6 Sample Assessment Questions And Student Responses

This chapter presents sample questions from the 2001 NAEP geography assessment. Four sample questions at each grade are provided, including multiple-choice and constructed-response questions. Each sample is classified according to its geography content area, as described in the geography framework. The constructed-response questions are accompanied by actual student responses, reproduced from test booklets, that illustrate work at different rating levels. The constructed-response samples were rated using either a three-point or four-point scoring rubric. Three-point questions were rated as "Complete," "Partial," or "Inappropriate." Four-point questions were rated as "Complete," "Essential," "Partial," or "Inappropriate." Sample responses are included for each level except "Inappropriate."

The table accompanying each sample question presents two types of performance data: the overall percentage of students who answered successfully, and the percentage of students who answered successfully within a specific score range on the NAEP geography scale. The score ranges correspond to the three achievement-level intervals—*Basic, Proficient*, and *Advanced*—as well as the range below *Basic*. These percentages give some indication of how difficult the question was for students who performed within each of the achievement-level ranges.

Chapter Focus

Sample materials from the 2001 geography assessment

Chapter Contents

Many additional sample questions released from the 1994 and 2001 NAEP geography assessments are available for viewing on the NAEP Web Site at http://www.nces.ed.gov/nationsreportcard/itmrls/. The item-viewing feature of the Web Site includes student performance data for all questions, detailed scoring guides (rubrics), and sample student responses for the constructed-response questions.

Grade 4 Sample Assessment Questions and Results

Questions in the grade 4 assessment cover a wide variety of geographic concepts and skills across the three geography content areas. A somewhat higher percentage of questions is devoted to United States geography than at the two higher grades where increasing emphasis is placed on world geography.

Many of the questions at all three grades are based upon visual or textual stimuli designed to make the assessment more interesting and more authentic. Visual stimuli include maps, charts, graphs, diagrams, cartoons, and, as in sample question 1, photographs.

The sample questions are also marked on the item maps on pages 110-112. The item map location of each question identifies the scale score at which that question was answered successfully by at least 65 percent of the students for constructed-response questions and 74 percent of the students for four-option multiple-choice questions.

In sample question 1, students are assessed on whether they can recognize a photographic representation of a landscape and associate irrigation with the landscape depicted. This question is mapped at scale score 216.

Grade 4 Sample Question 1:

Geography Content Area: Environment and Society

Look at the photograph above. What would help farmers in this area grow more food?

Ⓐ Cutting down forests

Ⓑ Making terraces

Ⓒ Building houses

● Irrigating the land

Table 6.1 Sample Question 1 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

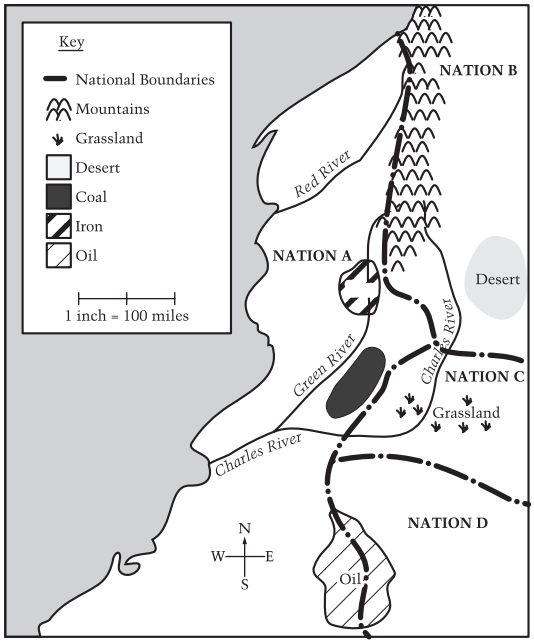
Grade 4	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
70	50	74	84	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 2 measures students' understanding of how geography plays a role in conflict among countries. Students found this question to be quite difficult, with only one-third answering correctly. This question appears on the item map at scale score 271.

Grade 4 Sample Question 2:

Geography Content Area: Spatial Dynamics and Connections



Which two nations are most likely to have a conflict over mineral resources?

- Ⓐ Nation A and Nation B
- Ⓑ Nation A and Nation C
- ● Nation A and Nation D
- Ⓓ Nation C and Nation D

Table 6.2 Sample Question 2 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 4	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
33	22	28	56	***

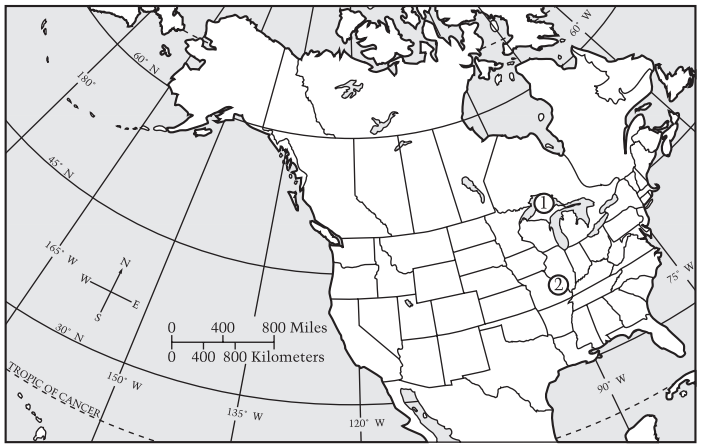
*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 3 is one of a number of production tasks included in the NAEP geography assessment in which students are asked to locate a place on a map or draw a map in their test booklet. Responses to this question were scored with a three-level rubric as "Complete," "Partial," or "Inappropriate." Two-thirds of students could correctly identify where they lived. This question appears on the item map at scale score 192. (Note that the circled numbers on the map were used in a different question that was also based on this map.)

Grade 4 Sample Question 3:

Geography Content Area: Space and Place

UNITED STATES AND CANADA



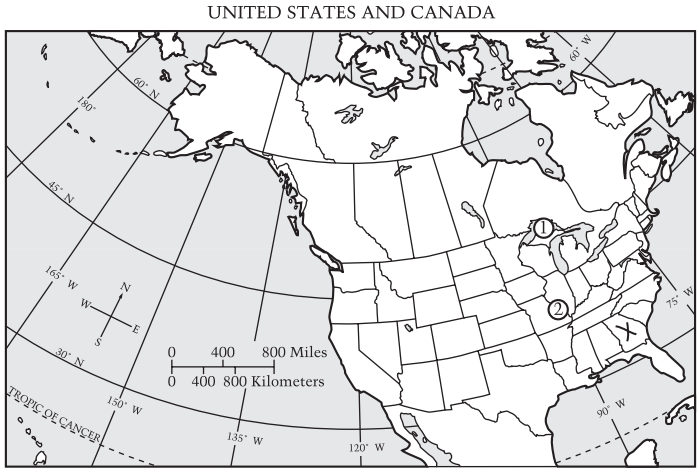
Write down the name of the state or district where you live.

I live in_____ .

Directly on the map, draw an "X" on the state or district where you live.

To earn a score of "Complete" on this question, students had to write the name of the state or district where they live and correctly mark the location on the map.

Sample "Complete" Response:



Write down the name of the state or district where you live.

I live in Georgia .

Directly on the map, draw an "X" on the state or district where you live.

Table 6.3a Sample Question 3 Results ("Complete" Short-Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 4	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
66	38	71	88	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

To earn a score of "Partial," students could indicate their state or district and mark a bordering state, or they could indicate the city or town in which they live and mark the correct state in which that city lies. In the sample below, the student lives in North Carolina but marked Virginia on the map.

Sample "Partial" Response:

Write down the name of the state or district where you live.

I live in north Carolina .

Directly on the map, draw an "X" on the state or district where you live.

Table 6.3b Sample Question 3 Results ("Partial" Short-Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 4	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
72	43	78	93	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

A more complex production task is seen in sample question 4. Here, students must use written descriptions of features of a town to sketch a map on a grid. They must understand scale, distance, and direction, and be able to read and use a map key. Responses were scored with a four-level rubric as "Complete," "Essential," "Partial," or "Inappropriate." The question was difficult for fourth-graders, with only 28 percent providing an "Essential" or better response. The item map scale score point for this question is 295.

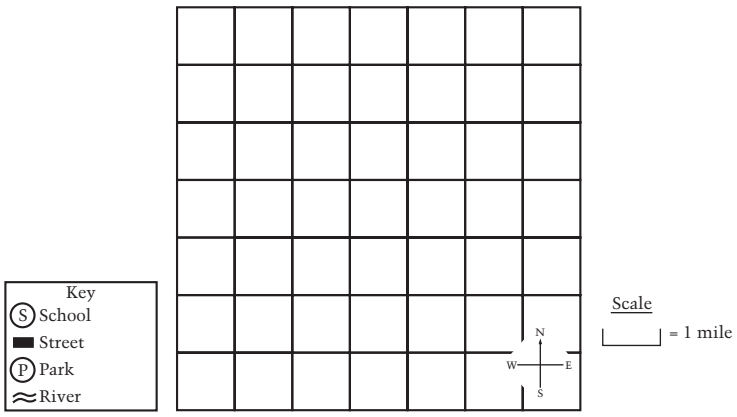
Grade 4 Sample Question 4:

Geography Content Area: Space and Place

LITTLE TOWN

- Width: 4.0 miles east to west
- Length: 3.0 miles north to south
- Main Street runs east to west through the town.
- The school is on the northeast side of town.
- Phelps Park is on the southwest side of town.
- Runt River runs north to south through the town.

On the grid below, each square is one mile wide and one mile long. Draw a map of Little Town on the grid. Draw the town's borders. Then, use the symbols in the key below to draw the features listed above.



Responses scored "Complete" correctly located all four features and drew the length and width to scale in the correct directions.

Sample "Complete" Response:

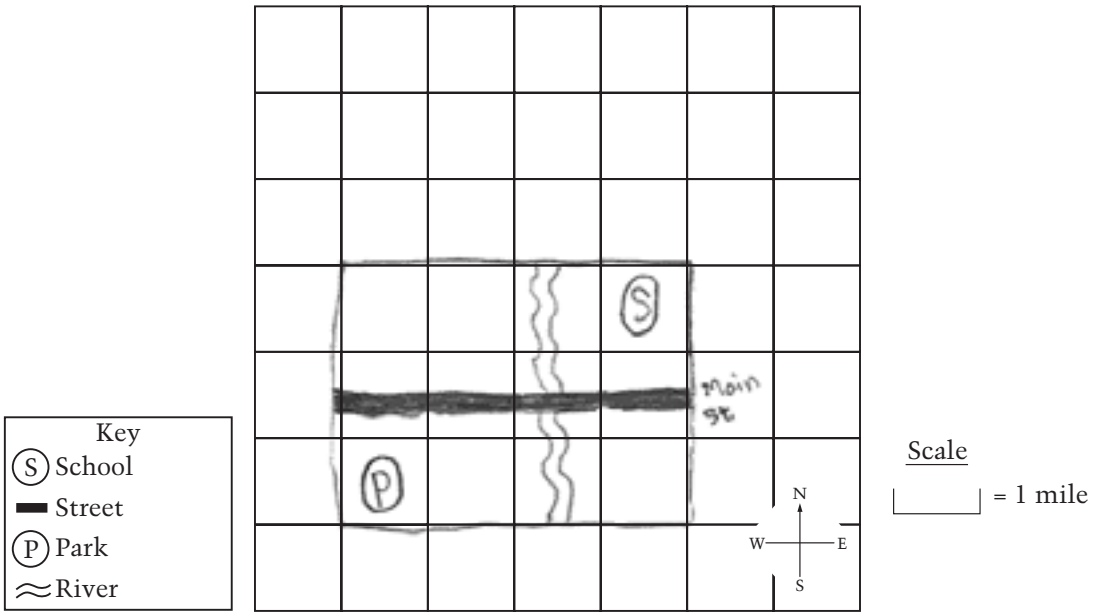


Table 6.4a Sample Question 4 Results ("Complete" Extended-Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 4	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
11	0	6	32	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Responses scored "Essential" correctly located four features but not to scale, or correctly located three features and had the scale correct.

Sample "Essential" Response:

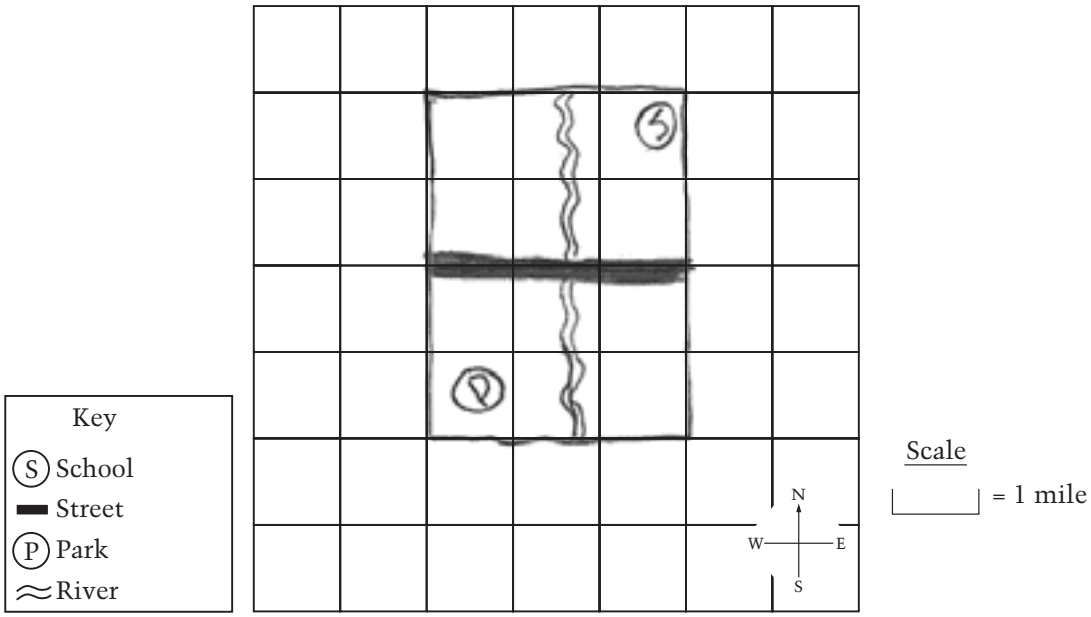


Table 6.4b Sample Question 4 Results ("Essential" Extended-Constructed-Response)

Overall percentage "Essential" or better and percentages "Essential" or better within each achievement-level range: 2001

Grade 4	Percentage "Essential" or better within achievement-level intervals			
Overall percentage "Essential" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
28	1	25	65	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Responses scored "Partial" located only one or two features and had the scale correct, or located three features with an incorrect scale.

Sample "Partial" Response:

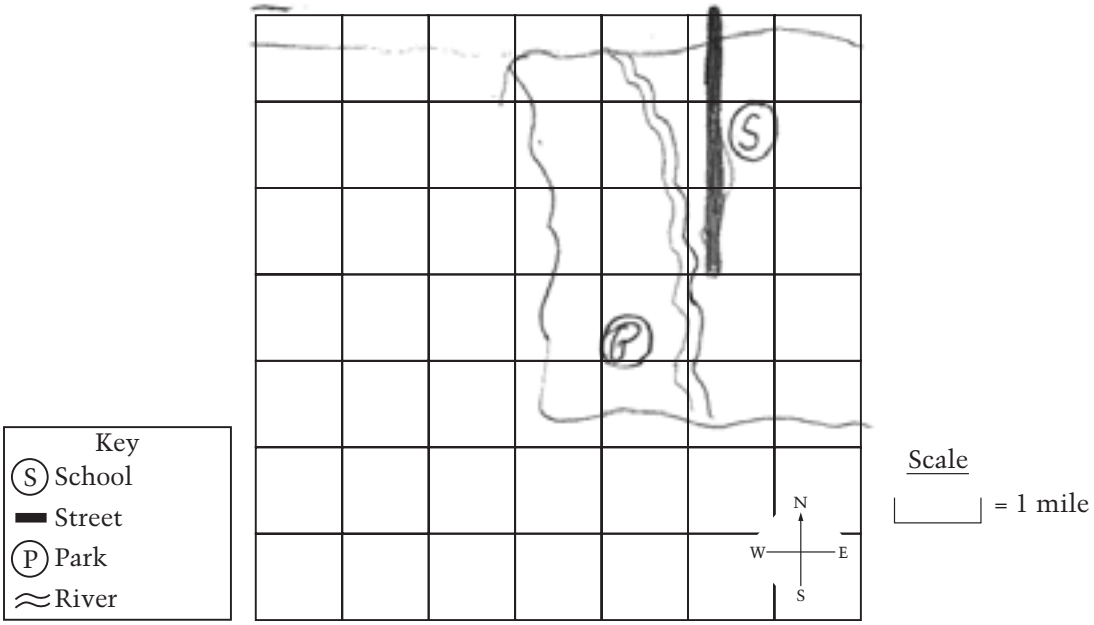


Table 6.4c Sample Question 4 Results ("Partial" Extended-Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 4	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
38	4	36	78	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Grade 8 Sample Assessment Questions and Results

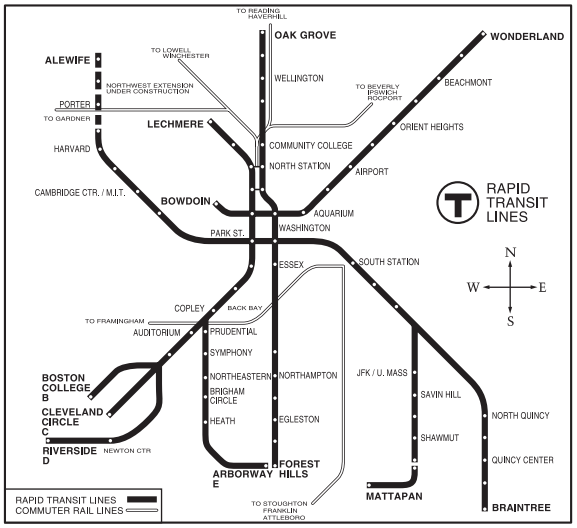
The assessment at grade 8, like that at grade 4, covers a wide range of geography skills and concepts. The questions, on average, look for a deeper understanding of the material and require students to grapple with more sophisticated stimuli, compare multiple maps, and apply geographic understanding to solving problems.

In this multiple-choice question students are asked to interpret a kind of map they may never have seen to determine exactly what kind of information it provides and doesn't provide. It was a fairly easy task for students. The scale score point for this question on the eighth-grade item map is 257.

Grade 8 Sample Question 5:

Geography Content Area: Spatial Dynamics and Connections

MASSACHUSETTS BAY TRANSIT AUTHORITY RAPID TRANSIT LINES



Which question could you answer based only on the information in the map?

- Ⓐ At what times do the public trains arrive?
- Ⓑ How much time does it take to go from Forest Hills to Oak Grove?
- Ⓒ How many miles is it from one station to another?
- ● How can one travel from Alewife to the Aquarium by public train?

Table 6.5 Sample Question 5 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
70	37	74	91	97

*NAEP geography composite scale range.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 6 asks about an important aspect of physical geography. One-half of eighth-graders knew that the four forces contribute to erosion. This question maps at scale score point 316.

Grade 8 Sample Question 6:

Geography Content Area: Space and Place

How do the forces listed below affect the natural environment?

Gravity
Ice
Water
Wind

- (A) They are major causes of erosion.
- (B) They are important influences on human settlement.
- (C) They are responsible for seismic activity.
- (D) They cause continental drift.

Table 6.6 Sample Question 6 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
50	36	47	64	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 7 tests students' knowledge of landforms as well as their skill with what geographers call "mental mapping"—the ability to visualize spatial patterns in one's mind. Students had to create an image of Florida in their minds before they could identify it as a peninsula. Nearly three-quarters of the students answered correctly. The question maps at a scale score of 256.

Grade 8 Sample Question 7:

Geography Content Area: Space and Place

Florida is an example of

Ⓐ an isthmus

Ⓑ an island

● a peninsula

Ⓓ a plateau

Table 6.7 Sample Question 7 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
74	40	80	93	100

*NAEP geography composite scale range.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 8 measures students' understanding of why countries join trans-regional organizations, a topic related to the larger theme of how people from different places work together across space to address common issues. Sixty percent of students answered this moderately difficult question correctly. The item map scale score for this question is 285.

Grade 8 Sample Question 8:

Geography Content Area: Spatial Dynamics and Connections

What is an important reason that countries join international organizations like the United Nations?

Ⓐ Countries who do not join usually lose their independence.

● Many of the world's problems involve more than one country.

Ⓒ Most citizens want their countries to join as many international organizations as possible.

Ⓓ Such organizations force countries to join.

