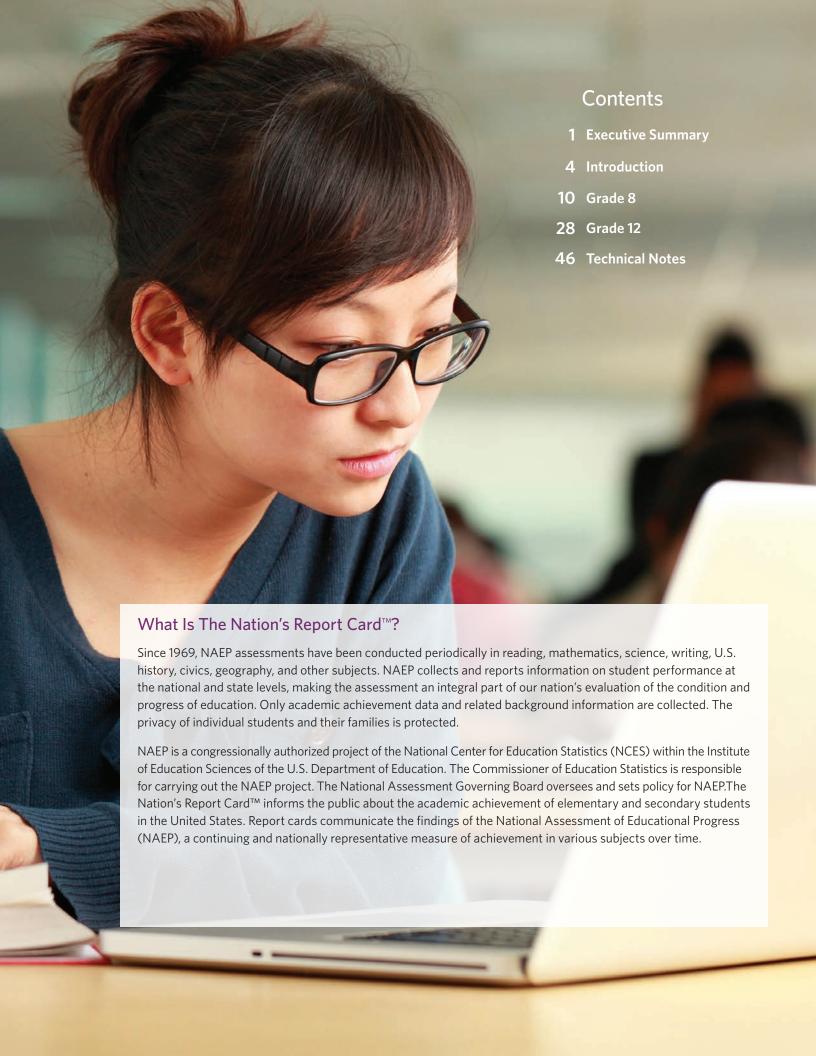




Writing 2011

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS AT GRADES 8 AND 12





Executive Summary

New computer-based assessment of students' writing skills

Writing in the 21st century is defined by its frequency and its efficiency. It is clear that the ability to use written language to communicate with others—and the corresponding need for effective writing instruction and assessment—is more relevant than ever. Reflecting current practice and recognizing the impact of communication technologies on the way students compose their writing, the National Assessment of Educational Progress (NAEP) administered the first computer-based assessment in writing in 2011.

In this new national writing assessment sample, 24,100 eighth-graders and 28,100 twelfth-graders engaged with writing tasks and composed their responses on computer. The assessment tasks reflected writing situations common to both academic and workplace settings and asked students to write for several purposes and communicate to different audiences. The results of the 2011 writing assessment offer a new opportunity to understand the ability of eighth- and twelfth-grade students to make effective choices in their writing and allow for insight into the role and impact of technology on writing education and performance.

For the first year of this computer-based writing assessment, new scales and achievement levels were established. The scales for grades 8 and 12 were developed separately and range from 0 to 300 with a mean set at 150 for each grade. Additional results are reported based on students' demographic characteristics, educational experiences, and the frequency of engaging in actions available to them in word-processing software.

About one-quarter of students perform at the *Proficient* level in writing

Twenty-four percent of students at both grades 8 and 12 performed at the *Proficient* level in writing in 2011 (**figure A**). The NAEP *Proficient* level represents solid academic performance for each grade assessed. Students performing at this level have clearly demonstrated the ability to accomplish the communicative purpose of their writing.

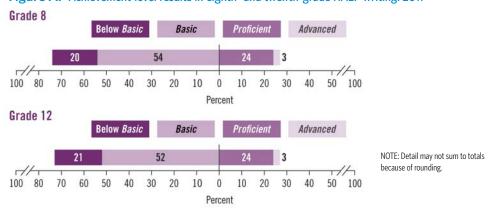


Figure A. Achievement-level results in eighth- and twelfth-grade NAEP writing: 2011

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

Fifty-four percent of eighth-graders and 52 percent of twelfth-graders performed at the Basic level in writing in 2011. The Basic level denotes partial mastery of the prerequisite knowledge and skills that are fundamental for proficient work at each grade.

Three percent of eighth- and twelfth-graders in 2011 performed at the Advanced level. This level represents superior performance.

Students' performance varies by race/ethnicity, gender, and school location

At grade 8, average writing scores were

- higher for Asian students than for other racial/ethnic groups (table A);
- higher for female students than for male students; and
- higher for students attending schools in suburban locations than for students in cities. towns, and rural locations.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude

At grade 12, average writing scores were

- higher for White students, Asian students, and students of two or more races than for Black, Hispanic, and American Indian/Alaska Native students (table B);
- higher for female students than for male students; and
- higher for students in suburban schools than for students in cities and rural locations.

Table A. Average scores in eighth-grade NAEP writing, by selected student and school characteristics: 2011

Characteristic	Scale score
Race/ethnicity	
White	158
Black	132
Hispanic	136
Asian	165
Native Hawaiian/Other Pacific Islan	ider 141
American Indian/Alaska Native	145
Two or more races	155
Gender	
Male	140
Female	160
School location	
City	144
Suburb	155
Town	148
Rural	150

Hispanic origin.

Table B. Average scores in twelfth-grade NAEP writing, by selected student and school characteristics: 2011

Characteristic	Scale score
Race/ethnicity	
White	159
Black	130
Hispanic	134
Asian	158
Native Hawaiian/Other Pacific Islander	144
American Indian/Alaska Native	145
Two or more races	158
Gender	
Male	143
Female	157
School location	
City	146
Suburb	154
Town	149
Rural	149

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin.

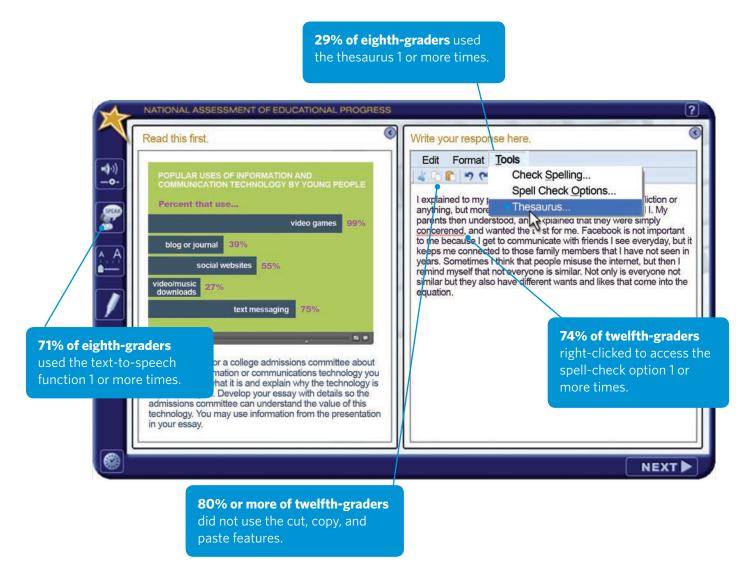
Computer-based assessment provides information on students' use of word-processing actions

Data collected from the computer-based writing assessment provided information about the extent to which students engaged in certain actions on the computer as they responded to the writing tasks. Information is reported for 23 unique actions students performed as they either viewed the writing prompts or wrote and edited their responses.

Results for the student actions are reported as the percentages of students engaging in the action with varying frequency, and the average writing score for those students. For example, at both grades 8 and 12, students who used the thesaurus tool more frequently scored higher on average than students who engaged in this action less frequently. Twelve percent of eighth-graders and 15 percent of twelfth-graders used the thesaurus two or more times during the assessment.

Writing Assessment Interface and Select Student Actions

Below is a snapshot of the interface students used as well as data on some of the actions they engaged in while viewing the prompts or editing their responses.



Introduction

The 2011 National Assessment of Educational Progress (NAEP) writing assessment was developed under a new framework that recognizes the significant role that computers play in the writing process, as well as the prevalence of computer technology in the lives of students and the increasing role of computers in learning activities. Assessment results provide information on what eighth- and twelfth-grade students can accomplish when writing for a specific communicative purpose and for a specified audience.

The New Writing Framework

The National Assessment Governing Board oversees the development of NAEP frameworks that describe the specific knowledge and skills to be assessed. The *Writing Framework for the 2011 National Assessment of Educational Progress* guided all aspects of assessment development. Major aspects of the assessment are anchored in the definition of writing provided by the 2011 framework:

Writing is a complex, multifaceted, and purposeful act of communication that is accomplished in a variety of environments, under various constraints of time, and with a variety of language resources and technological tools.

With this definition as the foundation, all assessment tasks specify both a definite purpose for the writing and a specific audience the writing should address. In addition, the computer-based tasks provided students with typical language resources such as a thesaurus and common computer tools such as spell-check, cut, copy, and paste.

The movement to a computer-based assessment reflects the important social and educational changes in the use of technology since the former writing framework was developed for the 1998, 2002, and 2007 assessments. The innovations in the new computer-based writing assessment prescribed by the new framework preclude the possibility of reporting trend results. Future NAEP writing assessment results will be compared to the 2011 results.

Writing for different purposes and audiences

Students participating in the 2011 NAEP writing assessment responded to tasks designed to measure one of three communicative purposes common to many typical writing situations:

- To persuade, in order to change the reader's point of view or affect the reader's action.
- To explain, in order to expand the reader's understanding.
- To convey experience (real or imagined), in order to communicate individual and imagined experience to others.

The proportion of the assessment tasks devoted to each of the three purposes varies by grade, with more of an emphasis on writing to persuade and to explain at grade 12 than at grade 8 (table 1).

Table 1. Target percentage distribution of NAEP writing tasks, by grade and communicative purpose: 2011

Communicative purpose	Grade 8	Grade 12
To persuade	35	40
To explain	35	40
To convey experience	30	20

Each task in the writing assessment clearly specifies or implies an audience that corresponds in some way to the purpose of the task. The kinds of audiences may vary by grade and broaden from grade 8 to grade 12. For example, eighth-graders may be asked to write to a principal, local newspaper editor, or online community, and twelfth-graders may be asked to write to a government official or community leader.

Assessment Design

The 2011 writing assessment included 22 writing tasks at grade 8 and 22 tasks at grade 12. Writing tasks were presented to students in a variety of ways, including text, audio, photographs, video, or animation on the computer. One example of a writing task and sample student responses from the assessment for each grade is presented in this report.

Students were randomly assigned two writing tasks and had 30 minutes to complete each of the tasks. Before being presented with the first task, students were shown a tutorial to familiarize them with the way material is presented on the computer screen and show them how to use the custom-developed software program provided in the assessment. Students completed their writing tasks on laptop computers provided by NAEP, using software similar to common word-processing programs. They were able to use some standard tools for editing, formatting, and viewing text, but did not have access to potentially irrelevant or distracting tools such as clip art, font type and color, or the Internet.

