

# the condition of education 2004



## INDICATOR 9

# Reading Performance of Students in Grades 4 and 8

The indicator and corresponding tables are taken directly from *The Condition of Education 2004*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2004* visit the NCES web site (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004077>) or contact ED PUBs at 1-877-4ED-PUBS.

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# Academic Outcomes

## Reading Performance of Students in Grades 4 and 8

*While 8th-grade reading performance increased between 1992 and 2003, no difference was detected in the performance of 4th-graders.*

The National Assessment of Educational Progress (NAEP) has assessed performance in reading in grades 4 and 8 in public and private schools since 1992, using the assessment reported here. The average reading scale score, which represents what students know and can do, of 4th-graders in 2003 was not significantly different from that in 1992. After decreasing in the late 1990s, the average score increased from 2000 to 2002, with the score in 2003 not significantly different from that in 2002. The average score of 8th-graders was higher in 2003 than in 1992 but decreased 1 point from 264 in 2002 to 263 in 2003.

Achievement levels, which identify what students should know and be able to do at each grade, provide another measure of student performance. The percentages of 4th- and 8th-graders performing at or above *Proficient* in reading were higher in 2003 than in 1992 (see supplemental table 9-1). The percentage of 8th-graders at or above *Basic* was higher in 2003 than in 1992. Scores at the 10th–90th percentiles reveal changes in the scale scores for lower- and higher-performing students. In 4th grade, scores at the 75th percentile were higher in 2003 than in 1992. There were increases in the student scores in grade 8 at the 10th–75th percentiles.

Certain subgroups outperformed others in reading in 2003. Females outperformed males in both grades (see supplemental table 9-2). White and Asian/Pacific Islander students had higher average scores than American Indian, Hispanic, and Black students in grades 4 and 8. Additionally, White students outperformed Asian/Pacific Islander students in grade 4, and Hispanic students outperformed Black students. The number of books in the home at both grades was positively associated with student achievement as was parents' education at grade 8. The level of poverty in the school, as measured by the percentage of students eligible for free or reduced-price lunch, was negatively associated with student achievement in both grades in 2003.

NAEP also provides a comparison of public schools among the states in grades 4 and 8. In grade 4, of the 42 states and jurisdictions that participated in 1992 and 2003, the average reading score increased in 13 and decreased in 5 (see supplemental table 9-3). In grade 8, of the 39 states and jurisdictions that participated in 1998 and 2003, 8 experienced an increase in achievement, and 7 experienced a decline.

\*Significantly different from 2003.

<sup>1</sup>Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

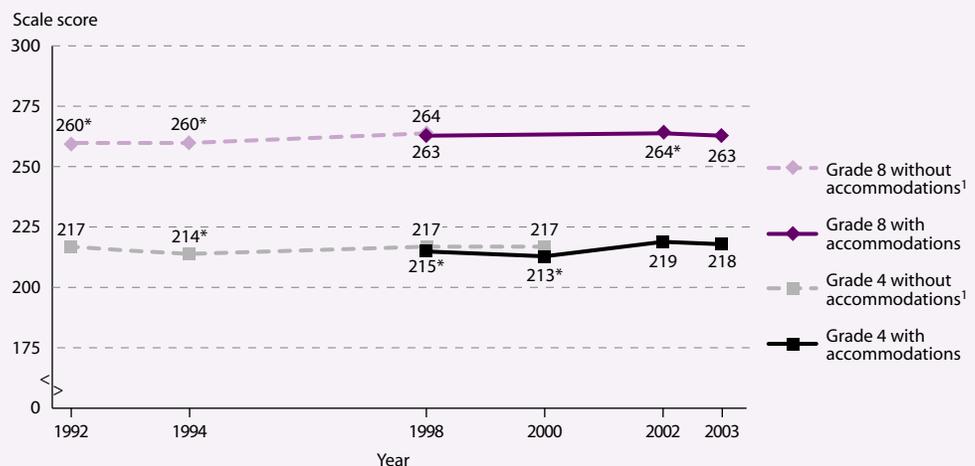
NOTE: In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998–2003) differ slightly from previous years' results, and from previously reported results for 1998 and 2000, due to changes in sample weighting procedures. Beginning in 2002, the NAEP national sample was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. The 2003 reading assessment did not include students in grade 12. See *supplemental note 4* for more information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004-452) and NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/search.asp>). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), selected years 1992–2003 Reading Assessments.



