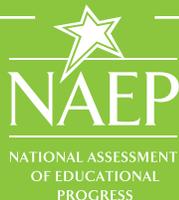


# Measure Up

NAEP NEWS FOR THE SCHOOL COMMUNITY



## INSIDE THIS ADDITION

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- WHAT'S HAPPENING IN THE WORLD OF NAEP?
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WINTER 2014

## A NEW APPROACH TO REPORTING

The Nation's Report Card informs the public about the academic achievement of elementary and secondary school students in the United States. Report cards communicate the findings of the National Assessment of Educational Progress (NAEP), a continuing and nationally representative measure of achievement in various subjects over time.

NAEP results are now easier than ever to access in a new interactive website for [state](#) and [Trial Urban District Assessment \(TUDA\)](#) results. The results from the 2013 assessments in mathematics and reading at grades 4 and 8 highlighted in the report can be explored in more detail with interactive graphics, downloadable data, and enhanced features.

## WHAT'S HAPPENING IN THE WORLD OF NAEP?

### WINTER 2014

- Grade 4: Science pilots
- Grade 8: Civics, geography, U.S. history, technology and engineering literacy, and science pilots
- Grade 12: Science pilots

### SPRING/SUMMER 2014

- NAEP 2014 assessments will be scored
- Schools selected to participate in NAEP 2015 will be notified



For more information about NAEP, visit:  
<http://nces.ed.gov/nationsreportcard>

Find us on:



# NAEP 2013 MATHEMATICS AND READING

Students in grades 4 and 8 participated in the 2013 NAEP mathematics and reading assessments. At each grade, students responded to questions designed to measure their knowledge of these subjects.

The NAEP mathematics assessment measures students' knowledge and skills in mathematics and students' ability to apply their knowledge in problem-solving situations. At each grade, students responded to multiple-choice and constructed-response questions designed to measure what they know and can do across five mathematics content areas: number properties and operations, measurement, geometry, data analysis, statistics and probability, and algebra.

The NAEP reading assessment measures students' reading comprehension by asking them to read selected grade-appropriate materials and answer questions based on what they have read. At each grade, students responded to multiple-choice and constructed-response questions designed to measure their reading comprehension across two types of texts. Literary texts include fiction, literary nonfiction, and poetry. Informational texts include exposition, argumentation and persuasive texts, and procedural texts and documents.

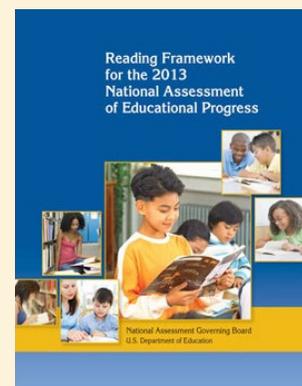
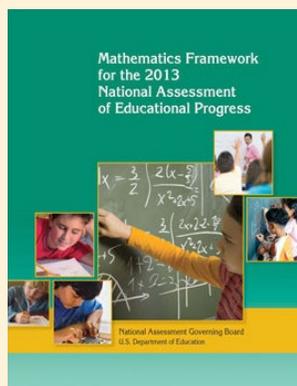
Explore the NAEP item maps for examples of questions that reflect the skills and knowledge demonstrated by students performing at each of the three achievement levels.

## HOW ARE RESULTS REPORTED?

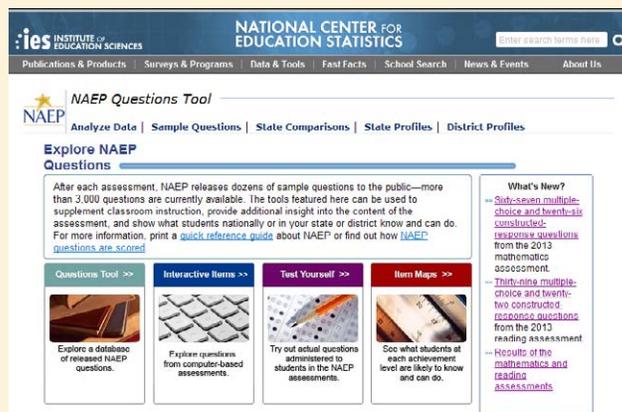
NAEP mathematics and reading assessment results are reported in terms of average scores for groups of students on the NAEP 0–500 scale and as percentages of students who attain each of the three achievement levels (*Basic, Proficient, and Advanced*).