Table 6.8 Sample Question 8 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
60	40	57	79	96

*NAEP geography composite scale range.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 9 is a short-constructed-response question designed to measure students' understanding of the interaction between human beings and the environment. Responses were scored on a three-level rubric as "Complete," "Partial," or "Inappropriate." The question was quite difficult for students, with only 22 percent giving a "Complete" response. On the item map for eighth grade this question appears as scale score 328.

Grade 8 Sample Question 9:

Geography Content Area: Environment and Society

Tropical forests are being destroyed at the rate of at least eleven million hectares each year, an area the size of Pennsylvania. About half of all tropical forests are already gone.

Discuss two major reasons for this high rate of tropical deforestation.

Responses scored "Complete" provided two reasons for the high rate of tropical deforestation. Reasons could relate to demand for land and resources or to the lack of regulation that allows deforestation to occur.

Sample "Complete" Response:

Discuss two major reasons for this high rate of tropical deforestation.

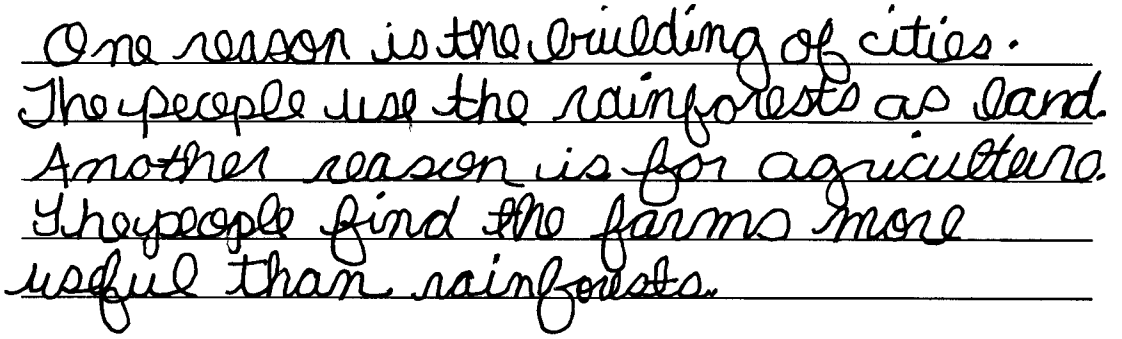


Table 6.9a Sample Question 9 Results ("Complete" Short-Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 8	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
22	6	18	38	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Responses scored "Partial" provided only one reason for the high rate of tropical deforestation, thereby revealing a more limited knowledge of the subject.

Sample "Partial" Response:

Discuss two major reasons for this high rate of tropical deforestation.

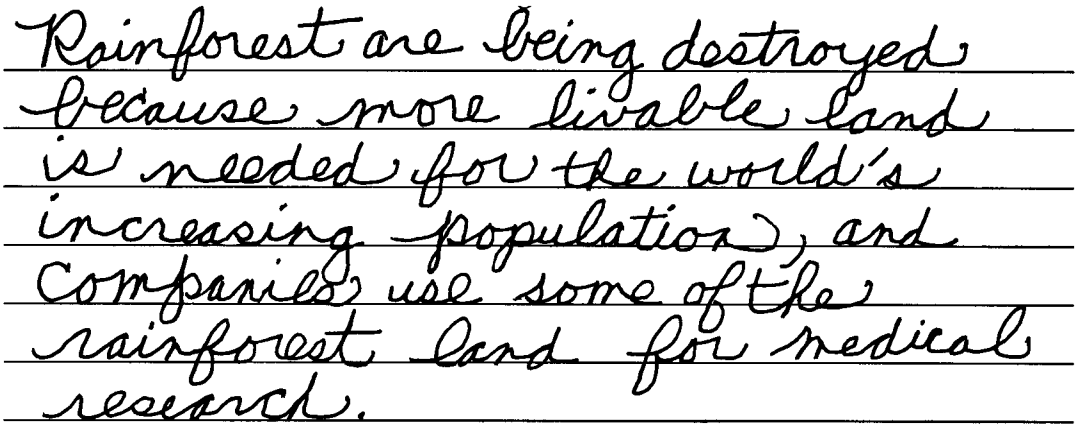


Table 6.9b Sample Question 9 Results ("Partial" Short-Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 8	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
60	26	62	84	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Grade 12 Sample Assessment Questions and Results

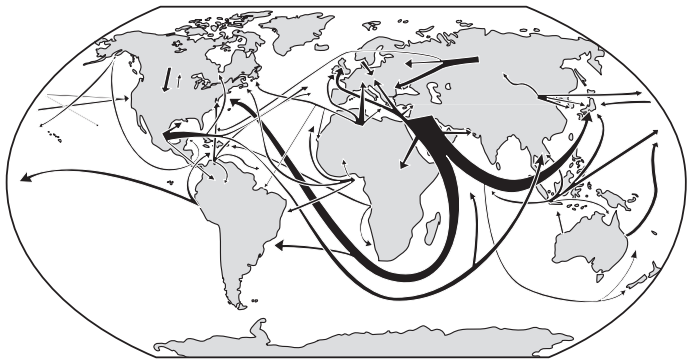
The grade 12 assessment included higher percentages of extended-constructed-response questions and questions devoted to non-U.S. geography than the assessments at grades 4 and 8. It also contained the most complex stimuli and challenging concepts.

Sample question 10 is a skills question designed to measure whether students understand the conventions used in what is known as a flow map. A majority of students (78 percent) successfully answered the question. This question appears on the twelfth-grade item map at scale score 272.

Grade 12 Sample Question 10:

Geography Content Area: Space and Place

MOVEMENT OF AN IMPORTANT INTERNATIONAL PRODUCT



The varying widths of the lines on the map most probably indicate the

- Ⓐ strength of ocean currents
- Ⓑ type of trade
- ● volume of trade
- Ⓓ type of transportation used

Table 6.10 Sample Question 10 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 12	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
78	46	86	99	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

This straightforward multiple-choice question helps measure students' knowledge of the distribution of world religions. Six out of ten students answered correctly. The item map scale score point for this question is 318.

Grade 12 Sample Question 11:

Geography Content Area: Spatial Dynamics and Connections

What religion is practiced by most people who live in India?

Ⓐ Confucianism

Ⓑ Buddhism

Ⓒ Christianity

● Hinduism

Table 6.11 Sample Question 11 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

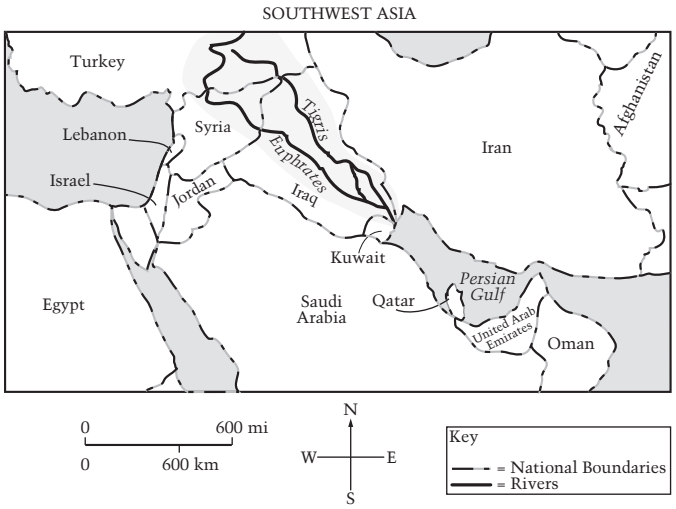
Grade 12	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
61	46	62	76	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 12 is a map-based, short-constructed-response question dealing with the interaction between humans and the natural environment. Although some students may have been able to answer without referring to the map, others could use it to gain valuable information about the region. Responses were scored on a three-level rubric as "Complete," "Partial," or "Inappropriate." The question was moderately difficult, with 47 percent of students providing a "Complete" response. This question "maps" at scale score 300 for "Complete."

Grade 12 Sample Question 12:

Geography Content Area: Environment and Society



Give two reasons why early civilizations flourished in the valley of the Tigris and Euphrates rivers.

Responses scored "Complete" gave two valid reasons why river valleys were important to the early civilization of Iraq.

Sample "Complete" Response:

Give two reasons why early civilizations flourished in the valley of the Tigris and Euphrates rivers.

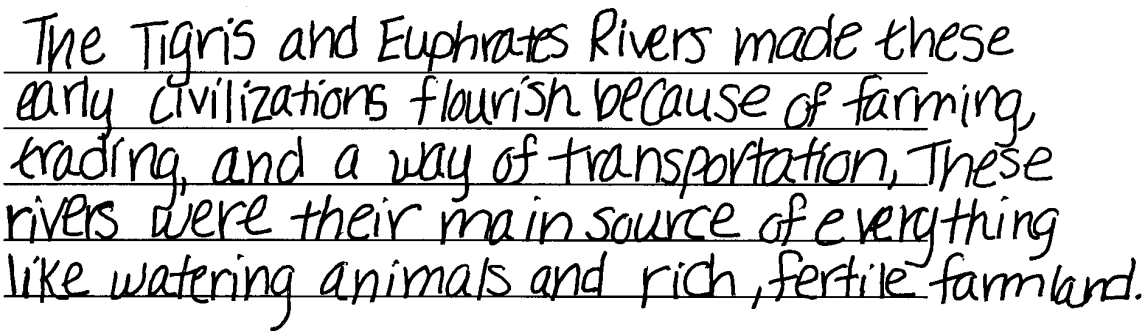


Table 6.12a Sample Question 12 Results ("Complete" Short-Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 12	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
47	17	52	70	***

*NAEP Geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Responses scored "Partial" gave only one valid reason for the importance of the river valley to the early civilization of Iraq.

Sample "Partial" Response:

Give two reasons why early civilizations flourished in the valley of the Tigris and Euphrates rivers.

Because its was next to the water, and it was a good place to live'.

Table 6.12b Sample Question 12 Results ("Partial" Short-Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 12	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
76	42	85	96	***

*NAEP Geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Sample question 13 is a short-constructed-response that measures students' ability to read and understand population pyramids. Responses were scored on a three-point rubric as "Complete," "Partial," or "Inappropriate." Students found this question to be very difficult. Sixteen percent received a score of "Complete." This question maps at scale score 347 for "Complete."

Grade 12 Sample Question 13:

Geography Content Area: Spatial Dynamics and Connections

COUNTRY 1
Age Distribution

Male			Female		
Age	% of Total Pop'n		% of Total Pop'n	Age
70 +	1.0%		1.2%	70 +
60-69	1.6%		1.8%	60-69
50-59	2.6%		2.7%	50-59
40-49	3.9%		4.0%	40-49
30-39	5.6%		5.5%	30-39
20-29	7.7%		7.7%	20-29
10-19	10.4%		10.4%	10-19
0-9	17.0%		16.9%	0-9

COUNTRY 2
Age Distribution

Male			Female		
Age	% of Total Pop'n		% of Total Pop'n	Age
70 +	2.9%		4.2%	70 +
60-69	3.7%		4.3%	60-69
50-59	4.7%		4.8%	50-59
40-49	5.8%		5.7%	40-49
30-39	8.2%		8.3%	30-39
20-29	9.3%		9.2%	20-29
10-19	7.5%		7.1%	10-19
0-9	7.3%		7.0%	0-9

Describe the difference in population patterns for people age 60 and over in countries 1 and 2. Give one possible explanation for the difference you have identified.

Responses scored "Complete" had to accurately describe the difference between the population patterns for people age 60 and over in the two countries and give a plausible explanation for the difference.

Sample "Complete" Response:

Describe the difference in population patterns for people age 60 and over in countries 1 and 2. Give one possible explanation for the difference you have identified.

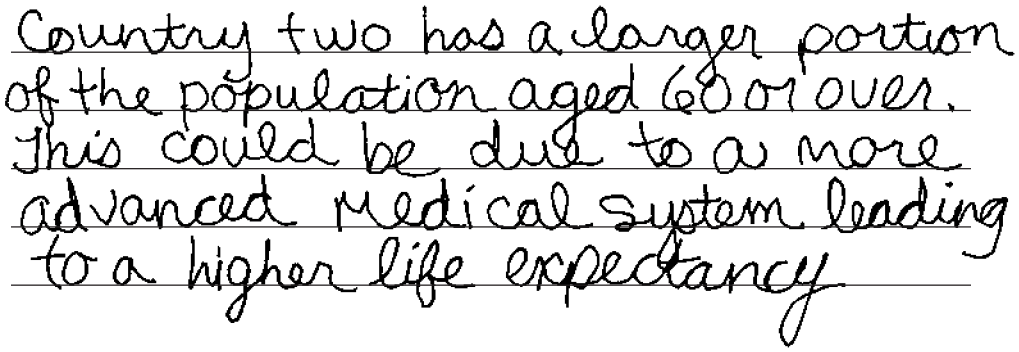


Table 6.13a Sample Question 13 Results ("Complete" Short-Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 12	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
16	2	15	33	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Responses scored "Partial" either described the difference between the two population pyramids but did not explain the difference or, as in the following example, incorrectly described the difference as one of absolute numbers rather than percentages of the population and gave a plausible explanation.

Sample "Partial" Response:

Describe the difference in population patterns for people age 60 and over in countries 1 and 2. Give one possible explanation for the difference you have identified.

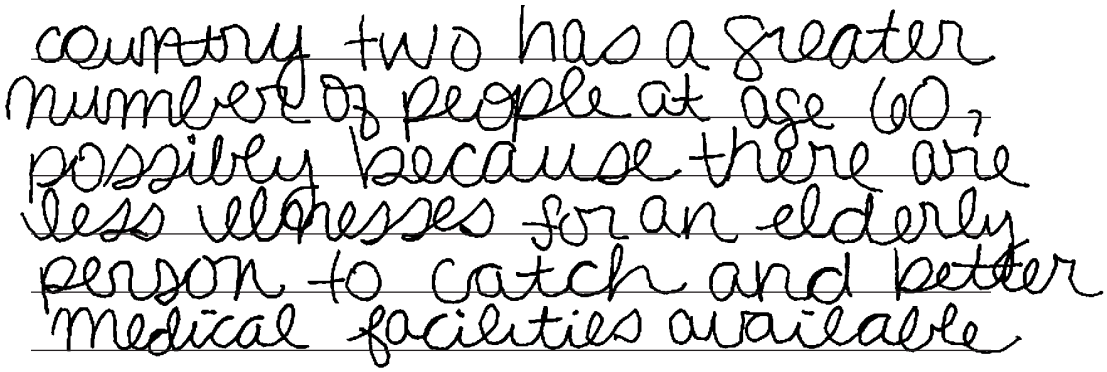


Table 6.13b Sample Question 13 Results ("Partial" Short-Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 12	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
51	18	57	79	***

*NAEP geography composite scale range.
***Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Maps of Selected Item Descriptions on the NAEP Geography Scale – Grades 4, 8, and 12

The geography performance of fourth-, eighth-, and twelfth-graders can be illustrated by maps that position item descriptions along the NAEP geography scale where they are likely to be answered successfully by students.[1] The descriptions used on the item maps focus on the geography knowledge or skill needed to answer the question. For multiple-choice questions, the description indicates the knowledge or skill demonstrated by selection of the correct option; for constructed-response questions, the description takes into account the knowledge or skill specified by the different levels of scoring criteria for that question. The questions described on the item maps include the 12 sample questions in the preceding section.

Figures 6.1 through 6.3 are item maps for grades 4, 8, and 12, respectively. The item map location of each question identifies the scale score at which that question was answered successfully by at least 65 percent of the students for constructed-response questions and 74 percent of the students for four-option, multiple-choice questions. For each question indicated on the item map, students whose average score fell at or above the scale point had a higher probability of successfully answering the question. Students whose average score fell below that scale point had a lower probability of successfully answering the question.

As an example of how to interpret the item maps, consider the multiple-choice question in figure 6.1 that maps at score point 271. This question appeared as sample question 2 earlier in the chapter, and was shown to have been a difficult question answered correctly by 33 percent of students. Students whose geography ability corresponds to a score of 271 or above on the scale had at least a 74 percent probability of answering this question correctly. Students whose ability is represented by a score below 271 had less than a 74 percent probability of answering correctly. This does not mean that all of the former students answered the question correctly or that all of the latter students answered it incorrectly. Rather, the item map indicates higher or lower probability of answering correctly depending on students' overall geography ability as measured on the NAEP scale.

The three geography achievement levels are indicated on the item map for each grade. It is important to note that, although the same 0-500 geography scale is used at each grade, the achievement levels are grade-specific, and each achievement level begins at a different score point at each grade. Returning to the example of the question mapping at score point 271, the item map is useful in showing how this difficult question maps relatively high up on the scale. In terms of achievement levels, one sees that students with a 74 percent probability of answering the question correctly performed near the upper end of the *Proficient* achievement-level range.

[1] Details on the procedures used to develop item maps are provided in appendix A.

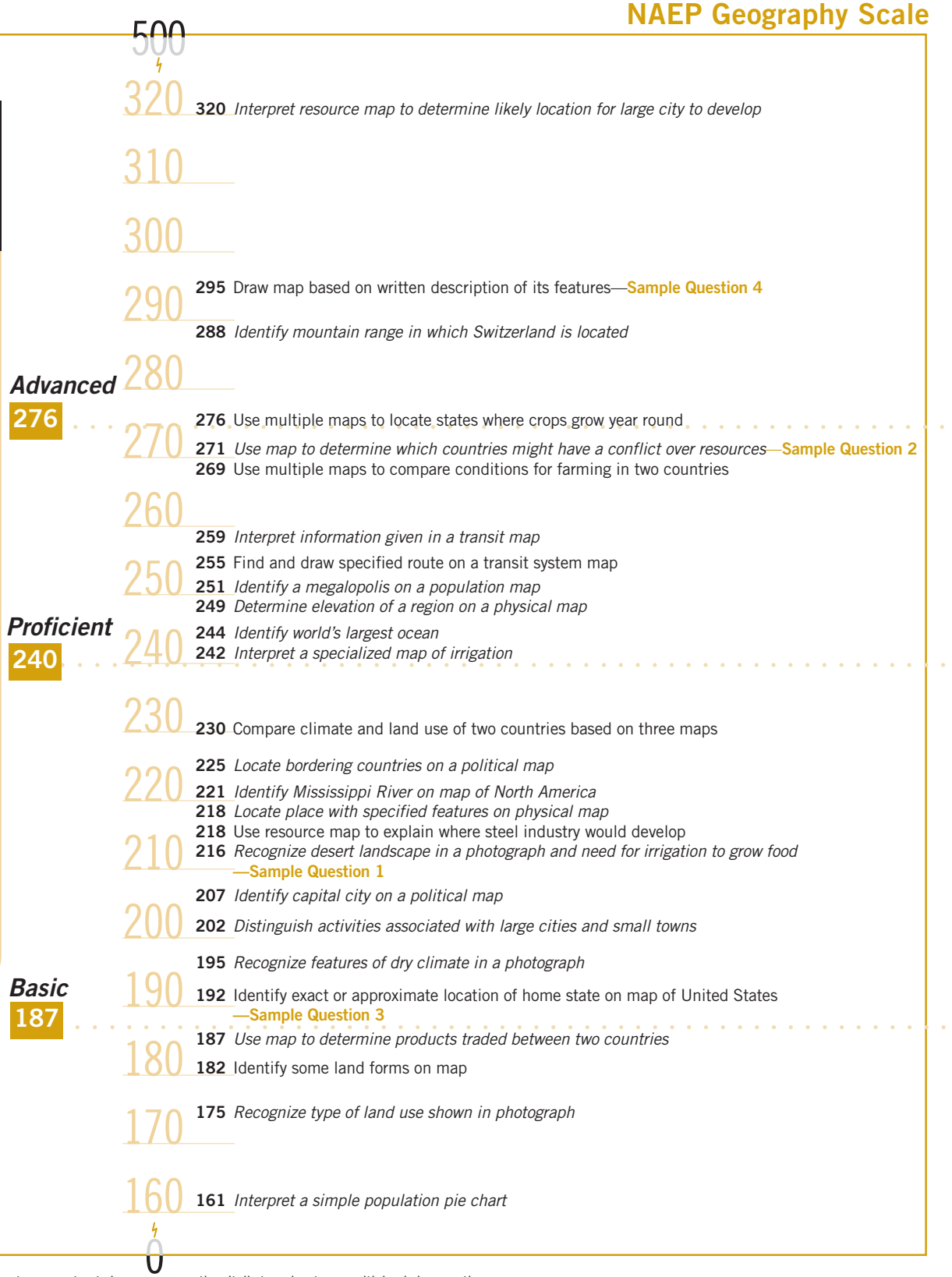
NAEP Geography Scale

Figure 6.1

Grade 4 Item Map

Map of selected item descriptions on the National Assessment of Educational Progress (NAEP) geography scale for grade 4

This map describes the knowledge or skill associated with answering individual geography questions. The map identifies the score point at which students had a high probability of successfully answering the question.*



NOTE: Regular type denotes a constructed-response question. Italic type denotes a multiple-choice question.