Survey questionnaires were completed by students, their teachers (at grade 8 only), and school administrators. The data obtained from these questionnaires help to provide additional information about students' educational experiences and a context for understanding the assessment results.



SOURCE: U.S. Department of Education, National Assessment Governing Board, Writing Framework for the 2011 National Assessment of Educational Progress (NAEP), 2010.

Scoring Students' Writing

Students' written responses to each task were evaluated based on a holistic approach that considered the response in its entirety rather than focusing on its specific parts. Individual scoring guides for each of the communicative purposes were used to evaluate students' writing. Grade-specific guides were used to rate students' responses to the *persuade* and *explain* tasks; however, as students' responses at grades 8 and 12 did not reflect strong differences for the *convey experience* task, the same scoring guide was used to rate this writing purpose. The scoring guides were used to train teams of human scorers to rate responses for each of the writing tasks. Due to the on-demand nature of writing tasks in the NAEP 2011 assessment, students' responses were evaluated as first drafts and not as polished pieces of writing.

Responses were scored on a 6-point scale (effective skill, competent skill, adequate skill, developing skill, marginal skill, and little or no skill) across three broad features of writing:

- Development of ideas
- Organization of ideas
- Language facility and conventions

Scoring guides are available at http://nationsreportcard.gov/writing_2011/sample_quest.asp.

Reporting NAEP Results

The 2011 writing assessment results are based on nationally representative samples of 24,100 eighth-graders from 950 schools, and 28,100 twelfth-graders from 1,220 schools. The sample design for the first computer-based writing assessment was not intended to report results for individual states or large urban districts.

Scale scores

The NAEP writing scale was developed in 2011 to facilitate the reporting of NAEP writing results and to establish the baseline for future writing assessment results. The scale at each grade ranged from 0 to 300 with a mean of 150 and a standard deviation of 35. That is, the average overall performance for each grade corresponds to a score of 150. Because NAEP scales are developed independently for each subject, scores cannot be compared across subjects. Similarly, although the scales are identical for grades 8 and 12, the scale scores were derived separately; therefore, scores cannot be compared across grades. More information about the NAEP writing scale can be found at http://nces.ed.gov/nationsreportcard/writing/scale.asp.



Achievement levels

Based on recommendations from policymakers, educators, and members of the general public, the Governing Board sets specific achievement levels for each subject area and grade assessed. Achievement levels are performance standards showing what students should know and be able to do. NAEP results are reported as percentages of students performing at the *Basic*, *Proficient*, and *Advanced* levels.

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

Proficient represents solid academic performance. Students reaching this level have demonstrated competency over challenging subject matter.

Advanced represents superior performance.

More specific definitions of the achievement levels that outline what students should know and be able to do in writing at each level are presented in the Assessment Content sections of this report for grades 8 and 12. Each content section also includes information on the relationship between the writing scores on the NAEP scale and the achievement levels.

As provided by law, the National Center for Education Statistics (NCES), upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials.

Student actions

Administering the NAEP writing assessment on computer provided students access to many of the same word-processing tools that have become a common part of their writing experiences in and out of school. Also, computer delivery of the assessment allowed for universal design features that remove barriers and make the assessment accessible to a wider population of students.

In addition to the number of key presses students made in the process of completing their responses to the writing tasks, data were collected on how often they engaged in 23 other actions related to editing, formatting, viewing, and reviewing text. While exploratory in nature, the collection of data on the frequency with which students used various word-processing tools during the assessment offers new insight into how students interact with technology during a timed assessment, and the possible relationship between that interaction and performance.



Accommodations and Exclusions in NAEP

It is important to assess all selected students from the population, including students with disabilities (SD) and English language learners (ELL). To accomplish this goal, many of the same accommodations that students use on other tests are provided for SD and ELL students participating in NAEP. Some of the testing accommodations that are provided to SD/ELL students in NAEP paper-and-pencil assessments are part of the universal design of the computer-based assessment, which seeks to make the assessment available to all students. For example, the font size adjustment feature available to all students taking the computer-based assessment is comparable to the large-print assessment book accommodation in the paper-and-pencil assessment, and the digital text-to-speech component takes the place of the read-aloud accommodation for paper-and-pencil assessments. However, there were still some accommodations available to SD and ELL students taking the computer-based writing assessment that were not available to other students, such as extended time and breaks.

Even with the availability of accommodations, some students may be excluded. The national exclusion rates for the 2011 writing assessment were 2 percent at both grades 8 and 12. More information about NAEP's policy on the inclusion of special-needs students is available at http://nces.ed.gov/nationsreportcard/about/inclusion.asp.

Interpreting the Results

The results from the 2011 writing assessment provide the public, policymakers, and educators with important new information about students' writing achievement and the nature of their performance in different communicative situations. There are, however, limitations to the range and scope of skills that NAEP can assess because, like most standardized assessments, NAEP is an on-demand assessment with limited time and resources. Therefore, the assessment results should not be interpreted as a complete representation of student writing performance.

NAEP reports results using widely accepted statistical standards; findings are reported based on a statistical significance level set at .05 with appropriate adjustments for multiple comparisons (see the Technical Notes for more information). Only those differences that are found to be statistically significant are discussed as higher or lower.



Learn more. See more. Do more online.

Find writing assessment results, analyze data, view sample questions, and more with these helpful online resources.

NAEP 2011 Writing Framework

Learn how the NAEP writing assessment is designed to measure students' writing at grades 4, 8, and 12.

http://www.nagb.org/publications/frameworks/writing-2011.pdf

NAEP Writing Assessment Questions

Access all released questions and scoring guides from the 2011 assessment. http://nces.ed.gov/nationsreportcard/itmrlsx/search.aspx?subject=writing

Assessment Interface Examples

View a sample of the computer-based environment. http://nationsreportcard.gov/writing_2011/writing_tools.asp

Writing Highlights from NAEP

Receive an in-depth overview of results and scores. http://nationsreportcard.gov/writing_2011/

The NAEP Data Explorer

Generate customized tables from the NAEP writing data. http://nces.ed.gov/nationsreportcard/naepdata/



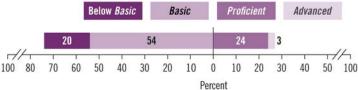
GRADE

Twenty-seven percent of eighth-graders perform at or above Proficient

The average eighth-grade writing score of 150 on the 0-300 scale establishes the benchmark against which students' performance on future NAEP writing assessments can be compared.

The percentages of students performing at each of the three achievement levels in 2011 provides information on the proportion of students demonstrating varying levels of writing skills and knowledge. Fifty-four percent of eighth-graders performed at the Basic level and 80 percent¹ performed at or above the Basic level in writing in 2011 (figure 1). Twenty-four percent performed at the Proficient level and 3 percent performed at the Advanced level.

Figure 1. Achievement-level results in eighth-grade NAEP writing: 2011



NOTE: Detail may not sum to totals because of rounding.

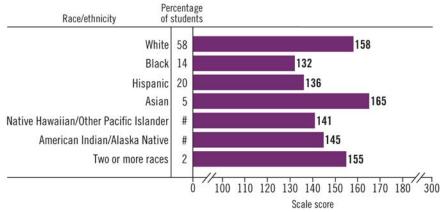
¹ The percentage is based on the sum of the unrounded percentages as opposed to the rounded percentages shown in the figure.

Asian students score higher than other racial/ethnic groups

In 2011, NAEP results were available for seven racial/ethnic groups: White, Black, Hispanic, Asian, Native Hawaiian/Other Pacific Islander, American Indian/Alaska Native, and students categorized as two or more races (multiracial). The average writing score for Asian students was higher than the scores for the other six racial/ethnic groups (figure 2).

A lower percentage of Asian students than White, Black, Hispanic, and multiracial students performed at the *Basic* level in 2011 (**figure 3**). The percentages of Asian students at *Proficient* and at *Advanced* were higher than the percentages of White, Black, Hispanic, and multiracial students. Higher percentages of White students than Black and Hispanic students performed at the *Proficient* and *Advanced* levels.

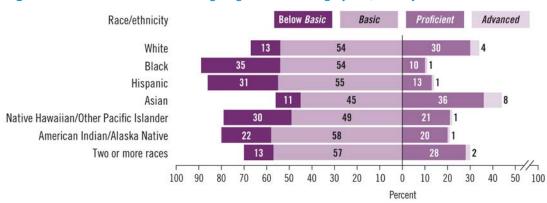
Figure 2. Percentage of students and average scores in eighth-grade NAEP writing, by race/ethnicity: 2011



Rounds to zero.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

Figure 3. Achievement-level results in eighth-grade NAEP writing, by race/ethnicity: 2011

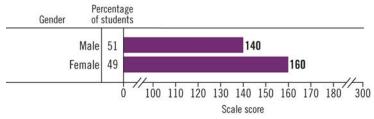


NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

Female students perform higher than male students

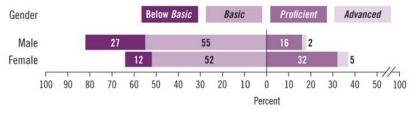
Female students scored 19 points² higher on average than male students in 2011 at grade 8 (figure 4). Differences in the performance of male and female students were also reflected in the achievement-level results, with a lower percentage of female than male students performing at the Basic level and higher percentages of female than male students at Proficient and at Advanced (figure 5).

Figure 4. Percentage of students and average scores in eighth-grade NAEP writing, by gender: 2011



NOTE: Detail may not sum to totals because of rounding.

Figure 5. Achievement-level results in eighth-grade NAEP writing, by gender: 2011



NOTE: Detail may not sum to totals because of rounding.



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

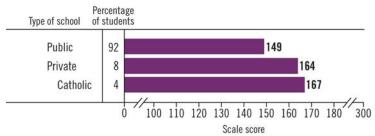
² The score-point difference is based on the difference between the unrounded scores as opposed to the rounded scores shown in the figure.

Public school students score lower than private school students

Ninety-two percent of eighth-graders attended public schools in 2011 (figure 6). The average writing score for students attending public schools was 16 points³ lower than the score for students attending private schools and 18 points lower than the score for private school students in Catholic schools only.

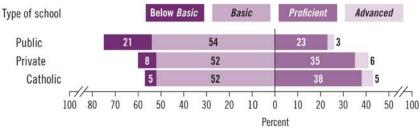
The percentages of students performing at the Basic level did not differ significantly by the type of school they attended (figure 7). Lower percentages of public school students than private school students performed at the Proficient level and at Advanced. While the percentage of public school students at Proficient was also lower than the percentage of Catholic school students at *Proficient*, there was no significant difference in the percentages of public and Catholic school students at Advanced.

Figure 6. Percentage of students and average scores in eighth-grade NAEP writing, by type of school: 2011



NOTE: Private schools include Catholic, other religious, and nonsectarian private schools. Detail may not sum to totals because of rounding.

Figure 7. Achievement-level results in eighth-grade NAEP writing, by type of school: 2011



NOTE: Private schools include Catholic, other religious, and nonsectarian private schools. Detail may not sum to totals because of rounding.

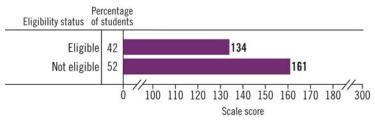
³ The score-point difference is based on the difference between the unrounded scores as opposed to the rounded scores shown in the figure.

Student performance varies by family income

Students' eligibility for the National School Lunch Program (NSLP) is used in NAEP as an indicator of family income. Students from lower-income families are eligible for either free or reduced-price school lunch, while students from higher-income families are not (see the Technical Notes for eligibility criteria).

