demand may change as a result of the instructional decisions made.

Yeung, B. (2009). Let 'em sweat. Edutopia, October 2009. Retrieved as Kids master mathematics when they're challenged but supported from http://www.edutopia.org/math-underachieving-mathnext-rutgers-newark

   This article highlights findings that suggest allowing students to struggle with challenging mathematical concepts can lead to increased motivation, engagement, and ultimately achievement as long as the students feel supported. Rutgers University researchers grouped students and had them explain the way they arrived at their answers, with other students critiquing their strategies. Teachers in low performing schools who applied Rutgers techniques saw increased math scores on state tests in addition to noticeable boosts in student confidence in math.

Differentiation

Leahy, S., Lyon, C., Thompson, M., & Wiliam, D. (2005). Classroom assessment: Minute by minute, day by day. Educational Leadership. 63(3), 19–24. Retrieved from http://www.ascd.org/publications/educationalleadership/nov05/vol63/num03/Classroom-Assessment@-Minute-by-Minute,-Day-by-Day.aspx

   This article describes five broad strategies for assessment that teachers use to support student learning and adapt instruction to meet diverse student needs. Strategies include clarifying and sharing learning intentions and criteria for success; engineering effective classroom discussions, questions, and learning tasks; providing feedback that moves learners forward; activating students as the owners of their own learning; and activating students as instructional resources for one another.

Microsoft. (2003). Guides by impairment. Retrieved from http://www.microsoft.com/ enable/guides/default.aspx

   On this website, guides for specific types of difficulties and impairments describe assistive technology products and links to tutorials for accessibility features. An additional guide, specifically for educators, focuses on understanding how accessibility affects the classroom and how to choose technology solutions.

Shulman, J., Lotan, R. A., & Whitcomb, J. A. (Eds.) (1998). Groupwork in diverse classrooms: A casebook for educators. New York: Teachers College Press.

   Research indicates that group work is a useful strategy for helping students reach complex academic goals, yet many teachers are reluctant to engage in this practice. In this book, case studies of 16 teachers describe the use of group work in their classrooms, detailing both the successes and failures. This book can serve as a professional development tool to help teachers build effective techniques for implementing group work in their classes.

Key Cognitive Strategies

Ambrose, S. A., Bridges, M. W., DiPiertro, M., Lovett, M. C., & Norman, M. K. (2010). How learning works: Seven research-based principles for smart teaching. San Francisco: Jossey-Bass Publishers.

This book proposes seven learning principles for effective teaching based on research on how postsecondary students learn. For each principle, the book has a discussion of the research and suggested teaching strategies.

Association for Supervision and Curriculum Development. (2008). Teaching students to think. Educational Leadership, 65(5). Retrieved from http://www.ascd.org/publications/educationalleadership/feb08/vol65/num05/toc.aspx

The articles in this issue of Educational Leadership offer varied perspectives about what it means to teach in intellectually challenging ways. Topics include disciplinary thinking, helping students tackle large questions, the importance of observation in thinking, and the need for frequent, deliberate practice in learning to think.

Blythe, T. (1997). The Teaching for Understanding guide. San Francisco: Jossey-Bass Publishers.

This book describes the Teaching for Understanding process developed by Harvard Project Zero. Classroom examples, practical tips, and worksheets help clarify the process. See specifically the strategies for improving student perfomance through continual feedback.

Cabrera, D., & Colosi, L. (2009). Thinking at every desk: How four simple thinking skills will transform your teaching, classroom, school, and district. Ithaca, NY: Research Institute for Thinking in Education.

Based on more than 20 years of research into learning disciplines and how novices and experts learn, the DSRP method, described in this book as a new approach to teaching thinking skills, identifies four universal patterns that structure knowledge: making Distinctions between identity and other, organizing Systems into parts and wholes, recognizing Relationships of cause and effect, and taking Perspectives of point and view. Video case studies of a range of subjects and grades provide examples.

Costa, A. L., & Kallick, B. (2000). Habits of Mind series. Alexandria, VA: Association for Supervision & Curriculum Development.

The Habits of Mind series was written to help students, adults, and organizations cultivate the habits of mind that will help them solve problems in schools and other areas of life.

Johnson, R.L., Penny, J.A., & Gordon, B. (2009). Assessing performance: Designing, scoring, and validating performance tasks. New York: Guilford Press.

This research-based resource provides pragmatic guidance and examples for faculties to consider how to assess and measure student performance. There are step by step explanations and guides for developing, administering, scoring and validating various kinds of performance tasks. Each chapter in the book also concludes with a list of additional books and resources to support the chapter's main ideas.

Ritchhart, R. (2002). Intellectual character: What it is, why it matters, and how to get it. San Francisco: Jossey-Bass.

