A Study of the Standards

Common Core State Standards

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A Study of the Standards: Goal

Participants will gain a common understanding of the Common Core State Standards and develop a strong working knowledge of the standards’ effect on teaching and learning.
A Study of the Standards: Learning Expectations

Session participants will learn . . .

• how to use a set of structured tools to promote conversations and collaboration around the Common Core State Standards.

• how to use the Common Core State Standards to guide decision making about teaching, learning, and assessment.
Common Core State Standards Development

- The Common Core State Standards Initiative is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO).

- The standards were developed in collaboration with teachers, school administrators, and experts to provide a clear and consistent framework to prepare our children for college and the workforce.
Common Core State Standards Development (continued)

- Aligned with college and work expectations;
- Include rigorous content and application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Informed by top-performing countries, so that all students are prepared to succeed in our global economy and society; and
- Evidence and/or research based.

As new research is conducted and implementation of the Common Core State Standards is evaluated, the standards will be revised on a set review cycle.
The Common Core State Standards do not provide . . .

- a complete scope and sequence,
- a course outline, or
- all the essential skills and knowledge students could have.

The Common Core State Standards do . . .

- outline the most important essential skills and knowledge every student needs to master to succeed in college and careers.
Standards: The Structure

Why would it be important for educators to understand the underlying structural components of the Common Core State Standards?
Standards: The Structure

The Common Core State Standards for Mathematics are comprised of two corresponding and connected sets of standards:

1. Standards for Mathematical Practice
   A set of 8 standards that describe the ways in which the mathematical content standards should be approached.

2. Standards for Mathematical Content
   These standards define what students should understand and be able to do in their study of mathematics.
The Structure:
Mathematics
<table>
<thead>
<tr>
<th>Standard title</th>
<th>Narrative description</th>
</tr>
</thead>
</table>

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**Standards: The Structure**

*Standards for Mathematical Content (K–8)*

**Introduction**
- Provides important contextual information and calls out and describes critical areas of focus.

**Domain**
- Large groups of related standards; connects topics and content between and among grade levels.

**Clusters/cluster heading**
- Smaller set of related standards within the domain; identify the primary idea.

**Standards**
- Describe what students should know and be able to do for that cluster heading, domain, and grade level.

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Standards: The Structure

Standards for Mathematical Content (High School)

Conceptual Category
• Provides a coherent view of high school mathematics.

Introduction
• Provides important contextual information.

Domain
• Chunks large groups of related standards; connects topics and content between and among conceptual categories.

Clusters/cluster heading
• Group smaller sets of related standards within the domain; identify the primary idea.

Standards
• Describe what students should know and be able to do for that cluster heading, domain, and conceptual category.

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Structure: High School Mathematics Content Standards

Conceptual category

Introduction

Domain

Cluster heading

Content standard
Standards for Mathematical Practice: K–High School

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

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Mathematical Content Standards: K-8 Domains

**Kindergarten-Grade 2**
- Counting & Cardinality (K only)
- Operations & Alg. Thinking
- Number & Operation in Base 10
- Measurement & Data
- Geometry

**Grades 3-5**
- Operations & Alg. Thinking
- Number & Operation in Base 10
- Number & Operations-Fractions
- Measurement & Data
- Geometry

**Grades 6–7**
- Ratios & Proportional Relationships
- Number System
- Expressions & Equations
- Geometry
- Statistics & Probability

**Grade 8**
- Number System
- Expressions & Equations
- Functions
- Geometry
- Statistics & Probability

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Mathematical Content Standards: High School

Conceptual categories and domains

**Number and Quantity**
- The Real Number System
- Quantities
- The Complex Number System
- Vector and Matrix Quantities

**Algebra**
- Seeing Structure in Expressions
- Arithmetic with Polynomials and Rational Expressions
- Creating Equations
- Reasoning with Equations and Inequalities

**Functions**
- Interpreting Functions
- Building Functions
- Linear, Quadratic, and Exponential Models
- Trigonometric Functions

**Modeling**
Mathematical Content Standards: High School (continued)

Conceptual categories and domains

Geometry
- Congruence
- Similarity, Right Triangles, and Trigonometry
- Circles
- Expressing Geometric Properties with Equations
- Geometric Measurement and Dimension
- Modeling with Geometry

Statistics and Probability
- Interpreting Categorical and Quantitative Data
- Making Inferences and Justifying Conclusions
- Conditional Probability and the Rules of Probability
- Using Probability to Make Decisions

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## Standards: The Structure

<table>
<thead>
<tr>
<th>What?</th>
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The Structure:
English Language Arts and Literacy
Standards: The Structure

The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects are comprised of a set of anchor standards and corresponding grade-specific standards that are organized around 4 strands

- Reading
- Writing
- Listening and Speaking
- Language
Structure

**K–12 English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects**

- **College and career readiness anchor standards**
- **Note on . . . /Introductory paragraph**
- **Strand**
- **Organizing element**
- **Grade-level column**
- **Grade-specific standards**

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Common Core State Standards: English Language Arts K–12

Strand, organizing element, and number of standards

Reading  
Literature (RL) K–12  
Key ideas and details (1-3)  
Craft and structure (4-6)  
Integration of knowledge and ideas (7-9)  
Range of reading and level of text complexity (10)  

