SPRING 2013
Measure Up

NAEP — NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

Assessment news for middle school teachers

Thank You!

Thank you to all students who participated in the National Assessment of Educational Progress (NAEP) 2013 assessments and helped to make them a success. NAEP 2013 included assessments in mathematics and reading in grades 4, 8, and 12. NAEP conducted the technology and engineering literacy (TEL) assessment pilot at grade 8. The NAEP 2013 grade 8 assessment was offered to a sample of about 360,000 public school students at 7,400 schools. Results will be reported in fall 2013.

A New Focus on Word Meaning

NAEP integrates a measure of students' understanding of word meaning with the measurement of passage comprehension in the NAEP reading assessment. The decision to focus on students' understanding of word meaning emphasized the important role vocabulary plays in the process of reading comprehension. To understand the overall topic or theme, students need to integrate their knowledge of individual words, or a sense of these words, with the way words are used in particular passages. For example, a reader may understand the meaning of "acute" in the context of mathematics to describe the angles of a triangle, but may not have encountered the word used to describe human emotions, as in "acute embarrassment." Having a sense of words that is sufficiently flexible helps readers extend their understanding of the word and understand its use in a new context.

Understanding word meaning has always been essential to reading comprehension. Whether reading the printed page or computer screen, a strong sense of word meaning provides a basis for greater comprehension.

How did students perform?

> Students who scored higher on NAEP vocabulary questions also scored higher in reading comprehension.

> Eighth-grade vocabulary scores did not change significantly from 2009 to 2011.

National Center for Education Statistics (2012). *The Nation's Report Card: Vocabulary Results From the 2009 and 2011 NAEP Reading Assessments* (NCES 2013–452). Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

http://nces.ed.gov/nationsreportcard

The Vocabulary Assessment Design

Vocabulary questions appeared in two sections of the NAEP reading assessment: comprehension and vocabulary. The sections differed in the length of the reading texts and in the number of vocabulary questions. The vocabulary questions in the comprehension sections are included within a larger set of questions and are based on longer passages. Examples of vocabulary questions from reading comprehension sections are available at **http://nationsreportcard.gov/ reading_2011/voc_sample_quest.asp**.

VOCABULARY QUESTIONS WERE INCLUDED IN TWO TYPES OF SECTIONS

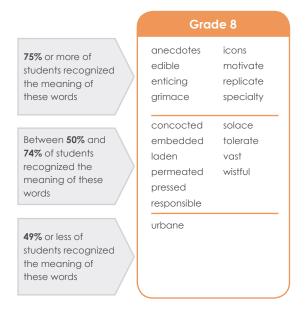| COMPREHENSION	VOCABULARY
➤ Full-length passages containing up to 1,000 words at grade 8.	➤ Shorter passages containing up to 500 words at grade 8.
➤ Approximately 10 multiple-choice and constructed-response questions, 2 of which were multiple-choice vocabulary questions.	➤ Approximately 5 multiple-choice vocabulary questions.

For more information on assessment design, see the Technical Notes section in *The Nation's Report Card: Vocabulary Results From the 2009 and 2011 NAEP Reading Assessments* (NCES 2013–452). This report is also available at **http://nces.ed.gov/nationsreportcard/pdf/ main2011/2013452.pdf**.

Vocabulary Word List

The chart below shows words from released comprehension and vocabulary sections and the proportion of students at each grade who understood how the words were used to convey meaning.
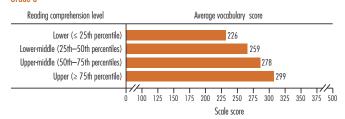
75% or more of students recognized the meaning of these words

Grade 8

anecdotes	icons
edible	motivate
enticing	replicate
grimace	specialty

Between **50%** and **74%** of students recognized the meaning of these words

concocted	solace
embedded	tolerate
laden	vast
permeated	wistful
pressed	
responsible	

49% or less of students recognized the meaning of these words

urbane

For more information, go to **http://www. nationsreportcard.gov/reading_2011/voc_summary.asp**.

Reporting NAEP Vocabulary Results

NAEP vocabulary results are reported as the percentage of students who correctly answered vocabulary questions and as average scores on a 0-500 scale for grade 8. While vocabulary results cannot be reported in terms of the NAEP achievement levels (*Basic*, *Proficient*, and *Advanced*), scores are reported to show patterns in results for students performing in the lower (10th and 25th), middle (50th), and higher (75th and 90th) percentiles.

