

DEVELOP MINDS... DELIVER DREAMS

TEACH

Teacher Quality & Retention Program 2013



Why the Common Core? How these Standards are Different

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AGREEMENTS

- Be open minded and respectful of all ideas
- Participate fully
- Work collaboratively with your groups
- Learn, reflect, implement and HAVE FUN!
- Limit comments to 1 minute (or less)
- Utilize the parking lot as needed



WORD SCRAMBLE COMPETITION

When I say go...

- Turn over your paper and complete every item as quickly as you can
- Stand when you are finished
- The people who finish fastest with all correct answers win!



Discussion questions

- What are your thoughts about the fairness of the competition?
- How would you construct the competition to make it more fair?
- What correlations can you make between this competition and the Common Core State Standards?



K-W-L

• K- What do you know about the Common Core State Standards?

• W- What do you want to know about the Common Core State Standards?

• L- What have you learned about the Common Core State Standards?



Background of the Common Core

Initiated by the National Governors Association (NGA) and Council of Chief State School Officers (CCSSO) with the following design principles:

- Result in College and Career Readiness
- Based on solid research and practice evidence
- Fewer, clearer, and higher



How did CCSS emerge?

- State led initiative
- National Governors Association and Council of Chief School State Officers collaborated to create CCSS
- Took best of state standards and internationally benchmarked them
- 2009 College and Career Anchor Standards released
- 2010 CCSS released
- Not national standards
- Different states are at different levels of implementation.



Why were these standards created?

Before Common Core State Standards we had standards, but rarely did we have standards-based instruction.

- ✓ Long lists of broad, vague statements
- ✓ Mysterious assessments
- ✓ Coverage mentality



✓ Focused on teacher behaviors — "the inputs"

Results

Previous state standards did not improve student achievement.

- ✓ Gaps in achievement
- ✓ Gaps in expectations
- ✓ NAEP results
- ✓ ACT 2012 data College Readiness Benchmark

All 4 subject areas: 25%

✓ College remediation rates



Principles of the CCSS

Fewer - Clearer - Higher

 Aligned to requirements for college and career readiness

Based on evidence

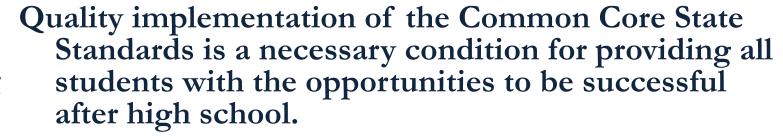


Honest about time

What are our expectations?

Based on the beliefs that

- A quality education is a key factor in providing all children with opportunities for their future
- It is not enough to simply complete school, or receive a credential students need critical knowledge and skills
- This is not a 12th grade or high school issue. It is an education system issue.





Name the standards

- Read the Standards for Literacy in History/Social Studies and Technical Subjects
- "Name" each standard with a 1-5 word phrase
- First individually (10 min)...table talk...share out



Diving into the Content Area Literacy ShiftsIntroduction

ELA/Literacy: 3 shifts

- 1. Building knowledge through content-rich nonfiction
- 2. Reading, writing, and speaking grounded in **evidence from text,** both literary and informational

3. Regular practice with **complex text** and its **academic** language



Shift #1: Building Knowledge Through Content-Rich Nonfiction



Building Knowledge Through Content-rich Nonfiction – Why?

- Students are required to read very little informational text in elementary and middle school.
- Non-fiction makes up the vast majority of required reading in college/workplace.
- Informational text is harder for students to comprehend than narrative text.
- Supports students learning how to read different types of informational text.

Distribution of Literacy and

Informational Texts

Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework

Grade	Literary	Informational
4	50%	50%
8	45%	55%
12	30%	70%

Source: National Assessment Governing Board. (2008). Reading framework for the 2009 National Assessment of Educational Progress. Washington, DC: U.S. Government Printing Office.



Shared Responsibility

•"The grades 6–12 standards are divided into two sections, one for ELA and the other for history/social studies, science, and technical subjects. This division reflects the unique, time-honored place of ELA teachers in developing students' literacy skills while at the same time recognizing that teachers in other areas must have a role in this development as well."

the Common Core State Standards for English Language Arts and Literacy in History/ Studies, Science, and Technical Subjects, page 4.