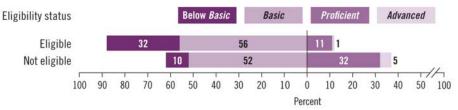
Forty-two percent of eighth-graders were eligible for NSLP in 2011 (figure 8). Eighth-graders who were not eligible for NSLP scored higher on average than those who were eligible. In comparison to students who were not eligible for NSLP, a larger percentage of eligible students performed at the Basic level in 2011, and smaller percentages of eligible students performed at Proficient and at Advanced (figure 9).

Figure 8. Percentage of students and average scores in eighth-grade NAEP writing, by eligibility for National School Lunch Program: 2011



NOTE: Detail may not sum to totals because results are not shown for the "Information not available" category.

Figure 9. Achievement-level results in eighth-grade NAEP writing, by eligibility for National School Lunch Program: 2011



NOTE: Detail may not sum to totals because of rounding.



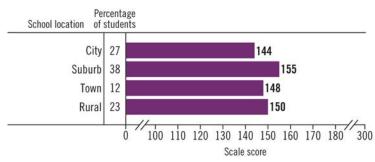
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

Students in suburban schools score higher than students in other locations

Student performance on the 2011 writing assessment varied based on the location of the schools they attended (see the Technical Notes for more information on how school location categories were defined). Students attending schools in suburban locations had a higher average score than students attending schools in other locations (figure 10). Scores for students who attended schools in rural and town locations were not significantly different from each other, and students in both locations had higher scores than students in cities.

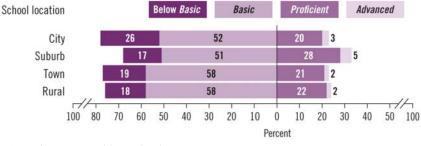
The percentages of eighth-graders performing at the Basic level in city and suburban schools were smaller than the percentages at Basic in town and rural locations (figure 11). Students attending suburban schools had higher percentages at Proficient and at Advanced than students attending schools in the other three locations.

Figure 10. Percentage of students and average scores in eighth-grade NAEP writing, by school location: 2011



NOTE: Detail may not sum to totals because of rounding.

Figure 11. Achievement-level results in eighth-grade NAEP writing, by school location: 2011



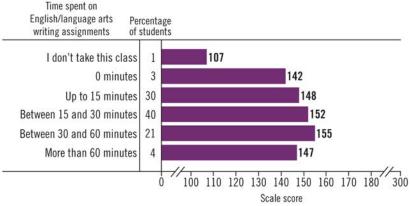
NOTE: Detail may not sum to totals because of rounding

About two-thirds of eighth-graders spend more than 15 minutes a day writing for English class

Students were asked how much time they spent in a typical school day writing a paragraph or more for their English/language arts (ELA) class. The writing could be on paper or on computer. Forty percent of students reported spending between 15 and 30 minutes on writing for their ELA class, while 21 percent reported spending between 30 and 60 minutes, and 4 percent reported spending more than 60 minutes (figure 12).

In 2011, eighth-graders who reported spending between 30 and 60 minutes on writing in their ELA class scored higher on average than students who wrote more or less frequently.

Figure 12. Percentage of students and average scores in eighth-grade NAEP writing, by student-reported time spent on writing assignments of a paragraph or more during English/language arts class in a typical school day: 2011



NOTE: Detail may not sum to totals because of rounding



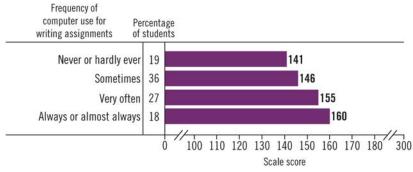
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

Students who use computers more frequently to draft and revise their writing score higher

As part of the 2011 eighth-grade writing assessment, questionnaires were completed by the teachers of participating students. One of the questions asked teachers to report on how often they asked students to use computers to draft and revise their writing. A total of 44 percent⁴ of students had teachers who reported that they asked students to use computers for drafting and revising very often or always.

Students whose teachers more frequently asked them to use the computer to draft and revise their writing scored higher than those whose teachers did so less frequently (figure 13). Students whose teachers never asked them to draft and revise their writing on a computer scored the lowest.

Figure 13. Percentage of students and average scores in eighth-grade NAEP writing, by teacher-reported frequency with which they ask their students to use a computer for drafting and revising writing assignments: 2011



NOTE: Detail may not sum to totals because of rounding

The frequency with which students' teachers had them use computers to draft and revise their writing differed by students' eligibility for NSLP and whether they attended public or private schools (table 2). In 2011, larger percentages of students who were eligible for school lunch than those who were not eligible had teachers who reported never or sometimes asking students to use computers to draft and revise their writing. On the other hand, higher percentages of students who were not eligible had teachers who reported always or very often asking them to use computers for drafting and revising. A larger percentage of students attending public schools than private schools had teachers who reported never or hardly ever asking students to use computers to draft or revise their writing.

Table 2. Percentage of students assessed in eighth-grade NAEP writing, by teacher-reported frequency with which they ask their students to use a computer for drafting and revising writing assignments and selected characteristics: 2011

	Frequency of computer use for writing assignments			
Characteristic	Never or hardly ever	Sometimes	Very often	Always or almost always
Eligibility for National School Lunch Program				
Eligible	25	40	23	12
Not eligible	15	34	30	21
Type of school				
Public	20	37	26	17
Private	12	29	32	28
Catholic	6	34	32	28

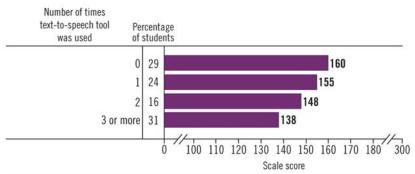
NOTE: Private schools include Catholic, other religious, and nonsectarian private schools. Detail may not sum to totals because of rounding

⁴ The percentage is based on the sum of the unrounded percentages as opposed to the rounded percentages shown in the figure.

New era of computer-based testing provides insight into how students use word-processing tools

The computer-based delivery of the NAEP writing assessment provided the opportunity to collect data on the extent to which students engaged in specific actions available to them in the word-processing software. Results for the student actions are reported as the percentages of students engaging in the action with varying frequency, and the average writing score for those students. For example, students who used the text-to-speech tool more frequently scored lower on average than those who engaged in the action less frequently (figure 14). A total of 71 percent of eighth-grade students used the text-to-speech tool for the writing prompt one or more times (the tool was not available to use for their responses), and 29 percent did not use it at all. Although not shown here, a higher percentage of students identified with a disability (39 percent) than those not identified with a disability (30 percent) used the text-to-speech tool three or more times. Further information about student actions is available at http://nationsreportcard .gov/writing_2011/writing_tools.asp.

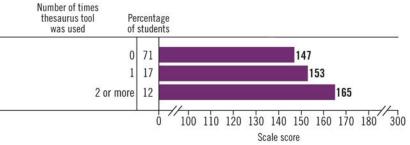
Figure 14. Percentage of students and average scores in eighth-grade NAEP writing, by number of times text-to-speech tool was used during assessment: 2011



NOTE: Detail may not sum to totals because of rounding

Students also had the option of using an online thesaurus tool to enhance or improve their writing. Students who used the thesaurus scored higher, on average, than students who did not use it, and students who used it two or more times scored higher than students who used it only once (figure 15). Seventy-one percent of eighth-grade students did not use the thesaurus tool and 29 percent used the tool one or more times during the assessment. Although not shown here, a lower percentage of students identified as English language learners (6 percent) than non-English language learners (12 percent) used the thesaurus tool two or more times.

Figure 15. Percentage of students and average scores in eighth-grade NAEP writing, by number of times thesaurus tool was used during assessment: 2011

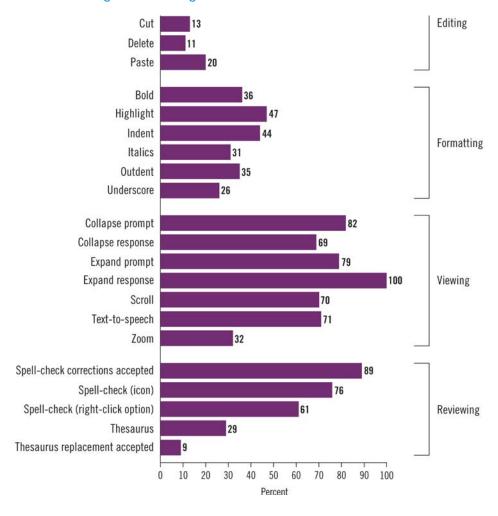


NOTE: Detail may not sum to totals because of rounding

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

In addition to the number of key presses students made in the process of completing their responses to the writing tasks, data were collected on how often they engaged in 23 other actions related to editing, formatting, viewing, and reviewing text. The extent to which students made use of each of the tools that were available to them varied. For example, almost all eighth-graders used the backspace key at least one time, while 20 percent or less used the copy, cut, or paste tools (figure 16).

Figure 16. Percentage of eighth-graders who used various student actions at least once during the NAEP writing assessment: 2011





Other results for student actions, including the percentages of students engaging in specific actions with varying frequency and the average writing scores for those students, are available on the NAEP website at http://nationsreportcard.gov/ writing_2011/student_action_results.asp and in the NAEP Data Explorer at http://nces.ed.gov/nationsreportcard/naepdata/ within the Student Factors category. Stud cha

attitude toward

writing

tools

A closer look at lower- and higher-performing students

Among eighth-graders who

The summary of results presented below shows how students performing at the lower end of the scale (below the 25th percentile) and those scoring at the higher end (above the 75th percentile) differed in terms of their demographics, educational experiences, and use of word-processing tools available to them.

	(i.e., below a score of 127) in 2011	(i.e., above a score of 175) in 2011
dent demographic	39% were White 25% were Black 31% were Hispanic 3% were Asian	73% were White 6% were Black 10% were Hispanic 8% were Asian
racteristics	67% were eligible for free/	18% were eligible for free/

reduced-price school lunch

86% had computers in the home

15% reported always using the

99% had computers in the home

49% reported always using the

reduced-price school lunch

Among eighth-graders who

computer to make changes to computer to make changes to something they wrote for school something they wrote for school 24% never use a computer to 5% never use a computer to Student educational write for school assignments write for school assignments experiences and

24% had teachers who always have them use wordprocessing tools

34% agreed or strongly agreed that writing is one of their favorite activities

38% had teachers who always have them use wordprocessing tools

58% agreed or strongly agreed that writing is one of their favorite activities

more than 500 times Students' use of word-processing

31% right-clicked to access spell-check 1-10 times

5% used the backspace key

45% accessed the text-to-speech function 3 or more times

41% used the backspace key more than 500 times

57% right-clicked to access spell-check 1-10 times

18% accessed the text-to-speech function 3 or more times

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

Assessment Content

Additional insight into students' performance on the NAEP writing assessment can be obtained by examining what eighth-graders are expected to know and be able to do in relation to how they performed on one of the assessment tasks designed to measure their writing skills. This section presents the achievement-level descriptions for writing at grade 8 and examples of student performance in response to a grade 8 task.

Writing Achievement-Level Descriptions for Grade 8

The specific descriptions of what eighth-graders should know and be able to do at the Basic, Proficient, and Advanced writing achievement levels are presented below. NAEP achievement levels are cumulative; therefore, student performance at the Proficient level includes the competencies associated with the Basic level, and the Advanced level also includes the skills and knowledge associated with both the Basic and the Proficient levels. The cut score indicating the lower end of the score range for each level is noted in parentheses.

