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NATIONAL CENTER FOR EDUCATION STATISTICS

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# Youth Indicators 1993



Indicator **35. International Mathematics and Science Comparison**

**Average percent correct on international mathematics and science assessments of 13-year-olds in selected countries: 1991**

| Mathematics                       |                 | Science                           |                 |
|-----------------------------------|-----------------|-----------------------------------|-----------------|
| Country                           | Percent correct | Country                           | Percent correct |
| Korea                             | 73              | Korea                             | 78              |
| Taiwan                            | 73              | Taiwan                            | 76              |
| Switzerland <sup>1</sup>          | 71              | Switzerland <sup>1</sup>          | 74              |
| Soviet Union, <sup>2</sup> former | 70              | Hungary                           | 73              |
| Hungary                           | 68              | Soviet Union, <sup>2</sup> former | 71              |
| France                            | 64              | Slovenia                          | 70              |
| Israel <sup>3</sup>               | 63              | Israel <sup>3</sup>               | 70              |
| Canada                            | 62              | Canada                            | 69              |
| Scotland                          | 61              | France                            | 69              |
| Ireland                           | 61              | Scotland                          | 68              |
| Slovenia                          | 57              | Spain <sup>4</sup>                | 68              |
| Spain <sup>4</sup>                | 55              | United States                     | 67              |
| United States                     | 55              | Ireland                           | 63              |
| Jordan                            | 40              | Jordan                            | 57              |

<sup>1</sup> 15 cantons

<sup>2</sup> Schools in 14 republics, where instruction is in Russian

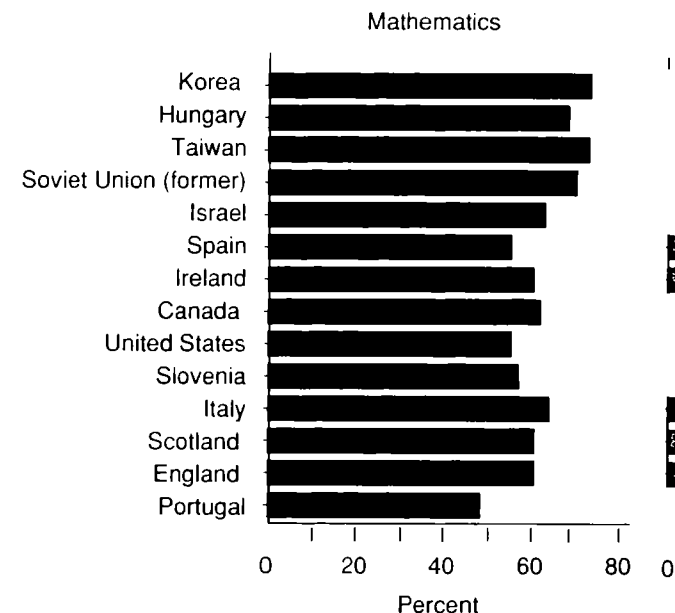
<sup>3</sup> Schools where instruction is in Hebrew

<sup>4</sup> Except Cataluna and in Spanish-speaking schools

**SOURCE:** U.S. Department of Education, National Center for Education Statistics, International Assessment of Educational Progress, *Learning Mathematics* and *Learning Science*, prepared by Educational Testing Service, February 1992.

Indicator **35. International Mathematics Comparison**

**Average percent correct on international mathematics assessments of 13-year-olds in selected countries: 1991**



**SOURCE:** U.S. Department of Education, National Center for Education Statistics, International Assessment of Educational Progress, *Learning Mathematics*; and *Learning Science*, prepared by Educational Testing Service, February 1992.

**In a 1991 International Assessment of Educational Progress, 13-year-old U.S. students performed at or near the bottom of the group in mathematics. U.S. students were not in the top group in either subject.**

# International Mathematics and Science

International mathematics and science assessments  
countries: 1991

| Science         |                                   |
|-----------------|-----------------------------------|
| Percent correct | Country                           |
| 78              | Korea                             |
| 76              | Taiwan                            |
| 74              | Switzerland <sup>1</sup>          |
| 73              | Hungary                           |
| 71              | Soviet Union, <sup>2</sup> former |
| 70              | Slovenia                          |
| 69              | Israel <sup>3</sup>               |
| 69              | Canada                            |
| 68              | France                            |
| 68              | Scotland                          |
| 67              | Spain <sup>4</sup>                |
| 63              | United States                     |
| 57              | Ireland                           |
| 57              | Jordan                            |

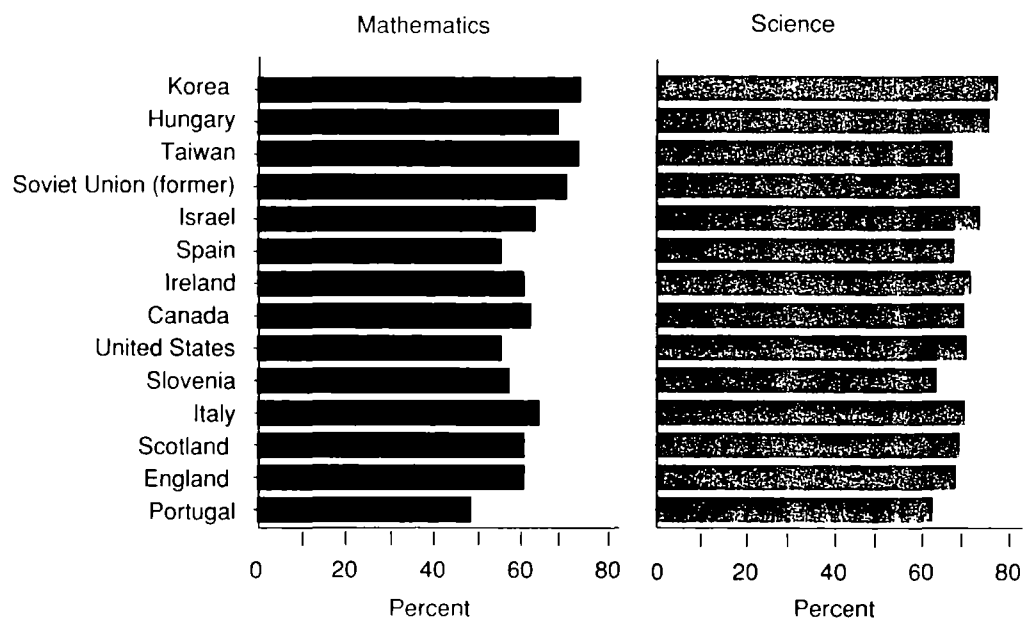
is in Russian

schools

National Center for Education Statistics, International Assessment of Educational Progress, prepared by Educational Testing Service, February

## Indicator 35. International Mathematics and Science Comparison

Average percent correct on international mathematics and science assessments of 13-year-olds in selected countries: 1991



**SOURCE:** U.S. Department of Education, National Center for Education Statistics, International Assessment of Educational Progress, *Learning Mathematics*; and *Learning Science*, prepared by Educational Testing Service.

In a 1991 International Assessment of Educational Progress (IAEP) in mathematics and science, 13-year-old U.S. students performed at or near the IAEP average in science, and below the average in mathematics. U.S. students were not among the highest performing group in either subject.

