

Promising Practices for Goal Five: Mathematics and Science

United States students will be first in the world in mathematics and science achievement.

For Goal Five, the National Education Goals Panel focused on the states with high international standing in eighth grade mathematics. Information on other countries was taken from the Third International Mathematics and Science Study (TIMSS). Information on the states' performance was taken from the National Assessment of Educational Progress (NAEP).

In mathematics, Iowa, Minnesota and Montana are three of seven states that would be expected to score as well as or better than 35 out of 41 nations participating in the TIMSS in 1995-96. The six nations that would be expected to perform significantly higher are: Belgium-Flemish, Czech Republic, Hong Kong, Japan, Korea and Singapore.

Minnesota's percentage of eighth-grade students who met the Goals Panel's performance standard in math increased from 23 percent in 1990 to 34 percent in 1996.

- Minnesota requires that all secondary math teachers must be certified to teach math.
- SciMathMin, a statewide coalition of business, industry and government, began in 1991. The group advocates standards-based reform and provides professional development in math and science for all teachers.

The percentage of eighth-graders in **Iowa** who met the Panel's standard in math increased from 25 percent in 1990 to 31 percent in 1996.

- New legislation requires the incorporation of accountability for student achievement into the locally developed education standards.
- The legislation also creates a Middle Level Mathematics/Technology Initiative, which will provide professional development to secondary math teachers.

The percentage of **Montana's** eighth graders who met the Panel's standard increased from 27 percent in 1990 to 32 percent in 1996.

- In 1994, the state developed Model Learner Goals. These goals serve as guidelines for math and science instruction.
- Local control is important in the state. Schools often use voluntary state policies and guidelines.

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