

The NAEP 1998 Reading Report Card

National & State
Highlights



America's children are its greatest resource. Educators, parents, and concerned citizens want to provide young people with the academic opportunities to compete and succeed in a challenging world. One resource that can help inform the public about the academic preparedness of America's youth is the National Assessment of Educational Progress (NAEP), often referred to as "the Nation's Report Card."

In 1998, the National Center for Education Statistics (NCES) administered the NAEP reading assessment to a national sample of students at grades 4, 8, and 12, and to state samples of students at grades 4 and 8. The results of this assessment present a broad view of how America's students are achieving in reading — one of the most important sets of skills that young people acquire and develop throughout their lives. Because the assessment administered in 1998 shared a common set of reading passages and comprehension questions with assessments given in 1992 and 1994, it is possible to use NAEP results to chart the progress American students have made in reading since 1992.

This publication provides highlights from the 1998 NAEP reading assessment, describing its content, its major findings at the national and state levels, and students' experiences at school and at home that support achievement in reading.

NAEP READING

CONTENTS

NAEP in a Nutshell	2
The NAEP 1998 Reading Assessment	2
Grade 4 Sample Questions	3
Grade 8 Sample Questions	4
Grade 12 Sample Questions	5
National Results	6
School & Home Factors Related to Reading	10
State Results	12
Other Publications and Related Materials	16



NAEP IN A NUTSHELL

Q: WHAT IS NAEP?

A: The National Assessment of Educational Progress (NAEP) is the nation's only ongoing assessment of what students know and can do in various subject areas. A project of the National Center for Education Statistics within the U.S. Department of Education, NAEP has assessed many academic subjects since its inception in 1969, including mathematics, science, reading, writing, world geography, U.S. history, civics, social studies, and the arts.

Decisions about which subject areas are assessed and how they are assessed are made by the National Assessment Governing Board (NAGB), an independent agency that oversees NAEP. With the assistance of educators, parents, public leaders, and concerned citizens, NAGB develops the "framework" or guidelines that determine how a subject area will be assessed. In addition, NAGB sets achievement levels, or student performance standards, for the three grades assessed – 4, 8, and 12.

Q: HOW IS STUDENT PERFORMANCE REPORTED?

A: The results of student performance on the NAEP assessment are reported for various groups of students (for example, fourth-grade female students) and for students who took the assessment in different years (1992, 1994, and 1998). The differences in performance between groups of students both within and across assessment years that are discussed in this publication are statistically significant.

Student performance is described in two ways: 1) scale scores, and 2) achievement levels.

Scale Scores

Student performance is reported as an average score based on the NAEP reading scale that ranges from 0 to 500. The average scale score reflects the overall reading performance of a particular group of students.

Achievement Levels

Student reading performance is also reported in terms of three achievement levels: **Basic**, **Proficient**, and **Advanced**. Results based on achievement levels are expressed in terms of the percentage of students who attained each level. The three achievement levels are defined as follows:

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 subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Advanced: This level signifies superior performance.

Q: HOW SHOULD NAEP ACHIEVEMENT LEVELS BE INTERPRETED?

A: The achievement levels are performance standards, adopted by NAGB as part of its statutory responsibilities. The levels are collective judgments of what students should know and be able to do for each grade tested. They are based on recommendations by broadly representative panels of classroom teachers, education specialists, and members of the general public.

As provided by law, the Commissioner of Education Statistics, upon review of a congressionally mandated evaluation of NAEP, has determined that the achievement levels are to be considered developmental and should be interpreted and used with caution. However, both the Commissioner and NAGB believe these performance standards are useful for understanding trends in student achievement. They have been widely used by national and state officials, including the National Education Goals Panel, as a common yardstick of academic performance.

NOTE: For reasons of confidentiality, the students shown in the photographs for this report are not NAEP reading assessment participants.

The NAEP 1998 Reading Assessment



The NAEP reading framework developed by the National Assessment Governing Board describes reading as an interactive process. To comprehend what is being read, the reader must interact with the written word, and interpret ideas presented in the reading material based, in part, upon the reader's knowledge and purpose for reading. The NAEP reading assessment included three types of reading material that represent different purposes for reading: reading for literary experience, reading to gain information, and reading to perform a task.

The materials that were used in the NAEP reading assessment were taken from sources that are typically available to students, such as collections of stories, children's or youth magazines, or informational books. These materials were presented in their original formats in the test booklets so as to reproduce, as much as possible, an "authentic" reading experience. By giving students different types of reading materials, NAEP was able to provide a measure of reading performance that reflects students' typical reading experiences both in and out of school.

To measure students' comprehension of the reading materials included in the assessment, students responded to both multiple-choice and open-ended questions. At all three grades, at least half of the questions required students to provide their own written responses, so that they could explain and support their understanding.



Sample Texts, Questions, and Student Responses from the NAEP 1998 Reading Assessment

The national results of the NAEP 1998 reading assessment are presented on pages 6 to 11 of this publication, and the state results are summarized on pages 12 to 15. The following three pages present sample questions and responses from the assessment. For each grade (4, 8, and 12), three sample questions have been selected to demonstrate how reading comprehension was assessed. The reading passages that accompany these sets of questions are depicted at the top of each page. They can be found in their entirety in the *NAEP 1998 Reading Report Card for the Nation and the States*.

A combination of multiple-choice and open-ended questions is shown. The open-ended questions are referred to as "constructed-response" questions because they require students to develop their own responses rather than to select a response from a list of possible answers, as they do with multiple-choice questions. Two types of constructed-response questions were included in the NAEP reading assessment and are presented on these pages: short constructed

response and extended constructed response.

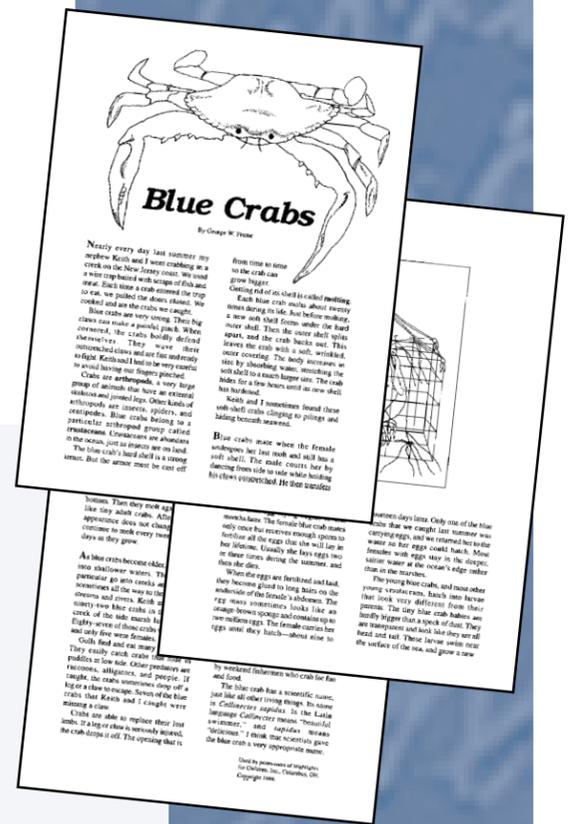
The correct answer for each multiple-choice question shown is indicated with a (★). For each constructed-response question shown, both a brief summary of the criteria used for rating the question and the rating assigned to the sample response are presented. It should be noted that the answers students provided to the constructed-response questions were rated based only on their understanding of the text. Errors in spelling and grammar did not affect students' ratings.

For all sample questions — multiple choice or constructed response — the overall percentage of students who responded successfully is shown. In addition, the percentage of students who responded successfully within the *Basic*, *Proficient*, and *Advanced* achievement levels is presented in the tables that accompany each sample question. These percentages indicate how difficult students found the questions. The higher the percentage of students answering a question successfully, the easier it was for students to answer the question.

Grade 4

Sample Questions and Responses

The following three fourth-grade questions were among those presented to students after they had read an informative article entitled "BLUE CRABS." The article described the experience of catching blue crabs. The author incorporated information about the crabs' appearance, habitats, and survival techniques with a description of techniques for catching them.



Multiple-Choice Question

The author of the article helps you to learn about blue crabs by

- A. explaining why they are endangered species
- B. comparing them to other arthropods
- C. discussing their place in the food chain
- ★ D. providing details about their unique characteristics

56% of all 4th graders answered this question correctly.*

Percentage of students at each achievement level who answered correctly

Basic	Proficient	Advanced
57%	79%	94%

* The percentage of all fourth graders includes those who were below **Basic**.

Short Constructed-Response Question

Why does a blue crab hide after molting?

Responses to this question were rated as *Unacceptable* or *Acceptable*.

Responses rated *Acceptable* demonstrated understanding of explicitly stated information by indicating that blue crabs are vulnerable to attack after molting because they no longer have their protective external skeleton.

69% of all 4th graders received a rating of "Acceptable."*

Percentage of students at each achievement level who received a rating of "Acceptable"

Basic	Proficient	Advanced
73%	88%	94%

* The percentage of all fourth graders includes those who were below **Basic**.

Sample "Acceptable" Response

So that a predator does not eat him while he is growing back a new shell.

Extended Constructed-Response Question

Write a paragraph telling the major things you learned about blue crabs.

Responses to this question were rated as *Unsatisfactory*, *Partial*, *Essential*, or *Extensive*.

Responses rated *Essential* went beyond simple recall of isolated facts, and demonstrated restricted but appropriate understanding of one or two of the major characteristics of blue crabs as presented in the article.

Responses rated *Extensive* demonstrated a more thorough understanding of the article by providing substantial information on more than two of the major characteristics of blue crabs as presented in the article.

43% of all 4th graders received a rating of "Essential" or better.*

Percentage of students at each achievement level who received a rating of "Essential" or better

Basic	Proficient	Advanced
44%	66%	82%

* The percentage of all fourth graders includes those who were below **Basic**.

Sample "Essential" Response

I learned that blue crabs live in the shallow waters of marsh and that when they hatched they are use tiny use a little speck of dust

Sample "Extensive" Response

I learned that blue crabs are very strong. They can mabe a painful pinch. They have outstretched claws. They are arthropods. Blue crabs belong to a group of crustaceans. There shell's are strong and layered that molting means getting rid of a shell. As blue crabs get older they move into shallower waters. Predators are raccoons, alligators, and people. Crabs can lose a leg and grow a new one.

