

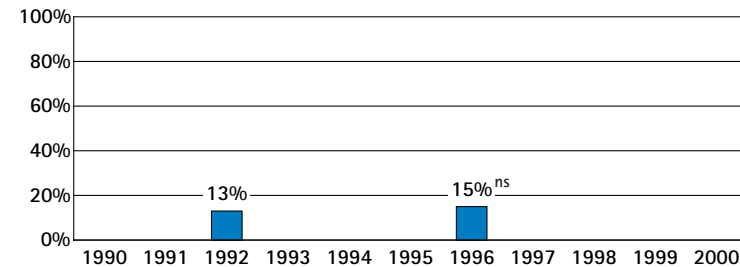
1. Improvement Over Time

Have Arizona'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.

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



^{ns} Interpret with caution. Change was not statistically significant. Mathematics performance will be tested again in 2000.

2. State Comparisons[†]

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

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

Connecticut	31%	Michigan, Utah, Vermont	23%
Minnesota	29%	Colorado, Iowa, Maryland, Montana	22%
Maine, Wisconsin	27%	U.S.,* Alaska, North Carolina, Oregon,	21%
New Jersey, Texas	25%	Washington	
Indiana, Massachusetts, Nebraska, North Dakota	24%	Missouri, New York, Pennsylvania	20%

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

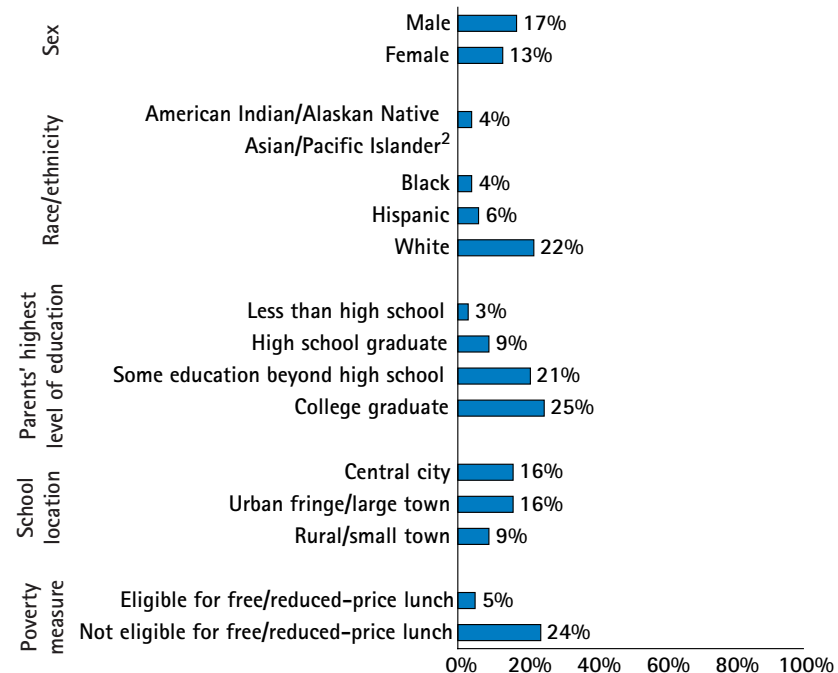
Virginia, West Virginia, Wyoming	19%	Nevada	14%
Rhode Island, Tennessee	17%	Arkansas, Georgia, New Mexico	13%
Delaware, Hawaii, Kentucky	16%	South Carolina	12%
Arizona , Florida	15%	California ²	11%

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

Alabama ²	11%	District of Columbia	5%
Louisiana, Mississippi	8%	Guam	3%

3. Subgroup Performance

What percentages of public school 4th graders in different subgroups¹ in Arizona 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.

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

[†] 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.

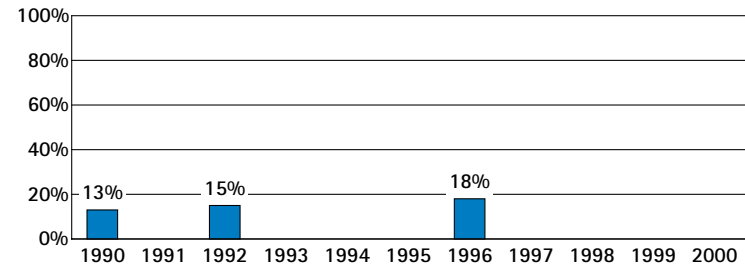
1. Improvement Over Time

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

Yes. The percentage of Arizona's public school 8th graders who met the Goals Panel's performance standard in mathematics increased from 13% in 1990, to 18% 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.

