1. Improvement Over Time

Have North Carolina’s 4th graders improved in mathematics achievement?

Yes. The percentage of North Carolina’s public school 4th graders who met the Goals Panel’s performance standard in mathematics increased from 13% in 1992, to 21% 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 North Carolina compare with other states in 4th grade mathematics achievement in public schools in 1996?

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhode Island</td>
<td>17%</td>
</tr>
<tr>
<td>Delaware, Hawaii, Kentucky</td>
<td>16%</td>
</tr>
<tr>
<td>Arizona, Florida</td>
<td>15%</td>
</tr>
<tr>
<td>Nevada</td>
<td>14%</td>
</tr>
<tr>
<td>Arkansas, Georgia, New Mexico</td>
<td>13%</td>
</tr>
</tbody>
</table>

3. Subgroup Performance

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

- Sex
  - Male: 22%
  - Female: 20%

- Race/Ethnicity
  - American Indian/Alaskan Native: 4%
  - Asian/Pacific Islander: 10%
  - Black: 29%
  - Hispanic: 29%
  - White: 20%

- Parent’s highest level of education
  - Less than high school: 12%
  - High school graduate: 29%
  - Some education beyond high school: 30%

- School location
  - Central city: 26%
  - Urban fringe/large town: 21%
  - Rural/small town: 18%

- Poverty measure
  - Eligible for free/reduced-price lunch: 7%
  - Not eligible for free/reduced-price lunch: 30%

† The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.
1 Interpret differences between subgroups with caution. See pp. 3-4.
2 Characteristics of the sample do not permit a reliable estimate.
1. Improvement Over Time

Have North Carolina’s 8th graders improved in mathematics achievement?

Yes. The percentage of North Carolina’s public school 8th graders who met the Goals Panel’s performance standard in mathematics increased from 9% in 1990, to 20% 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 North Carolina compare with other states in 8th grade mathematics achievement in public schools in 1996?

15 states had significantly higher percentages of students who were at or above Proficient on NAEP:

- Minnesota: 34%
- North Dakota: 33%
- Montana, Wisconsin: 32%
- Connecticut, Iowa, Maine, Nebraska: 31%
- Alaska: 30%
- Massachusetts, Michigan: 28%
- Vermont: 27%
- Oregon, Washington: 26%
- Colorado: 25%
- North Carolina: 28%
- Georgia: 23%
- Arizona: 19%
- California, Florida: 17%
- Colorado: 16%

14 states had similar percentages of students who were at or above Proficient on NAEP:

- U.S., Indiana, Maryland, Utah: 24%
- Missouri, New York, Wyoming: 22%
- Texas, Virginia: 21%
- Rhode Island: 20%
- Delaware: 19%
- Arizona: 18%
- California, Florida: 17%
- Georgia: 16%
- U.S., Indiana, Maryland, Utah: 19%
- Missouri, New York, Wyoming: 18%
- Texas, Virginia: 17%
- Rhode Island: 16%

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

- Hawaii, Kentucky: 16%
- Tennessee: 15%
- New Mexico, South Carolina: 14%
- West Virginia: 13%
- Alabama: 12%
- Louisiana, Mississippi: 7%
- Guam: 6%
- District of Columbia: 5%
- Arkansas: 13%

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

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

3. Subgroup Performance

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

Sex
- Male: 23%
- Female: 18%

Race/ethnicity
- American Indian/Alaskan Native: 5%
- Asian/Pacific Islander: 7%
- Black: 28%
- Hispanic: 28%
- White: 28%

Parents’ highest level of education
- Less than high school: 5%
- High school graduate: 10%
- Some education beyond high school: 20%
- College graduate: 32%

School location
- Central city: 26%
- Urban fringe/large town: 16%
- Rural/small town: 18%

Poverty measure
- Eligible for free/reduced-price lunch: 6%
- Not eligible for free/reduced-price lunch: 28%

1 Interpret differences between subgroups with caution. See pp. 3–4 and Appendix D.
2 Characteristics of the sample do not permit a reliable estimate.

See Appendix A for definitions, sources, and technical notes.
# North Carolina

## 1. Improvement Over Time

Have North Carolina’s 8th graders improved in science achievement?

In 1996, 24% of North Carolina’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 North Carolina compare with other states in 8th grade science achievement in public schools in 1996?

### Percentage of public school 8th graders at or above Proficient on the NAEP science assessment

### 3. Subgroup Performance

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

### Sex

- Male: 26%
- Female: 22%

### Race/ethnicity

- American Indian/Alaskan Native: 14%
- Asian/Pacific Islander: 2%
- Black: 6%
- Hispanic: 8%
- White: 33%

### Parents' highest level of education

- Less than high school: 5%
- High school graduate: 11%
- Some education beyond high school: 24%
- College graduate: 37%

### School location

- Central city
- Urban fringe/large town
- Rural/small town

### Poverty measure

- Eligible for free/reduced-price lunch: 7%
- Not eligible for free/reduced-price lunch: 33%

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

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

* 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. If public school 8th graders in North Carolina participated in the TIMSS mathematics assessment, how would their average performance compare to that of students who took TIMSS in these nations?

#### 21 nations’ would be expected to perform significantly higher:

- (Australia)
- (Austria)
- Belgium – Flemish
- (Belgium – French)
- (Bulgaria)
- Canada
- Czech Republic
- France
- Hong Kong
- Hungary
- Israel
- Lithuania
- North Carolina
- Norway
- Russian Federation
- Slovakia
- South Africa
- Spain
- Thailand
- (United States)

#### 15 nations’ would be expected to perform similarly:

- Cyprus
- Denmark
- England
- Germany
- Greece
- Iceland
- Israel
- (Latvia – LSS)
- (Lithuania)
- (New Zealand)
- (North Carolina)
- (Norway)
- (Romania)
- (Scotland)
- (Spain)
- (Thailand)

#### 5 nations’ would be expected to perform significantly lower:

- (Colombia)
- Iran, Islamic Republic
- Kuwait
- Portugal
- (South Africa)

† 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.

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### Science Grade 8

Forty-one nations participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade science in 1995. If public school 8th graders in North Carolina participated in the TIMSS science assessment, how would their average performance compare to that of students who took TIMSS in these nations?

#### 10 nations’ would be expected to perform significantly higher:

- (Austria)
- (Bulgaria)
- Czech Republic
- (England)
- Hungary
- (Japan)
- (Korea)
- (Netherlands)
- Singapore
- (Slovenia)

#### 17 nations’ would be expected to perform similarly:

- (Australia)
- Belgium – Flemish
- Canada
- (Germany)
- (Greece)
- Iceland
- Israel
- New Zealand
- North Carolina
- Norway
- Russian Federation
- (Scotland)
- Slovak Republic
- Spain
- Sweden
- (Switzerland)
- (Thailand)
- (United States)

#### 14 nations’ would be expected to perform significantly lower:

- (Belgium – French)
- Colombia
- Cyprus
- (Denmark)
- France
- (Greece)
- Iceland
- Iran, Islamic Republic
- Kuwait
- (Latvia – LSS)
- (Lithuania)
- (Portugal)
- (Romania)
- (South Africa)

† 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.