All Teachers Support Literacy

- research shows <u>students need</u> to <u>be proficient in reading complex</u> <u>informational texts, independently, in a variety of content areas in order to be college and career ready.</u>
- Most of the required reading in college and workforce training programs is informational in structure and challenging in content
- <u>Postsecondary education</u> programs typically provide students with both a <u>higher volume of such reading</u> than is generally <u>required in K–12</u> schools and <u>comparatively little scaffolding</u>.
- The 2009 reading framework of the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessment as students advance through the grades.

Shift #2: Reading, Writing and Speaking Grounded in Evidence From Text, Both Literary and Informational



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.
- Being able to locate and deploy evidence are hallmarks of strong readers and writers.



Writing About Biology

The Double Helix

The following excerpts are from The Double Helix, James Watson's account of the discovery of the structure of DNA.

 Γ he α-helix had not been found by staring at X-ray pictures; the essential trick, instead, was to ask which atoms like to sit next to each other. In place of pencil and paper, the main working tools were a set of molecular models superficially resembling the toys of preschool children. . . .

I went ahead spending most evenings at the films, vaguely dreaming that at any moment the answer would suddenly hit me. . . .

Not until the middle of the next week, however, did a nontrivial idea emerge. It came while I was drawing the fused rings of adenine on paper. Suddenly I realized the potentially profound implications of a DNA structure in which the adenine residue formed hydrogen bonds similar to those found in crystals of pure adenine. If DNA was like this, each adenine residue would form two hydrogen bonds to an adenine residue related to it by a 180-degree rotation. Most important, two symmetrical hydrogen bonds could also hold together pairs of guanine, cytosine, or thymine.

I thus started wondering whether each DNA molecule consisted of two chains with identical base sequences held together by hydrogen bonds between pairs of identical bases. There was the complication, however, that such a structure could not have a regular backbone since the purines (adenine and guanine) and the pyrimidines (thymine and cytosine) have different shapes.

Despite the messy backbone, my pulse began to race. . . . The existence of two intertwined chains with identical base sequences

could not be a chance matter. Instead it would strongly suggest that one chain in each molecule had at some earlier stage served as the template for the synthesis of the other chain.

[One day elapsed during which American crystallographer Jerry Donahue convinced Watson that his model was incorrect.]

When I got to our still empty office the following morning, I quickly cleared away the papers from my desk top so that I would have a large, flat surface on which to form pairs of bases held together by hydrogen bonds. Though I initially went back to my like-with-like prejudices, I

saw all too well that they led nowhere. When Jerry came in I looked up, saw that it was not Francis, and began shifting the bases in and out of various other pairing possibilities.

Suddenly I became aware that an adenine-thymine pair held together by two hydrogen bonds was identical in

shape to a guanine-cytosine pair held together by at least two hydrogen bonds. All the hydrogen bonds seemed to form naturally; no fudging was required to make the two types of base pairs identical in shape. Quickly I called Jerry over to ask him whether this time he had any objection to my new base pairs. When he said no, my morale skyrocketed. . . .

Upon his arrival Francis did not get more than halfway through the door before I let loose that the answer to everything was in our hands. . . .

Write

James Watson used time away from his laboratory and a set of models similar to preschool toys to help him solve the puzzle of DNA. In an essay discuss how play and relaxation help promote clear thinking and problem solving.

124 James D. Watson, excerpted from The Double Helix. Copyright © 1968 James D. Watson. Reprinted with permission of Atheneum Publishers, an imprint of Macmillan Publishing Company.

Example?

James Watson used time away from his laboratory and a set of models similar to preschool toys to help him solve the puzzle of DNA. In an essay discuss how play and relaxation help promote clear thinking and problem solving.



Sample Assessment Question

for Informational Text:

Pre-Common Core State Standards

- High school students read an excerpt of James D. Watson's *The Double Helix* and respond to the following:
- James Watson used time away from his laboratory and a set of models similar to preschool toys to help him solve the puzzle of DNA. In an essay discuss how play and relaxation help promote clear thinking and problem solving

Common Core State Standards

- High school students read an excerpt of James D. Watson's *The Double Helix* and respond to the following:
 - By the end of this article, James Watson felt that "the answer to everything was in our hands."
- What was the answer? What problem was Watson trying to solve? What steps or process did he use to discover the answer? What mistakes did he make along the way to his discovery? What was his response to this mistake?