Basic (120)

Eighth-grade students writing at the Basic level should be able to address the tasks appropriately and mostly accomplish their communicative purposes. Their texts should be coherent and effectively structured. Many of the ideas in their texts should be developed effectively. Supporting details and examples should be relevant to the main ideas they support. Voice should align with the topic, purpose, and audience. Texts should include appropriately varied uses of simple, compound, and complex sentences. Words and phrases should be relevant to the topics, purposes, and audiences. Knowledge of spelling, grammar, usage, capitalization, and punctuation should be made evident; however, there may be some errors in the texts that impede meaning.

Proficient (173)

Eighth-grade students writing at the Proficient level should be able to develop responses that clearly accomplish their communicative purposes. Their texts should be coherent and well structured, and they should include appropriate connections and transitions. Most of the ideas in the texts should be developed logically, coherently, and effectively. Supporting details and examples should be relevant to the main ideas they support, and contribute to overall communicative effectiveness. Voice should be relevant to the tasks and support communicative effectiveness. Texts should include a variety of simple, compound, and complex sentence types combined effectively. Words and phrases should be chosen thoughtfully and used in ways that contribute to communicative effectiveness. Solid knowledge of spelling, grammar, usage, capitalization, and punctuation should be evident throughout the texts. There may be some errors, but these errors should not impede meaning.

Advanced (211)

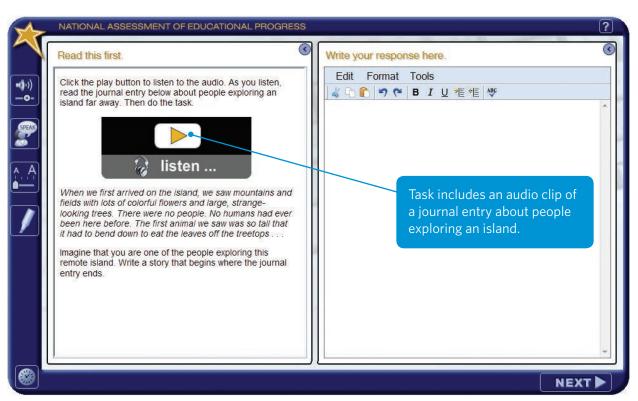
Eighth-grade students writing at the Advanced level should be able to construct skillful responses that accomplish their communicative purposes effectively. Their texts should be coherent and well structured throughout, and they should include effective connections and transitions. Ideas in the texts should be developed logically, coherently, and effectively. Supporting details and examples should skillfully and effectively support and extend the main ideas in the texts. Voice should be distinct and enhance communicative effectiveness. Texts should include a well-chosen variety of sentence types, and the sentence structure variations should enhance communicative effectiveness. Words and phrases should be chosen strategically, with precision, and in ways that enhance communicative effectiveness. An extensive knowledge of spelling, grammar, usage, capitalization, and punctuation should be evident throughout the texts. Appropriate use of these features should enhance communicative effectiveness. There may be a few errors, but these errors should not impede meaning.

Sample Task: Writing to Convey Experience

Whether writing to convey a real or an imaginary experience, the task of the writer is to wield the language in such a way that the experience becomes vivid to the reader. When writing to convey experience, the writer employs description, voice, and style to evoke a sense of an event or of emotions associated with the events described.

One of the writing tasks from the eighth-grade assessment asked students to immerse themselves in an imaginary situation and to write about it as if from personal experience. In the Lost Island task, students listened to an audio recording of atmospheric sounds while reading a few sentences from an imaginary journal. The audio provided the sound of waves lapping on the shore, the squawking of birds, as well as the sound of footsteps in the sand to create a sense of the island world that the students were to imagine exploring. Students' responses to this task included both journal-style narratives as well as stories told in the third person. Responses were rated with a six-level scoring guide ranging from "Little or no skill" to "Effective."

LOST ISLAND TASK SCREENSHOT

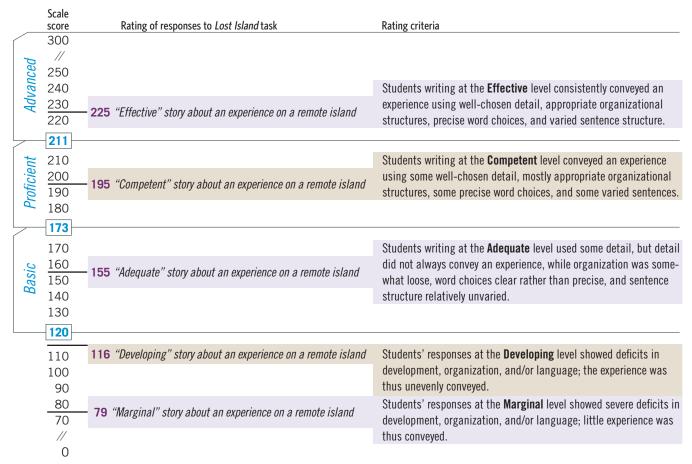


Range of eighth-grade skills when writing to convey experience

The item map below illustrates the range of writing skills demonstrated by students when writing to the Lost Island task. The responses for each of the credited score categories⁵ are mapped at different points on the NAEP writing scale and fall within the achievement level ranges Basic, Proficient, and Advanced, or in the range below Basic. The cut score at the lower end of the range for each achievement level is boxed. The criteria for specific score levels reflect the skills demonstrated by eighth-graders when writing to convey experience. In reading the map, it is important to remember that the score levels do not have a direct correspondence to the achievement level ranges, but indicate where performance mapped for this particular writing task. For example, for this task, students performing at the Basic level with a score of 155 were likely to compose a coherent story using some relevant details. Students performing within the *Proficient* range with a score of 195 were likely to produce mostly well-controlled stories using more variety of sentence structure and thoughtful word choices. Students performing at the Advanced level with a score of 225 were likely to develop a story that consistently displayed a skillful use of language and technique to fully accomplish the purpose of the task.

However, student performance varies by task, and ratings for different tasks may map at different points of the writing scale. For other tasks, responses rated as "Adequate" may fall within the Proficient range, or a "Developing" response might fall within the Basic range.

GRADE 8 NAEP WRITING ITEM MAP



NOTE: The sample grade 8 writing task in the 2011 writing assessment was mapped onto the NAEP 0-300 writing scale. The map shows, for each level on the scoring guide from "Marginal" through "Effective," the scale score attained by students who had a 65 percent probability of attaining that level or higher for the selected task. Scale score ranges for writing achievement levels are referenced on the map. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

⁵ The lowest rating, "Little or no skill," receives 0 credit and is not scaled.

Five percent of eighth-graders provided responses to the Lost Island task that were rated "Effective" and 14 percent provided responses rated "Competent." Three percent of eighth-graders received a rating of "Little or no skill" on this task.

Percentage of eighth-grade students, by response rating for Lost Island task: 2011

Effective	Competent	Adequate	Developing	Marginal	Little or no skill
5	14	37	30	11	3

NOTE: Detail may not sum to totals because of rounding.

The table below shows the percentage of students within each achievement level whose responses to the Lost Island task were rated as "Adequate" or higher. For example, among eighth-graders performing at the Basic level, 53 percent provided responses that were rated "Adequate" or higher and among students at the Proficient level, 95 percent wrote responses to the task that were rated "Adequate" or higher.

Percentage of eighth-grade student responses to Lost Island task rated "Adequate" or higher, by achievement level: 2011

Below Basic	At Basic	At Proficient	At Advanced
4	53	95	100

Example of a "Developing" response

The sample student response shown here was rated as demonstrating "Developing" skill in responding to the writing task. It begins with a rather flat explanation of what happened to bring them to the island and continues the narrative with a list-like focus on action but no discussion of plot elements. Apart from the "ferocious monkeys" and the sudden "loud buzzing noise," the response incorporates no descriptive vocabulary to evoke what it felt like to have the experience or what the island was like. The narrative voice is not controlled as it switches from first person to third person. Errors in mechanics and verb tenses are frequent enough to be distracting. This response demonstrates skills associated with performance below the Basic level. Eighth-grade students performing in the range below Basic respond to the topic but do not sufficiently develop ideas to convey the experience.

The reason we are on this island is because our plane crashed offshore about one hundred feet. Then we drifted here. The plane has three days worth of food and 2 days worth of water. We could probably use some of the things on the plane to build shelter and a fire. There was a total of 10 people on the plane, nobody died when it crashed thinks to the pilot. We are college students on a vacation to Hawaii, but we hit a bad storm and drifted way off course. The pilot saw the island and crash landed near it. There is five guys and five girls, the girls will get to sleep inside the plane so they don't get to cold or scared. The guys will sleep outside near the plane next to the fire because the plane is now not big enough to hold 10 people.

The next day, the guys ventured further inland for some fruit to eat for breakfast. All of the sudden they were attacked by monkeys, so they ran back and squeezed in the plane until the ferocious monkeys left. They ate what fruit they were able to grab and then went to the ocean to catch some fish. While the guys were outside fishing, the girls built a sign out of logs that said "HELP". If they saw a boat or airplane, they would light it on fire so that they could be rescued. Two days past, then suddenly a loud buzzing noise came from overhead, it was an airplane. They were saved! The plane had saw the smoke from their fire. It landed safely near the shore and picked them up.

Example of an "Adequate" response

The sample student response shown here was rated as demonstrating "Adequate" skill in responding to the writing task. It takes elements from the journal excerpt—the animal, the mountains—and incorporates them into a short narrative using both description and action. While simple sentences predominate, there is some variety in sentence structure. Ideas are presented clearly and in a logical progression, but without any stylistic transition between them. The use of such words as "exotic," "apex," and "magnificent" contribute to a sense of voice that aligns with the experience the student has been asked to convey. This response demonstrates skills associated with performance at the Basic level. Eighth-grade students at this level are able to mostly accomplish the communicative purpose of a task clearly and coherently.

The animal looked like a brontosaurus, but bigger and more muscular. There were many more animals on the island also, there were strange animals that looked like moneys, but they had two tails and four arms. Another animal looked like a rhinosaurus, but had four eyes and five horns on his head and back. As we watched the creatures, we decided to explore the rest of the island. We cut through fields where wonderful foods grew. We had never seen these types of foods before. They food was huge and exotic looking, but they were ripe and delicious. Then we made our way to the mountains, they were so big and beautiful. We thought it would be exciting to climb up these mountains and get a better view of the island. The mountain was steep and had a lot of the same strange trees and colorful flowers. When we made it to the apex of the mountain, the scenery was magnificent! There were many trees and animal life, the island had warm beaches and clear lakes and a clear blue sky. The island was a sight to see, it looked as if had been untouched by the pollution and the oil spill. The island was full of beauty.

Example of a "Competent" response

The following sample student response was rated as "Competent" in responding to the writing task. Despite some awkward moments, the response demonstrates a control of language in a sustained and descriptive narrative. A variety of sentence types are used effectively to create both scene and character. In parts of the response, sentence length is used to emphasize meaning, as in the fourth paragraph, where the second sentence effectively communicates a sense of suspense. Transitions between most of the sentences and paragraphs contribute to the narrative flow. Although the ending is somewhat abrupt, it does create a sense of conclusion. This response demonstrates skills associated with performance at the *Proficient* level. Eighth-grade students at this level are able to develop thoughtful responses that accomplish the communicative purpose.

It was a creature none of us has ever seen before. We were awed by its beauty with its purple furry body and head like a cat. When this creature saw us it was not mean, it was not harsh, it simply bent down and purred. We were welcomed.

As we explored the island on the back of the creature we call Bila, we saw more diverse creatures and we wanted to captivate this experience. We had a camera with us and with this camera we took pictures of Bila and her friend Shia, who looked just like her only orange. We took pictures of the trees, which were enormously tall—only not quite as tall as Bila—and blue! they had strange fruits such as these things that were yellow like lemons, but were in the shape of a box.