Informational Text (RI) K–12  
Key ideas and details (1-3)  
Craft and structure (4-6)  
Integration of knowledge and ideas (7-9)  
Range of reading and level of text complexity (10)  

Foundational Skills (RF) K-5 only  
Print concepts (1)  
Phonological awareness (2)  
Phonics and word recognition (3)  
Fluency (4)  

Writing (W) K–12  
Text types and purposes (1-3)  
Production and distribution of writing (4-6)  
Research to build and present knowledge (7-9)  
Range of Writing (10)  

Speaking and Listening (SL) K–12  
Comprehension and collaboration (1-3)  
Presentation of knowledge and ideas (4-6)  

Language (L) K–12  
Conventions of Standard English (1-2)  
Knowledge of Language (3)  
Vocabulary Acquisition and Use (4-6)  

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Common Core State Standards: Literacy in History/Social Studies, Science, and Technical Subjects

Strand, organizing element, and number of standards

**Reading**

- **History/Social Studies (RH) 6–12**
  - Key ideas and details (1-3)
  - Craft and structure (4-6)
  - Integration of knowledge and ideas (7-9)
  - Range of reading and level of text complexity (10)

- **Science and Technical Subjects (RST) 6–12**
  - Key ideas and details (1-3)
  - Craft and structure (4-6)
  - Integration of knowledge and ideas (7-9)
  - Range of reading and level of text complexity (10)

**Writing**

- **History/Social Studies, Science, and Technical Subjects (WHST) 6–12**
  - Text types and purposes (1-3)
  - Production and distribution of writing (4-6)
  - Research to build and present knowledge (7-9)
  - Range of Writing (10)

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Alignment Is More Than . . .

• A chart
• A textbook correlation
• A scope and sequence
• A curriculum guide
• A testing plan

These things imply alignment, but they do not give us alignment.
A Basic Alignment Principle

Adapted from the work of Fenwick English

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Alignment Means *Every Educator* . . .

- Understands what is expected of students.
- Understands these expectations within the context of the K-12 program.
- Accepts responsibility for these expectations.
Understanding Alignment Using the Standards

A research activity

• It is not about developing content knowledge. It is about learning a process to understand alignment and its implications for teaching and learning.

• It is not about demonstrating our content knowledge. It is about engaging in a collaborative process and constructing meaning using that process.

• It is not about specific grade-level content. It is about developing a K–12 perspective on alignment.

• It is not about creating a tower. It is about collegial conversations focused on the standards.

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Understanding Alignment Using the Standards

Investigating learning trajectories

Big Idea: 

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Understanding Alignment Using the Standards

Directions for investigating learning trajectories

As a table group . . .

1. Determine what your big idea means.

2. Read, discuss, and come to a consensus on what the standards say students need to know and be able to do. Consider all parts of the standards.
   - What changes occur from grade to grade? Consider content and processes.
   - Where are new concepts introduced? Dropped?
   - How does the demand of the standard change? Does an idea or skill get more complex, and if so, how?

3. Record your findings for that grade level/span.
### Understanding Alignment Using Mathematics Standards

*Investigating learning trajectories*

(continued)

<table>
<thead>
<tr>
<th>Area and perimeter</th>
<th>Place value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.G.2</td>
<td>K.NBT.1</td>
</tr>
<tr>
<td>3.MD.5; 3.MD.6; 3.MD.7; 3.MD.8</td>
<td>1.NBT.2a; 1.NBT.2b; 1.NBT.2c</td>
</tr>
<tr>
<td>MD.3</td>
<td>2.NBT.1a; 2.NBT.1b</td>
</tr>
<tr>
<td>Grade 5—none</td>
<td>3.NBT.1</td>
</tr>
<tr>
<td>6.G.1</td>
<td>4.NBT.2; 4.NBT.3</td>
</tr>
<tr>
<td>7.G.1; 7.G.4</td>
<td>5.NBT.1; 5.NBT.4</td>
</tr>
<tr>
<td>Grade 8—none</td>
<td>Grade 6—none</td>
</tr>
<tr>
<td>G-GEP.7; G-MF.2</td>
<td>Grade 7—none</td>
</tr>
<tr>
<td></td>
<td>Grade 8—none</td>
</tr>
</tbody>
</table>

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Understanding Alignment

Investigating learning trajectories

Reading–Informational text (RI)

Craft and Structure

Standard #8: Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

RI.K.8   RI.7.8
RI.1.8   RI.8.8
RI.2.8   RI.9-10.8
RI.3.8   RI.11-12.8
RI.4.8   RH.6-8.8; RST.6-8.8
RI.5.8   RH.9-10.8; RST.9-10.8
RI.6.8   RH.11-12.8; RST.11-12.8

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Understanding Alignment

*Investigating learning trajectories*

**Writing—(W)**

**Text Types and Purposes**

**Standard #1:** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

- W.K.1  W.7.1
- W.1.1  W.8.1
- W.2.1  W.9-10.1
- W.3.1  W.11-12.1
- W.4.1  WHST.6-8.1
- W.5.1  WHST.9-10.1
- W.6.1  WHST.11-12.1
Reflection

1. What did you learn as a result of engaging in this activity?

2. What are the implications for you and your work?

3. What do you want to make sure you take to your team planning session?