Shift #3:Regular Practice with Complex Text and Its Academic Language



Regular Practice With Complex text and Its Academic Language: Why?

- Gap between complexity of college and high school texts is huge.
- What students can read, in terms of complexity, is greatest predictor of success in college (2006 ACT study).
- Too many students are reading at too low a level.
- Standards include a staircase of increasing text complexity from elementary through high school.
- Standards also focus on building general academic yocabulary so critical to comprehension.

Determining Text Complexity

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality

and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the ques-

tions posed)

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.



Which text is more complex?

.Text 1

Centripetal force and centrifugal force, action-reaction force pair associated with circular motion. According to Newton's first law of motion, a moving body travels along a straight path with constant speed (i.e., has constant velocity) unless it is acted on by an outside force. For circular motion to occur there must be a constant force acting on a body, pushing it toward the center of the circular path. This force is the centripetal (centerseeking) force. For a planet orbiting the sun, the force is gravitational; for an object twirled on a string, the force is mechanical; for an electron orbiting an atom, it is electrical. The magnitude F of the centripetal force is equal to the mass m of the body times its velocity squared v 2 divided by the radius r of its path: F=mv2/r. According to Newton's third law of motion, for every action there is an equal and opposite reaction. The centripetal force, the action, is balanced by a reaction force, the centrifugal (center-fleeing) force. The two forces are equal in magnitude and opposite in direction. The centrifugal force does not act on the body in motion; the only force acting on the body in motion is the centripetal force. The centrifugal force acts on the source of the centripetal force to displace it radially from the center of the path. Thus, in twirling a mass on a string, the centripetal force transmitted by the string pulls in on the mass to keep it in its circular path, while the centrifugal force transmitted by the string pulls outward on its point of attachment at the center of the path.



Text 2 HAVE you ever let the words "centrifugal force" escape from your lips? Shame on you: you might as well have called it the "hocus-pocus force". You are in good company, though. Scientists, engineers and, we confess, even New Scientist, sometimes let the c-word slip.

Why can't we help ourselves? It's all down to our subjective experience getting on top of our scientific judgment. Drive round a curve too fast and you feel as if you're being flung outwards. Turn right sharply, and your sunglasses slide off to the left along the dashboard. And if you enjoy fairground rides you will know that on the "sticky wall" you end up pinned against the inside of a vertical spinning drum as the floor drops away.

So, intuition aside, what's really going on? It's all down to Isaac Newton's laws of motion. Stationary objects, Newton pointed out, stay put, and moving objects travel forever with the same velocity unless some force acts on them.

As you round a bend, you may feel you are being flung outwards but in reality you are just trying to go straight on. Indeed, if you were pushed out of the car, gangster-movie style, while Newton hovered overhead in a police helicopter, he would see you continue in a straight line until you hit the ground.

What we should be talking about here is centripetal rather than centrifugal force. This name comes from the Latin words meaning "centre" and "seeking". The centripetal force is what makes objects move in a circle. Our notional car, planes looping-the-loop, even planets moving around the Sun—they would all simply fly of at a tangent were it not for the force's inward pull.

What are the Qualitative Features of Complex Text?

- Subtle and/or frequent transitions
- Multiple and/or subtle themes and purposes
- Density of information
- Unfamiliar settings, topics or events
- Lack of repetition, overlap or similarity in words and sentences
- Complex sentences
- Uncommon vocabulary
- Lack of words, sentences or paragraphs that review or pull things together for the student
- Longer paragraphs
- Any text structure which is less narrative and/or mixes structures

Scaffolds for Reading Complex Text

- Chunking
- Annotation
- Reading and rereading
- Read aloud
- Strategic think aloud
- Heterogeneous small groups
- Recording
- Pre-prepping struggling readers to support confidence and participation
- Paraphrasing and journaling
- Note taking



Close Analytic Reading

- Requires prompting students with text-dependent questions to unpack complex text and gain knowledge.
- Text dependent questions require text-based answers evidence.
- Not teacher summarizing text, but guiding students through the text for information.
- Virtually every standard is activated during the course of every close analytic reading exemplar through the use of text dependent questions.
- Supports fluency



Sample: Quick Annotation Strategy

- ? = Ask a question
- "The text mentions a the DNA study. What does DNA stand for?"

