



Setting the Record Straight

about changes in

Mathematics Education

Commonsense Facts about School Mathematics

Every student will enter a world of work that is far different from the one that existed just a few years ago. Every student will assume the responsibilities of citizenship in a much more quantitatively driven society. And every student—not just a select few—has the right to be mathematically prepared for this future. Quality mathematics education is not just for those who want to study mathematics and science in college. It is for everyone! Quality mathematics must be a major component of every student's education—every year!

Changes in our daily world require equivalent modifications in school mathematics programs.

Let's look at the facts:

The world is changing.

- We are all bombarded with data that must be absorbed, sorted out, organized, and used to make increasingly crucial decisions.
- We all live in a world of spreadsheets and databases, digital readouts, and computer-aided design and manufacturing.
- The need for a broader command of basic mathematical concepts and skills—including measurement and statistics—has never been greater.

Today's students are different.

- They live in a fast-paced world of video games and MTV.
- They are Internet savvy, smoothly juggling multiple images and inputs.
- They are more likely to demand answers when they ask, "Why?"

The status quo of traditional mathematics isn't working.

- Too many adults suffer from mathphobia and math avoidance.

- International comparisons leave us well behind our economic competitors.
- The achievement gaps between whites and non-whites and between wealthy and poor are large and unacceptable.

Alternatives, aligned with the forward-thinking National Council of Teachers of Mathematics (NCTM) Standards, ARE working.

- Many new mathematics programs, including those designated Exemplary or Promising by the U.S. Department of Education, are closely aligned with the NCTM Standards and have demonstrated a positive impact on the mathematics achievement of students.
- Some of the greatest student gains in mathematics between 1990 and 1996 have occurred in states like Connecticut, Michigan, Texas, and North Carolina—four states that have made strong and consistent investments in state standards and assessments that reflect the vision of the NCTM Standards.
- The top five states in fourth-grade mathematics achievement as reported by Education Week in its Quality Counts 2000—Connecticut, Minnesota, Maine, Wisconsin, and Texas—have all been leaders in adopting the spirit of the NCTM recommendations for improvement.
- Student proficiency on the National Assessment of Educational Progress (NAEP) mathematics assessments has significantly increased at grades 4, 8, and 12 between 1990 and 1996, representing approximately one grade level of growth at each grade level.

**The facts are simple. Our children deserve—
Mathematics That Makes Sense!
Mathematics for the Future!**

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