**Average score on an international reading assessment of 14-year-olds in selected countries and provinces: 1990**

| Country                  | Mean score | Below the U.S. <sup>1</sup> | About the same as the U.S. <sup>1</sup> | Higher than the U.S. <sup>1</sup> | Mean age | Grade tested |
|--------------------------|------------|-----------------------------|-----------------------------------------|-----------------------------------|----------|--------------|
| Finland                  | 560        |                             |                                         | X                                 | 14.7     | 8            |
| France                   | 549        |                             | X                                       |                                   | 15.4     | 9            |
| Sweden                   | 546        |                             | X                                       |                                   | 14.8     | 8            |
| New Zealand              | 545        |                             | X                                       |                                   | 15.0     | 10           |
| Hungary                  | 536        |                             | X                                       |                                   | 14.1     | 8            |
| Iceland                  | 536        |                             | X                                       |                                   | 14.8     | 8            |
| Switzerland              | 536        |                             | X                                       |                                   | 14.9     | 8            |
| Hong Kong                | 535        |                             | X                                       |                                   | 15.2     | 9            |
| United States            | 535        |                             | X                                       |                                   | 15.0     | 9            |
| Singapore                | 534        |                             | X                                       |                                   | 14.4     | 8            |
| Slovenia                 | 532        |                             | X                                       |                                   | 14.7     | 8            |
| Germany, former East     | 526        |                             | X                                       |                                   | 14.4     | 8            |
| Denmark                  | 525        |                             | X                                       |                                   | 14.8     | 8            |
| Portugal                 | 523        |                             | X                                       |                                   | 15.6     | 9            |
| Canada, British Columbia | 522        |                             | X                                       |                                   | 13.9     | 8            |
| Germany, former West     | 522        |                             | X                                       |                                   | 14.6     | 8            |
| Norway                   | 516        | X                           |                                         |                                   | 14.8     | 8            |
| Italy                    | 515        | X                           |                                         |                                   | 14.1     | 8            |
| Netherlands              | 514        |                             | X                                       |                                   | 14.3     | 8            |
| Ireland                  | 511        | X                           |                                         |                                   | 14.5     | 9            |
| Greece                   | 509        | X                           |                                         |                                   | 14.4     | 9            |
| Cyprus                   | 497        | X                           |                                         |                                   | 14.8     | 9            |
| Spain                    | 490        | X                           |                                         |                                   | 14.2     | 8            |
| Belgium, French          | 481        | X                           |                                         |                                   | 14.3     | 8            |
| Trinidad/Tobago          | 479        | X                           |                                         |                                   | 14.4     | 9            |
| Thailand <sup>2</sup>    | 477        | X                           |                                         |                                   | 15.2     | 9            |
| Philippines              | 430        | X                           |                                         |                                   | 14.5     | 8            |
| Venezuela                | 417        | X                           |                                         |                                   | 15.5     | 9            |
| Nigeria <sup>2</sup>     | 401        | X                           |                                         |                                   | 15.3     | 9            |
| Zimbabwe <sup>2</sup>    | 372        | X                           |                                         |                                   | 15.5     | 9            |
| Botswana                 | 330        | X                           |                                         |                                   | 14.7     | 9            |

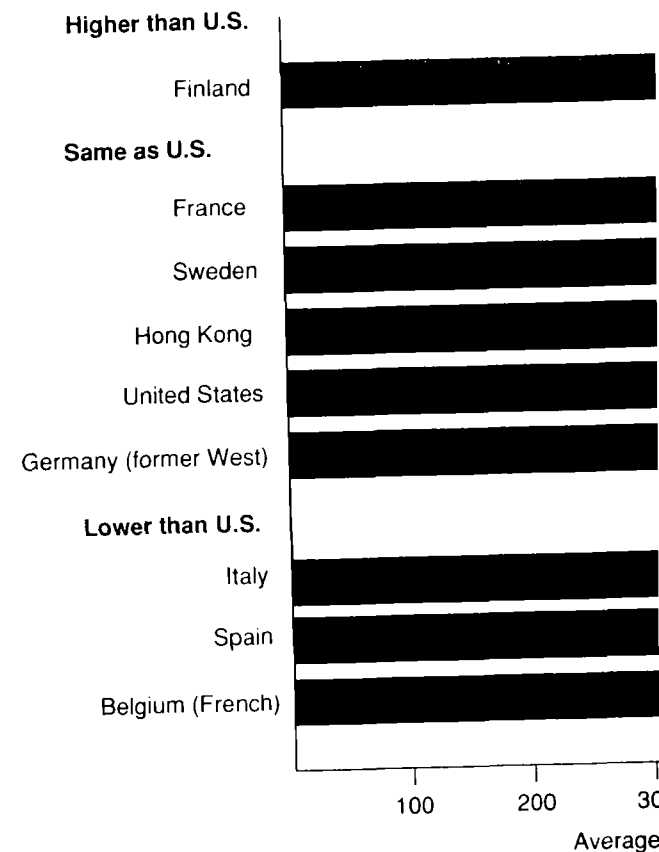
<sup>1</sup> Significance test at the 95 percent confidence level.

<sup>2</sup> Sampling response rate of schools was below 80 percent.

**NOTE:** Score distributions are based on a mean of 500 and a standard deviation of 100.

**SOURCE:** The International Association for the Evaluation of Educational Achievement, *How in the World Do Students Read?*

**Average reading assessment score of 14-year-olds**



**SOURCE:** The International Association for the Evaluation of Educational Achievement, *How in the World Do Students Read?*

In a 1990 international reading assessment, the United States ranked about equal to the U.S. for 14-year-olds. Countries ranking about equal to the U.S. for 14-year-olds include New Zealand, Hungary, Iceland, Switzerland, Hong Kong, Germany (former East and West), Denmark, Portugal, Canada, and the Netherlands.

# Reading Comparison

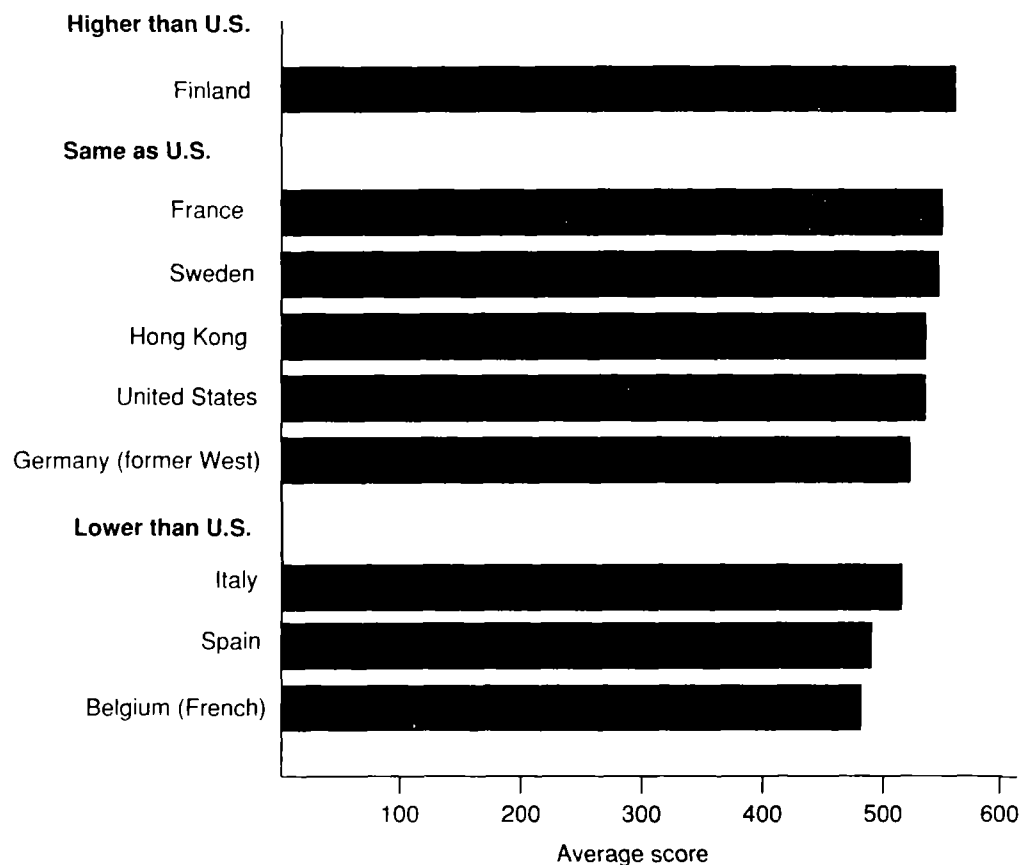
reading assessment of 14-year-olds in 1990

