# Curriculum Boot Camp for School professionals

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# Learning Objectives

- Be able to define “curriculum”
- Understand how standards drive curriculum development through a basic working knowledge of the structure and content of the Common Core for ELA/Math Standards
- Define concepts of “scope and sequence” and vertical and horizontal alignment
- Understand the concept of “priority” or “power” standards and why these are needed
- Be introduced to “deconstructing” standards
- See relationships between curriculum and formative/summative assessment and student outcome measures
- Understand lesson and unit design given learning outcomes

## Why do school professionals who are not classroom teachers need to know teaching and curriculum information?

*If you understand the world of curriculum and instruction and assessments teachers use you can:*

- Better analyze why a student may be struggling with classroom performance and high stakes assessments

- Understand how to develop better hypotheses in problem solving conversations when looking at ICEL

# What is Curriculum?

- Most of us think of “Curriculum” as what students learn at each grade level
- There is a distinct academic vocabulary within curriculum departments that is very different than how most school psychologists think about “academics”
- Teachers and Curriculum Directors see “Curriculum” as much more than content

# If you look up “curriculum” definitions:

- *Depending on how broadly educators define or employ the term, curriculum typically refers to the knowledge and skills students are expected to learn, which includes the **learning standards** or **learning objectives** they are expected to meet; the units and lessons that teachers teach; the assignments and projects given to students; the books, materials, videos, presentations, and readings used in a course; and the tests, **assessments**, and other methods used to evaluate student learning*
  - *From the website Glossary of Education Reform*

# CURRICULUM AND INSTRUCTION BASICS

# Relationship between Standards, Scope and Sequence and Unit/Lesson Design

Unit and Lesson Design -How

Scope and Sequence - When

Standards – What and Why

# What are educational standards?

From CCSS website FAQs

Educational standards are the learning goals for what students should know and be able to do at each grade level.

Education standards, like Common Core are *not* a curriculum.

***In other words, the Common Core is <u>what</u> students need to know and be able to do, and curriculum is <u>how</u> students will learn it.***

# Knowledge and Skills

*Q: If standards typically refers to the knowledge and skills students are expected to learn – who determines what these are?*

*A: Generally speaking, the state is considered to be the "agency" responsible for education per the US constitution, so in the US –most State Departments of Education have Student Learning Standards. In many states local school districts decide.*

*NOTE: State standards are relatively new in Illinois as ISBE Learning Standards were first formally adopted in 1997*

# If states determine standards, Why Common Core ?

- Internationally benchmarked
- Offers continuity across state boundaries which acknowledges mobility and technology realities
- Starts with college and career readiness*

*Ready for first-year credit-bearing, postsecondary coursework in mathematics and English without the need for remediation

Adapted from achieve.org

# Introduction to CCSS from website

- https://vimeo.com/77075740

# Common Core State Standards Internationally Benchmarked

COMMON CORE
STATE STANDARDS INITIATIVE
PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER

**Standards from individual high-performing countries and provinces were used to inform content, structure, and language. Writing teams looked for examples of rigor, coherence, and progressions.**

***Mathematics***

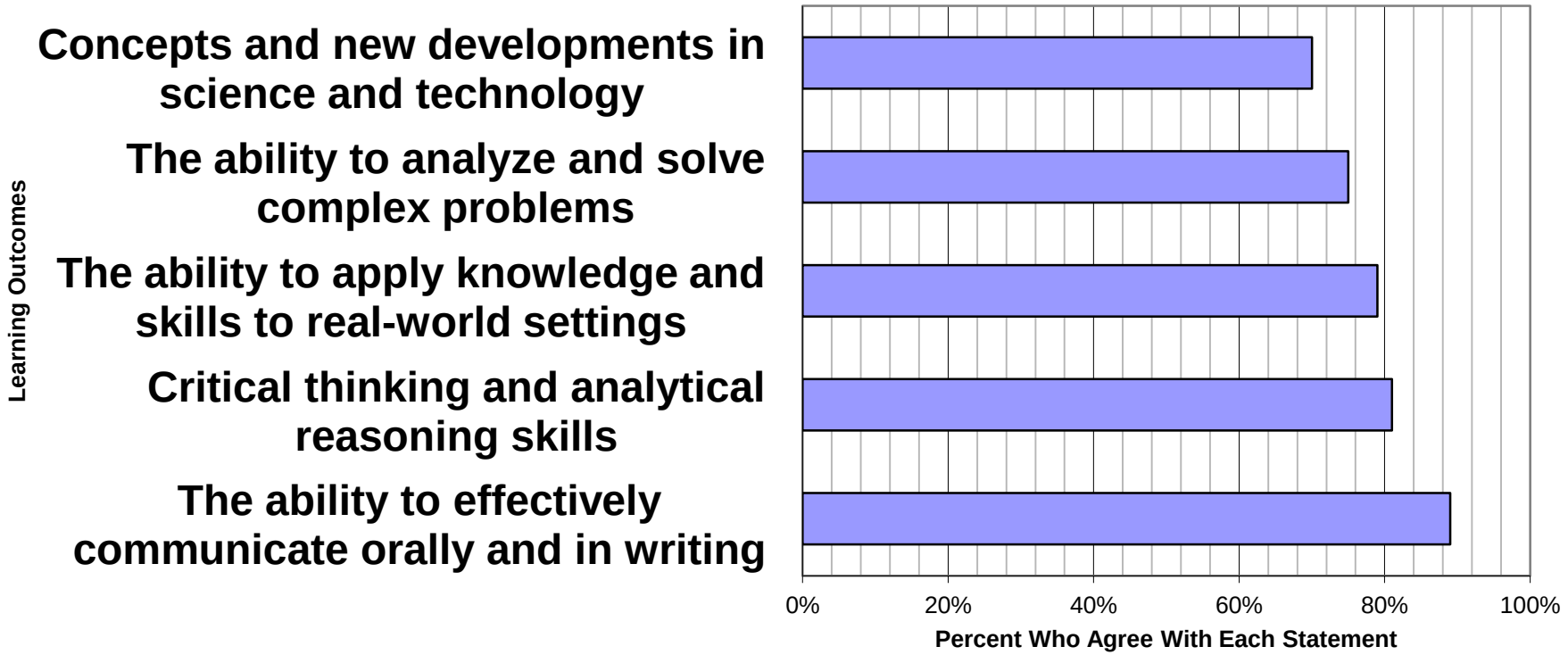
1. *Belgium (Flemish)*
2. *Canada (Alberta)*
3. *China*
4. *Chinese Taipei*
5. *England*
6. *Finland*
7. *Hong Kong*
8. *India*
9. *Ireland*
10. *Japan*
11. *Korea*
12. *Singapore*

***1. English language arts***

2. *Australia*
    1. *New South Wales*
    2. *Victoria*
3. *Canada*
    1. *Alberta*
    2. *British Columbia*
    3. *Ontario*
4. *England*
5. *Finland*
6. *Hong Kong*
7. *Ireland*
8. *Singapore*

