

Six shifts in Common Core State Standards (CCSS) in **Mathematics** for curricular materials and classroom instruction.

Shifts in Mathematics	
Shift 1: Focus	Teachers use the power of “selective abandonment” to significantly narrow and deepen the scope of how time and energy are spent in the math classroom. They do so in order to focus deeply on only the concepts that are 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.
Shift 2: Coherence	Principals and teachers intentionally connect learning progressions within and across grades so that, for example, fractions or multiplication spiral across grade levels and students can build new understanding onto foundations built in previous years. Teachers can begin to count on deep conceptual understanding of core content and build on it. <i>Each standard is not new event, but an extension of previous learning.</i>
Shift 3: Fluency	Students are expected to have speed and accuracy with simple calculations teachers structure class time and/or homework time for students to memorize, through a focus on strategies, core functions such as multiplication tables so that they are more able to understand and manipulate more complex concepts.
Shift 4: Deep Understanding	Teachers teach more than “how to get the answer” and instead support students’ ability to access concepts from a number of perspectives so that students are able to see math as more than a set of mnemonics or discrete procedures. Students demonstrate deeper conceptual understanding of core math concepts by applying them to new situations, as well as writing and speaking about their understanding.
Shift 5: Application	Students are expected to use math and choose the appropriate concepts for application even when they are not prompted to do so. Teachers provide opportunities at all grade levels for students to apply math concepts in “real world” situations. Teachers in content areas outside of math, particularly science, ensure that students are using math – at all grade levels – to make meaning of and access content.
Shift 6: Dual Intensity	Students are practicing and understanding . There is more than a balance between these two things in the classroom – both are occurring with intensity. Teachers create opportunities for students to participate in “drills” and make use of those skills through extended application of math concepts. The amount of time and energy spent practicing, understanding, and learning driven by the specific mathematical concepts and therefore, varies throughout the given school year.



Common Core “Shifts”

English Language Arts & Literacy

Six shifts in Common Core State Standards (CCSS) in **ELA & Literacy in History/Social Studies, Science, and Technical Subjects** required for curricular materials and classroom instruction.

Shifts in ELA / Literacy	
Shift 1: Increase Reading of Informational Text	<p>Classrooms are places where students access the world – science, social studies, the arts and literature – through informational and literary text. In elementary, at least 50% of what students read is informational; in middle school, it is 55%; and by the end of high school, it is 70%.</p> <p>Increasing the amount of informational text students read K-12 will better prepare them to read college and career-ready texts.</p>
Shift 2: Literacy Instruction in all Content Areas	<p>Content-area teachers emphasize the reading and writing of their disciplines in planning and instruction for teaching the content.</p> <p>Students learn through reading domain-specific texts in history/social studies, science, and technical subjects and by writing informative/explanatory and argumentative pieces.</p>
Shift 3: Text Complexity	<p>In order to prepare students for the complexity of college and career-ready texts, each grade level requires reading increasingly more complex texts independently. Students read the central, grade-appropriate text around which instruction is centered.</p> <p>Teachers create more time in the curriculum for close and careful reading and provide appropriate and necessary supports to make the central text accessible to students reading below grade level.</p>
Shift 4: Text-based Answers	<p>Students have rich and rigorous conversations that are dependent on students reading a central text.</p> <p>Teachers ensure instructional activities are connected to reading texts and students develop habits for making evidentiary arguments based on the text, both in conversation as well as in writing, to assess their comprehension of a text.</p>
Shift 5: Increase Writing from Sources	<p>Writing instruction emphasizes use of evidence to inform or to make an argument; it includes short, focused research projects K-12.</p> <p>Students K-12 develop college and career-ready skills through written arguments that respond to the ideas, events, facts, and arguments presented in the texts they listen to and read.</p>
Shift 6: Academic Vocabulary	<p>Students constantly build the vocabulary they need to be able to access increasingly more complex grade-level texts.</p> <p>By focusing strategically on comprehension of pivotal and commonly found words (such as “discourse,” “generation,” “theory,” and “principled”) teachers constantly build students’ ability to access more complex texts across the content areas.</p>

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This document was originally adapted from “Common Core ‘Shifts ’” published by *engageNY*.



Mathematical Practices

Eight Mathematical Practices

For students to succeed, they must increasingly develop varieties of expertise at all levels in the following ways:

1. Make sense of problems and persevere in solving them
...start by explaining the meaning of a problem and looking for entry points to its solution
2. Reason abstractly and quantitatively
...make sense of quantities and their relationships to problem situations
3. Construct viable arguments and critique the reasoning of others
...understand and use stated assumptions, definitions, and previously established results in constructing arguments
4. Model with mathematics
...can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace
5. Use appropriate tools strategically
...consider the available tools when solving a mathematical problem
6. Attend to precision
...communicate precisely using clear definitions and calculate accurately and efficiently
7. Look for and make use of structure
...look closely to discern a pattern or structure
8. Look for and express regularity in repeated reasoning
...notice if calculations are repeated, and look for both general methods and shortcuts

Seven Habits of Mind

As students advance through the grades, and master the standards in ELA, they should be able to exhibit with increasing knowledge and regularity the capacities of a literate individual:

1. Demonstrate independence.
2. Build strong content knowledge.
3. Respond to the varying demands of audience, task, purpose, and discipline.
4. Comprehend as well as critique.
5. Value evidence.
6. Use technology and digital media strategically and capably.
7. Come to understand other perspectives and cultures.