| Mean score | Below the U.S. <sup>1</sup> | About the same as the U.S. <sup>1</sup> | Higher than the U.S. <sup>1</sup> | Mean age | Grade tested |
|------------|-----------------------------|-----------------------------------------|-----------------------------------|----------|--------------|
| 560        |                             |                                         | X                                 | 14.7     | 8            |
| 549        |                             | X                                       |                                   | 15.4     | 9            |
| 546        |                             | X                                       |                                   | 14.8     | 8            |
| 545        |                             | X                                       |                                   | 15.0     | 10           |
| 536        |                             | X                                       |                                   | 14.1     | 8            |
| 536        |                             | X                                       |                                   | 14.8     | 8            |
| 536        |                             | X                                       |                                   | 14.9     | 8            |
| 535        |                             | X                                       |                                   | 15.2     | 9            |
| 535        |                             | X                                       |                                   | 15.0     | 9            |
| 534        |                             | X                                       |                                   | 14.4     | 8            |
| 532        |                             | X                                       |                                   | 14.7     | 8            |
| 526        |                             | X                                       |                                   | 14.4     | 8            |
| 525        |                             | X                                       |                                   | 14.8     | 8            |
| 523        |                             | X                                       |                                   | 15.6     | 9            |
| 522        |                             | X                                       |                                   | 13.9     | 8            |
| 522        |                             | X                                       |                                   | 14.6     | 8            |
| 516        | X                           |                                         |                                   | 14.8     | 8            |
| 515        | X                           |                                         |                                   | 14.1     | 8            |
| 514        |                             | X                                       |                                   | 14.3     | 8            |
| 511        | X                           |                                         |                                   | 14.5     | 9            |
| 509        | X                           |                                         |                                   | 14.4     | 9            |
| 497        | X                           |                                         |                                   | 14.8     | 9            |
| 490        | X                           |                                         |                                   | 14.2     | 8            |
| 481        | X                           |                                         |                                   | 14.3     | 8            |
| 479        | X                           |                                         |                                   | 14.4     | 9            |
| 477        | X                           |                                         |                                   | 15.2     | 9            |
| 430        | X                           |                                         |                                   | 14.5     | 8            |
| 417        | X                           |                                         |                                   | 15.5     | 9            |
| 401        | X                           |                                         |                                   | 15.3     | 9            |
| 372        | X                           |                                         |                                   | 15.5     | 9            |
| 330        | X                           |                                         |                                   | 14.7     | 9            |

level.  
80 percent.  
of 500 and a standard deviation of 100.  
Evaluation of Educational Achievement, *How in the World Do Students*

## Indicator 36. International Reading Comparison

Average reading assessment score of 14-year-olds in selected countries: 1990



SOURCE: The International Association for the Evaluation of Educational Achievement, *How in the World Do Students Read?*

In a 1990 international reading assessment, the United States was in the second cluster for both 9- and 14-year-olds. At both age levels only Finland outperformed U.S. students. Countries ranking about equal to the U.S. for 14-year-olds were France, Sweden, New Zealand, Hungary, Iceland, Switzerland, Hong Kong, Singapore, Slovenia, Germany (former East and West), Denmark, Portugal, Canada (British Columbia), and the Netherlands.

### Science scores and home activities of 13-year-olds in selected countries: 1991

| Country                           | Average percent correct on science test | Percent of students who read for fun every day | Percent of students with 2 or more hours homework daily | Percent of students who watch TV 5 or more hours daily | Percent of students with positive attitudes towards science |
|-----------------------------------|-----------------------------------------|------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------|
| Korea                             | 78                                      | 11                                             | 38                                                      | 10                                                     | 27                                                          |
| Taiwan                            | 76                                      | 17                                             | 44                                                      | 7                                                      | 51                                                          |
| Switzerland <sup>1</sup>          | 74                                      | 49                                             | 21                                                      | 7                                                      | 59                                                          |
| Hungary                           | 73                                      | 44                                             | 61                                                      | 16                                                     | 69                                                          |
| Soviet Union, <sup>2</sup> former | 71                                      | 48                                             | 52                                                      | 19                                                     | 66                                                          |
| Israel <sup>3</sup>               | 70                                      | 40                                             | 49                                                      | 20                                                     | 62                                                          |
| Slovenia                          | 70                                      | 43                                             | 27                                                      | 5                                                      | 78                                                          |
| Canada                            | 69                                      | 36                                             | 26                                                      | 15                                                     | 62                                                          |
| France                            | 69                                      | 39                                             | 55                                                      | 4                                                      | 55                                                          |
| Scotland                          | 68                                      | 37                                             | 15                                                      | 23                                                     | 66                                                          |
| Spain <sup>4</sup>                | 68                                      | 34                                             | 62                                                      | 11                                                     | 78                                                          |
| United States                     | 67                                      | 29                                             | 31                                                      | 22                                                     | 57                                                          |
| Ireland                           | 63                                      | 40                                             | 66                                                      | 9                                                      | 57                                                          |
| Jordan                            | 57                                      | 22                                             | 54                                                      | 10                                                     | 82                                                          |

<sup>1</sup> 15 cantons.

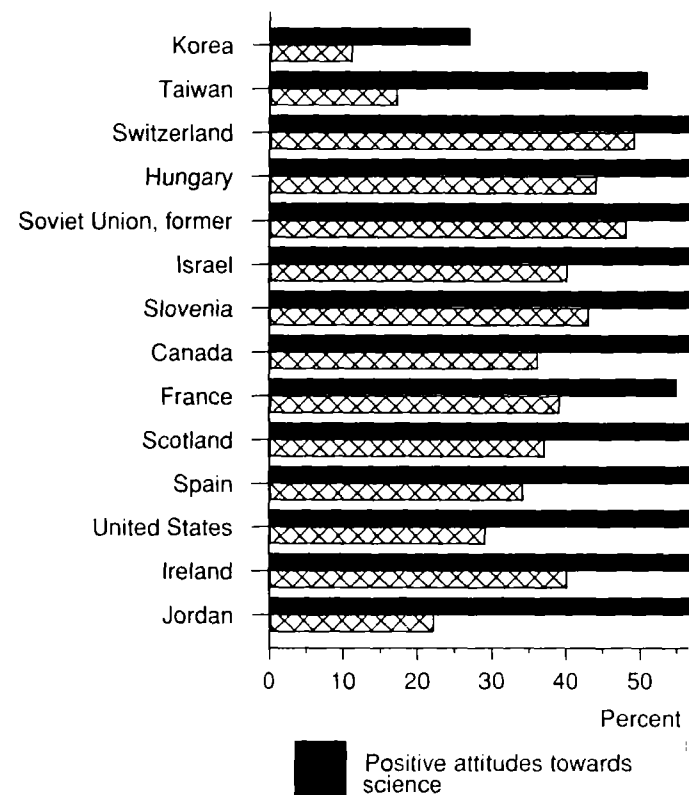
<sup>2</sup> Schools in 14 republics, where instruction is in Russian.

<sup>3</sup> Schools where instruction is in Hebrew.

<sup>4</sup> Except Cataluna, Spanish-speaking schools.

**SOURCE:** U.S. Department of Education, National Center for Education Statistics, International Assessment of Educational Progress, *Learning Science*, prepared by Educational Testing Service.

### Percent of 13-year-olds with positive attitudes toward science: 1991



**SOURCE:** U.S. Department of Education, National Center for Education Statistics, International Assessment of Educational Progress, *Learning Science*, prepared by Educational Testing Service.

International comparisons provide useful information about learning across countries. Sometimes, however, data are relevant within countries. For example, the amount of leisure reading and students' attitudes toward science are related to their science scores, while the amount of TV watching is not. Moreover, U.S. students spent more time watching TV than students in most of the other countries participating in the assessment. Korean students do not appear to read for fun or have positive attitudes toward science, yet they scored at the top of the 1991 assessment.

