

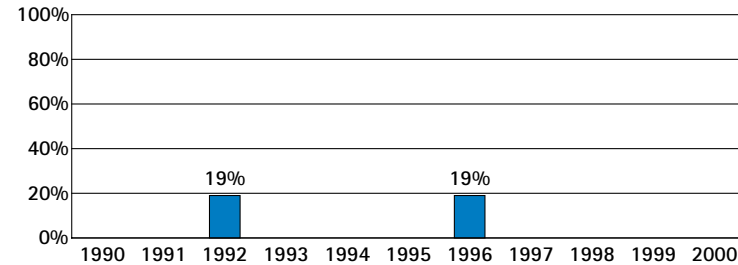
## 1. Improvement Over Time

Have Virginia'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



Mathematics performance will be tested again in 2000.

## 2. State Comparisons<sup>†</sup>

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

**5 states had significantly higher<sup>1</sup> percentages of students who were at or above Proficient on NAEP:**

Connecticut	31%	Maine, Wisconsin	27%
Minnesota	29%	Texas <sup>2</sup>	25%

**27 states had similar<sup>1</sup> percentages of students who were at or above Proficient on NAEP:**

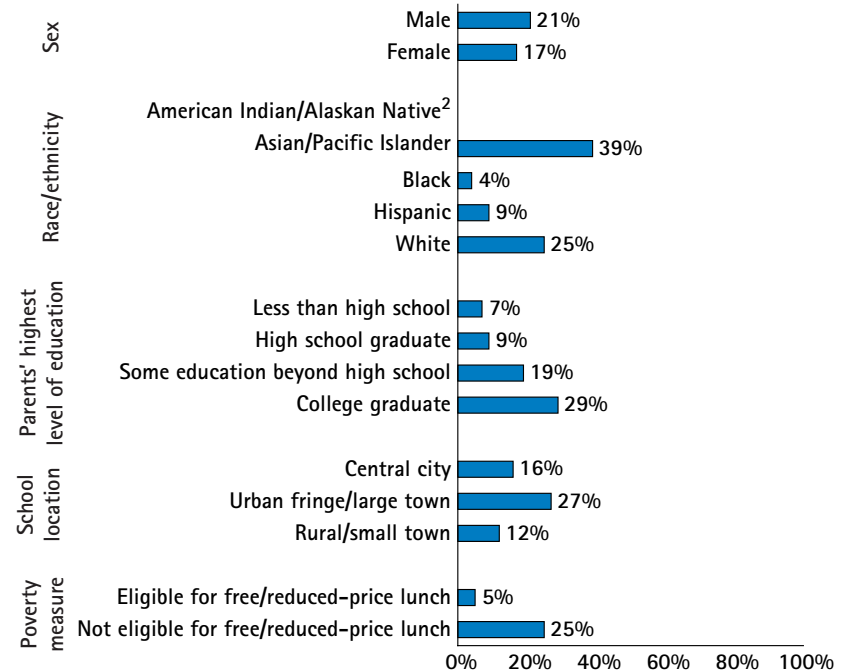
New Jersey <sup>2</sup>	25%	Missouri, New York, Pennsylvania	20%
Indiana, Massachusetts, Nebraska, North Dakota	24%	<b>Virginia</b> , West Virginia, Wyoming	<b>19%</b>
Michigan, Utah, Vermont	23%	Rhode Island, Tennessee	17%
Colorado, Iowa, Maryland, Montana	22%	Delaware, Hawaii, Kentucky	16%
<b>U.S.*</b> Alaska, North Carolina, Oregon, Washington	<b>21%</b>	Arizona <sup>2</sup>	15%

**12 states had significantly lower<sup>1</sup> percentages of students who were at or above Proficient on NAEP:**

Florida <sup>2</sup>	15%	Alabama, California	11%
Nevada	14%	Louisiana, Mississippi	8%
Arkansas, Georgia, New Mexico	13%	District of Columbia	5%
South Carolina	12%	Guam	3%

## 3. Subgroup Performance

What percentages of public school 4th graders in different subgroups<sup>1</sup> in Virginia were at or above Proficient on the 1996 NAEP mathematics assessment?



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

<sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

<sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

<sup>1</sup> See explanation on pp. 3-4.

<sup>2</sup> 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.

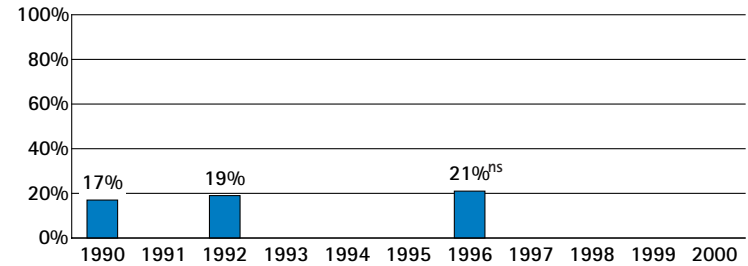
## 1. Improvement Over Time

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

*Not yet. Between 1990 and 1996, there was no significant change in the percentage of public school 8th 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 8th graders at or above Proficient on the NAEP mathematics assessment



<sup>ns</sup> Interpret with caution. Change was not statistically significant. Mathematics performance will be tested again in 2000.