That was just the first night though. We camped out where Bila stayed and set up a campfire. Bila and Shia's reaction made it seemed as though they never saw a fire before. There were terrified and intriqued at the same time. As we were talking Bila said something about the Shigrutan, who didn't like new creatures. They talked about them as though they were demons. They told us to never cross the line of invisibility, where the Shigrutan would be waiting.

(continued on next page)

However, one day, about a week into our adventure, one of our followers, Mike, accidentally stepped over the line while getting picking some tias—a green fruit shaped like a triangle. As promised, the Shigrutan were waiting. They started poking him with sticks and throwing some strange looking vegetables at him. Bila and Shia rushed over to get him and started towards the line again. They looked mad and afraid that he didn't listen.

As Bila and Shia were re-explaining the dangers of crossing the line, my curiosity got the better of me. I started towards the line and as Bila started to realize, I was already running. I got to the line and started hearing the brushing of bushes and leaves. I started to get nervous, but I wasn't afraid. I crossed the line and everything happened in a rush. There were sticks and vegetables flying and then all of a sudden an ear-piercing scream.

What I took to be the leader of the Shigrutan stepped out signaling his followers to cease fire. He wore a yellow wrap around his body, which was blue. He had long black hair that went to the middle of his back in a ponytail. His eyebrows looked like they were made out of gems. He was a beautiful creature and I felt like I was being pulled to him. I walked towards him and could hear the sharp intake of breath from behind me.

As I got to him, he wrapped me up in a red cloth and threw me on his back. He carried me away to his dungeon as I could hear Bila and Shia yelling from behind me. I didn't care though. Some how I felt safe with him. When we got to his dungeon he sat me down and told me about his life. He told me that his life was just like mine, except he was always an outcast with his blue skin. His mother told him about this place, and he always imagined that one day he would find it. His mother passed away when he was seventeen and he went on a mission to find the place his mother was from. He set off on the journey when he was nineteen.

When he got here, he saw creatures, strangely unique creatures. He was pulled in and felt like he knew this place just from what his mother would tell him. He had found his home and quickly became the king of his loyal followers, the Shigrutan. When he was done telling the story that I became captivated in, he asked me about myself. I told him that I was from America and had come all the way down here for an adventure. To go where no other has gone before. Even now, after I've found what I was looking for, there was no way that I was leaving. He got down on one knee and proposed. I said even though I don't know you, I feel strangely connected. I answered yes but with one condition. After he asked me what that one condition was, I told him that he had to let my friends come with me.

We got married and I never had to leave the island. This was where I was staying whether or not my friends were.



WRITING TASKS AVAILABLE ONLINE

More NAEP writing tasks are available online at http://nces.ed.gov/nationsreportcard/ itmrlsx/search.aspx?subject=writing and include:

- One released task for each writing purpose at grade 8, including audio and video
- A scoring rubric for each task
- Samples of responses at each scoring level
- Student performance data

Explore the interface for the writing tasks at http://nationsreportcard.gov/ writing_2011/writing_tools.asp.

Example of an "Effective" response

The sample student response shown below was rated as showing "Effective" skill in responding to the writing task. Well-chosen details are used throughout the response, often in complex sentences to modify or elaborate on the idea. The consistently high level of word choice strategically enhances what the author wants to communicate; for example, "We slowly trudged through the dense sand back to our boat..." conveys the mood of the group that just witnessed the fight described in the first paragraph. Although it has a few confusing moments, the narrative coheres by virtue of a distinct voice and overall structure. This response demonstrates skills associated with performance at the Advanced level. Eighth-grade students at this level establish a distinct voice and employ an overall structure to effectively accomplish the communicative purpose.

We were nervous. What a tall animal it was! It stood on four legs and slowly munched on the leaves contentedly. None of our group had ever seen an animal this large, so we sat down to try to think about what it could be. Just then, a smaller animal with two legs and tiny little arms came galloping upon the first animal and tore off one of its legs. The fight was bloody, but quickly ended with the second animal enjoying his victory and savoring the taste of the first animal. That's when I knew. We were in an island with a bunch of dinosaurs.

Our group started to panic. So I tried to calm them down by simply telling them that we could get far, far away with just the boat that we had traveled on. Most of them seemed to agree. We slowly trudged through the dense sand back to our boat, which was now in sight. But it seemed that time stopped and the next thing I saw was a gigantic foot on top of our ruined boat. A dinosaur's face 20 feet above leered down at us and growled. I could tell by popular knowledge that it was a tyrannosaurus rex, one of the most fearsome creatures ever to walk the earth.

It was a mean sight to see. It was terrifying, with its huge claws and teeth and the fact that it was much larger than us. The only thing that reassured me was its tiny little arms. They kind of ruin the whole bad guy look for him. But I still am terrified. It's pandemonium, with everybody running and screaming and the t-rex behind us, picking us off one by one. I see many of my closest friends disappear behind the gigantic white teeth. And just as quickly as he appeared, he disappeared. Our group was stunned. Where could he have gone? We thought silently, worried looks behind our faces. When we couldn't get anything out of thinking, we started to make camp, since it was getting dark by then. We didn't have any materials and it was beautiful weather, with the temperature hanging around 70 degrees Fahrenheit. Se we just grabbed some leaves and branches off of what looked like a palm tree and tried to get to sleep, although I don't think anyone slept that night. I kept thinking to myself over and over, "We're doomed."

When we woke up in the morning we started to gather materials to make a new boat to get onto some nearby islands that looked small and didn't have any dinosaurs on them. We made great time, even working from dawn to sunset. We made around fifteen rafts that could carry our whole group. We made plans to get off the island by tomorrow morning. That's when I started to feel optimistic about our chances of survival.

The next morning, we took the rafts one by one down to the beach. I started to lead the group into a good rowing formation, since we had made oars also. I could see some dinosaurs cawing in the distance. Seemed normal enough to me. Then I thought that only flying things cawed. And that's when I saw an enormous pterodactyl swoop down onto me and lift me up into the air.

Flying was terrifying. The pterodactyl seemed to have every intention of dropping me into the ocean. I looked up at its orange skin and hated it for all the hope it had taken away from my life. Then I felt it lowering. It flew lower and lower until we were five feet off one of those nearby islands I wrote about earlier. Then it dropped me. It was a hard landing on the island, but I shook it off and came up O.K. I looked up and the last thing I saw was the pterodactyl swooping low over the horizon. I thanked it in my mind for what it had given me.

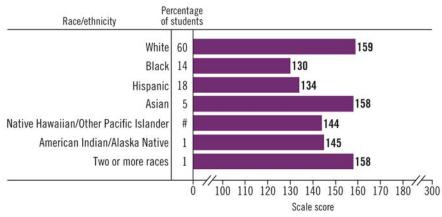
By the time the next morning came, the rest of my group was in the rafts on the shore of the island. I was so happy to see them all and to learn that one of the group mate's cell phones had picked up a signal, and help was coming. I finally had some hope.

GRADE 12 Twenty-seven percent of twelfth-graders perform at or above Proficient The average twelfth-grade writing score of 150 on the 0-300 scale establishes the baseline for comparing students' performance on future writing assessments. The percentages of students performing at each of the three achievement levels in 2011 provides information on the proportion of students demonstrating varying levels of writing skills and knowledge. Fifty-two percent of twelfth-graders performed at the Basic level and 79 percent performed at or above the Basic level in writing in 2011 (figure 17). Twenty-four percent performed at the Proficient level and 3 percent performed at the Advanced level. Figure 17. Achievement-level results in twelfth-grade NAEP writing: 2011 Percent NOTE: Detail may not sum to totals because of rounding. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

White, Asian, and multiracial students perform comparably at grade 12

Average writing scores for White students, Asian students, and students of two or more races (multiracial) did not differ significantly from each other in 2011, and all three groups scored higher on average than Black, Hispanic, and American Indian/Alaska Native students (**figure 18**). There were no significant differences among the racial/ethnic groups in the percentages of twelfth-graders performing at the *Basic* level in 2011 (**figure 19**). The percentages of students at *Proficient* and at *Advanced* did not differ significantly for White, Asian, and multiracial students, and the percentages for all three groups were higher than the percentages of Black and Hispanic students at *Proficient* and at *Advanced*.

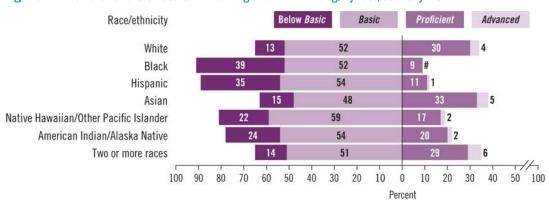
Figure 18. Percentage of students and average scores in twelfth-grade NAEP writing, by race/ethnicity: 2011



Rounds to zero.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

Figure 19. Achievement-level results in twelfth-grade NAEP writing, by race/ethnicity: 2011



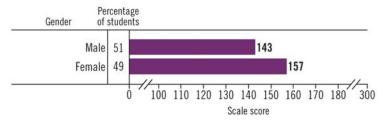
Rounds to zero.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding.

Female students score higher than male students

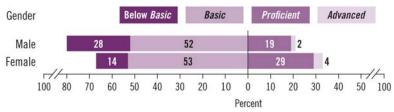
In 2011, female students scored 14 points higher on average than male students at grade 12 (figure 20). The percentages of students performing at the Basic level did not differ significantly by gender (figure 21). Higher percentages of female than male students performed at the Proficient level and at Advanced.

Figure 20. Percentage of students and average scores in twelfth-grade NAEP writing, by gender: 2011



NOTE: Detail may not sum to totals because of rounding.

Figure 21. Achievement-level results in twelfth-grade NAEP writing, by gender: 2011



NOTE: Detail may not sum to totals because of rounding.



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

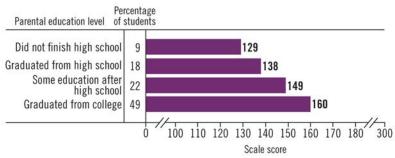
Students whose parents have higher levels of education score higher

Twelfth-graders were asked to report the highest level of education completed by each parent. Students selected one of five response options: "did not finish high school," "graduated from high school," "some education after high school," "graduated from college," and "I don't know." Results are reported for the highest level of education for either parent.

In 2011, twelfth-graders who reported higher levels of parental education had higher average writing scores than those who reported lower levels (**figure 22**). For example, students whose parents graduated from college scored higher on average than those whose parents had some education after high school, and they, in turn, scored higher than students whose parents' highest level of education was high school.

A similar pattern was observed in the achievement-level results—students who reported higher levels of parental education had higher percentages at *Proficient* and at *Advanced* in comparison to the percentages for students who reported lower levels of parental education (figure 23).

Figure 22. Percentage of students and average scores in twelfth-grade NAEP writing, by highest level of parental education: 2011



NOTE: Detail may not sum to totals because results are not shown for students who reported that they did not know the highest education level for either of their parents

Figure 23. Achievement-level results in twelfth-grade NAEP writing, by highest level of parental education: 2011



Rounds to zero.

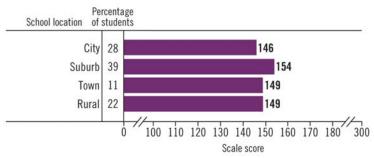
NOTE: Detail may not sum to totals because of rounding

Students in suburban schools score higher than students in cities and rural locations

There were some differences in student performance on the 2011 writing assessment based on the location of the schools students attended. The average score for students who attended schools in suburban locations was higher than the scores for students who attended schools in cities or rural locations, but did not differ significantly from the score for students in town locations (figure 24). Average scores for students attending schools in town, city, and rural locations did not differ significantly from each other.

