# The Nation's Report Card Reading Highlights 2002 

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## Important Indicator of Educational Progress

Since 1969, NAEP has been an ongoing nationally representative indicator of what American students know and can do in major academic subjects.

Over the years, NAEP has measured students' achievement in many subjects, including reading, mathematics, science, writing, U.S. history, geography, civics, and the arts. In 2002, NAEP conducted a national assessment in reading at grades 4,8 , and 12 and a state assessment at grades 4 and 8 .

NAEP is a project of the National Center for Education Statistics (NCES) in the U.S. Department of Education and is overseen by the National Assessment Governing Board (NAGB).


In addition to allowing for accommodations, the accommodationspermitted results at grade 4 (1998-2002) differ slightly from previous
 years results, and from previously reported results for 1998 and 2000 due to changes in sample weighting procedures. See appendix A of the full report card for more details.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments.

The fourth-grade average score in 2002 was higher than in 1994, 1998, and 2000, but was not found to be significantly different from 1992. Among eighth-graders, the average score in 2002 was higher than in 1992 or 1994. The twelfth-grade average score in 2002 was lower than in 1992 and 1998.

Average test scores have a standard errora range of a few points plus or minus the score-due to sampling error and measurement error. Statistical tests are used to determine whether the differences between average scores are significant; therefore, not all apparent differences may be found to be statistically significant. Only statistically significant differences are cited in this report.

The results presented in the figures and tables throughout this report distinguish between
two different reporting samples that reflect a change in administration procedures. The more recent results are based on administration procedures in which testing accommodations were permitted for students with disabilities and limited English proficient students. Accommodations were not permitted in earlier assessments. Comparisons between results from 2002 and those from assessment years in which both types of administration procedures were used (in 1998 at all three grades and again in 2000 at the fourth grade only) are discussed based on the results when accommodations were permitted, even though significant differences in results when accommodations were not permitted may be noted in the figures and tables. Additional information about the change in administration procedures can be found in the full report, The Nation's Report Card: Reading 2002.

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## Achievement Levels Provide Standards for Student Performance

Achievement levels are performance standards set by NAGB that provide a context for interpreting student performance on NAEP. These performance standards, based on recommendations from broadly representative panels of educators and members of the public, are used to report what students should know and be able to do at the Basic, Proficient, and Advanced levels of performance in each subject area and at each grade assessed.

As provided by law, NCES, upon review of a congressionally mandated evaluation of NAEP, has determined that the achievement levels are to be used on a trial basis and should be interpreted and used with caution.

However, both NCES and NAGB believe that these performance standards are useful for understanding trends in student achievement. NAEP achievement levels have been widely used by national and state officials.

Detailed descriptions of the NAEP reading achievement levels can be found on the NAGB web site at http://www.nagb.org/pubs/ readingbook.pdf.

## 2002 Achievement Levels Show Gains and Losses

As shown below, the percentage of fourth-graders at or above Basic was higher in 2002 than in 1994, 1998, and 2000 but was not found to be significantly different from 1992. The percentage of fourth-graders at or above Proficient was higher in 2002 than in 1992 and 1998. The percentage of eighth-graders at or above Basic was higher in 2002 than in all previous assessment years. The percentage of eighth-graders at or above Proficient was higher in 2002 than in 1992 and 1994. The percentages of twelfth-graders at or above Basic and Proficient fell below levels seen in 1992 and 1998.

Percentage of students, by reading achievement level, grades 4, 8, and 12: 1992-2002

|  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

* Significantly different from 2002.

NOTE: Percentages within each reading achievement level range may not add to 100 , or to the exact percentages at or above achievement levels, due to rounding. In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998-2002) differ slightly from previous years' results, and from previously reported results for 1998 and 2000, due to changes in sample weighting procedures. See appendix A of the full report card for more details.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments.

## Achievement Levels

Basic: This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.

Proficient: This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subjectmatter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.
Advanced: This level signifies superior performance.

## Trends in Percentiles Differ by Grade Level

Looking at changes in scores for students at higher, middle, and lower performance levels gives a more complete picture of student progress. An examination of scores at different percentiles
on the $0-500$ reading scale at each grade indicates whether or not the changes seen in the national average score results are reflected in the performance of lower-, middle-, and higher-performing students.

The percentile indicates the percentage of students whose scores fell below a particular score.

At grade 4, scores at the 10th, 25 th, and 50 th percentiles were higher in 2002 than in

Reading scale score percentiles, grades 4, 8, and 12: 1992-2002


1998 and 2000 but were not found to be significantly different from 1992. The score at the 75 th percentile was higher than in 1992.

At grade 8, scores were higher in 2002 than in 1992 at all but the 90th percentile. However, only scores for lower-performing students at the 10th and 25 th percentiles were higher in 2002 than in 1998.

At grade 12, the decline in performance since 1992 was evident across most of the score distribution (at the 10th, 25th, 50th, and 75th percentiles). Performance declined between 1998 and 2002 at the 90th percentile.

## NAEP 2002 Reading Assessment Design: Framework, Accommodations, and Samples

The NAEP reading framework, which defines the content for the 2002 assessment, was developed through a comprehensive national process and adopted by NAGB.