* Each grade 4 geography question in the 2001 assessment was mapped onto the NAEP 0–500 geography scale. The position of the question on the scale represents the scale score attained by students who had a 65 percent probability of successfully answering a constructed-response question, or a 74 percent probability of correctly answering a four-option multiple-choice question. Only selected questions are presented. Scale score ranges for geography achievement levels are referenced on the map. For constructed-response questions, the question description represents students' performance at the scoring criteria level being mapped.

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Figure 6.2

Grade 8 Item Map

Map of selected item descriptions on the National Assessment of Educational Progress (NAEP) geography scale for grade 8

This map describes the knowledge or skill associated with answering individual geography questions. The map identifies the score point at which students had a high probability of successfully answering the question.*

NOTE: Regular type denotes a constructed-response question. Italic type denotes a multiple-choice question.

* Each grade 8 geography question in the 2001 assessment was mapped onto the NAEP 0–500 geography scale. The position of the question on the scale represents the scale score attained by students who had a 65 percent probability of successfully answering a constructed-response question, or a 74 percent probability of correctly answering a four-option multiple-choice question. Only selected questions are presented. Scale score ranges for geography achievement levels are referenced on the map. For constructed-response questions, the question description represents students' performance at the scoring criteria level being mapped.

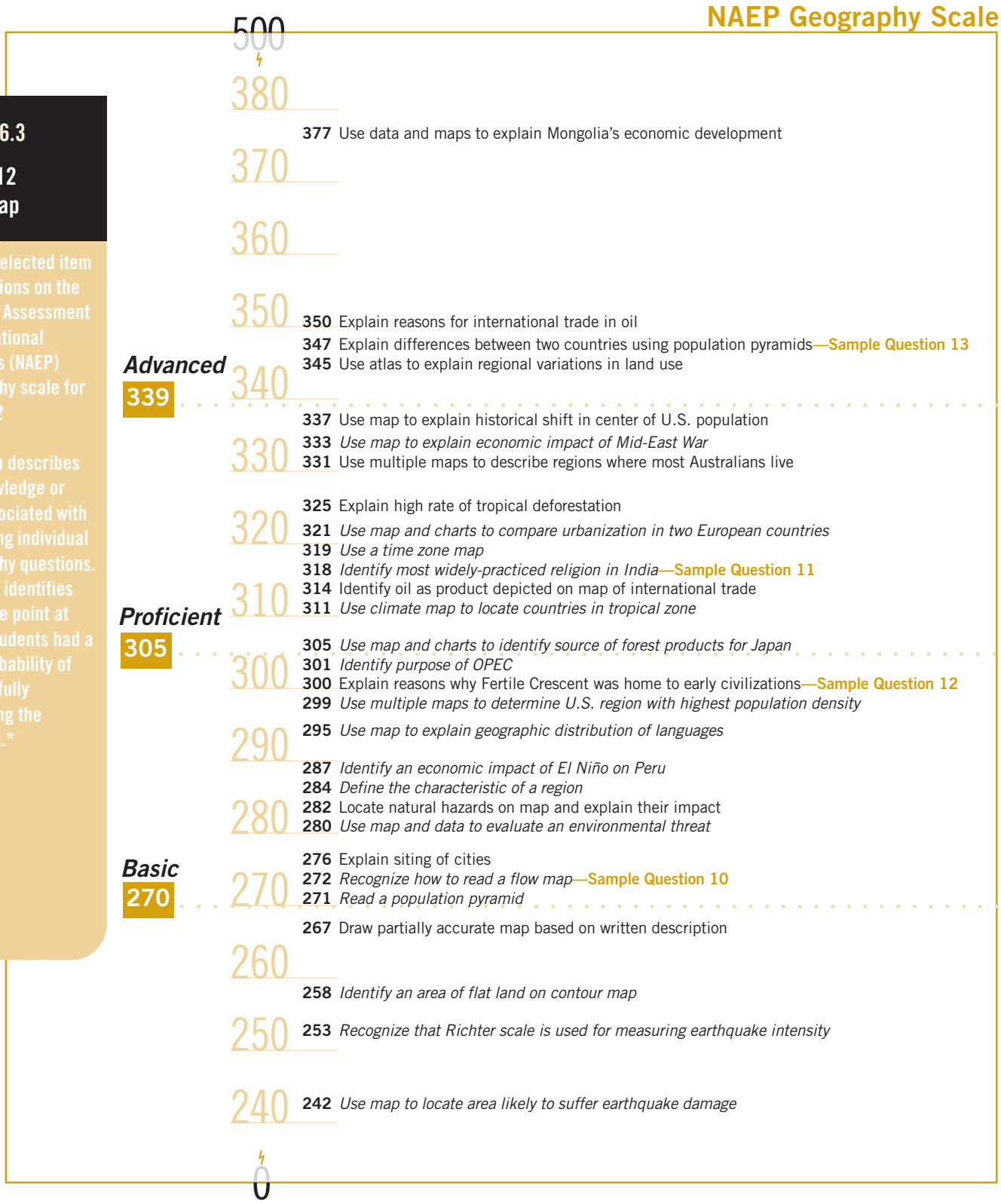
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Figure 6.3

Grade 12 Item Map

Map of selected item descriptions on the National Assessment of Educational Progress (NAEP) geography scale for grade 12

This map describes the knowledge or skill associated with answering individual geography questions. The map identifies the score point at which students had a high probability of successfully answering the question.*



NOTE: Regular type denotes a constructed-response question. Italic type denotes a multiple-choice question.

* Each grade 12 geography question in the 2001 assessment was mapped onto the NAEP 0–500 geography scale. The position of the question on the scale represents the scale score attained by students who had a 65 percent probability of successfully answering a constructed-response question, or a 74 percent probability of correctly answering a four-option multiple-choice question. Only selected questions are presented. Scale score ranges for geography achievement levels are referenced on the map. For constructed-response questions, the question description represents students' performance at the scoring criteria level being mapped.

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Appendix A
Overview of Procedures Used for the NAEP 2001 Geography Assessment

This appendix provides an overview of the NAEP 2001 geography assessment's primary components—framework, development, administration, scoring, and analysis. A more extensive review of the procedures and methods used in the geography assessment will be included in the forthcoming *NAEP 2001 Technical Report*.

Appendix Focus

Technical aspects of the NAEP 2001 geography assessment

The NAEP 2001 Geography Assessment

The National Assessment Governing Board (NAGB), created by Congress in 1988, is responsible for formulating policy for NAEP. The NAGB is specifically charged with developing assessment objectives and test specifications through a national consensus approach. That consensus approach results in the development of an assessment framework. The design of the NAEP 2001 geography assessment followed the guidelines provided in the framework developed for the 1994 assessment.[1]

The framework underlying both the NAEP 1994 and 2001 assessments reflects consensus among educators and researchers about the study of geography. Its purpose is to present a comprehensive overview of the most essential outcomes of students' geography education. Developing this framework and the specifications that guided development of the assessment involved the critical

Appendix Contents

[1] National Assessment Governing Board (1994). *Geography framework for the 1994 and 2001 National Assessment of Educational Progress.* Washington, DC: Author.

input of hundreds of individuals across the country, including representatives of national education organizations, teachers, parents, policymakers, business leaders, and the interested general public. This consensus process was managed by the Council of Chief State School Officers for NAGB.

The assessment framework specified not only the particular content areas of geography to be measured (see chapter 1 for a description of these dimensions), but also the percentage of assessment questions that should be devoted to each. The target percentage distribution of content areas, as specified in the framework, along with the actual percentage distributions in the 1994 and 2001 assessments, are presented in table A.1. The targeted content mix of 40 percent Space and Place, 30 percent Environment and Society, and 30 percent Spatial Dynamics and Connections was held constant across all three grades. The actual content of the assessment in terms of percentage of time spent by students was generally within a few percentage points of the targeted distribution in both assessment years. Such variation across years in item classification distribution does not affect the reporting of trends in student performance. Trend reporting is based upon the underlying scale, which uses the common items (i.e., those used in both assessment years), but maintains its stability even if some items are dropped or replaced. Moreover, the weighting of subscales in deriving the composite scale is based on the target item classification distribution.

The Assessment Design

Each student who participated in the geography assessment received a booklet containing three or four sections: a set of general background questions, a set of subject-specific background questions dealing largely with the student's use of technology, and one or two sets, or "blocks," of cognitive questions assessing knowledge and skills in geography as outlined in the framework. At grades 8 and 12, students were given either two 25-minute blocks or one 50-minute block. At grade 4, however, only 25-minute blocks were used. At each grade, one of the 25-minute blocks of questions required the use of an atlas, which was provided.

Table A.1 Distribution of Questions

Target and actual percentage distribution of questions by grade and geography content area, grades 4, 8, and 12: 1994 and 2001

	Grade 4			Grade 8			Grade 12		
Content Areas	Target	Actual 1994	Actual 2001	Target	Actual 1994	Actual 2001	Target	Actual 1994	Actual 2001
Space and Place	40	42	48	40	39	40	40	42	38
Environment and Society	30	28	24	30	30	32	30	30	35
Spatial Dynamics and Connections	30	31	28	30	32	28	30	29	27

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table A.2 Distribution of Questions by Question Type

Distribution of questions administered by question type, grades 4, 8, and 12: 1994 and 2001

	Grade 4		Grade 8		Grade 12	
	1994	2001	1994	2001	1994	2001
Multiple-choice	59	63	84	85	85	86
Short constructed-response	23	21	32	30	25	24
Extended constructed-response	8	7	9	9	13	13
Total	90	91	125	124	123	123

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

At grade 4, a total of six 25-minute blocks of cognitive questions were given, while at grades 8 and 12, seven blocks (six 25-minute blocks and one 50-minute block) were administered.[2] Some of the blocks at each grade (three at grade 4, and four at grades 8 and 12) were carried forward from the 1994 assessment to the 2001 assessment to allow for the measurement of changes across time. Each block consisted of both multiple-choice and constructed-response questions. Short-constructed-response questions required a few sentences for an answer, while extended-constructed-response questions generally required a paragraph or more. Some of the constructed-response questions required students to create maps or graphics. It was expected that students could adequately answer the short-constructed-response questions in about two to three minutes and the extended-constructed-response questions in about five minutes. The 50-minute blocks contained questions focusing on a particular theme, and included two extended-constructed-response questions. Only one 50-minute block was administered at each of grades 8 and 12.

Table A.2 displays the number of questions by type and by grade level for the 1994 and 2001 assessments. Some of the questions were used at more than one grade level; thus, the sum of the questions that appears at each grade level is greater than the total number of unique questions. The total number of questions at each grade level varied little from 1994 to 2001, despite the release to the public of several blocks at each grade level and attendant replacement with new blocks of questions. It should be noted that any such variation across years does not affect NAEP's ability to report on changes in students' performance across years because this reporting is based on the presence of blocks that were common to the assessment in two years.

[2] These blocks were distributed across the student booklets in a Balanced Incomplete Block (BIB) design that is described later in this section.

The assessment design allowed for maximum coverage of geography content at grades 4, 8, and 12, while minimizing the time burden for any one student. This was accomplished through the use of matrix sampling of cognitive questions, in which representative samples of students took different portions of the entire pool of assessment questions. The aggregate results across the entire assessment allowed for broad reporting of the geography performance of the targeted population. Matrix sampling did not apply to background questions; each student received all the background questions appropriate for his or her grade.

In addition to matrix sampling, the assessment design utilized a procedure for distributing test booklets that controlled for position and context effects. Students received different blocks of questions in their booklets according to a procedure called "Balanced Incomplete Block (BIB) spiraling." This procedure assigns blocks of questions so that every block appears in the first or second position within a booklet an equal number of times. Every block of questions is paired with every other block, with the exception of the 50-minute theme block, which appears on its own without another block of cognitive questions. The spiraling aspect of this procedure cycles the booklets for administration, so that typically only a few students in any assessment session receive the same booklet. This design allows for some balancing of the impact of context and fatigue effects to be measured and reported, but makes allowance for the difficulties of administering the 50-minute blocks.[3]

In addition to the student assessment booklets, three other instruments provided data relating to the assessment: a teacher questionnaire, a school questionnaire, and a Students with Disabilities and/or Limited English Proficiency (SD and/or LEP) questionnaire. The teacher questionnaire was administered to the geography or social studies teachers of fourth- and eighth-grade students participating in the assessment. The questionnaire consisted of three sections and took approximately 20 minutes to complete. The first section focused on the teacher's general background and experience; the second section on computer resources available in the school; and the third section on classroom information about geography/social studies instruction.

The school characteristics and policy questionnaire was given to the principal or other administrator in each participating school and took about 20 minutes to complete. The questions asked about school policies, programs, facilities, and demographic composition and background of the student body.

The SD and/or LEP student questionnaire was completed by a school staff member knowledgeable about those

[3] For further details on the booklet design, see the forthcoming *NAEP 2001 Technical Report*.

students who were selected to participate in the assessment and who were identified as: 1) having an Individualized Education Program (IEP) or equivalent program (for reasons other than being gifted and talented) or 2) being limited English proficient (LEP). A questionnaire was completed for each SD and/or LEP student sampled regardless of whether the student participated in the assessment. Each questionnaire took approximately 3 minutes to complete and asked about the student and the special programs in which he or she participated.

National Sample

The national results presented in this report are based on nationally representative probability samples of fourth-, eighth-, and twelfth-grade students. The sample was chosen using a multistage design that involved sampling students from selected schools within selected geographic areas across the country. The sample design had the following stages:

1) selection of geographic areas (a county, group of counties, or metropolitan statistical area);
2) selection of schools (public and nonpublic) within the selected areas; and
3) selection of students within selected schools.

Each selected school that participated in the assessment and each student assessed represents a portion of the population of interest. Sampling weights are needed to make valid inferences between the student samples and the respective populations from which they were drawn. Sampling weights account for disproportionate representation due to the oversampling of students who attend schools with high concentrations of Black and/or Hispanic students and students who attend nonpublic schools. Among other uses, sampling weights also account for lower sampling rates for very small schools and are used to adjust for school and student nonresponse.[4]

Unlike the 1994 national assessment, a special feature of the 2001 national assessment was the collection of data from samples of students where assessment accommodations for special-needs students were not permitted and from samples of students where accommodations for special-needs students were permitted. NAEP inclusion rules were applied, and accommodations were offered only when a student had an Individualized Education Program (IEP) because of a disability and/or was identified as being a limited English proficient student (LEP); all other students were asked to participate in the assessment under standard conditions.

[4] Additional details regarding the design and structure of the national and state samples will be included in the forthcoming *NAEP 2001 Technical Report*. In addition, the reader may consult the *NAEP 2000 Technical Report* for a discussion of sampling procedures that are mostly common to all NAEP assessments.

Table A.3 National Student Sample Size

National student sample size by type of results, grades 4, 8, and 12: 1994 and 2001

	1994	2001	
	Accommodations not permitted sample	Accommodations not permitted sample	Accommodations permitted sample
Grade 4			
Non SD/LEP students assessed	5,045	6,375	
SD/LEP students assessed without accommodations	462	551	476
SD/LEP students assessed with accommodations	NA	NA	368
Total students assessed	5,507	6,926	7,219
Grade 8			
Non SD/LEP students assessed	6,482	8,227	
SD/LEP students assessed without accommodations	396	721	675
SD/LEP students assessed with accommodations	NA	NA	397
Total students assessed	6,878	8,948	9,299
Grade 12			
Non SD/LEP students assessed	5,944	8,477	
SD/LEP students assessed without accommodations	290	522	467
SD/LEP students assessed with accommodations	NA	NA	188
Total students assessed	6,234	8,999	9,132

SD = Students with Disabilities.
LEP = Limited English Proficient students.
NA = Not applicable. No accommodations were permitted in this sample.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table A.3 shows the number of students included in the national samples for the NAEP 1994 and 2001 geography assessments at each grade level. For the 2001 assessment, the table includes the number of students in the sample where accommodations were not permitted and the number of students in the sample where accommodations were permitted. The table shows that the same non-SD and/or LEP students were included in both samples in 2001; only the SD and/or LEP students differed between the two samples. The 1994 design differed somewhat in that the SD and/or LEP students were assessed in standard conditions and accommodations were not permitted.

Table A.4 provides a summary of the national school and student participation rates for the geography assessment samples where accommodations were not permitted and where accommodations were

Table A.4 Participation Rates

National school and student participation rates for public schools, nonpublic schools, and public and nonpublic schools combined, grades 4, 8, and 12: 2001

	Weighted school participation			Samples where accommodations were not permitted				Samples where accommodations were permitted			
				Student participation		Overall participation rate		Student participation		Overall participation rate	
	Percentage before substitution	Percentage after substitution	Total number of schools	Weighted percentage student participation	Total number of students assessed	Before substitution	After substitution	Weighted percentage student participation	Total number of students assessed	Before substitution	After substitution
Grade 4											
Public	83	88	276	95	5,895	79	84	95	6,181	79	84
Nonpublic	83	91	89	96	1,031	80	87	96	1,038	80	88
Combined	83	88	365	95	6,926	79	84	95	7,219	79	84
Grade 8											
Public	79	87	259	92	7,728	73	80	92	8,063	72	80
Nonpublic	84	88	110	96	1,232	81	84	96	1,245	80	84
Combined	79	87	369	93	8,960	74	81	92	9,308	73	80
Grade 12											
Public	73	80	311	76	7,977	55	61	76	8,112	55	61
Nonpublic	67	77	63	98	1,022	66	76	91	1,021	61	70
Combined	72	80	374	77	8,999	56	62	77	9,133	56	62

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

permitted. Participation rates are presented for public and nonpublic schools, individually and combined. The first rate is the weighted percentage of schools participating in the assessment before substitution of demographically similar schools.[5] This rate is based only on the number of schools that were initially selected for the assessment. The numerator of this rate is the sum of the number of students represented by each initially selected school that participated in the assessment. The denominator is the sum of the number of students represented by each of the initially selected schools that had eligible students enrolled.

The second school participation rate is the weighted participation rate after substitution. The numerator of this rate is the sum of the number of students represented by each of the participating schools, whether originally selected or selected as a substitute for a school that chose not to participate. The denominator is the same as that for the weighted participation rate for the initial sample. Because of the common denominators, the weighted participation rate after substitution is at least as great as the weighted participation rate before substitution.

[5] The initial base sampling weights were used in weighting the percentages of participating schools and students. An attempt was made to preselect (before field processes began) a maximum of two substitute schools for each sampled public school (one in-district and one out-of-district) and each sampled Catholic school, and one for each sampled nonpublic school (other than Catholic). To minimize bias, a substitute school resembled the original selection as much as possible on affiliation, estimated number of grade-eligible students, and minority composition.

Also presented in table A.4 are weighted student participation rates. The numerator of this rate is the sum across all students assessed (in either an initial session or a makeup session) of the number of students that each represents. The denominator of this rate is the sum across all eligible sampled students in participating schools of the number of students that each represents. The overall participation rates take into account the weighted percentage of school participation before or after substitution and the weighted percentage of student participation after makeup sessions.

For the grade 12 national sample, where school and student response rates did not meet NCES standards, an extensive analysis was conducted that examined, among other factors, the potential for nonresponse bias at both the school and student level. No evidence of any significant potential for either school or student nonresponse bias was found. Results of these analyses, as well as nonresponse bias analyses for the grade 4 and grade 8 national samples, will be included in the forthcoming *NAEP 2001 Technical Report*.

Students with Disabilities (SD) and/or Limited English Proficient (LEP) Students

It is NAEP's intent to assess all selected students from the target population. Therefore, every effort is made to ensure that all selected students who are capable of participating in the assessment are assessed. Some students sampled for participation in NAEP can be excluded from the sample according to carefully defined criteria. These criteria were revised in 1996 to communicate more clearly a presumption of inclusion except under special circumstances. According to these criteria, students with Individualized Education Programs (IEPs) were to be included in the NAEP assessment except in the following cases:

1) The school's IEP team determined that the student could not participate, OR,
2) The student's cognitive functioning was so severely impaired that she or he could not participate, OR,
3) The student's IEP required that the student had to be tested with an accommodation or adaptation and that the student could not demonstrate his or her knowledge without that accommodation.[6]

All LEP students receiving academic instruction in English for three years or more were to be included in the assessment. Those LEP students receiving instruction in English for fewer than three years were to be included unless school staff judged them to be incapable of participating in the assessment in English.