#

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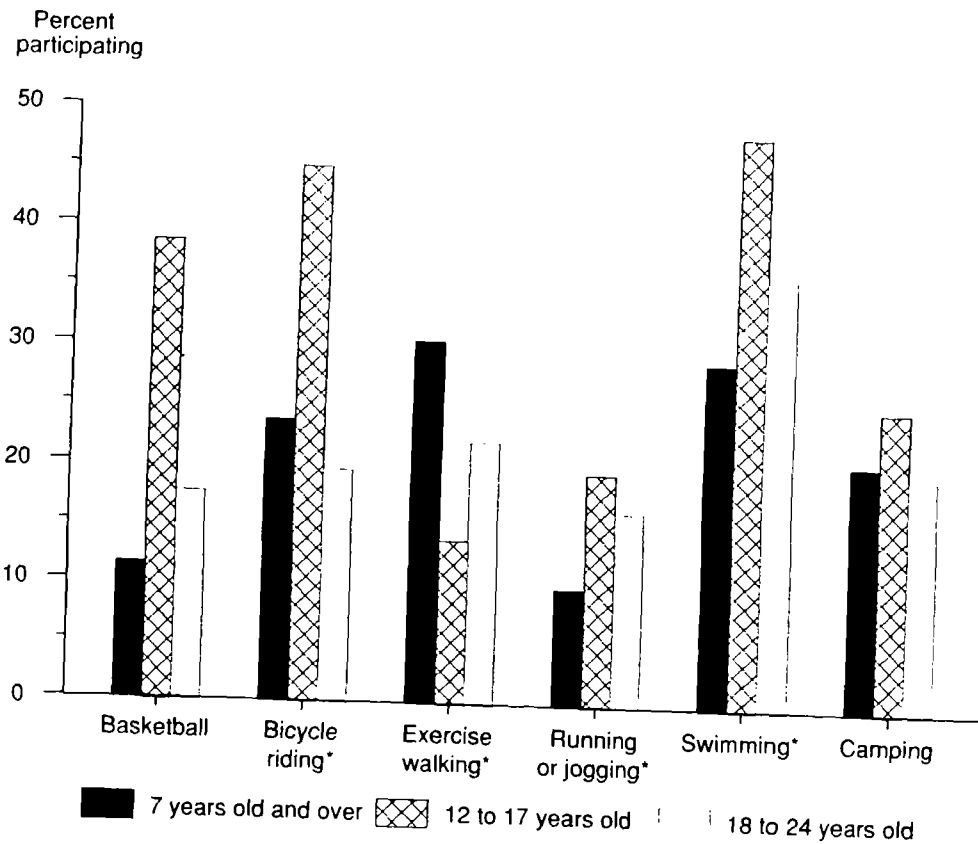
rs old and over participating in sports activities in  
to 1991

| 1986                             |                                |                                | 1990                             |                                |                                | 1991                             |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|--------------------------------|
| 7<br>years<br>old<br>and<br>over | 12- to<br>17-<br>year-<br>olds | 18- to<br>24-<br>year-<br>olds | 7<br>years<br>old<br>and<br>over | 12- to<br>17-<br>year-<br>olds | 18- to<br>24-<br>year-<br>olds | 7<br>years<br>old<br>and<br>over | 12- to<br>17-<br>year-<br>olds | 18- to<br>24-<br>year-<br>olds |
| 10.2                             | 11.5                           | 16.4                           | 10.4                             | 9.4                            | 17.6                           | 11.3                             | 7.4                            | 20.7                           |
| 3.7                              | 7.6                            | 5.8                            | 4.8                              | 6.2                            | 6.3                            | 4.5                              | 7.7                            | 6.9                            |
| 6.5                              | 23.8                           | 9.4                            | 6.9                              | 22.9                           | 9.4                            | 7.2                              | 23.3                           | 8.6                            |
| 9.9                              | 35.4                           | 16.8                           | 11.7                             | 41.4                           | 17.2                           | 11.4                             | 38.6                           | 17.6                           |
| 23.1                             | 47.5                           | 23.9                           | 24.6                             | 45.0                           | 24.5                           | 23.6                             | 45.0                           | 19.6                           |
| 6.7                              | 14.1                           | 8.8                            | 5.9                              | 10.7                           | 7.0                            | 5.4                              | 8.6                            | 7.2                            |
| 19.2                             | 26.0                           | 20.9                           | 20.6                             | 27.3                           | 20.7                           | 20.6                             | 25.3                           | 19.7                           |
| 24.9                             | 13.4                           | 22.4                           | 31.8                             | 16.9                           | 25.2                           | 30.4                             | 13.8                           | 22.1                           |
| 14.9                             | 20.8                           | 26.8                           | 15.7                             | 16.2                           | 25.0                           | 17.1                             | 13.6                           | 27.6                           |
| 19.0                             | 24.2                           | 20.7                           | 18.5                             | 21.8                           | 20.0                           | 18.3                             | 19.6                           | 19.0                           |
| 5.7                              | 5.8                            | 5.5                            | 5.5                              | 6.6                            | 6.4                            | 5.2                              | 4.2                            | 5.4                            |
| 5.6                              | 23.4                           | 10.8                           | 6.4                              | 25.5                           | 12.4                           | 5.8                              | 21.5                           | 10.9                           |
| 9.3                              | 8.8                            | 11.8                           | 10.2                             | 7.9                            | 11.2                           | 10.8                             | 8.2                            | 12.3                           |
| 7.9                              | 10.7                           | 9.9                            | 9.8                              | 9.5                            | 8.6                            | 9.9                              | 12.4                           | 10.0                           |
| 9.6                              | 12.4                           | 13.4                           | 8.2                              | 10.6                           | 11.3                           | 7.5                              | 6.4                            | 9.7                            |
| 3.6                              | 5.0                            | 8.3                            | 3.6                              | 3.1                            | 9.0                            | 2.7                              | 2.2                            | 7.4                            |
| 10.8                             | 23.2                           | 18.8                           | 10.6                             | 22.8                           | 17.2                           | 9.8                              | 19.6                           | 16.4                           |
| 4.5                              | 9.0                            | 9.8                            | 5.1                              | 10.2                           | 10.4                           | 4.6                              | 7.8                            | 9.2                            |
| 2.2                              | 2.9                            | 1.9                            | 2.3                              | 2.5                            | 2.2                            | 1.9                              | 2.1                            | 2.8                            |
| 3.8                              | 16.3                           | 2.9                            | 4.9                              | 18.7                           | 4.1                            | 4.4                              | 17.3                           | 4.6                            |
| 9.7                              | 22.1                           | 15.9                           | 8.9                              | 19.3                           | 13.5                           | 8.6                              | 20.7                           | 14.5                           |
| 33.8                             | 56.0                           | 41.8                           | 30.0                             | 52.8                           | 38.1                           | 28.9                             | 48.1                           | 36.2                           |
| 8.4                              | 19.1                           | 16.9                           | 8.2                              | 18.4                           | 15.3                           | 7.3                              | 14.4                           | 14.0                           |
| 9.7                              | 24.5                           | 18.5                           | 10.3                             | 28.5                           | 18.4                           | 9.9                              | 24.6                           | 18.3                           |

six times in the year.  
er, Bureau of the Census, *Statistical Abstract of the United States, 1990*. Na-  
Sports Participation in 1986, Series 1; and *Sports Participation in 1988-1991, Series*

Indicator 40. Sports Participation

Participation in sports activities, by age: 1991



\*Participated in activity at least six times in the year.  
SOURCE: National Sporting Goods Association, *Sports Participation in 1988-91, Series 1*.  
Teenagers and young adults are more likely to participate in many types of sporting activities than other age groups. Compared with 12- to 17-year-olds, 18- to 24-year-olds are less likely to participate in most organized group sports, bicycle riding, and swimming, but more likely to participate in aerobics, exercise walking, or exercising with equipment.



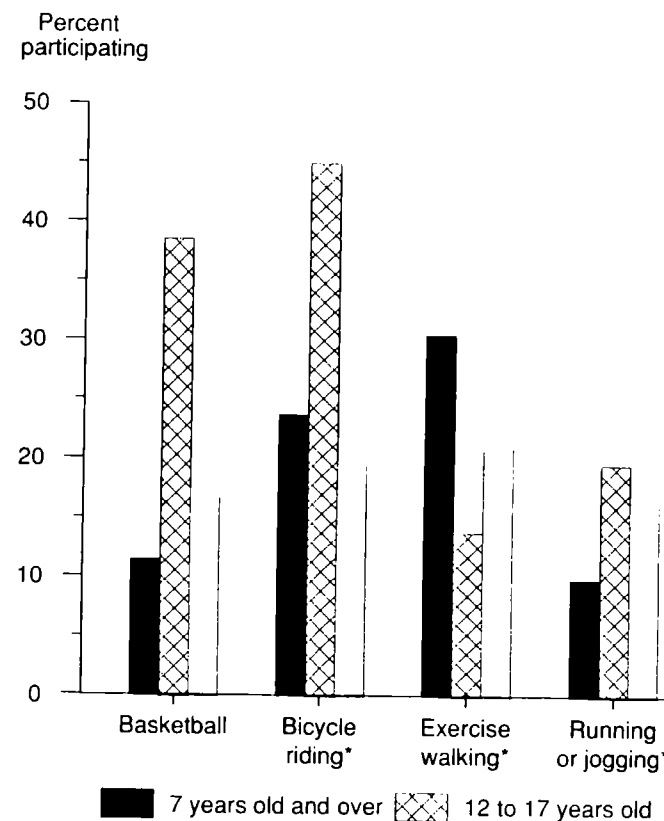
**Percent of population 7 years old and over participating in sports activities in the past year, by age: 1986 to 1991**