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 Arizona compare with other states in 8th grade mathematics achievement in public schools in 1996?

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

Minnesota	34%	Vermont	27%
North Dakota	33%	Oregon, Washington	26%
Montana, Wisconsin	32%	Colorado	25%
Connecticut, Iowa, Maine, Nebraska	31%	U.S.,^{2*} Indiana,² Utah²	24%
Alaska	30%	Wyoming ²	22%
Massachusetts, Michigan	28%		

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

Maryland ²	24%	Arizona	18%
Missouri, ² New York ²	22%	California, Florida	17%
Texas, Virginia	21%	Georgia, Hawaii, Kentucky	16%
North Carolina, Rhode Island	20%	Tennessee	15%
Delaware	19%		

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

New Mexico, South Carolina, West Virginia	14%	Louisiana, Mississippi	7%
Arkansas	13%	Guam	6%
Alabama	12%	District of Columbia	5%

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

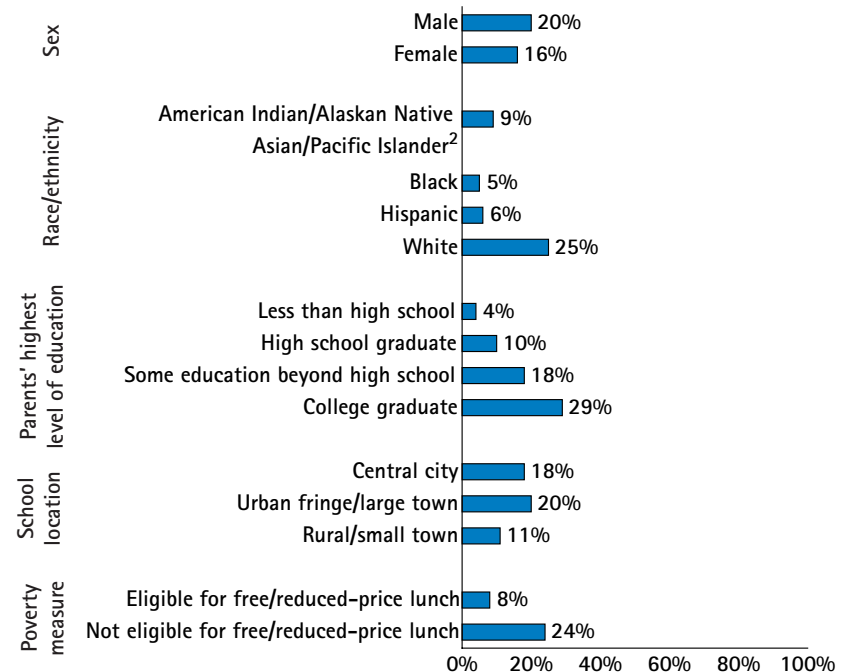
¹ See explanation on pp. 3-4.

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.

3. Subgroup Performance

What percentages of public school 8th graders in different subgroups¹ in Arizona 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.

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

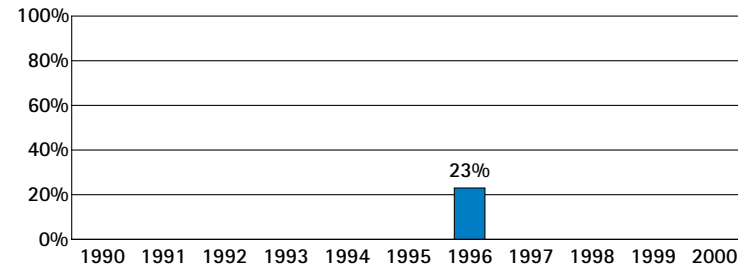
1. Improvement Over Time

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

In 1996, 23% of Arizona'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.

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



Science performance will be tested again in 2000.