FOR MORE INFORMATION:  
Supplemental Notes 1, 4  
Supplemental Tables 9-1,  
9-2, 9-3

**READING PERFORMANCE: Average reading scale scores for 4th- and 8th-graders: Selected years 1992–2003**



## Reading Performance of Students in Grades 4 and 8

**Table 9-1. Average reading scale score by percentile and percentage of students at each achievement level, by grade: Selected years 1992–2003**

Grade, percentile, and achievement level	1992 <sup>1</sup>	1994 <sup>1</sup>	1998 <sup>1</sup>	1998	2000 <sup>1</sup>	2000	2002	2003
	<b>Average scale score</b>							
Grade 4	217	214*	217	215*	217	213*	219	218
Grade 8	260*	260*	264	263	—	—	264*	263
Grade 12	292	287	291	290	—	—	287	—
<b>Percentile</b>								
<b>Grade 4</b>								
10th	170	159*	167	163*	163*	159*	170	169
25th	194	189*	193	191*	193	189*	196	195
50th	219	219	220	217*	221	218*	221	221
75th	242*	243	244	242*	245	243*	244	244
90th	261	263	263	262	264	262	263*	264
<b>Grade 8</b>								
10th	213*	211*	217	216	—	—	220*	217
25th	237*	236*	242	241	—	—	244*	242
50th	262*	262*	267	266	—	—	267	266
75th	285*	286	288	288	—	—	288	288
90th	305	305	305	306	—	—	305	306
<b>Grade 12</b>								
10th	249	239	242	240	—	—	237	—
25th	271	264	268	267	—	—	263	—
50th	294	290	293	293	—	—	289	—
75th	315	313	317	317	—	—	312	—
90th	333	332	337	336	—	—	332	—
	<b>Percentage at achievement level</b>							
<b>Grade 4</b>								
Below Basic	38	40*	38	40*	37	41*	36	37
At or above Basic	62	60*	62	60*	63	59*	64	63
At or above Proficient	29*	30	31	29*	32	29	31	31
At Advanced	6	7	7	7	8	7	7*	8
<b>Grade 8</b>								
Below Basic	31*	30*	26	27	—	—	25*	26
At or above Basic	69*	70*	74	73	—	—	75*	74
At or above Proficient	29*	30*	33	32	—	—	33	32
At Advanced	3	3	3	3	—	—	3	3
<b>Grade 12</b>								
Below Basic	20	25	23	24	—	—	26	—
At or above Basic	80	75	77	76	—	—	74	—
At or above Proficient	40	36	40	40	—	—	36	—
At Advanced	4	4	6	6	—	—	5	—

— Not available.

\*Significantly different from 2003.

<sup>1</sup>Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

NOTE: In addition to allowing for accommodations, the accommodations-permitted results at grade 4 (1998–2003) differ slightly from previous years' results, and from previously reported results for 1998 and 2000, due to changes in sample weighting procedures. Beginning in 2002, the NAEP national sample was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. The 2003 reading assessment did not include students in grade 12. See *supplemental note 4* for more information on achievement levels and the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004–452) and NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), selected years 1992–2003 Reading Assessments.

## Reading Performance of Students in Grades 4 and 8

Table 9-2. Average reading scale score for 4th- and 8th-graders, by selected student and school characteristics: 2003

Student or school characteristic	Grade 4	Grade 8
<b>Total</b>	<b>218</b>	<b>263</b>
Sex		
Male	215	258
Female	222	269
Race/ethnicity <sup>1</sup>		
American Indian	202	246
Asian/Pacific Islander	226	270
Black	198	244
White	229	272
Hispanic	200	245
Parents' education		
Less than high school	—	245
High school diploma or equivalent	—	254
Some college, including vocational/technical	—	267
Bachelor's degree or higher	—	273
How often student discusses studies at home		
Every day	216	267
2–3 times a week	228	271
1–2 times a month	216	260
Never/hardly ever	212	253
Number of books in the home		
0–10	192	238
11–25	204	249
26–100	223	264
More than 100	229	278
Control		
Public	216	261
Private	235	282
Location		
Central city	212	258
Urban fringe/large town	222	267
Rural/small town	220	264
Enrollment		
Less than 300	222	269
300–999	218	264
1,000 or more	210	260
Percent of students in school eligible for free or reduced-price lunch		
0–10	238	280
11–25	228	270
26–50	221	263
51–75	211	253
76–100	194	239

—Not available.

<sup>1</sup>American Indian includes Alaska Native, Black includes African American, Pacific Islander includes Native Hawaiian, and Hispanic includes Latino. Racial categories exclude Hispanic origin.

NOTE: See *supplemental note 1* for information on parents' education, location, and free or reduced-price lunch. See *supplemental note 4* for information on the National Assessment of Educational Progress (NAEP).

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004–452), NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>), and previously unpublished tabulation (November 2003). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), 2003 Reading Assessment.