The reading framework is organized along two dimensions, the context for reading and the aspect of reading. The context dimension is divided into three areas that characterize the purposes for reading: reading for literary experience,
reading for information, and reading to perform a task. All three contexts are assessed at grades 8 and 12 , but reading to perform a task is not assessed at grade 4 . The aspects of reading, which define the types of comprehension questions used in the assessments, include forming a general understanding, developing interpretation, making reader/text connections, and examining content and structure.

The complete framework is available on the NAGB web site at http://www.nagb.org.

Beginning in 1998, assessment procedures allowed for the use of accommodations by students with disabilities or limited English proficient students who required accommodations to participate in NAEP. Accommodations had not been permitted in prior assessment years (see page 1).

Results from the 2002 reading assessment are reported for the nation at grades 4,8 , and 12 , and at the state level at grades 4 and 8 . The national results are based on a representative sample of students in both public schools and nonpublic schools, while the state results are based only on public-school students.

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## Fourth- and Eighth-Grade Results for Participating States and Jurisdictions

In addition to national results for students' reading performance, the 2002 assessment collected performance data for fourth- and eighth-graders who attended public schools in states and other jurisdictions that volunteered to participate. In 2002, 45 states and 5 other jurisdictions participated at grade 4, and


44 states and 6 other jurisdictions participated at grade 8 . Two states at grade 4 and three states at grade 8 participated but did not meet minimum school participation guidelines for reporting their results in 2002.

While the national results presented on the previous

Table A. Average reading scile scores, grade 4 public schools: By state, 1992-2002

|  | Accommodations not permitted |  |  | Accommodations permitted |  |  | Accommodations not permitted |  |  | Accommodations permitted |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1992 | 1994 | 1998 | 1998 | 2002 |  | 1992 | 1994 | 1998 | 1998 | 2002 |
| Nation (Public) ${ }^{1}$ | 215 | 212 * | 215 | 213 * | 217 | New Hampshire | 228 | 223 | 226 | 226 | - |
| Alabama | 207 | 208 | 211 | 211 | 207 | New Jersey | 223 | 219 | - | - | - |
| Arizona | 209 * | 206 | 207 | 206 | 205 | New Mexico | 211 | 205 | 206 | 205 | 208 |
| Arkansas | 211 | 209 | 209 * | 209 | 213 | New York $\ddagger$ | 215 **** | 212 *,** | 216 *,** | 215 **** | 222 |
| California $\ddagger$ | 202 | 197 *,** | 202 | 202 | 206 | North Carolina | 212 *,** | 214 **** | 217 **** | 213 **** | 222 |
| Colorado | 217 | 213 | 222 | 220 | - | North Dakota $\ddagger$ | 226 | 225 | - | - | 224 |
| Connecticut | 222 *,** | 222 *,** | 232 | 230 | 229 | Ohio | 217 *,** | - | - | - | 222 |
| Delaware | 213 **** | 206 *,** | 212 *** | 207 *,** | 224 | Oklahoma | 220 *,** | - | 220 *,** | 219 *,** | 213 |
| Florida | 208 *,** | 205 *** | 207 *** | $206{ }^{\text {*,** }}$ | 214 | Oregon | - | - | 214 **** | 212 *,** | 220 |
| Georgia | 212 | 207 *,** | 210 *** | 209 *,** | 215 | Pennsylvania | 221 | 215 **** | - | - | 221 |
| Hawaii | 203 * | 201 *,** | 200 *** | 200 *,** | 208 | Rhode Island | 217 | 220 | 218 | 218 | 220 |
| Idaho | 219 | - | - | - | 220 | South Carolina | 210 * | 203 *,** | 210 | 209 *,** | 214 |
|  | 221 | 220 | - | - | 222 | Tennessee ${ }^{\ddagger}$ | 212 | 213 | 212 | 212 | 214 |
| $\text { lowa } \ddagger$ | 225 | 223 | 223 | 220 | 223 | Texas | 213 | 212 | 217 | 214 | 217 |
| Kansas $\ddagger$ | - | - | 222 | 221 | 222 | Utah | 220 | 217 **** | 215 **** | 216 **** | 222 |
| Kentucky | 213 **** | 212 *,** | 218 | 218 | 219 | Vermont | - | - | - | - | 227 |
| Lovisiana | 204 | 197 *,** | 204 | 200 *,** | 207 | Virginia | 221 * | 213 *** | 218 *,** | $217{ }^{\text {*,**}}$ | 225 |
| Maine | 227 | 228 *,** | 225 | 225 | 225 | Washington $\ddagger$ | - | 213 **** | 217 **** | 218 *,** | 224 |
| Maryland | 211 *,** | 210 *,** | 215 | 212 *,** | 217 | West Virginia | 216 | 213 *,** | 216 | 216 | 219 |
| Massachusetts | $226{ }^{*, * *}$ | 223 *,** | 225 *** | 223 *,** | 234 | Wisconsin $\ddagger$ | 224 | 224 | 224 | 222 | - |
| Michigan | 216 | - | 217 | 216 | 219 | Wyoming | 223 | 221 | 219 | 218 | 221 |
| Minnesota ${ }^{\ddagger}$ | 221 *,** | 218 *,** | 222 | 219 *,** | 225 | Other Jurisdictions |  |  |  |  |  |
| Mississippi | 199 | 202 | 204 | 203 | 203 | District of Columbia | 188 * | 179 *,** | 182 *,** | $179 \text { *,** }$ | 191 |
| Missouri | 220 | 217 | 216 | 216 *,** | 220 | DDESS ${ }^{2}$ | , | $-$ | 220 *** | $219 \text { *,** }$ | 225 |
| Montana ${ }^{\ddagger}$ | - | 222 | 226 | 225 | 224 | DoDDS ${ }^{3}$ | - | 218 **** | 223 | 221 *,** | 224 |
| Nebraska | 221 | 220 | - | 20 | 222 |  |  | 181 **** | - | 22 | 185 |
| Nevada | - | - | 208 | 206 | 209 | Virgin Islands | $171^{*, * *}$ | 181 | 178 | 174 | 179 |

[^0]pages reflect the performance of students in both public and nonpublic schools combined, results for jurisdictions are based on the performance of students attending public schools only. For purposes of comparison, the national performance results presented here are for public school students only.