Grade 8

Sample Questions and Responses

The following three eighth-grade questions were among those presented to students after they had read a literary passage entitled “GARY SOTO: A FIRE IN MY HANDS.” The passage described the life and work of the Mexican American poet, Gary Soto. The passage contained entire poems and excerpts of Soto’s work within the context of his life.



Multiple-Choice Question

In the poem “Finding a Lucky Number,” Gary Soto contrasts

- A. dogs and squirrels
- ★ B. present youth and future aging
- C. Indian summer and the coming year
- D. eating candy and a healthy diet

60% of all 8th graders answered this question correctly.*

Percentage of students at each achievement level who answered correctly		
Basic	Proficient	Advanced
56%	80%	◆

* The percentage of all eighth graders includes those who were below **Basic**.
◆ Too few eighth graders reached the **Advanced** level to report the results for this question.

Short Constructed-Response Question

Write down in your own words some of the images from the poems that linger in your mind.

Responses to this question were rated as *Unacceptable* or *Acceptable*.

Responses rated *Acceptable* demonstrated at least an initial understanding of Soto’s poetry by providing an image or sensory detail from one of the poems presented in the article.

57% of all 8th graders received a rating of “Acceptable.”*

Percentage of students at each achievement level who received a rating of “Acceptable”		
Basic	Proficient	Advanced
55%	73%	◆

* The percentage of all eighth graders includes those who were below **Basic**.
◆ Too few eighth graders reached the **Advanced** level to report the results for this question.

Sample “Acceptable” Response

I remember reading about images of an orange looking like a fireball and black beautiful hair. I remember a chocolate for an orange and a nickel.

Extended Constructed-Response Question

If you had to select one poem or excerpt to use to introduce your friends to Gary Soto’s work, which selection would you choose? Explain why you would choose this selection over the others.

Responses to this question were rated as *Unsatisfactory*, *Partial*, *Essential*, or *Extensive*.

Responses rated *Essential* demonstrated appropriate understanding of at least one of the poems presented in the article by selecting a poem and providing an explanation for choosing that poem.

Responses rated *Extensive* demonstrated a more complex understanding of Gary Soto’s poetry by selecting a poem and providing an explanation that contrasts the selected poem to the other poems in the article.

15% of all 8th graders received a rating of “Essential” or better.*

Percentage of students at each achievement level who received a rating of “Essential” or better		
Basic	Proficient	Advanced
12%	23%	◆

* The percentage of all eighth graders includes those who were below **Basic**.
◆ Too few eighth graders reached the **Advanced** level to report the results for this question.

Sample “Essential” Response

I would select “Finding a Lucky Number” because all of my friends are scared of old age, and I agree with them. After reading this poem it helped me overcome my fear, so I think this poem would be an excellent influence on my friends.

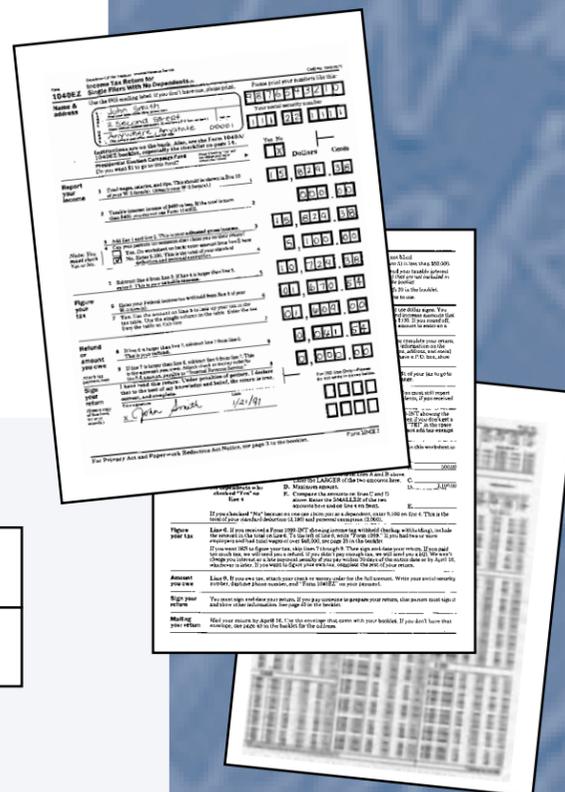
Sample “Extensive” Response

If I had to select one poem to introduce my friends to Gary Soto it would be “Oranges.” “Oranges” had both sadness and contentment in it. The other poems were all happy. I enjoyed the mixed emotions of “Oranges” and I believe my friends would enjoy them too. The sadness in “Oranges” was the narrator’s inability to pay for the candy bar. He then found contentment in knowing that the woman at the counter understood his predicament and helped him with it. The narrator also found contentment in the happiness he saw in the girl’s face as she received the chocolate he had given her.

Grade 12

Sample Questions and Responses

The following three twelfth-grade questions were among those presented to students after they had an opportunity to read and review an actual “1040EZ” tax form and the instructions on how to fill it out. After responding to questions about organization and procedures, the students were asked to complete the actual tax form.



Multiple-Choice Question

The purpose of the tax table is to help you determine

- A. your gross income
- ★ B. the amount of tax you owe
- C. your net earnings
- D. your allowable deductions

64% of all 12th graders answered this question correctly.*

Percentage of students at each achievement level who answered correctly

Basic	Proficient	Advanced
59%	84%	92%

* The percentage of all twelfth graders includes those who were below **Basic**.

Short Constructed-Response Question

Why is it important that you file your tax return before April 16?

Responses to this question were rated as *Unacceptable* or *Acceptable*.

Responses rated *Acceptable* demonstrated understanding of explicitly stated information by providing a reason for submitting a tax return before April 16 as presented in the instructions.

57% of all 12th graders received a rating of “Acceptable.”*

Percentage of students at each achievement level who received a rating of “Acceptable”

Basic	Proficient	Advanced
53%	72%	76%

* The percentage of all twelfth graders includes those who were below **Basic**.

Sample “Acceptable” Response

So you aren't charged interest or a late payment penalty

Short Constructed-Response Question

List two mistakes that you could make in completing your tax return that might delay its processing.

Responses to this question were rated as *Unacceptable* or *Acceptable*.

Responses rated *Acceptable* demonstrated a critical evaluation of the tax form directions by providing two errors that could cause a delay in processing.

37% of all 12th graders received a rating of “Acceptable.”*

Percentage of students at each achievement level who received a rating of “Acceptable”

Basic	Proficient	Advanced
36%	48%	57%

* The percentage of all twelfth graders includes those who were below **Basic**.

Sample “Acceptable” Response

forgetting to sign it, and forgetting to correct the address label if there were any errors, are two mistakes that you could make that might delay its processing



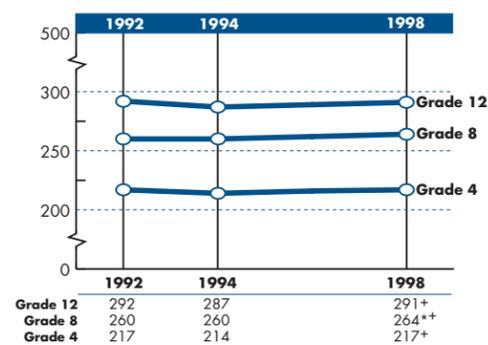
NAEP Reading Assessment Results for the Nation

The tables and figures in this section portray student achievement in reading nationwide. These results represent averages for the entire nation and do not pertain to any individual student or school.



The results of the 1998 reading assessment, shown in the figure on the right, are mixed. At the 8th grade, the 1998 average reading score was higher than the 1992 and 1994 scores. In contrast, although the scores increased between 1994 and 1998 for students in grades 4 and 12, these increases showed no net gains over the 1992 average scores for reading.

Average Reading Scores for the Nation



* Indicates that the 1998 score is significantly different from the 1992 score.
+ Indicates that the 1998 score is significantly different from the 1994 score.

Percentage of Students at or above the Reading Achievement Levels for the Nation

	Nation			
	Below Basic	At or above Basic	At or above Proficient	Advanced
Grade 4				
1998	38	62	31	7
1994	40	60	30	7
1992	38	62	29	6
Grade 8				
1998	26**	74**	33**	3
1994	30	70	30	3
1992	31	69	29	3
Grade 12				
1998	23**	77**	40+	6**
1994	25	75	36	4
1992	20	80	40	4

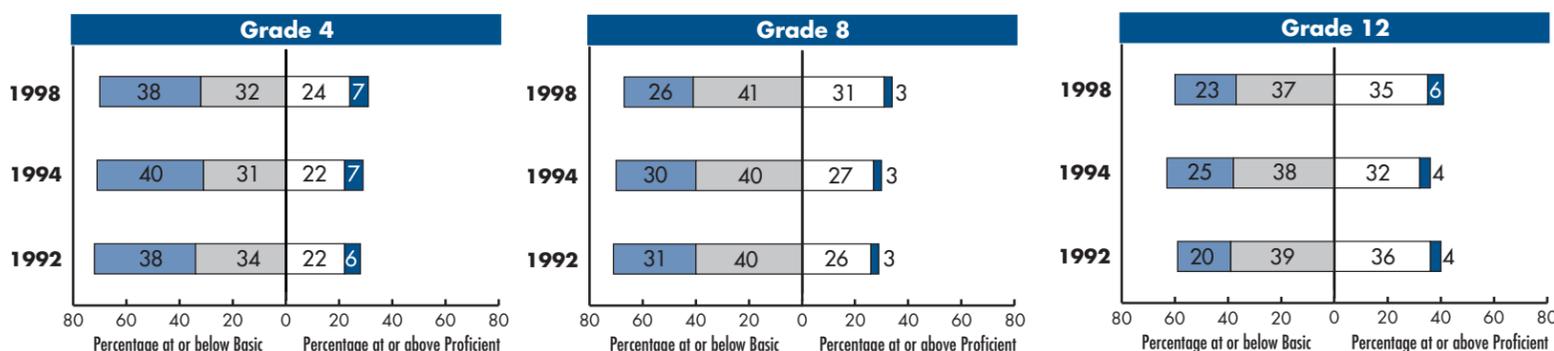
* Indicates that the 1998 percentage is significantly different from the 1992 percentage.
+ Indicates that the 1998 percentage is significantly different from the 1994 percentage.