| Activity                    | 1986                 |                     |                     | 1990                 |                     |                     | 1991                 |                     |                     |
|-----------------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|
|                             | 7 years old and over | 12- to 17-year-olds | 18- to 24-year-olds | 7 years old and over | 12- to 17-year-olds | 18- to 24-year-olds | 7 years old and over | 12- to 17-year-olds | 18- to 24-year-olds |
| Aerobic exercising *        | 10.2                 | 11.5                | 16.4                | 10.4                 | 9.4                 | 17.6                | 11.3                 | 7.4                 | 20.7                |
| Backpacking                 | 3.7                  | 7.6                 | 5.8                 | 4.8                  | 6.2                 | 6.3                 | 4.5                  | 7.7                 | 6.9                 |
| Baseball                    | 6.5                  | 23.8                | 9.4                 | 6.9                  | 22.9                | 9.4                 | 7.2                  | 23.3                | 8.6                 |
| Basketball                  | 9.9                  | 35.4                | 16.8                | 11.7                 | 41.4                | 17.2                | 11.4                 | 38.6                | 17.6                |
| Bicycle riding *            | 23.1                 | 47.5                | 23.9                | 24.6                 | 45.0                | 24.5                | 23.6                 | 45.0                | 19.6                |
| Calisthenics *              | 6.7                  | 14.1                | 8.8                 | 5.9                  | 10.7                | 7.0                 | 5.4                  | 8.6                 | 7.2                 |
| Camping                     | 19.2                 | 26.0                | 20.9                | 20.6                 | 27.3                | 20.7                | 20.6                 | 25.3                | 19.7                |
| Exercise walking *          | 24.9                 | 13.4                | 22.4                | 31.8                 | 16.9                | 25.2                | 30.4                 | 13.8                | 22.1                |
| Exercising with equipment * | 14.9                 | 20.8                | 26.8                | 15.7                 | 16.2                | 25.0                | 17.1                 | 13.6                | 27.6                |
| Fishing-fresh water         | 19.0                 | 24.2                | 20.7                | 18.5                 | 21.8                | 20.0                | 18.3                 | 19.6                | 19.0                |
| Fishing-salt water          | 5.7                  | 5.8                 | 5.5                 | 5.5                  | 6.6                 | 6.4                 | 5.2                  | 4.2                 | 5.4                 |
| Football                    | 5.6                  | 23.4                | 10.8                | 6.4                  | 25.5                | 12.4                | 5.8                  | 21.5                | 10.9                |
| Golf                        | 9.3                  | 8.8                 | 11.8                | 10.2                 | 7.9                 | 11.2                | 10.8                 | 8.2                 | 12.3                |
| Hiking                      | 7.9                  | 10.7                | 9.9                 | 9.8                  | 9.5                 | 8.6                 | 9.9                  | 12.4                | 10.0                |
| Hunting/shooting firearms   | 9.6                  | 12.4                | 13.4                | 8.2                  | 10.6                | 11.3                | 7.5                  | 6.4                 | 9.7                 |
| Racquetball                 | 3.6                  | 5.0                 | 8.3                 | 3.6                  | 3.1                 | 9.0                 | 2.7                  | 2.2                 | 7.4                 |
| Running/jogging *           | 10.8                 | 23.2                | 18.8                | 10.6                 | 22.8                | 17.2                | 9.8                  | 19.6                | 16.4                |
| Skiing-alpine/downhill      | 4.5                  | 9.0                 | 9.8                 | 5.1                  | 10.2                | 10.4                | 4.6                  | 7.8                 | 9.2                 |
| Skiing-cross country        | 2.2                  | 2.9                 | 1.9                 | 2.3                  | 2.5                 | 2.2                 | 1.9                  | 2.1                 | 2.8                 |
| Soccer                      | 3.8                  | 16.3                | 2.9                 | 4.9                  | 18.7                | 4.1                 | 4.4                  | 17.3                | 4.6                 |
| Softball                    | 9.7                  | 22.1                | 15.9                | 8.9                  | 19.3                | 13.5                | 8.6                  | 20.7                | 14.5                |
| Swimming *                  | 33.8                 | 56.0                | 41.8                | 30.0                 | 52.8                | 38.1                | 28.9                 | 48.1                | 36.2                |
| Tennis                      | 8.4                  | 19.1                | 16.9                | 8.2                  | 18.4                | 15.3                | 7.3                  | 14.4                | 14.0                |
| Volleyball                  | 9.7                  | 24.5                | 18.5                | 10.3                 | 28.5                | 18.4                | 9.9                  | 24.6                | 18.3                |

\* Participant engaged in activity at least six times in the year.

**SOURCE:** U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1990*. National Sporting Goods Association, *Sports Participation in 1986*, Series I; and *Sports Participation in 1988-1991*, Series I.

**Participation in sports activities, by age: 1991**



\* Participated in activity at least six times in the year.

**SOURCE:** National Sporting Goods Association, *Sports Participation in 1988-1991*, Series I.

**Teenagers and young adults are more likely to participate in sports activities than other age groups. Compared with 12- to 17-year-olds, 7-year-olds and over are less likely to participate in most organized group sports, but more likely to participate in aerobics, exercise walking**

