



COMMON CORE

STATE STANDARDS INITIATIVE

PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER

Parent Advisory Council:

Gr. 6-12 CCSS Mathematics Update

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**Let's Get to
the "Core"**



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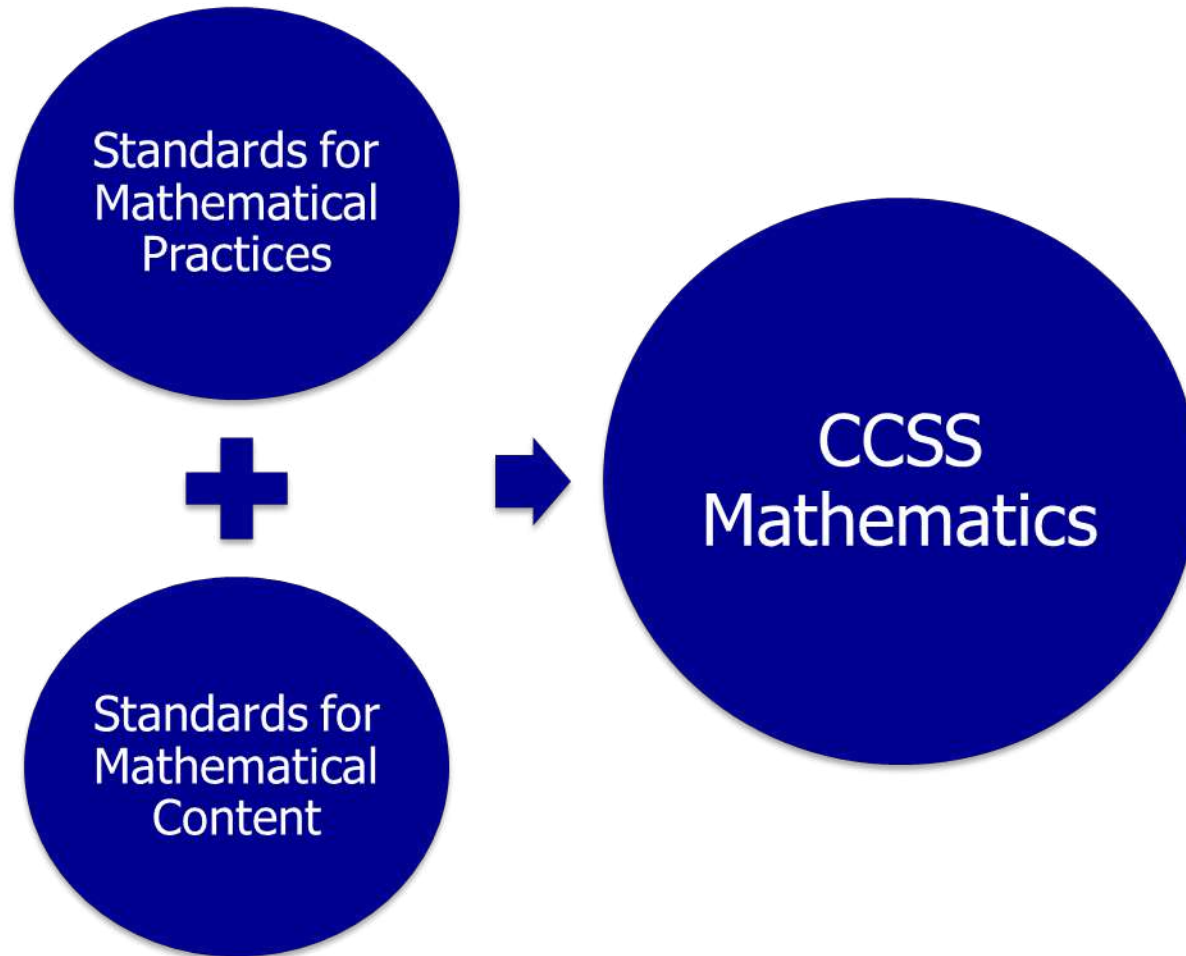
- www.corestandards.org
- On June 2, 2010, NC State Board of Education adopted the
- Common Core State Standards (CCSS)
- in
- K-12 Mathematics.
- **Implementation Year: 2012 – 2013**



Common Core State Standards

The standards which specify the mathematics that *all* students should study in order to be college and career ready.