## Average Score Results

Tables A and B present average reading score results for fourth- and eighth-graders, respectively. Among the 40 jurisdictions that participated in both the 1998 and 2002 fourth-grade reading assessments, 19 jurisdictions showed score increases in 2002 and only 1 jurisdiction
showed a decline. Among the 40 jurisdictions that participated in both 1992 and 2002, average reading scores in 2002 were higher in 15 jurisdictions and lower in 2 jurisdictions.

At grade 8, 10 of the 37 jurisdictions that participated in both assessment years showed gains in 2002, and 5 showed declines.


Table B. Average reading scivle scores, grade 8 public schools: By state, 1998 and 2002

|  | Accommodations not permitted 1998 | Accommodations permitted |  |  | Accommodations not permitted 1998 | Accommodations permitted |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1998 | 2002 |  |  | 1998 | 2002 |
| Nation (Public) ${ }^{1}$ | 261 | 261 * | 263 | New Mexico | 258 * | 258 *,** | 254 |
| Alabama | 255 | 255 | 253 | New York ${ }^{\ddagger}$ | 266 | 265 | 264 |
| Arizona | 261 * | 260 | 257 | North Carolina | 264 | 262 | 265 |
| Arkansas | 256 * | 256 * | 260 | North Dakota ${ }^{\ddagger}$ | - | - | 268 |
| California ${ }^{\ddagger}$ | 253 | 252 | 250 | Ohio | - | - | 268 |
| Colorado | 264 | 264 | - | Oklahoma | 265 * | 265 * | 262 |
| Connecticut | 272 *,** | 270 * | 267 | Oregon ${ }^{\ddagger}$ | 266 | 266 | 268 |
| Delaware | 256 *,** | 254 *,** | 267 | Pennsylvania | - | - | 265 |
| Florida | 253 *,** | 255 *,** | 261 | Rhode Island | 262 | 264 * | 262 |
| Georgia | 257 | 257 | 258 | South Carolina | 255 | 255 | 258 |
| Hawaii | 250 | 249 * | 252 | Tennessee ${ }^{\ddagger}$ | 259 | 258 | 260 |
| Idaho | - | - | 266 | Texas | 262 | 261 | 262 |
| Indiana | - | - | 265 | Utah | 265 | 263 | 263 |
| Kansas ${ }^{\ddagger}$ | 268 | 268 | 269 | Vermont | - | - | 272 |
| Kentucky | 262 | 262 | 265 | Virginia | 266 | 266 | 269 |
| Lovisiana | 252 * | 252 * | 256 | Washington ${ }^{\ddagger}$ | 265 | 264 * | 268 |
| Maine | 273 | 271 | 270 | West Virginia | 262 | 262 | 264 |
| Maryland | 262 | 261 | 263 | Wisconsin ${ }^{\text {f }}$ | 266 | 265 | - |
| Massachusetts | 269 | 269 | 271 | Wyoming | 262 | 263 | 265 |
| Michigan | - | - | 265 | Other Jurisdictions |  |  |  |
| Minnesota ${ }^{\ddagger}$ | 267 | 265 | - | American Samoa | - | - | 198 |
| Mississippi | 251 * | 251 * | 255 | District of Columbia | 236 | 236 | 240 |
| Missouri | 263 **** | 262 *,** | 268 | DDESS ${ }^{2}$ | 269 | 268 | 272 |
| Montana ${ }^{\ddagger}$ | 270 | 271 | 270 | DoDDS ${ }^{3}$ | 269 *,** | 269 *,** | 273 |
| Nebraska |  |  | 270 | Guam | 26 |  | 240 |
| Nevada | $257{ }^{*, * *}$ | 258 *,** | 251 | Virgin Islands | 233 * | $231{ }^{*, * *}$ | 241 |

- Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
\# Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
${ }^{1}$ National results that are presented for assessments prior to 2002 are based on the national sample, not on aggregated state assessment samples.
${ }^{2}$ Department of Defense Domestic Dependent Elementary and Secondary Schools.
${ }^{3}$ Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Reading Assessments.


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Figures A and B show how the performance of students in participating states and other jurisdictions compares to the performance of students in the national publicschool sample.

Of the 48 states and other jurisdictions that had their results reported in 2002 at grade 4, 26 had scores that were higher than the national average score, 7 had scores that were not found to be
statistically different from the national average, and 15 had scores that were lower than the national average.

Of the 47 states and other jurisdictions that had results reported in 2002 at grade 8,

20 had scores that were higher than the national average score, 12 had scores that were not found to differ significantly from the national average, and 15 had scores that were lower than the national average.

