The Common Core State Standards for Mathematics

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

Transitioning to the Common Core

SHIFT #1: Focus

Similar to the Oregon standards in Mathematics, the intent of the CCSSM is to *narrowly and deeply focus* the time and energy spent in the math classroom.

The CCSSM emphasizes concepts prioritized in the standards so that students reach strong foundational knowledge and deep conceptual understanding and are able to transfer mathematical skills and understanding across concepts and grades.

The Three-Legged Stool

In order to focus on content, you must teach to address all three legs of mathematical learning:

- Conceptual Understanding
- Computational Fluency
- Problem-Solving

Draft Emphases (Sample – Grade 6)

Ratios and Proportional Relationships
[m] Understand ratio concepts and use ratio reasoning to solve problems.

The Number System
[m] Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
[a] Compute fluently with multi-digit numbers and find common factors and multiples.
[m] Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations
[m] Apply and extend previous understandings of arithmetic to algebraic expressions.
[m] Reason about and solve one-variable equations and inequalities.
[m] Represent and analyze quantitative relationships between dependent and independent variables

Geometry
[s] Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability
[a] Develop understanding of statistical variability.
[a] Summarize and describe distributions.

Activity: Focus
(find a partner or small group at your grade level)

Grades K-2
- Read through the Critical Areas page of your standards
- Discuss with a partner how you could better address all three legs of the "mathematics" stool in these areas

Grades 3-HS
- Pick up the appropriate Emphases page from the front
- Look at the "m" clusters and discuss how you could better address all three legs of the "mathematics" stool in these areas

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SHIFT #2: Coherence

Deep conceptual understanding of core content at each grade is critical for student success in subsequent years.

Each standard is not a new event, but an extension of previous learning. For example, fractions and multiplication build across grade levels and students can scaffold new understanding onto foundations built in previous years.
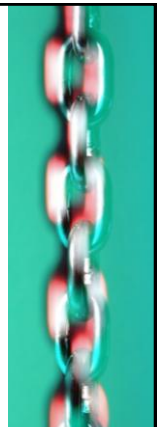
Activity: Coherence
(with same partner or small group at your grade level)

Grades K-2
- Look at the standards not in your critical areas (may fall in the same domain but be listed at the end)
- How are these connecting to your grade level while introducing or reinforcing other grade level skills?

Grades 3-8
- Look at the "s" and "a" clusters. How are these connecting to your grade level while introducing or reinforcing other grade level skills?

Activity: Coherence (Cont)
(with same partner or small group at your grade level)

High School
- Only your major emphases are listed on the Emphases handout.
- Coherence may come from connecting and reinforcing previous grade level standards.
- How do the additional and supporting (non-major) standards fit into your program(s)?

Shift #4: Modeling

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making
- Choose and use appropriate mathematics to analyze situations
- Better understanding real-world scenarios involving math

Teachers at all grade levels should identify opportunities for students to apply math concepts in "real world" situations.

Activity: Modeling

1. Locate your goldenrod stations activity template.

2. Visit between 4-6 stations.
   ❖ Pink Cards = Elementary Content
   ❖ Blue Cards = Middle/High School Content

3. While visiting stations, have others sign off on the correctness of your answer. Nobody can sign your paper more than twice.

4. When finished, return to your seat and answer the two questions at the bottom of the page.

Performance Task
Choose a new partner or small group:
Elementary or Secondary

1. Pick up the appropriate performance task up front.
   Options: Elementary (4th Grade) or High School

2. Understand purpose and placement of task in classroom instruction and assessment.

3. Read/Attempt the task.

4. Discuss implications for classroom instruction.

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