In this book, the author argues for a view of intelligence that moves beyond knowledge and ability to focus on intellectual character—a set of cognitive dispositions that include open-mindedness, curiosity, metacognition, truth-seeking, strategic thinking, and skepticism. The author explores the foundations of intellectual character and describes how teachers can create classroom environments that support productive patterns of thinking in their students.

SpringBoard. http://professionals.collegeboard.com/k-12/prepare/springboard

The College Board's SpringBoard® program is a comprehensive instructional program in English and mathematics, aligned with the Common Core State Standards that reflects powerful research-based understanding about how people learn. It is the foundational component for the College Board's College Readiness System, offering a Pre-AP program that increases participation and prepares a greater diversity of students for success in Advanced Placement, college and beyond – without remediation.

Key Content Knowledge: General

ACT College Readiness Standards. http://www.act.org/standard/infoserv.html

The ACT College Readiness Standards are detailed, research-based descriptions of the skills and knowledge associated with what students are likely to know and be able to do based on their EXPLORE, PLAN, and ACT test scores. They cover English, mathematics, reading, and science.

American Diploma Project K-12 Benchmarks. http://www.achieve.org/K-12Benchmarks

The American Diploma Project's K-12 benchmarks articulate the skills students need to have acquired by the end of high school in order to succeed in college and careers.

College Board Standards for Success. http://professinoals.collegeboard.com/k-12/standards

These content standards are for middle school and high school English, math, and statistics, leading to preparation for Advanced Placement or college-level work.

Standards for Foreign Language Learning. http://www.actfl.org/i4a/pages/index.cfm?pageid=3324

These standards describe the best instructional practice and should be used in conjunction with state and local standards.

Texas College and Career Readiness Standards. http://www.thecb.state.tx.us/collegereadiness/TCRS.cfm

The College and Career Readiness Standards in English/language arts, mathematics, science, and social studies were developed by subject matter experts and are designed to prepare high school students for entry-level college course work.

Key Content Knowledge: English/Language Arts

Oczkus, L. D. (2010). Reciprocal teaching at work: Powerful strategies and lessons for improving reading comprehension (2nd ed.). Newark, DE: International Reading Association.

In this book, the author describes the way reciprocal teaching can increase the reading comprehension of all students. The book offers scaffolded lessons, reproducible teaching materials, and reflection questions for professional development.

OWL: Purdue online writing lab. http://owl.english.purdue.edu/owl

The Online Writing Lab (OWL) at Purdue University offers a range of writing and instructional material at no cost. This site provides general writing resources for the writing process, academic writing, mechanics, grammar, punctuation, and rhetorical devices as well as resources for subject specific writing. Additionally, teachers and tutors can find guides for developing writing curriculum.

TeacherVision. http://www.teachervision.fen.com/

TeacherVision is a collection of more than 20,000 resources for teachers, including lesson plans, quizzes, graphic organizers, games, and other printable materials. Users can search for resources by grade level, subject, or theme. TeacherVision is a subscription-based site but offers a free trial.

Thinkmap Visual Thesaurus. http://www.visualthesaurus.com/

This interactive online tool allows students to input a word and the Visual Thesaurus will create a visual wordmap. The tool aids understanding and encourages students to view and explore vocabulary in unique and novel ways.

Key Content Knowledge: Mathematics

Brutlag, D. (2009). Active algebra: Strategies and lessons for successfully teaching linear relationship, grades 7–10. Sausalito, CA: Math Solutions.

> The guidance on active learning techniques, student presentations, and classroom management in this award-winning book is ready to use and applicable to more than the teaching of linear relationships. Based on research of the adolescent brain, the practices described come to life in the authentic classroom experiences included.

Burger, E. B., & Starbird, M. (2010). The heart of mathematics: An invitation to effective thinking. (3rd ed.). New York: John Wiley & Sons.

> A great resource for encouraging students to take risks and persevere as problem solvers, this book by two award-winning teachers lives up to their goal of taking students on a mathematical excursion that combines rigorous thought with "fun and games." Students are introduced to the most important and interesting ideas in mathematics while grappling with problems and digesting a running commentary of encouragement and tips.

Carpenter, T. P., & Romberg, T. A. (2004). Powerful practices in mathematics & science. Naperville, IL: Learning Point Associates.

> This suite of resources, designed for a wide audience, includes classroom episodes (in two CD-ROMs) and a monograph that illustrate the power of taking seriously the development of the practices of modeling, generalization, and justification in mathematics and science classes. The publication provides discussion questions, additional resources and extended clips of classroom instruction.

Core-Plus Mathematics Project. http://www.wmich.edu/cpmp/

> Core-Plus Mathematics is a four-year math curriculum from the National Science Foundation that features intewoven strands of math subjects and focuses on habits of mind and connections between subjects.

Drexel School of Education, Drexel University. (2006). Scaffolding for the math writing (and talking) process. Retrieved from http://mathforum.org/pow/teacher/writingdev.pdf

> This short handout provides teacher questions to facilitate student work on rich tasks. Facets of problem solving addressed include figuring out a solution path, explaining a solution, asking questions when stuck, and reflecting to improve and extend solutions. Also briefly described are typical learning and writing stages and tips for responding to students' reluctance to write out solutions.