Figure A. Comparison of state and national public school average reading scores, grade 4: 2002


Figure B. Comparison of state and national public school average reading scores, grade 8: 2002

${ }^{1}$ Department of Defense Domestic Dependent Elementary and Secondary Schools.
${ }^{2}$ Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.

Jurisdiction was not found to be significantly different from nation in average scale score.
Jurisdiction had lower average scale score than nation.
Jurisdiction did not meet minimum participation rate guidelines.
Jurisdiction did not participate in the NAEP 2002 Reading State Assessment.

## Achievement Level Results

The following figures show the percentages of fourth- and eighth-graders at each achievement level for the states and other jurisdictions that had results reported in
the 2002 reading assessment. Figure C shows this information for grade 4, figure D for grade 8. In both figures, the shaded bars represent the proportion of students at each of three achievement
levels: Basic, Proficient, and Advanced-as well as the proportion below Basic. The central vertical line divides the proportion of students who fell below the Proficient level (i.e., at Basic or below

Basic) from those who performed at or above the Proficient achievement level (i.e., at Proficient or at Advanced). Scanning down the horizontal bars to the right of the vertical line allows

Figure C. Percentage of students within each reading achievement level range, grade 4 public schools: By state, 2002


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easy comparison of states' and jurisdictions' percentages of students at or above Proficientthe achievement level identified by the National Assessment Governing Board (NAGB) as the standard all students should reach.

At grade 4, as shown in figure C, 19 states and other jurisdictions had higher percentages of students at or above Proficient than the nation, 14 had percentages that were not found to be statistically different from the
nation, and 15 had percentages that were lower than the nation.

At grade 8, as shown in figure D, 16 states and other jurisdictions had higher percentages of students at or
above Proficient than the nation, 15 had percentages that were not found to be significantly different from the nation, and 16 had percentages that were lower than the nation.

Figure D. Percentage of students within each reading achievement level range, grade 8 public schools: By state, 2002


## Students Performing at or Above Proficient in Reading

The percentage of students at or above the Proficient level across years is presented in table C for grade 4 and in table D for grade 8. The percentage of fourth-graders
at or above Proficient increased from 1998 to 2002 in 11 jurisdictions and decreased in 1 jurisdiction. Since 1992, the percentage of fourth-graders at or above Proficient has
increased in 17 jurisdictions. The percentage of eighthgraders at or above Proficient has increased since 1998 in 5 jurisdictions and declined in 1 jurisdiction.


## Table C. Percentage of students at or above Proficient in reading , grade 4 public schools: By state, 1992-2002



- Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
$\ddagger$ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdition or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
${ }^{1}$ National results that are presented for assessments prior to 2002 are based on the national sample, not on aggregated state assessment samples.
${ }^{2}$ Department of Defense Domestic Dependent Elementary and Secondary Schools.
${ }^{3}$ Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
In addition to allowing for accommodations, the accommodations-permitted results for national public schools at grade 4 (1998 and 2002) differ slightly from previous years' results, and from previously reported results for 1998 , due to changes in sample weighting procedures. See appendix A of the full report card for more details.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, and 2002 Reading Assessments.


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Table D. Percentage of students at or above Proficient in reading , grade 8 public schools: By state, 1998 and 2002

|  | Accommodations not permitted | Accommodations permitted |  |
| :---: | :---: | :---: | :---: |
|  | 1998 | 1998 | 2002 |
| Nation (Public) ${ }^{1}$ | 31 | 30 | 31 |
| Alabama | 21 | 22 | 21 |
| Arizona | 28 * | 27 | 23 |
| Arkansas | 23 * | 23 | 27 |
| California ${ }^{\ddagger}$ | 22 | 21 | 20 |
| Colorado | 30 | 30 | - |
| Connecticut | 42 * | 40 | 37 |
| Delaware | 25 *,** | 23 *** | 33 |
| Florida | 23 * | 23 * | 29 |
| Georgia | 25 | 25 | 26 |
| Hawaii | 19 | 19 | 20 |
| Idaho | - | - | 34 |
| Indiana | - | - | 32 |
| Kansus ${ }^{\ddagger}$ | 35 | 36 | 38 |
| Kentucky | 29 | 30 | 32 |
| Lovisiana | 18 * | 17 * | 22 |
| Maine | 42 | 41 | 38 |
| Maryland | 31 | 31 | 32 |
| Massachusetts | 36 | 38 | 39 |
| Michigan | - | - | 32 |
| Minnesota ${ }^{\ddagger}$ | 37 | 36 | - |
| Misisisippi | 19 | 19 | 20 |
| Missouri | 29 | 28 * | 33 |
| Montana ${ }^{\ddagger}$ | 38 | 40 | 37 |
| Nebraska | - | - | 36 |
| Nevada | 24 * | 23 * | 19 |
| New Mexico | 24 | 23 | 20 |
| New York ${ }^{\ddagger}$ | 34 | 32 | 32 |
| North Carolina | 31 | 30 | 32 |
| North Dakota ${ }^{\ddagger}$ | - |  | 35 |
| Ohio | - | - | 35 |
| Oklahoma | 29 | 30 | 28 |
| Oregon ${ }^{\text {¢ }}$ | 33 | 35 | 37 |
| Pennsylvania | - | - | 35 |
| Rhode island | 30 | 32 | 30 |
| South Carolina | 22 | 22 | 24 |
| Tennessee $\ddagger$ | 26 | 27 | 28 |
| Texas | 28 | 27 | 31 |
| Utah | 31 | 31 | 32 |
| Vermont | - | - | 40 |
| Virginia | 33 | 33 | 37 |
| Washington $\ddagger$ | 32 * | 32 * | 37 |
| West Virginia | 27 | 28 | 29 |
| Wisconsin $\ddagger$ | 33 | 34 | - |
| Wyoming | 29 | 31 | 31 |
| Other Jurisdictions |  |  |  |
| American Samoa | - | - | 1 |
| District of Columbia | 12 | 11 | 10 |
| DDESS ${ }^{2}$ | 37 | 39 | 37 |
| DoDDS ${ }^{3}$ | 36 | 37 | 40 |
| Guam | - | - | 11 |
| Virgin Slands | 10 | 9 | 7 |