Achievement level results for the nation's fourth-, eighth-, and twelfth-grade students are presented in the table on the left. In reading this table, it is necessary to keep in mind that the levels are cumulative. The percentage of students who are at or above *Basic* includes not only students at the *Basic* level of performance, but also those students who attained the *Proficient* and *Advanced* levels. Likewise, the percentage of students at or above *Proficient* includes those who attained the *Advanced* level.

Performance at or above the *Proficient* level – the achievement level identified as the standard all students should reach – was attained by 31 percent of students at grade 4, 33 percent of students at grade 8, and 40 percent of students at grade 12.

- At grade 4, there was no significant change in achievement level performance across the three assessment years.
- At grade 8, the percentages of students at or above *Basic* and at or above *Proficient* were higher in 1998 than in 1994 and in 1992.
- At grade 12, the achievement level results were somewhat mixed. Higher percentages of students attained each level of performance in 1998 than in 1994. In addition, the percentage of students at the *Advanced* level was higher in 1998 than in 1992. Although the percentage of students at or above *Basic* increased between 1994 and 1998, it was still lower than it had been in 1992.

Percentage of Students within each Achievement Level Range for the Nation



NOTE: Percentages may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.

While the previous table shows cumulative percentages of students “at or above” each achievement level, the figure above shows the percentage of students within each achievement level range — below *Basic*, *Basic*, *Proficient*, and *Advanced*.

In this figure, the sections of the bar to the right of the center vertical line represent the proportion of students who reached at least the *Proficient* level of performance. Correspondingly, the shaded sections of the bar to the left

of the vertical line represent the proportion of students who were at or below *Basic*. The figure makes it clear that a large proportion of students at each grade did not reach the *Proficient* level of reading performance.

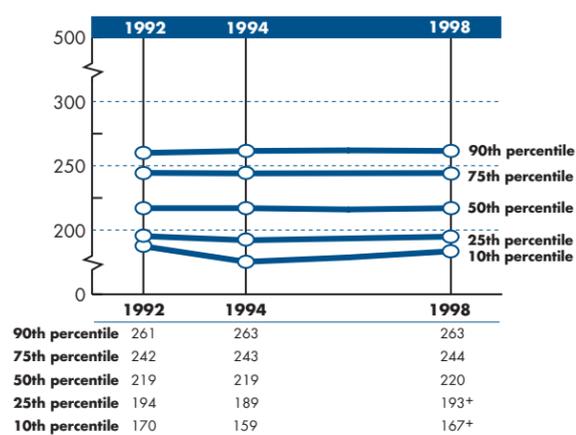
Reading Score Percentiles for the Nation

While scores went up at all three grades for the nation, increased scores were not seen for all students. The figures below show scores at the 10th, 25th, 50th, 75th, and 90th percentiles for students in grades 4, 8, and 12. Looking at

scores this way shows how students with lower or higher reading ability performed in 1992, 1994, and 1998. Scores at the 10th and 25th percentiles represent lower performance, scores at the 50th percentile represent the middle range of performance, and scores at the 75th and 90th percentiles represent higher performance.

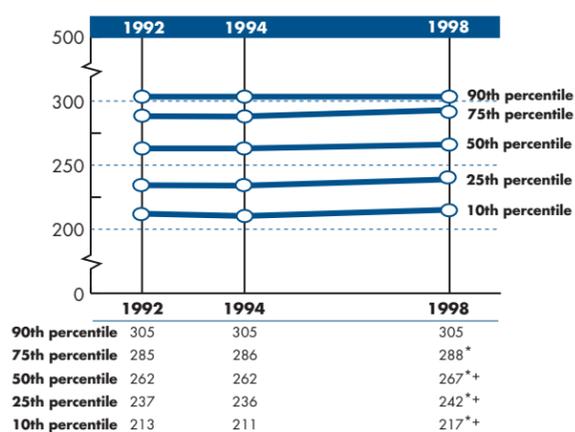
The 1994 to 1998 increase in the average reading score for fourth graders occurred only among the lower-performing students. The scores for students at the 10th and 25th percentiles increased between 1994 and 1998 to levels that were comparable to those in 1992 for lower-performing students. The reading scores for middle- and high-performing fourth graders were essentially unchanged between 1992 and 1998.

Fourth-Grade Reading Score Percentiles



+ Indicates that the 1998 score is significantly different from the 1994 score.

Eighth-Grade Reading Score Percentiles

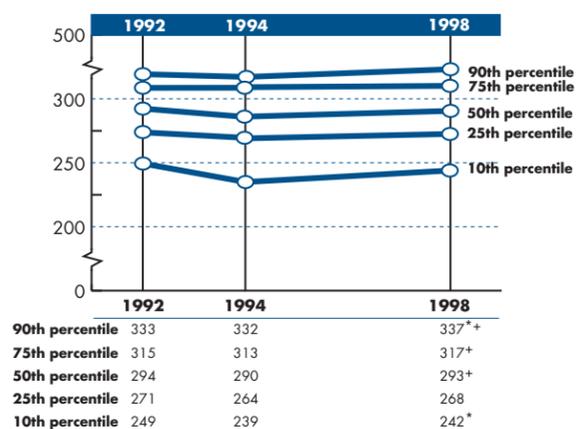


* Indicates that the 1998 score is significantly different from the 1992 score.
+ Indicates that the 1998 score is significantly different from the 1994 score.

The increase in average reading scores for eighth graders was shared by all but the highest-performing students. In 1998, the reading scores for students at the 10th, 25th, 50th, and 75th percentiles were higher than the scores in 1992. At the lower- and middle-performance levels, the increase occurred between 1994 and 1998.

The 1994 to 1998 increase in the average reading score for twelfth graders amounted to a recovery; returning the 1998 score to the level of the 1992 score. However, an examination of the percentile scores reveals a more complex pattern. Reading scores increased between 1994 and 1998 for the middle- and high-performing students. At the 90th percentile, the increase amounted to a real gain over both the 1994 and 1992 scores. However, at the 50th and 75th percentiles, the 1994 to 1998 gains yielded scores comparable to those for students at these levels in 1992. In addition, the net improvement among the highest-performing twelfth graders was offset by a 1992 to 1998 drop in the reading scores of students with the lowest performance.

Twelfth-Grade Reading Score Percentiles

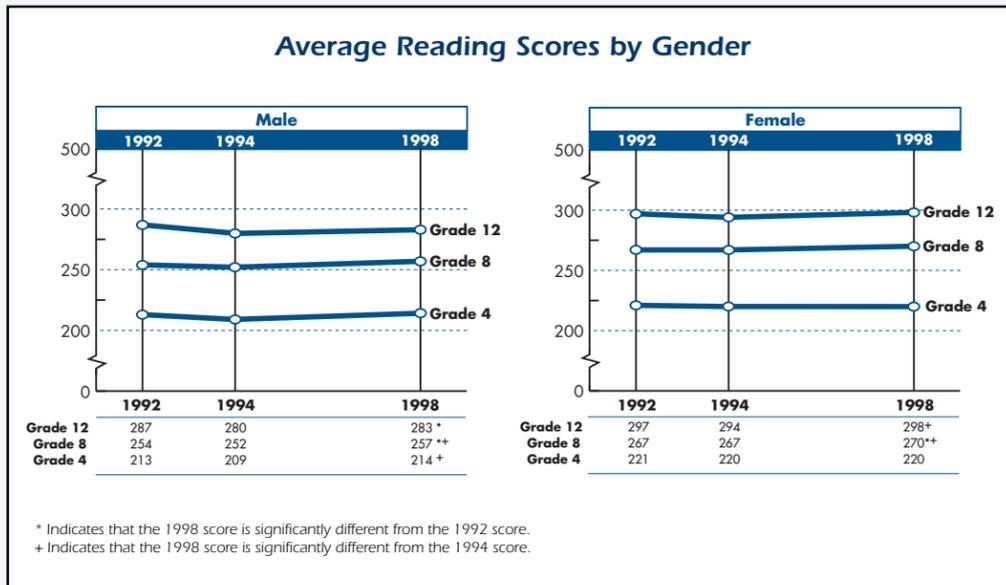


* Indicates that the 1998 score is significantly different from the 1992 score.
+ Indicates that the 1998 score is significantly different from the 1994 score.

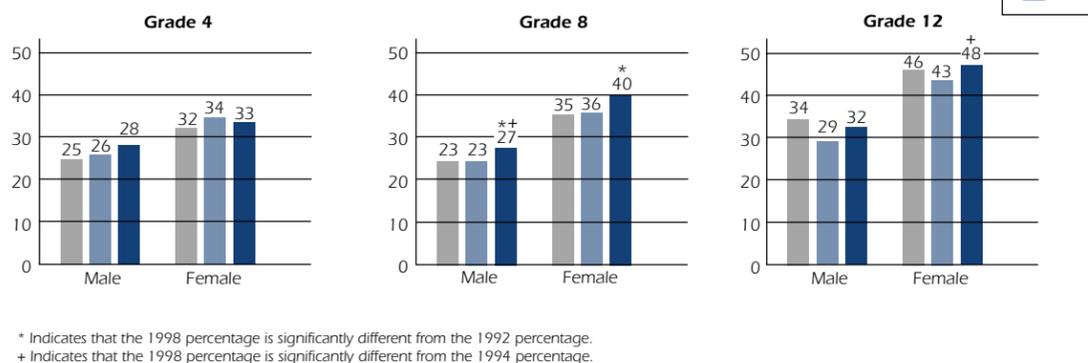
Reading Performance of Male and Female Students

The figure on the right shows average reading scores for male and female students in 1992, 1994, and 1998. At all three grades, females did better than males in reading. The results are generally positive, showing that most students are making gains in reading.

- At grade 4, the average score for male students went up between 1994 and 1998; however, there was no change in the average score for female students.
- At grade 8, the average scores for both male and female students in 1998 were higher than in 1994 and in 1992.
- At grade 12, the average score for female students went up between 1994 and 1998. The apparent gain between 1994 and 1998 for male twelfth graders was not significant, and their average score in 1998 remained lower than it was in 1992.



Percentage of Students at or above the Proficient Achievement Level by Gender



The figure on the left shows the percentages of males and females in grades 4, 8, and 12 who were at or above the *Proficient* level. At each grade, one third or fewer of males reached or exceeded this level – 28 percent at grade 4, 27 percent at grade 8, and 32 percent at grade 12. In comparison, one third or more of females in each grade were at or above *Proficient* – 33 percent at grade 4, 40 percent at grade 8, and 48 percent at grade 12.