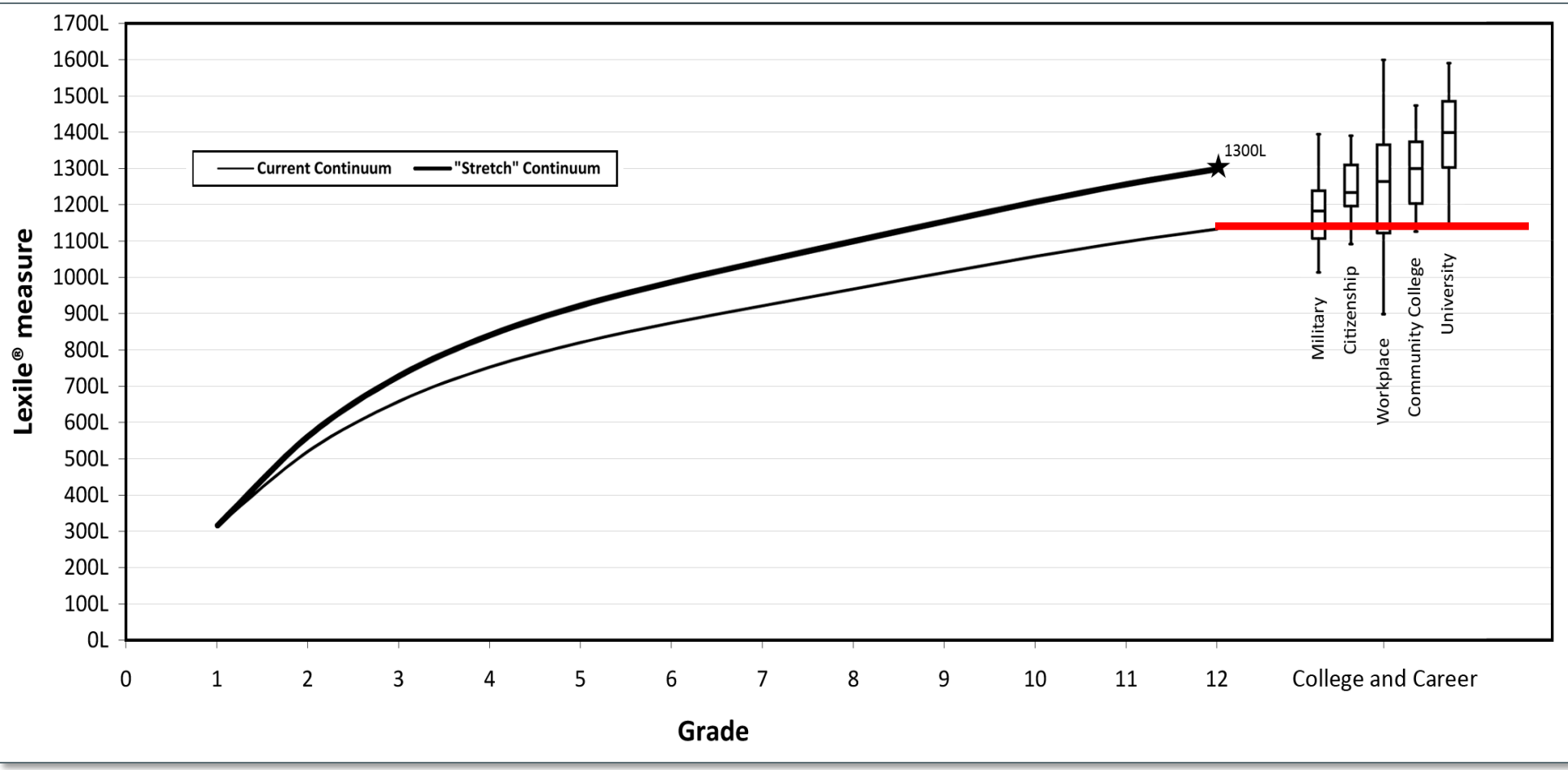
# College & Career Readiness

## Learning Outcomes Desired by Employers




*SOURCE: Hart Research Associates. (2010). Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn.*

# RIGOR: Compare previous Illinois standards to "College & Career Ready"




Adapted From : Center for College and Career Readiness

# Example of Rigor

## Text Complexity

We must systematically expose students to increasingly complex texts earlier if they are to reach benchmarks.

| Grade Band | Current Lexile Band | "Stretch" Lexile Band* |
|---|---|---|
| K–1 | N/A | N/A |
| 2–3 | 450L–725L | 420L–820L |
| 4–5 | 645L–845L | 740L–1010L |
| 6–8 | 860L–1010L | 925L–1185L |
| 9-10 | 960L–1115L | 1050L–1335L |
| 11–CCR | 1070L–1220L | 1185L–1385L |

From : www.lexile.com

# CCSS is also about preparing learners for a complex future

- Common Core Standards are written to include teaching the kinds of skills that will be needed to
  - Communicate effectively in a global environment
  - Problem solve real world “messy” problems
  - Use evidence to support argument
  - Persist in challenging tasks in literacy and mathematics

# Why is “Common Core” So Controversial?

- Political
  - Generally speaking conservatives believe in “local” control of what students should learn in school. The idea of “national” standards is unacceptable
  - Much of the controversy over content is in the areas of science and history for political or religious reasons
  - Concerns about Too Much Testing

    *Common Core Standards are too often confused with the push for accountability under NCLB – Testing was not required by CCSS – But CCSS changed WHAT and HOW students are tested*

# Why have classroom teachers expressed concerns about Common Core?

- Given that CCSS and PARCC have now become the “norm” many concerns have been addressed. These have included
  - Transitioning students from one set of standards to another – impact on high stakes testing
  - Lack of Common Core aligned materials
  - Changing the nature of classroom instruction to meet instructional shifts
  - “Initiative fatigue” – Changes in Teacher Evaluation to include student growth, Common Core and PARCC all landed at the same time

# HOLD THIS QUESTION IN MIND- Should objections really be about "Common Core Curriculum"?

- For most school professionals – CCSS aligned Assessment should be more controversial than the standards
  - New assessments like PARCC and other common core aligned tests have high stakes implications for teachers who now have a percentage of their evaluation tied to student test scores. In some districts related service professionals are included in this practice, even though it's not required
  - Focus on higher level thinking, anchor standards, mathematical practices, speaking and listening outcomes presents challenges for those who are looking for simple, predictive, psychometrically reliable and valid assessment
  - Untried and creative methodology is useful and should be encouraged, but current measures are "not ready for prime time" with respect to measuring student outcomes in high stakes assessment settings
  - RTI models and traditional special education "discrepancy" issues are much more difficult to measure under common core outcomes, particularly with existing assessment methodologies

# COMMON CORE BASICS – AN INTRODUCTION TO STANDARDS AND INSTRUCTIONAL SHIFTS

# Common Core State Standards for ***English Language Arts and Literacy in History/ Social Studies, Science, and Technical Subjects***

# In English language arts, CCSS standards require certain critical content:

- Classic myths and stories from around the world
- America's founding documents
- Foundational American literature
- Shakespeare
- The remaining crucial decisions about what content should be taught are made at the state and local levels. In addition to content coverage, the Common Core State Standards require that students systematically acquire knowledge in literature and other disciplines through reading, writing, speaking, and listening

# Beyond the 3 “R’s”

In addition to content coverage, the Common Core State Standards require that students systematically acquire knowledge in literature and other disciplines through reading, writing, speaking, and listening.

- Specific standards for speaking and listening skills are included in standards

# ELA = English Language Arts

FOUR AREAS OF FOCUS

- **Reading**
- **Writing**
- **Listening and Speaking**
- **Language**

# ELA – Key Features

- **Reading:** **Text complexity and the growth of comprehension**
- **Writing:** **Text types, responding to reading, and research**
- **Speaking and Listening:** **Flexible communication and collaboration**
- **Language:** **Conventions, effective use, and vocabulary**

# ELA- College and Career Ready Students:

- ✓ Demonstrate independence.
- ✓ Build strong content knowledge.
- ✓ Respond to the varying demands of audience, task, purpose, and discipline.
- ✓ Comprehend and critique.
- ✓ Value evidence.
- ✓ Use technology and digital media strategically and capably.
- ✓ Come to understand other perspectives and cultures.

## College and Career Readiness (CCR) Standards

## College and Career Ready Skills= Anchor Standards

Overarching standards for each of four strands that are further defined by grade-specific standards

- **Reading** – 10 standards
- **Writing** – 10 standards
- **Speaking and Listening** – 6 standards
- **Language** – 6 standards

*See handouts for CCSS - ELA anchor standards*

# English Language Arts Common Core Standards

## Reading Strand

- Key Ideas and Details
- Craft and Structure
- Integration of Knowledge and Ideas
- Range of Reading and Level of Text Complexity

## Writing Strand

- Text Types and Purposes
- Production and Distribution of Writing
- Research to Build Knowledge
- Range of Writing

## Speaking and Listening Strand

- Comprehension and Collaboration
- Presentation of Knowledge and Ideas

## Language Strand

- Conventions of Standard English
- Knowledge of Language
- Vocabulary Acquisition and Use

http://www.education.ohio.gov/

# ELA Common Core Coding

- RL = Reading for Literature
- RI = Reading for Information
- RF = Reading Foundations
- W = Writing
- SL = Speaking and Listening
- L = Language

# Characteristics of "Informational Text" More than just Non-Fiction

- Goes Beyond facts
- Conveys information
- Real world topics (natural and social)
- Type: Many formats

  Magazine, map, chart, website, "infographic", etc…
- Not a "story" but may or may not have narrative format

# ELA Common Core Format

## Reading Standards for Literature 6–CCR

Following are the standards progressions for grades 6–CCR, which relate to their College- [illegible] instruction each year and help ensure students gain adequate exposure to a range of texts and tasks. Rigor is also [illegible] complex texts through the grades.

Strands

| Grade 6 students are able to: | Grade 7 students are able to: | [illegible] |
|---|---|---|
| *Key Ideas and Details* | | |
| 1. Cite specific textual evidence to support analysis of what the text says explicitly as well as to draw inferences from the text. | 1. Cite more than one source of textual evidence to support analysis of what the text says explicitly as well as to draw inferences from the text. | 1. Cite several sources of textual evidence to support analysis of what the text says explicitly as well as to draw inferences from the text. |
| 2. Articulate how a theme or central idea develops over the course of a text. | 2. Infer themes not explicitly stated in a text and provide the evidence on which those inferences are based. | 2. Analyze how motifs, such as recurring images or events, contribute to the development of themes or overall meanings in a poem, drama, or narrative. |
| 3. Describe how the plot constructs a series of episodes that delineates a problem to be solved and how the problem requires characters to change, revise plans, or face challenges as they move toward a resolution. | 3. Describe shifts in time or location over the course of a novel or play and explain how elements of the setting reinforce the theme or other aspects of the work. | 3. Describe how particular lines of dialogue or specific incidents in a drama or narrative propel the action, reveal [illegible] a decision. |
| *Craft and Structure* | | |
| 4. Interpret words and phrases as they are used in the text, including figurative meanings, and analyze how an author's choice of specific words in a text contributes to understanding events, characters, and ideas. | 4. Interpret words and phrases as they are used [illegible] including connotative meanings, and describe [illegible] impact of specific word choices on the meanin[illegible] of the text. | [illegible] makes through the use [illegible]ies and analyze how [illegible] poem, novel, or play. |
| 5. Compare a poem with a conventional structure, such as a sonnet, to a free verse poem, considering such factors as meter and rhyme scheme. | 5. Describe how any given chapter, scene, or stan[illegible] the overall structure of a narrative, drama, or poem and contributes to development of the plot or ideas presented. | [illegible]r lays out the events in [illegible]nts are out of chronological order (e.g., flashbacks and flash-forwards). |
| 6. Compare and contrast the viewpoints or perspectives of different characters in a narrative or drama. | 6. Compare and contrast the internal conflicts that characters experience with external conflicts in the plot. | 6. Explain how dramatic irony, created by differences between what an audience (or reader) knows and what the characters know in a drama or narrative, produces suspense, anxiety, or humor. |
| *Integration of Knowledge and Ideas* | | |
| 7. Analyze how illustrations, diagrams, or multimedia elements contribute to the meaning of print and digital texts, including graphic novels or multimedia presentations of fiction. | 7. Examine the tools used to produce video, film, or theater (e.g., lighting, sound, pacing, color, camera angles) by comparing a written text to its staged or multimed[illegible] version. | 7. Analyze how a film or live production of a drama or narrative reflects or departs from the script or text as a [illegible]terprets characters, |
| 8. Describe the reasoning and rhetoric one chara[illegible] persuade another. | [illegible] conflicting viewpoints through characters and thei[illegible] interactions. | [illegible] have a significant [illegible] becomes a turning [illegible]nds to something he |
| 9. Compare similar ideas and themes (e.g., opposition of dark and light, the struggle for power) as well as character types and patterns of events in myths, creation stories, and other traditional literature from different cultures. | 9. Examine specific cases in which modern fiction dr[illegible] patterns of story or character from traditional narr[illegible] (e.g., the hero and companions, the quest). | [illegible]ical material by [illegible]e, place, or character to historical sources from the same period; determine which historical details have been emphasized or changed. |
| *Range and Level of Complex Texts* | | |
| 10. Demonstrate the capacity to read literature independently in the grades 6–8 text complexity band; read texts at the high end of the range with scaffolding as needed. | 10. Demonstrate the capacity to read literature independently in the grades 6–8 text complexity band; read "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. | 10. Demonstrate the capacity to read literature independently in the grades 6–8 text complexity band; gain sustained practice with "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. |