Participation of SD and/or LEP Students in the NAEP Samples

Testing all sampled students is the best way for NAEP to ensure that the statistics generated by the assessment are as representative as possible of the performance of the entire national population and the populations of participating jurisdictions. However, all groups of students include certain proportions that cannot be tested in

[6] As described in the following section, a second sample in the 2001 national assessments was assessed that included students who required and were provided with accommodations.

large-scale assessments (such as students who have profound mental disabilities), or who can only be tested through the use of "accommodations" such as extra time, one-on-one administration, or use of magnifying equipment.

Some students with disabilities and some LEP students cannot show on a test what they know and can do unless they are provided accommodations. When such accommodations are not allowed, students requiring such adjustments are often excluded from large-scale assessments such as NAEP. This phenomenon has become more common in the last decade and gained momentum with the passage of the Individuals with Disabilities Education Act (IDEA), which led schools and states to identify increasing proportions of students as needing accommodations on assessments to best show what they know and can do.[7] Furthermore, Section 504 of the Rehabilitation Act of 1973 requires that, when students with disabilities are tested, schools must provide them with appropriate accommodations so that the test results accurately reflect students' achievement.[8] In addition, as the proportion of limited English proficient students in the population has increased, some states have started offering accommodations, such as translated versions of assessments or the use of bilingual dictionaries as part of assessments.

Before 1996, NAEP did not allow any testing under nonstandard conditions (i.e., accommodations were not permitted). At that time, NAEP samples were able to include almost all sampled students in "standard" assessment sessions. However, as the influence of IDEA grew more widespread, the failure to provide accommodations led to increasing levels of exclusion in the assessment. Such increases posed two threats to the program: 1) they threatened the stability of trend lines (because excluding more students in one year than the next might lead to apparent rather than real gains), and 2) they made NAEP samples less than optimally representative of target populations.

NAEP reacted to this challenge by adopting a multipart strategy. It became clear that, to ensure that NAEP samples were as inclusive as possible, the program had to move toward allowing the same assessment accommodations that were afforded students in state and district testing programs. However, allowing accommodations represents a change in testing conditions that may affect measurement of changes over time. Therefore, beginning with the 1996 national assessments and the 1998 state assessments, NAEP has assessed a series of parallel samples of students. In one set of samples, testing accommodations were not permitted; this has allowed NAEP to maintain the

[7] Office of Special Education Programs (1997). *Nineteenth annual report to Congress on the implementation of the individuals with disabilities education act*. Washington, DC: U. S. Department of Education.

[8] Section 504 of the Rehabilitation Act of 1973 is a civil rights law designed to prohibit discrimination on the basis of disability in programs and activities, including education, that receive federal financial assistance.

measurement of achievement trends. In addition to the samples where accommodations were not permitted, parallel samples in which accommodations were permitted were also assessed. By having two overlapping samples and two sets of related data points, NAEP could meet two core program goals.[9] First, data trends could be maintained. Second, parallel trend lines could be set in ways that ensure that in future years the program will be able to use the most inclusive practices possible and mirror the procedures used by most state and district assessments. Beginning in 2002, NAEP will use only the more inclusive samples in which assessment accommodations are permitted.

In geography, national data from 1994 and 2001 are reported for the sample in which accommodations were not permitted. National data for the second sample, in which accommodations were permitted, are reported at all grades for 2001 only.

In order to make it possible to evaluate the impact of increasing exclusion rates, data on exclusion in both assessment years are included in this appendix. Since the exclusion rates may affect average scale scores, readers should consider the magnitude of exclusion rate changes when interpreting score changes.

Percentages of SD and/or LEP students for the national sample where accommodations were not permitted are presented in table A.5. The data in this table include the percentages of students *identified* as SD and/or LEP, the percentage of students *excluded*, and the percentage of *assessed* SD and/or LEP students. Percentages of these students in the national sample where accommodations were permitted are presented in table A.6. The data in this table include the percentages of students *identified* as SD and/or LEP, the percentage of students *excluded*, the percentage of *assessed* SD and/or LEP students, the percentage *assessed without accommodations*, and the percentage *assessed with accommodations*.

In the 2001 accommodations-not-permitted national sample, 8 percent of students at grades 4 and 8, and 5 percent of students at grade 12 were excluded from the assessment. The comparable percentages in the 2001 accommodations-permitted national sample were 4 percent at grades 4 and 8, and 2 percent at grade 12.

[9] The two samples are described as "overlapping" because in 2001 the same group of non-SD and/or LEP students were included in both samples.

Table A.5 Students Identified as SD and/or LEP Where Accommodations Were Not Permitted

Percentage of students identified as SD and/or LEP where accommodations were not permitted, grades 4, 8, and 12: 1994 and 2001

	1994			2001		
	Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified	Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified
Grade 4						
SD and/or LEP students						
Identified	1,487	14	100	1,051	16	100
Excluded	1,025	5	41	500	8	48
Assessed	462	8	59	551	8	52
SD students only						
Identified	974	10	100	611	11	100
Excluded	685	4	43	378	6	58
Assessed	289	6	57	233	4	42
LEP students only						
Identified	546	4	100	489	6	100
Excluded	368	1	35	157	2	32
Assessed	178	3	65	332	4	68
Grade 8						
SD and/or LEP students						
Identified	1,674	10	100	1,379	16	100
Excluded	1,278	5	46	658	8	48
Assessed	396	5	54	721	8	52
SD students only						
Identified	1,254	8	100	947	12	100
Excluded	979	4	49	546	7	54
Assessed	275	4	51	401	6	46
LEP students only						
Identified	450	2	100	489	4	100
Excluded	323	1	38	153	1	31
Assessed	127	1	62	336	3	69
Grade 12						
SD and/or LEP students						
Identified	1,238	8	100	1,096	11	100
Excluded	948	3	43	574	5	44
Assessed	290	4	57	522	6	56
SD students only						
Identified	967	6	100	772	8	100
Excluded	776	3	47	483	4	49
Assessed	191	3	53	289	4	51
LEP students only						
Identified	285	2	100	373	3	100
Excluded	184	#	29	121	1	31
Assessed	101	1	71	252	2	69

Percentage is between 0.0 and 0.5.

SD = Students with Disabilities. LEP = Limited English Proficient students.

NOTE: Within each grade level, the combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions, but counted only once in the top portion. Within each portion of the table, percentages may not sum properly due to rounding. In 1994, the geography assessment was conducted at the same time as the 1994 U.S. history assessment. The identification and exclusion of special-needs students occurred after they were sampled, but before they could be assigned either a history or geography session. As a consequence, the 1994 sample sizes for identified and excluded students appear larger than would be expected given the weighted percentages that were calculations based on the geography sample only.

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table A.6 Students Identified as SD and/or LEP Where Accommodations Were Permitted

Percentage of students identified as SD and/or LEP where accommodations were permitted, grades 4, 8, and 12: 2001

		Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified
Grade 4				
SD and/or LEP students	Identified	1,137	17	100
	Excluded	293	4	24
	Assessed	844	13	76
Assessed without accommodations		476	6	36
Assessed with accommodations		368	7	41
SD students only	Identified	641	13	100
	Excluded	138	3	21
	Assessed	503	10	79
Assessed without accommodations		172	3	26
Assessed with accommodations		331	7	53
LEP students only	Identified	576	5	100
	Excluded	175	2	31
	Assessed	401	4	69
Assessed without accommodations		309	3	54
Assessed with accommodations		92	1	16
Grade 8				
SD and/or LEP students	Identified	1,453	16	100
	Excluded	381	4	23
	Assessed	1,072	12	77
Assessed without accommodations		675	7	43
Assessed with accommodations		397	5	34
SD students only	Identified	996	12	100
	Excluded	262	3	22
	Assessed	734	10	78
Assessed without accommodations		344	4	35
Assessed with accommodations		390	5	43
LEP students only	Identified	545	4	100
	Excluded	140	1	27
	Assessed	405	3	73
Assessed without accommodations		348	3	63
Assessed with accommodations		57	#	10
Grade 12				
SD and/or LEP students	Identified	956	10	100
	Excluded	301	2	23
	Assessed	655	8	77
Assessed without accommodations		467	5	50
Assessed with accommodations		188	3	27
SD students only	Identified	652	8	100
	Excluded	252	2	26
	Assessed	400	6	74
Assessed without accommodations		233	3	42
Assessed with accommodations		167	3	32
LEP students only	Identified	334	2	100
	Excluded	63	#	17
	Assessed	271	2	83
Assessed without accommodations		242	2	75
Assessed with accommodations		29	#	8

Percentage is between 0.0 and 0.5.

SD = Students with Disabilities. LEP = Limited English Proficient students.

NOTE: Within each grade level, the combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions, but counted only once in the top portion.

Within each portion of the table, percentages may not sum properly due to rounding.

SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Investigating the Effects of Exclusion Rates on Assessment Results

As indicated by the data in the previous section, exclusion rates have tended to increase across assessment years in the samples that did not permit accommodations. In considering the effects of exclusion rates on assessment results, at least one major issue becomes evident. If exclusion rates vary substantially across assessment years, then the ability to report trends (i.e., compare results between years) may be affected by the fact that the results from different years are based on different proportions of the population.

NCES has funded research into ways in which excluded students might be included in the estimation of scores for total populations and has also commissioned studies of the impact of assessment accommodations on overall scores. Several statistical adjustment approaches for estimating full populations (including estimates for excluded students) have been proposed, but none has yet been judged ready for operational use. Regarding the impact of assessment accommodations on overall scores, ETS has conducted differential item functioning (DIF) studies of items assessed with accommodations in the 1996 assessment.[10] In these studies, ETS researchers found little evidence that accommodations changed the functioning of test questions.

Types of Accommodations Permitted

Table A.7 displays the number and the percentages of SD and/or LEP students assessed with the variety of available accommodations. It should be noted that students assessed with accommodations typically received some combination of accommodations. The numbers and percentages presented in the table reflect only the primary accommodation provided. For example, students assessed in small groups (as compared to standard NAEP sessions of about 30 students) usually received extended time. In one-on-one administrations, students often received assistance in recording answers and were afforded extra time. Extended time was considered the primary accommodation only when it was the sole accommodation provided.

[10] For information on DIF studies of items assessed with accommodations in the 1996 mathematics and science assessments, see Mazzeo, J. M., Carlson, J. E., Voelkl, K. E., & Lutkus, A. D. (1999). *Increasing the participation of special needs students in NAEP; A report on 1996 NAEP research activities.* Washington, DC: National Center for Education Statistics.

Table A.7 Students Identified as SD and/or LEP by Type of Accommodation

Percentage of students identified as SD and/or LEP by type of accommodation where accommodations were permitted, grades 4, 8, and 12: 2001

	Grade 4			Grade 8			Grade 12		
	Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified	Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified	Number of students sampled	Weighted percentage of all students	Weighted percentage of students identified
SD and/or LEP students									
Bilingual dictionary	41	0.38	2.2	6	0.04	0.3	21	0.14	1.4
Large-print book	3	0.02	0.1	3	0.02	0.2	3	0.05	0.5
Extended time	40	0.59	3.4	70	0.82	5.1	68	0.86	8.6
Read aloud	15	0.27	1.5	14	0.15	0.9	10	0.13	1.3
Small group	230	4.97	28.6	286	4.02	25.1	83	1.43	14.4
One-on-one	27	0.50	2.9	6	0.09	0.6	3	0.03	0.4
Scribe/computer	10	0.31	1.8	3	0.08	0.5	0	0.00	0.0
Other	2	0.03	0.2	9	0.16	1.0	0	0.00	0.0
SD students only									
Bilingual dictionary	5	0.05	0.4	0	0.00	0.0	0	0.00	0.0
Large-print book	3	0.02	0.2	3	0.02	0.2	3	0.05	0.6
Extended time	40	0.59	4.7	70	0.82	6.6	68	0.86	11.1
Read aloud	15	0.27	2.1	14	0.15	1.2	10	0.13	1.7
Small group	230	4.97	39.3	286	4.02	32.4	83	1.43	18.5
One-on-one	27	0.50	3.9	6	0.09	0.7	3	0.03	0.5
Scribe/computer	10	0.31	2.5	3	0.08	0.7	0	0.00	0.0
Other	1	0.02	0.2	8	0.15	1.2	0	0.00	0.0
LEP students only									
Bilingual dictionary	41	0.38	6.9	6	0.04	1.0	21	0.14	5.7
Large-print book	0	0.00	0.0	0	0.00	0.0	0	0.00	0.0
Extended time	20	0.20	3.6	20	0.13	3.0	4	0.02	0.9
Read aloud	5	0.04	0.7	0	0.00	0.0	0	0.00	0.0
Small group	21	0.21	3.8	30	0.27	6.1	4	0.04	1.7
One-on-one	3	0.03	0.5	0	0.00	0.0	0	0.00	0.0
Scribe/computer	1	0.01	0.2	0	0.00	0.0	0	0.00	0.0
Other	1	0.01	0.1	1	0.01	0.3	0	0.00	0.0

SD = Students with Disabilities. LEP = Limited English Proficient students.
NOTE: The combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions, but counted only once in the top portion.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Data Collection and Scoring

The 2001 geography assessment was conducted from January through March 2001, with some makeup sessions in early April. As with all NAEP assessments, data collection for the 2001 assessment was conducted by a trained field staff. This was accomplished by staff from Westat, Inc.

Materials from the 2001 assessment were shipped to NCS Pearson, where trained staff evaluated the responses to the constructed-response questions using scoring rubrics or guides prepared by ETS. Each constructed-response question had a unique scoring rubric that defined the criteria used to evaluate students' responses. The extended-constructed-response questions were evaluated with four-level rubrics, and almost all of the short-constructed-response questions were rated according to three-level rubrics that permitted partial credit. Other short-constructed-response questions were scored as either acceptable or unacceptable.

For the 2001 geography assessment, approximately 303,000 constructed responses were scored. This number includes rescoring to monitor inter-rater reliability. The within-year average percentage of agreement for the 2001 national reliability sample was 95 percent at grade 4, 94 percent at grade 8, and 93 percent at grade 12.

Data Analysis and IRT Scaling

Subsequent to the professional scoring, all information was transcribed to the NAEP database at ETS. Each processing activity was conducted with rigorous quality control. After the assessment information was compiled in the database, the data were weighted according to the population structure. The weighting for the national sample reflected the probability of selection for each student as a result of the sampling design, adjusted for nonresponse. Through post-stratification, the weighting assured that the representation of certain subpopulations corresponded to figures from the U.S. Census and the Current Population Survey.[11]

Analyses were then conducted to determine the percentages of students who gave various responses to each cognitive and background question. In determining these percentages for the cognitive questions, a distinction was made between missing responses at the end of a block (i.e., missing responses subsequent to the last question the student answered) and missing responses prior to the last observed response. Missing responses before the last observed response were considered intentional omissions. In analysis, omitted responses to multiple-choice items were scored as fractionally correct.[12] For constructed-response items,

[11] These procedures are described more fully in the "Weighting and Variance Estimation" section later in this document. For additional information about the use of weighting procedures, see the forthcoming *NAEP 2001 Technical Report*. In addition, the reader may consult the *NAEP 2000 Technical Report* for a discussion of weighting procedures that are common to all NAEP assessments.

[12] Lord, F. M. (1980). *Applications of item response theory to practical testing problems.* Hillsdale, NJ: Lawrence Erlbaum Associates.

omitted responses were placed into the lowest score category. Missing responses at the end of the block were considered "not reached" and treated as if the questions had not been presented to the student. In calculating response percentages for each question, only students classified as having been presented the question were included in the denominator of the statistic.

It is standard NAEP practice to treat all nonrespondents to the last question in a block as if they had not reached the question. For multiple-choice and short-constructed-response questions, this practice produces a reasonable pattern of results in that the proportion reaching the last question is not dramatically smaller than the proportion reaching the next-to-last question. However, for geography blocks that ended with extended-constructed-response questions, the standard practice could result in extremely large drops in the proportion of students attempting some of the final questions. Therefore, for blocks ending with an extended-constructed-response question, students who answered the next-to-last question but did not respond to the extended-constructed-response question were classified as having intentionally omitted the last question.

Item Response Theory (IRT) was used to estimate average geography scale scores for the nation and for various subgroups of interest within the nation. IRT models the probability of answering a question in a certain way as a mathematical function of proficiency or skill. The main purpose of IRT analysis is to provide a common scale on which performance can be compared across groups such as those defined by characteristics, including gender and race/ethnicity.

In producing the geography scales, three distinct IRT models were used. Multiple-choice questions were scaled using the three-parameter logistic (3PL) model; short-constructed-response questions rated as acceptable or unacceptable were scaled using the two-parameter logistic (2PL) model; and short-constructed-response questions rated according to a three-level rubric, as well as extended-constructed-response questions rated on a four-level rubric, were scaled using a Generalized Partial-Credit (GPC) model.[13] Developed by ETS and first used in 1992, the GPC model permits the scaling of questions scored according to multipoint rating schemes. The model takes full advantage of the information available from each of the student response categories used for these more complex constructed-response questions.[14]

The geography scale is composed of three types of questions: multiple-choice, short-constructed-response (scored either dichotomously or allowing for partial credit), and extended-constructed-response (scored according to a partial-credit model). Unfortunately, the question of how much information different question-types contribute to the geography scale has no simple answer. The information provided by a given question is determined by the

[13] Muraki, E. (1992). A generalized partial credit model: Application of an EM algorithm. *Applied Psychological Measurement*, (*16)*2, 159–176.

[14] More detailed information regarding the IRT analyses used in NAEP assessments will be provided in the forthcoming *NAEP 2001 Technical Report*. In addition, the reader may consult the *NAEP 2000 Technical Report* for a discussion of analysis procedures that are common to all NAEP assessments.

IRT model used to scale the question. It is a function of the item parameters and varies by level of geography proficiency.[15] Thus, the answer to the query "How much information do the different types of questions provide?" will differ for each level of geography performance. When considering the composite geography scale, the answer is even more complicated. The geography data are scaled separately by the three themes (space and place; environment and society; and, spatial dynamics and connections), resulting in three separate subscales at each grade. The composite scale is a weighted combination of these subscales. IRT information functions are only strictly comparable when the item parameters are estimated together. Because the composite scale is based on three separate estimation runs, there is no direct way to compare the information provided by the questions on the composite scale.

Because of the BIB-spiraling design used by NAEP, students do not receive enough questions about a specific topic to provide reliable information about individual performance. (For more information on BIB-spiraling, see "The Assessment Design" section presented earlier in this appendix.) Traditional test scores for individual students, even those based on IRT, would lead to misleading estimates of population characteristics, such as subgroup means and percentages of students at or above a certain scale-score level. Consequently, NAEP constructs sets of plausible values designed to represent the distribution of performance in the population. A plausible value for an individual is not a scale score for that individual, but may be regarded as a representative value from the distribution of potential scale scores for all students in the population with similar characteristics and identical patterns of item response. Statistics describing performance on the NAEP geography scale are based on the plausible values. Under the assumptions of the scaling models, these population estimates will be consistent, in the sense that the estimates approach the model-based population values as the sample size increases, which would not be the case for population estimates obtained by aggregating optimal estimates of individual performance.[16]

Item Mapping Procedures

The geography performance of fourth-, eighth-, and twelfth-graders can be illustrated by "item maps," which position question or "item" descriptions along the NAEP geography scale at each grade. Each question shown is placed at the point on the scale where questions are likely to be answered successfully by students. The descriptions used on these item maps focus on the geography knowledge or skill needed to answer the question. For multiple-choice questions, the description indicates

[15] Donoghue, J. R. (1994). An empirical examination of the IRT information of polytomously scored reading items under the generalized partial credit model. *Journal of Educational Measurement, (31)*4, 295–311.

[16] For theoretical and empirical justification of the procedures employed, see Mislevy, R. J. (1988). Randomization-based inferences about latent variables from complex samples. *Psychometrika, (56)*2, 177–196.

For computational details, see the forthcoming *NAEP 2001 Technical Report*.

the knowledge or skill demonstrated by selection of the correct option; for constructed-response questions, the description takes into account the knowledge or skill specified by the different levels of scoring criteria for that question.

To map questions to particular points on the NAEP geography scale, a response probability convention was adopted that would divide those who had a higher probability of success from those who had a lower probability. Establishing a response probability convention has an impact on the mapping of the test questions onto the geography scale. A lower boundary convention maps the geography questions at lower points along the scale, and a higher boundary convention maps the same questions at higher points on the scale. The underlying distribution of geography skills in the population does not change, but the choice of a response probability convention does have an impact on the proportion of the student population that is reported as "able to do" the questions on the geography scales.

There is no obvious choice of a point along the probability scale that is clearly superior to any other point. If the convention were set with a boundary at 50 percent, those above the boundary would be more likely to get a question right than get it wrong, while those below the boundary would be more likely to get the question wrong than right. Although this convention has some intuitive appeal, it was rejected on the grounds that having a 50/50 chance of getting the question right shows an insufficient degree of mastery. If the convention were set with a boundary at 80 percent, students above the criterion would have a high probability of success with a question. However, many students below this criterion show some level of geography ability that would be ignored by such a stringent criterion. In particular, those in the range between 50 and 80 percent correct would be more likely to get the question right than wrong, yet would not be in the group described as "able to do" the question.