Changes in students' performance over time are discussed only if the differences in scores or percentages are determined to be statistically significant. Results cannot be compared across subjects since NAEP scales and achievement levels are developed independently for each subject.

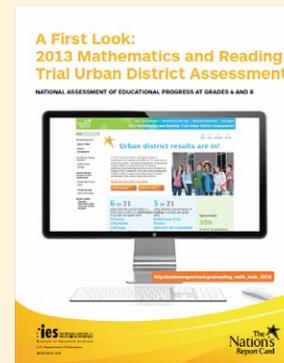
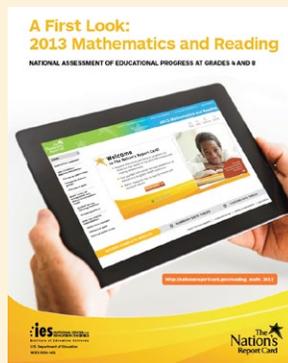
Download each of the frameworks below for more information about content assessed in mathematics and reading.



View sample questions and other released NAEP items from the mathematics and reading assessments in the NAEP Questions Tool.



Download the state and TUDA executive summaries for more information about the mathematics and reading results.



## ARE THE NATION'S STUDENTS MAKING PROGRESS IN MATHEMATICS AND READING?

Results from the 2013 NAEP assessments show fourth- and eighth-graders making progress in mathematics and reading.

### Nation – Mathematics

**Average mathematics scores for fourth- and eighth-graders in 2013 were 1 point higher than in 2011 and 28 or 22 points higher, respectively, in comparison to the first assessment year in 1990.**

- Hispanic students at both grades made 2-point gains since 2011. Eighth-grade Asian/Pacific Islander students and American Indian/Alaska Native students made 4-point gains.

	Grade 4		Grade 8	
	From 1990	From 2011	From 1990	From 2011
<b>All students</b>	↑ 28	↑ 1	↑ 22	↑ 1
<b>Race/ethnicity</b>				
White	↑ 30	↑ 1	↑ 24	◆
Black	↑ 37	◆	↑ 26	◆
Hispanic	↑ 30	↑ 2	↑ 26	↑ 2
Asian/Pacific Islander	↑ 33	◆	↑ 31	↑ 4
Asian	—	◆	—	◆
Native Hawaiian/ Other Pacific Islander	—	◆	—	◆
American Indian/Alaska Native	—	◆	—	↑ 4
White-Black score gap	↔	◆	◆	◆
White-Hispanic score gap	◆	◆	◆	◆
<b>Gender</b>				
Male	↑ 29	◆	↑ 22	◆
Female	↑ 28	↑ 1	↑ 22	↑ 1
Male-Female score gap	◆	◆	◆	◆

Key: ↑ Higher in 2013 ◆ No significant change in 2013 — Not available ↔ Score gap narrowed

NOTE: Accommodations were not permitted in NAEP mathematics assessments prior to 1996, and in NAEP reading assessments prior to 1998. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Score-point changes are calculated using unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2013 Mathematics and Reading Assessments.

### Nation – Reading

**The average reading score for eighth-graders was 2 points higher in 2013 than in 2011, but the score for fourth-graders did not change significantly from 2011. Reading scores were higher in 2013 than in 1992 at both grades.**

- White students made gains since 2011 at both grades, and Black, Hispanic, and Asian/Pacific Islander students made gains at grade 8.