# Activities

by they engage in various activities at least once

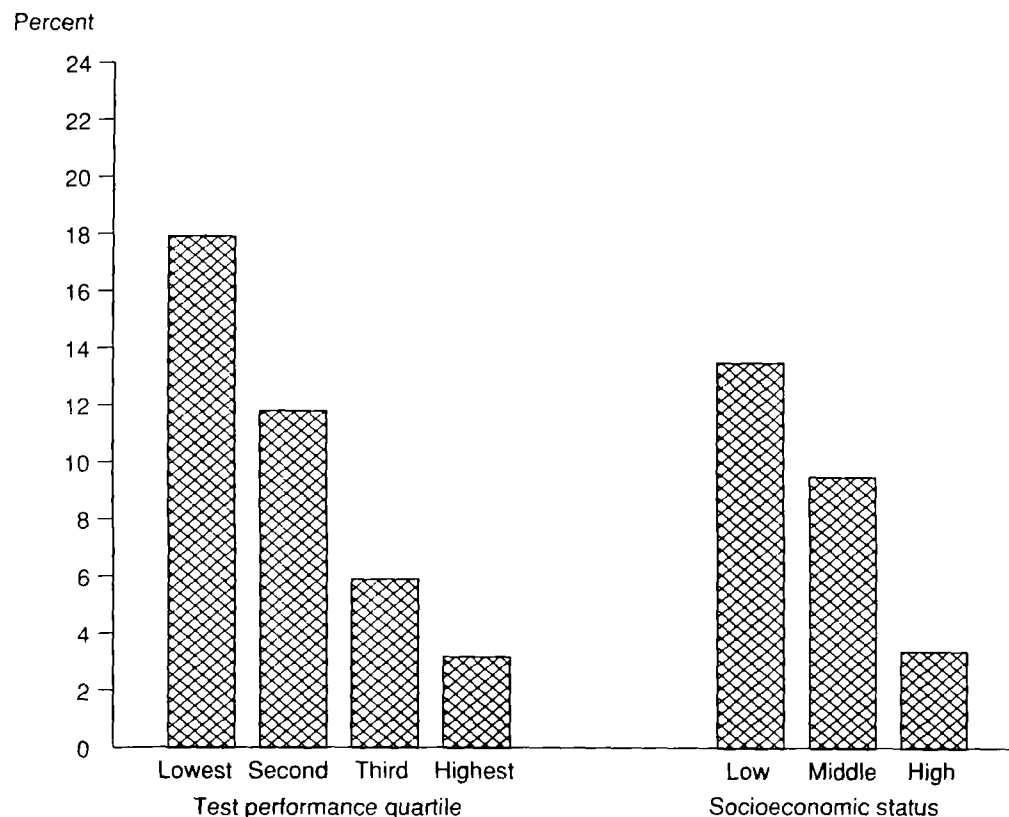
| Age Group | Visting with friends at a local hangout |      | Talking with friends on the telephone |      | Reading for pleasure |      | Hours of television on school nights |                       |                         |
|-----------|-----------------------------------------|------|---------------------------------------|------|----------------------|------|--------------------------------------|-----------------------|-------------------------|
|           | 1990                                    | 1980 | 1990                                  | 1980 | 1990                 | 1980 | 1990                                 | 5 or more hours, 1980 | More than 5 hours, 1990 |
| 13-17     | 56.1                                    | 67.2 | 66.3                                  | 76.6 | 80.1                 | 41.1 | 41.0                                 | 27.3                  | 9.1                     |
| 18-24     | 57.9                                    | 69.4 | 69.5                                  | 66.5 | 72.5                 | 34.3 | 33.8                                 | 29.1                  | 10.2                    |
| 25-34     | 54.3                                    | 65.2 | 63.1                                  | 86.2 | 87.7                 | 47.9 | 48.2                                 | 24.9                  | 8.0                     |
| 35-44     | 58.9                                    | 68.7 | 68.7                                  | 78.4 | 81.7                 | 40.4 | 41.5                                 | 25.1                  | 6.7                     |
| 45-54     | 50.1                                    | 64.8 | 59.1                                  | 73.3 | 79.6                 | 46.6 | 41.2                                 | 39.8                  | 23.0                    |
| 55-64     | 47.6                                    | 60.2 | 59.3                                  | 68.6 | 72.4                 | 36.3 | 38.2                                 | 27.3                  | 10.2                    |
| 65-74     | 44.0                                    | 55.3 | 57.1                                  | 67.7 | 78.3                 | 50.4 | 40.2                                 | 23.5                  | 6.9                     |
| 75+       | 53.3                                    | 62.2 | 70.4                                  | 59.4 | 65.1                 | 41.8 | 39.5                                 | 26.5                  | 15.8                    |
| 13-17     | 59.6                                    | 65.0 | 66.1                                  | 72.3 | 74.8                 | 30.7 | 27.7                                 | 35.3                  | 17.9                    |
| 18-24     | 62.0                                    | 69.1 | 69.0                                  | 77.3 | 80.9                 | 34.3 | 36.3                                 | 31.7                  | 11.8                    |
| 25-34     | 57.8                                    | 69.7 | 68.5                                  | 78.9 | 83.9                 | 40.3 | 42.4                                 | 25.6                  | 5.9                     |
| 35-44     | 45.8                                    | 64.8 | 61.1                                  | 78.2 | 80.4                 | 57.8 | 55.8                                 | 18.1                  | 3.2                     |
| 45-54     | 55.1                                    | 61.2 | 62.6                                  | 68.6 | 72.2                 | 37.0 | 37.4                                 | 34.4                  | 13.5                    |
| 55-64     | 58.3                                    | 68.7 | 68.0                                  | 78.2 | 81.9                 | 40.7 | 40.4                                 | 27.4                  | 9.5                     |
| 65-74     | 52.0                                    | 70.8 | 66.2                                  | 83.0 | 83.5                 | 46.7 | 46.1                                 | 19.1                  | 3.4                     |
| 75+       | 57.1                                    | 66.9 | 65.9                                  | 76.1 | 79.9                 | 40.9 | 40.9                                 | 28.1                  | 9.6                     |
| 13-17     | 51.6                                    | 71.4 | 75.8                                  | 81.7 | 86.8                 | 41.4 | 41.0                                 | 21.2                  | 5.8                     |
| 18-24     | 39.6                                    | 65.3 | 58.7                                  | 79.2 | 77.6                 | 43.8 | 45.6                                 | 18.7                  | 1.8                     |

a composite score on parental education and occupations, and family income.  
e; the "middle" SES group is the middle two quartiles; and the "high" SES

National Center for Education Statistics, High School and Beyond, Base Year  
National Education Longitudinal Study of 1988, "First Followup" survey.

## Indicator 39. After School Activities

Percent of high school sophomores who watch more than 5 hours of television on school nights, by test performance and socioeconomic status: 1990



**SOURCE:** U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, "First Followup" survey.

Although there appears to be a negative relationship between television watching and performance on achievement tests, other variables such as socioeconomic characteristics are also negatively related with achievement. Higher SES students were less likely to watch five or more hours of TV on school nights and more likely to have high test scores than low SES students.

# 38. Extracurricular Activities

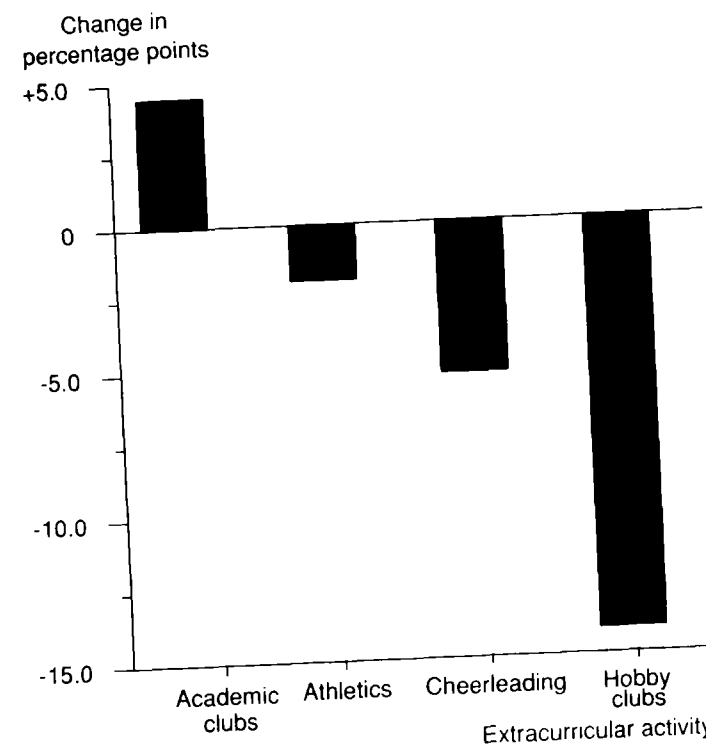
**Percent of sophomores who participate in selected school-sponsored extracurricular activities: 1980 and 1990**

| Student and school characteristics | Academic clubs |      | Athletics |      | Cheerleading |      | Hobby clubs |      | Music |      | Vocational clubs |      |
|------------------------------------|----------------|------|-----------|------|--------------|------|-------------|------|-------|------|------------------|------|
|                                    | 1980           | 1990 | 1980      | 1990 | 1980         | 1990 | 1980        | 1990 | 1980  | 1990 | 1980             | 1990 |
| All sophomores                     | 26.2           | 30.7 | 54.1      | 52.2 | 14.3         | 9.1  | 21.4        | 7.3  | 31.3  | 21.5 | 13.9             | 11.7 |
| Male                               | 22.7           | 27.4 | 63.4      | 63.0 | 3.3          | 2.1  | 25.5        | 7.9  | 21.5  | 15.6 | 11.5             | 11.0 |
| Female                             | 29.1           | 34.0 | 45.9      | 41.4 | 24.7         | 15.8 | 17.6        | 6.7  | 41.0  | 27.3 | 15.7             | 12.3 |
| Race/ethnicity                     |                |      |           |      |              |      |             |      |       |      |                  |      |
| White                              | 25.3           | 31.7 | 54.4      | 53.5 | 14.1         | 8.3  | 21.0        | 7.5  | 30.5  | 22.3 | 13.5             | 12.2 |
| Black                              | 28.9           | 26.2 | 57.1      | 51.4 | 17.1         | 15.7 | 21.7        | 5.2  | 37.9  | 23.0 | 17.5             | 13.7 |
| Hispanic                           | 27.6           | 27.2 | 48.3      | 43.9 | 13.2         | 8.3  | 22.7        | 6.7  | 28.4  | 14.8 | 13.2             | 7.4  |
| Asian                              | 31.8           | 36.7 | 46.3      | 54.9 | 7.0          | 5.2  | 25.5        | 11.8 | 28.4  | 20.6 | 5.3              | 5.1  |
| American Indian                    | 29.5           | 31.9 | 56.8      | 44.2 | 12.9         | 11.3 | 26.5        | 8.4  | 33.7  | 17.3 | 20.0             | 16.9 |
| Test performance quartile          |                |      |           |      |              |      |             |      |       |      |                  |      |
| Lowest                             | 27.5           | 22.5 | 47.0      | 47.4 | 15.0         | 9.5  | 22.9        | 6.5  | 29.6  | 16.0 | 20.6             | 17.3 |
| Second                             | 25.7           | 29.9 | 53.3      | 50.8 | 14.8         | 8.6  | 22.7        | 6.1  | 29.7  | 20.5 | 16.2             | 13.2 |
| Third                              | 24.4           | 30.3 | 56.4      | 51.8 | 15.1         | 9.2  | 21.1        | 7.6  | 31.2  | 22.1 | 12.6             | 11.4 |
| Highest                            | 27.9           | 40.0 | 60.5      | 59.0 | 13.4         | 9.0  | 18.6        | 8.7  | 35.8  | 26.9 | 7.7              | 6.7  |
| Socioeconomic status *             |                |      |           |      |              |      |             |      |       |      |                  |      |
| Low                                | 25.2           | 26.3 | 43.7      | 42.0 | 13.2         | 8.2  | 19.6        | 5.8  | 27.6  | 18.3 | 18.0             | 17.1 |
| Middle                             | 26.3           | 31.5 | 55.1      | 52.7 | 15.1         | 9.6  | 22.3        | 7.1  | 31.5  | 22.1 | 14.8             | 11.4 |
| High                               | 26.9           | 34.9 | 64.4      | 63.2 | 14.4         | 9.3  | 21.4        | 9.4  | 35.2  | 24.4 | 7.9              | 6.5  |
| Control of school                  |                |      |           |      |              |      |             |      |       |      |                  |      |
| Public                             | 26.0           | 31.0 | 53.1      | 50.8 | 14.2         | 9.2  | 21.3        | 6.7  | 31.3  | 22.1 | 14.9             | 12.6 |
| Catholic                           | 27.7           | 28.6 | 61.8      | 66.5 | 15.9         | 7.1  | 21.2        | 12.3 | 28.4  | 12.6 | 3.6              | 2.8  |
| Other private                      | 27.3           | 29.1 | 68.8      | 68.0 | 13.1         | 9.9  | 24.4        | 13.1 | 35.9  | 25.7 | 6.5              | 5.5  |