## Subgroup Results Reveal How Various Groups of Students Performed on NAEP

In addition to reporting information on all students' performance on its assessments, NAEP also studies the performance of various subgroups of students. The reading performance of
subgroups of students in 2002 indicates whether they have progressed since earlier assessments and allows for comparisons with the performance of other subgroups in 2002.

## Average Reading Scores by Gender

The figures below present average reading scores for males and females across assessment years.
The average scores for male and female fourth-graders were higher in 2002 than in 1998 but were not found to be significantly different from the scores in 1992.

The average reading scores for both male and female eighthgraders were higher in 2002 than in 1992 and 1994.

While the reading score for eighth-grade males increased between 1998 and 2002, the average score for females in 2002 was not found to be significantly different from that in 1998.
The average reading scores for both male and female twelfthgraders decreased between 1998 and 2002, resulting in average scores that were lower than in 1992 for both groups.

Average reading scale scores, by gender, grades 4, 8, and 12: 1992-2002


* Significantly different from 2002.

NOTE: Scale score results when testing accommodations were not permitted are shown in darker print, and when accommodations were permitted in lighter print.
In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998-2002) differ slightly from previous years' results, and from previously reported results for 1998 and 2000, due to changes in sample weighting procedures. See appendix A of the full report card for more details.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments.

When reading these subgroup results, it is important to keep in mind that there is no simple, cause-and-effect relationship between membership in a subgroup and
achievement in NAEP. A complex mix of educational and socioeconomic factors may interact to affect student performance.

## Average Reading Score Gaps Between Males and Females

In 2002, the difference in average reading scale scores favoring females over males was 6 score points at grade 4, 9 points at grade 8 , and 16 points at grade 12 . While this represents a narrowing of the gap since 2000 at grade 4 , the gap in 2002 was not found to be significantly different from 1992. The gap in 2002 at grade 8 was smaller than in all prior assessment years. The scale score gap between male and female twelfth-graders was larger in 2002 than in 1992.


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## Achievement Level Results by Gender

The percentages of male and female students at or above the Basic and Proficient reading achievement levels are presented below.

At grade 4, the percentages of males at or above the Basic and Proficient levels were higher in 2002 than in 2000 but were not found to differ significantly from 1992. The
percentages of female fourthgraders at or above Basic and Proficient were higher in 2002 than in 1998, but were not found to differ significantly from 1992.

At grade 8, the percentage of males at or above Basic was higher in 2002 than in any of the previous reading assessment years. The percentage of
males at or above Proficient in 2002 was higher than that in 1992 and 1994. The percentage of eighth-grade females at or above Basic in 2002 was higher than in 1992 and 1994, while no significant change was detected in the percentage at or above Proficient.

At grade 12, the percentages of males and females at or above Basic were lower in 2002 than in 1992. The percentages of males at or above Proficient was lower in 2002 than in 1992 while there was no significant change detected since 1992 for females.

Percentages of students at or above Basic and Proficient in reading, by gender, grades 4, 8, and 12: 1992-2002

| Grade 4 | Accommodations not permitted |  |  |  | Accommodations permitted |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 1992 | 1994 | 1998 | 2000 | 1998 | 2000 | 2002 |
| At or above Proficient | 25 | 26 | 28 | 27 | 27 | 25 * | 28 |
| At or above Basic | 58 | 55* | 59 | 58 | 57 * | 55 * | 61 |
| Female |  |  |  |  |  |  |  |
| At or above Proficient | 32 | 34 | 33 | 36 | 32* | 34 | 35 |
| At or above Basic | 67 | 66 | 65 | 67 | 62* | 64 | 67 |
| Grade 8 |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
| At or above Proficient | 23 * | 23* | 27 | - | 26 | - | 28 |
| At or above Basic | 64 * | 62* | 68 * | - | 67 * | - | 71 |
| Female |  |  |  |  |  |  |  |
| At or above Proficient | 35 | 36 | 40 | - | 39 | - | 38 |
| At or above Basic | 76* | 77 * | 81 | - | 80 | - | 80 |
| Grade 12 |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
| At or above Proficient | 34* | 29 | 32 * | - | 32* | - | 28 |
| At or above Basic | 75* | 69 | 70* | - | 70 | - | 67 |
| Female |  |  |  |  |  |  |  |
| At or above Proficient | 46 | 43 | 48 * | - | 48 * | - | 44 |
| At or above Basic | 84* | 80 | $83 *$ | - | 83 | - | 80 |

[^1]
## Average Reading Scores by Race/Ethnicity

Based on information obtained from school records, students who took the NAEP reading assessment were identified as belonging to one of the racial/ ethnic subgroups identified in the figures below. The results presented here for 1992 through 2000 differ from those presented in earlier reading reports in which results were reported for the same five racial/ethnic subgroups listed below based on student self-identification.