2. State Comparisons[†]

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

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

Maine, Montana, North Dakota	41%	Colorado, Michigan, Oregon, Utah	32%
Wisconsin	39%	Alaska	31%
Massachusetts, Minnesota	37%	Indiana	30%
Connecticut, Iowa	36%	U.S.*	29%
Nebraska	35%	Missouri	28%
Vermont, Wyoming	34%		

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

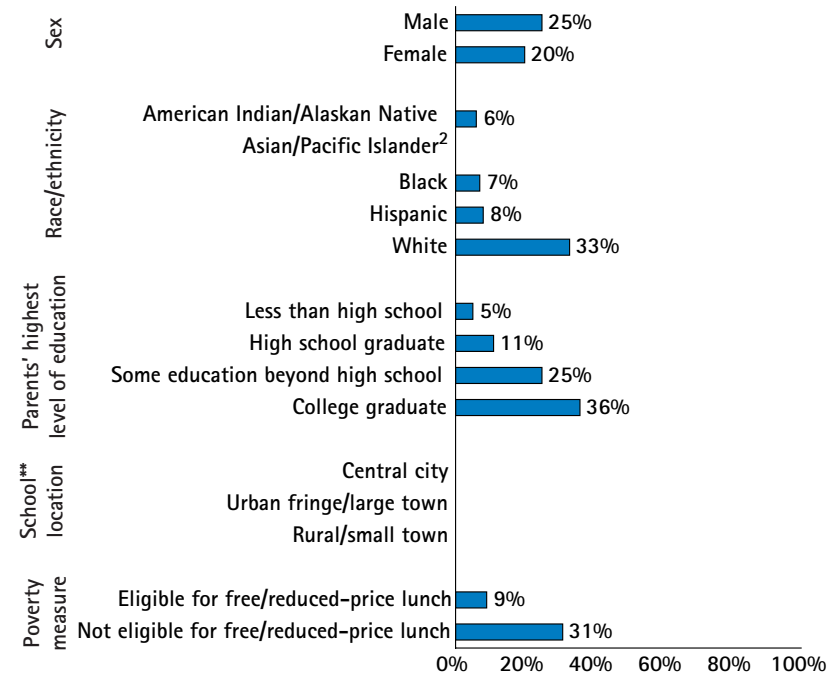
New York, Virginia, Washington	27%	Arkansas, Tennessee	22%
Rhode Island	26%	Delaware, Florida, Georgia, West Virginia	21%
Maryland	25%	California	20%
North Carolina	24%		
Arizona , Kentucky, Texas	23%		

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

New Mexico	19%	Louisiana	13%
Alabama	18%	Mississippi	12%
South Carolina	17%	Guam	7%
Hawaii	15%	District of Columbia	5%

3. Subgroup Performance

What percentages of public school 8th graders in different subgroups¹ in Arizona 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.

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

** No school location data for science in 1996.

[†] 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.

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 Arizona 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:¹

(Australia)	Japan
(Austria)	Korea
Belgium – Flemish ²	(Netherlands)
(Belgium – French) ²	Russian Federation
(Bulgaria)	Singapore
Canada	Slovak Republic
Czech Republic	(Slovenia)
France	Sweden
Hong Kong	(Switzerland)
Hungary	(Thailand)
Ireland	

15 nations[†] would be expected to perform similarly:¹

Arizona	(Latvia – LSS) ³
Cyprus	(Lithuania)
(Denmark)	New Zealand
(England)	Norway
(Germany)	(Romania)
(Greece)	(Scotland)
Iceland	Spain
(Israel)	United States

5 nations[†] would be expected to perform significantly lower:¹

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

[†] 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 Arizona 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:¹

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

20 nations[†] would be expected to perform similarly:¹

Arizona	New Zealand
(Australia)	Norway
Belgium – Flemish ²	Russian Federation
Canada	(Scotland)
France	Slovak Republic
(Germany)	Spain
(Greece)	Sweden
Hong Kong	(Switzerland)
Iceland	(Thailand)
Ireland	United States
(Israel)	

11 nations[†] would be expected to perform significantly lower:¹

(Belgium – French) ²	(Latvia – LSS) ³
(Colombia)	(Lithuania)
Cyprus	Portugal
(Denmark)	(Romania)
Iran, Islamic Republic	(South Africa)
(Kuwait)	

[†] 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.