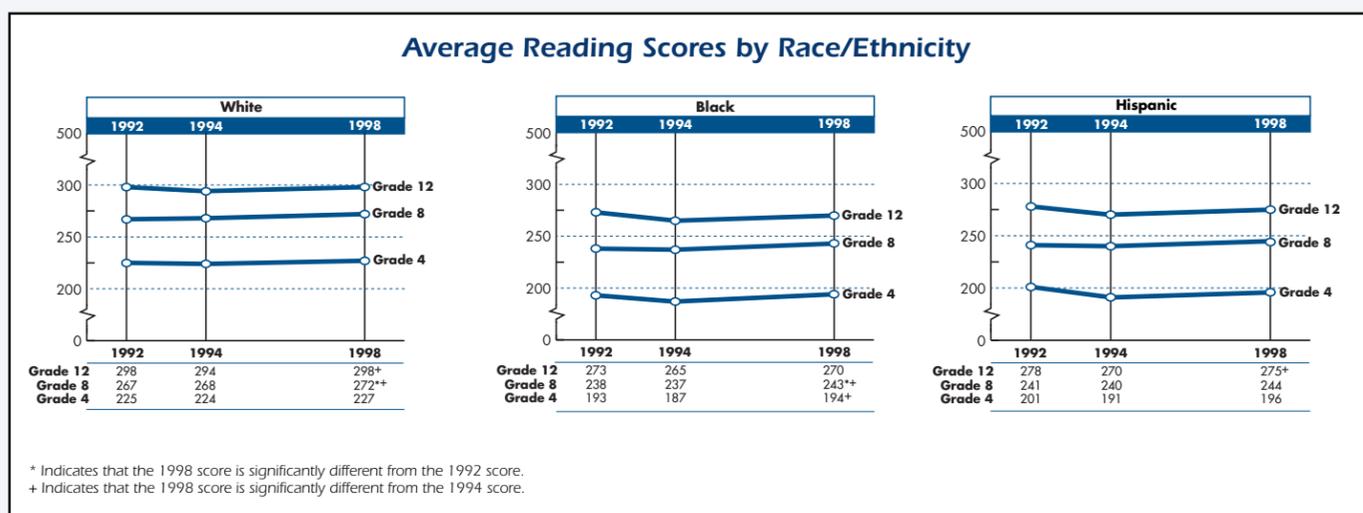
For both males and females at grade 8 there were gains in the percentage of students at or above *Proficient*. In 1998, the percentage of male eighth graders was higher than in 1994 and in 1992, and the percentage of female students was higher than in 1992. Among female twelfth graders, a higher percentage of students were at or above *Proficient* in 1998 than in 1994.

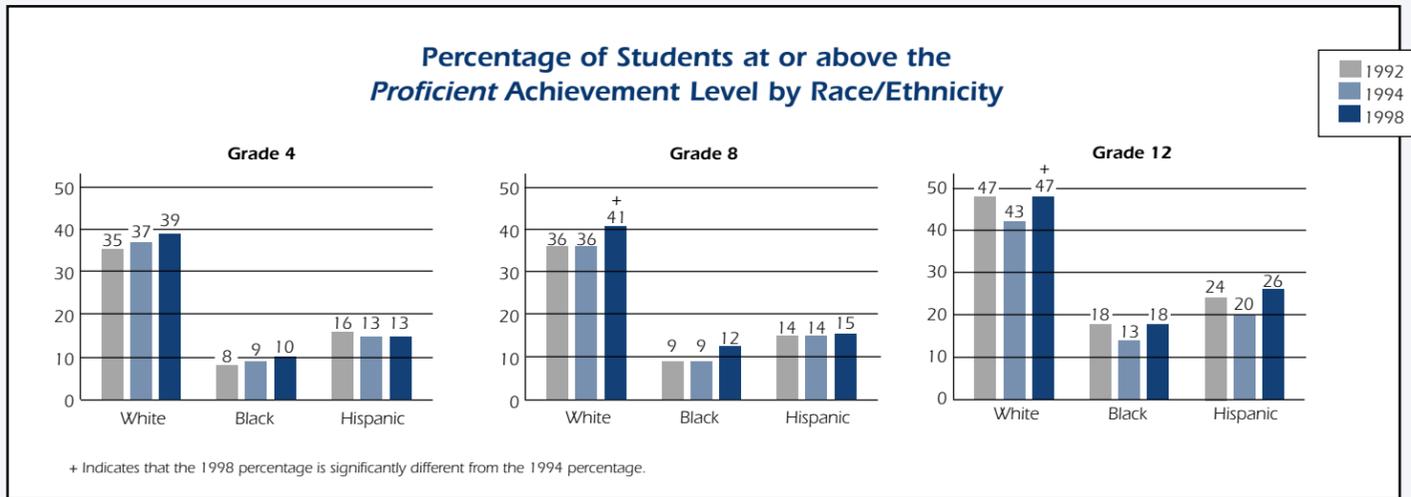
Reading Performance by Racial/Ethnic Subgroups

The figure below shows average reading scores in 1992, 1994, and 1998 for students within three different racial/ethnic subgroups: White, Black, and Hispanic. Average scores for Asian/Pacific Islander and American Indian students are included in the *NAEP 1998 Reading Report Card for the Nation and the States*. They are not presented here because in 1998 there were no significant changes at any grade since 1992 or 1994 in average scores for these students.

In 1998, White and Asian fourth-grade students outscored their Black, Hispanic, and American Indian peers. American Indian students also scored higher than Black students at grade 4. Among eighth graders, White and Asian students again scored higher than their Black, Hispanic, and American Indian peers. At grade 12, White students had higher scores than Black, Hispanic, and American Indian students. Asian students outscored their Black and Hispanic peers, and Hispanic students had higher scores than Black students.

- At grade 4, the average score for Black students went up between 1994 and 1998.
- At grade 8, the average scores for both White and Black students in 1998 were higher than in 1994 and 1992.
- At grade 12, the average scores for both White and Hispanic students went up between 1994 and 1998.





The figure above shows the percentages of students in three racial/ethnic groups (White, Black, and Hispanic) in grades 4, 8, and 12 who performed at or above the *Proficient* level. Across the three grades in 1998, between 39 and 47 percent

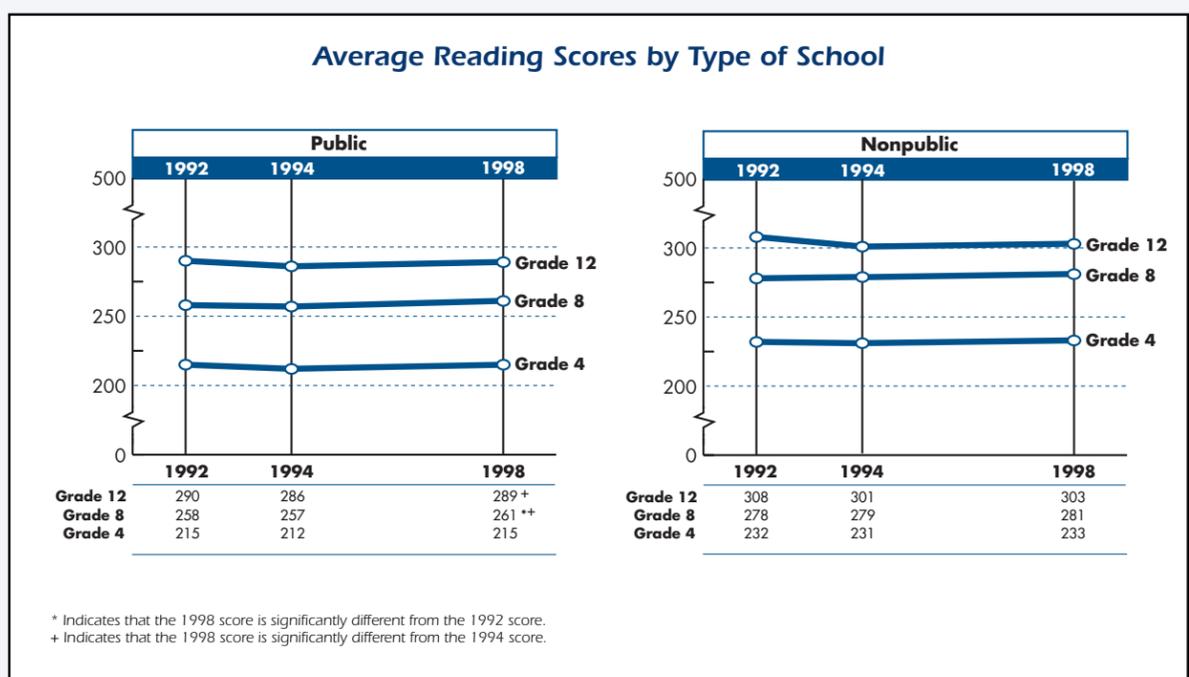
of White students were at or above the *Proficient* level. In comparison, 10 to 15 percent of Black students and 13 to 26 percent of Hispanic students reached or exceeded this level of performance.

The only significant increases seen in the percentages of students at or above the *Proficient* level in any racial/ethnic group were for White students at grades 8 and 12 between 1994 and 1998.