In a compromise between the 50 percent and the 80 percent conventions, NAEP has adopted two related response probability conventions for all its subjects: 65 percent for constructed-response questions (where guessing is not a factor) and 74 percent for multiple-choice questions (to correct for the possibility of answering correctly by guessing). These probability conventions were established, in part, based on an intuitive judgment that they would provide the best picture of students' geography skills.

Some additional support for the dual conventions adopted by NAEP was provided by Huynh.[17] He examined the IRT information provided by items, according to the IRT model used in scaling NAEP questions. ("Information" is used here in a technical sense. See the forthcoming *NAEP 2001 Technical Report* for details.) Following Bock, Huynh decomposed the item information into that provided by a

[17] Huynh, H. (1994, October). *Some technical aspects of standard setting.* Paper presented at the Joint Conference on Standard Setting for Large-Scale Assessment, Washington, DC.

correct response [P(q) I(q)] and that provided by an incorrect response [(1– P(q)) I(q)].[18] Huynh showed that the item information provided by a correct response to a constructed-response item is maximized at the point along the geography scale at which the probability of a correct response is 0.65 (for multiple-choice items, the information provided by a correct response is maximized at the point at which the probability of getting the item correct is 0.74). It should be noted, however, that maximizing the item information I(q), rather than the information provided by a correct response [P(q) I(q)], would imply an item mapping criterion closer to 50 percent.

Results are presented in terms of the composite geography scale. However, the geography assessment was scaled separately for the three themes in geography at grades 4, 8, and 12. The composite scale is a weighted combination of the three subscales for the three themes in geography. To obtain item map information, a procedure developed by Donoghue was used.[19] This method models the relationship between the item response function for the subscale and the subscale structure to derive the relationship between the item score and the composite scale (i.e., an item response function for the composite scale). This item response function is then used to derive the probability used in the mapping.

Weighting and Variance Estimation

A multistage sampling design was used to select the students who were assessed. The properties of a sample selected through such a design could be very different from those of a simple random sample, in which every student in the target population has an equal chance of selection and in which the observations from different sampled students can be considered to be statistically independent of one another. Therefore, the properties of the sample for the data collection design were taken into account during the analysis of the assessment data.

One way that the properties of the sample design were addressed was by using sampling weights to account for the fact that the probabilities of selection were not identical for all students. All population and subpopulation characteristics based on the assessment data were estimated using sampling weights. These weights included adjustments for school and student nonresponse.

Not only must appropriate estimates of population characteristics be derived, but appropriate measures of the degree of uncertainty must be obtained for those statistics. Two components of uncertainty are accounted for in the variability of statistics based on student ability: 1) the uncertainty due to sampling only a rela-

[18] Bock, R. D. (1972). Estimating item parameters and latent ability when responses are scored in two or more latent categories. *Psychometrika*, 37, 29–51.

[19] Donoghue, J. R. (1997, March). *Item mapping to a weighted composite scale*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

tively small number of students, and 2) the uncertainty due to sampling only a portion of the cognitive domain of interest. The first component accounts for the variability associated with the estimated percentages of students who had certain background characteristics or who answered a certain cognitive question correctly.

Because NAEP uses multistage sampling procedures, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate. NAEP uses a jackknife replication procedure to estimate standard errors. The jackknife standard error provides a reasonable measure of uncertainty for any student information that can be observed without error. However, because each student typically responds to only a few questions within any theme of geography, the scale score for any single student would be imprecise. In this case, plausible values methodology can be used to describe the performance of groups and subgroups of students. Multiple plausible values (5) are drawn for each student in order to estimate the variance of the posterior scale score distribution. This component of variability is included in the standard errors of NAEP scale scores.[20]

Typically, when the standard error is based on a small number of students or when the group of students is enrolled in a small number of schools, the amount of uncertainty associated with the estimation of standard errors may be quite large. Estimates of standard errors subject to a large degree of uncertainty are followed by the "!" symbol to indicate that the nature of the sample does not allow accurate determination of the variability of the statistic. In such cases, the standard errors—and any confidence intervals or significance tests involving these standard errors—should be interpreted cautiously. Additional details concerning procedures for identifying such standard errors are discussed in the forthcoming *NAEP 2001 Technical Report*.

Drawing Inferences from the Results

The reported statistics are estimates and are therefore subject to a measure of uncertainty. There are two sources of such uncertainty. First, NAEP uses a sample of students rather than testing all students. Second, all assessments have some amount of uncertainty related to the fact that they cannot ask all questions that might be asked in a content area. The magnitude of this uncertainty is reflected in the standard error of each of the estimates. When the percentages or average scale scores of certain groups are compared, the standard error should be taken into account, and observed similarities or differences should not be relied on solely. Therefore, the comparisons are based on statistical tests that consider the standard errors of those statistics and the magnitude of the difference among the averages or percentages.

[20] For further details, see Johnson, E. G. & Rust, K. F. (1992). Population inferences and variance estimation for NAEP data. *Journal of Educational Statistics*, (*17)*2, 175–190.

Using confidence intervals based on the standard errors provides a way to take into account the uncertainty associated with sample estimates and to make inferences about the population averages and percentages in a manner that reflects that uncertainty. An estimated sample average scale score plus or minus 1.96 standard errors approximates a 95 percent confidence interval for the corresponding population quantity. This statement means that one can conclude with approximately a 95 percent level of confidence that the average performance of the entire population of interest (e.g., all fourth-grade students in public and nonpublic schools) is within plus or minus 1.96 standard errors of the sample average.

As an example, suppose that the average geography scale score of the students in a particular group was 256 with a standard error of 1.2. An approximate 95 percent confidence interval for the population quantity would be as follows:

$$\text{Average} \pm 1.96 \text{ standard errors}$$
$$256 \pm 1.96 \times 1.2$$
$$256 \pm 2.35$$
$$(253.65, 258.35)$$

Thus, one can conclude with a 95 percent level of confidence that the average scale score for the entire population of students in that group is between 253.65 and 258.35. It should be noted that this example, and the examples in the following sections are illustrative. More precise estimates carried out to one or more decimal places are used in the actual analyses.

Similar confidence intervals can be constructed for percentages, if the percentages are not extremely large or extremely small. Extreme percentages should be interpreted with caution. Adding or subtracting the standard errors associated with extreme percentages could cause the confidence interval to exceed 100 percent or go below 0 percent, resulting in numbers that are not meaningful. The forthcoming *NAEP 2001 Technical Report* will contain a more complete discussion of extreme percentages.

Analyzing Group Differences in Averages and Percentages

Statistical tests determine whether the evidence, based on the data from the groups in the sample, is strong enough to conclude that the averages or percentages are actually different for those groups in the population. If the evidence is strong (i.e., the difference is statistically significant), the report describes the group averages or percentages as being different (e.g., one group performed higher than or lower than another group), regardless of whether the sample averages or percentages appear to be approximately the same.

The reader is cautioned to rely on the results of the statistical tests rather than on the apparent magnitude of the difference between sample averages or percentages when determining whether the sample differences are likely to represent actual differences among the groups in the population.

To determine whether a real difference exists between the average scale scores (or percentages of a certain attribute) for two groups in the population, one needs to obtain an estimate of the degree of uncertainty associated with the difference between the averages (or percentages) of these groups for the sample. This estimate of the degree of uncertainty, called the "standard error of the difference" between the groups, is obtained by taking the square of each group's standard error, summing the squared standard errors, and taking the square root of that sum.

$$\text{Standard Error of the Difference} = SE_{A-B} = \sqrt{(SE_A^2 + SE_B^2)}$$

Similar to how the standard error for an individual group average or percentage is used, the standard error of the difference can be used to help determine whether differences among groups in the population are real. The difference between the averages or percentages of the two groups plus or minus two standard errors of the difference represents an approximate 95 percent confidence interval. If the resulting interval includes zero, there is insufficient evidence to claim a real difference between the groups in the population. If the interval does not contain zero, the difference between the groups is statistically significant (different) at the 0.05 level.

As an example of comparing groups, consider the problem of determining whether the average geography scale score of group A is higher than that of group B. Suppose that the sample estimates of the average scale scores and standard errors were as follows:

Group	Average Scale Score	Standard Error
A	218	0.9
B	216	1.1

The difference between the estimates of the average scale scores of groups A and B is two points (218 − 216). The standard error of this difference is

$$\sqrt{(0.9^2 + 1.1^2)} = 1.4$$

Thus, an approximate 95 percent confidence interval for this difference is plus or minus two standard errors of the difference

$$2 \pm 1.96 \times 1.4$$
$$2 \pm 2.74$$
$$(-0.74, 4.74)$$

The value zero is within the confidence interval; therefore, there is insufficient evidence to claim that group A outperformed group B.

Conducting Multiple Tests

The procedures in the previous section and the certainty ascribed to intervals (e.g., a 95 percent confidence interval) are based on statistical theory that assumes that only one confidence interval or test of statistical significance is being performed. However, many different groups are being compared (i.e., multiple sets of confidence intervals are being analyzed). In sets of confidence intervals, statistical theory indicates that the

Table A.8 FDR Comparisons of Average Scale Scores

Example of FDR comparisons of average scale scores for different groups of students

	Previous year		Current year		Previous year and current year			
	Average scale score	Standard error	Average scale score	Standard error	Difference in averages	Standard error of difference	Test statistic	Percent confidence*
Group 1	224	1.3	226	1.0	2.08	1.62	1.29	20
Group 2	187	1.7	193	1.7	6.31	2.36	2.68	1
Group 3	191	2.6	197	1.7	6.63	3.08	2.15	4
Group 4	229	4.4	232	4.6	3.24	6.35	.51	62
Group 5	201	3.4	196	4.7	–5.51	5.81	–.95	35

* The percent confidence is 2(1–F(x)) where F(x) is the cumulative distribution of the t-distribution with the degrees of freedom adjusted to reflect the complexities of the sample design.

certainty associated with the entire set of intervals is less than that attributable to each individual comparison from the set. To hold the significance level for the set of comparisons at a particular level (e.g., 0.05), adjustments (called "multiple comparison procedures"[21]) must be made to the methods described in the previous section. One such procedure, the False Discovery Rate (FDR) procedure[22] was used to control the certainty level.

Unlike the other multiple comparison procedures (e.g., the Bonferroni procedure) that control the familywise error rate (i.e., the probability of making even one false rejection in the set of comparisons), the FDR procedure controls the expected proportion of falsely rejected hypotheses. Furthermore, familywise procedures are considered conservative for large families of comparisons.[23] Therefore, the FDR procedure is more suitable for multiple comparisons in NAEP than other procedures. A detailed description of the FDR procedure appears in the forthcoming *NAEP 2001 Technical Report*.

To illustrate how the FDR procedure is used, consider the comparisons of current and previous years' average geography scale scores for the five groups presented in table A.8. Note that the difference in average scale scores and the standard error of the difference are calculated in a way comparable with that of the example in the previous section. The test statistic shown is the difference in average scale scores divided by the standard error of the difference.

[21] Miller, R. G. (1966). *Simultaneous statistical inference*. New York: Wiley.

[22] Benjamini, Y. & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society, Series B, No. 1.*, pp 289–300.

[23] Williams, V. S. L., Jones, L. V., & Tukey, J. W. (1999). *Controlling error in multiple comparisons with examples from state-to-state differences in educational achievement*. Journal of Educational and Behavioral Statistics, *24*(1), 42–69.

The difference in average scale scores and its standard error can be used to find an approximate 95 percent confidence interval as in the example in the previous section or they can be used to identify a confidence percentage. In the example in the previous section, because an approximate 95 percent confidence interval was desired, the number 1.96 was used to multiply the standard error of the difference to create the approximate confidence interval. In the current example, the confidence interval for the test statistics is identified from statistical tables. Instead of checking to see if zero is within the 95 percent confidence interval about the mean, the significance level from the statistical tables can be directly compared to 100−95 = 5 percent.

If the comparison of average scale scores across two years were made for only one of the five groups, there would be a significant difference between the average scale scores for the two years if the significance level were less than 5 percent. However, because we are interested in the difference in average scale scores across the two years for all five of the groups, comparing each of the significance levels to 5 percent is not adequate. Groups of students defined by shared characteristics, such as race/ethnicity groups, are treated as sets or families when making comparisons. However, comparisons of average scale scores for each pair of years were treated separately. So the steps described in this example would be replicated for the comparison of other current and previous year average scale scores.

To use the FDR procedure to take into account that all comparisons are of interest to us, the percents of confidence in the example are ordered from largest to smallest: 62, 35, 20, 4, and 1. In the FDR procedure, 62 percent confidence for the Group 4 comparison would be compared to 5 percent, 35 percent for the Group 5 comparison would be compared to $0.05\times(5-1)/5 = 0.04\times100 = 4$ percent,[24] 20 percent for the Group 1 comparison would be compared to $0.05\times(5-2)/5 = 0.03\times100 = 3$ percent, 4 percent for the Group 3 comparison would be compared to $0.05\times(5-3)/5 = 0.02\times100 = 2$ percent, and 1 percent for the Group 2 comparison (actually slightly smaller than 1 prior to rounding) would be compared to $0.05\times(5-4)/5 = 0.01\times100 = 1$ percent. The last of these comparisons is the only one for which the percent confidence is smaller than the FDR procedure value. The difference in the current year and previous years' average scale scores for the Group 2 students is significant; for all of the other groups, average scale scores for current and previous year are not significantly different from one another. In practice, a very small number of counter-intuitive results occur when using the FDR procedures to examine between-year differences in subgroup results by jurisdiction. In those cases, results were not included in this report. NCES is continuing to evaluate the use of FDR and multiple-comparison procedures for future reporting.

[24] The level of confidence times the number of comparisons minus one divided by the number of comparisons is $0.05\times(5-1)/5 = 0.04\times100 = 4$ percent.

NAEP Reporting Groups

Results are provided for groups of students defined by shared characteristics—region of the country, gender, race or ethnicity, school's type of location, eligibility for the free/reduced-price school lunch program, and type of school. Based on participation rate criteria, results are reported for subpopulations only when sufficient numbers of students and adequate school representation are present. The minimum requirement is at least 62 students in a particular subgroup from at least five primary sampling units (PSUs).[25] However, the data for all students, regardless of whether their subgroup was reported separately, were included in computing overall results.

Definitions of the subpopulations are presented below.

Region

Results in NAEP are reported for four regions of the nation: Northeast, Southeast, Central, and West. Figure A.1 shows how states are subdivided into these NAEP regions. All 50 states and the District of Columbia are listed. Other jurisdictions, including territories and the two Department of Defense Educational Activities jurisdictions are not assigned to any region.

Gender

Results are reported separately for males and females.

Figure A.1
States by Region

States included in the four NAEP regions: 2001

Northeast	Southeast	Central	West
Connecticut	Alabama	Illinois	Alaska
Delaware	Arkansas	Indiana	Arizona
District of Columbia	Florida	Iowa	California
Maine	Georgia	Kansas	Colorado
Maryland	Kentucky	Michigan	Hawaii
Massachusetts	Louisiana	Minnesota	Idaho
New Hampshire	Mississippi	Missouri	Montana
New Jersey	North Carolina	Nebraska	Nevada
New York	South Carolina	North Dakota	New Mexico
Pennsylvania	Tennessee	Ohio	Oklahoma
Rhode Island	* Virginia	South Dakota	Oregon
Vermont	West Virginia	Wisconsin	Texas
* Virginia			Utah
			Washington
			Wyoming

* The part of Virginia that is included in the Northeast region is the Washington, DC metropolitan area; the remainder of the state is included in the Southeast region.

[25] For the national assessment, a PSU is a selected geographic region (a county, group of counties, or metropolitan statistical area). Further details about the procedure for determining minimum sample size appear in the *NAEP 2000 Technical Report* and the forthcoming *NAEP 2001 Technical Report*.

Race/Ethnicity

The race/ethnicity variable is derived from two questions asked of students and from school records, and it is used for race/ethnicity subgroup comparisons. Two questions from the set of general student background questions were used to determine race/ethnicity:

If you are Hispanic, what is your Hispanic background?

- ❑ I am not Hispanic
- ❑ Mexican, Mexican American, or Chicano
- ❑ Puerto Rican
- ❑ Cuban
- ❑ Other Spanish or Hispanic background

Students who responded to this question by filling in the second, third, fourth, or fifth oval were considered Hispanic. For students who filled in the first oval, did not respond to the question, or provided information that was illegible or could not be classified, responses to the following question were examined to determine their race/ethnicity.

Which best describes you?

- ❑ White (not Hispanic)
- ❑ Black (not Hispanic)
- ❑ Hispanic ("Hispanic" means someone who is Mexican, Mexican American, Chicano, Puerto Rican, Cuban, or other Spanish or Hispanic background)
- ❑ Asian or Pacific Islander ("Asian or Pacific Islander" means someone who is from a Chinese, Japanese, Korean, Filipino, Vietnamese, Asian American or some other Asian or Pacific Islander background.)
- ❑ American Indian or Alaskan Native ("American Indian or Alaskan Native" means someone who is from one of the American Indian tribes or one of the original people of Alaska.)
- ❑ Other (specify)

Students' race/ethnicity was then assigned on the basis of their responses. For students who filled in the sixth oval ("Other"), provided illegible information or information that could not be classified, or did not respond at all, race/ethnicity was assigned as determined by school records.

Race/ethnicity could not be determined for students who did not respond to either of the demographic questions and whose schools did not provide information about race/ethnicity.

Also, some students indicated that they were from a Hispanic background (e.g., Puerto Rican or Cuban) and that a racial/ethnic category other than Hispanic best described them. These students were classified as Hispanic based on the rules described above.

Type of Location

Results from the 2001 assessment are reported for students attending schools in three mutually exclusive location types: central city, urban fringe/large town, and rural/small town:

Central City: This category includes central cities of all Standard Metropolitan Statistical Areas (SMSA) as defined by the Office of Management and Budget. Central City is a geographical term and is not synonymous with "inner city."

Urban Fringe/Large Town: The urban fringe category includes all densely settled places and areas within SMSA's that are classified as urban by the Bureau of the Census, but which do not qualify as Central City. A Large Town is defined as a place outside a SMSA with a population greater than or equal to 25,000.

Rural/Small Town: Rural includes all places and areas with populations of less than 2,500 that are classified as rural by the Bureau of the Census. A Small Town is defined as a place outside a SMSA with a population of less than 25,000, but greater than or equal to 2,500.

Results for each type of location are not compared across years. This was due to new methods used by NCES to identify the type of location assigned to each school in the Common Core of Data (CCD). The new methods were put into place by NCES in order to improve the quality of the assignments and they take into account more information about the exact physical location of the school. The variable was revised in NAEP beginning with the 2000 assessments.

Eligibility for the Free/Reduced-Price School Lunch Program

Based on available school records, students were classified as either currently eligible for the free/reduced-price school lunch component of the Department of Agriculture's National School Lunch Program or not eligible. Eligibility for the program is determined by students' family income in relation to the federally established poverty level. Free lunch qualification is set at 130 percent of the poverty level, and reduced-price lunch qualification is set at 170 percent of the poverty level. The classification applies only to the school year when the assessment was administered (i.e., the 2000–2001 school year) and is not based on eligibility in previous years. If school records were not available, the student was classified as "Information not available." If the school did not participate in the program, all students in that school were classified as "Information not available."

Type of School

Results are reported by the type of school that the student attends—public or nonpublic. Nonpublic schools include Catholic and other private schools.[26] Because they are funded by federal authorities, not state/local governments, Bureau of Indian Affairs (BIA) schools and Department of Defense Domestic Dependent Elementary and Secondary Schools (DDESS) are not included in either the public or nonpublic categories; they are included in the overall national results.

Grade 12 Participation Rates

NAEP has been described as a "low-stakes" assessment. That is, students receive no individual scores, and their NAEP performance has no effect on their grades, promotions, or graduation. There has been continued concern that this lack of consequences affects participation rates of students and schools, as well as the motivation of students to perform well on NAEP. Of particular concern has been the performance of twelfth-graders, who typically have lower student participation rates than fourth- and eighth-graders, and who are more likely to omit responses compared to the younger cohorts.

[26] Through a pilot study, more detailed breakdowns of nonpublic school results are available on the NAEP Web Site (http://nces.ed.gov/nationsreportcard/geography/results/index.asp).