## Reading Performance of Students in Grades 4 and 8

**Table 9-3. Average reading scale score and change in score since 1992 and 1998 for public school 4th- and 8th-graders, by state and jurisdiction: 2003**

State or jurisdiction	Grade 4		Grade 8	
	Average scale score in 2003	Change from 1992 <sup>1</sup> average scale score	Average scale score in 2003	Change from 1998 average scale score
Nation <sup>2</sup>	216	2	261*	1
Alabama	207*	#	253*	-2
Alaska	212*	—	256*	—
Arizona	209*	-1	255*	-5**
Arkansas	214*	3	258*	2
California	206*	3	251*	-1
Colorado	224*	7**	268*	4**
Connecticut	228*	7**	267*	-3**
Delaware	224*	11**	265*	11**
Florida	218	10**	257*	3
Georgia	214*	1	258*	#
Hawaii	208*	5**	251*	2
Idaho	218	-1	264*	—
Illinois	216	—	266*	—
Indiana	220*	-1	265*	—
Iowa	223*	-2	268*	—
Kansas	220*	—	266*	-2
Kentucky	219	7**	266*	4**
Louisiana	205*	1	253*	2
Maine	224*	-3**	268*	-3**
Maryland	219	8**	262	1
Massachusetts	228*	2	273*	4**
Michigan	219	3	264	—
Minnesota	223*	2	268*	3
Mississippi	205*	6**	255*	4
Missouri	222*	2	267*	5**
Montana	223*	—	270*	-1
Nebraska	221*	-1	266*	—
Nevada	207*	—	252*	-5**
New Hampshire	228*	#	271*	—
New Jersey	225*	2	268*	—
New Mexico	203*	-8**	252*	-6**
New York	222*	8**	265*	1
North Carolina	221*	10**	262	-1
North Dakota	222*	-4**	270*	—
Ohio	222*	4**	267*	—
Oklahoma	214*	-7**	262	-4**
Oregon	218	—	264*	-2
Pennsylvania	219	-2	264*	—
Rhode Island	216	#	261	-4**
South Carolina	215	5**	258*	3**
South Dakota	222*	—	270*	—
Tennessee	212*	#	258*	#

See notes at end of table.

## Reading Performance of Students in Grades 4 and 8

**Table 9-3. Average reading scale score and change in score since 1992 and 1998 for public school 4th- and 8th-graders, by state and jurisdiction: 2003—Continued**

State or jurisdiction	Grade 4		Grade 8	
	Average scale score in 2003	Change from 1992 <sup>1</sup> average scale score	Average scale score in 2003	Change from 1998 average scale score
Texas	215	2	259*	-2
Utah	219*	-1	264*	1
Vermont	226*	—	271*	—
Virginia	223*	3	268*	2
Washington	221*	—	264*	1
West Virginia	219*	4**	260	-2
Wisconsin	221*	-3**	266*	1
Wyoming	222*	-1	267*	4**
Other jurisdictions				
District of Columbia	188*	#	239*	3
DDESS <sup>3</sup>	223*	—	269*	1
DoDDS <sup>4</sup>	225*	—	273*	4**

—Not available.

#Rounds to zero.

\*Significantly different from national average in 2003.

\*\*Change in score is statistically significant.

<sup>1</sup>Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted on the 1992 reading assessment.

<sup>2</sup>National results for assessments before 2003 are based on the national sample, not on aggregated state samples.

<sup>3</sup>Department of Defense Domestic Dependent Elementary and Secondary Schools.

<sup>4</sup>Department of Defense Dependent Schools (overseas).

NOTE: At the state level, the National Assessment for Educational Progress (NAEP) includes only students in public schools while other reported national results in this indicator include both public and private school students. Variations or changes in exclusion rates for students with disabilities and limited-English-proficient students in the NAEP samples may affect comparative performance results. Beginning in 2002, the NAEP national sample was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. See *supplemental note 4* for more information on NAEP.

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004–452), tables 1 and 2 and figures 1 and 2, NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>), and previously unpublished tabulation (November 2003). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), 1992, 1998, and 2003 Reading Assessments.

## Reading Performance of Students in Grades 4 and 8

**Table S9. Standard errors for the average reading scale scores for 4th- and 8th-graders: Selected years 1992–2003**

Average scale score	1992 <sup>1</sup>	1994 <sup>1</sup>	1998 <sup>1</sup>	1998	2000 <sup>1</sup>	2000	2002	2003
Grade 4	0.94	1.02	0.78	1.14	0.81	1.27	0.42	0.27
Grade 8	0.92	0.83	0.77	0.76	—	—	0.42	0.26

—Not available.