Education Development Center. (2001). Making mathematics: Teacher handbook. Retrieved from http://www2.edc.org/makingmath/mathproj.asp#rsskil

> Part of the website for Making Mathematics, a 10-year research project, the Teacher Handbook is a valuable resource for teachers using open-ended research projects with students. The website provides information on helping students during research and about what a research sequence might look like. Also provided are introductory explorations that highlight the stages of performing research and help students gradually build up their persistence.

Principles and Standards for School Mathematics http://www.nctm.org/standards/

> The Principles and Standards were designed by a commission appointed by the National Council for Teachers of Mathematics to provide guidance for educational decision makers and describe the mathematical understanding, knowledge, and skills that students should acquire from prekindergarten through the twelfth grade.

Stein, M. K., Smith, M. S., Henningsen, M. A., & Silver, E. A. (2009). Implementing standards-based mathematics instruction: A casebook for professional development (2nd ed.). Ways of knowing in science series. New York: Teachers College Press.

Cognitively challenging tasks can be difficult to implement. In this highly useful book, the authors focus on mathematical tasks and their enactments, using cases of mathematics instruction drawn from their research of nearly 500 lessons. Using the authors' Mathematical Tasks Framework, readers learn to analyze the level of cognitive demand of a task as well as ways the cognitive demand may change as a result of the instructional decisions made.

Key Learning Skills and Techniques

Cornell Study Skills Resources. http://lsc.sas.cornell.edu/

Cornell's Learning Strategies Center has several study skills resources available for download, including a template and directions for using the Cornell note-taking system. Also included are resources related to time management, reading and learning from lecture, studying and taking exams, and stress management.

Study Guides and Strategies. http://www.studygs.net/

This website provides extensive study skills resources, also available for copying, adaptation, and distribution in print format.

Learning and Study Strategy Inventory (LASSI). http://www.hhpublishing.com/_assessments/LASSI/

The LASSI is an assessment that measures students' awareness regarding the use of learning and study strategies related to skills, will, and self-regulation components of strategic learning.

Key Transitional Knowledge and Skills

American School Counselor Association Standards for School Counseling Programs. http://www.schoolcounselor.org/

These standards for school counseling programs encompass academic, career, and social goals for students.

College.gov. http://www.colege.gov/wps.portal

This website, produced by the US Department of Education, provides high school students information about going to college, including reasons why to go to college, how to select a school and apply, and how to pay for college.

National College Access Program Directory. http://www.collegeaccess.org/accessprogramdirectory/

A searchable directory of college access programs for students, parents, counselors, and researchers.

Appendix B: Syllabus Template

Course Title:

Teacher: Classroom:
Available for assistance:

Required Texts

Course Objectives:

Prerequisite Knowledge and Skills:

Teaching Methods Employed:

Classroom Policies:

Grading Policies:

Course Title:

Course Schedule

Unit 1:

Standards Addressed in Unit:

Topic 1:

Activity Description(s):

Assignment Description(s):

Assignment weight(s) relative to course grade:

Topic 2:

Activity Description(s):

Assignment Description(s):

Assignment weight(s) relative to course grade:

Unit 1 Assessment:

Appendix C: Gap Analysis Templates

English/Language Arts Gap Analysis Map

A	B	C	D	E	F
New Illinois Learning Standards Incorporating the Common Core	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	College and Career Readiness Anchor Standard(s) Addressed in Column B	Missing Standards (mark with an X)

English/Language Arts Gap Analysis Map for Curriculum Aligned to Previous Illinois Learning Standards

A	B	C	D	E	F	G
New Illinois Learning Standards Incorporating the Common Core	Illinois Learning Standards (previous version)	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	College and Career Readiness Anchor Standard(s) Addressed in Column C	Missing Standards (mark with an X)

Mathematics Gap Analysis Map

A	B	C	D	E	F
New Illinois Learning Standards Incorporating the Common Core	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	Standard(s) for Mathematical Practice Addressed in Column B	Missing Standards (mark with an X)

Mathematics Gap Analysis Map for Curriculum Aligned to Previous Illinois Learning Standards

A	B	C	D	E	F	G
New Illinois Learning Standards Incorporating the Common Core	Illinois Learning Standards (previous version)	Location within the Curriculum (unit, page number, etc.)	Match/No Match/Partial Match	Explanatory Notes about Match Determination	Standard(s) for Mathematical Practice Addressed in Column C	Missing Standards (mark with an X)

Appendix D: Scale for Analyzing a College- and Career-Readiness Level Trajectory Template

Level of Challenge	Explanation

Appendix E: Performance Expectations Organizer Template

Curriculum Activities/Task	Level of Challenge	Explanation