Mathematics Grade 4

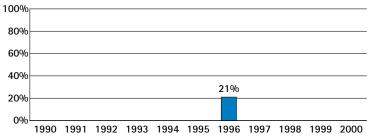
1. Improvement Over Time

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

In 1996, 21% of Alaska's public school 4th graders met the Goals Panel's performance standard in mathematics. The Goals Panel will report whether Alaska's 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.

Percentage of public school 4th graders at or above Proficient on the NAEP mathematics assessment



Mathematics performance will be tested again in 2000.

2. State Comparisons⁺

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

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

Connecticut	31%	Maine, Wisconsin	27%
Minnesota	29%		

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

New Jersey, Texas	25%	U.S.,* Alaska, North Carolina, Oregon,	21%
Indiana, Massachusetts, Nebraska,	24%	Washington	
North Dakota		Missouri, New York, Pennsylvania	20%
Michigan, Utah, Vermont	23%	Virginia, West Virginia, Wyoming	19%
Colorado, Iowa, Maryland, Montana	22%	Tennessee ²	17%

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

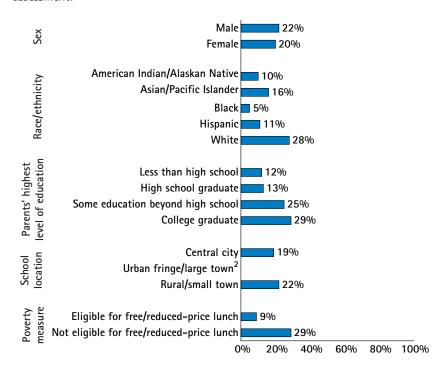
Rhode Island ²	17%	South Carolina	12%
Delaware, Hawaii, Kentucky	16%	Alabama, California	11%
Arizona, Florida	15%	Louisiana, Mississippi	8%
Nevada	14%	District of Columbia	5%
Arkansas, Georgia, New Mexico	13%	Guam	3%

[†] The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

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

3. Subgroup Performance

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



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

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.

² Characteristics of the sample do not permit a reliable estimate.

Mathematics Grade 8

Alaska

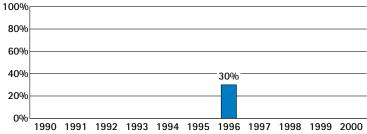
1. Improvement Over Time

Have Alaska's 8th graders improved in mathematics achievement?

In 1996, 30% of Alaska's public school 8th graders met the Goals Panel's performance standard in mathematics. The Goals Panel will report whether Alaska's 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.

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



Mathematics performance will be tested again in 2000.

2. State Comparisons⁺

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

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

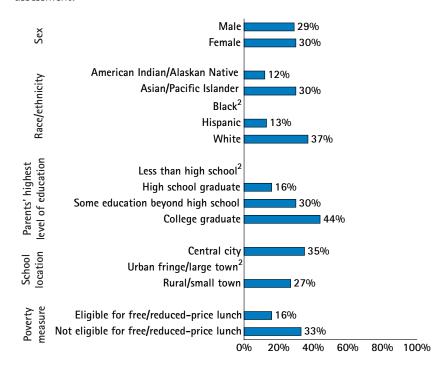
Minnesota	34%	Massachusetts, Michigan	28%
North Dakota	33%	Vermont	27%
Montana, Wisconsin	32%	Oregon, Washington	26%
Connecticut, Iowa, Maine, Nebraska	31%	Maryland ²	24%
Alaska	30 %		

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

Colorado ²	25%	Tennessee	15%
U.S.,2* Indiana,2 Utah2	24%	New Mexico, South Carolina,	14%
Missouri, New York, Wyoming	22%	West Virginia	
Texas, Virginia	21%	Arkansas	13%
North Carolina, Rhode Island	20%	Alabama	12%
Delaware	19%	Louisiana, Mississippi	7%
Arizona	18%	Guam	6%
California, Florida	17%	District of Columbia	5%
Georgia, Hawaii, Kentucky	16%		

3. Subgroup Performance

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



[†] 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.

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.

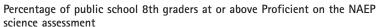
Science Grade 8

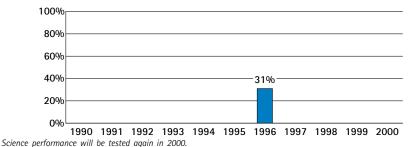
1. Improvement Over Time

Have Alaska's 8th graders improved in science achievement?

In 1996, 31% of Alaska'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 Alaska compare with other states in 8th grade science achievement in public schools in 1996?

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

Maine, Montana, North Dakota 41% Wisconsin 39%

16 states had similar' percentages of students who were at or above Proficient on NAEP:			
Massachusetts, Minnesota	37%	Alaska	31%
Connecticut, Iowa	36%	Indiana	30%
Nebraska	35%	U.S.*	29%

Missouri

		percentages of students who were icient on NAEP:	
Colorado, Michigan, Oregon, Utah	32%	New York, Virginia, Washington	

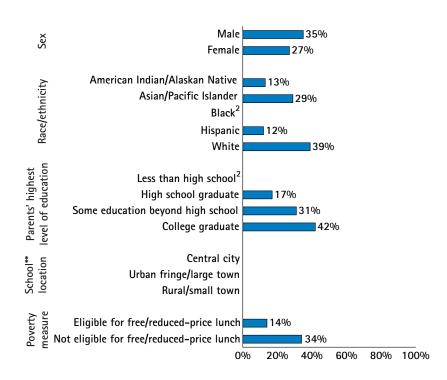
34%

Rhode Island	26%	New Mexico	19%
Maryland	25%	Alabama	18%
North Carolina	24%	South Carolina	17%
Arizona, Kentucky, Texas	23%	Hawaii	15%
Arkansas, Tennessee	22%	Louisiana	13%
Delaware, Florida, Georgia,	21%	Mississippi	12%
West Virginia		Guam	7%
California	20%	District of Columbia	5%

Vermont, Wyomina

3. Subgroup Performance

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



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

28%

27%

[†] 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.

² Characteristics of the sample do not permit a reliable estimate.

^{**} No school location data for science in 1996.

International Comparisons

Alaska

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 Alaska 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 - Flemish²KoreaCzech RepublicSingaporeHong KongSlovak RepublicJapan(Switzerland)

23 nations would be expected to perform similarly:1

AlaskaIreland(Australia)(Israel)(Austria)(Latvia – LSS)³(Belgium – French)²(Netherlands)(Bulgaria)New ZealandCanadaNorway

(Denmark)Russian Federation(England)(Scotland)France(Slovenia)

(Germany) Sweden
Hungary (Thailand)
Iceland United States

10 nations* would be expected to perform significantly lower:

(Colombia)(Lithuania)CyprusPortugal(Greece)(Romania)Iran, Islamic Republic(South Africa)(Kuwait)Spain

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

3 nations would be expected to perform significantly higher:

Czech Republic Singapore Japan

22 nations* would be expected to perform similarly:1

AlaskaKorea(Australia)(Netherlands)(Austria)New ZealandBelgium - Flemish²Norway(Bulgaria)Russian Federation

Canada Slovak Republic (England) (Slovenia) (Slovenia) (Germany) Sweden (Switzerland) Hungary (Thailand) United States

(Israel)

16 nations would be expected to perform significantly lower:

(Belgium - French)2 (Kuwait) (Colombia) (Latvia - LSS)3 (Lithuania) Cyprus (Denmark) Portugal (Romania) France (Greece) (Scotland) Iceland (South Africa) Iran, Islamic Republic Spain

[†] 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.

[†] 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.

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