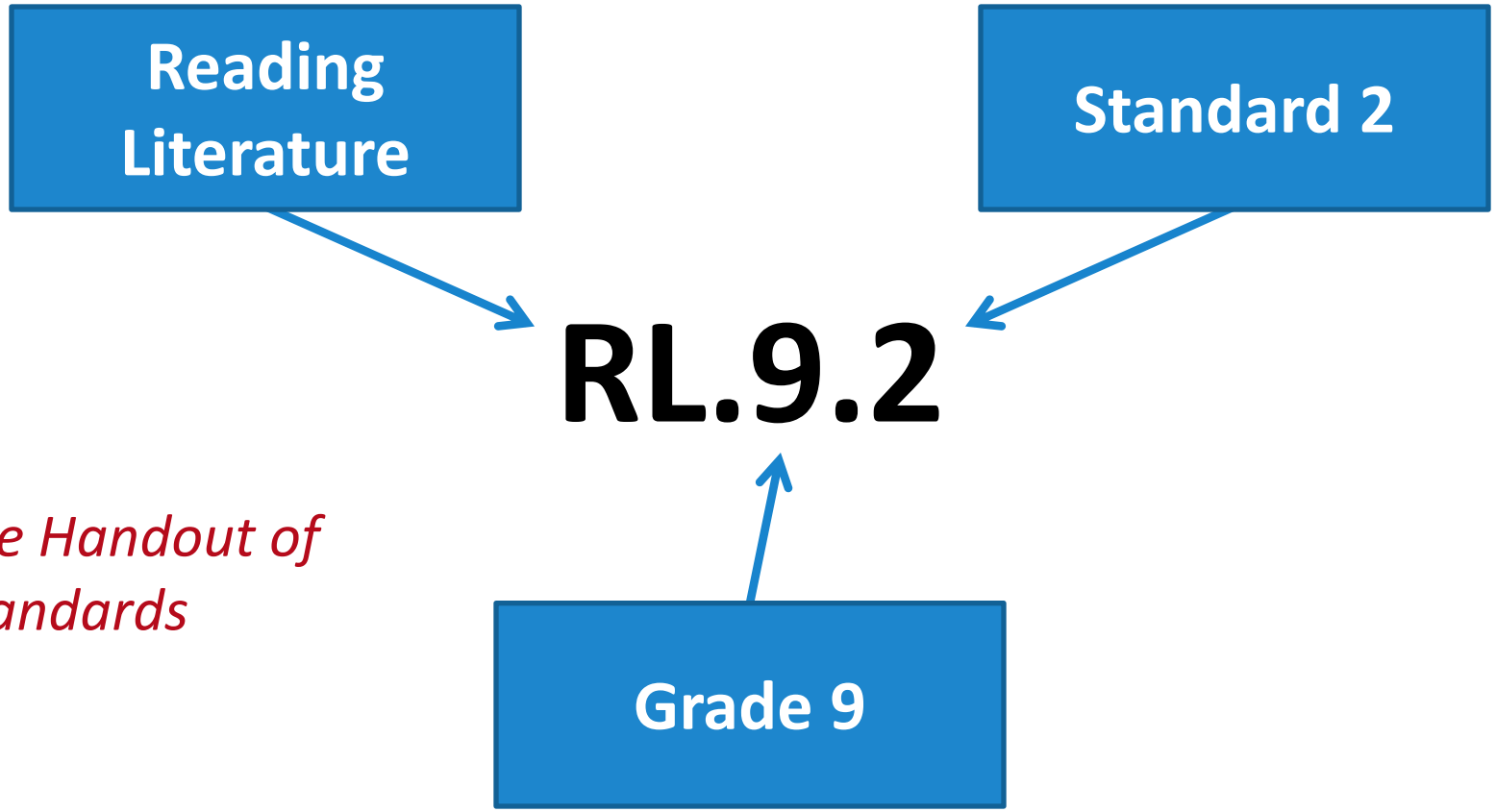
Topics

Standard Statement



http://www.education.ohio.gov/

# Sample Code




*See Handout of Standards*

http://www.education.ohio.gov/

# ELA - Instructional Shifts Summary

**Shift 1: Balancing Informational & Literary Texts (K-5)** Students read a true balance of informational and literary texts. Elementary school classrooms are, therefore, places where students access the world — science, social studies, the arts and literature — through text

**Shift 2: Knowledge in the Disciplines (Grades 6-12)** - Content area teachers outside of the ELA classroom emphasize literacy experiences in their planning and instruction.

**Shift 3: Staircase of Complexity** - In order to prepare students for the complexity of college and career ready texts, each grade level requires a "step" of growth on the "staircase"

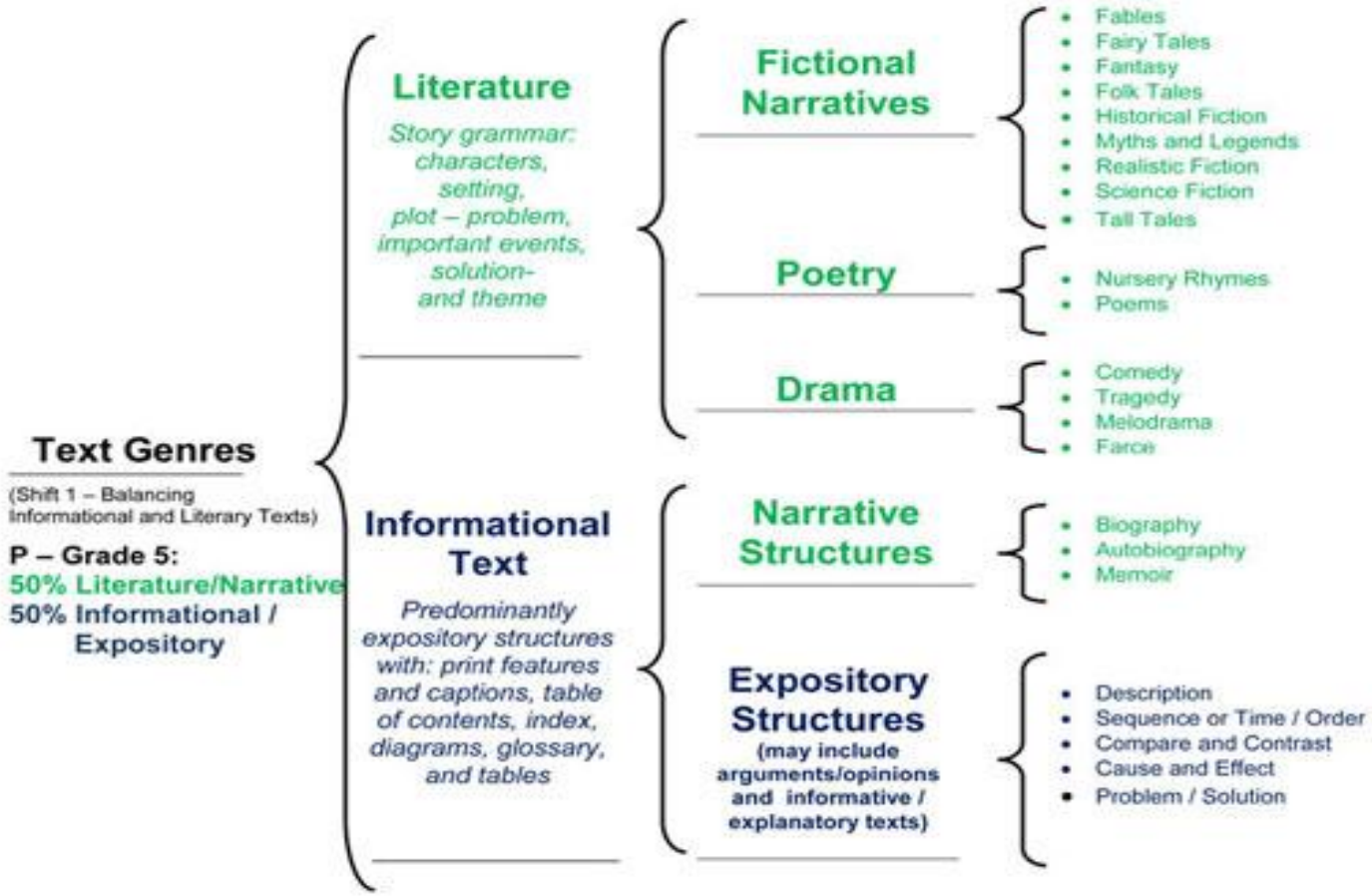
**Shift 4: Text-based Answers** - Teachers insist that classroom experiences stay deeply connected to the text on the page and that students develop habits for making evidentiary arguments both in conversation, as well as in writing to assess comprehension of a text.