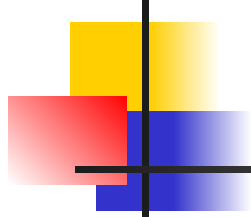
Common Core State Standards for K – 12 Mathematics





Common Core State Standards for Mathematical Practice (K-12)

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



Mathematical practices describe the habits of mind of mathematically proficient students...

- Who is doing the talking?

- Who is doing the math?

Cathy Seeley



Students Must Talk About Their Learning

“MATH TALK”

WINTHROP

MRS. HACKABERRY SAYS THAT TEACHING IS LIKE OPENING CHILDREN'S HEADS...



AND POURING KNOWLEDGE IN, SHE SAYS IF WE KEEP OUR MOUTHS SHUT...



IT WON'T LEAK OUT AGAIN.





Common Core State Standards for Mathematical Content

Standards for Mathematical Content

- Organized into domains that progress over several grades
- K-8 presented by grade level
- High school standards presented by conceptual category
 - Number & Quantity
 - Algebra
 - Functions
 - Modeling
 - Geometry
 - Statistics & Probability

K	1	2	3	4	5	6	7	8	9-12
Counting and Cardinality									
Operations and Algebraic Thinking			Operations and Algebraic Thinking				Expressions and Equations		Algebra
Number & Operations in Base Ten			Number & Operations •Base Ten •Fractions				The Number System		Number and Quantity
Measurement and Data			Measurement and Data				Geometry		Geometry
Geometry			Geometry						
						Statistics and Probability			Statistics and Probability
						Ratio and Proportional Relationships	Functions		Functions



Modeling

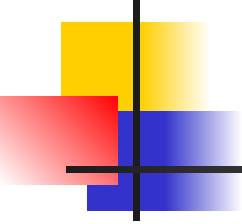




Overview of High School Mathematics Standards (CCSS)

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



Overview of High School CCSS Mathematics Standards (cont'd)

The high school mathematics standards:

- Emphasize ***mathematical modeling***, the use of mathematics and statistics to ***analyze empirical situations***, understand them better, and improve decisions; and
- Identify the mathematics that all students should study in order to be ***college and career ready***.



CCSS Math Grades 9 - 12

- ***Grades 9 – 12*** require the application of mathematics to real world situations and issues.
- ***Modeling*** is a requirement under the Standards for Mathematical Practice.

High School Math

Common Core Course Names

- Common Core Math I (new name anticipated 2013-2014)
 - Algebra I/Integrated Math I – same standards
- Common Core Math II (new name anticipated 2013-2014)
 - Geometry/Integrated Math II – same standards
- Common Core Math III (new name anticipated 2014-2015)
 - Algebra II/Integrated Math III – same standards



Common Core Math I, *II & *III

Conceptual Categories

- Number and Quantity
- Algebra
- Functions
- Geometry
- Statistics and Probability
- Modeling (integrated throughout the categories)

*Honors and Regular Levels

Next Generation Assessments



SMARTER

Balanced Assessment Consortium

Implementation Year: 2014-2015



Martha's Carpeting Task

(Pre-Common Core)

Martha was re-carpeting her bedroom, which was 15 feet long and 10 feet wide. How many square feet of carpeting will she need to purchase?

Types of Items

- Selected response (SR)
- Short constructed response (CR)
- Technology enhanced (TE)
- Extended response items (PT)





The Fencing Task

- Ms. Brown's class will raise rabbits for their spring science fair. They have 24 feet of fencing with which to build a rectangular rabbit pen to keep the rabbits.
 - If Ms. Brown's students want their rabbits to have as much room as possible, how long would each of the sides of the pen be?
 - How long would each of the sides of the pen be if they had only 16 feet of fencing?
 - How would you go about determining the pen with the most room for any amount of fencing? Organize your work so that someone else who reads it will understand it.