	Grade 4		Grade 8	
	From 1992	From 2011	From 1992	From 2011
<b>All students</b>	↑ 5	◆	↑ 8	↑ 2
<b>Race/ethnicity</b>				
White	↑ 8	↑ 1	↑ 9	↑ 2
Black	↑ 14	◆	↑ 13	↑ 2
Hispanic	↑ 10	◆	↑ 15	↑ 3
Asian/Pacific Islander	↑ 19	◆	↑ 12	↑ 5
Asian	—	◆	—	↑ 5
Native Hawaiian/ Other Pacific Islander	—	◆	—	◆
American Indian/Alaska Native	—	◆	—	◆
White-Black score gap	↔	◆	◆	◆
White-Hispanic score gap	◆	◆	↔	◆
<b>Gender</b>				
Male	↑ 6	◆	↑ 9	↑ 2
Female	↑ 4	◆	↑ 6	↑ 3
Female-Male score gap	◆	◆	◆	◆

Key: ↑ Higher in 2013 ◆ No significant change in 2013 — Not available ↔ Score gap narrowed

NOTE: Accommodations were not permitted in NAEP mathematics assessments prior to 1996, and in NAEP reading assessments prior to 1998. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Score-point changes are calculated using unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2013 Mathematics and Reading Assessments.

## HOW ARE STATES PERFORMING?

Forty-one percent of public school students at grade 8 performed at or above *Proficient* in mathematics in 2013. The percentage of students at or above *Proficient* in the states ranged from 19 to 59 percent. Nineteen states/jurisdictions had higher percentages at or above *Proficient* than the nation at both grades 4 and 8, and 11 had lower percentages at both grades.

Thirty-four percent of public school students performed at or above *Proficient* in reading in 2013 at both grades 4 and 8, with percentages in the states ranging from 17 to 48 percent. Fifteen states/jurisdictions had higher percentages at or above *Proficient* than the nation at both grades.

### State – Mathematics

- Compared to 2011, average scores were up in 16 states at grade 4 and in 7 states at grade 8, with students in Hawaii,

Tennessee, the District of Columbia, and Department of Defense schools showing gains at both grades.