<sup>1</sup>Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004-452) and NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), selected years 1992–2003 Reading Assessments.

## Reading Performance of Students in Grades 4 and 8

**Table S9-1. Standard errors for the average reading scale score by percentile and percentage of students at each achievement level, by grade: Selected years 1992–2003**

Grade, percentile, and achievement level	1992 <sup>1</sup>	1994 <sup>1</sup>	1998 <sup>1</sup>	1998	2000 <sup>1</sup>	2000	2002	2003
<b>Average scale score</b>								
Grade 4	0.94	1.02	0.78	1.14	0.81	1.27	0.42	0.27
Grade 8	0.92	0.83	0.77	0.76	—	—	0.42	0.26
Grade 12	0.55	0.69	0.72	0.60	—	—	0.66	—
<b>Percentile</b>								
<b>Grade 4</b>								
10th	1.90	1.52	1.43	2.08	1.89	2.29	0.89	0.50
25th	1.13	1.05	0.90	1.73	0.91	1.37	0.49	0.36
50th	1.28	1.28	1.24	1.31	1.12	1.65	0.48	0.30
75th	1.08	1.29	0.90	0.88	0.82	0.80	0.48	0.29
90th	1.42	1.70	0.91	0.92	0.91	1.38	0.38	0.28
<b>Grade 8</b>								
10th	1.20	1.89	1.90	1.66	—	—	0.53	0.58
25th	1.08	1.10	0.89	0.72	—	—	0.53	0.34
50th	1.08	0.71	0.78	0.68	—	—	0.45	0.26
75th	0.84	1.10	0.59	1.03	—	—	0.45	0.32
90th	1.33	1.20	0.97	0.76	—	—	0.51	0.22
<b>Grade 12</b>								
10th	0.80	0.90	1.29	0.63	—	—	1.54	—
25th	0.80	0.93	1.16	0.84	—	—	1.35	—
50th	0.78	0.64	0.85	0.62	—	—	0.66	—
75th	0.50	0.78	0.87	0.74	—	—	0.59	—
90th	0.71	1.20	0.81	0.81	—	—	0.87	—
<b>Percentage at achievement level</b>								
<b>Grade 4</b>								
Below Basic	1.06	1.03	0.94	1.19	0.83	1.35	0.47	0.30
At or above Basic	1.06	1.03	0.94	1.19	0.83	1.35	0.47	0.30
At or above Proficient	1.22	1.09	0.86	0.95	0.88	1.09	0.44	0.33
At Advanced	0.62	0.71	0.47	0.47	0.50	0.58	0.20	0.13
<b>Grade 8</b>								
Below Basic	0.97	0.89	0.88	0.80	—	—	0.47	0.26
At or above Basic	0.97	0.89	0.88	0.80	—	—	0.47	0.26
At or above Proficient	1.12	0.91	0.94	1.05	—	—	0.51	0.27
At Advanced	0.33	0.27	0.37	0.27	—	—	0.19	0.08
<b>Grade 12</b>								
Below Basic	0.60	0.73	0.94	0.70	—	—	0.75	—
At or above Basic	0.60	0.73	0.94	0.70	—	—	0.75	—
At or above Proficient	0.83	0.96	0.93	0.73	—	—	0.84	—
At Advanced	0.28	0.54	0.37	0.36	—	—	0.27	—

—Not available.

<sup>1</sup>Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted.

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004–452) and NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), selected years 1992–2003 Reading Assessments.

## Reading Performance of Students in Grades 4 and 8

**Table S9-2. Standard errors for the average reading scale score for 4th- and 8th-graders, by selected student and school characteristics: 2003**

Student or school characteristic	Grade 4	Grade 8
<b>Total</b>	<b>0.27</b>	<b>0.26</b>
Sex		
Male	0.33	0.28
Female	0.32	0.29
Race/ethnicity		
American Indian	1.35	3.00
Asian/Pacific Islander	1.22	1.13
Black	0.42	0.50
White	0.24	0.23
Hispanic	0.59	0.68
Parents' education		
Less than high school	—	0.69
High school diploma or equivalent	—	0.36
Some college, including vocational/technical	—	0.36
Bachelor's degree or higher	—	0.31
How often students discusses studies at home		
Every day	0.32	0.44
2–3 times a week	0.39	0.37
1–2 times a month	0.49	0.40
Never/hardly ever	0.45	0.38
Number of books in the home		
0–10	0.60	0.58
11–25	0.35	0.48
26–100	0.31	0.32
More than 100	0.32	0.31
Control		
Public	0.27	0.24
Private	0.76	0.71
Location		
Central city	0.52	0.55
Urban fringe/large town	0.33	0.46
Rural/small town	0.54	0.42
Enrollment		
Less than 300	0.71	1.01
300–999	0.37	0.33
1,000 or more	2.08	0.69
Percent of students in school eligible for free or reduced-price lunch		
0–10	0.50	0.45
11–25	0.63	0.56
26–50	0.46	0.41
51–75	0.50	0.65
76–100	0.54	1.02

— Not available.