Reading Performance by Type of School

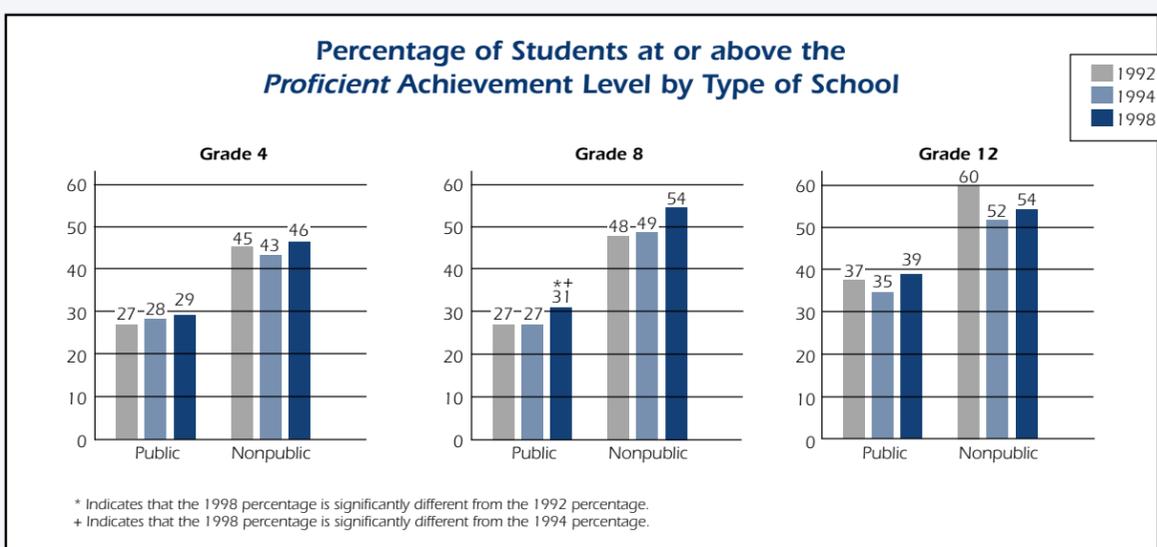
The figure on the right shows average reading scores in 1992, 1994, and 1998 for students attending two types of schools: public and nonpublic. Included among nonpublic school students are those who attended Catholic schools and those who attended other nonpublic schools. For all three grades in 1998, students in nonpublic schools had higher reading scores than their peers in public schools. It should be noted that differences between the performance of students in public and nonpublic schools may be due to a variety of factors such as student selection and parental involvement.

In 1998, scores for students in nonpublic schools were not significantly different from scores in 1994 and in 1992. The 1998 score for fourth graders in public schools also was not significantly different from those in the previous two assessments. However, there were some gains for eighth and twelfth graders in public schools.



• At grade 8, the average score for public school students in 1998 was higher than in 1994 and in 1992.

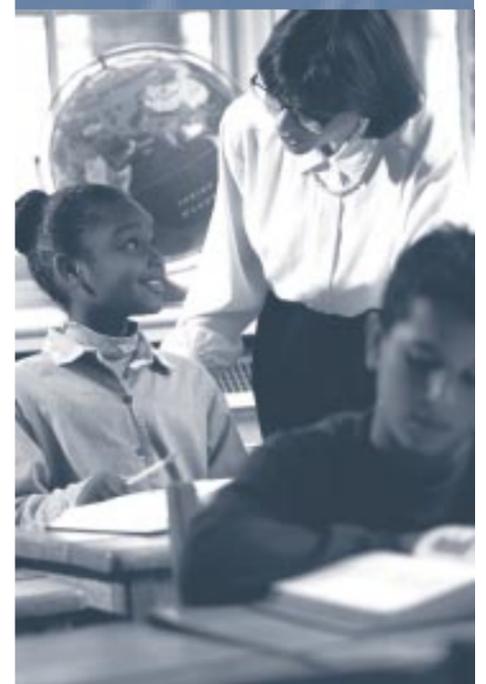
• At grade 12, the average score for public school students went up between 1994 and 1998.



The figure above shows the percentages of students in public and nonpublic schools in grades 4, 8, and 12 who performed at or above the *Proficient* level. At each grade, a higher percentage of nonpublic school students reached or exceeded this level of performance than did public school students. Across the three grades in 1998, between 46 and 54 percent of nonpublic

school students were at or above *Proficient*. In comparison, 29 to 39 percent of public school students were at or above this level.

The only significant increase seen in the percentages of students at or above the *Proficient* level was for public school students at grade 8; the percentage in 1998 was higher than that in both 1994 and 1992.





School & Home Factors Related to Reading Achievement

Do students' reading habits in school and at home affect their reading proficiency? Is there a relationship between students' television viewing habits and their reading achievement? What kinds of teaching practices seem to enhance students' reading performance? NAEP collects information that can help researchers answer these questions.

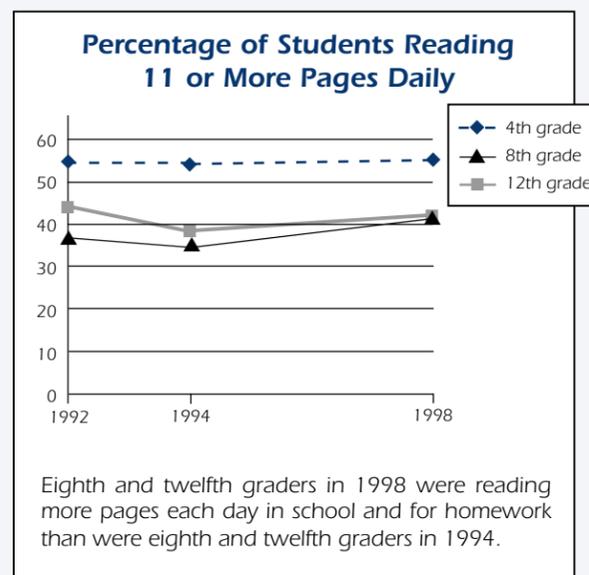
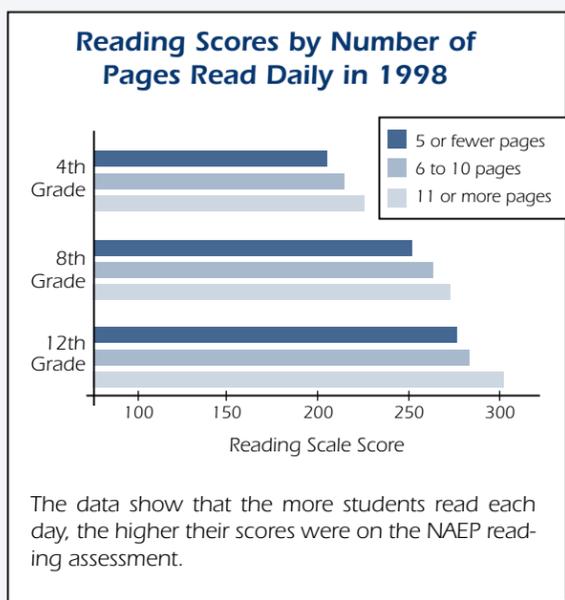
This information may be especially useful. It may help educators discover, for example, that some of their own established classroom activities are also practiced by their colleagues across the nation. It also can suggest different approaches to help students become better readers, and provide a resource for parents to strengthen their children's at-home reading habits.

Daily Reading Habits

Research has found that children who read every day have the best chance of becoming competent readers. Daily practice at reading in school and for homework may not only increase fluency, but may also encourage both literacy habits and literary appreciation. Although the amount of reading students do each day may vary depending on a school's instructional goals and student needs, most schools do require their students to read on a daily basis.



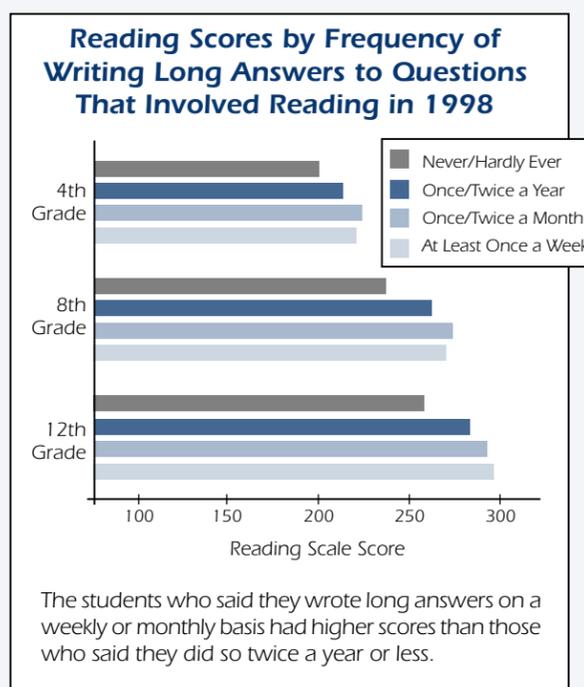
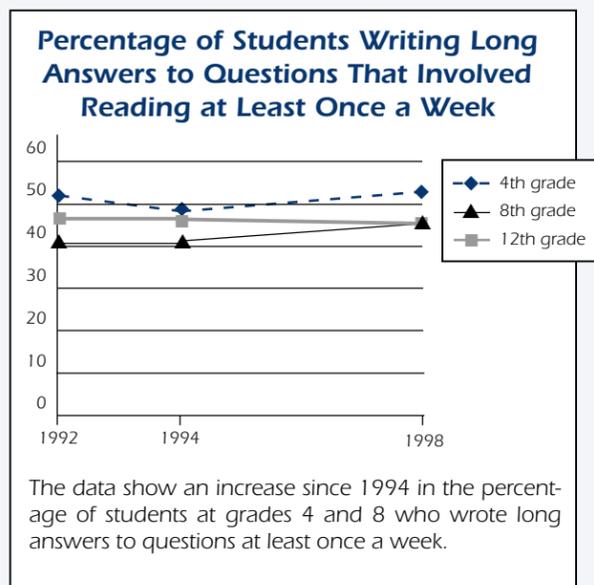
Students in the NAEP 1998 reading assessment were asked about the number of pages they read daily in school and for homework. The figures below present information about their responses.



Reading and Writing

Most educators today agree that integrating reading and writing benefits the development of literacy. Numerous studies have shown that reading development does not take place in isolation; children develop simultaneously as readers, listeners, speakers, and writers. The NAEP reading assessment recognized the importance of these interrelationships by asking students and teachers questions about the ways in which reading and writing are combined in their classrooms.

Students in the NAEP 1998 reading assessment were asked how frequently in school they were asked to write long answers to questions on tests or assignments that involved reading. The figures below provide information about their responses.



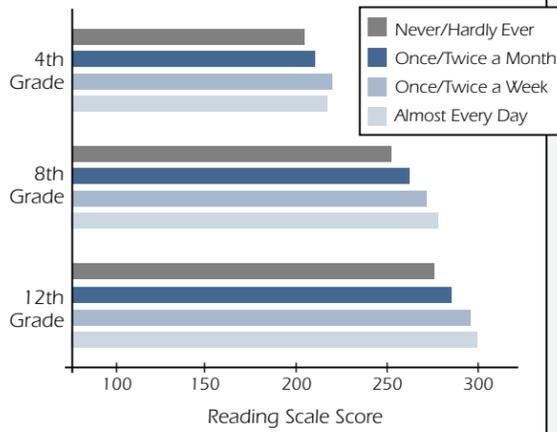
Discussing Studies at Home

The lessons students learn in school are reinforced when they have opportunities to share them with caring family members. Research studies have documented the higher achievement of students whose families have taken an active role in their learning. Recognizing this, recent education reform efforts, such as Goals 2000, have sought to strengthen cooperation between parents and schools.