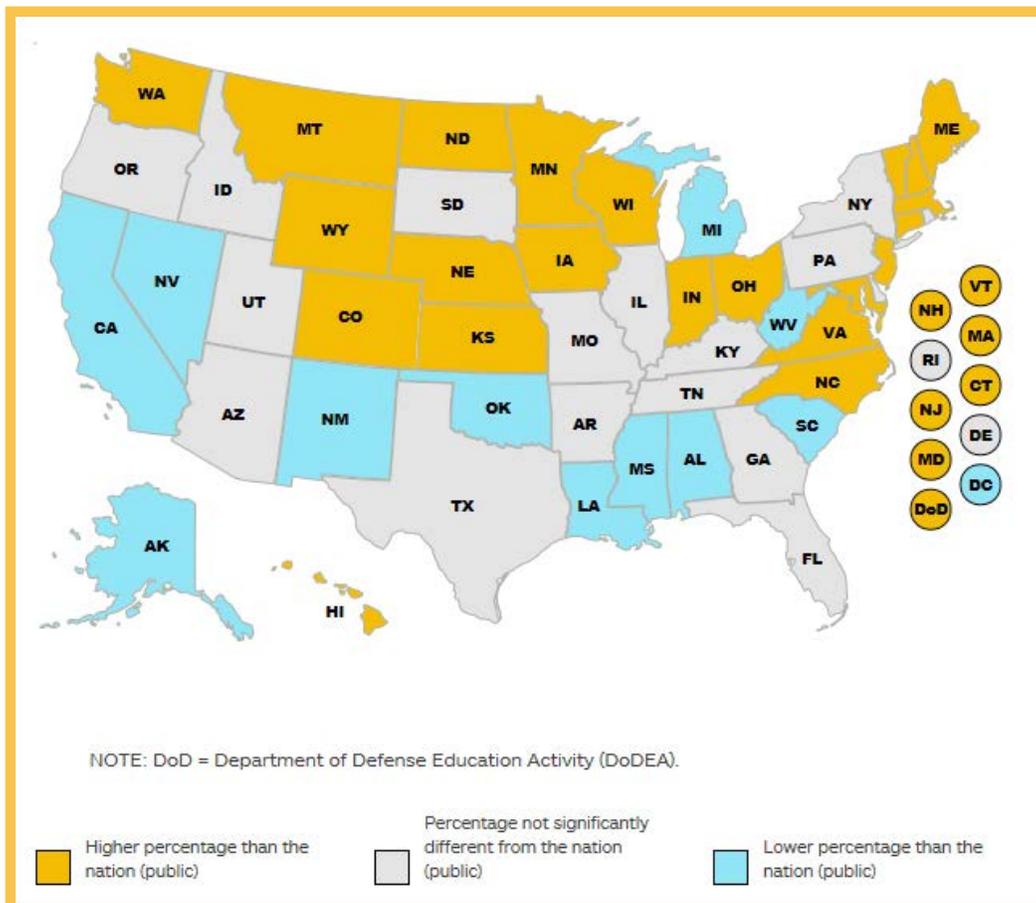
### State – Reading

- Compared to 2011, average scores were up in 9 states at grade 4 and in 14 states at grade 8, with students in Iowa, Tennessee, Washington, the District of Columbia, and Department of Defense schools showing gains at both grades.

## EXPLORE STATE RESULTS IN DETAIL

Below are the percentages comparison between states and the nation for public school students at or above *Proficient* in fourth-grade NAEP 2013 mathematics. Click on the map to see which states are making gains and their comparisons to the nation (public).

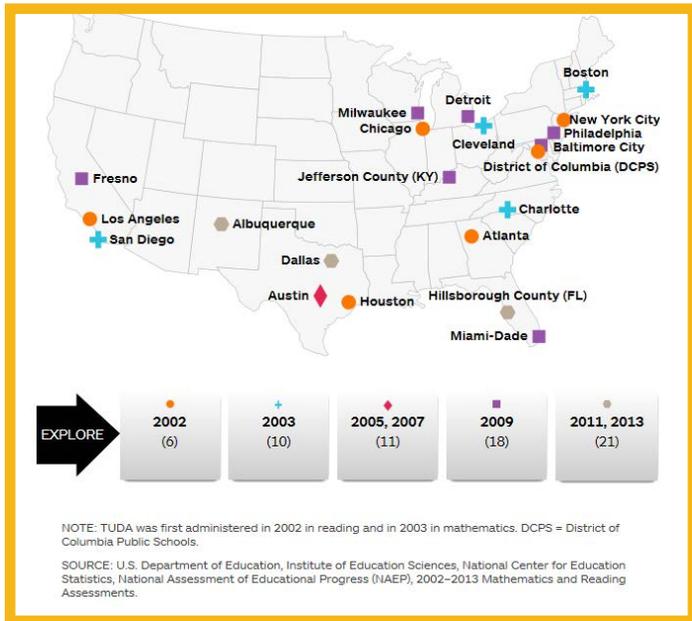
**Percentage comparison between states and the nation for public school students at or above *Proficient* in fourth-grade NAEP mathematics: 2013**



## WHAT IS TUDA?

The National Assessment of Educational Progress (NAEP), in partnership with the National Assessment Governing Board and the Council of the Great City Schools (CGCS), created the Trial Urban District Assessment (TUDA) in 2002 to support the improvement of student achievement in the nation's large urban districts. TUDA focuses attention on urban education and measures the educational progress within participating large urban districts. Reading results were first reported for six urban districts in 2002, and mathematics results were first reported in 2003 for ten districts. Since 2002, urban districts have been added in each assessment year, culminating in the 21 districts that participated in both 2011 and 2013.

### TUDA Districts and the Years of Participation Map



### TUDA Districts and the Years of Participation List

TUDA districts and the year in which they first participated

2002	2003	2005	2009	2011
Atlanta	Boston	Austin	Baltimore City	Albuquerque
Chicago	Charlotte		Detroit	Dallas
District of Columbia (DCPS)	Cleveland		Fresno	Hillsborough County (FL)
Houston	San Diego		Jefferson County (KY)	
Los Angeles			Miami-Dade	
New York City			Milwaukee	
			Philadelphia	