**Shift 5: Writing from Sources** - Writing needs to emphasize use of evidence to inform or make an argument rather than the personal narrative and other forms of decontextualized prompts.

**Shift 6: Academic Vocabulary** - Students constantly build the vocabulary they need to access grade level complex texts.

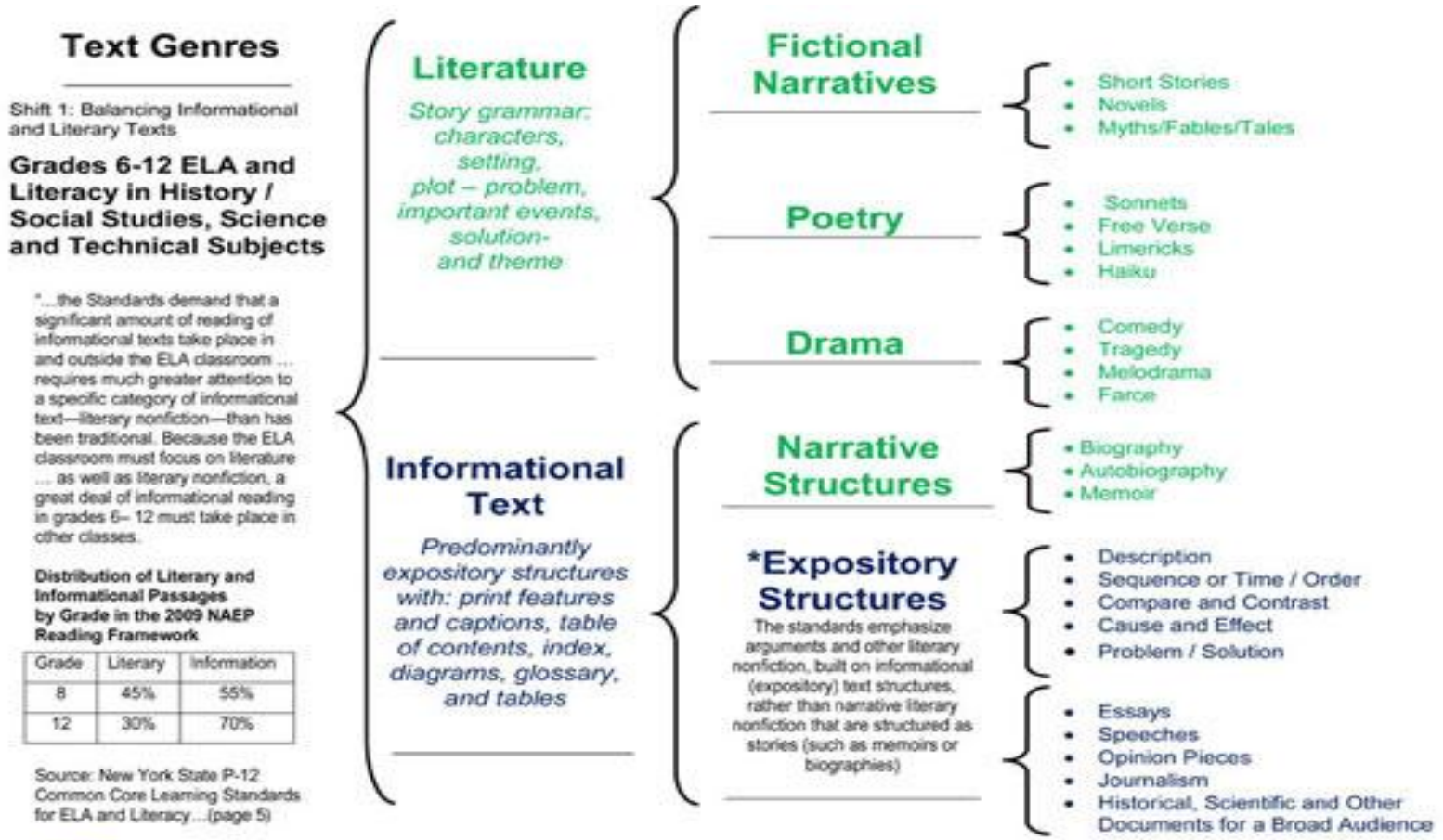
Source: http://www.readingrockets.org/article/51433/#shifts

# Shift : Balancing Informational & Literary Texts (K-5)




SCB
Created by Denise Alterio, Judy Carr, and Lynn Miller for Sullivan County BOCES - scboces.org
*Text Genres Brace Map: P - 5*
June 2012

# Informational Text and Literature Grades 6-12

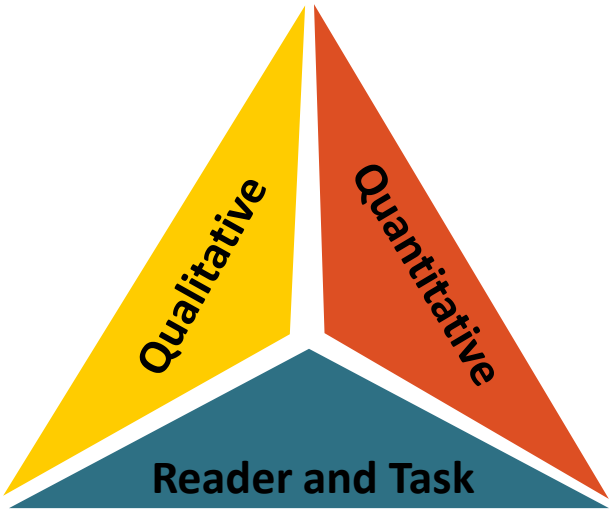



Created by Denise Alterio, Judy Carr, and Lynn Miller for Sullivan County BOCES - scboces.org
*Text Genres Brace Map: Grades 6-12 ELA* and Literacy in HST (Content Areas) June 2012

# Shift in Increasing Text Complexity

- Reading Standards include over exemplar texts (stories and literature, poetry, and informational texts) that illustrate appropriate level of complexity by grade
- Text complexity is defined by:

1. Qualitative measures – levels of meaning, structure, language conventionality and clarity, and knowledge demands
2. Quantitative measures – readability and other scores of text complexity
3. Reader and Task – background knowledge of reader, motivation, interests, and complexity generated by tasks assigned




From aachieve.org

# Shift: Text-based Answers

## Text-Dependent Questions

- Far longer amounts of classroom time spent on text worth reading and rereading carefully
- Base answers on what has been read, not opinions or experience
- *Recent study found that 80% of the questions students were asked when they are reading are answerable without direct reference to the text itself .*

Bringing the Common Core to Life" David Coleman · Founder, Student Achievement Partners Chancellors Hall · State Education Building · Albany, NY April 28, 2011

# Text-Dependent Questions

| Not Text-Dependent | Text-Dependent |
| --- | --- |
| In "Casey at the Bat," Casey strikes out. Describe a time when you failed at something. | What makes Casey's experiences at bat humorous? |
| In "Letter from a Birmingham Jail," Dr. King discusses nonviolent protest. Discuss, in writing, a time when you wanted to fight against something that you felt was unfair. | What can you infer from King's letter about the letter that he received? |
| In "The Gettysburg Address" Lincoln says the nation is dedicated to the proposition that all men are created equal. Why is equality an important value to promote? | "The Gettysburg Address" mentions the year 1776. According to Lincoln's speech, why is this year significant to the events described in the speech? |

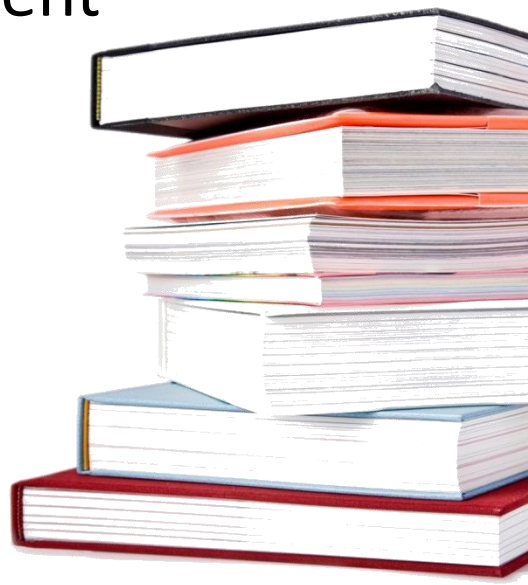
# SHIFT: Reading, Writing and Speaking Grounded in Evidence from Text: Why?