At grade 4, both White students and Black students had higher average reading scores in 2002 than in any of the previous assessment years. The average score for Hispanic students in 2002 was higher than in 1994, 1998, and 2000 but was not found to be significantly different from 1992. The average score in 2002 was higher than that in 1992 for Asian/Pacific Islander students.

At grade 8, average reading scores in 2002 were higher than those in 1992 and 1994 for White, Black, and Hispanic students.
At grade 12, the average scores for White students and Black students in 2002 were lower than in 1992.
In 2002, White students and Asian/Pacific Islander students had higher average scores than Black and His-
panic students, and White students outperformed Asian/ Pacific Islander students at all three grades. In addition, White and Asian/Pacific Islander students scored higher on average than American Indian/Alaska Native students at grades 4 and 8 .


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments.

## Average Reading Score Gaps Between Selected Racial/Ethnic Subgroups

Average score gaps across assessment years between White students and Black students and between White students and Hispanic students are presented in the figures shown to the right.
The score gap between White and Black fourthgraders was smaller in 2002 than in 1994 and the gap between White and Hispanic fourth-graders narrowed between 2000 and 2002 but neither was found to differ significantly from 1992. At grades 8 and 12, no significant change in either gap was seen across the assessment years.

[^2]
## Grade 4



White average score minus Hispanic average score


## Achievement Level Results by Race/Ethnicity

Achievement level results for the racial/ethnic subgroups are presented in the figures below. At grade 4, the percentages of White and Black students at or above Basic were higher in 2002 than in any of the previous assessment years, and the percentages at or above Proficient were higher in 2002
than in 1992 and 1994 for both groups. The percentage of Hispanic students at or above Basic in 2002 was higher than in 1994 but was not found to differ significantly from 1992. The percentage of Asian/Pacific Islander students at or above Proficient was higher in 2002 compared to 1992.

At grade 8, the percentages of White students and Black students at or above the Basic and Proficient levels were higher in 2002 than in 1992 and 1994. The percentage of White students at or above Basic was also higher in 2002 than in 1998. A higher percentage of Hispanic
students were at or above Basic in 2002 than in 1992 and 1994.

At grade 12, the percentages of White students at or above the Basic and Proficient levels were lower in 2002 than in 1992 and 1998.

Percentages of students at or above Basic and Proficient, by race/ethnicity, grades 4, 8, and 12: 1992-2002

| Grade 4 | Accommodations not permitted |  |  |  | Accommodations permitted |  |  | Grade 12 | Accommodations not permitted |  |  |  | Accommodations permitted |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| White | 1992 | 1994 | 1998 | 2000 | 1998 | 2000 | 2002 | White | 1992 | 1994 | 1998 | 2000 | 1998 | 2000 | 2002 |
| At or above Proficient At or above Basic | 35* 71 * | $\begin{aligned} & 36 * \\ & 70 \end{aligned}$ | $\begin{aligned} & 38 \\ & 72 \text { * } \end{aligned}$ | $\begin{aligned} & 39 \\ & 72 \text { * } \end{aligned}$ | 37 70 | $\begin{aligned} & 38 \\ & 70 \text { * } \end{aligned}$ | 41 75 | At or above Proficient At or above Basic | $46 *$ 85 | $\begin{aligned} & 42 \\ & 80 \end{aligned}$ | $\begin{aligned} & 47^{*} \\ & 83^{*} \end{aligned}$ | - | 47 82 | $-$ | $\begin{aligned} & 42 \\ & 79 \end{aligned}$ |
| Black |  |  |  |  |  |  |  | Black |  |  |  |  |  |  |  |
| At or above Proficient | 8* | 8 * | 10 | 11 | 10 | 10 | 12 | At or above Proficient | 18 | 13 | 18 | - | 17 | - | 16 |
| At or above Basic | 32* | 30* | $35 *$ | $35 *$ | 36 * | 35 * | 40 | At or above Basic | 61 | 52 | 58 | - | 57 | - | 54 |
| Hispanic |  |  |  |  |  |  |  | Hispanic |  |  |  |  |  |  |  |
| At or above Proficient | 12 | 12 | 13 | 15 | 13 | 13 | 15 | At or above Proficient |  | 20 | 25 | - | 24 | - |  |
| At or above Basic | 39 | 34 * | 38 | 41 | 37 | 37 | 44 | At or above Basic |  | 58 | 64 | - | 62 | - |  |
| Asian/Pacific Islander |  |  |  |  |  |  |  | Asian/Pacific Islander |  |  |  |  |  |  |  |
| At or above Proficient | 25 * | 36 | 34 | 44 | 30 | 41 | 37 | At or above Proficient | 40 | 29 | 37 | - | 38 | - |  |
| At or above Basic | 60 | 66 | 63 | 75 | 58 | 70 | 70 | At or above Basic | 77 | 67 | 75 | - | 74 | - |  |
| American Indian/ Alaska Native |  |  |  |  |  |  |  | American Indian/ Alaska Native |  |  |  |  |  |  |  |
| At or above Proficient | $\ddagger$ | 30 | $\ddagger$ | 22 | $\ddagger$ | 28 | 22 | At or above Proficient | $\ddagger$ | 20 | $\ddagger$ | - | $\ddagger$ | - | $\ddagger$ |
| At or above Basic | $\ddagger$ | 59 | $\ddagger$ | 60 | $\ddagger$ | 63 | 51 | At or above Basic | $\ddagger$ | 61 | $\ddagger$ | - | キ | - | $\ddagger$ |
| Grade 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| White |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At or above Proficient | $35 *$ | 35* | 40 | - | 39 | - | 41 |  |  |  |  |  |  |  |  |
| At or above Basic | 77 * | 77 * | 82 | - | 81 * | - | 84 |  |  |  |  |  |  |  |  |
| Black |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At or above Proficient | 9* | 10* | 13 | - | 13 | - | 13 | - Data were not collected. <br> *Significantly different from 2002. |  |  |  |  |  |  |  |
| At or above Basic | 45 * | 43* | 52 | - | 53 | - | 55 | $\neq$ Reporting standards were not met. Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian/Alaska Native data in 2002. As a result, they are omitted from this report. |  |  |  |  |  |  |  |
| Hispanic |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At or above Proficient | 13 | 15 | 15 | - | 14 | - | 15 | NOTE: At each grade, approximately 1 percent of students were classified as other races. In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998-2002) differ slightly from previous years' results, and from previously reported results for 1998 and 2000 , due to changes in sample weighting procedures. See appendix A of the full report card for more details. |  |  |  |  |  |  |  |
| At or above Basic | 49 * | 51 * | 54 | - | 53 | - | 57 |  |  |  |  |  |  |  |  |
| Asian/Pacific Islander |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At or above Proficient | 37 | 34 | 35 | - | 33 | - | 36 | SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments. |  |  |  |  |  |  |  |
| At or above Basic | 76 | 72 | 77 | - | 75 | - | 76 |  |  |  |  |  |  |  |  |
| American Indian/ Alaska Native |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At or above Proficient | $\ddagger$ | 19 | $\ddagger$ | - | $\ddagger$ | - | 17 |  |  |  |  |  |  |  |  |
| At or above Basic | $\ddagger$ | 58 | $\ddagger$ | - | $\ddagger$ | - | 61 |  |  |  |  |  |  |  |  |