!!! = Note an interesting passage

- "I didn't realize that tapeworms can grow to 23 meters!"
- C = connection to another text or piece of evidence
- "The Ebola virus is like the AIDS virus we read about yesterday because...."
- (check)= Access prior knowledge; I already knew that!
- "I knew that photosynthesis required water."
 - X = Challenge your own thinking, new information
- "I had no idea that Nobel invented dynamite."
 - * = Reason that looks important
- "I'll need this piece of evidence about Triceratops to support my thesis."
- THURGOOD MARSHALL COLLEGE FUND
- "Box it" = Remember words you don't know, are repeated, or you just like
- "I've seen the word ignominious several times, and I need to look it up."

ELA/Literacy Shifts in action

http://www.youtube.com/watch?v=xV3rYB79lcU

https://www.teachingchannel.org/videos/ninth-grade-biology-lesson



Activity: Create your own Venn

- Compare and contrast two classrooms in the videos
- Share notes and discuss
- Create your own Venn diagram using hula hoops, index cards and markers/pens



Shifts Mean a Change in Practice!

•From...

•Content knowledge primarily from teacher-led lecture

•To...

•Content knowledge comes from a *balance* of **reading**, **writing** lecture, and handson experience



A closer look at Text Dependent Questions...



Text-Dependent Questions are not...

- Low-level, literal, or recall questions
- Focused on comprehension strategies
- ➤ Just questions...



Text-Dependent Questions...

- Can *only* be answered with evidence from the text.
- Can be literal (checking for understanding) but must also involve analysis, synthesis, evaluation.
- Focus on word, sentence, and paragraph, as well as larger ideas, themes, or events.
- Focus on difficult portions of text in order to enhance reading proficiency.



Can also include prompts for writing and discussion questions.

Global Warming Article





Non-Examples and Examples

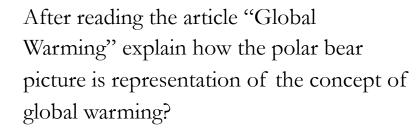
Not Text-Dependent

•In the article "Global Warming" why do you think they used the picture of the polar bear?

•Why is global warming a problem?

The article "Global Warming" they discuss greenhouse gases. What are greenhouse gases?

Text-Dependent



What changes in the Earth's ecosystem are directly effected by global warming and how do these changes interact with each other to alter the overall ecosystem?

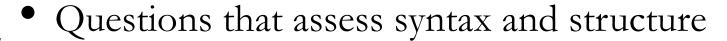
How does human activity effect greenhouse gases and in turn effect overall global warming?



3 Types of Text-Dependent Questions

When writing or reviewing a set of questions, consider the following three categories:

- Questions that assess themes and central ideas
- Questions that assess knowledge of vocabulary





Creating Text-Dependent Questions

Step 1: Identify the core understandings and key ideas of the text.

Step 2: Start small to build confidence.

Step 3: Target vocabulary and text structure.

Step 4: Tackle tough sections head-on.

Step 5: Create coherent sequences of text-dependent questions.

Step 6: Identify the standards that are being addressed.



Step 7: Create the culminating assessment.

"Text Dependent Questions" Activity



TDQ- Activity Instructions

- Read "Sexual Reproduction in Flowering Plants"
- Evaluate questions using:
 - ✓ "Checklist for Evaluating Question Quality"
 - ✓ 6-8 Literacy standards for Science <u>www.corestandards.org</u>
 - ✓Bloom's Taxonomy
- Discuss checklist with your group
- Explain what changes you would make to the set of questions to make them TDQ



Summary Activity: Word Sort

- Use items from bags for this activity
- Place sentence strips with categories written on them on the wall
- Sort through typed words/phrases and place them under the category to which they belong



POST ASSESSMENT

QUESTIONS & ANSWERS



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