Vermont Mathematics Grade 4

1. Improvement Over Time

Have Vermont's 4th graders improved in mathematics achievement?

In 1996, 23% of Vermont's public school 4th graders met the Goals Panel's performance standard in mathematics. The Goals Panel will report whether mathematics performance has improved over time when mathematics 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 Vermont 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 subgroups1 in Vermont were at or above Proficient on the 1996 NAEP mathematics assessment?

2 states had significantly higher1 percentages of students who were at or above Proficient on NAEP:

Connecticut 31% Minnesota 29%

22 states had similar1 percentages of students who were at or above Proficient on NAEP:

Maine, Wisconsin 27% Colorado, Iowa, Maryland, Montana 22%
New Jersey, Texas 25% U.S.*, Alaska, North Carolina, Oregon, 21%
Indiana, Massachusetts, Nebraska, 24% Washington
North Dakota Missouri, New York, Pennsylvania 20%
Vermont, Michigan, Utah 23% Virginia1 19%

20 states had significantly lower1 percentages of students who were at or above Proficient on NAEP:

West Virginia,2 Wyoming2 19% South Carolina 12%
Rhode Island, Tennessee 17% Alabama, California 11%
Delaware, Hawaii, Kentucky 16% Louisiana, Mississippi 8%
Arizona, Florida 15% District of Columbia 5%
Nevada 14% Guam 3%
Arkansas, Georgia, New Mexico 13%

†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 Characteristics of the sample do not permit a reliable estimate.
Mathematics Grade 8 Vermont

1. Improvement Over Time

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

In 1996, 27% of Vermont’s public school 8th graders met the Goals Panel’s performance standard in mathematics. The Goals Panel will report whether mathematics performance has improved over time when mathematics 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 Vermont compare with other states in 8th grade mathematics achievement in public schools in 1996?

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

Missouri, New York, Wyoming 22% New Mexico, South Carolina, 14%
Texas, Virginia 21% West Virginia
North Carolina, Rhode Island 20% Arkansas 13%
Delaware 19% Alabama 12%
Arizona 18% Louisiana, Mississippi 7%
California, Florida 17% Guam 6%
Georgia, Hawaii, Kentucky 16% District of Columbia 5%
Tennessee 15%

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

Minnesota 34% Massachusetts, Michigan 28%
North Dakota 33% Vermont 27%
Montana, Wisconsin 32% Oregon, Washington 26%
Connecticut, Iowa, Maine, Nebraska 31% Colorado 25%
Alaska 30% U.S.,* Indiana, Maryland, Utah 24%

3. Subgroup Performance

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

† See explanation on pp. 3-4.

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

† 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.

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

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

In 1996, 34% of Vermont’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 Vermont compare with other states in 8th grade science achievement in public schools in 1996?

1 state had a significantly higher† percentage of students who were at or above Proficient on NAEP:

North Dakota†

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

Maine†, Montana†
Wisconsin
Massachusetts, Minnesota
Connecticut, Iowa
Nebraska

Vermont, Wyoming
Colorado, Michigan, Oregon, Utah
Alaska
Indiana

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

U.S.*
Missouri
New York, Virginia, Washington
Rhode Island
Maryland
North Carolina
Arizona, Kentucky, Texas
Arkansas, Tennessee
Delaware, Florida, Georgia,
West Virginia

California
New Mexico
Alabama
South Carolina
Hawaii
Louisiana
Mississippi
Guam
District of Columbia

3. Subgroup Performance

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

Sex

Male
36%
Female
32%

Race/ethnicity

American Indian/Alaskan Native
Asian/Pacific Islander
Black
Hispanic
White
11%
18%
31%
47%

Parents’ highest level of education

Less than high school
High school graduate
Some education beyond high school
College graduate
Central city
Urban fringe/large town
Rural/small town

Eligible for free/reduced-price lunch
Not eligible for free/reduced-price lunch

0% 20% 40% 60% 80% 100%

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 Vermont participated in the TIMSS mathematics assessment, how would their average performance compare to that of students who took TIMSS in these nations?

8 nations would be expected to perform significantly higher:
- Belgium – Flemish
- Czech Republic
- Hong Kong
- Japan
- Korea
- Singapore
- Slovak Republic
- (Switzerland)

21 nations would be expected to perform similarly:
- (Australia)
- (Austria)
- (Belgium – French)
- (Bulgaria)
- Canada
- (Denmark)
- (England)
- France
- (Germany)
- Hungary
- Ireland
- Israel
- (Netherlands)
- (New Zealand)
- Norway
- Russian Federation
- (Scotland)
- (Slovenia)
- Sweden
- (Thailand)
- United States
- Vermont
- Singapore

1 nation would be expected to perform significantly higher:
- Korea

17 nations would be expected to perform similarly:
- (Australia)
- (Austria)
- Belgium – Flemish
- (Bulgaria)
- Czech Republic
- (England)
- (Germany)
- Hungary
- Ireland
- Japan
- (Korea)
- (Netherlands)
- Russian Federation
- Slovak Republic
- (Slovenia)
- Sweden
- United States
- Vermont

23 nations would be expected to perform significantly lower:
- (Belgium – French)
- Canada
- (Colombia)
- Cyprus
- (Denmark)
- France
- (Greece)
- Hong Kong
- Iceland
- Iran, Islamic Republic
- (Israel)
- (Kuwait)
- Latvia – LSS
- (Lithuania)
- Portugal
- (Romania)
- (South Africa)
- Spain
- (Switzerland)
- (Thailand)

† 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.

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 Vermont participated in the TIMSS science assessment, how would their average performance compare to that of students who took TIMSS in these nations?

1 nation would be expected to perform significantly higher:
- Singapore

17 nations would be expected to perform similarly:
- (Australia)
- (Austria)
- Belgium – Flemish
- (Bulgaria)
- Czech Republic
- (England)
- (Germany)
- Hungary
- Ireland
- Japan
- (Korea)
- (Netherlands)
- Russian Federation
- Slovak Republic
- (Slovenia)
- Sweden
- United States
- Vermont

23 nations would be expected to perform significantly lower:
- (Belgium – French)
- Canada
- (Colombia)
- Cyprus
- (Denmark)
- France
- (Greece)
- Hong Kong
- Iceland
- Iran, Islamic Republic
- (Israel)
- (Kuwait)
- Latvia – LSS
- (Lithuania)
- New Zealand
- Norway
- Portugal
- (Romania)
- (Scotland)
- (South Africa)
- Spain
- (Switzerland)
- (Thailand)

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