OREA | Offices of Research and Education Accountability
Tennessee Comptroller of the Treasury, Justin P. Wilson
Questions and Answers

# The National Assessment of Educational Progress

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On November 7, 2013, the National Assessment Governing Board released the results from the 2013 National Assessment of Educational Progress (NAEP) in math and reading.[1] Tennessee was one of only three states/jurisdictions that scored higher in 2013 than in 2011 in both subjects at grades 4 and 8.[2] On three of the four assessments, Tennessee's average score was within one point of the national average; although the state is still well below the top scoring states, its gains on NAEP are significant.[3] This brief provides general information about NAEP, including what the assessments cover, who takes the tests, who administers the tests, and what NAEP proficiency levels mean.

### What is NAEP (National Assessment of Educational Progress)?

NAEP is a national system of testing in K-12 schools to measure what U.S. students know and can do in core subjects.[4] NAEP collects and reports academic achievement results at the national level and, for certain assessments, at the state and district levels.[5] Assessment results are referred to as *The Nation's Report Card* once they have been processed and compiled into results that are presented to the public.[6] NAEP reports subject-matter achievement results for populations of students (for example, all fourth-graders) and groups within those populations (for example, female students, Hispanic students). NAEP reports on results for different demographic groups at the state level, or in a few cases, at the district level. It does not release results for individual students or schools (or for districts, outside of the Trial Urban District Assessment, a voluntary program for large, urban districts; no Tennessee districts currently participate).[7] The assessments are administered following uniform procedures and using the same sets of test booklets across the nation, making state-to-state comparisons of NAEP results possible.[8]

NAEP tests small samples of students at grades 4, 8, and 12 for the national and state-level assessments.[9] (See "NAEP in grade 12.") These grades are tested because they represent critical stages in students' academic careers. Additionally, limiting the assessment to three grades and ages lessens the testing burden on schools.[10]

**NAEP in Grade 12**

In 2009, NCES began a trial program to provide state-level results in mathematics and reading at grade 12 for participating states – previously, grade 12 results were reported only nationally. In the program's first year, 11 states volunteered and received state-level results for grade 12.

In 2013, NCES again offered state-level NAEP results for the 11 original states as well as two new participants: Michigan and Tennessee. Results for the 2013 Grade 12 assessments will be released later in 2014.

The 11 original states are Arkansas, Connecticut, Florida, Idaho, Illinois, Iowa, Massachusetts, New Hampshire, New Jersey, South Dakota, and West Virginia.

Sources: National Center for Education Statistics, Grade 12 State Program, 2013, http://nces.ed.gov/.
National Center for Education Statistics, Jack Buckley, Commissioner, NAEP 2013 Mathematics and Reading, Nov. 7, 2013, http://nces.ed.gov/.

Results from NAEP assessments are reported at three levels: national, state, and district (for certain districts who opt in).[11]

NAEP has been administered at the *national* level since 1969.[12] NAEP assesses several subject areas at the national level: mathematics, reading, science, and writing, as well as the arts, civics, economics, foreign language, geography, technology and engineering literacy, and U.S. history. NAEP assesses mathematics and reading at the national level every two years, and assesses science, writing, and the other subject areas less frequently. The national NAEP includes students at grade levels 4, 8, and 12.[13]

NAEP assesses four subjects at the *state* level: mathematics, reading, science, and writing. Since 2003, all 50 states have participated in state-level NAEP assessments for reading and mathematics at grades 4 and 8. State-level NAEP also assesses at grade 12 in some states.[14] (See box "NAEP in grade 12" for more information.)

The state-level assessments for reading and mathematics occur every two years, and are administered along with the national level assessments. Science and writing are assessed less frequently. NAEP state assessments began in 1990; Tennessee first participated in 1992.[15]

The national NAEP assesses students in public and private schools. State-level NAEP assesses students in public schools only.[16] (See appendix for the NAEP Assessment Schedule,1969-2017.)

Since 2002, some school districts have participated in various NAEP assessments through TUDA, the Trial Urban District Assessment, created to explore the feasibility of using NAEP to report on student performance at the district level. As authorized by federal law, NAEP has administered the mathematics, reading, science, and writing assessments to samples of students in selected urban district public schools. No Tennessee districts have participated in TUDA to date.[17]

In addition to testing subject knowledge, NAEP collects information that helps to put student performance in context. Students, teachers, and principals in sampled schools complete questionnaires to provide NAEP with data about students' school experiences and educational activities. Students answer questions about courses, homework, and a limited number of additional factors related to instruction. Teachers answer questions about their professional qualifications and teaching activities, and principals answer questions about school-level practices and policies. Questionnaires also cover the accommodations[18] used by students with disabilities and English language learners taking NAEP assessments.[19]

**Student subgroup categories in NAEP**

Race/ethnicity (white, black, Hispanic, Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, Two or more races)

Gender (male, female)

National School Lunch Program eligibility (free lunch, reduced price lunch, not eligible, no information)

Private or Public School (where applicable)

Parental Education (grade 8 only) (did not finish high school, graduated high school, some education after high school; graduated college; unknown)

Disability Status (with disabilities, no disabilities)

ELL status (ELL, not ELL)

School Location (city, suburb, town, rural)

Source: The Nation's Report Card, NAEP 2013, http://nationsreportcard.gov/.