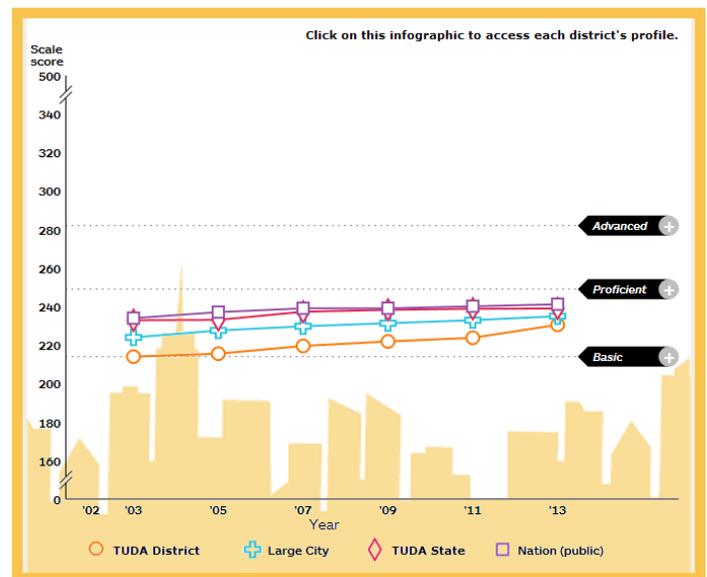
NOTE: TUDA was first administered in 2002 in reading and in 2003 in mathematics. DCPS = District of Columbia Public Schools.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002–2013 Mathematics and Reading Assessments.

## DISTRICT PROFILES

District Profiles provide an in-depth look at each participating district's performance in context by subject and grade. Results are shown for large city, each district's home state, and the nation overall to facilitate relevant comparisons.

Choose from the drop-down menus to create the district profile of your choice.

### TUDA District Profiles



## HOW ARE URBAN DISTRICTS PERFORMING?

Mathematics and reading scores in three urban districts (Austin, Charlotte-Mecklenburg, and Hillsborough County) were higher in 2013 than the scores for large cities at grades 4 and 8. Scores in nine urban districts (Baltimore City, Chicago, Cleveland, Detroit, the District of Columbia, Fresno, Los Angeles, Milwaukee, and Philadelphia) were lower than the scores for large cities in both subjects and both grades.

In 2013, average mathematics and reading scores for fourth- and eighth-grade public school students in large cities were lower than the scores for public school students in the nation. See complete comparisons between the nation's public schools, large city schools in the nation, and each district's home state.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 and 2013 Mathematics and Reading Assessments.

## NAEP 2014 ASSESSMENTS

Between January 27 and March 7, 2014, NAEP will administer the NAEP 2014 technology and engineering literacy (TEL), civics, geography and U.S. history assessments and science pilots.

### NAEP 2014 Technology and Engineering Literacy (TEL) Assessment

The first TEL assessment will be administered on computers to a sample of eighth-graders. The TEL assessment measures students' capacity to use, understand, and evaluate technology, as well as to understand technological principles and strategies. The TEL assessment will be administered to a sample of approximately 20,000 eighth-grade students in public and private schools.

Students will spend up to 120 minutes completing the assessment, including transition time and directions. The assessment contains problem-solving tasks based on interactive scenarios reflecting realistic situations, and multiple-choice and short-answer questions.

### Civics, Geography and U.S. History

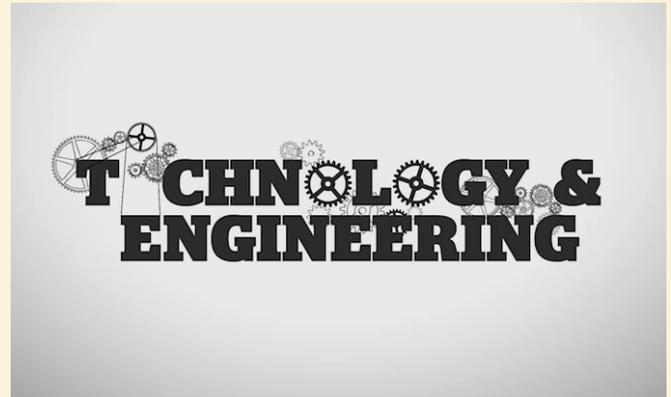
The civics, geography and U.S. history assessments will be administered to a sample of eighth-grade students. Students will be assessed in one of the three subjects. Nationally, approximately 26,000 students in eighth grade will be assessed.

