

Perla Graham

Professor Valeria Ruiz

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Summary of Shifts in Common Core Standards Math

There are Three shifts in mathematics that make the Common Core and all other colleges and careers ready standards different from other standards. The three key shifts represented in the Document Achiever the Core are **Focus, Coherence, and Rigor**.

1. First key shift is **Focus**, explains that rather than racing to cover a topic in a lesson, CCR standards require teachers to significantly narrow and deepen the way time and energy are spent in the math classroom. Focusing on the major work of each grade so that students can improve strong foundation; solid conceptual understanding, a high degree of practical skill and fluency, and the ability to apply the math they've learned inside and outside the classroom. According to the website "Achieve the Core" students should spend large majority of their time on the major work of the grade, supporting work and, where appropriate, additional work can engage students in the major work of the grade.

In grades K–2: Concepts, skills, and problem solving related to addition and subtraction

In grades 3–5: Concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions

In grade 6: Ratios and proportional relationships, and early algebraic expressions and

equations

In grade 7: Ratios and proportional relationships, and arithmetic of rational numbers

In grade 8: Linear algebra and linear functions

2. The second key Shift in mathematics is **Coherence**: Think across grades, and link to major topics within grades. Learning is carefully connected across grades so that students can build new understanding onto foundations built in previous years. Each standard is not a new event, but an extension of previous learning. Linking to major topics: Instead of allowing additional or supporting topics to detract from the focus of the grade, these concepts serve the grade-level focus. Coherence is also built into the standards by utilizing supporting, complementary topics to reinforce a major topic in a grade.
3. The third key shift is **Rigor**: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity. Rigor refers to deep, authentic command of mathematical concepts, not making math harder or introducing topics at earlier grades. To help students meet the standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skills and fluency, and application.

Conceptual understanding: The CCR standards require conceptual understanding of key concepts like place value and ratios. Students must be able to access concepts from diverse perspectives in order to see math as more than a collection of mnemonics or discrete procedures.

Procedural skills and fluency: The CCR standards call for speed and accuracy in calculation. Students must practice core functions, such as single-digit multiplication, in order to have access to more complex concepts and procedures. Fluency must be addressed in the classroom or through supporting materials, as some students might require more practice than others.

Application: These standards call for students to use math in situations that require mathematical knowledge. Correctly applying mathematical knowledge depends on students having a solid conceptual understanding and procedural fluency.

Reference

College- and career-ready shifts in mathematics. Achieve The Core. (n.d.). Retrieved January 21, 2023, from <https://achievethecore.org/page/900/college-and-career-ready-shifts-in-mathematics>