- Most college and workplace writing requires evidence.
- Ability to cite evidence differentiates strong from weak student performance on NAEP ( a national proficiency exam)
- Evidence is a major emphasis of the ELA Standards: Reading Standard 1, Writing Standard 9, Speaking and Listening standards 2, 3, and 4, all focus on the gathering, evaluating and presenting of evidence from text.
- Being able to locate and deploy evidence are hallmarks of strong readers and writers

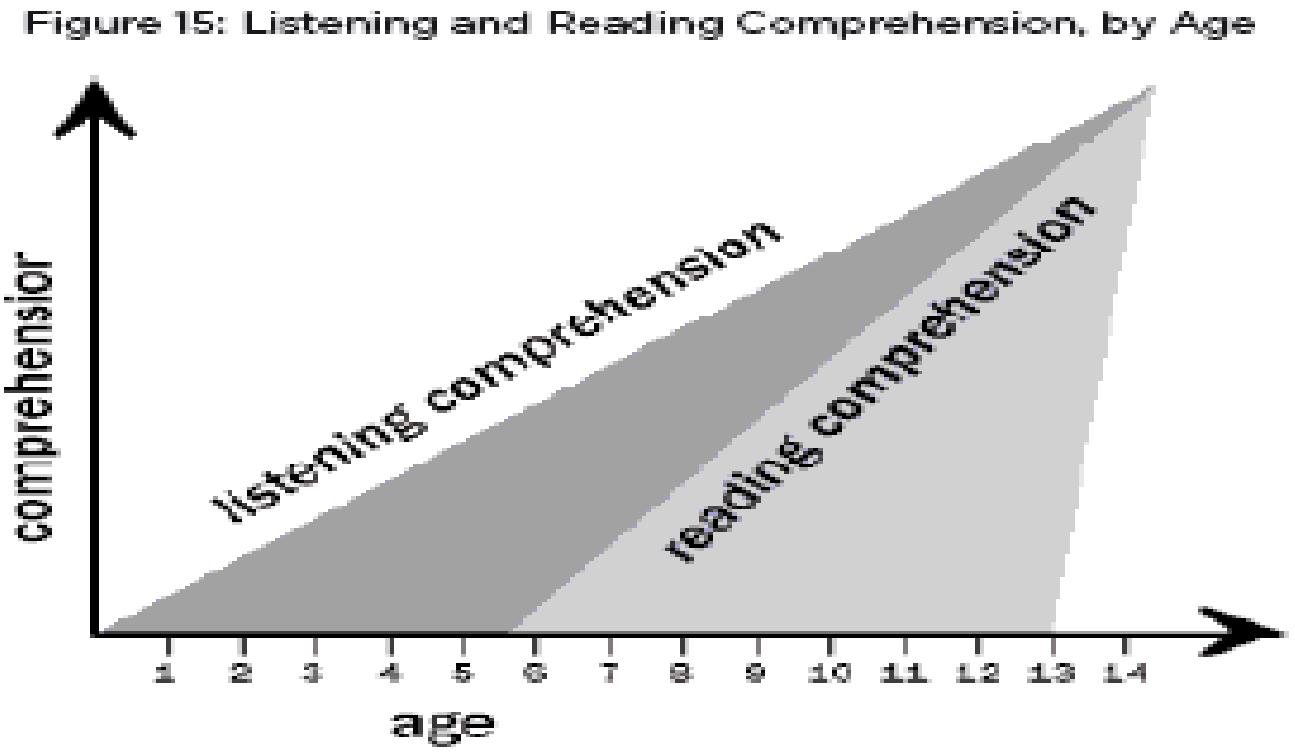
Source NEA CCSS Overview

# SHIFT: Specific Focus on Academic and Domain Specific Vocabulary

- Academic vocabulary is the true language of power
- Not just memorizing terms but using them to express our understanding of the content
- Vocabulary:
  - Tier 1- Everyday Words (implicit)
  - Tier 2- Academic Vocabulary
  - Tier 3 – Domain Specific Words



# Go Up TWO Grades for a TALKING LIST




Source: T. G. Sticht and J. James, "Listening and reading," in P. Pearson, ed., Handbook of Research on Reading. New York:
Longmans, 1984. (1984)

# Vocabulary for…..

| | |
|---|---|
| 1. | hexagon |
| 2. | parallelogram |
| 3. | geometry |
| 4. | intersect |
| 5. | octagon |
| 6. | quadrilateral |
| 7. | line of symmetry |
| 8. | two-dimensional |
| 9. | parallel |
| 10. | plane shapes |

# Common Core State Standards for ***Mathematics***

# Organization of Common Core State Standards for Mathematics

## Grade-Level Standards

- K-8 grade-by-grade standards organized by domain
- 9-12 high school standards organized by conceptual categories

## Standards for Mathematical Practice

- Describe mathematical “habits of mind”
- Connect with content standards in each grade

- **NOTE: Increased focus on**

  **REAL WORLD APPLIED PROBLEM SOLVING**

# CCSS Mathematics

In mathematics, the standards lay a solid foundation in:

- Whole numbers
- Addition
- Subtraction
- Multiplication
- Division
- Fractions
- Decimals

Taken together, these elements support a student's ability to learn and apply more demanding math concepts and procedures.

# Overview of **K-8** Mathematics Standards

## The K- 8 standards:

- The K-5 standards provide students with a solid foundation in *whole numbers, addition, subtraction, multiplication, division, fractions and decimals*
- The 6-8 standards describe robust learning in *geometry*, *algebra*, and *probability and statistics*
- Modeled after the focus of standards from high-performing nations, the standards for grades 7 and 8 include *significant algebra and geometry content*
- Students who have completed 7$^{th}$ grade and mastered the content and skills will be *prepared for algebra, in 8$^{th}$ grade or after*

## Table 2: Benchmarks for the Critical Foundations

**Fluency With Whole Numbers**

1) By the end of Grade 3, students should be proficient with the addition and subtraction of whole numbers.
2) By the end of Grade 5, students should be proficient with multiplication and division of whole numbers.

**Fluency With Fractions**

1) By the end of Grade 4, students should be able to identify and represent fractions and decimals, and compare them on a number line or with other common representations of fractions and decimals.
2) By the end of Grade 5, students should be proficient with comparing fractions and decimals and common percent, and with the addition and subtraction of fractions and decimals.
3) By the end of Grade 6, students should be proficient with multiplication and division of fractions and decimals.
4) By the end of Grade 6, students should be proficient with all operations involving positive and negative integers.
5) By the end of Grade 7, students should be proficient with all operations involving positive and negative fractions.
6) By the end of Grade 7, students should be able to solve problems involving percent, ratio, and rate and extend this work to proportionality.

**Geometry and Measurement**

1) By the end of Grade 5, students should be able to solve problems involving perimeter and area of triangles and all quadrilaterals having at least one pair of parallel sides (i.e., trapezoids).
2) By the end of Grade 6, students should be able to analyze the properties of two-dimensional shapes and solve problems involving perimeter and area, and analyze the properties of three-dimensional shapes and solve problems involving surface area and volume.
3) By the end of Grade 7, students should be familiar with the relationship between similar triangles and the concept of the slope of a line.

# Overview of High School Mathematics Standards

## The high school mathematics standards:

- Call on students to practice *applying mathematical ways of thinking* to real world issues and challenges
- Require students to develop a *depth of understanding and ability to apply mathematics to novel situations*, as college students and employees regularly are called to do
- Emphasize *mathematical modeling*, the use of mathematics and statistics to *analyze empirical situations*, understand them better, and improve decisions
- Identify the mathematics that all students should study in order to be *college and career ready*

From achieve.org

# Model Course Pathways for Mathematics

Courses in higher level mathematics: Precalculus, Calculus (upon completion of Precalculus), Advanced Statistics, Discrete Mathematics, Advanced Quantitative Reasoning, or other courses to be designed at a later date, such as additional career technical courses.


**Pathway A**
*Traditional in U.S.*

**Pathway B**
*International Integrated approach (typical outside of U.S.)*



From achieve.org

# CCSS - Mathematical Practices

- Mathematical Practice standards call on students to practice applying mathematical ways of thinking to real-world issues and challenge

- The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

# Standards for Mathematical Practice

## Eight Standards for Mathematical Practice

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the understanding of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