## 2. State Comparisons<sup>†</sup>

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

### 14 states had significantly higher<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

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

### 13 states had similar<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

Colorado	25%	North Carolina, Rhode Island	20%
<b>U.S.,*</b> Indiana, Maryland, Utah	<b>24%</b>	Delaware	19%
Missouri, New York, Wyoming	22%	Arizona	18%
<b>Virginia, Texas</b>	<b>21%</b>	California <sup>2</sup>	17%

### 14 states had significantly lower<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

Florida <sup>2</sup>	17%	Arkansas	13%
Georgia, Hawaii, Kentucky	16%	Alabama	12%
Tennessee	15%	Louisiana, Mississippi	7%
New Mexico, South Carolina, West Virginia	14%	Guam	6%
		District of Columbia	5%

<sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

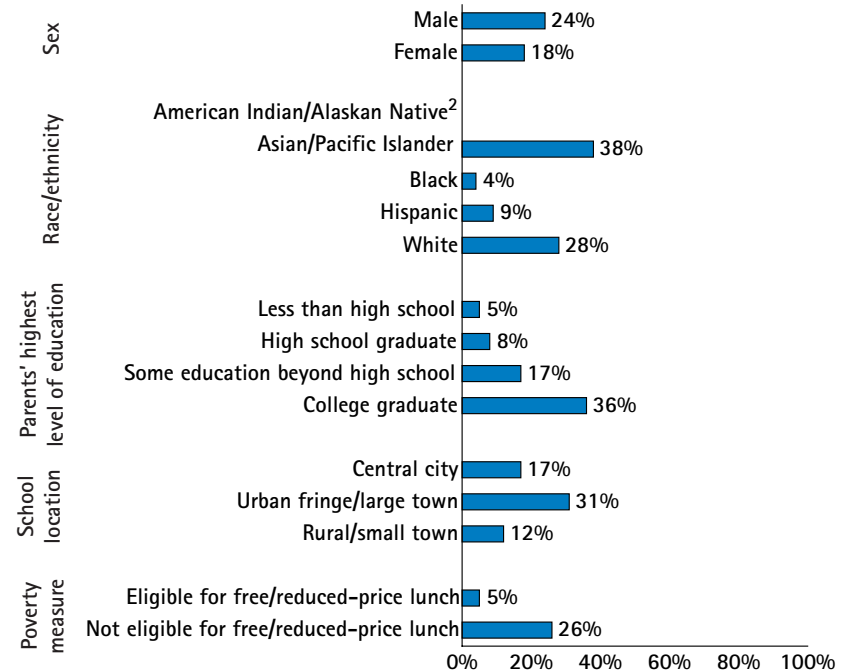
<sup>1</sup> See explanation on pp. 3-4.

<sup>2</sup> 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 subgroups<sup>1</sup> in Virginia were at or above Proficient on the 1996 NAEP mathematics assessment?



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

<sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

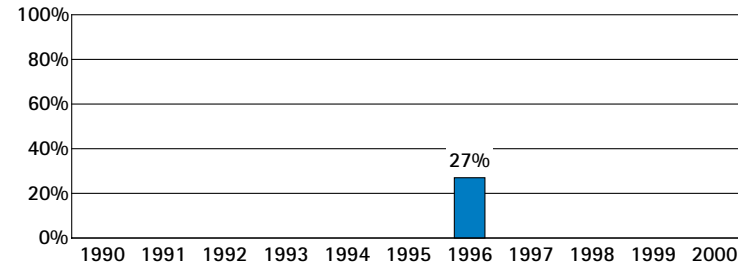
## 1. Improvement Over Time

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

*In 1996, 27% of Virginia'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<sup>†</sup>

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

### 11 states had significantly higher<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

Maine, Montana, North Dakota	41%	Connecticut, Iowa	36%
Wisconsin	39%	Nebraska	35%
Massachusetts, Minnesota	37%	Vermont, Wyoming	34%