## Sample Reading Questions

A better understanding of students' performance on the NAEP 2002 reading assessment can be gained by examining sample test questions and students' responses to them. The questions shown here were used in the 2002 reading
assessment. The tables that accompany these sample questions show two types of percentages: the overall percentage of students answering the question successfully and the percentage of students at each achievement level answering
successfully. For the multiplechoice questions shown, the oval corresponding to the correct multiple-choice response is filled in and for the constructed-response questions sample student responses are presented. In addition, the reading context
and reading aspect are identified for each sample question. Additional sample questions can be viewed on the NAEP web site at http:// nces.ed.gov/nationsreportcard/ itmrls.

## Grade 4 Sample Questions and Responses

| Fourth-Grade Multiple-Choice |  | Percentage correct |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| The fourth-grade reading comprehension questions | Overall percentage correct 77 | Below Basic 207 or below ${ }^{1}$ 48 | $\begin{gathered} \text { At Basic } \\ \text { 208-2371 } \\ 87 \end{gathered}$ | $\begin{gathered} \text { At Proficient } \\ \text { 238-2671 } \\ 96 \end{gathered}$ | At Advanced 268 or above ${ }^{1}$ 99 |

${ }^{1}$ NAEP reading composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.
based on the short story "The Box in the Barn," by Barbara Eckfield Connor. Jason, the story's main character, learns a lesson about the risks of snooping when he accidentally lets loose a puppy he believes to be his sister's birthday present. After a day of worry and guilt, Jason is relieved and excited to learn that his father has rescued the puppy, which turns out to be a surprise gift for the boy.

This sample question asked students to choose an answer to explain the character's motivation.

When Megan spoke to Jason in the tall weeds, she was concerned that
(A) she wouldn't get enough presents
(B) her dad wouldn't get back in time for the party

- something was wrong with Jason
(D) the puppy was missing from the box

| Reading Context: | Reading Aspect: |
| :--- | :--- |
| Reading for Literary Experience | Developing Interpretation |

## The Nation's Report Card

## Fourth-Grade Multiple-Choice Question

This question asked students to identify dialogue that illustrates a character's feelings within the story.

| Overall percentage <br> correct <br> 60 |
| :---: | :---: |

'NAEP reading composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.

What does Megan say in the story that shows how she felt about Jason's getting a gift on her birthday?
(A) "Jason, Jason, I'm six years old."
(B) "Are you ok?"
© "Let's see what Dad wants."

- "Isn't he wonderful, Jason?"



## sample questions

## Grade 8 Sample Questions and Responses

| Eighth-Grade Multiple-Choice Question |  | Percentage correct |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| The eighth-grade reading comprehension | Overall percentage correct 57 | Below Basic 242 or below ${ }^{1}$ 41 | $\begin{gathered} \text { At Basic } \\ 243-280^{\prime} \\ 51 \end{gathered}$ | At Proficient 281-322 ${ }^{1}$ 73 | At Advanced 323 or above ${ }^{1}$ 91 |
| questions presented here were based on | NAEP reading composite scale range. <br> SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment. |  |  |  |  |

"The Sharebots," by Carl Zimmer. This article explains the work of a Brandeis University computer scientist, Maya Mataric, who programmed her "Nerd Herd," a squad of 14 small robots, to socialize and cooperate for efficient task management.