**Is participation in NAEP required?**

Although federal law specifies that NAEP is voluntary for every student, school, school district, and state, it also requires all states that receive Title I funds to participate in NAEP reading and mathematics assessments at grades 4 and 8.[20] Because all states receive Title I funds, the provision applies to all states.[21] Similarly, school districts that receive Title I funds and are selected for the NAEP sample are also required to participate in NAEP reading and mathematics assessments at grades 4 and 8. All other NAEP assessments are voluntary.[22] States and jurisdictions can volunteer to participate in science, writing, and the other state NAEP subjects. The Commissioner of Education Statistics in the USDOE sends a letter describing the upcoming subjects and grades for national and state NAEP to appropriate state officials each fall.[23]

**How are school districts, schools, and students selected to participate in NAEP? How many students are assessed?**

Not every school or student participates in NAEP assessments. To ensure that a representative sample of students is assessed, NAEP is given in a sample of schools whose students reflect the varying demographics of a specific jurisdiction – i.e., the nation, a state, or a district.

States do not choose which schools participate in NAEP; to ensure the validity of assessment results, the National Center for Education Statistics (NCES) selects a sample of schools using a sampling process that takes into account the distribution of schools and students across rural, suburban, and urban areas, and the diversity of the student population in each state. Within each selected school and grade to be assessed, students are then chosen at random to participate in NAEP. Within the selected sample of schools, every student has the same chance of being chosen, regardless of race/ethnicity, socioeconomic status, disability, status as an English language learner, or any other factors.[24] (See also "Do special education students and English language learner students participate in NAEP?")

In the national-only sample, there are approximately 10,000 students per subject area and grade level. In years when NAEP also reports state-level results, approximately 3,000 public school students per subject and grade are assessed in each state. For state NAEP assessments, around 100 public schools are selected for each subject at grades 4 and 8. (See also Exhibit 2 and "NAEP in Grade 12.") Typically, 30 students per subject per grade are randomly selected in each school.[25]

The sampling process is repeated each year that NAEP is administered, each time using the most recent data to account for changes in schools and shifts in student demographics across states and the nation. See Exhibit 1 for a summary of the NAEP state-level selection of schools and students.

**NAEP and student data privacy**

Under the National Assessment of Educational Progress Authorization Act, the Commissioner of the National Center for Education Statistics (NCES) is charged with ensuring that NAEP tests do not question test takers about personal or family beliefs or make information about their personal identity publicly available.

Identities of the schools and students who participate in NAEP are kept confidential. After publishing NAEP reports, NCES makes data available to researchers but withholds students' names and other identifying information. Because it might be possible to deduce from data the identities of some NAEP schools, researchers must promise, under penalty of fines and jail terms, to keep these identities confidential.

Sources: National Assessment of Educational Progress, Important Aspects of No Child Left Behind Relevant to NAEP, http://nces.ed.gov/. The Nation's Report Card, Frequently Asked Questions, Overview of The Nation's Report Card, http://nationsreportcard.gov/.

**Exhibit 1: Procedures for NAEP state-level selection of schools and students**

1. **Identify all public schools in each state**, using the U.S. Department of Education's most current public education system database.
2. **Classify schools into groups**, first by type of location and then by the racial/ethnic composition of the schools within these locations. This ensures that the sampling process takes into account the distribution of schools and students across rural, suburban, and urban areas, and the diversity of the student population in each state.
3. **Within each group, order schools by student achievement.** Schools are sorted by a measure related to student achievement to ensure that schools with varying levels of student performance are represented in the NAEP sample. This is done using school-level results on state achievement tests.
4. **Develop a comprehensive ordered list for sampling**, i.e., by type of location, race/ethnicity, and student achievement. The probability of a school being selected for the NAEP sample is calculated based on the size of its enrollment in relation to the size of the state's student population at the selected grade level and the number of schools needed for the assessment.
5. **Select the school sample using a systematic sampling procedure**, which ensures that each school has an equal probability of selection. By proceeding systematically throughout the entire list, schools of different sizes and varying demographics are selected and a representative sample of students in the state is chosen for the assessment.
6. **Confirm school eligibility.** The list of schools selected to participate is sent to each state department of education to verify that the schools are eligible for participation. Some factors that would make a school ineligible include school closure or if the school does not have students in the grade level being assessed.
7. **Within sampled schools, select students to participate in NAEP.** In each sampled school, a list is compiled of all students within the grade to be assessed. From this list, a sample of students is randomly selected by NCES (the National Center for Education Statistics) for participation in the assessment. Every student in a sampled school has an equal probability of being selected. After the sample is drawn, students are assigned a single subject area in which to answer questions. NAEP staff members work with the school to verify the accuracy of student demographic information.