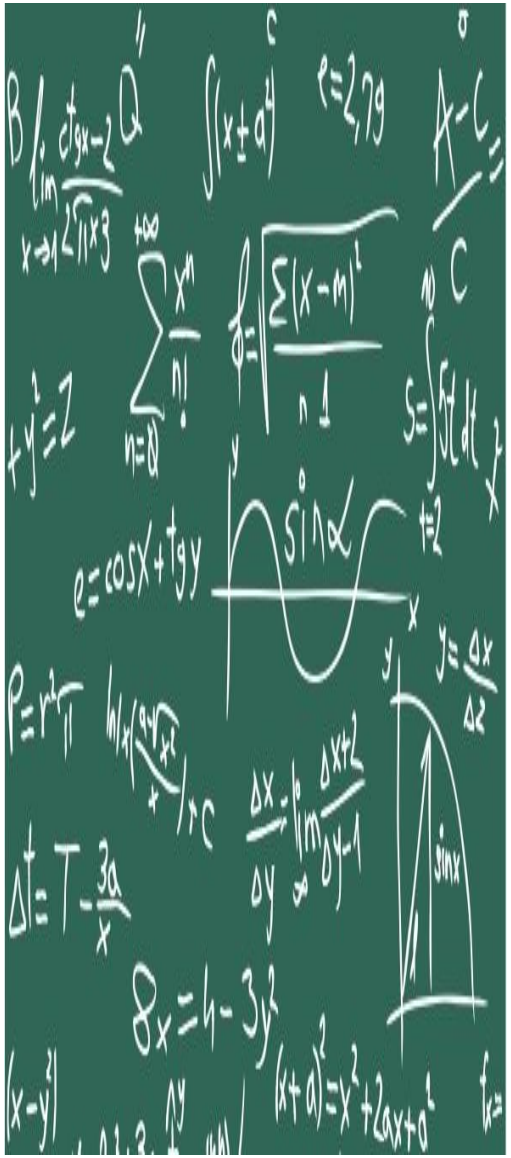
From achieve.org

# Shifts in Mathematics

| | | |
|---|---|---|
| Shift 1 | **Focus** | Teachers significantly narrow and deepen the scope of how time and energy is spent in the math classroom. They do so in order to focus deeply on only the concepts that are prioritized in the standards. |
| Shift 2 | **Coherence** | Principals and teachers carefully connect the learning within and across grades so that students can build new understanding onto foundations built in previous years. |
| Shift 3 | **Fluency** | Students are expected to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions. |
| Shift 4 | **Deep Understanding** | Students deeply understand and can operate easily within a math concept before moving on. They learn more than the trick to get the answer right. They learn the math. |
| Shift 5 | **Application** | Students are expected to use math and choose the appropriate concept for application even when they are not prompted to do so. |
| Shift 6 | **Dual Intensity** | Students are practicing and understanding. There is more than a balance between these two things in the classroom – both are occurring with intensity. |



From engage ny



# Three Responses to a Math Problem

1. Answer getting
2. Making sense of the problem situation
3. Making sense of the mathematics you can learn from working on the problem

# Thought vs. Operation

- **Our Traditional Approach**

  - Computation and teaching algorithms

**- vs. -**

- **College & Career Ready students**
  - Understand the argument presented
  - Can analyze the structure of the argument
  - Can solve for the problem in the language of mathematics, and defend their solution

# Yesterday

**8** [WHICH NUMBER GOES IN THE BOX?]

$$386 < \square < 521$$

| 297 | 334 | 410 | 528 |
|---|---|---|---|
| **A** | **B** | **C** | **D** |

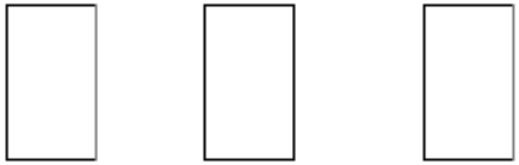
CSM10265

# Carol's Numbers

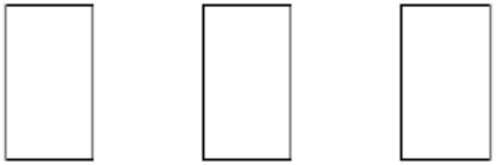
TODAY

Carol has three number cards.


1. What is the largest three-digit number Carol can make with her cards?



2. What is the smallest three-digit number Carol can make with her cards?



Explain to Carol how she can make the smallest possible number using her three cards.

_____

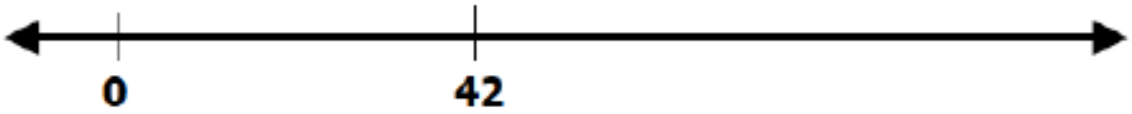
_____

_____

_____

Carol's teacher drew a number line on the board.

**TODAY**




3. About where would 85 be? Place 85 on the number line where it belongs.

4. About where would 21 be? Place 21 on the number line where it belongs.

5. About where would 31 be? Place 31 on the number line where it belongs.

Tell Carol how you knew where to place 31 and why.

_____

_____

_____

_____

_____

# STANDARDS NEXT STEP FOR FURTHER EXPLORATION

# If you would like a "next step" to further deepen your understanding of standards:

1) Read through the standards introduction available at CCSS website – each set of standards has an introductory statement
2) Browse the standards themselves to see what's included and what students are expected to know and be able to do
3) ISBE has good resources on introduction to CCSS content on its website

# Relationship between Standards, Scope and Sequence and Unit/Lesson Design

Unit and Lesson Design -How

Scope and Sequence - When

Standards – What and Why

# Relationship between Standards and Scope/Sequence

## Standards

- What skills should be learned by students in each subject area?
- What skills should be mastered at each grade level in each subject area to ensure that a student is well educated and prepared for college and work?

## Scope/Sequence

- In what order should students learn skills to ensure mastery of the concepts and skills within a given year?
- What is the order in which students should progress in a skill set from year to year?

# Vertical and Horizontal Alignment

- Curriculum should flow in a logical way both within a grade level
  - Horizontal alignment ( within a grade)
- Across Grade levels to show the “stair step” sequence of building blocks of mastery of more complexity within skills
  - Vertical alignment ( across grades in a skill )

# How do I find progressions for the subjects/grades I serve?

- CCSS for ELA and Math
- District level “road maps”
- Scope and sequence section of district purchased published teacher’s editions
- ISBE has progressions on its webpage

# ISBE website progressions for ELA and Math

- terrific interactive resource for ELA
  - http://learningprogressions.tctl.org/
- Pdf of math progressions K-12 in model math curriculum units
  - http://www.isbe.state.il.us/common_core/htmls/math-model-units.htm

# PRACTICE SCOPE/SEQUENCE

# Explore Scope/Sequence- Using Handouts

- Choose a grade level and look at the ELA and math standards for that grade
  - Consider a grade level where you spend time consulting or that generates a lot of referrals
- Choose one strand, starting in K and read all the way through the last grade level in the strand
  - It would be good to choose one in ELA and one in Math

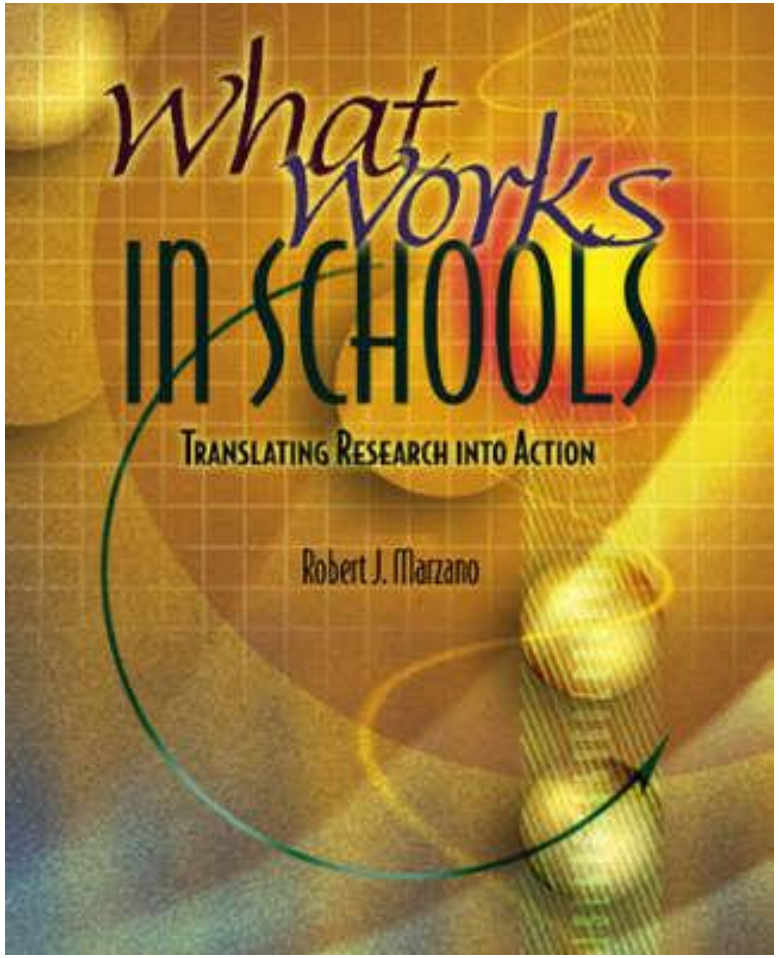
## POWER /PRIORITY STANDARDS

# HOW CAN WE TEACH EVERYTHING?

Crayon Slides from Slide Share: Richard Hess

# Leading Curriculum Expert: Robert Marzano

- The first school-level factor is a "guaranteed and viable curriculum." I rank this as the first factor, having the most impact on student achievement…a guaranteed and viable curriculum is primarily a combination of my factors "opportunity to learn" and "time" (Marzano, 2000a). Both have strong correlations with academic achievement, yet they are so interdependent that they constitute one factor.



# Power Standards = Prioritized Standards

- Given limited number of hours and variable student needs for amount of time and practice needed to learn content – we need to prioritize the MOST important content and skills for a “Guaranteed and Viable Curriculum”
- Based on the work of Larry Ainsworth– “power standards” are a way to focus on what’s most important among the standards.

# What Are Power Standards?

- Prioritized standards that are derived from a systematic and balanced approach to distinguishing which standards are absolutely essential and which ones are simply “nice to know”
- A subset of the complete list of standards for each grade or subject area and represent the “safety net” curriculum.