The NAEP 1998 reading assessment sought to gauge the impact of parental involvement on students' reading achievement by asking students how often they discuss their studies with someone at home. The figures below present information about their responses.

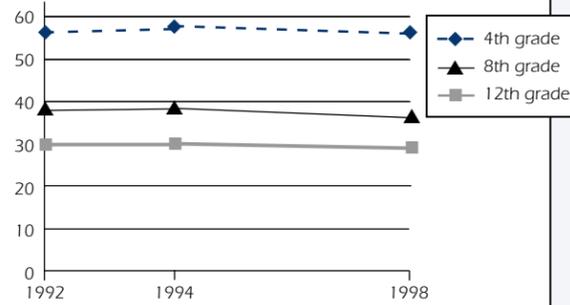


Reading Scores by Frequency of Discussing Studies at Home in 1998



Students in all three grades who discussed studies at home at least weekly had higher reading scores than students who did so less frequently. At grades 8 and 12, students who did this almost every day had the highest reading scores.

Percentage of Students Discussing Studies at Home Almost Every Day



Any apparent changes over time in the frequency of this activity were not significant.

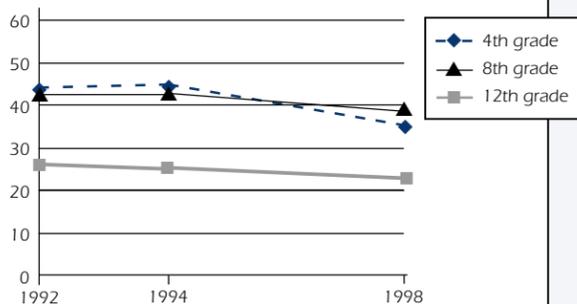
Television Viewing

Television watching has been widely criticized for distracting children from their studies and discouraging recreational reading. Numerous research findings provide support for these concerns and underscore the negative relationship between TV viewing and literacy development.

The NAEP reading assessment has long recognized the importance of monitoring the effects of television watching on students' reading achievement. Students in the assessment were asked how many hours of television they watched each day. The figures below present information about their responses.

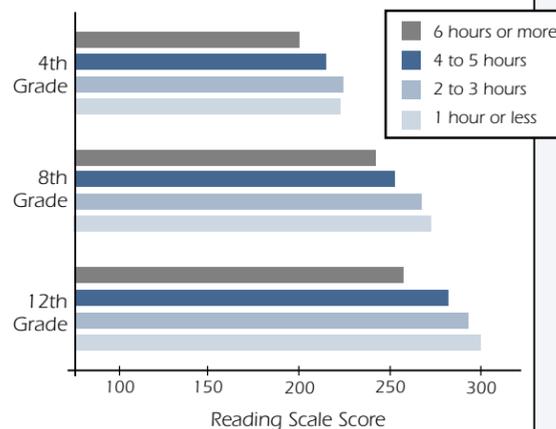


Percentage of Students Viewing 4 Hours or More of Television Daily



The percentages generally decreased between 1994 and 1998, suggesting that students are watching less television on a daily basis.

Reading Scores by Amount of Television Viewing Daily in 1998



Students at all three grades who watched 3 hours or less of television daily had higher reading scores than students who watched 4 or more hours daily.



Reading Performance Within States

While the average scores of students across the nation provide parents and educators with a broad view of how well the nation's students are performing in reading, it is also informative to examine the reading performance of students within individual states. In 1998, the NAEP assessment was conducted, not only at the national level, but also within states or other jurisdictions that volunteered to participate in the state-level assessments at grades 4 and 8. The figures and tables in this section show the results from those assessments.



Fourth-Grade Reading Performance

Figure A below presents average reading scores for public school fourth graders in each participating state or jurisdiction in the 1998 reading assessment. The figure also indicates achievement level results by showing the percentages of students within each state who performed at each of the achievement levels.

The table at the bottom of the page compares the average score of each of the forty-three states or jurisdictions that participated in the 1998 state assessment at grade 4 with the national average score. Thirteen states or jurisdictions had average scores that were above the national average, 15 were at or around the national average, and 15 were below the national average.

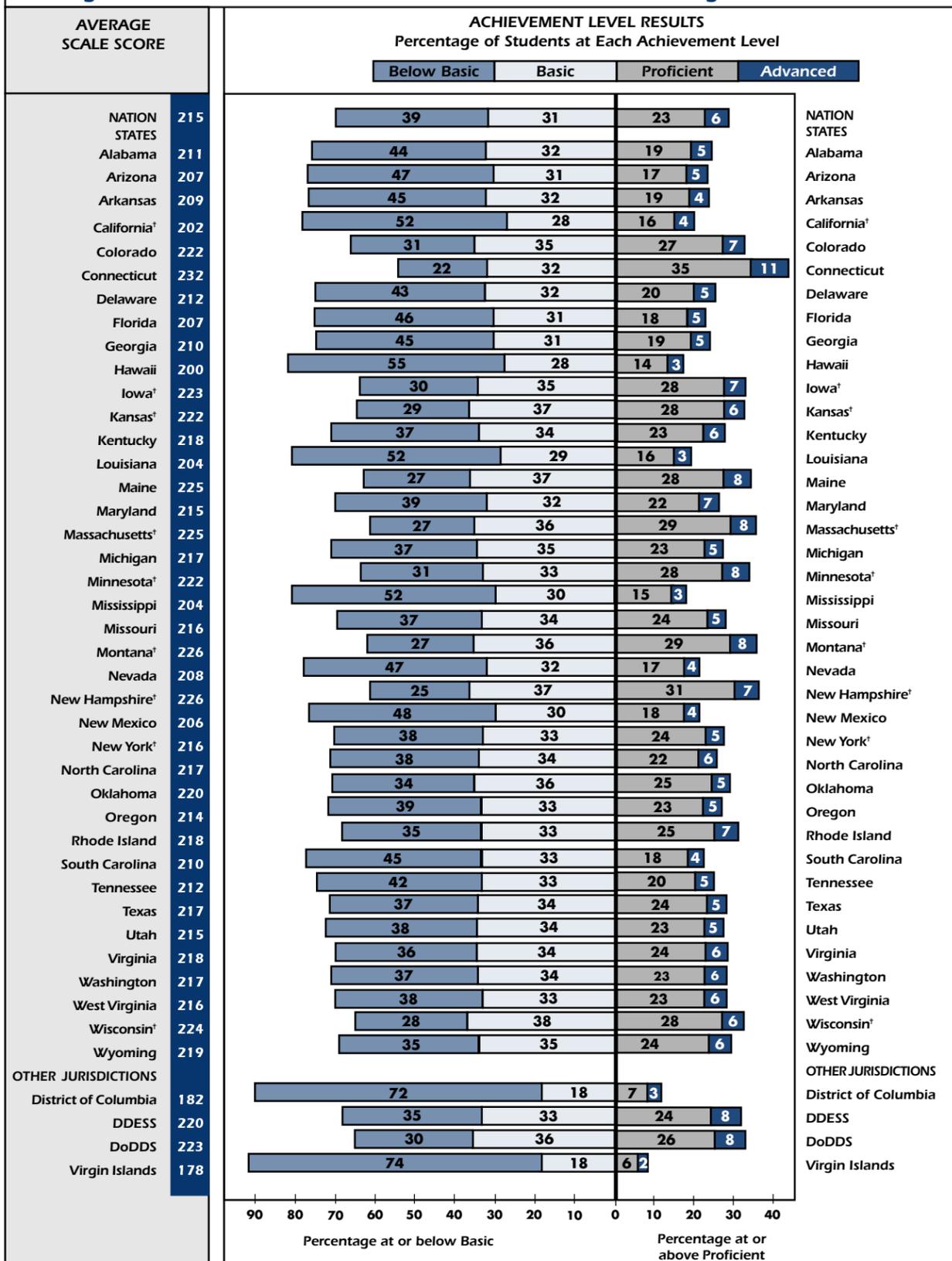
HOW TO READ FIGURES A AND B

Figures A and B present both types of results from the NAEP reading assessment — scale scores and achievement levels — for public school students in the states or jurisdictions that participated in the 1998 NAEP state assessment.

For each of these figures, average scale scores for each participating state or jurisdiction are listed in the first column. These scores represent the average for public school students only. (Private school students are not included in these results.) For comparison, the average score for public school students across the nation is provided at the top of this column.

The shaded bars that appear down the center column of these figures provide achievement level results for each participating state or jurisdiction. The numbers within the shaded bars show the percentage of students who attained that level of performance. In both figures, the bars are aligned at the cut point between **Basic** and **Proficient** to make it easier for comparing the percentage of students at or above **Proficient** across all the participating states or jurisdictions.

Figure A: Grade 4 Public School Students: 1998 NAEP Reading State Assessment



[†]Indicates jurisdiction did not meet one or more of the guidelines for school participation.

DDESS: Department of Defense Domestic Dependent Elementary and Secondary Schools; DoDDS: Department of Defense Dependents Schools (Overseas). NOTE: Numbers may not add to 100, or to the exact percentages at or above achievement levels, due to rounding. National results are based on the national sample, not on aggregated state assessment samples.

1998 NAEP Reading Comparison of State versus National Average Reading Scores for Public Schools: Grade 4

Above the National Average	Colorado Connecticut DDESS	DoDDS Iowa [†] Kansas [†]	Maine Massachusetts [†] Minnesota [†]	Montana [†] New Hampshire [†] Oklahoma	Wisconsin [†]
At or around the National Average	Kentucky Maryland Michigan	Missouri New York [†] North Carolina	Oregon Rhode Island Tennessee	Texas Utah Virginia	Washington West Virginia Wyoming
Below the National Average	Alabama Arizona Arkansas	California [†] Delaware District of Columbia	Florida Georgia Hawaii	Louisiana Mississippi Nevada	New Mexico South Carolina Virgin Islands

[†]Indicates jurisdiction did not meet one or more of the guidelines for school participation.

NOTE: Differences between states and jurisdictions may be partially explained by other factors not included in these tables.