In NAEP, there has been a consistent pattern of lower participation rates for older students. In the 2001 NAEP assessments, for example, the student participation rates were 95 percent and 93 percent at grades 4 and 8, respectively. At grade 12, however, the participation rate was 77 percent. School participation rates (the percentage of sampled schools that participated in the assessment) have also typically decreased with grade level. Again citing the 2001 assessments, the school participation rate was 88 percent for the fourth grade, 87 percent for the eighth grade, and 80 percent for the twelfth grade.

The effect of participation rates on student performance, however, is unclear. Students may choose not to participate in NAEP for many reasons, such as desire to attend regular classes so as not to miss important instruction or conflict with other school-based activities. Similarly, there are a variety of reasons for which various schools do not participate. The sampling weights and nonresponse adjustments, described earlier in this document, provide an approximate statistical adjustment for nonparticipation. However, the effect of some school and student nonparticipation may have some undetermined effect on results.

More research is needed to delineate the factors that contribute to nonparticipation and lack of motivation. To that end, NCES is currently investigating how various types of incentives can be effectively used to increase participation in NAEP. One report that examines the impact of monetary incentives on student effort and performance is available on the NCES Web Site at http://nces.ed.gov/pubsearch/. Enter NCES#: 2001024.

Cautions in Interpretations

As described earlier, the NAEP geography scale makes it possible to examine relationships between students' performance and various background factors measured by NAEP. However, a relationship that exists between achievement and another variable does not reveal its underlying cause, which may be influenced by a number of other variables. Similarly, the assessments do not capture the influence of unmeasured variables. The results are most useful when they are considered in combination with other knowledge about the student population and the educational system, such as trends in instruction, changes in the school-age population, and societal demands and expectations.

B Appendix B
Data Appendix

This appendix contains complete data for all the tables and figures presented in this report, including average scores, achievement-level results, and percentages of students. In addition, standard errors appear in parentheses next to each scale score and percentage. The comparisons presented in this report are based on statistical tests that consider the magnitude of the difference between group averages or percentages and the standard errors of those statistics. Because NAEP scores and percentages are based on samples rather than the entire population(s), the results are subject to a measure of uncertainty reflected in the standard errors of the estimates. It can be said with 95 percent certainty that for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. As with the figures and tables in the chapters, significant differences between results of previous assessments and the 2001 assessment are highlighted.

Appendix Focus

Complete data for all tables and figures.

Appendix Contents

Table B.1: Data for Figure 2.1 National Scale Score Results

Average geography scale scores, grades 4, 8, and 12: 1994 and 2001

	Grade 4	Grade 8	Grade 12
1994	206 (1.2)	260 (0.7)	285 (0.7)
2001	209 (1.0) *	262 (0.9) *	285 (0.8)

Standard errors of the estimated scale scores appear in parentheses.
* Significantly different from 1994.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.2: Data for Figure 2.2: National Performance Distribution

National geography scale score percentiles, grades 4, 8, and 12: 1994 and 2001

		10th	25th	50th	75th	90th
Grade 4	1994	146 (1.9)	179 (1.5)	211 (1.1)	237 (1.3)	257 (2.0)
	2001	158 (1.7) *	185 (1.9) *	212 (1.1)	236 (1.0)	254 (0.9)
Grade 8	1994	213 (1.3)	237 (1.0)	263 (1.1)	285 (0.9)	302 (1.9)
	2001	217 (1.0) *	241 (0.9) *	265 (1.1)	286 (0.9)	303 (1.2)
Grade 12	1994	244 (0.9)	265 (1.1)	287 (0.9)	306 (1.0)	321 (1.0)
	2001	247 (1.7)	267 (1.2)	287 (0.9)	305 (0.9)	319 (1.0)

Standard errors of the estimated scale scores appear in parentheses.
* Significantly different from 1994.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.3: Data for Figure 2.3: National Achievement-Level Results

Percentage of students within and at or above geography achievement levels, grades 4, 8, and 12: 1994 and 2001

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	1994	30 (1.1)	48 (1.0)	19 (1.1)	3 (0.4)	70 (1.1)	22 (1.2)
	2001	26 (1.2) *	53 (1.4) *	19 (1.1)	2 (0.3)	74 (1.2) *	21 (1.0)
Grade 8	1994	29 (1.0)	43 (1.1)	24 (0.9)	4 (0.4)	71 (1.0)	28 (1.0)
	2001	26 (0.9) *	44 (0.9)	26 (1.1)	4 (0.6)	74 (0.9) *	30 (1.2)
Grade 12	1994	30 (0.9)	43 (1.0)	25 (1.0)	2 (0.5)	70 (0.9)	27 (1.2)
	2001	29 (0.9)	47 (0.9) *	23 (1.0)	1 (0.3)	71 (0.9)	25 (1.1)

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.4: Data for Figure 3.1 National Scale Score Results by Gender

Percentage of students and average geography scale scores by gender, grades 4, 8, and 12: 1994 and 2001

		Male	Female
Grade 4	1994	51 (1.0) 208 (1.4)	49 (1.0) 203 (1.4)
	2001	51 (0.8) 212 (1.1)	49 (0.8) 207 (1.2)
Grade 8	1994	51 (0.7) 262 (0.9)	49 (0.7) 258 (0.8)
	2001	51 (0.6) 264 (1.0)	49 (0.6) 260 (1.1)
Grade 12	1994	50 (1.0) 288 (0.8)	50 (1.0) 281 (0.9)
	2001	48 (0.8) 287 (0.9)	52 (0.8) 282 (0.8)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.5: Data for Figure 3.2 National Scale Score Differences by Gender

Differences in average geography scale scores by gender, grades 4, 8, and 12: 1994 and 2001

		Male-Female
Grade 4	1994	5 (2.0)
	2001	5 (1.7)
Grade 8	1994	4 (1.2)
	2001	4 (1.4)
Grade 12	1994	7 (1.2)
	2001	4 (1.2)

Standard errors of the estimated difference in scale scores appear in parentheses.
Score differences are calculated based on differences between unrounded average scale scores.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.6: Data for Figure 3.3 National Achievement-Level Results by Gender

Percentage of students within and at or above geography achievement levels by gender, grades 4, 8, and 12: 1994 and 2001

			Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	Male	1994	29 (1.3)	46 (1.4)	22 (1.6)	4 (0.7)	71 (1.3)	26 (1.7)
		2001	25 (1.3)	51 (1.6) *	21 (1.4)	3 (0.5)	75 (1.3)	24 (1.4)
	Female	1994	32 (1.4)	49 (1.3)	17 (1.2)	2 (0.5)	68 (1.4)	19 (1.3)
		2001	28 (1.6)	54 (1.7) *	17 (1.2)	1 (0.4)	72 (1.6)	18 (1.1)
Grade 8	Male	1994	28 (1.3)	42 (1.4)	25 (1.2)	5 (0.6)	72 (1.3)	30 (1.2)
		2001	25 (1.0)	42 (1.3)	29 (1.7)	5 (0.7)	75 (1.0)	33 (1.5)
	Female	1994	31 (1.1)	44 (1.2)	22 (1.2)	3 (0.4)	69 (1.1)	25 (1.1)
		2001	27 (1.2)	47 (1.1)	24 (1.3)	3 (0.6)	73 (1.2)	26 (1.4)
Grade 12	Male	1994	27 (1.1)	41 (1.1)	29 (1.1)	2 (0.7)	73 (1.1)	32 (1.4)
		2001	27 (1.1)	45 (1.3) *	26 (1.4)	2 (0.4)	73 (1.1)	28 (1.5)
	Female	1994	33 (1.2)	45 (1.5)	21 (1.2)	1 (0.4)	67 (1.2)	22 (1.4)
		2001	30 (1.0)	48 (1.0) *	20 (0.9)	1 (0.3)	70 (1.0)	21 (1.0)

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.7: Data for Figure 3.4 National Scale Score Results by Race/Ethnicity

Percentage of students and average geography scale scores by race/ethnicity, grades 4, 8, and 12: 1994 and 2001

		White	Black	Hispanic	Asian/ Pacific Islander	American Indian
Grade 4	1994	69 (0.2) 218 (1.5)	15 (0.1) 168 (2.5)	12 (0.2) 183 (2.5)	3 (0.2) 214 (3.8)	1 (0.2) 193 (3.6)
	2001	64 (0.3) 222 (1.0)	14 (0.2) 181 (1.8) *	16 (0.3) 184 (2.8)	3 (0.2) 212 (2.7)	2 (0.2) 199 (3.6)
Grade 8	1994	69 (0.2) 270 (0.8)	15 (0.1) 229 (1.7)	11 (0.1) 239 (1.9)	3 (0.4) 264 (5.2)	2 (0.4) 248 (3.4) !
	2001	66 (0.3) 273 (1.0)	14 (0.2) 234 (1.7)	14 (0.2) 240 (1.7)	4 (0.2) 266 (2.5)	1 (0.2) 261 (5.8)
Grade 12	1994	74 (0.3) 291 (0.8)	12 (0.4) 258 (1.4)	8 (0.2) 268 (1.5)	4 (0.2) 285 (2.7)	1 (0.2) *** (***)
	2001	70 (0.3) 291 (0.9)	13 (0.3) 260 (1.4)	12 (0.2) 270 (1.5)	5 (0.2) 286 (2.9)	1 (0.2) 288 (3.6) !

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
***(***) Sample size is insufficient to permit a reliable estimate.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.8: Data for Figure 3.5 National Scale Score Differences by Race/Ethnicity

Differences in average geography scale scores by race/ethnicity, grades 4, 8, and 12: 1994 and 2001

		White-Black	White-Hispanic
Grade 4	1994	50 (2.9)	35 (2.9)
	2001	40 (2.0) *	38 (3.0)
Grade 8	1994	40 (1.9)	31 (2.0)
	2001	38 (2.0)	33 (2.0)
Grade 12	1994	33 (1.6)	23 (1.7)
	2001	32 (1.7)	21 (1.8)

Standard errors of the estimated difference in scale scores appear in parentheses.
*Significantly different from 1994.
Score differences are calculated based on differences between unrounded average scale scores.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.9: Data for Figure 3.6a, b, c National Achievement-Level Results by Race/Ethnicity

Percentage of students within and at or above geography achievement levels by race/ethnicity, grades 4, 8, and 12: 1994 and 2001

			Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	White	1994	19 (1.3)	53 (1.3)	25 (1.5)	4 (0.6)	81 (1.3)	29 (1.6)
		2001	13 (1.3) *	58 (1.8)	26 (1.6)	3 (0.5)	87 (1.3) *	29 (1.5)
	Black	1994	66 (2.4)	32 (2.4)	2 (0.6)	# (***)	34 (2.4)	3 (0.6)
		2001	56 (2.1) *	39 (2.1)	5 (0.8)	# (***)	44 (2.1) *	5 (0.9)
	Hispanic	1994	51 (2.7)	39 (2.0)	9 (1.7)	1 (0.4)	49 (2.7)	10 (1.7)
		2001	51 (3.0)	43 (2.5)	6 (1.0)	# (***)	49 (3.0)	6 (1.0)
	Asian/Pacific Islander	1994	24 (4.0)	49 (4.3)	23 (3.9)	4 (2.2)	76 (4.0)	27 (4.4)
		2001	23 (3.4)	52 (4.4)	23 (3.1)	1 (0.9)	77 (3.4)	25 (3.0)
	American Indian	1994	38 (5.7)	53 (5.8)	9 (3.6)	# (***)	62 (5.7)	9 (3.9)
		2001	34 (4.9)	53 (6.3)	13 (4.2)	# (***)	66 (4.9)	13 (4.1)
Grade 8	White	1994	18 (0.9)	47 (1.2)	30 (1.2)	5 (0.5)	82 (0.9)	36 (1.3)
		2001	14 (0.9) *	48 (1.2)	34 (1.5)	5 (0.8)	86 (0.9) *	39 (1.7)
	Black	1994	66 (2.9)	30 (2.8)	4 (0.7)	# (0.3)	34 (2.9)	5 (0.7)
		2001	60 (2.3)	34 (1.9)	6 (0.8)	# (***)	40 (2.3)	6 (0.8)
	Hispanic	1994	50 (3.6)	39 (3.1)	10 (1.2)	1 (0.5)	50 (3.6)	10 (1.2)
		2001	52 (1.9)	38 (1.6)	9 (1.1)	1 (0.2)	48 (1.9)	10 (1.0)
	Asian/Pacific Islander	1994	27 (6.3)	43 (4.4)	25 (3.1)	6 (3.1)	73 (6.3)	30 (4.2)
		2001	21 (3.4)	47 (4.8)	28 (3.5)	4 (1.8)	79 (3.4)	32 (3.2)
	American Indian	1994	41 (5.1) !	43 (4.9) !	13 (3.5) !	2 (1.3) !	59 (5.1) !	15 (3.6) !
		2001	28 (6.8)	41 (11.1)	29 (8.9)	3 (***)	72 (6.8)	31 (11.2)
Grade 12	White	1994	22 (0.9)	46 (1.3)	31 (1.2)	2 (0.6)	78 (0.9)	33 (1.5)
		2001	19 (0.9)	51 (1.1) *	29 (1.2)	2 (0.4)	81 (0.9)	31 (1.4)
	Black	1994	68 (2.3)	27 (2.1)	5 (1.0)	# (***)	32 (2.3)	5 (1.0)
		2001	65 (2.3)	31 (2.1)	4 (0.7)	# (***)	35 (2.3)	4 (0.7)
	Hispanic	1994	52 (2.8)	38 (2.4)	10 (1.7)	# (***)	48 (2.8)	10 (1.8)
		2001	48 (2.6)	42 (2.5)	10 (1.4)	# (0.1)	52 (2.6)	10 (1.4)
	Asian/Pacific Islander	1994	31 (3.1)	41 (3.4)	25 (4.0)	3 (1.3)	69 (3.1)	28 (4.4)
		2001	28 (4.3)	45 (3.0)	25 (4.6)	1 (0.7)	72 (4.3)	26 (4.7)
	American Indian	1994	*** (***)	*** (***)	*** (***)	*** (***)	*** (***)	*** (***)
		2001	26 (6.0) !	41 (7.0) !	31 (5.3) !	1 (***) !	74 (6.0) !	32 (4.9) !

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
# Percentage is between 0.0 and 0.5.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
(***) Standard error estimates cannot be accurately determined.
***(***) Sample size is insufficient to permit a reliable estimate.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.10: Data for Figure 3.7 National Scale Score Results by Region of the Country

Percentage of students and average geography scale scores by region of the country, grades 4, 8, and 12: 1994 and 2001

		Northeast	Southeast	Central	West
Grade 4	1994	22 (0.8) 203 (2.7)	23 (1.0) 200 (2.5)	25 (0.8) 215 (3.2)	30 (0.7) 205 (1.7)
	2001	21 (0.8) 214 (2.8) *	24 (1.3) 207 (2.1)	24 (0.4) 219 (1.8)	31 (1.3) 200 (2.5)
Grade 8	1994	20 (0.8) 266 (1.9)	25 (1.0) 252 (1.6)	24 (0.6) 268 (1.6)	31 (0.7) 255 (1.8)
	2001	21 (0.8) 266 (2.4)	22 (1.0) 260 (2.0) *	25 (0.6) 270 (2.5)	32 (1.2) 255 (1.5)
Grade 12	1994	21 (0.5) 284 (1.6)	23 (0.8) 278 (1.1)	28 (0.7) 289 (1.8)	29 (0.7) 286 (1.9)
	2001	20 (0.9) 286 (2.8)	21 (1.2) 281 (1.0)	27 (0.6) 287 (1.3)	31 (1.4) 283 (1.3)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.11: Data for Figure 3.8a, b, c National Achievement-Level Results by Region of the Country

Percentage of students within and at or above geography achievement levels by region of the country, grades 4, 8, and 12: 1994 and 2001

			Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	Northeast	1994	33 (2.7)	45 (2.5)	19 (2.1)	3 (0.8)	67 (2.7)	22 (2.5)
		2001	22 (3.7)	54 (3.7)	22 (2.1)	3 (0.9)	78 (3.7)	24 (2.2)
	Southeast	1994	36 (2.6)	48 (2.2)	14 (1.9)	2 (0.5)	64 (2.6)	17 (2.0)
		2001	28 (2.5)	54 (2.7)	17 (1.8)	1 (0.6)	72 (2.5)	18 (1.9)
	Central	1994	22 (2.6)	49 (2.3)	25 (3.2)	4 (1.3)	78 (2.6)	28 (3.3)
		2001	18 (1.7)	51 (1.8)	27 (2.3)	3 (0.7)	82 (1.7)	30 (2.5)
	West	1994	30 (1.7)	48 (1.9)	19 (2.0)	3 (0.6)	70 (1.7)	21 (1.7)
		2001	34 (2.7)	52 (2.4)	13 (1.5)	1 (0.3)	66 (2.7)	14 (1.7) *
Grade 8	Northeast	1994	24 (2.2)	43 (1.6)	28 (1.8)	6 (1.0)	76 (2.2)	33 (2.0)
		2001	22 (2.5)	44 (2.1)	29 (3.2)	4 (1.3)	78 (2.5)	34 (3.3)
	Southeast	1994	38 (2.1)	40 (1.8)	19 (1.4)	3 (0.5)	62 (2.1)	21 (1.6)
		2001	27 (2.4) *	46 (1.7)	24 (1.5)	3 (0.6)	73 (2.4) *	26 (1.6)
	Central	1994	20 (1.7)	44 (1.9)	30 (1.9)	6 (0.9)	80 (1.7)	36 (2.1)
		2001	18 (2.3)	43 (2.4)	32 (3.1)	6 (1.3)	82 (2.3)	38 (3.7)
	West	1994	33 (2.4)	45 (1.8)	20 (1.8)	3 (0.7)	67 (2.4)	23 (2.0)
		2001	34 (1.7)	44 (1.7)	21 (1.6)	2 (0.6)	66 (1.7)	23 (1.7)
Grade 12	Northeast	1994	31 (2.3)	44 (2.1)	23 (1.8)	2 (0.6)	69 (2.3)	25 (2.1)
		2001	29 (2.3)	46 (2.4)	24 (3.2)	2 (1.1)	71 (2.3)	26 (4.1)
	Southeast	1994	40 (1.5)	41 (1.5)	19 (1.4)	1 (0.6)	60 (1.5)	20 (1.3)
		2001	33 (1.6) *	46 (1.4)	20 (1.2)	1 (0.3)	67 (1.6) *	21 (1.3)
	Central	1994	25 (2.1)	43 (2.3)	30 (2.2)	2 (1.0)	75 (2.1)	32 (2.9)
		2001	24 (1.8)	48 (1.8)	27 (1.8)	1 (0.5)	76 (1.8)	28 (1.9)
	West	1994	28 (2.1)	43 (1.6)	27 (2.3)	2 (0.7)	72 (2.1)	29 (2.6)
		2001	30 (1.9)	47 (1.7)	22 (1.7)	1 (0.4)	70 (1.9)	23 (1.8)

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.12: Data for Figure 3.9 National Scale Score Results by Parents' Education

Percentage of students and average geography scale scores by parents' highest level of education, grades 8 and 12: 1994 and 2001

		Less than high school	Graduated high school	Some education after high school	Graduated college	Unknown
Grade 8	1994	7 (0.5) 238 (1.7)	22 (0.9) 250 (1.2)	19 (0.7) 265 (1.0)	42 (1.2) 272 (1.0)	10 (0.5) 234 (1.5)
	2001	6 (0.4) 241 (1.7)	18 (0.5) 253 (1.2)	19 (0.6) 266 (1.0)	48 (1.2) 274 (0.9)	9 (0.6) 245 (1.5) *
Grade 12	1994	7 (0.4) 263 (1.2)	22 (0.8) 274 (1.1)	25 (0.7) 286 (1.0)	44 (1.2) 294 (0.9)	3 (0.2) 257 (2.8)
	2001	7 (0.4) 269 (1.7) *	19 (0.7) 276 (0.9)	25 (0.7) 284 (0.9)	46 (1.1) 293 (1.1)	3 (0.3) 257 (2.9)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.13: Data for Figure 3.10a, b National Achievement-Level Results by Parents' Education

Percentage of students within and at or above geography achievement levels by parents' highest level of education, grades 8 and 12: 1994 and 2001