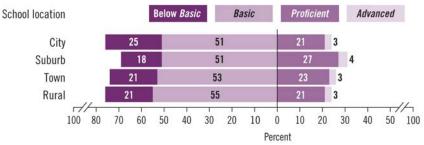
The percentages of twelfth-graders in city and suburban schools performing at the Basic level were smaller than the percentage of students at Basic in rural locations (figure 25). Students attending schools in suburban locations had a higher percentage at Proficient than students attending schools in the other three locations. The percentages of students at the Advanced level did not differ significantly by school location.

Figure 24. Percentage of students and average scores in twelfth-grade NAEP writing, by school location: 2011



NOTE: Detail may not sum to totals because of rounding.

Figure 25. Achievement-level results in twelfth-grade NAEP writing, by school location: 2011

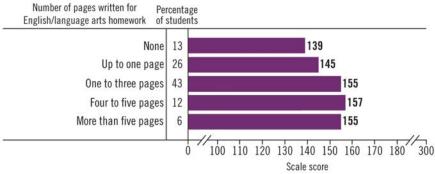


NOTE: Detail may not sum to totals because of rounding

Students who write four to five pages a week for English/language arts homework score higher than those who write fewer pages

Twelfth-graders were asked how many pages they wrote in a typical week for homework in their English/language arts (ELA) class. In 2011, the average writing score for twelfth-graders who reported writing between four and five pages for ELA homework did not differ significantly from the score for students who wrote more than five pages, and was higher than the scores for students who wrote fewer than four pages (figure 26). Students who reported not writing any pages for homework scored lower than those selecting any of the other responses. Sixty-eight percent⁶ of twelfth-graders reported writing up to three pages for their ELA homework in a typical week.

Figure 26. Percentage of students and average scores in twelfth-grade NAEP writing, by student-reported number of pages written for English/language arts homework in a typical week: 2011



NOTE: Detail may not sum to totals because of rounding.



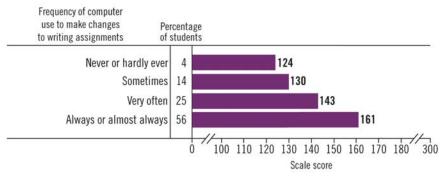
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). 2011 Writing Assessment.

⁶ The percentage is based on the sum of the unrounded percentages as opposed to the rounded percentages shown in the figure.

Students who use a computer more frequently to edit their writing score higher

Twelfth-graders were asked how often during the school year they use a computer to make changes to a paper or report (e.g., spell-check or cut and paste). Fifty-six percent of twelfthgraders reported always or almost always using a computer to make changes to their writing, and 4 percent reported never or hardly ever using one (figure 27). In 2011, twelfth-graders who reported more frequent use of a computer to edit their writing had higher average writing scores than those who reported less frequent use. For example, students who always or almost always used a computer to edit their writing scored higher on average than students who reported doing so very often, sometimes, or never or hardly ever.

Figure 27. Percentage of students and average scores in twelfth-grade NAEP writing, by student-reported frequency with which they use a computer to make changes to writing assignments: 2011



NOTE: Detail may not sum to totals because of rounding.

The frequency with which students used a computer to make changes to a paper or report varied by level of parental education (table 3). In 2011, a higher percentage of students whose parents graduated from college than students whose parents had lower levels of education reported always or almost always using a computer to make changes.

Table 3. Percentage of students assessed in twelfth-grade NAEP writing, by student-reported frequency with which they use a computer to make changes to writing assignments and highest level of parental education: 2011

	Frequency of computer use to make changes to writing assignments			
Parental education level	Never or hardly ever	Sometimes	Very often	Always or almost always
Did not finish high school	7	24	29	39
Graduated from high school	6	19	29	46
Some education after high school	4	14	27	54
Graduated from college	3	10	22	65

NOTE: Detail may not sum to totals because of rounding.

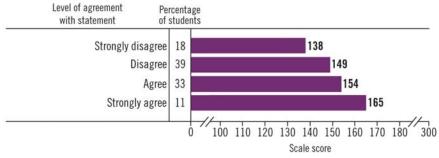
About 44 percent of students report writing is a favorite activity

Twelfth-grade students were asked about the extent to which they agreed or disagreed with the statement, "writing is one of my favorite activities." Thirty-three percent of students agreed that writing was one of their favorite activities in 2011 and 11 percent strongly agreed (figure 28).

Students who strongly agreed with the statement scored higher on average than students who simply agreed, and scores for both groups were higher than the scores for students who disagreed or strongly disagreed.

The proportion of students indicating that writing was one of their favorite activities varied by gender. Larger percentages of female than male students agreed or strongly agreed with the statement (table 4).

Figure 28. Percentage of students and average scores in twelfth-grade NAEP writing, by student-reported level of agreement with the statement, "writing is one of my favorite activities": 2011



NOTE: Detail may not sum to totals because of rounding.

Table 4. Percentage of students in twelfth-grade NAEP writing, by student-reported level of agreement with the statement, "writing is one of my favorite activities," and gender: 2011

	Level of agreement with statement				
Gender	Strongly disagree	Disagree	Agree	Strongly agree	
Male	23	42	27	8	
Female	12	36	39	14	

NOTE: Detail may not sum to totals because of rounding.

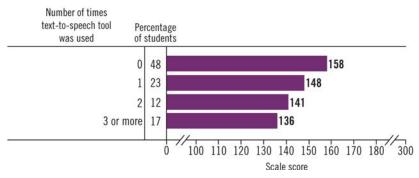


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP). 2011 Writing Assessment.

New era of computer-based testing provides insight into how students use word-processing tools

The computer-based delivery of the NAEP writing assessment provided the opportunity to collect data on the extent to which students engaged in specific actions available to them in the word-processing software. Results for the student actions are reported as the percentages of students engaging in the action with varying frequency, and the average writing score for those students. For example, students who used the text-to-speech tool more frequently scored lower on average than those who engaged in the action less frequently (figure 29). A total of 52 percent of twelfth-grade students used the text-to-speech tool for the writing prompt one or more times (the tool was not available to use for their responses), and 48 percent did not use it at all. Although not shown here, a higher percentage of students identified with a disability (26 percent) than those not identified with a disability (16 percent) used the text-to-speech tool three or more times. Further information about student actions is available at http://nationsreportcard.gov/ writing_2011/writing_tools.asp.

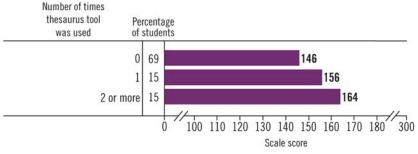
Figure 29. Percentage of students and average scores in twelfth-grade NAEP writing, by number of times text-to-speech tool was used during assessment: 2011



NOTE: Detail may not sum to totals because of rounding.

Students also had the option of using an online thesaurus tool to enhance or improve their writing. Students who used the thesaurus more frequently scored higher on average than those who engaged in this action less frequently (figure 30). Sixty-nine percent of twelfth-grade students did not use the thesaurus tool at all and 15 percent used the tool two or more times during the assessment. Although not shown here, a smaller percentage of English language learners (6 percent) than non-English language learners (16 percent) used the thesaurus tool two or more times.

Figure 30. Percentage of students and average scores in twelfth-grade NAEP writing, by number of times thesaurus tool was used during assessment: 2011

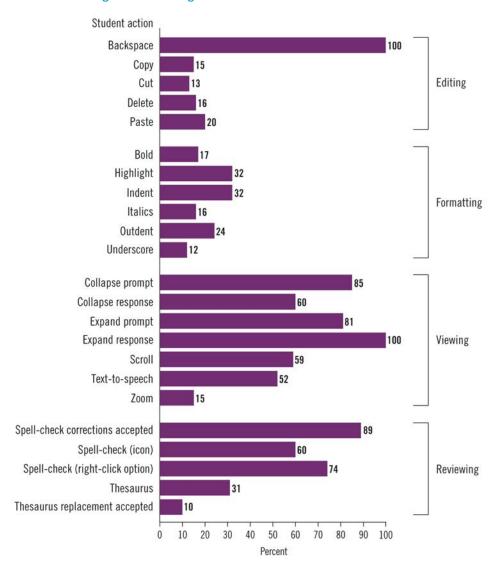


NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

In addition to the number of key presses students made in the process of completing their responses to the writing tasks, data were collected on how often they engaged in 23 other actions related to editing, formatting, viewing, and reviewing text. The extent to which students made use of each of the tools that were available to them varied. For example, almost all twelfth-graders used the backspace key at least one time, while 20 percent or less used the copy, cut, or paste tools (figure 31).

Figure 31. Percentage of twelfth-graders who used various student actions at least once during the NAEP writing assessment: 2011





Other results for student actions, including the percentages of students engaging in specific actions with varying frequency and the average writing scores for those students, are available on the NAEP website at http://nationsreportcard.gov/ writing_2011/student_action_results.asp and in the NAEP Data Explorer at http://nces.ed.gov/nationsreportcard/naepdata/ within the Student Factors category.

A closer look at lower- and higher-performing students

The summary of results presented below shows how students performing at the lower end of the scale (below the 25th percentile) and those scoring at the higher end (above the 75th percentile) differed in terms of their demographics, educational experiences, and use of word-processing tools available to them.

	Among twelfth-graders who scored below the 25th percentile (i.e., below a score of 127) in 2011	Among twelfth-graders who scored above the 75th percentile (i.e., above a score of 175) in 2011
Student demographic characteristics	40% were White25% were Black29% were Hispanic32% had at least one parent who graduated from college87% had computers in the home	78% were White5% were Black7% were Hispanic69% had at least one parent who graduated from college99% had computers in the home
Student educational experiences and attitude toward writing	 33% reported always using a computer to make changes to a paper or report (e.g., cut and paste, spell-check) 18% used a computer daily to write for school assignments 34% agreed or strongly agreed that writing is one of their favorite activities 	 77% reported always using a computer to make changes to a paper or report (e.g., cut and paste, spell-check) 39% used a computer daily to write for school assignments 55% agreed or strongly agreed that writing is one of their favorite activities
Students' use of word-processing tools	10% used the backspace key more than 500 times 49% right-clicked to access spell-check 1-10 times	67% used the backspace key more than 500 times68% right-clicked to access spell-check 1–10 times

Assessment Content

Additional insight into students' performance on the NAEP writing assessment can be obtained by examining what twelfth-graders are expected to know and be able to do in relation to how they performed on one of the assessment tasks designed to measure their writing skills. This section presents the achievementlevel descriptions for writing at grade 12 and examples of student performance in response to a grade 12 task.

Writing Achievement-Level Descriptions for Grade 12

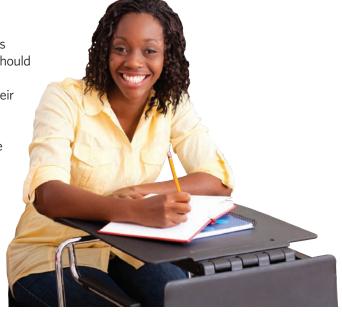
The specific descriptions of what twelfth-graders are expected to be able to do at the Basic, Proficient, and Advanced writing achievement levels are presented below. As the NAEP achievement levels are cumulative, the expectations of student performance at the Proficient level include writing skills expected at the Basic level. Likewise, skills expected at the Advanced level of writing assume those specified for performance at the Basic and Proficient levels. The cut score indicating the lower end of the score range for each achievement level is noted in parentheses.