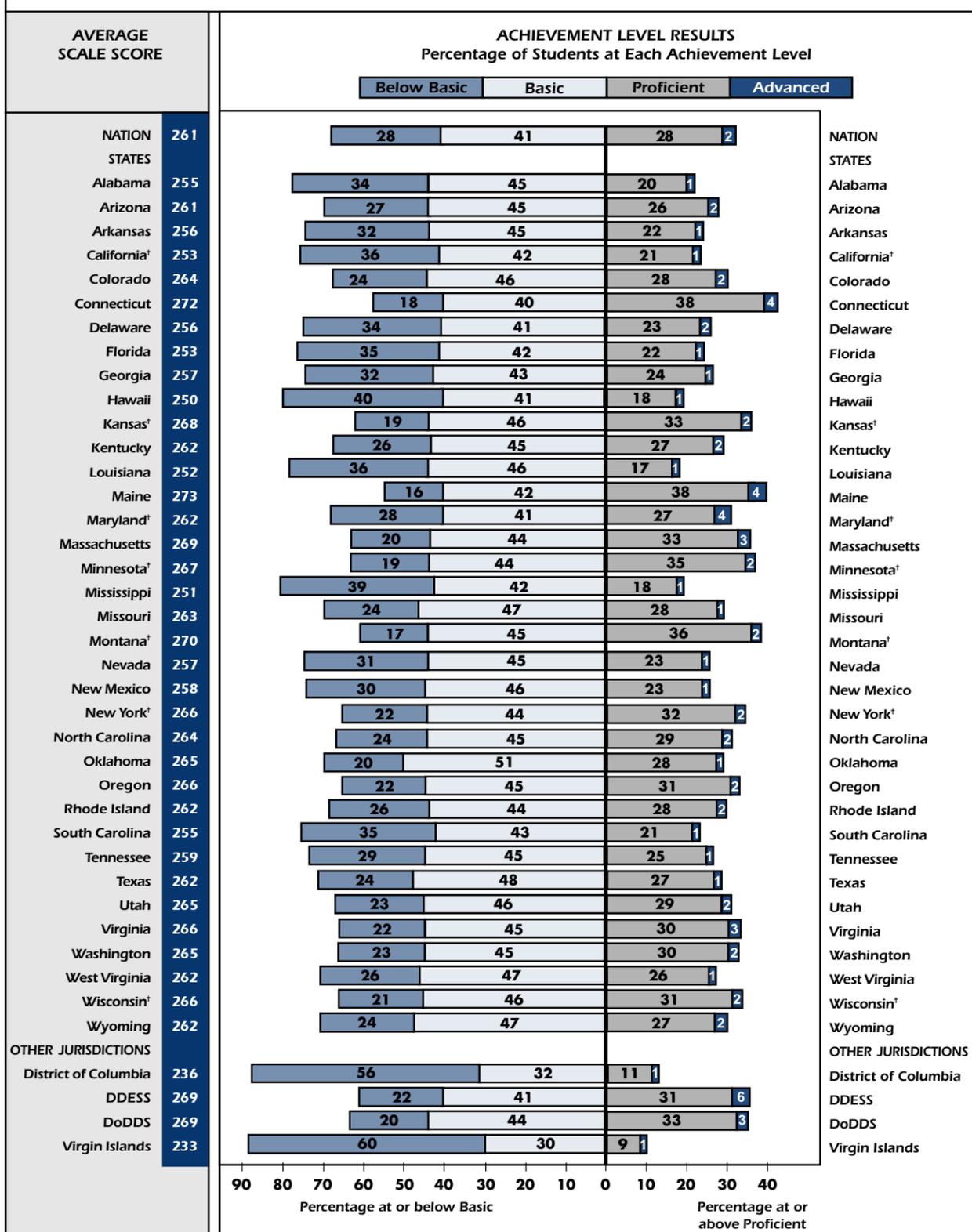
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), Reading Assessment.

Eighth-Grade Reading Performance

Figure B below presents average reading scores for public school eighth graders in each participating state or jurisdiction in the 1998 reading assessment. The figure also indicates achievement level results by showing the percentages of students within each state who performed at each of the achievement levels.

The table at the bottom of the page compares the average score of each of the forty states or jurisdictions that participated in 1998 state assessment at grade 8 with the national average score. Fifteen states or jurisdictions had average scores that were above the national average, 11 were at or around the national average, and 14 were below the national average.

Figure B: Grade 8 Public School Students: 1998 NAEP Reading State Assessment



[†]Indicates jurisdiction did not meet one or more of the guidelines for school participation.
DDESS: Department of Defense Domestic Dependent Elementary and Secondary Schools; DoDDS: Department of Defense Dependents Schools (Overseas). NOTE: Numbers may not add to 100, or to the exact percentages at or above achievement levels, due to rounding. National results are based on the national sample, not on aggregated state assessment samples.

1998 NAEP Reading Comparison of State versus National Average Reading Scores for Public Schools: Grade 8

Above the National Average	Connecticut DDESS DoDDS	Kansas [†] Maine Massachusetts	Minnesota [†] Montana [†] New York [†]	Oklahoma Oregon Utah	Virginia Washington Wisconsin [†]
At or around the National Average	Arizona Colorado Kentucky	Maryland [†] Missouri North Carolina	Rhode Island Tennessee Texas	West Virginia Wyoming	
Below the National Average	Alabama Arkansas California [†]	Delaware District of Columbia Florida	Georgia Hawaii Louisiana	Mississippi Nevada New Mexico	South Carolina Virgin Islands

[†]Indicates jurisdiction did not meet one or more of the guidelines for school participation.
NOTE: Differences between states and jurisdictions may be partially explained by other factors not included in these tables.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), Reading Assessment.

The tables and figures on these two pages offer a snapshot of state level reading performance across time. The 1998 NAEP reading assessment was the third in which states or jurisdictions could participate in a state-level assessment of reading at grade 4. Thus, it is possible to observe changes over time in students'

reading performance by comparing the 1998 score to the 1994 and 1992 scores in each state or jurisdiction. Because 1998 was the first time a state level assessment of reading was conducted at grade 8, it is not possible to observe changes across time in the reading performance for eighth graders in each state.

Average Grade 4 Reading Scores for the States for Public Schools only: 1992, 1994, and 1998

	Average scale score		
	1992	1994	1998
Nation	215	212	215 ⁺
States			
Alabama	207	208	211
Arizona	209	206	207
Arkansas	211	209	209
California [†]	202	197	202
Colorado	217	213	222 ^{****}
Connecticut	222	222	232 ^{****}
Delaware	213	206	212 ⁺⁺
Florida	208	205	207
Georgia	212	207	210
Hawaii	203	201	200
Iowa [†]	225	223	223
Kansas [†]	—	—	222
Kentucky	213	212	218 ⁺⁺⁺
Louisiana	204	197	204 ⁺⁺
Maine	227	228	225
Maryland	211	210	215 ⁺
Massachusetts [†]	226	223	225
Michigan	216	—	217
Minnesota [†]	221	218	222
Mississippi	199	202	204 [*]
Missouri	220	217	216
Montana [†]	—	222	226
Nevada	—	—	208
New Hampshire [†]	228	223	226
New Mexico	211	205	206
New York [†]	215	212	216
North Carolina	212	214	217 ^{**}
Oklahoma	220	—	220
Oregon	—	—	214
Rhode Island	217	220	218
South Carolina	210	203	210 ⁺⁺
Tennessee	212	213	212
Texas	213	212	217
Utah	220	217	215 ^{**}
Virginia	221	213	218 ⁺
Washington	—	213	217 ⁺
West Virginia	216	213	216
Wisconsin [†]	224	224	224
Wyoming	223	221	219 [*]
Other Jurisdictions			
District of Columbia	188	179	182 ^{**}
DDESS	—	—	220
DoDDS	—	218	223 ⁺⁺
Virgin Islands	171	—	178 [*]

** Indicates that the average scale score in 1998 was significantly different from that in 1992 using a multiple comparison procedure based on all jurisdictions that participated both years. * Indicates that the average scale score in 1998 was significantly different from that in 1992 if only one jurisdiction is being examined. ++ Indicates that the average scale score in 1998 was significantly different from that in 1994 using a multiple comparison procedure based on 43 jurisdictions. + Indicates that the average scale score in 1998 was significantly different from that in 1994 if only one jurisdiction or the nation is being examined. — Indicates jurisdiction did not participate. † Indicates jurisdiction did not meet one or more of the guidelines for school participation. DDESS: Department of Defense Domestic Dependent Elementary and Secondary Schools. DoDDS: Department of Defense Dependents Schools (Overseas). NOTE: National results are based on the national assessment sample, not on aggregated state assessment samples. Differences between states and jurisdictions may be partially explained by other factors not included in this table.

State Level Trends in Reading Scores

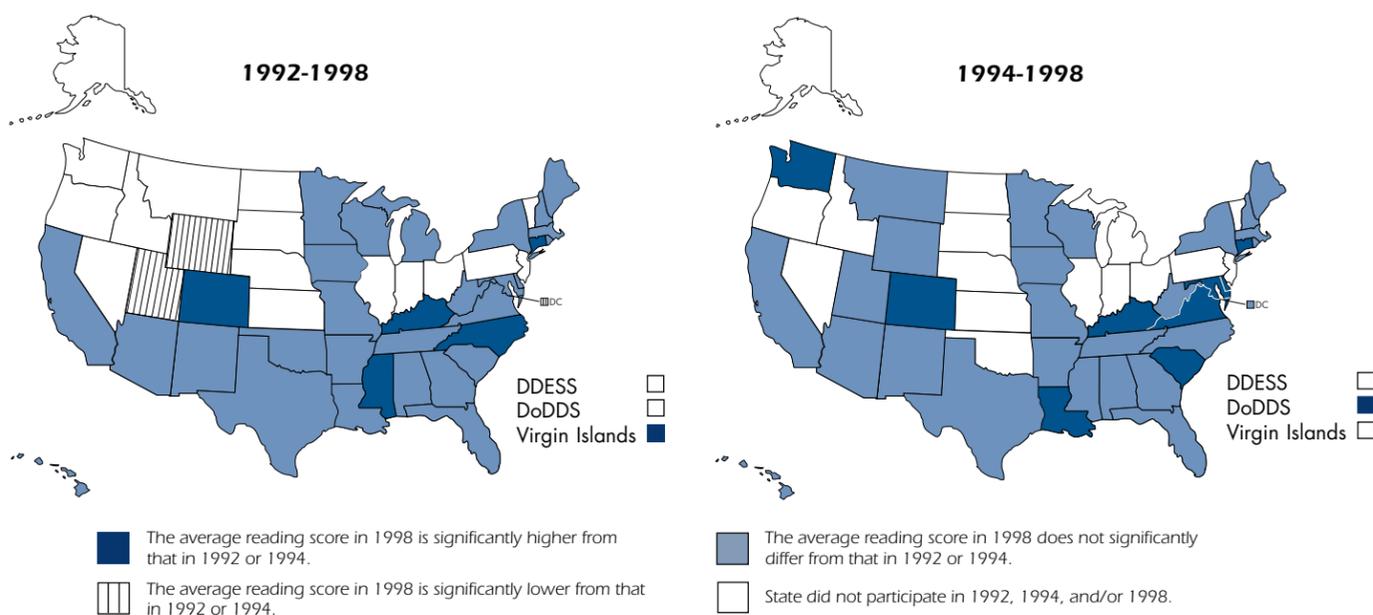
The table on the left shows the average reading scores for public school students in each state or jurisdiction participating in the 1992, 1994, and 1998 state level reading assessments. Significant differences since 1992 and/or 1994 are indicated next to the 1998 score in the third column

Between 1992 and 1998, the reading scores for fourth-grade public school students went up in Colorado, Connecticut, Kentucky, Mississippi, North Carolina, and the Virgin Islands. However, in Utah, Wyoming, and the District of Columbia, the reading score in 1998 was lower than it was in 1992.