\* Socioeconomic status was measured by a composite score on parental education and occupations, and family income. The "low" SES group is the lowest quartile; the "middle" SES group is the middle two quartiles; and the "high" SES group is the upper quartile.

**SOURCE:** U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, "1980 Sophomore Cohort;" and National Education Longitudinal Study of 1988, "First Followup" survey.

**Change in participation of high school sophomores in extracurricular activities: 1980 and 1990**



**SOURCE:** U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, "1980 Sophomore Cohort;" and National Education Longitudinal Study of 1988, "First Followup" survey.

Since 1980, the proportion of sophomores participating in academic clubs has increased by nearly 5 percentage points. However, participation in athletics, cheerleading, and hobby clubs has decreased. There has been a significant decline in the proportion of students participating in hobby clubs and musical activities. Athletics remain more than half of students participating in both 1980 and 1990.

lar Activities

icipate in selected school-sponsored  
id 1990

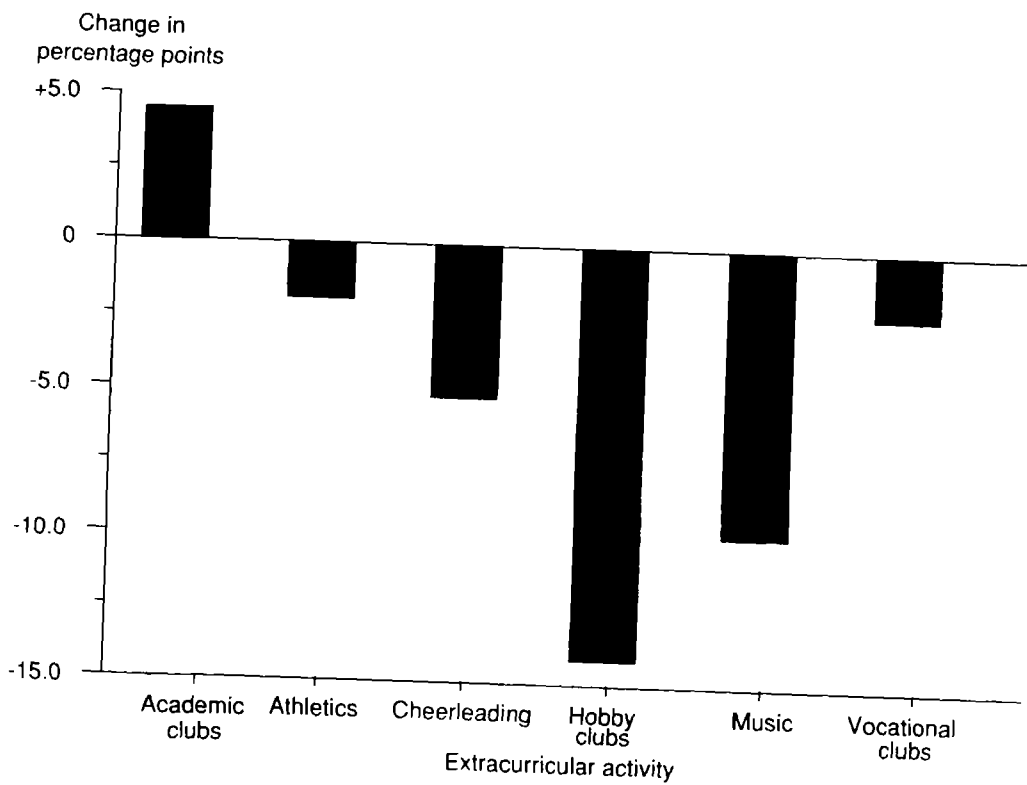
| Athletics |      | Cheerleading |      | Hobby clubs |      | Music |      | Vocational clubs |      |
|-----------|------|--------------|------|-------------|------|-------|------|------------------|------|
| 1980      | 1990 | 1980         | 1990 | 1980        | 1990 | 1980  | 1990 | 1980             | 1990 |
| 54.1      | 52.2 | 14.3         | 9.1  | 21.4        | 7.3  | 31.3  | 21.5 | 13.9             | 11.7 |
| 63.4      | 63.0 | 3.3          | 2.1  | 25.5        | 7.9  | 21.5  | 15.6 | 11.5             | 11.0 |
| 45.9      | 41.4 | 24.7         | 15.8 | 17.6        | 6.7  | 41.0  | 27.3 | 15.7             | 12.3 |
| 54.4      | 53.5 | 14.1         | 8.3  | 21.0        | 7.5  | 30.5  | 22.3 | 13.5             | 12.2 |
| 57.1      | 51.4 | 17.1         | 15.7 | 21.7        | 5.2  | 37.9  | 23.0 | 17.5             | 13.7 |
| 48.3      | 43.9 | 13.2         | 8.3  | 22.7        | 6.7  | 28.4  | 14.8 | 13.2             | 7.4  |
| 46.3      | 54.9 | 7.0          | 5.2  | 25.5        | 11.8 | 28.4  | 20.6 | 5.3              | 5.1  |
| 56.8      | 44.2 | 12.9         | 11.3 | 26.5        | 8.4  | 33.7  | 17.3 | 20.0             | 16.9 |
| 47.0      | 47.4 | 15.0         | 9.5  | 22.9        | 6.5  | 29.6  | 16.0 | 20.6             | 17.3 |
| 53.3      | 50.8 | 14.8         | 8.6  | 22.7        | 6.1  | 29.7  | 20.5 | 16.2             | 13.2 |
| 56.4      | 51.8 | 15.1         | 9.2  | 21.1        | 7.6  | 31.2  | 22.1 | 12.6             | 11.4 |
| 60.5      | 59.0 | 13.4         | 9.0  | 18.6        | 8.7  | 35.8  | 26.9 | 7.7              | 6.7  |
| 43.7      | 42.0 | 13.2         | 8.2  | 19.6        | 5.8  | 27.6  | 18.3 | 18.0             | 17.1 |
| 55.1      | 52.7 | 15.1         | 9.6  | 22.3        | 7.1  | 31.5  | 22.1 | 14.8             | 11.4 |
| 64.4      | 63.2 | 14.4         | 9.3  | 21.4        | 9.4  | 35.2  | 24.4 | 7.9              | 6.5  |
| 53.1      | 50.8 | 14.2         | 9.2  | 21.3        | 6.7  | 31.3  | 22.1 | 14.9             | 12.6 |
| 61.8      | 66.5 | 15.9         | 7.1  | 21.2        | 12.3 | 28.4  | 12.6 | 3.6              | 2.8  |
| 68.8      | 68.0 | 13.1         | 9.9  | 24.4        | 13.1 | 35.9  | 25.7 | 6.5              | 5.5  |

omposite score on parental education and occupations, and family income.  
he "middle" SES group is the middle two quartiles; and the "high" SES

onal Center for Education Statistics, High School and Beyond, Base Year  
nal Education Longitudinal Study of 1988, "First Followup" survey.

