1. Improvement Over Time

Have Minnesota’s 4th graders improved in mathematics achievement?

Not yet. Between 1992 and 1996, there was no significant change in the percentage of public school 4th graders who met the Goals Panel’s performance standard in mathematics.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.

2. State Comparisons†

How did Minnesota compare with other states in 4th grade mathematics achievement in public schools in 1996?

3. Subgroup Performance

What percentages of public school 4th graders in different subgroups† in Minnesota were at or above Proficient on the 1996 NAEP mathematics assessment?

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†The term “state” is used to refer to the 50 states, the District of Columbia, and the territories.

1 See explanation on pp. 3–4.

* Figure shown for the U.S. includes both public and nonpublic school data.

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See Appendix A for definitions, sources, and technical notes.
1. Improvement Over Time

Have Minnesota’s 8th graders improved in mathematics achievement?

Yes. The percentage of Minnesota’s public school 8th graders who met the Goals Panel’s performance standard in mathematics increased from 23% in 1990, to 34% in 1996.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.

2. State Comparisons†

How did Minnesota compare with other states in 8th grade mathematics achievement in public schools in 1996?

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentage Proficient on NAEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vermont</td>
<td>27%</td>
</tr>
<tr>
<td>Oregon, WA</td>
<td>26%</td>
</tr>
<tr>
<td>Colorado</td>
<td>25%</td>
</tr>
<tr>
<td>U.S.*</td>
<td>24%</td>
</tr>
<tr>
<td>Missouri, NY</td>
<td>22%</td>
</tr>
<tr>
<td>Texas, VA</td>
<td>21%</td>
</tr>
<tr>
<td>North Carolina, RI</td>
<td>20%</td>
</tr>
<tr>
<td>Delaware</td>
<td>19%</td>
</tr>
<tr>
<td>Arizona</td>
<td>18%</td>
</tr>
<tr>
<td>California, FL</td>
<td>17%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>34%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>33%</td>
</tr>
<tr>
<td>Montana</td>
<td>32%</td>
</tr>
<tr>
<td>Vermont</td>
<td>27%</td>
</tr>
<tr>
<td>Oregon, WA</td>
<td>26%</td>
</tr>
<tr>
<td>Colorado</td>
<td>25%</td>
</tr>
<tr>
<td>U.S.*</td>
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<td>19%</td>
</tr>
<tr>
<td>Arizona</td>
<td>18%</td>
</tr>
<tr>
<td>California, FL</td>
<td>17%</td>
</tr>
</tbody>
</table>

† The term “state” is used to refer to the 50 states, the District of Columbia, and the territories.

† See explanation on pp. 3-4.

* Figure shown for the U.S. includes both public and nonpublic school data.

3. Subgroup Performance

What percentages of public school 8th graders in different subgroups1 in Minnesota were at or above Proficient on the 1996 NAEP mathematics assessment?

- **Sex**
  - Male: 36%
  - Female: 33%
- **Race/ethnicity**
  - American Indian/Alaskan Native: 27%
  - Asian/Pacific Islander: 6%
  - Black: 19%
  - Hispanic: 37%
  - White: 37%
- **Parents’ highest level of education**
  - Less than high school: 12%
  - High school graduate: 19%
  - Some education beyond high school: 35%
  - College graduate: 45%
- **School location**
  - Central city: 32%
  - Urban fringe/large town: 40%
  - Rural/small town: 30%
- **Eligible for free/reduced-price lunch**
  - Eligible: 20%
  - Not eligible: 37%

† Interpret differences between subgroups with caution. See pp. 3-4 and Appendix D.

Characteristics of the sample do not permit a reliable estimate.
1. Improvement Over Time

Have Minnesota’s 8th graders improved in science achievement?

In 1996, 37% of Minnesota’s public school 8th graders met the Goals Panel’s performance standard in science. The Goals Panel will report whether science performance has improved over time when science is assessed again in 2000.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.

2. State Comparisons†

How did Minnesota compare with other states in 8th grade science achievement in public schools in 1996?

<table>
<thead>
<tr>
<th>States with similar percentages</th>
<th>Nebraska 35%</th>
<th>Vermont, Wyoming 34%</th>
<th>Colorado, Michigan, Oregon 32%</th>
<th>Colorado, Michigan, Oregon 32%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota, Massachusetts 37%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
</tr>
<tr>
<td>Connecticut, Iowa 36%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
<td>Colorado, Michigan, Oregon 32%</td>
</tr>
</tbody>
</table>

28 states had significantly lower† percentages of students who were at or above Proficient on NAEP:

<table>
<thead>
<tr>
<th>States with lower percentages</th>
<th>Delaware, Florida, Georgia, 21%</th>
<th>West Virginia 18%</th>
<th>California 20%</th>
<th>New Mexico 19%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska 31%</td>
<td>Alabama 18%</td>
<td>New Mexico 19%</td>
<td>California 20%</td>
<td>Delaware, Florida, Georgia, 21%</td>
</tr>
<tr>
<td>Indiana 30%</td>
<td>South Carolina 17%</td>
<td>Nebraska 18%</td>
<td>Maryland 13%</td>
<td>Nevada 15%</td>
</tr>
<tr>
<td>Missouri 28%</td>
<td>Hawai‘i 15%</td>
<td>South Carolina 17%</td>
<td>North Carolina 15%</td>
<td>South Carolina 17%</td>
</tr>
<tr>
<td>New York, Virginia, Washington 27%</td>
<td>Mississippi 12%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
</tr>
<tr>
<td>Rhode Island 26%</td>
<td>Mississippi 12%</td>
<td>South Carolina 17%</td>
<td>South Carolina 17%</td>
<td>South Carolina 17%</td>
</tr>
<tr>
<td>Maryland 25%</td>
<td>Mississippi 12%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
</tr>
<tr>
<td>North Carolina 24%</td>
<td>Mississippi 12%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
</tr>
<tr>
<td>Arizona, Kentucky, Texas 23%</td>
<td>Mississippi 12%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
<td>New Mexico 19%</td>
</tr>
<tr>
<td>Arkansas, Tennessee 22%</td>
<td>Guam 7%</td>
<td>District of Columbia 5%</td>
<td>District of Columbia 5%</td>
<td>District of Columbia 5%</td>
</tr>
</tbody>
</table>

3. Subgroup Performance

What percentages of public school 8th graders in different subgroups† in Minnesota were at or above Proficient on the 1996 NAEP science assessment?

- **Sex**
  - Male 40%
  - Female 33%

- **Race/ethnicity**
  - American Indian/Alaskan Native 2%
  - Asian/Pacific Islander 19%
  - Black 13%
  - Hispanic 20%
  - White 25%

- **Least than high school**
  - Low income 20%
  - High school graduate 26%

- **Formal education**
  - High school graduate 26%
  - Some education beyond high school 28%
  - College graduate 29%

- **School**
  - Urban fringe/large town 29%
  - Rural/small town 29%

- **Parent’s highest level of education**
  - Parent’s highest level of education 29%

- **Eligible for free/reduced-price lunch**
  - Eligible for free/reduced-price lunch 22%
  - Not eligible for free/reduced-price lunch 36%

† The term “state” is used to refer to the 50 states, the District of Columbia, and the territories.
1 See explanation on pp. 3-4.
2 State may appear to be out of place; however, statistically, its placement is correct. See pp. 3-4.
* Figure shown for the U.S. includes both public and nonpublic school data.

See Appendix A for definitions, sources, and technical notes.
International Comparisons

Mathematics Grade 8

Forty-one nations participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade mathematics in 1995. Students in Minnesota took the same test so that their results could be compared directly to the results of students in other countries. How did public school 8th graders in Minnesota compare to students in the other participating countries?

6 nations performed significantly higher:
- Belgium – Flemish
- Czech Republic
- Hong Kong
- Japan
- Korea
- Singapore

19 nations performed similarly:
- (Australia)
- (Austria)
- (Belgium – French)
- (Bulgaria)
- Canada
- (England)
- France
- (Germany)
- Hungary
- Ireland

16 nations performed significantly lower:
- (Colombia)
- Cyprus
- (Denmark)
- (Greece)
- Iceland
- Iran, Islamic Republic
- [Kuwait]
- (Latvia – LSS)
- (Lithuania)
- Norway
- Portugal
- (Romania)
- (Scotland)
- Spain
- (South Africa)

Science Grade 8

Forty-one nations participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade science in 1995. Students in Minnesota took the same test so that their results could be compared directly to the results of students in other countries. How did public school 8th graders in Minnesota compare to students in the other participating countries?

1 nation performed significantly higher:
- Singapore

12 nations performed similarly:
- (Australia)
- (Austria)
- Belgium – Flemish
- (Bulgaria)
- Czech Republic
- (England)
- Hungary
- Japan
- Korea
- Minnesota
- Slovak Republic
- (Slovenia)

28 nations performed significantly lower:
- (Belgium – French)
- Canada
- (Colombia)
- Cyprus
- (Denmark)
- France
- (Germany)
- (Greece)
- Hong Kong
- Iceland
- Iran, Islamic Republic
- Ireland
- (Israel)
- United States

† The term "nation" is used to refer to nations, states, or jurisdictions. Performance for nations is based on public school data only. Nations not meeting international guidelines are shown in parentheses.

1 See explanation on pp. 3-4.

2 The Flemish and French educational systems in Belgium participated separately.

3 Latvia is designated LSS because only Latvian-speaking schools were tested, which represent less than 65% of the population.

See Appendix A for definitions, sources, and technical notes.