### Science Pilots

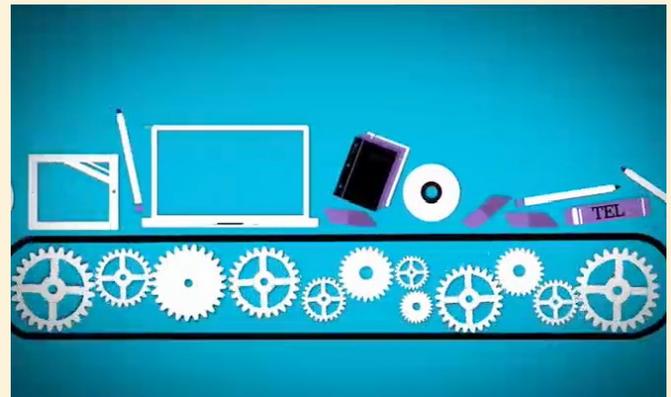
National NAEP science pilots will be administered to a sample of fourth-, eighth-, or twelfth-grade students. The students will be assessed via traditional paper-and-pencil assessment and hands-on tasks (HOTs). Students will spend between 90 and 120 minutes completing the items, including transition time and directions.

HOTs allow students to demonstrate how well they are able to plan and conduct scientific investigations, reason through complex problems, and apply their knowledge in real-world contexts. [Click here for the complete library of released science HOTs from the 2009 assessment.](#) Watch a [short video](#) and learn more about HOTs.

Watch the TEL overview video below.



Watch the video below to learn more about TEL tasks.



Try out a TEL task on your own.

**Tutorial: Using the Pump Repair Manual**

When you select a problem, the parts of the pump that are related to the problem are labeled for you.

Instructions for investigating and repairing the problem are shown below.

Pump Repair Manual: Common Problems with Hand Pumps	
Handle moves too easily and no water comes out.	<b>What to Check For:</b> Handle has become disconnected from the piston rod.
Water has a bad smell.	<b>How to Repair:</b> Reconnect handle to piston rod.
Water is very cloudy.	
It is hard to move the handle or pump operation is noisy.	
Little or no water comes out.	

Back Next

## WHAT'S NEW WITH NAEP?

### VIRTUAL PREASSESSMENT VISITS/ ONLINE SURVEYS

The [MyNAEP website](#) is a restricted-use website that contains information on NAEP. It provides participating schools and districts in the current sample with a convenient way to prepare for the upcoming assessments. Previously, school coordinators prepared for NAEP by completing paperwork and holding an in-person preassessment visit with NAEP representatives. MyNAEP offers school coordinators an electronic way to complete the same tasks at their own pace.

The school coordinator is responsible for using MyNAEP to distribute and ensure the completion of online questionnaires designed to help provide contextual information for the assessment results.

### NAEP QUESTIONNAIRES GO DIGITAL

In addition to assessing subject-area achievement, NAEP collects information that serves to fulfill reporting requirements of [federal legislation](#) and to provide a context for reporting student performance. The legislation requires that, whenever feasible, NAEP include information on special groups (e.g., information reported by race, ethnicity, socioeconomic status, gender, disability, and limited English proficiency). When developing the [questionnaires](#), NAEP ensures that the questions do not infringe on respondents' privacy, are grounded in educational research, and that the responses can provide information relevant to the subject being assessed. This year, the school and teacher questionnaires will be completed online.

The school questionnaire, completed by the principal or another school official, is used to gather information concerning school administration, staffing patterns, curriculum, and student services.

The teacher questionnaires gather information concerning years of teaching experience, frequency of assignments, use of teaching materials, and availability and use of computers.

#### Student Questionnaires

	Grade 4	Grade 8	Grade 12
Mathematics (2013)	<u>261K</u>	<u>322K</u>	<u>328K</u>
Reading (2013)	<u>280K</u>	<u>301K</u>	<u>284K</u>

#### Teacher Questionnaires (Completed by teachers at grades 4 and 8. NAEP does not typically collect teacher information for grade 12.)

	Grade 4	Grade 8
Reading/Mathematics (2013)	<u>424K</u>	
Reading (2013)		<u>375K</u>
Mathematics (2013)		<u>374K</u>

#### School Questionnaires

	Grade 4	Grade 8	Grade 12
Reading/Mathematics (2013)	<u>504K</u>	<u>507K</u>	<u>527K</u>

#### Students with Disabilities/English Language Learners (SD/ELL)

SD all subjects (2013)	<u>552K</u>
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# NAEP Behind The Scenes

Learn more about the people who work behind the scenes to make NAEP the gold standard among assessments.