This question is a vocabulary item asking students to use contextual clues to determine the meaning of a word.

The following sentence appears in the next-to-last paragraph of the article:
"With this simple social contract, the robots needed only 15 minutes of practice to become altruistic."

Based on how the word is used in the article, which of the following best describes what it means to be altruistic?
(A) To engage in an experiment

- To provide assistance to others
© To work without taking frequent breaks
(D) To compete with others for the highest score

| Reading Context: | Reading Aspect: |
| :--- | :--- |
| Reading for Information | Developing Interpretation |

Eighth-Grade Short Constructed-Response Question

This question measured students' ability to judge the appropriateness of the article's title and to provide information from the text to support their reasoning. Answers to this question were scored on three levels: evidence of "Full Comprehension," evidence of "Partial or Surface Comprehension," or evidence of "Little or No Comprehenson."

This sample response reflects "Full Comprehenson" because it offers appropriate evidence from the article directly supporting the idea that the robots shared information.
Overall percentage
"Full Comprehension"
40


NAEP reading composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.

## Sample "Full Comprehension" Response

Do you think "The Sharebots" is a good title for this article? Explain why or why not, using information from the article.

It is a good title because the robots share information on location, of pucks and who retrieves them.

| Reading Context: | Reading Aspect: |
| :--- | :--- |
| Reading for Information | Forming a General Understanding |
|  |  |

## Reading Aspect:

Forming a General Understanding

## sample questions

## Grade 12 Sample Questions and Responses

## Twelfihh-Grade Multiple-Choice Question

The twelfth-grade reading comprehension questions presented here were based on "Address to the Broadcasting Industry," by Newton Minow. This selection is the text of Minow's 1961 speech to the National Associatron of Broadcasters, in which he describes American television programming as "a vast wasteland."

In this question, students were asked to choose the answer that best describes the kind of support that Minow used to defend his position.

Mr. Minow mainly supported his position with

- personal opinions
(B) rating statistics
© recommendations from advertisers
(D) newspaper articles


## Reading Context: <br> Reading Aspect:

Reading for Information

Percentage correct
Below Basic
264 or below
At Basic
$265-301$
71

At Proficient
302-3451
84

At Advanced 346 or above ${ }^{1}$ 92

NAEP reading composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.

## Iwelfth-Grade Short Constructed-Response Question

This question measured students' ability to link information from across the text in order to explain Minow's meaning of "a vast wasteland." Answers to this question were scored on three levels: evidence of "Full Comprehension," evidence of "Partial or Surface Comprehension," or evidence of "Little or No Comprehension."
This response was rated "Full Comprehension" because it demonstrates a clear understanding of Minow's concern and provides a supporting example from the speech.

| Overall percentage |
| :---: |
| "Full Comprehension" |
| 27 |



Examining Content and Structure
${ }^{1}$ NAEP reading composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Reading Assessment.

## Sample "Full Comprehension" Response

Why did Mr. Minow refer to television as "a vast wasteland"?
Give an example from the speech to support your answer.
He called TV a vast wasteland because there is hardly anything worth watching. He used bad game shows and westerns as examples

## Reading Context:

Reading for Information

## Reading Aspect:

Developing Interpretation

The Nation's Report Card

> Reading Highlights 2002

National Center for Education Statistics

## More Information

Additional results and detailed information about the NAEP 2002 reading assessment can be found on the NAEP web site. Additional NAEP publications can be ordered from
U.S. Department of Education

ED Pubs
P.O. Box 1398

Jessup, MD 20794-1398
877-4ED-PUBS
877-433-7827
Additional information about the NAEP reading framework can be found on the National Assessment Governing Board web site at http://www.nagb.org.


The NAEP web site offers a wealth of assessment information, publications, and analysis tools, including

■ fast "one-stop" access to free NAEP publications and assessment data
■ national and state "report cards" on student achievement in core subject areas such as reading, mathematics, and science
■ sample questions, student answers, and scoring guides
■ interactive data analysis tool and student performance results from past NAEP assessments

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[^0]:    - Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
    $\ddagger$ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
    * Significantly different from 2002 when only one jurisdiction or the nation is being examined.
    ** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
    ${ }^{1}$ National results that are presented for assessments prior to 2002 are based on the national sample, not on aggregated state assessment samples.
    ${ }^{2}$ Department of Defense Domestic Dependent Elementary and Secondary Schools.
    ${ }^{3}$ Department of Defense Dependents Schools (Overseas).
    NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
    In addition to allowing for accommodations, the accommodations-permitted results for national public schools at grade 4 (1998 and 2002) differ slightly from previous years' results, and from previously reported results for 1998 , due to changes in sample weighting procedures. See appendix A of the full report card for more details.
    SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, and 2002 Reading Assessments.

[^1]:    - Data were not collected at grades 8 and 12 in 2000.
    *Significantly different from 2002.
    NOTE: In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998-2002) differ slightly from previous years' results, and from previously reported results for 1998 and 2000, due to changes in sample weighting procedures. See appendix A of the full report card for more details.
    SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002
    Reading Assessments.

[^2]:    * Significantly different from 2002.

    NOTE: Score gaps are calculated based on differences between unrounded average scale scores.
    SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, and 2002 Reading Assessments.