The figure below shows the average scores in NAEP vocabulary at grade 8 by reading comprehension level.

Average scores in NAEP vocabulary at grade 8 by reading comprehension level: 2011

Grade 8

Reading comprehension level	Average vocabulary score
Lower (≤ 25th percentile)	226
Lower-middle (25th–50th percentiles)	259
Upper-middle (50th–75th percentiles)	278
Upper (≥ 75th percentile)	299

0   100   125   150   175   200   225   250   275   300   325   350   375   500
Scale score

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

Preparing for the 2014 NAEP Technology and Engineering Literacy (TEL) Assessment

From January to March 2013, a nationally representative sample of grade 8 students participated in the TEL pilot. The results from this pilot will be used to prepare for the TEL assessment in 2014.

The TEL pilot was administered by NAEP representatives who worked with school staff to organize the assessment activities. NAEP representatives brought all necessary materials to schools, including laptop computers and earbuds. The pilot was administered in two sequential sessions of approximately 15 students each. Before the pilot began, students viewed a tutorial that helped them become familiar with the format of the pilot.

In 2014, the NAEP TEL assessment will be administered to a national sample of eighth-grade students in public and private schools.

Background

The 2014 *Abridged NAEP Technology and Engineering Literacy (TEL) Framework* broadly defines technology and engineering literacy as the capacity to use, understand, and evaluate technology as well as to understand technological principles and strategies needed to develop solutions and achieve goals.

The skills for technology and engineering literacy are increasingly being taught through a wide range of school coursework. This includes contemporary science, technology, engineering, and mathematics (STEM) education, as well as subjects such as social studies and language arts. These courses include instruction on the use of computers and information technology to complete school assignments, lessons that examine the role of technology in society, and information on engineering design. Information technologies are also essential tools in workplace and practical contexts. The TEL assessment opens the door to understanding

what students know about technology and engineering, in the same way that NAEP assesses their knowledge and capabilities in reading, mathematics, science, and other subjects.

TEL is completely computer-based and includes interactive scenario-based tasks—an innovative component of NAEP. Students are asked to perform a variety of these interactive tasks to solve problems within realistic scenarios. Examples of interactive tasks are available in the interactive version of the TEL framework at **http://www.nagb.org/assets/documents/publications/ frameworks/tech2014-framework/ch_toc/index.html**. In addition to scenario-based tasks, TEL also relies on short-answer and multiple-choice questions to measure students' knowledge and skills.

Find more information about the TEL pilot at **http://nces. ed.gov/nationsreportcard/pdf/about/schools/Grade8_TEL_ FactSheet.pdf**.

Additional Resources

Read more about the TEL pilot at **http://nces.ed.gov/ nationsreportcard/tel**.

For an overview of the TEL framework, see the *2014 Abridged Technology and Engineering Literacy Framework* at **http://www.nagb.org/content/ nagb/assets/documents/publications/frameworks/ tel-abridged-2014.pdf**.

Watch the TEL video at **http://nces.ed.gov/ nationsreportcard/videos/telanimation** and find out more about the assessment.

Watch the TEL tutorial at **http://nces.ed.gov/ nationsreportcard/videos/teltutorial/**

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- the latest news regarding upcoming assessments and releases;
- tips for using online NAEP tools;
- NAEP questions to test your knowledge compared to that of the nation's students; and
- NAEP publications.

For more information about NAEP, go to http://nces.ed.gov/nationsreportcard.

Online Resources

Sample Questions Booklets
Examine the types of questions students will be answering at **http://nces.ed.gov/ nationsreportcard/about/booklets.asp**

Content Area Frameworks
Review the frameworks that guide the development of the NAEP assessment and determine the content to be assessed at
http://nces.ed.gov/nationsreportcard/frameworks.asp

Information for Educators
Create your own NAEP test and see what students know and can do at
http://nationsreportcard.gov/educators.asp

Information for Students
Allow students to test themselves using NAEP questions at
http://nationsreportcard.gov/students.asp

Data Tools
Explore NAEP results with online data tools at
http://nationsreportcard.gov/data_tools.asp

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