## INTERVIEW WITH ROBERT FINNEGAN ON THE NEW NATION'S REPORT CARD INTERACTIVE WEBSITE



*Robert Finnegan is the director of reporting at the Educational Testing Service (ETS). He has a Ph.D. in education in addition to a BA in English and a MFA in creative writing. He worked with the team to build the initial Nation's Report Card website and has been working with teams at ETS and other partners to bring innovations to the NAEP reporting products.*

### **What is/was your role in the development of the state and TUDA Nation's Report Card interactive websites?**

As the director of reporting at ETS, I work directly with the National Center for Education Statistics (NCES) to understand their goals and coordinate the efforts of our reporting team at ETS. I also work a great deal with colleagues in data analysis who are critical to the reporting process. We typically end up with a rich set of new ideas from NCES, ETS data analysts, and others. It's really rewarding to be involved in bringing something new to the NAEP suite of products—our collaboration with data analysts and NCES allows that to happen.

### **What type of background do you need to perform what you do with NAEP?**

My formal education is more focused on how assessment results are interpreted and the effects assessments have on teachers and teaching, but I've also done a great deal of informal learning of web development and data science. I think my interest in visualizing data and using

it for some purpose is the most valuable to me in my current role.

### **How do you envision the website developing and growing?**

The Nation's Report Card website is already a rich library of previously published web reports. Our next steps involve doing some redesign work on the home page of the Nation's Report Card website and setting up the rest of the website with a more modern design. In addition, we are looking to roll out additional results features. We will also be publishing the grade 12 results from 2013 in the spring of 2014.

### **How can teachers and others in the school community use the Nation's Report Card interactive website for their purposes?**

I think the sample questions are the most valuable information to teachers on the interactive website. Teachers and parents can use the sample questions to see what their students or children know in reading and math (at grades 4 and 8). The sample questions are broken down by where the question mapped according to the achievement level cut points, so it might be interesting to see how students perform on questions at the *Proficient* level. Of course, the interactive report contains just a sample of the released questions, but it does contain links to full sets of released questions in the NAEP Questions Tool.

### **How can users make suggestions or provide feedback on what they have found most useful?**

Users should contact Robert Finnegan at [RFinnegan@ETS.org](mailto:RFinnegan@ETS.org). We are working to capture and categorize all the feedback we have gotten so far and set some priorities for the next few years. Putting some thoughts down in writing and sending them along will certainly help us as we continue to enhance the site.

## ONLINE RESOURCES

### A NEW APPROACH TO REPORTING

**NAEP 2013 mathematics and reading results interactive Nation's Report Card website** [http://www.nationsreportcard.gov/reading\\_math\\_2013/#/](http://www.nationsreportcard.gov/reading_math_2013/#/)

**NAEP 2013 TUDA mathematics and reading results interactive Nation's Report Card website** [http://nationsreportcard.gov/reading\\_math\\_tuda\\_2013/#/](http://nationsreportcard.gov/reading_math_tuda_2013/#/)

**Nation's Report Card website** <http://nces.ed.gov/nationsreportcard/>

### NAEP 2013 MATHEMATICS AND READING

**What questions are students able to answer?** [http://www.nationsreportcard.gov/reading\\_math\\_2013/#/sample-questions](http://www.nationsreportcard.gov/reading_math_2013/#/sample-questions)

**The NAEP mathematics achievement levels by grade** <http://nces.ed.gov/nationsreportcard/mathematics/achieveall.aspx>

**The NAEP reading achievement levels by grade** <http://nces.ed.gov/nationsreportcard/reading/achieveall.aspx>

**NAEP achievement levels** <http://nces.ed.gov/nationsreportcard/achievement.aspx>

**Mathematics Framework for the 2013 National Assessment of Educational Progress** <http://www.nagb.org/publications/frameworks/mathematics/2013-mathematics-framework.html>