# Why Power Standards?

- Power standards do not relieve teachers of the responsibility for teaching all standards and indicators, but does identify which standards are critical for student success and which ones can be given less emphasis
- In the absence of Power Standards, teachers will select their own

# Which Standards to Choose?

- Doug Reeves has written about ways in which to identify what's most important in choosing what to teach
- Reeves calls the priority standards the "safety net" that are key skills needed for students to move forward to the next grade and to be successful

# Power Standards Identification criteria

- Endurance
- Leverage
- Readiness for the next level of learning

- What knowledge and skills must I impart to my students this year so that they will enter next year's class with confidence and a readiness for success?

# ENDURANCE

- Will the knowledge and skills to which this standard relates be used by students for several years after they use that standard at this grade level?

# LEVERAGE

- **Will the knowledge and skills to which this standard help students in other academic areas?**

# READINESS

- Do teachers in the next higher grade regard this standard as a necessary entry point for a student to enter that grade with success and confidence?

# The Role of State Testing in Choosing Priority Standards

- In addition to teacher and administrator conversations about the earlier questions, school districts are also held accountable to the content of tests administered by the state to evaluate how well students are mastering state standards
- In Illinois, this is PARCC
  - PARCC priorities are outlined in model content standards for each grade level

# What are PARCC Model Content Frameworks?

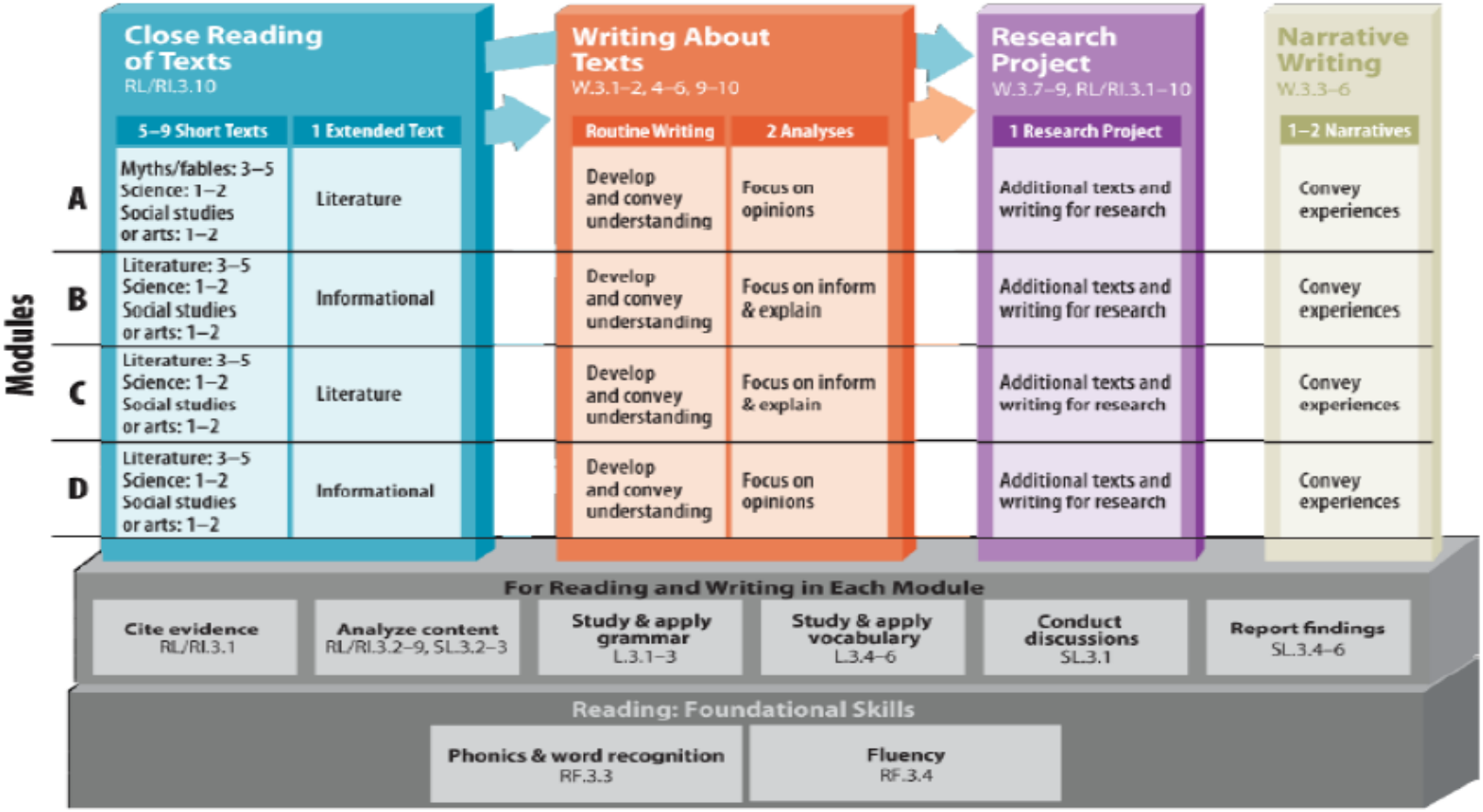
## *From PARCC website*

- The frameworks serve as a bridge between the standards and these tools in a variety of ways, including by clarifying areas of emphasis in each grade and what changes in the standards from one grade to the next. In grades 3 through 11, for which PARCC has previously published frameworks, they served as foundational documents to guide development of assessments. In grades K-2, they serve as guides for developing diagnostic tools and formative tasks that teachers can use to get real-time data on how their students are doing and where they need help or enrichment.

- The Model Content Frameworks are neither a curriculum nor a replacement to the standards. Rather, they ought to be used as a companion to the standards, and *as a lens through which to analyze and build local curricula.*

- **In other words, Model Content Frameworks essentially indicate what will be covered in PARCC assessments at each grade level…**

# ELA/Literacy Model Content Framework Chart
## Grade 3




See handouts for Model Content Frameworks for Math

www.parcconline.org

# PARCC Model Content Framework
# Math Example – Grade 3

## Key Advances

**Students in grade 3 begin to enlarge their concept of number by developing an understanding of fractions as numbers. This work will continue in grades 3-6, preparing the way for work with the complete rational number system in grades 6 and 7.**

## Fluency Expectations or Culminating Standards

**Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory. (3.OA.7)**

## Major Within-Grade Dependencies

**Students must begin work with multiplication and division (3.OA) at or near the very start of the year to allow time for understanding and fluency to develop.**

## Connections Among Standards, Clusters, or Domains

**Students' work with partitioning shapes (3.G.2) relates to visual fraction models (3.NF).**

## Opportunities for In-Depth Focus

**Word problems involving equal groups, arrays, and measurement quantities can be used to build students' understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations. (3.OA.3)**

## Connecting Content and Practices

**Mathematical practices should be evident throughout mathematics instruction and connected to all of the content areas highlighted above, as well as all other content areas addressed at this grade level.**

Deconstructing Standards

# HOW DO I TRANSLATE STANDARDS INTO SOMETHING I CAN TEACH?

# Relationship between Standards, Scope and Sequence and Unit/Lesson Design

Unit and Lesson Design -How

Scope and Sequence - When

Standards – What and Why

# Deconstructing Standards

- Teachers can't teach standards themselves
- Standards need to be broken down into component parts that can be used to identify student outcome or learning goals  that can be used to design units/lessons
- The process of breaking down standards is called "deconstructing" standards

Here's a simplified illustration of the process

https://www.youtube.com/watch?v=rl5VmqiciIo

# So what?

- An important outcome of deconstructing or “unpacking” standards is that learning outcomes can be made transparent for both students and parents.
- One method of making this understandable is “I can” statements that make the outcome clear- one example

http://www.thecurriculumcorner.com/thecurriculumcorner123/2014/10/22/everything-ccss-i-can-for-k-6-grades/

# Now What?

- Clear “I can” or deconstructed standards helps teachers think through how they will be able to have students demonstrate that they have in fact learned the knowledge or skill
- Teachers use these deconstructed standards to choose or develop formative and summative assessment tools to measure learning outcomes

Formative/Summative Assessment and DOK

# HOW DO STUDENTS DEMONSTRATE LEARNING IN THE CLASSROOM

# One additional thing about "deconstructing" standards

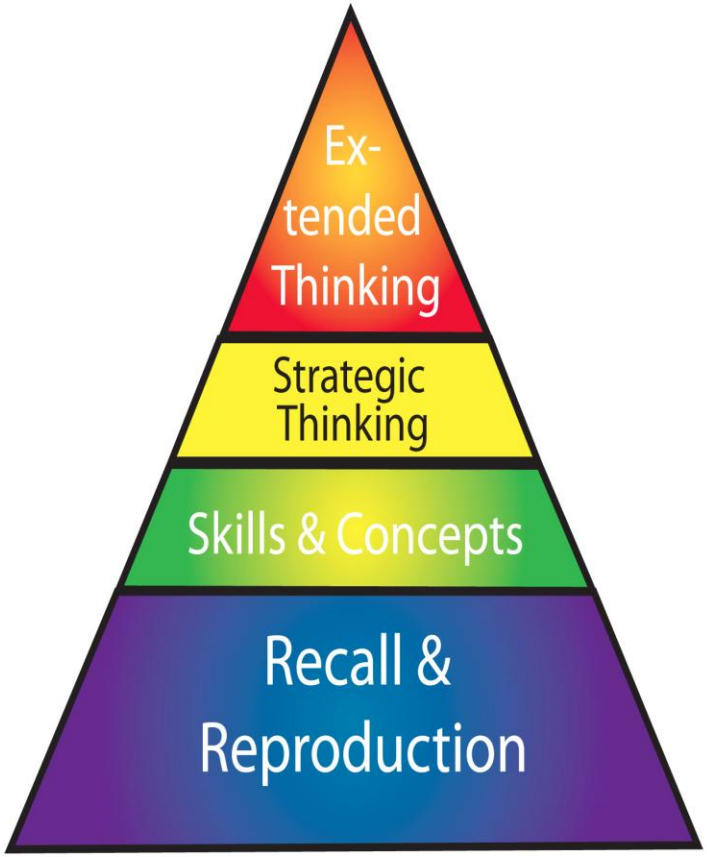
- In addition to identifying what students know or can do as a result of a lesson is figuring out how the student will show this –
- What KIND of a task is it – how complex is it?
- Teachers were trained on Bloom's Taxonomy – or if they have been more recently trained on Depth of Knowledge or DOK
- DOK -Adapted from the model used by Norm Webb, University of Wisconsin, to align standards with assessment