Basic (122)

Twelfth-grade students writing at the Basic level should be able to respond effectively to the tasks and accomplish their communicative purposes. Their texts should be coherent and well structured. Most of the ideas in their texts should be developed effectively. Relevant details and examples should be used to support and extend the main ideas in the texts. Voice should support the communicative purposes of the texts. Texts should include appropriately varied simple, compound, and complex sentence types. Words and phrases should be suitable for the topics, purposes, and audiences. Substantial knowledge of spelling, grammar, usage, capitalization, and punctuation should be clearly evident. There may be some errors in the texts, but these errors should not generally impede meaning.

Proficient (173)

Twelfth-grade students writing at the *Proficient* level should address the tasks effectively and fully accomplish their communicative purposes. Their texts should be coherent and well structured with respect to these purposes, and they should include well-crafted and effective connections and transitions. Their ideas should be developed in a logical, clear, and effective manner. Relevant details and examples should support and extend the main ideas of the texts and contribute to their overall communicative effectiveness. Voice should be relevant to the tasks and contribute to overall communicative effectiveness. Texts should include a variety of simple, compound, and complex sentence types that contribute to overall communicative effectiveness. Words and phrases should be chosen purposefully and used skillfully to enhance the effectiveness of the texts. A solid knowledge of spelling, grammar, usage, capitalization, and punctuation should be evident throughout the texts. There may be some errors in the texts, but they should not impede meaning.



Advanced (210)

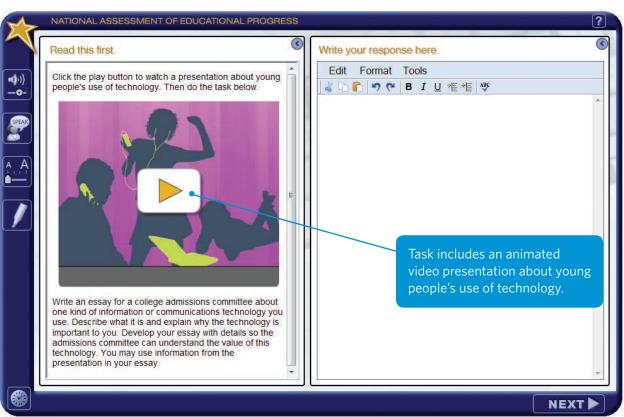
Twelfth-grade students writing at the Advanced level should be able to address the tasks strategically, fully accomplish their communicative purposes, and demonstrate a skillful and creative approach to constructing and delivering their messages. Their texts should be coherent and well structured; they should include skillfully constructed and effective connections and transitions; and they should be rhetorically powerful. All of the ideas in their texts should be developed clearly, logically, effectively, and in focused and sophisticated ways. Supporting details and examples should be well crafted; they should skillfully support and extend the main ideas; and they should strengthen both communicative effectiveness and rhetorical power of the texts. A distinct voice that enhances the communicative effectiveness and rhetorical power of the texts should be evident. Texts should include a variety of sentence structures and types that are skillfully crafted and enhance communicative effectiveness and rhetorical power. Words and phrases should be chosen purposefully, with precision, and in ways that enhance communicative effectiveness and rhetorical power. A highly developed knowledge of spelling, grammar, usage, capitalization, and punctuation should be evident throughout the texts and function in ways that enhance communicative effectiveness and rhetorical power. There may be a few errors in the texts, but they should not impede meaning.

Sample Task: Writing to Explain

When writing to explain, the task of the writer is to bring together relevant information and to present this information with focus and clarity so that the topic becomes understandable to a reader. The sequence of ideas, and how ideas are arranged, must cohere and contribute to the communicative purpose.

One of the writing tasks from the twelfth-grade assessment asked students to write about a type of technology that they use in their lives and why they value that technology. The Value of Technology task began with a short video about young people's use of technology. This video included animation and statistics about technology use. The written part of the task then specified an audience for students to address in explaining the value of a particular technology. Responses were rated using a scoring guide ranging from "Little or no skill" to "Effective."

VALUE OF TECHNOLOGY TASK SCREENSHOT

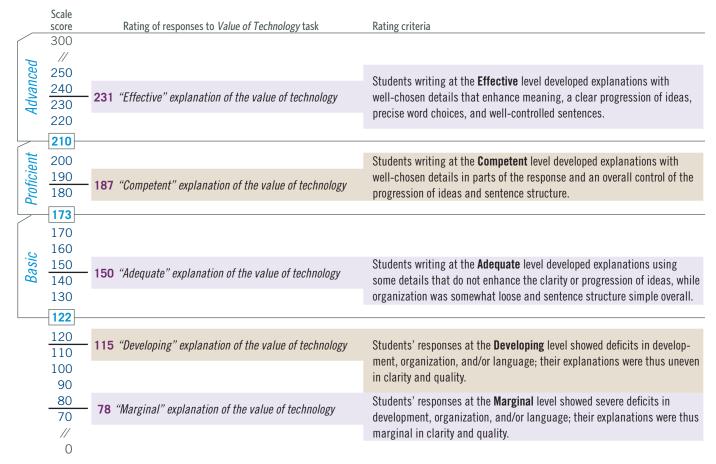


Range of twelfth-grade skills when writing to explain

The item map below illustrates the range of writing skills demonstrated by students when writing to the Value of Technology task. The responses for each of the credited score categories⁷ are mapped at different points on the NAEP writing scale and fall within the achievement level ranges Basic, Proficient, and Advanced, or in the range below Basic. The cut score at the lower end of the range for each achievement level is boxed. The criteria for specific score levels reflect the skills demonstrated by twelfth-graders when writing to this purpose (i.e., writing to explain). In reading the map, it is important to remember that the score levels do not have a direct correspondence to the achievement level ranges, but indicate where performance mapped for this particular writing task. For example, for this task, students performing at the Basic level with a score of 150 were likely to focus ideas clearly enough to provide some explanation. Students performing within the Proficient range with a score of 187 were likely to provide well-developed explanations with some ideas strengthening the clarity and progression. Students performing at the Advanced level with a score of 231 were likely to provide consistently controlled explanations enhanced by precise word choice and clearly focused ideas expressed in such a way that not only are the ideas clear, but also the relationships among them.

However, student performance varies by task, and ratings for different tasks may map at different points of the writing scale. For other tasks, responses rated as "Adequate" may fall within the Proficient range, or a "Developing" response might fall within the Basic range.

GRADE 12 NAEP WRITING ITEM MAP



NOTE: The sample grade 12 writing task in the 2011 writing assessment was mapped onto the NAEP 0-300 writing scale. The map shows, for each level on the scoring guide from "Marginal" through "Effective," the scale score attained by students who had a 65 percent probability of attaining that level or higher for the selected task. Scale score ranges for writing achievement levels are referenced on the map SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 Writing Assessment.

⁷ The lowest rating, "Little or no skill," receives 0 credit and is not scaled.

Five percent of twelfth-graders provided responses to the Value of Technology task that were rated "Effective" and 21 percent provided responses rated "Competent." Three percent of twelfth-graders received a rating of "Little or no skill" on this task.

Percentage of twelfth-grade students, by response rating for Value of Technology task: 2011

Effective	Competent	Adequate	Developing	Marginal	Little or no skill
5	21	34	25	11	3

NOTE: Detail may not sum to totals because of rounding.

The table below shows the percentage of students within each achievement level whose responses to the Value of Technology task were rated as "Adequate" or higher. For example, among twelfth-graders performing at the Basic level, 61 percent provided responses that were rated "Adequate" or higher and among students at the Proficient level, 97 percent wrote responses to the task that were rated "Adequate" or higher.

Percentage of twelfth-grade student responses to Value of Technology task rated "Adequate" or higher, by achievement level: 2011

Below Basic	At Basic	At Proficient	At Advanced
6	61	97	100

Example of a "Developing" response

The sample response shown here was rated as demonstrating "Developing" skill in responding to the writing task. While this response provides clear statements related to the topic, the presentation of ideas is list-like. With the exception of the one-sentence explanation for why the writer uses the computer to do research for homework, no ideas are developed. Statistics from the video are referred to but not integrated into the response. The response never progresses in its organization beyond a listing based on "I use," "I like," or "I don't use"; ideas are related to the overall topic more than to one another. This response demonstrates performance associated with the range below the Basic level. Twelfth-grade students performing in this range may provide ideas relevant to the topic, but do not control or develop the ideas to fully explain it.

A type of technology I use in my daily life is my laptop.

I use my laptop daily because it's fast and simple to use. I use it to play games and use social networking sites such as facebook. I also use it to listen to music with iTunes. I can use it to sync music to put more songs on my ipod. Statistics state that 27% of young teens used video or music downloads. Doing research for homework is also something I use my laptop for. Using my computer makes it faster and easier to look things up. My laptop is important to me because it helps me stay connected with friends and family through social networking sights such as facebook. The internet somehow keeps me entertained knowing that I have everything i need to know right at my fingertips even though it might not always be true. I like to stay updated on what my favorite celebrities are doing through twitter. I don't use twitter as much as I use facebook because i feel that facebook has more things you can do on the site rather than just telling people what you are doing. The statistics in the video state that 55% of young people use social websites and probably for the same reasons I do. These are some of the many reasons why i like to use my laptop and why it is important to me.

Example of an "Adequate" response

The sample student response shown here was rated as demonstrating "Adequate" skill in responding to the writing task. In explaining the value of the technology, the response presents ideas clearly and simply. The three middle paragraphs explain different aspects of why the technology is valuable, with some examples that support the main idea. The connection between ideas in each paragraph is smooth and contributes to a sense of overall cohesion. While some phrasings are unclear, e.g., "fast engulfing" or "a reliant lifestyles," this response demonstrates skills associated with performance at the Basic level. Twelfth-grade students at this level demonstrate a control of language to accomplish the communicative purpose.

To College Admissions Committee:

Technology is an ongoing factor that will continue to grow each year. I, along with others, can admit that without it today's experiences would not be the same. Facebook, a popular blogging site, is a source that I rely on for communication, news, and entertainment.

Facebook, created by Mark Zukerberg, was originally made as a site to communicate with fellow college students. The fast engulfing site has become just this for myself and many million other "friends." Acquaintances are able to update me on what is new with their lives. I am able to communicate with long distance family. My school has even taken advantage of the popular site by posting assignments and study groups.

News sweeps across Facebook faster than a hurricane. Although I do watch and read news elsewhere, the website makes it easy and convenient. Because most people own a computer, the news can be accessed as desired. Television, in comparison, plays news once and your absence can determine if you're informed or not.

Music, videos and chatting are available on Facebook. Although distracting, the entertainment that the website provides is popular. You can even join groups that have the same interests and receive updates on events. Whether I want to look up a new hit song, or watch a movie trailer that I know of, I can rely on Facebook to have it.

The most modern form on keeping in touch with people, discovering news, and entertaining yourself is found on Facebook. It is easy to look down on such a reliant lifestyles, but earlier generations can't ignore how convenient the website is. Regardless of how your life was yesterday, technology will change tomorrow and the day after. Inventions like Facebook make it hard to believe life without such advanced technologies.



WRITING TASKS AVAILABLE ONLINE

More NAEP writing tasks are available online at http://nces.ed.gov/nationsreportcard/ itmrlsx/search.aspx?subject=writing and include:

- One released task for each writing purpose at grade 12, including audio and video
- A scoring rubric for each task
- Samples of responses at each scoring level
- Student performance data

Explore the interface for the writing tasks at http://nationsreportcard.gov/ writing 2011/writing tools.asp.

Example of a "Competent" response

The following sample student response was rated as "Competent" in writing to explain. From the strong opening sentence and throughout, the response demonstrates a control of language in developing logical and clear ideas that contribute to explaining the value of a particular technology. Specific advantages are presented, and then the value of the technology is illustrated with a personal example. Overall cohesiveness is achieved by relatively smooth transitions. Logically cohesive complex sentences, such as the final one in the response, enhance the ideas being expressed. This response demonstrates skills associated with the Proficient level. Twelfth-grade students at this level are able to produce well-structured responses that fully accomplish the communicative purpose.