**Reading Framework for the 2013 National Assessment of Educational Progress** <http://www.nagb.org/publications/frameworks/reading/2013-reading-framework.html>

**NAEP Questions Tool – Sample questions and released items from the mathematics assessments** <http://nces.ed.gov/nationsreportcard/itmrlsx/search.aspx?subject=mathematics>

**NAEP Questions Tool – Sample questions and released items from the reading assessments** <http://nces.ed.gov/nationsreportcard/itmrlsx/search.aspx?subject=reading>

**NAEP Questions Tool** <http://nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx>

**Explore NAEP Questions** <http://nces.ed.gov/nationsreportcard/itmrlsx/>

**A First Look: 2013 Mathematics and Reading brochure** <http://nces.ed.gov/nationsreportcard/subject/publications/main2013/pdf/2014451.pdf>

**A First Look: 2013 TUDA Mathematics and Reading brochure** <http://nces.ed.gov/nationsreportcard/subject/publications/main2013/pdf/2014466.pdf>

**Results for 2013 NAEP mathematics and reading assessments are in** [http://www.nationsreportcard.gov/reading\\_math\\_2013/#/executive-summary](http://www.nationsreportcard.gov/reading_math_2013/#/executive-summary)

## ONLINE RESOURCES (CONTINUED)

<b>What states are making gains?</b>	<a href="http://www.nationsreportcard.gov/reading_math_2013/#/state-gains">http://www.nationsreportcard.gov/reading_math_2013/#/state-gains</a>
<b>How are states performing?</b>	<a href="http://www.nationsreportcard.gov/reading_math_2013/#/state-performance">http://www.nationsreportcard.gov/reading_math_2013/#/state-performance</a>
<b>What is TUDA?</b>	<a href="http://nationsreportcard.gov/reading_math_tuda_2013/#/what-is-tuda">http://nationsreportcard.gov/reading_math_tuda_2013/#/what-is-tuda</a>
<b>TUDA District Profile</b>	<a href="http://nationsreportcard.gov/reading_math_tuda_2013/#/tuda-profiles">http://nationsreportcard.gov/reading_math_tuda_2013/#/tuda-profiles</a>
<b>How do districts compare to other jurisdictions?</b>	<a href="http://nationsreportcard.gov/reading_math_tuda_2013/#/tuda-performance">http://nationsreportcard.gov/reading_math_tuda_2013/#/tuda-performance</a>
<b>NAEP 2014 ASSESSMENTS</b>	
<b>Learn more about TEL</b>	<a href="http://nces.ed.gov/nationsreportcard/tel">http://nces.ed.gov/nationsreportcard/tel</a>
<b>Learn more about TEL tasks</b>	<a href="http://nces.ed.gov/nationsreportcard/videos/telanimation.asp">http://nces.ed.gov/nationsreportcard/videos/telanimation.asp</a>
<b>Try a TEL task</b>	<a href="http://nces.ed.gov/nationsreportcard/tel/wells_item.aspx">http://nces.ed.gov/nationsreportcard/tel/wells_item.aspx</a>
<b>The complete library of released science HOTS from the 2009 assessment</b>	<a href="http://nationsreportcard.gov/science_2009/ict_tasks.aspx?tab_id=tab2&amp;subtab_%20id=Tab_1#tabsContainer">http://nationsreportcard.gov/science_2009/ict_tasks.aspx?tab_id=tab2&amp;subtab_%20id=Tab_1#tabsContainer</a>
<b>Watch a short video about HOTS</b>	<a href="http://nationsreportcard.gov/science_2009/naep_hot.aspx">http://nationsreportcard.gov/science_2009/naep_hot.aspx</a>
<b>WHAT'S NEW WITH NAEP?</b>	
<b>Important aspects of No Child Left Behind relevant to NAEP - Federal legislation</b>	<a href="http://nces.ed.gov/nationsreportcard/nclb.aspx">http://nces.ed.gov/nationsreportcard/nclb.aspx</a>
<b>Questionnaires for students, teachers, and schools</b>	<a href="http://nces.ed.gov/nationsreportcard/bgquest.asp">http://nces.ed.gov/nationsreportcard/bgquest.asp</a>