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004–452), NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>), and previously unpublished tabulation (November 2003). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), 2003 Reading Assessments.

## Reading Performance of Students in Grades 4 and 8

**Table S9-3. Standard errors for the average reading scale score and change in score since 1992 and 1998 for public school 4th- and 8th-graders, by state and jurisdiction: 2003**

State or jurisdiction	Grade 4		Grade 8	
	Average scale score in 2003	Change from 1992 average scale score	Average scale score in 2003	Change from 1998 average scale score
<b>Nation</b>	<b>0.27</b>	<b>1.06</b>	<b>0.24</b>	<b>0.82</b>
Alabama	1.73	2.41	1.51	2.09
Alaska	1.64	—	1.10	—
Arizona	1.25	1.76	1.36	1.75
Arkansas	1.38	1.83	1.29	1.81
California	1.24	2.37	1.28	2.06
Colorado	1.22	1.66	1.20	1.56
Connecticut	1.10	1.69	1.08	1.49
Delaware	0.65	0.91	0.74	1.52
Florida	1.15	1.69	1.33	1.94
Georgia	1.25	1.93	1.14	1.77
Hawaii	1.37	2.18	0.87	1.31
Idaho	1.01	1.37	0.89	—
Illinois	1.57	—	1.01	—
Indiana	0.98	1.60	1.04	—
Iowa	1.11	1.53	0.79	—
Kansas	1.19	—	1.48	2.06
Kentucky	1.33	1.84	1.25	1.89
Louisiana	1.41	1.82	1.58	2.09
Maine	0.92	1.40	0.98	1.53
Maryland	1.41	2.12	1.45	2.29
Massachusetts	1.22	1.55	0.96	1.69
Michigan	1.19	1.92	1.84	—
Minnesota	1.10	1.64	1.08	1.74
Mississippi	1.35	1.88	1.38	1.80
Missouri	1.17	1.70	1.01	1.66
Montana	1.20	—	1.04	1.68
Nebraska	1.00	1.49	0.91	—
Nevada	1.24	—	0.82	1.28
New Hampshire	0.98	1.55	0.93	—
New Jersey	1.18	1.85	1.21	—
New Mexico	1.53	2.12	0.87	1.52
New York	1.09	1.77	1.33	2.00
North Carolina	1.02	1.52	0.98	1.44
North Dakota	0.85	1.42	0.78	—
Ohio	1.15	1.77	1.32	—
Oklahoma	1.24	1.56	0.95	1.53
Oregon	1.30	—	1.23	1.93
Pennsylvania	1.28	1.82	1.18	—
Rhode Island	1.32	2.22	0.71	1.17
South Carolina	1.29	1.84	1.26	1.64
South Dakota	1.17	—	0.77	—
Tennessee	1.60	2.15	1.17	1.68

See notes at end of table.

## Reading Performance of Students in Grades 4 and 8

**Table S9-3. Standard errors for the average reading scale score and change in score since 1992 and 1998 for public school 4th- and 8th-graders, by state and jurisdiction: 2003—Continued**

State or jurisdiction	Grade 4		Grade 8	
	Average scale score in 2003	Change from 1992 average scale score	Average scale score in 2003	Change from 1998 average scale score
Texas	1.05	1.87	1.12	1.79
Utah	1.02	1.52	0.84	1.33
Vermont	0.91	—	0.82	—
Virginia	1.50	2.03	1.05	1.53
Washington	1.12	—	0.88	1.47
West Virginia	1.03	1.65	1.00	1.43
Wisconsin	0.85	1.29	1.27	2.24
Wyoming	0.84	1.42	0.53	1.42
Other jurisdictions				
District of Columbia	0.86	1.15	0.75	2.25
DDESS	1.22	—	1.37	4.66
DoDDS	0.63	—	0.69	1.22

— Not available.

SOURCE: U.S. Department of Education, NCES. (2003). *The Nation's Report Card: Reading Highlights 2003* (NCES 2004-452), NAEP web data tool (<http://nces.ed.gov/nationsreportcard/naepdata/>), and previously unpublished tabulation (November 2003). Data from U.S. Department of Education, NCES, National Assessment of Educational Progress (NAEP), 1992, 1998, and 2003 Reading Assessments.