# What is Depth of Knowledge?

- The degree of depth or complexity of knowledge reflected in the content standards and assessments

- How deeply a student needs to understand the content for a given response/assessment

# Webb's Depth of Knowledge (DOK)




4. Extended Thinking: Students take information from multiple sources and are asked to apply this information to a new task that requires complex thinking, usually over time. (Ex. A project-based-learning activity or a research paper. )

3. Strategic Thinking: Can the student think beyond the text to his world or another text for an answer, or adapt the text to create something new? Can he explain, generalize, or connect ideas from one text to another? Can he evaluate text, formulate opinions, and then explain them?

2. Skills & Concepts: Can the student think beyond recalling a fact? Students may be asked to interpret, infer, classify and categorize, organize, compare & contrast, and determine whether fact or opinion, predict, determine cause & effect, apply, reconstruct or sequence a story.

1. Recall & Reproduction: Can the student recall a simple fact from the story? Requires a shallow understanding and no analysis.

# Video Overview and Examples

http://schools.nyc.gov/Academics/CommonCoreLibrary/ProfessionalLearning/DOK/default.htm

# DOK and Classroom Instruction/Assessment

- The next steps in “deconstructing” a standard is to figure out how complex a task is being taught and finding a way to teach and assess the new learning at the same level of complexity

# DOK generalizations:

- **If there is only one correct answer, it is probably level DOK 1 or DOK 2**
  - DOK 1: you either know it (can recall it, locate it, do it) or you don't
  - DOK 2 (conceptual): apply one concept, then make a decision before going on *applying a second concept*

- **If more than one solution/approach, requiring evidence, it is DOK 3 or 4**
  - DOK 3: Must provide supporting evidence and reasoning (not just HOW solved, but WHY – explain reasoning)
  - DOK 4: all of "3" + use of multiple sources or texts

# Recall and Reproduction: Level 1

- DOK 1 requires recall of information, such as a fact, definition, term, or performance of a simple process or procedure, as well as performing a simple algorithm or applying a formula.
- Answering a Level 1 item can involve following a simple, well-known procedure or formula. Simple skills and abilities or recall characterize DOK 1.

# DOK Level 1 Examples

1. Identify a diagonal in a geometric figure.
2. Find the area of a rectangle.
3. Convert scientific notation to decimal form.
4. Measure an angle.
5. Identify elements of music using musical terminology
6. Identify basic rules for participating in simple games and activities

# Skills/Concepts: Level 2

- DOK 2 includes the engagement of some mental processing beyond recalling or reproducing a response. Items require students to make some decisions as to how to approach the question or problem.
- Keywords distinguishing Level 2 may include classify, organize, estimate, make observations, collect and display data, and compare data.
- These actions imply more than one mental or cognitive process/step.

# DOK Level 2 Examples

1. Compare two sets of data using the mean, median, and mode of each set.
2. Write summaries that contain the main idea of the reading selection and pertinent details.
3. Determine a strategy to estimate the number of jelly beans in a jar.
4. Explain how two characters react differently to the same event.
5. Organize a set of data and construct an appropriate display.

# Strategic Thinking: Level 3

- DOK 3 requires reasoning, planning, using evidence, and more demanding cognitive reasoning. The cognitive demands at Level 3 are complex and abstract.
- An assessment item that has more than one possible answer and requires students to justify the response they give would be a Level 3.

# DOK Level 3 Examples

1. Solve a multiple-step problem and provide support with a mathematical explanation that justifies the answer.
2. Compare consumer actions and analyze how these actions impact the environment.
3. Analyze or evaluate the effectiveness of literary elements (e.g. characterization, setting, point of view, conflict and resolution, plot structures)
4. Provide a mathematical justification when a situation has more than one outcome. Interpret information from a series of data displays.
5. Explain how changes in the dimensions affect the area and perimeter/circumference of geometric figures.

# Extended Thinking: Level 4

- DOK 4 requires high cognitive demand and is very complex. It requires complex reasoning, planning, developing, and thinking.
- Students are expected to make connections - relate ideas *within* the content or *among* content areas — and select or devise one approach among many alternatives on how the situation can be solved.
- Due to the complexity of cognitive demand, DOK 4 often requires an extended period of time.

# Level 4 Examples

1. Specify a problem, identify solution paths, solve the problem, and report the results.
2. Collect data over time taking into consideration a number of variables and analyze the results.
3. Gather, analyze, organize, and interpret information from multiple (print and non print sources) to draft a reasoned report
4. Analyzing author's craft (e.g., style, bias, literary techniques, point of view)

# Depth of Knowledge

Level 1 Level 2 Level 3 Level 4

(recall) (skill/concept) (strategic thinking) (extended thinking)

Math

A car has traveled 23, 456.2 miles. The next exit is 1000 feet ahead. What will the mileage gauge read then?

Level 2

Identify a real world problem that requires the application of mathematics, describe the possible procedure(s) for solving this problem, and explain the outcome and your reasoning.

Level 4

Mr. Baxter wants to fence in an area for his dog. He can afford 36 feet of fencing. He is considering several different shapes for the area but wants the shape to have four sides that are whole number lengths and contain four right angles. What is the largest area that Mr. Baxter can enclose with 36 feet of fencing?

Level 3

PARCC

Partnership for Assessment of Readiness for College and Careers

# FAQ

## In ELA/literacy,

the PARCC assessments will look much deeper at student writing abilities and critical-thinking skills

## In Math,

students will have to solve complex problems, show their work, and demonstrate how they solved the problem. Unlike pencil-and-paper bubble tests, these new assessments will more closely resemble high-quality classroom work. PARCC will measure what children are learning, in a more meaningful way.

□

# DOK Levels and PARCC

Generally speaking from PARCC item analysis

- **ELA**
  - More than 80 percent of items will be DOK 3
- **MATH**
  - More than 75 percent of items will be DOK 2

# Higher Expectations of Applied Performance – PARCC

## ELA/Literacy

- Read sufficiently complex texts independently
- Write effectively to sources
- Build and present knowledge through research

## Math

- Solve problems: content and mathematical practice
- Reason mathematically
- Model real-world problems
- Have fluency with mathematics

# USING DECONSTRUCTED STANDARDS TO PLAN INSTRUCTION AND ASSESSMENTS

# Ainsworth uses this language in an Ed Week Blog* post:

- After the "unwrapping" step is completed, teachers next prepare a graphic organizer (outline, bulleted list, concept map, or chart) as a visual display of the "unwrapped" concepts and skills. They then determine each skill's *approximate* levels of Bloom's Taxonomy and Webb's Depth of Knowledge. This reveals each skill's level of cognitive rigor. (Note: Both taxonomies are used to assist educators in accurately matching the identified levels of cognitive rigor to selected- and constructed-response questions when they later write their unit assessment.)
- The majority of educators I've worked with prefer using a three-column chart in which the concepts are listed in the first column, the skills in the second column, and the levels of rigor in the third. In this way, they can see "at a glance" all of the learning targets and corresponding levels of cognitive rigor that will be the focus for instruction and assessment during the unit. In addition, the concepts listed in the first column provide many of the unit's vocabulary terms

*

http://blogs.edweek.org/edweek/finding_common_ground/2015/03/unwrapping_the_standards_a_simple_way_to_deconstruct_learning_outcomes.html

# Sample Template Including DOK

## Unwrapping A Power Standard

| **Step One: Focus on the Key Words** *What are the key skills & concepts in the power standard?* | | | |
|---|---|---|---|
| Power Standard (New Illinois Learning Standard): | | | |
| **Step Two: Map It Out** | | | **Step Three: Analyze the Target** *Bloom's, Marzano's, Webb's* |
| **What Will Student Do?** *(Skills)* | **With What Knowledge or Concepts?** | **In What Context?** | **Level of Thinking** |
| | | | |
| | | | |
| Implied learning targets: | | | |
| Vocabulary: | | | |

# The BIG idea or goal

- Once learning objective(s) are identified including the DOK level, teachers can create a learning unit and lessons aligned to the desired unit outcome.
- Good examples of CCSS aligned unit and related lesson designs can be found in the ISBE model math curriculum project

  http://www.livebinders.com/play/play?id=953710

# Next Steps in understanding Classroom Instruction/Assessment Design

- Review Lessons on ISBE Math Model Curriculum
- ISBE and Achieve.org have unit/lesson design rubrics that will help understand high quality lesson planning that meets CCSS Standards called EQUIP rubrics