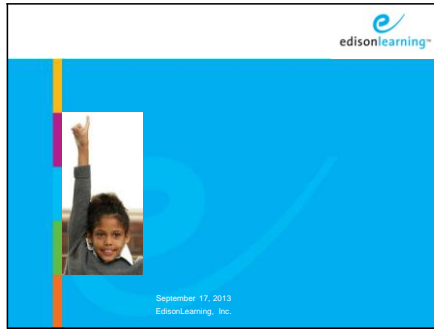


Slide 1



Slide 2

Outcomes


- **Raise** rigor in classrooms through an understanding of Depth of Knowledge
- **Develop** an understanding of Webb's Depth of Knowledge
- **Explain** how DoK impacts instruction

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Slide 3

How do you define RIGOR?

- As a table, on the sticky notes provided, **define rigor**.
- Reflect on the following questions:
 - What is the difference between a learning task that is rigorous and one that is challenging?
 - How do you know when learning is rigorous for students?

A photograph of three students (two girls and one boy) sitting at a table, looking at a document or sticky notes. They appear to be in a collaborative learning environment.

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- **Rigor** is the goal of helping students develop the capacity to understand content that is complex, ambiguous, provocative and personally or emotionally challenging.

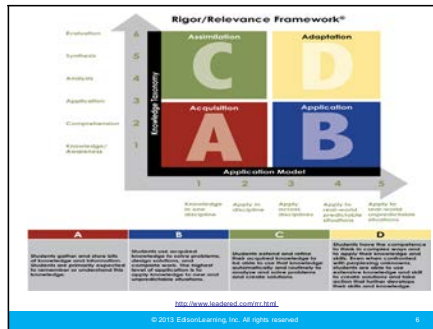
Teaching What Matters Most: Standards and Strategies for Raising Student Achievement by Richard W. Strong, Harvey F. Silver and Matthew J. Patni, ASCD, 2001

- “Learning is optimized when students are involved in activities that require complex thinking and the application of knowledge.”

- Hess, Carlock, Jones, & Walkup, 2009

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	Level 1	Level 2	Level 3	Level 4
<i>Elementary Investigation</i>	List the ingredients for a project and identify needs and resources.	Collect the materials for a project and assign.	Investigate how many people are coming to dinner and formulate the appropriate amounts of ingredients for 8 people.	Design a plan to feed the entire class using the following information: one jar of jelly makes 10 sandwiches, one set of jelly serves 8, and one loaf of bread contains 18 slices.
<i>Middle School Science</i>	Define the following terms: electrical generator, electrical motor, magnetic field, magnetic current.	Compare and contrast how an electrical motor operates to how an electrical generator operates.	Design and conduct an experiment to demonstrate that electrical currents produce magnetic forces.	Research and design a system to lift heavy objects using the conversion of electrical energy to mechanical energy. Build a prototype of the system using materials found in the classroom.
<i>U.S. History</i>	Master the U.S. presidents in order.	Using the left and right political positions of the presidents of the 19 th and 21 st centuries as a basis to make political standing.	Hypothesize how Dwight D. Eisenhower would react to today's world political situations.	Analyze the strategies and effectiveness of George H. W. Bush's war strategies in the Persian Gulf with the war strategies of George W. Bush in Iraq.
<i>High School Arts</i>	Name several composers from the Baroque and Classical periods.	Describe differences between the Baroque and Classical periods.	Critique, compare, and contrast pieces of music from the Baroque and Classical periods.	Choose a period and develop a 16 measure piece of music from that style.

http://media.nespdfs/hsapTab%20PDF/hsapTab_for_09.pdf


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Slide 11

Evaluating Rigor: Activity

- Use the Cognitive Rigor Matrix in your participant's packet to evaluate the level of each task.
- With a partner, sort the cards according to where each task falls within Depth of Knowledge Matrix.
- Once completed, discuss why you and your partner(s) determined these cards fell within these DOK levels. Reflect upon how each task would look if the rigor were raised or lowered.



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Slide 12

Reference standard number	Standard	DOK rating
3	Writing Standards	3
3.1	Text Types and Purposes	3
3.1a	1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	3
3.1b	a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.	3
3.1c	b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.	4

Figure 8. Percent of Common Core ELA and Literacy Standards at each Depth of Knowledge Level

Depth of Knowledge Level	Percent
Level 1: Recall and Reproduction	7%
Level 2: Skills and Concepts	12%
Level 3: Strategic Thinking	63%
Level 4: Extended Thinking	18%

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Reference number	Standard	DOK rating
3.64	c. 1) Composite Functions. For example, if T is the temperature in the atmosphere as a function of height, and H is the height of a weather balloon as a function of time, then $H \circ T$ is the temperature at the location of the weather balloon as a function of time.	3
3.66	2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.*	3
3.5	Build new functions from existing functions	2

Figure 12. Percent of Common Core Mathematics Standards at each Depth of Knowledge Level

Depth of Knowledge Level	Percent
Level 1	21%
Level 2	39%
Level 3	20%
Level 4	20%

Slide 14

STRIVE HI, SLOs, and Supporting Teachers

- Grades K-2: DoK Level 2
 - Grades 3-12: DoK Level 3 or 4
-
- What successes do you foresee for your students/teachers?
 - What challenges or misconceptions do you anticipate?
 - What resources do you have to overcome those challenges? What resources might you need?
 - What could you take away or modify from these activities?
 - How do we lead teachers towards rigorous instruction? What steps/strategies might be involved? What would be the first step?


Slide 15

Closure

- How would your understanding of DoK help teachers when writing and or evaluating SLOs?
- How would teachers' understanding of Webb's DoK help their students in creating goals?
- *How can school leaders recognize, encourage and support rigorous teaching and learning throughout the school?*

Slide 16

Questions & Answers



A photograph of a man's face from the nose up, looking upwards at a glowing light bulb. The background is a plain, light-colored wall.

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