

## Test Scores Trends: What Are They Telling Us?

International studies show that the United States continues to lag behind other countries in knowledge and understanding of math and science. Our students are not being properly prepared for a world continuously shaped and redefined by innovation and technology. It is vital that the U.S. remain competitive by providing our students with a solid education in math and science.

The results of the 2000 National Assessment of Education Progress (NAEP) science test stated that 82 percent of the nation's twelfth-graders performed below the proficient level. A 2004 report by the National Science Foundation showed that California eighth-graders scored the lowest in the country in science and 7<sup>th</sup> from the bottom in mathematics.

Additionally, the California Legislative Analyst's Office found in 2003 that almost 50 percent of college freshman in the California State University (CSU) system must take remedial mathematic courses before moving on to college level courses. This statistic is distressing because these students represent the top one-third of the state's high school graduates. Furthermore, the National Science Board has noted that more than 50 percent of individuals graduating from U. S. universities being awarded degrees in math, science, and engineering are foreign nationals.

Most recently, test scores from the Third International Mathematics and Science Study (TIMSS) and the Program for International Student Assessment (PISA) have indicated that the United States is lagging far behind other industrialized countries. Of the 41 countries participating in the PISA mathematics survey, American 15-year olds ranked below 25. This is of particular concern as the PISA measures whether or not students can apply math concepts outside of the classroom and into the real world.

There is little argument that success in education, the technical workforce, scientific innovation, and economic growth are all interconnected. The recent findings from various international studies and assessments, such as the TIMSS and PISA, clearly demonstrate a growing concern in meeting industry's needs for employees competent in mathematics, science, and technology. Students who once only had to compete with their classroom peers for career opportunities must now compete in a global market place.

California must take the necessary steps to prepare its students for the demands of today's technically savvy and evolving world. This can only be accomplished by increasing opportunities for differentiated instruction in math and science and utilizing today's technology to improve student achievement and understanding of key mathematics and science based concepts.