

COMMON CORE

State Standards for Mathematics

A Long Overdue Shifting of the Foundation

Steven Leinwand
American Institutes for Research

For as long as most of us can remember, the K–12 mathematics program in the United States has been aptly characterized in many rather uncomplimentary ways: underperforming, incoherent, fragmented, poorly aligned, unteachable, unfair, narrow in focus, skill-based, and, of course, “a mile wide and an inch deep.” Most teachers are well aware that there have been far too many objectives for each grade or course, few of them rigorous or conceptually oriented, and too many of them misplaced as we prematurely ram far too much computation down too many throats. It’s not a pretty picture and helps to explain why so many teachers and students have been set up to fail and why we’ve created the need for much of the intervention that test results seem to require.

But hope and change have arrived! Like the long awaited cavalry, the new *Common Core State Standards (CCSS)* for Mathematics presents us—at least those in the 44 states that have now adopted them (representing over 80% of the nation’s students)—a once in a lifetime opportunity to rescue ourselves and our students from the myriad curriculum problems we’ve faced for years.

First, the new standards are **common**. No longer will publishers cater to a few large states and stuff their books with the union of fifty sets of demands. No longer will our assessments be developed by the lowest bidder and overwhelmingly comprised of low-level, multiple-choice items. Instead, the prospects of a *Common Core* set of standards are for shorter, more web-based, better-focused instructional materials and for computer-adaptive, computer-delivered, and instantaneously-scorable constructed response-item assessments. It almost sounds too good to be true, but once everyone is pushing and pulling and lifting in the same direction, market forces and public and private investments will be all the incentive needed to ensure an aligned system of materials and assessments that support the implementation of the new standards.

But it is the quality of the standards themselves—particularly at grades K–8—that is the cause for such optimism. They are **coherent**. These standards replace the vagueness of strands (number, measurement, geometry, data, and algebra) with domains, clusters, and well-conceived progressions

“Hope and change have arrived! Like the long awaited cavalry, the new Common Core State Standards (CCSS) for Mathematics presents us—at least those in the 44 states that have now adopted them—a once in a lifetime opportunity to rescue ourselves and our students from the myriad curriculum problems we’ve faced for years.”

of standards. They are **fair**. Many procedures that we have come to teach at grade x , have been moved to grade $x + 1$, giving us all a chance to build prerequisite knowledge and slow down what has become a drag race through the curriculum. And, lastly, they are **teachable**. There are only about thirty standards—of varying sizes and depth—at each grade level, resulting in a far more manageable teaching load than the forty to fifty objectives per year that many of us now face.

But don’t take my word for it. Go to www.corestandards.org and take a look for yourself. Turn to your grade and do your own quick analysis of:

- which of the CCSS are fully and/or partially matched by your current standards for that grade—that is, what is essentially the same or superficially the same, but deeper
- which of the CCSS are fully and/or partially matched by your current standards, but at a different grade—that is, what has to be moved
- which of the CCSS are not matched by your current standards at any grade—that is, what is new content
- which of your current standards get moved to a different grade or are no longer expected to be taught at any grade.

Best of all, and another sign of a shifting of how we do business, new assessments aligned to the CCSS are not expected to go online until the 2014–15 school year giving us all an unusually professional four-year ramp to gradually get ourselves up to speed and ready to soar. It really is a brave new world with bright possibilities for mathematics teaching and learning in the United States.

Steve Leinwand is the author of the Heinemann titles *Accessible Mathematics: Ten Instructional Shifts That Raise Student Achievement* and *Sensible Mathematics: A Guide for School Leaders*. He is Principal Research Analyst at the American Institutes for Research in Washington, D.C., where he supports a range of mathematics education initiatives and research.