In recent history, people had no means to communicate with each other instantaneously over long distances, but within the past ten years social networking has completely altered our ways of communication. Mark Zuckerburg's creation of Facebook truly revolutionized how we interact with one another, for he created a relatively safe online environment where people can keep in close contact with friends with having to travel to visit them personally. People no longer need to wait days or weeks for the Pony Express to transport messages, because now at the mere click of a button we can write and send lengthy messages, pictures, memos, videos, and greetings to our peers. Facebook is the form of current technology that has most affected my life as a high school student.

Facebook is a novel innovation that has completely altered how people, especially teenagers, communicate. Originally intended for college networking, Facebook lets you "friend" your acquaintances and keep in closer contact with them by automatically updating them about your life. Facebook has practically limitless entertainment and communications options, including instant messaging, status updating, game playing, and picture sharing. With this, one can choose to share as much about herself as she wishes, but someone like me can also choose to be more reserved and write to people in private inbox messages instead of public updates.

Ever since I created a Facebook account in the beginning of my sophomore year in high school, it has allowed me to keep in contact with friends that I would otherwise never see again and share in what is happening in their lives. Going to a private school from a public middle school was a difficult decision for me because I did not want to leave the close friends I had made in middle school, but Facebook has allowed me to be as close to them as ever; for although I no longer see them on a regular basis, I can always write a quick "Hello" or "Happy Birthday" on their Facebook wall, and I am constantly updated on events in their lives. I can easily invite people to my plays and concerts at my school without spending great quantities of time or having to hurt the environment by sending paper invitations. Facebook also helps me keep in contact with close friends that I make while in Winds of Change theater camp in Canada. Though I only visit Canada for this camp once a year, I can stay connected to my Canadian friends because of Facebook. One year I was unable to stay for the entire two weeks of the camp, but thanks to Facebook I was able to see pictures from the show I helped prepare that was performed at the end of the second week.

Although my parents and grandparents kept in minimal contact with some of their high school and college friends through telephone and snail mail, I feel that I will stay much closer to friends all throughout my childhood because I can see recent pictures of them and read about what is occurring in their lives much more easily. I limit my Facebook friends to people that I care about and truly want to keep in contact with, and thus whenever I log into Facebook, I am receiving updates even about friends on exchange in foreign countries, and I feel much more connected to the world around me.

Example of an "Effective" response

The sample student response shown below was rated as "Effective" in responding to the task about the value of technology. After an opening paragraph that defines video games and introduces the ideas to be developed throughout, the writer constructs the explanation primarily through use of personal experience. This approach skillfully communicates the value of video games through the use of detailed descriptions of specific games and what the writer has learned from them. Ideas are fully developed, and the rich use of explanatory details establishes a distinct voice speaking intelligently from experience. This response demonstrates skills associated with performance at the Advanced level. Twelfth-grade students at this level are able to craft responses that strategically accomplish the communicative purpose.

Videogames are a primary source of entertainment for people of all ages. Videogames are discs or cartridges that hold data; once a disc or cartridege is inserted into a gaming console, the data is read and displayed on the screen along with prompts that allow the game to be played. Games have many genres ranging from fighting to educational and can be used for than just mere entertainment. I personally have been experiencing what videogames have to offer for over five years now. Gaming is not just something that people do for fun, people can play videogames for many reasons. Videogames are an important factor in many peoples lives including mine and are a valuable type of technology.

I have been playing videogames from a very young age. Mario was the first game I was ever introduced to and it was not through playing; through sheer coincidence my mother realized that the theme music to Mario put me to sleep as a baby. Once I was old enough to hold a controller I began playing the game. Ever since that moment I have been playing videogames. Games are multi-purposed; to some it is merely a form of entertainment, but to others it could be their job. Some people argue that games are a waste of time and that they are not product. I beg to differ; games are important to me because not only do they give me something to do to pass time but they are also educational. A prime example of this is a game I was introduced to by my cousins, Runescape. When I was about thirteen I had went to see my cousins up state and I saw them playing this browser game called Runescape (a browser game is a game that can be played within an internet browser without the need to download or upload information from a disc or cartridge). Me being the person I am, I was curious as to what it was so I began to ask questions. By the end of the day I learned two things about that game, two things that to some gamers, were their favorite word. It was a MMORPG (massive multiplayer online role playing game) that was free; in essence it was a free gamethat I didn't have to download and I could do basically whatever I wanted that was allowed in the game. Within the game you could do any of the various skills offered, quests, and even fight against other players from around the world with you're avatar. Once I got home, I of course signed up and began to play. Throughout the few years I played that game I realized it was set in Medieval times and I learned many things about that age. I learned the process it takes to turn ore into metal, what smelting is, how leather is crafted into clothing, how clay is used, and some of the politics of Medieval civilizations throughout the quests of the game. Although I would spend hours on this game and it seemed like I was doing nothing, I infact was actually learning.

Another game my cousins introduced to me was Age of Mythology. The game was a PC game(which means it had to be bought and it contained disc which had to upload the game onto you're computer or device and then the game could be played) and I had played it at my cousins and eventually went on to buy it. If mythology was a subject in school, this game could be the teacher. This game focuses around Greek, Egyptian and Norse mythology. You follow the antagonists (which you name) through all three civilizations chasing an evil minotaur that is attempting to end the world. You begin in a fictional Greek city and eventually move throughout the world. This game teaches any of it's players not only how armies from all three civilazations worked but those civilazations major Gods, minor Gods, demigods and mythological creatures. Stories based on mythology or fact are also told and experienced throughout the game; such as the Trojan Horse and Ragnorak. I have never picked up a book based on mythology or ancient Gods but because of this game I have an extensive knowledge of the mythology of those three cultures. Games are important in society; they give people a hobby and peace of mind. They can also be used for educational purposes. Toddlers no longer read books to learn how to read, write, and spell, they are given toys and games to play. Games hold a high position in society and can be beneficial to those who use them if they wish to use them in that way.

Technical Notes

Sampling and Weighting

The schools and students participating in NAEP assessments are selected to be representative of all schools nationally. The results from the assessed students are combined to provide accurate estimates of the overall performance of students in public, private, and other types of schools (i.e., Bureau of Indian Education schools and Department of Defense schools) in the nation. More information on sampling can be found at http://nces.ed.gov/nationsreportcard/about/nathow.asp.

Because each school that participated in the assessment and each student assessed represents a portion of the population of interest, the results are weighted to account for the disproportionate representation of the selected sample. This includes oversampling of schools with high concentrations of students from certain racial/ethnic groups and the lower sampling rates of students who attend very small schools.

School and Student Participation

To ensure unbiased samples, NAEP statistical standards require that participation rates for the original school samples be 70 percent or higher to report national results separately for public and private schools. In instances where participation rates meet the 70 percent criterion but fall below 85 percent, a nonresponse bias analysis is conducted to determine if the responding school sample is not representative of the population, thereby introducing the potential for nonresponse bias.

The weighted national school participation rates for the 2011 writing assessment were 97 percent for grade 8 (100 percent for public schools, 71 percent for private schools, and 96 percent for Catholic schools only), and 94 percent for grade 12 (96 percent for public schools, 67 percent for private schools, and 77 percent for Catholic schools only). Weighted student participation rates were 94 percent at grade 8, and 87 percent at grade 12. Because the participation rate for private schools overall fell below 70 percent, results could not be reported for twelfth-graders attending private schools in 2011. Results are available for Catholic schools on the NAEP Data Explorer at http://nces.ed.gov/nationsreportcard/naepdata/.

Nonresponse bias analyses were conducted for the private school samples at both grades 8 and 12. For grade 8, the results of the nonresponse bias analyses showed no significant bias for any school characteristic after substitution and nonresponse adjustments. However, at grade 12, some variables examined in the analyses still indicated potential bias after nonresponse adjustments. Specifically, the potential for bias still existed for race after nonresponse adjustments. The Asian/Pacific Islander students were slightly underrepresented in the responding private school sample.

Interpreting Statistical Significance

Comparisons between groups are based on statistical tests that consider both the size of the differences and the standard errors of the two statistics being compared. Standard errors are margins of error, and estimates based on smaller groups are likely to have larger margins of error. The size of the standard errors may also be influenced by other factors such as how representative the assessed students are of the entire population.

When an estimate has a large standard error, a numerical difference that seems large may not be statistically significant. Differences of the same magnitude may or may not be statistically significant depending upon the size of the standard errors of the estimates. For example, at grade 8, the 13-point difference in average writing scores for White and American Indian/Alaska Native

students was statistically significant, while the 17-point difference between White and Native Hawaiian/Other Pacific Islander students was not. Standard errors for the estimates presented in this report are available at http://nces.ed.gov/nationsreportcard/naepdata/.

To ensure that significant differences in NAEP data reflect actual differences and not mere chance, error rates need to be controlled when making multiple simultaneous comparisons. The more comparisons that are made (e.g., comparing the performance of White, Black, Hispanic, Asian, Native Hawaiian/Other Pacific Islander, American Indian/Alaska Native, and multiracial students), the higher the probability of finding significant differences by chance. In NAEP, the Benjamini-Hochberg False Discovery Rate (FDR) procedure is used to control the expected proportion of falsely rejected hypotheses relative to the number of comparisons that are conducted. A detailed explanation of this procedure can be found at http://nces.ed.gov/nationsreportcard/ tdw/analysis/infer.asp. NAEP employs a number of rules to determine the number of comparisons conducted, which in most cases is simply the number of possible statistical tests.

Race/Ethnicity

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, information was collected in 2011 to report results for the following seven racial/ethnic categories:

White • Native Hawaiian/Other Pacific Islander

 Black American Indian/Alaska Native

 Hispanic Two or more races

Asian

Students identified as Hispanic were classified as Hispanic even if they were also identified with another racial/ethnic group. Students identified with two or more of the other racial/ethnic groups (e.g., White and Black) were classified as "two or more races."

National School Lunch Program

NAEP collects data on student eligibility for the National School Lunch Program (NSLP) as an indicator of family income. Under the guidelines of NSLP, children from families with incomes at or below 130 percent of the poverty level are eligible for free meals. Those from families with incomes between 130 and 185 percent of the poverty level are eligible for reduced-price meals. (For the period July 1, 2011 through June 30, 2012, for a family of four, 130 percent of the poverty level was \$29,055, and 185 percent was \$41,348.) Some schools provide free meals to all students regardless of individual eligibility, using their own funds to cover the costs of noneligible students. Under special provisions of the National School Lunch Act intended to reduce the administrative burden of determining student eligibility every year, schools can be reimbursed based on eligibility data for a single base year. For more information on NSLP, visit http://www.fns.usda.gov/cnd/lunch/.

School Location

NAEP results are reported for four mutually exclusive categories of school location: city, suburb, town, and rural. The categories are based on standard definitions established by the Federal Office of Management and Budget using population and geographic information from the U.S. Census Bureau. Schools are assigned to these categories in the NCES Common Core of Data (CCD) "locale codes" based on their physical address. The locale codes are based on a school's proximity to an urbanized area (a densely settled core with densely settled surrounding areas). More detail on the locale codes is available at http://nces.ed.gov/ccd/rural_locales.asp.





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The National Assessment of Educational Progress (NAEP) is a congressionally authorized project sponsored by the U.S. Department of Education. The National Center for Education Statistics, within the Institute of Education Sciences, administers NAEP. The Commissioner of Education Statistics is responsible by law for carrying out the NAEP project.

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