Between 1994 and 1998, the reading scores for fourth-grade public school students went up in Colorado, Connecticut, Delaware, Kentucky, Louisiana, Maryland, South Carolina, Virginia, Washington, and Department of Defense overseas schools. There were no significant declines in scores between 1994 and 1998 for any participating jurisdiction.

The maps shown below further illustrate the changes in reading scores for each state between 1992 and 1998 and between 1994 and 1998.

Comparison of State-Level Average Reading Scores for Public School Fourth Graders: 1992, 1994, and 1998



State Level Trends in Achievement Level Performance

The table on the right shows the percentage of fourth-grade public school students who performed at or above the *Proficient* achievement level in 1992, 1994, and 1998. Significant differences between 1992 and 1998 and between 1994 and 1998 are indicated in the third column.

Between 1992 and 1998, the percentage of public school fourth graders who reached or exceeded the *Proficient* level increased in Colorado, Connecticut, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, and the Virgin Islands. There were no significant decreases for any state or jurisdiction.

Between 1994 and 1998, the percentage of public school fourth graders at or above *Proficient* increased in Colorado, Connecticut, Louisiana, and Department of Defense overseas schools. There were no significant decreases for any state or jurisdiction.

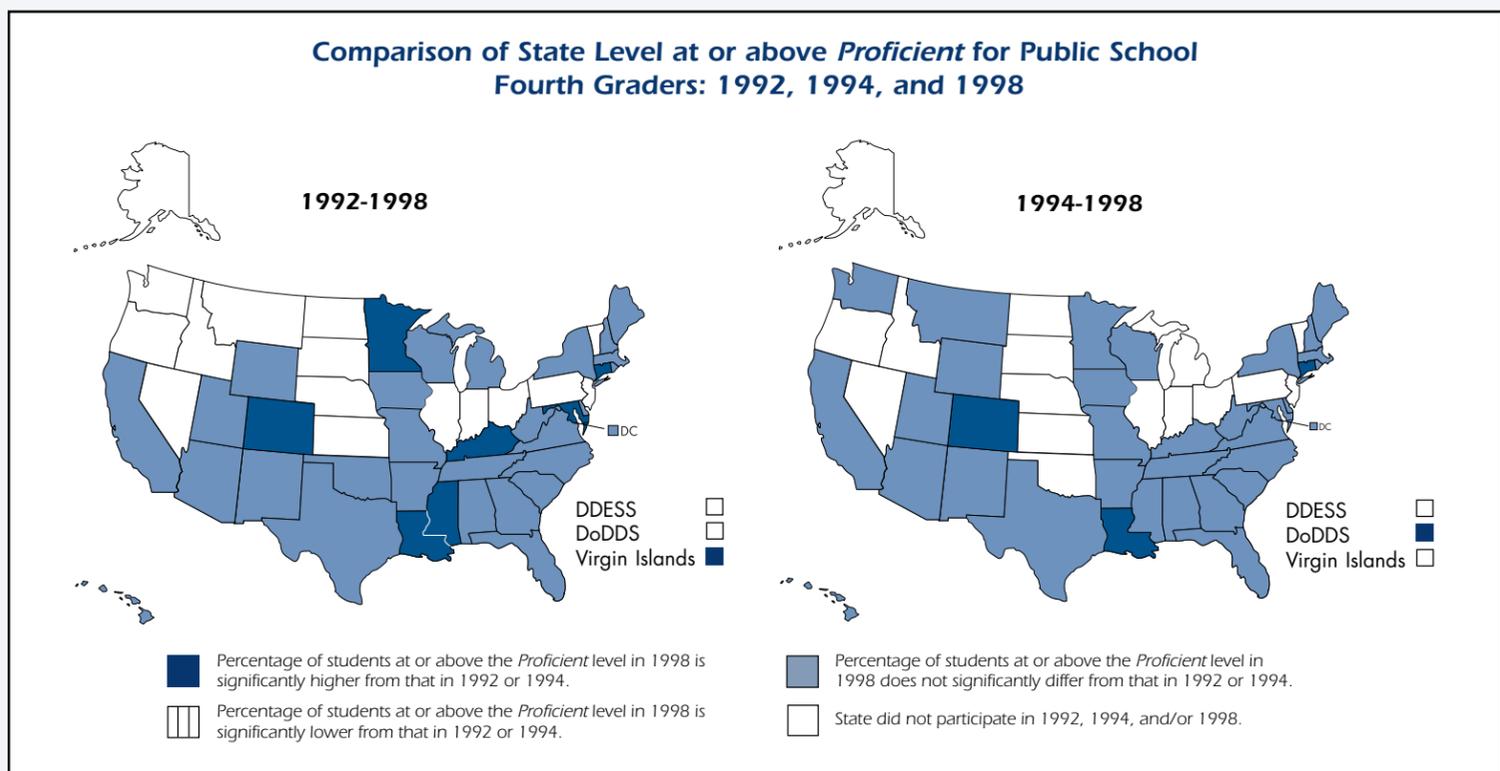
The maps shown below further illustrate the changes in the percentage of students in each state who performed at or above *Proficient* between 1992 and 1998 and between 1994 and 1998.

Percentage of Grade 4 Students at or above the *Proficient* Level for Public Schools only: 1992, 1994, and 1998

Nation States	Percentage of students at or above <i>Proficient</i>		
	1992	1994	1998
Nation	27	28	29
Alabama	20	23	24
Arizona	21	24	22
Arkansas	23	24	23
California [†]	19	18	20
Colorado	25	28	34***
Connecticut	34	38	46***
Delaware	24	23	25
Florida	21	23	23
Georgia	25	26	24
Hawaii	17	19	17
Iowa [†]	36	35	35
Kansas [†]	—	—	34
Kentucky	23	26	29*
Louisiana	15	15	19**
Maine	36	41	36
Maryland	24	26	29*
Massachusetts [†]	36	36	37
Michigan	26	—	28
Minnesota [†]	31	33	36*
Mississippi	14	18	18*
Missouri	30	31	29
Montana [†]	—	35	37
Nevada	—	—	21
New Hampshire [†]	38	36	38
New Mexico	23	21	22
New York [†]	27	27	29
North Carolina	25	30	28
Oklahoma	29	—	30
Oregon	—	—	28
Rhode Island	28	32	32
South Carolina	22	20	22
Tennessee	23	27	25
Texas	24	26	29
Utah	30	30	28
Virginia	31	26	30
Washington	—	27	29
West Virginia	25	26	29
Wisconsin [†]	33	35	34
Wyoming	33	32	30
Other Jurisdictions			
District of Columbia	10	8	10
DDESS	—	—	32
DoDDS	—	28	34+
Virgin Islands	3	—	8**

* Indicates that the percentage in 1998 was significantly different from that in 1992 if only one jurisdiction is being examined. ** Indicates that the percentage in 1998 was significantly different from that in 1992 using a multiple comparison procedure based on 43 jurisdictions. † Indicates that the percentage in 1998 was significantly different from that in 1994 if only one jurisdiction is being examined. — Indicates jurisdiction did not participate. ‡ Indicates jurisdiction did not meet one or more of the guidelines for school participation. DDESS: Department of Defense Domestic Dependent Elementary and Secondary Schools. DoDDS: Department of Defense Dependents Schools (Overseas). NOTE: National results are based on the national assessment sample, not on aggregated state assessment samples. Differences between states and jurisdictions may be partially explained by other factors not included in this table.

Comparison of State Level at or above *Proficient* for Public School Fourth Graders: 1992, 1994, and 1998



Other Publications and Related Materials

For additional information and a more complete report of the findings of the 1998 NAEP reading assessment, please refer to the **NAEP 1998 Reading Report Card for the Nation and the States**. Additional reports are available from the 1998 and past NAEP reading assessments. Please consult the information below for ordering these and other resources about the assessment.

Reading Framework for the National Assessment of Educational Progress: 1992-1998, National Assessment Governing Board

NAEP 1998 Reading State Report Card (request specific state)

NAEP 1998 Reading Sample Questions and Student Responses: Results from Public School Students in the States and Nationwide (forthcoming)

Students Selecting Stories: The Effects of Choice in Reading Assessment, Results from the NAEP Reader Special Study of the 1994 National Assessment of Educational Progress

Listening to Children Read Aloud, Data from NAEP's

Integrated Reading Performance Record (IRPR) at Grade 4 (Results from the 1992 IRPR, a special study conducted with a subgroup of fourth graders who participated in the 1992 NAEP reading assessment)

NAEPfacts: Reading Proficiency and Home Support for Literacy (A summary of findings related to home contexts for reading achievement from the 1994 NAEP reading assessment)

NAEPfacts: Long-Term Trends in Student Reading Performance (A summary of findings from the 1996 NAEP long-term trend reading assessment)

Interviewing Children about Their Literacy Experiences, Data from NAEP's Integrated Reading Performance Record (IRPR) at Grade 4 (A special study conducted with a subgroup of fourth graders who participated in the 1992 NAEP reading assessment)



For ordering information on these reports, write:

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