### 17 states had similar<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

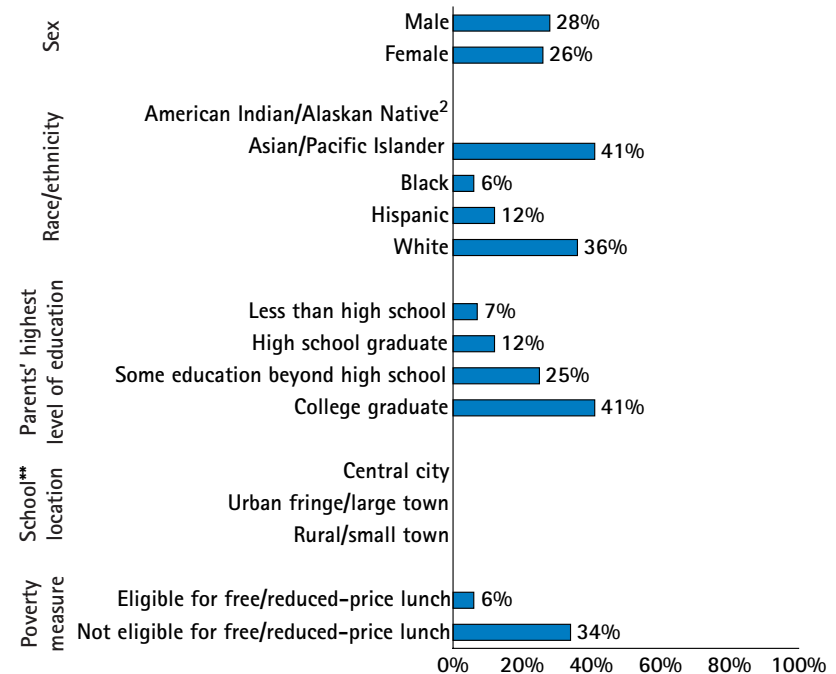
Colorado, Michigan, Oregon, Utah	32%	Rhode Island	26%
Alaska	31%	Maryland	25%
Indiana	30%	North Carolina	24%
<b>U.S.*</b>	<b>29%</b>	Arizona, Kentucky, Texas	23%
Missouri	28%	Arkansas, Tennessee	22%
<b>Virginia</b> , New York, Washington	<b>27%</b>		

### 13 states had significantly lower<sup>1</sup> percentages of students who were at or above Proficient on NAEP:

Delaware, Florida, Georgia, West Virginia	21%	Hawaii	15%
California	20%	Louisiana	13%
New Mexico	19%	Mississippi	12%
Alabama	18%	Guam	7%
South Carolina	17%	District of Columbia	5%

## 3. Subgroup Performance

What percentages of public school 8th graders in different subgroups<sup>1</sup> in Virginia were at or above Proficient on the 1996 NAEP science assessment?



<sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

<sup>1</sup> See explanation on pp. 3-4.

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

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

<sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

\*\* No school location data for science in 1996.

## Mathematics Grade 8

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

### 19 nations<sup>†</sup> would be expected to perform significantly higher:<sup>1</sup>

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

### 17 nations<sup>†</sup> would be expected to perform similarly:<sup>1</sup>

Cyprus	New Zealand
(Denmark)	Norway
(England)	(Romania)
(Germany)	(Scotland)
(Greece)	Spain
Iceland	Sweden
(Israel)	(Thailand)
(Latvia – LSS) <sup>3</sup>	<b>United States</b>
(Lithuania)	<b>Virginia</b>

### 5 nations<sup>†</sup> would be expected to perform significantly lower:<sup>1</sup>

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

<sup>†</sup> 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.

<sup>1</sup> See explanation on pp. 3–4.

<sup>2</sup> The Flemish and French educational systems in Belgium participated separately.

<sup>3</sup> 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<sup>†</sup> participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade science in 1995. If public school 8th graders in Virginia participated in the TIMSS science assessment, how would their average performance compare to that of students who took TIMSS in these nations?

### 4 nations<sup>†</sup> would be expected to perform significantly higher:<sup>1</sup>

Czech Republic	Korea
Japan	Singapore

### 23 nations<sup>†</sup> would be expected to perform similarly:<sup>1</sup>

(Australia)	New Zealand
(Austria)	Norway
Belgium – Flemish <sup>2</sup>	Russian Federation
(Bulgaria)	(Scotland)
Canada	Slovak Republic
(England)	(Slovenia)
(Germany)	Spain
Hong Kong	Sweden
Hungary	(Switzerland)
Ireland	(Thailand)
(Israel)	<b>United States</b>
(Netherlands)	<b>Virginia</b>

### 14 nations<sup>†</sup> would be expected to perform significantly lower:<sup>1</sup>

(Belgium – French) <sup>2</sup>	Iran, Islamic Republic
(Colombia)	(Kuwait)
Cyprus	(Latvia – LSS) <sup>3</sup>
(Denmark)	(Lithuania)
France	Portugal
(Greece)	(Romania)
Iceland	(South Africa)

<sup>†</sup> 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.

<sup>1</sup> See explanation on pp. 3–4.

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