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 8							
Less than high school	1994	53 (3.4)	39 (3.4)	8 (1.4)	1 (***)	47 (3.4)	8 (1.6)
	2001	52 (2.6)	41 (3.6)	8 (2.6)	# (***)	48 (2.6)	8 (2.6)
Graduated high school	1994	38 (2.0)	47 (2.1)	14 (1.6)	1 (0.6)	62 (2.0)	15 (1.5)
	2001	34 (2.1)	48 (1.5)	16 (2.1)	1 (0.6)	66 (2.1)	18 (1.9)
Some education after high school	1994	21 (1.3)	50 (2.7)	26 (2.5)	3 (0.8)	79 (1.3)	29 (2.3)
	2001	20 (1.6)	51 (1.8)	27 (1.7)	2 (0.8)	80 (1.6)	30 (1.8)
Graduated College	1994	18 (1.2)	41 (1.4)	34 (1.3)	7 (0.7)	82 (1.2)	41 (1.4)
	2001	14 (0.9)	42 (1.5)	37 (1.3)	6 (0.9)	86 (0.9)	43 (1.5)
Unknown	1994	56 (2.9)	35 (3.2)	8 (1.6)	1 (***)	44 (2.9)	8 (1.5)
	2001	44 (2.6) *	44 (3.1)	11 (1.9)	1 (0.5)	56 (2.6) *	12 (1.9)
Grade 12							
Less than high school	1994	59 (2.9)	34 (3.5)	7 (2.0)	0 (***)	41 (2.9)	7 (2.0)
	2001	52 (3.5)	38 (3.2)	10 (1.5)	# (***)	48 (3.5)	10 (1.5)
Graduated high school	1994	44 (2.0)	42 (2.5)	13 (1.6)	# (0.3)	56 (2.0)	14 (1.6)
	2001	38 (2.0)	50 (1.8) *	12 (1.6)	# (***)	62 (2.0)	12 (1.6)
Some education after high school	1994	25 (1.5)	51 (1.7)	23 (1.4)	1 (***)	75 (1.5)	24 (1.8)
	2001	27 (1.2)	52 (1.7)	20 (1.6)	1 (0.3)	73 (1.2)	21 (1.7)
Graduated College	1994	19 (1.1)	41 (1.3)	37 (1.5)	3 (0.8)	81 (1.1)	40 (1.6)
	2001	18 (1.1)	46 (1.4) *	34 (1.5)	3 (0.6)	82 (1.1)	36 (1.8)
Unknown	1994	64 (4.4)	29 (4.1)	7 (1.6)	0 (***)	36 (4.4)	7 (1.6)
	2001	67 (4.2)	28 (4.3)	5 (2.0)	0 (***)	33 (4.2)	5 (2.0)

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
# Percentage is between 0.0 and 0.5.
(***) Standard error estimates cannot be accurately determined.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.14: Data for Figure 3.11 National Scale Score Results by Type of School

Percentage of students and average geography scale scores by type of school, grades 4, 8, and 12: 1994 and 2001

		Public	Nonpublic	Nonpublic: Catholic	Nonpublic: Other
Grade 4	1994	90 (0.8) 204 (1.4)	10 (0.8) 221 (2.2)	6 (0.7) 222 (2.6)	4 (0.5) 220 (3.8)
	2001	89 (1.2) 207 (1.1)	11 (1.2) 226 (2.2)	6 (0.8) 230 (1.7)	5 (0.9) 221 (4.4)
Grade 8	1994	90 (0.8) 258 (0.8)	10 (0.8) 276 (1.3)	6 (0.6) 276 (1.6)	4 (0.6) 276 (2.6)
	2001	90 (0.9) 261 (1.0) *	10 (0.9) 274 (2.5)	5 (0.6) 277 (2.0)	5 (0.7) 271 (4.7)
Grade 12	1994	89 (1.0) 283 (0.8)	11 (1.0) 294 (1.6)	6 (0.9) 291 (3.0)	4 (0.6) 298 (2.0)
	2001	92 (0.8) 284 (0.8)	8 (0.8) 291 (2.3)	4 (0.6) 294 (2.0)	3 (0.6) 287 (4.3)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.15: Data for Figure 3.12a, b, c National Achievement-Level Results by Type of School

Percentage of students within and at or above geography achievement levels by type of school, grades 4, 8, and 12: 1994 and 2001

			Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	Public	1994	32 (1.2)	47 (1.1)	19 (1.2)	3 (0.5)	68 (1.2)	21 (1.3)
		2001	28 (1.3)	52 (1.6) *	18 (1.1)	2 (0.3)	72 (1.3)	20 (1.1)
	Nonpublic	1994	16 (2.2)	53 (2.3)	26 (2.3)	5 (1.2)	84 (2.2)	30 (2.5)
		2001	9 (2.2)	59 (2.1)	28 (2.6)	3 (0.9)	91 (2.2)	31 (2.8)
	Nonpublic: Catholic	1994	15 (2.8)	54 (3.2)	25 (2.4)	5 (1.9)	85 (2.8)	30 (3.0)
		2001	7 (1.2) *	56 (2.3)	32 (2.0)	4 (1.6)	93 (1.2) *	36 (2.5)
	Nonpublic: other	1994	18 (3.5)	52 (3.6)	26 (3.7)	4 (1.2)	82 (3.5)	30 (4.1)
		2001	12 (5.1)	63 (4.1)	23 (4.9)	2 (1.1)	88 (5.1)	25 (5.5)
Grade 8	Public	1994	31 (1.0)	43 (1.1)	22 (1.0)	4 (0.4)	69 (1.0)	26 (1.0)
		2001	28 (0.9) *	44 (1.0)	25 (1.2)	3 (0.6)	72 (0.9) *	28 (1.2)
	Nonpublic	1994	13 (1.7)	43 (2.3)	36 (2.3)	8 (1.4)	87 (1.7)	44 (2.2)
		2001	13 (2.6)	46 (3.6)	36 (3.5)	5 (1.3)	87 (2.6)	41 (4.2)
	Nonpublic: Catholic	1994	11 (1.8)	45 (2.2)	35 (2.8)	8 (1.6)	89 (1.8)	44 (2.6)
		2001	11 (2.5)	44 (3.4)	40 (2.9)	6 (1.3)	89 (2.5)	46 (3.4)
	Nonpublic: other	1994	14 (3.2)	41 (4.7)	38 (4.6)	7 (2.0)	86 (3.2)	45 (4.8)
		2001	15 (4.7)	48 (5.1)	33 (6.2)	4 (1.8)	85 (4.7)	37 (7.2)
Grade 12	Public	1994	32 (1.0)	42 (1.1)	24 (1.0)	1 (0.5)	68 (1.0)	26 (1.3)
		2001	29 (1.0)	47 (1.0) *	23 (1.1)	1 (0.3)	71 (1.0)	24 (1.2)
	Nonpublic	1994	17 (2.2)	47 (1.7)	33 (2.3)	3 (0.7)	83 (2.2)	36 (2.3)
		2001	20 (3.0)	48 (2.0)	30 (2.6)	2 (0.7)	80 (3.0)	32 (3.0)
	Nonpublic: Catholic	1994	20 (3.9)	47 (2.0)	32 (3.6)	1 (0.5)	80 (3.9)	33 (3.8)
		2001	15 (2.5)	51 (2.5)	32 (3.4)	2 (0.6)	85 (2.5)	34 (3.4)
	Nonpublic: other	1994	13 (2.4)	47 (2.9)	35 (2.9)	5 (1.5)	87 (2.4)	40 (3.1)
		2001	27 (5.5)	44 (3.1)	26 (4.7)	2 (1.3)	73 (5.5)	29 (5.6)

Standard errors of the estimated percentages appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.16: Data for Table 3.1 National Scale Score Results by Type of Location

Percentage of students and average geography scale scores by type of school location, grades 4, 8, and 12: 2001

	Central city	Urban fringe/large town	Rural/small town
Grade 4	27 (1.6) 199 (2.3)	44 (2.9) 212 (2.1)	29 (2.8) 215 (2.0)
Grade 8	27 (2.0) 255 (2.0)	45 (2.8) 265 (1.6)	28 (2.5) 265 (2.0)
Grade 12	26 (2.0) 279 (1.6)	40 (2.8) 288 (1.6)	34 (2.5) 284 (1.0)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.17: Data for Figure 3.13 National Achievement-Level Results by Type of Location

Percentage of students within and at or above geography achievement levels by type of school location, grades 4, 8, and 12: 2001

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	Central city	38 (2.4)	46 (1.8)	14 (1.6)	2 (0.4)	62 (2.4)	16 (1.8)
	Urban fringe/large town	24 (2.1)	53 (1.7)	21 (1.5)	2 (0.6)	76 (2.1)	23 (1.7)
	Rural/small town	19 (2.1)	58 (3.0)	21 (2.4)	2 (0.5)	81 (2.1)	23 (2.4)
Grade 8	Central city	36 (2.2)	39 (1.7)	22 (1.8)	3 (0.7)	64 (2.2)	25 (2.1)
	Urban fringe/large town	22 (1.7)	45 (1.3)	29 (1.5)	4 (0.9)	78 (1.7)	32 (1.8)
	Rural/small town	22 (2.2)	48 (2.0)	27 (2.4)	3 (0.7)	78 (2.2)	30 (2.7)
Grade 12	Central city	37 (2.4)	42 (2.0)	19 (1.8)	1 (0.3)	63 (2.4)	20 (1.9)
	Urban fringe/large town	25 (1.6)	45 (1.6)	28 (1.9)	2 (0.6)	75 (1.6)	30 (2.3)
	Rural/small town	26 (1.5)	52 (1.5)	21 (1.4)	1 (0.3)	74 (1.5)	22 (1.4)

Standard errors of the estimated percentages appear in parentheses.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.18: Data for Table 3.2 National Scale Score Results by Free/Reduced-Price School Lunch Program Eligibility

Percentage of students and average geography scale scores by student eligibility for Free/Reduced-Price School Lunch program, grades 4, 8, and 12: 2001

	Eligible	Not eligible	Info not available
Grade 4	33 (1.4) 186 (1.7)	48 (2.3) 221 (1.2)	18 (2.4) 218 (2.5)
Grade 8	25 (1.1) 242 (1.4)	53 (2.1) 270 (1.1)	22 (2.3) 266 (1.8)
Grade 12	16 (1.0) 269 (1.6)	64 (2.2) 287 (1.0)	21 (2.4) 289 (1.5)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.19: Data for Figure 3.14 National Achievement-Level Results by Free/Reduced-Price School Lunch Program Eligibility

Percentage of students within and at or above geography achievement levels by student eligibility for the Free/Reduced-Price School Lunch program, grades 4, 8, and 12: 2001

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4	Eligible	49 (2.2)	45 (2.1)	6 (0.9)	# (***)	51 (2.2)	6 (0.9)
	Not eligible	14 (1.1)	56 (1.6)	27 (1.4)	3 (0.6)	86 (1.1)	29 (1.5)
	Info not available	16 (2.5)	57 (2.9)	24 (3.1)	3 (0.8)	84 (2.5)	27 (3.2)
Grade 8	Eligible	50 (1.8)	39 (1.6)	10 (1.1)	1 (0.3)	50 (1.8)	11 (1.2)
	Not eligible	17 (0.9)	46 (1.3)	32 (1.5)	5 (0.8)	83 (0.9)	37 (1.7)
	Info not available	21 (2.1)	46 (2.5)	29 (2.2)	4 (0.9)	79 (2.1)	33 (2.5)
Grade 12	Eligible	49 (2.3)	40 (1.7)	10 (1.5)	# (***)	51 (2.3)	11 (1.6)
	Not eligible	25 (1.2)	49 (1.3)	25 (1.4)	1 (0.4)	75 (1.2)	26 (1.6)
	Info not available	24 (2.0)	45 (1.6)	29 (2.0)	2 (0.4)	76 (2.0)	31 (2.1)

Standard errors of the estimated percentages appear in parentheses.
Percentage is between 0.0 and 0.5.
(***) Standard error estimates cannot be accurately determined.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.20: Data for Table 4.1 Teachers' Majors/Minors

Percentage of students and average geography scale scores by teachers' reported undergraduate/graduate major and minor/special emphasis, grades 4 and 8: 2001

*Did you have a major, minor, or special emphasis in any of the following subjects as part of your **undergraduate** or **graduate** course work?*	Yes	No
Grade 4		
Geography or Geography Education	7 (1.0) 204 (5.2)	93 (1.0) 210 (1.1)
History or History Education	15 (1.5) 206 (3.6)	85 (1.5) 211 (1.1)
Social Science or Social Studies Education	20 (1.7) 208 (2.6)	80 (1.7) 210 (1.3)
Other Social Science	57 (2.5) 210 (1.6)	43 (2.5) 209 (1.4)
Elementary Education	93 (1.0) 211 (1.1)	7 (1.0) 197 (4.3)
Grade 8		
Geography or Geography Education	28 (2.5) 263 (2.1)	72 (2.5) 263 (1.2)
History or History Education	71 (2.7) 263 (1.3)	29 (2.7) 261 (1.9)
Social Science or Social Studies Education	55 (3.0) 263 (1.3)	45 (3.0) 262 (1.5)
Other Social Science	51 (2.1) 261 (1.5)	49 (2.1) 264 (1.4)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.21: Data for Table 4.2 Teachers' Preparedness to Teach Geography

Percentage of students and average geography scale scores by teachers' reports on how well prepared they felt they were to teach geography, grades 4 and 8: 1994 and 2001

Regardless or whether you are currently teaching the topic, how well prepared do you feel you are to teach geography at the elementary/middle school level?	1994	2001
Grade 4		
Very prepared	23 (2.0) 209 (2.1)	31 (2.1) * 211 (2.1)
Adequately prepared	57 (2.0) 206 (1.8)	53 (2.3) 210 (1.3)
Somewhat prepared	18 (1.8) 207 (2.8)	15 (1.5) 206 (2.4)
Unprepared	2 (0.5) 200 (8.9) !	1 (0.3) 209 (8.6) !
Grade 8		
Very prepared	36 (2.9) 260 (2.2)	44 (2.5) 263 (1.4)
Adequately prepared	48 (3.6) 262 (1.4)	43 (2.4) 262 (1.3)
Somewhat prepared	13 (2.3) 265 (2.9)	11 (1.7) 261 (2.5)
Unprepared	2 (***) 260 (3.7) !	2 (0.6) 264 (8.9) !

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
* Significantly different from 1994.
(***) Standard error estimates cannot be accurately determined.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.22: Data for Table 4.3 Frequency of Instruction in Fourth-Grade Geography Skills and Topics

Percentage of students and average geography scale scores by teachers' reports on frequency of instruction of selected skills and topics, grade 4:1994 and 2001

How often do you teach the following skills and topics as a part of geography instruction with this class?	1994	2001
Using maps and globes		
Almost every day	29 (2.3) 210 (2.1)	28 (2.3) 213 (1.9)
Once or twice a week	54 (2.5) 208 (1.7)	47 (2.2) 209 (1.5)
Once or twice a month	17 (2.1) 199 (3.2)	22 (1.7) 206 (2.4)
Never or hardly ever	1 (0.3) *** (***)	3 (0.7) 209 (8.9) !
Natural resources		
Almost every day	9 (1.8) 201 (4.1)	9 (1.4) 217 (4.6)
Once or twice a week	38 (2.5) 209 (2.3)	31 (1.6) * 208 (1.9)
Once or twice a month	44 (2.5) 208 (2.2)	46 (1.9) 210 (1.7)
Never or hardly ever	9 (1.4) 198 (4.8)	14 (1.4) * 208 (3.1)
Foreign countries and cultures		
Almost every day	6 (1.2) 206 (5.7)	3 (0.8) 206 (6.3) !
Once or twice a week	19 (1.9) 203 (2.7)	23 (1.7) 208 (2.3)
Once or twice a month	43 (2.1) 208 (2.0)	45 (2.7) 209 (1.4)
Never or hardly ever	32 (2.3) 209 (1.9)	29 (2.4) 212 (2.2)
Environmental issues		
Almost every day	4 (0.9) 201 (5.6) !	7 (1.5) 212 (3.6) !
Once or twice a week	27 (2.1) 206 (2.5)	21 (1.7) 205 (2.6)
Once or twice a month	56 (2.0) 208 (2.0)	56 (2.2) 211 (1.4)
Never or hardly ever	13 (1.5) 208 (3.9)	16 (1.9) 211 (3.0)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
* Significantly different from 1994.
*** (***) Sample size is insufficient to permit a reliable estimate.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.23a: Data for Table 4.4a Frequency of Instruction in Eighth-Grade Geography Skills and Topics

Percentage of students and average geography scale scores by students' reports on frequency of instruction of selected skills and topics, grade 8 : 1994 and 2001

How often have you studied the following geography skills and topics in school?	1994	2001
Using maps and globes		
Almost every day	9 (0.6) 261 (1.7)	12 (0.7) * 259 (1.7)
Once or twice a week	30 (0.9) 264 (1.1)	34 (0.7) * 264 (1.1)
Once or twice a month	33 (0.9) 263 (1.1)	33 (0.7) 268 (1.2)
Never or hardly ever	28 (1.0) 253 (1.0)	21 (0.7) * 258 (1.2)
Natural resources		
Almost every day	9 (0.4) 251 (1.7)	9 (0.5) 249 (1.5)
Once or twice a week	21 (0.8) 259 (1.2)	24 (0.6) * 262 (1.3)
Once or twice a month	36 (0.8) 265 (1.0)	35 (0.6) 269 (1.1)
Never or hardly ever	34 (1.1) 260 (0.9)	32 (0.8) 263 (1.2)
Countries and cultures		
Almost every day	23 (0.8) 260 (1.2)	31 (1.0) * 264 (1.1)
Once or twice a week	29 (1.0) 261 (1.1)	32 (0.7) * 266 (1.2)
Once or twice a month	28 (0.9) 264 (1.2)	24 (0.6) * 263 (1.2)
Never or hardly ever	20 (0.7) 256 (1.3)	13 (0.6) * 254 (1.6)
Environmental issues		
Almost every day	12 (0.7) 258 (1.7)	11 (0.5) 254 (1.7)
Once or twice a week	21 (0.6) 260 (1.2)	24 (0.8) * 265 (0.9)
Once or twice a month	33 (0.8) 263 (1.1)	33 (0.7) 267 (1.2)
Never or hardly ever	34 (1.0) 260 (0.9)	32 (1.0) 262 (1.3)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.23b: Data for Table 4.4b Frequency of Instruction in Twelfth-Grade Geography Skills and Topics

Percentage of students and average geography scale scores by students' reports on frequency of instruction of selected skills and topics, grade 12: 1994 and 2001

How often have you studied the following geography skills and topics in school?	1994	2001
Using maps and globes		
Almost every day	7 (0.4) 284 (2.0)	6 (0.4) 277 (1.5)
Once or twice a week	22 (0.7) 288 (0.9)	24 (0.5) 285 (1.1)
Once or twice a month	31 (0.7) 286 (0.8)	34 (0.6) * 287 (0.9)
Never or hardly ever	40 (0.9) 283 (1.1)	36 (0.8) * 284 (1.0)
Natural resources		
Almost every day	7 (0.4) 282 (2.1)	7 (0.4) 275 (1.7)
Once or twice a week	18 (0.6) 286 (1.2)	22 (0.8) * 283 (1.2)
Once or twice a month	31 (0.7) 288 (1.0)	32 (0.7) 288 (0.9)
Never or hardly ever	45 (0.9) 284 (0.9)	39 (0.8) * 285 (1.0)
Countries and cultures		
Almost every day	16 (0.6) 287 (1.3)	20 (0.5) * 286 (0.9)
Once or twice a week	26 (0.5) 288 (1.0)	32 (0.6) * 288 (1.0)
Once or twice a month	30 (0.7) 286 (0.8)	29 (0.6) 286 (1.2)
Never or hardly ever	28 (0.8) 280 (1.0)	19 (0.5) * 277 (1.0)
Environmental issues		
Almost every day	11 (0.5) 284 (1.6)	11 (0.5) 279 (1.3)
Once or twice a week	22 (0.7) 288 (1.2)	26 (0.7) * 286 (1.1)
Once or twice a month	30 (0.7) 288 (0.9)	33 (0.6) * 289 (1.1)
Never or hardly ever	37 (0.8) 282 (0.9)	30 (0.6) * 282 (0.9)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.24: Data for Table 4.5 Eighth-Grade Frequency of Geography Course Taking

Percentage of students and average geography scale scores by students' reports on grades in which geography was taken since the 6th grade, grade 8: 1994 and 2001

Did you take or do you expect to take a geography course in 6th, 7th, or 8th grade?	1994	2001
Number of grades selected		
None	18 (1.0) 250 (1.6)	12 (0.7)* 255 (1.7)
One	30 (0.7) 257 (1.1)	20 (0.6)* 256 (1.5)
Two	14 (0.9) 269 (1.4)	16 (0.6) 263 (1.3)
Three	26 (0.9) 274 (0.9)	43 (1.1)* 272 (1.1)
Don't know	13 (0.6) 243 (1.5)	9 (0.5) 246 (1.5)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.25: Data for Table 4.6 Twelfth-Grade Frequency of Geography Course Taking

Percentage of students and average geography scale scores by students' reports on grades in which geography was taken since 9th grade, grade 12: 1994 and 2001