Indicator 38. Extracurricular Activities

Change in participation of high school sophomores in school-sponsored  
extracurricular activities: 1980 and 1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, "1980 Sophomore Cohort;" and National Education Longitudinal Study of 1988, "First Followup" survey.

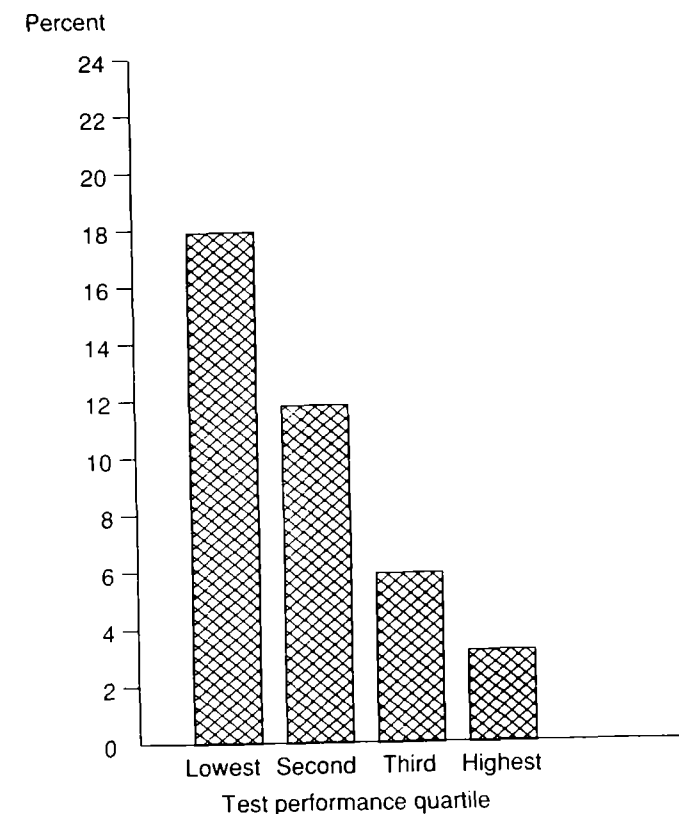
Since 1980, the proportion of sophomores participating in academic clubs has increased nearly 5 percentage points. However, participation in other extracurricular activities has decreased. There has been a significant decline in the percent of students participating in hobby clubs and musical activities. Athletics remains the most popular activity, with more than half of students participating in both 1980 and 1990.

**Percent of sophomores who say they engage in various activities at least once or twice a week: 1980 and 1990**

| Student and school characteristics | Just driving or riding around |      | Visting with friends at a local hangout |      | Talking with friends on the telephone |      | Reading for pleasure |      | Hours of television on school nights |                         |
|------------------------------------|-------------------------------|------|-----------------------------------------|------|---------------------------------------|------|----------------------|------|--------------------------------------|-------------------------|
|                                    | 1980                          | 1990 | 1980                                    | 1990 | 1980                                  | 1990 | 1980                 | 1990 | 5 or more hours, 1980                | More than 5 hours, 1990 |
| All sophomores                     | 47.1                          | 56.1 | 67.2                                    | 66.3 | 76.6                                  | 80.1 | 41.1                 | 41.0 | 27.3                                 | 9.1                     |
| Male                               | 51.0                          | 57.9 | 69.4                                    | 69.5 | 66.5                                  | 72.5 | 34.3                 | 33.8 | 29.1                                 | 10.2                    |
| Female                             | 43.3                          | 54.3 | 65.2                                    | 63.1 | 86.2                                  | 87.7 | 47.9                 | 48.2 | 24.9                                 | 8.0                     |
| Race/ethnicity                     |                               |      |                                         |      |                                       |      |                      |      |                                      |                         |
| White                              | 49.0                          | 58.9 | 68.7                                    | 68.7 | 78.4                                  | 81.7 | 40.4                 | 41.5 | 25.1                                 | 6.7                     |
| Black                              | 38.0                          | 50.1 | 64.8                                    | 59.1 | 73.3                                  | 79.6 | 46.6                 | 41.2 | 39.8                                 | 23.0                    |
| Hispanic                           | 46.6                          | 47.6 | 60.2                                    | 59.3 | 68.6                                  | 72.4 | 36.3                 | 38.2 | 27.3                                 | 10.2                    |
| Asian                              | 31.5                          | 44.0 | 55.3                                    | 57.1 | 67.7                                  | 78.3 | 50.4                 | 40.2 | 23.5                                 | 6.9                     |
| American Indian                    | 51.6                          | 53.3 | 62.2                                    | 70.4 | 59.4                                  | 65.1 | 41.8                 | 39.5 | 26.5                                 | 15.8                    |
| Test performance quartile          |                               |      |                                         |      |                                       |      |                      |      |                                      |                         |
| Lowest                             | 48.9                          | 59.6 | 65.0                                    | 66.1 | 72.3                                  | 74.8 | 30.7                 | 27.7 | 35.3                                 | 17.9                    |
| Second                             | 51.1                          | 62.0 | 69.1                                    | 69.0 | 77.3                                  | 80.9 | 34.3                 | 36.3 | 31.7                                 | 11.8                    |
| Third                              | 47.9                          | 57.8 | 69.7                                    | 68.5 | 78.9                                  | 83.9 | 40.3                 | 42.4 | 25.6                                 | 5.9                     |
| Highest                            | 39.7                          | 45.8 | 64.8                                    | 61.1 | 78.2                                  | 80.4 | 57.8                 | 55.8 | 18.1                                 | 3.2                     |
| Socioeconomic status *             |                               |      |                                         |      |                                       |      |                      |      |                                      |                         |
| Low                                | 43.1                          | 55.1 | 61.2                                    | 62.6 | 68.6                                  | 72.2 | 37.0                 | 37.4 | 34.4                                 | 13.5                    |
| Middle                             | 49.5                          | 58.3 | 68.7                                    | 68.0 | 78.2                                  | 81.9 | 40.7                 | 40.4 | 27.4                                 | 9.5                     |
| High                               | 47.2                          | 52.0 | 70.8                                    | 66.2 | 83.0                                  | 83.5 | 46.7                 | 46.1 | 19.1                                 | 3.4                     |
| Control of school                  |                               |      |                                         |      |                                       |      |                      |      |                                      |                         |
| Public                             | 47.7                          | 57.1 | 66.9                                    | 65.9 | 76.1                                  | 79.9 | 40.9                 | 40.9 | 28.1                                 | 9.6                     |
| Catholic                           | 40.3                          | 51.6 | 71.4                                    | 75.8 | 81.7                                  | 86.8 | 41.4                 | 41.0 | 21.2                                 | 5.8                     |
| Other private                      | 43.9                          | 39.6 | 65.3                                    | 58.7 | 79.2                                  | 77.6 | 43.8                 | 45.6 | 18.7                                 | 1.8                     |

\* Socioeconomic status was measured by a composite score on parental education and occupations, and family income. The "low" SES group is the lowest quartile; the "middle" SES group is the middle two quartiles; and the "high" SES group is the upper quartile.

**SOURCE:** U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, "1980 Sophomore Cohort;" and National Education Longitudinal Study of 1988, "First Followup" survey.

**Percent of high school sophomores who watch more than five hours of television on school nights, by test performance and socioeconomic status**

**SOURCE:** U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, "1980 Sophomore Cohort;" and National Education Longitudinal Study of 1988, "First Followup" survey.

Although there appears to be a negative relationship between test performance and achievement, other variables such as socioeconomic status are also negatively related with achievement. High-achieving students tend to watch five or more hours of TV on school nights and have lower test scores than low SES students.