Did you take or do you expect to take a geography course in 9th, 10th, 11th, or 12th grade?	1994	2001
Number of grades selected		
None	31 (1.6) 286 (1.4)	21 (1.2) * 289 (1.3)
One	35 (1.4) 288 (0.9)	32 (1.4) 288 (1.2)
Two	16 (0.8) 286 (1.5)	15 (0.7) 285 (1.3)
Three	10 (0.6) 281 (1.7)	18 (0.9)* 280 (1.1)
Four	5 (0.5) 277 (2.5)	10 (0.6) * 281 (1.3)
Don't know	3 (0.4) 268 (2.1)	3 (0.3) 265 (2.6)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.26a: Data for Table 4.7a Fourth-Grade Computer Use

Percentage of students and average geography scale scores by teachers' reports on computer use for social studies instruction, grade 4: 2001

When students in this class work on social studies, to what extent do they use computers to do each of the following?	2001
Grade 4	
Use CD-ROM to look up reference works	
Not at all	37 (2.5) 205 (2.0)
Small extent	47 (2.4) 211 (1.6)
Moderate extent	14 (1.8) 216 (2.4)
Large extent	2 (0.9) 214 (7.9) !
Retrieve information through the Internet	
Not at all	34 (2.3) 203 (2.3)
Small extent	45 (2.3) 212 (1.6)
Moderate extent	17 (2.2) 216 (3.0)
Large extent	4 (1.1) 211 (6.3) !
Use exploration/simulation software	
Not at all	54 (2.4) 207 (1.4)
Small extent	37 (2.4) 213 (1.7)
Moderate extent	8 (1.2) 211 (3.7)
Large extent	1 (0.2) *** (***)
Organize information using spreadsheets/databases	
Not at all	89 (1.4) 209 (1.2)
Small extent	9 (1.3) 213 (3.7)
Moderate extent	1 (0.4) 213 (8.5) !
Large extent	# (0.2) *** (***)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
Percentage is between 0.0 and 0.5.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
*** (***) Sample size is insufficient to permit a reliable estimate.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.26b: Data for Table 4.7b Eighth-Grade Computer Use

Percentage of students and average geography scale scores by teachers' reports on computer use for social studies instruction, grade 8: 2001

When students in this class work on social studies, to what extent do they use computers to do each of the following?	2001
Grade 8	
Use CD-ROM to look up reference works	
Not at all	31 (2.0) 258 (1.3)
Small extent	48 (2.3) 263 (1.4)
Moderate extent	17 (2.4) 266 (2.4)
Large extent	4 (0.9) 268 (4.7) !
Retrieve information through the Internet	
Not at all	20 (1.9) 255 (2.0)
Small extent	47 (2.4) 261 (1.3)
Moderate extent	29 (2.6) 266 (1.9)
Large extent	4 (0.8) 273 (3.8)
Use exploration/simulation software	
Not at all	62 (2.2) 261 (1.2)
Small extent	32 (2.3) 265 (1.9)
Moderate extent	5 (1.1) 259 (3.4) !
Large extent	1 (0.4) 257 (11.0) !
Organize information using spreadsheets/databases	
Not at all	74 (2.7) 261 (1.2)
Small extent	22 (2.7) 266 (2.4)
Moderate extent	2 (0.8) 262 (6.2) !
Large extent	1 (0.5) 249 (5.5) !

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.27: Data for Table 4.8 Twelfth-Grade Computer Use

Percentage of students and average geography scale scores by students' reports on computer use for history and geography, grade 12: 2001

Think about all the courses since the 9th grade in which you have studied history or geography. To what extent have you used computers to do the following? For this question include both work in class and homework assignments.	2001
Research projects using a CD or the Internet	
Not at all	26 (0.8) 274 (1.0)
Small extent	32 (0.5) 285 (1.0)
Moderate extent	29 (0.7) 290 (1.1)
Large extent	13 (0.6) 292 (1.3)
Use exploration/simulation software	
Not at all	66 (0.7) 287 (0.8)
Small extent	23 (0.5) 281 (1.1)
Moderate extent	9 (0.4) 276 (1.4)
Large extent	2 (0.2) 278 (3.3)
Tables, charts or graphs on the computer	
Not at all	55 (0.9) 284 (0.7)
Small extent	30 (0.7) 288 (1.2)
Moderate extent	12 (0.5) 281 (1.6)
Large extent	4 (0.3) 277 (2.7)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.28: Data for Table 4.9 How Much Eighth- and Twelfth-Grade Students Like Geography

Percentage of students and average geography scale scores by students' reports on how much they like studying geography, grades 8 and 12: 1994 and 2001

How much do you like studying geography?	1994	2001
Grade 8		
One of my favorite subjects	19 (0.8) 274 (1.2)	20 (0.6) 275 (1.3)
Like other subjects better	67 (0.9) 260 (0.7)	69 (0.6) 263 (1.0)
Never studied geography	14 (0.6) 241 (1.9)	11 (0.5) * 247 (1.7)
Grade 12		
One of my favorite subjects	14 (0.6) 297 (1.3)	15 (0.6) 293 (1.2)
Like other subjects better	63 (1.1) 285 (0.8)	72 (0.8) * 285 (0.8)
Never studied geography	23 (1.2) 277 (1.3)	13 (0.8) * 278 (1.8)

The percentage of students is listed first with the corresponding average scale score presented below.
Standard errors of the estimated percentages and scale scores appear in parentheses.
* Significantly different from 1994.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994 and 2001 Geography Assessments.

Table B.29: Data for Table 5.1 Comparison of Two Sets of National Scale Score Results

National average geography scale scores by type of results, grades 4, 8, and 12: 2001

	Accommodations not permitted	Accommodations permitted
Grade 4	209 (1.0)	208 (0.9)
Grade 8	262 (0.9)	260 (1.0) †
Grade 12	285 (0.8)	284 (0.8)

Standard errors of the estimated scale scores appear in parentheses.
† Significantly different from the sample where accommodations were not permitted.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.30: Data for Table 5.2 Comparison of Two Sets of National Achievement-Level Results

Percentage of students within and at or above geography achievement levels by type of results, grades 4, 8, and 12: 2001

	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4						
Accommodations were not permitted	26 (1.2)	53 (1.4)	19 (1.1)	2 (0.3)	74 (1.2)	21 (1.0)
Accommodations were permitted	27 (1.0)	52 (1.1)	19 (0.9)	2 (0.3)	73 (1.0)	20 (0.9)
Grade 8						
Accommodations were not permitted	26 (0.9)	44 (0.9)	26 (1.1)	4 (0.6)	74 (0.9)	30 (1.2)
Accommodations were permitted	28 (1.2) †	43 (0.9)	25 (1.0)	4 (0.5)	72 (1.2) †	29 (1.3)
Grade 12						
Accommodations were not permitted	29 (0.9)	47 (0.9)	23 (1.0)	1 (0.3)	71 (0.9)	25 (1.1)
Accommodations were permitted	29 (1.0)	47 (0.9)	23 (1.0)	1 (0.3)	71 (1.0)	24 (1.2)

Standard errors of the estimated percentages appear in parentheses.
† Significantly different from the sample where accommodations were not permitted.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.31: Data for Table 5.3 Comparison of Two Sets of National Scale Score Results by Gender

National average geography scale scores by gender and type of results, grades 4, 8, and 12: 2001

	Male	Female
Grade 4		
Accommodations were not permitted	212 (1.1)	207 (1.2)
Accommodations were permitted	210 (1.0)	206 (1.3)
Grade 8		
Accommodations were not permitted	264 (1.0)	260 (1.1)
Accommodations were permitted	262 (1.2) †	258 (1.0)
Grade 12		
Accommodations were not permitted	287 (0.9)	282 (0.8)
Accommodations were permitted	287 (1.0)	281 (0.8)

Standard errors of the estimated scale scores appear in parentheses.
† Significantly different from the sample where accommodations were not permitted.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.32: Table 5.4 Comparison of Two Sets of National Achievement-Level Results by Gender

Percentage of students within and at or above geography achievement levels by gender and type of results, grades 4, 8, and 12: 2001

	Below ***Basic***	At ***Basic***	At ***Proficient***	At ***Advanced***	At or above ***Basic***	At or above ***Proficient***
Grade 4						
Male						
Accommodations were not permitted	25 (1.3)	51 (1.6)	21 (1.4)	3 (0.5)	75 (1.3)	24 (1.4)
Accommodations were permitted	26 (0.9)	51 (1.3)	21 (1.1)	3 (0.5)	74 (0.9)	23 (1.2)
Female						
Accommodations were not permitted	28 (1.6)	54 (1.7)	17 (1.2)	1 (0.4)	72 (1.6)	18 (1.1)
Accommodations were permitted	29 (1.5)	54 (1.5)	16 (1.3)	1 (0.3)	71 (1.5)	18 (1.3)
Grade 8						
Male						
Accommodations were not permitted	25 (1.0)	42 (1.3)	29 (1.7)	5 (0.7)	75 (1.0)	33 (1.5)
Accommodations were permitted	27 (1.5)	41 (1.0)	27 (1.2)	4 (0.7)	73 (1.5)	32 (1.5)
Female						
Accommodations were not permitted	27 (1.2)	47 (1.1)	24 (1.3)	3 (0.6)	73 (1.2)	26 (1.4)
Accommodations were permitted	29 (1.1)	45 (1.5)	23 (1.4)	3 (0.5)	71 (1.1)	26 (1.5)
Grade 12						
Male						
Accommodations were not permitted	27 (1.1)	45 (1.3)	26 (1.4)	2 (0.4)	73 (1.1)	28 (1.5)
Accommodations were permitted	26 (1.3)	45 (1.4)	26 (1.4)	2 (0.4)	74 (1.3)	28 (1.6)
Female						
Accommodations were not permitted	30 (1.0)	48 (1.0)	20 (0.9)	1 (0.3)	70 (1.0)	21 (1.0)
Accommodations were permitted	32 (1.2)	48 (1.2)	19 (1.2)	1 (0.3)	68 (1.2)	20 (1.2)

Standard errors of the estimated percentages appear in parentheses.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.33: Data for Table 5.5 Comparison of Two Sets of National Scale Score Results by Race/Ethnicity

National average geography scale scores by race/ethnicity and type of results, grades 4, 8, and 12: 2001

	White	Black	Hispanic	Asian/Pacific Islander	American Indian
Grade 4					
Accommodations were not permitted	222 (1.0)	181 (1.8)	184 (2.8)	212 (2.7)	199 (3.6)
Accommodations were permitted	220 (1.0)	181 (1.9)	185 (2.1)	216 (2.6)	199 (3.4)
Grade 8					
Accommodations were not permitted	273 (1.0)	234 (1.7)	240 (1.7)	266 (2.5)	261 (5.8)
Accommodations were permitted	271 (1.4)	232 (1.6)	238 (1.8)	267 (2.2)	259 (4.9)
Grade 12					
Accommodations were not permitted	291 (0.9)	260 (1.4)	270 (1.5)	286 (2.9)	288 (3.6) !
Accommodations were permitted	292 (0.8)	258 (1.5)	269 (1.4)	285 (5.0)	286 (3.5) !

Standard errors of the estimated scale scores appear in parentheses.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.34: Data for Table 5.6 Comparison of Two Sets of National Achievement-Level Results by Race/Ethnicity

Percentage of students within and at or above geography achievement levels by race/ethnicity and type of results, grades 4, 8, and 12: 2001

	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4						
White						
Accommodations were not permitted	13 (1.3)	58 (1.8)	26 (1.6)	3 (0.5)	87 (1.3)	29 (1.5)
Accommodations were permitted	15 (1.0)	57 (1.4)	25 (1.3)	3 (0.5)	85 (1.0)	28 (1.3)
Black						
Accommodations were not permitted	56 (2.1)	39 (2.1)	5 (0.8)	# (***)	44 (2.1)	5 (0.9)
Accommodations were permitted	56 (2.7)	40 (2.6)	4 (0.5)	# (***)	44 (2.7)	4 (0.6)
Hispanic						
Accommodations were not permitted	51 (3.0)	43 (2.5)	6 (1.0)	# (***)	49 (3.0)	6 (1.0)
Accommodations were permitted	49 (2.5)	45 (2.1)	5 (0.9)	# (***)	51 (2.5)	6 (0.9)
Asian/Pacific Islander						
Accommodations were not permitted	23 (3.4)	52 (4.4)	23 (3.1)	1 (0.9)	77 (3.4)	25 (3.0)
Accommodations were permitted	18 (3.4)	57 (4.0)	24 (3.9)	2 (0.8)	82 (3.4)	25 (3.7)
American Indian						
Accommodations were not permitted	34 (4.9)	53 (6.3)	13 (4.2)	# (***)	66 (4.9)	13 (4.1)
Accommodations were permitted	37 (5.7)	51 (5.7)	12 (3.1)	# (***)	63 (5.7)	12 (3.3)
Grade 8						
White						
Accommodations were not permitted	14 (0.9)	48 (1.2)	34 (1.5)	5 (0.8)	86 (0.9)	39 (1.7)
Accommodations were permitted	16 (1.5)	46 (1.2)	33 (1.5)	5 (0.7)	84 (1.5)	38 (1.9)
Black						
Accommodations were not permitted	60 (2.3)	34 (1.9)	6 (0.8)	# (***)	40 (2.3)	6 (0.8)
Accommodations were permitted	62 (2.5)	32 (2.2)	6 (0.9)	# (***)	38 (2.5)	6 (1.1)
Hispanic						
Accommodations were not permitted	52 (1.9)	38 (1.6)	9 (1.1)	1 (0.2)	48 (1.9)	10 (1.0)
Accommodations were permitted	54 (2.3)	37 (1.9)	9 (0.8)	1 (0.2)	46 (2.3)	9 (0.8)
Asian/Pacific Islander						
Accommodations were not permitted	21 (3.4)	47 (4.8)	28 (3.5)	4 (1.8)	79 (3.4)	32 (3.2)
Accommodations were permitted	20 (2.7)	49 (2.9)	28 (3.1)	4 (1.4)	80 (2.7)	32 (3.0)
American Indian						
Accommodations were not permitted	28 (6.8)	41 (11.1)	29 (8.9)	3 (***)	72 (6.8)	31 (11.2)
Accommodations were permitted	30 (5.2)	46 (5.9)	21 (6.0)	3 (***)	70 (5.2)	24 (7.2)
Grade 12						
White						
Accommodations were not permitted	19 (0.9)	51 (1.1)	29 (1.2)	2 (0.4)	81 (0.9)	31 (1.4)
Accommodations were permitted	19 (0.9)	51 (1.1)	29 (1.3)	2 (0.4)	81 (0.9)	31 (1.4)
Black						
Accommodations were not permitted	65 (2.3)	31 (2.1)	4 (0.7)	# (***)	35 (2.3)	4 (0.7)
Accommodations were permitted	67 (2.0)	30 (1.8)	3 (0.9)	# (***)	33 (2.0)	3 (0.9)
Hispanic						
Accommodations were not permitted	48 (2.6)	42 (2.5)	10 (1.4)	# (0.1)	52 (2.6)	10 (1.4)
Accommodations were permitted	50 (2.4)	42 (2.2)	9 (1.1)	# (***)	50 (2.4)	9 (1.1)
Asian/Pacific Islander						
Accommodations were not permitted	28 (4.3)	45 (3.0)	25 (4.6)	1 (0.7)	72 (4.3)	26 (4.7)
Accommodations were permitted	29 (6.1)	46 (2.6)	23 (5.0)	1 (0.9)	71 (6.1)	25 (5.6)
American Indian						
Accommodations were not permitted	26 (6.0) !	41 (7.0) !	31 (5.3) !	1 (***)	74 (6.0) !	32 (4.9) !
Accommodations were permitted	29 (7.6) !	41 (7.6) !	29 (6.9) !	1 (***)	71 (7.6) !	30 (6.9) !

Standard errors of the estimated percentages appear in parentheses.
Percentage is between 0.0 and 0.5.
(***) Standard error estimates cannot be accurately determined.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
NOTE: Percentages within each geography achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.35: Data for Table 6.1 Grade 4 Sample Question 1 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 4	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
70 (1.4)	50 (2.8)	74 (1.7)	84 (2.5)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***)Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.36: Data for Table 6.2 Grade 4 Sample Question 2 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 4	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
33 (1.1)	22 (1.8)	28 (1.8)	56 (3.2)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***)Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.37: Data for Table 6.3a Grade 4 Sample Question 3 Results ("Complete" Short Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 4	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
66 (1.4)	38 (2.3)	71 (2.0)	88 (2.3)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.38: Data for Table 6.3b Grade 4 Sample Question 3 Results ("Partial" Short Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 4	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
72 (1.4)	43 (2.5)	78 (1.8)	93 (2.3)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.39: Data for Table 6.4a Grade 4 Sample Question 4 Results ("Complete" Extended Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 4	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
11 (0.8)	0 (***)	6 (1.2)	32 (3.4)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.40: Data for Table 6.4b Grade 4 Sample Question 4 Results ("Essential" Extended Constructed-Response)

Overall percentage "Essential" or better and percentages "Essential" or better within each achievement-level range: 2001

Grade 4	Percentage "Essential" or better within achievement-level intervals			
Overall percentage "Essential" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
28 (1.3)	1 (0.6)	25 (2.1)	65 (3.8)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.41: Data for Table 6.4c Grade 4 Sample Question 4 Results ("Partial" Extended Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 4	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **186 and below***	***Basic*** **187–239***	***Proficient*** **240–275***	***Advanced*** **276 and above***
38 (1.3)	4 (1.5)	36 (2.2)	78 (2.5)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.42: Data for Table 6.5 Grade 8 Sample Question 5 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
70 (1.2)	37 (2.3)	74 (1.7)	91 (1.5)	97 (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
(***) Standard error estimates cannot be accurately determined.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.43: Data for Table 6.6 Grade 8 Sample Question 6 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
50 (1.3)	36 (2.2)	47 (2.3)	64 (3.1)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.44: Data for Table 6.7 Grade 8 Sample Question 7 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
74 (1.4)	40 (2.3)	80 (2.0)	93 (1.9)	100 (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
(***) Standard error estimates cannot be accurately determined.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.45: Data for Table 6.8 Grade 8 Sample Question 8 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 8	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
60 (1.4)	40 (2.6)	57 (2.0)	79 (2.7)	96 (1.7)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.46: Data for Table 6.9a Grade 8 Sample Question 9 Results ("Complete" Short Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 8	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
22 (1.4)	6 (2.1)	18 (1.9)	38 (2.7)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.47: Data for Table 6.9b Grade 8 Sample Question 9 Results ("Partial" Short Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 8	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **241 and below***	***Basic*** **242–281***	***Proficient*** **282–314***	***Advanced*** **315 and above***
60 (1.3)	26 (2.5)	62 (2.1)	84 (2.3)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.48: Data for Table 6.10 Grade 12 Sample Question 10 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 12	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
78 (1.2)	46 (2.3)	86 (1.6)	99 (***)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
(***) Standard error estimates cannot be accurately determined.
***(***)Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.49: Data for Table 6.11 Grade 12 Sample Question 11 Results (Multiple-Choice)

Overall percentage correct and percentages correct within each achievement-level range: 2001

Grade 12	Percentage correct within achievement-level intervals			
Overall percentage correct	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
61 (1.4)	46 (2.3)	62 (2.2)	76 (3.3)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.50: Data for Table 6.12a Grade 12 Sample Question 12 Results ("Complete" Short Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 12	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
47 (1.3)	17 (1.9)	52 (2.1)	70 (3.2)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP Geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.51 Data for Table 6.12b Grade 12 Sample Question 12 Results ("Partial" Short Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 12	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
76 (1.2)	42 (2.8)	85 (1.4)	96 (1.4)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP Geography composite scale range.
***(***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.52: Data for Table 6.13a Grade 12 Sample Question 13 Results ("Complete" Short Constructed-Response)

Overall percentage "Complete" and percentages "Complete" within each achievement-level range: 2001

Grade 12	Percentage "Complete" within achievement-level intervals			
Overall percentage "Complete"	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
16 (0.9)	2 (0.9)	15 (1.3)	33 (3.0)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

Table B.53: Data for Table 6.13b Grade 12 Sample Question 13 Results ("Partial" Short Constructed-Response)

Overall percentage "Partial" or better and percentages "Partial" or better within each achievement-level range: 2001

Grade 12	Percentage "Partial" or better within achievement-level intervals			
Overall percentage "Partial" or better	Below ***Basic*** **269 and below***	***Basic*** **270–304***	***Proficient*** **305–338***	***Advanced*** **339 and above***
51 (1.7)	18 (2.1)	57 (2.0)	79 (2.7)	*** (***)

Standard errors of the estimated percentages appear in parentheses.
*NAEP geography composite scale range.
*** (***) Sample size is insufficient to permit a reliable estimate (see appendix A).
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2001 Geography Assessment.

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