Source: National Center for Education Statistics, National Assessment of Educational Progress, NAEP State Assessment Sample Design Frequently Asked Questions, http://nces.ed.gov/.

**Exhibit 2: NAEP 2013 – Tennessee sample sizes, school and student participation**

| | Sample Size | Target Population | # of Participating Schools | # of Students Assessed |
|---|---|---|---|---|
| Grade 4, Reading | 3,200 | 71,000 | 110 | 3,100 |
| Grade 8, Reading | 2,800 | 70,000 | 110 | 2,700 |
| Grade 4, Math | 3,000 | 71,000 | 110 | 3,000 |
| Grade 8, Math | 2,800 | 70,000 | 110 | 2,700 |

Note: The sample size is rounded to the nearest hundred. The target population is rounded to the nearest thousand. The number of schools is rounded to the nearest ten. The number of students is rounded to the nearest hundred.
Sources: National Center for Education Statistics, *2013 Reading Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified*, pp. 1-4, and *2013 Mathematics Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified*, pp. 1-4, http://nationsreportcard.gov/.

**Do special education students and English language learner students participate in NAEP?**

NAEP allows the use of certain testing accommodations for students with disabilities and English language learner students (ELLs), many of which are also allowed on state assessments. Examples of such accommodations are extending the time period during which the test is taken and administering the test to small groups or a single student.[26] Examples of testing accommodations *not* allowed in NAEP are giving the reading assessment in a language other than English or reading the reading passages aloud to the student. Also, extending testing over several days is not allowed for NAEP because NAEP administrators are in each school only one day.[27]

For ELLs, NAEP offers math and science exams in Spanish to students tested in that language by their states. For most other subjects, NAEP allows bilingual dictionaries in whatever language a student needs. However, students may be excluded from the assessment when NAEP does not offer an accommodation or translation, such as in reading, which NAEP tests in English only.[28]

NAEP encourages participation of all students selected in the sampling process; however, school officials are permitted to exclude some students from testing. According to NCES,

> To ensure that the samples in each state are representative, NAEP has established policies and procedures to maximize the inclusion of all students in the assessment. Every effort is made to ensure that all selected students who are capable of participating meaningfully in the assessment are assessed. While some students with disabilities (SD) and/or English language learner (ELL) students can be assessed without any special procedures, others require accommodations to participate in NAEP. Still other SD and/or ELL students selected by NAEP may not be able to participate. Local school authorities determine whether SD/ELL students require accommodations or shall be excluded because they cannot be assessed. The percentage of SD and/or ELL students who are excluded from NAEP assessments varies from one jurisdiction to another and within a jurisdiction over time.[29]

NAEP monitors and reports states' participation, inclusion, and exclusion rates to the public for every assessment. The National Center for Education Statistics publishes a state-by-state account of participation, accommodation, and exclusion rates for NAEP assessments.[30] According to the National Assessment Governing Board (NAGB), accommodation and exclusion rates on NAEP vary because of state-to-state differences in demography, school policies, and testing practices.[31]

**Why are exclusion rates important? How has this been handled in Tennessee?**

According to NCES,

> Since students with disabilities (SD) and English language learners (ELL) tend to score below average on assessments, exclusion of students from these groups may result in a higher average score than if those students had taken the assessment.[32]

In July 2005, a Government Accountability Office (GAO) report found varying and high rates of exclusion among states for students with disabilities on NAEP tests, and cited an average exclusion rate of five percent.[33] In updated research a few months later, GAO reported that its original estimates were too low based on new information about how the data should be interpreted, and that the exclusion rates varied by grade level, with 40 percent of grade 4 students

with disabilities excluded from NAEP samples, 37 percent from grade 8 samples, and 43 percent from grade 12 samples.[34]

In 2010, the NAGB adopted a policy proposing uniform national rules for NAEP testing of students with disabilities and ELL students, in an effort "to ensure that NAEP is fully representative." The policy guidelines specify that states exclude no more than five percent of any NAEP sample (i.e., include 95 percent of all sampled students) and establish a goal of 85 percent inclusion for students with disabilities and ELL students randomly selected for a NAEP sample.[35]

On NAEP 2011, the first NAEP tests given after the NAGB policy was adopted, Tennessee did not meet the 85 percent inclusion goal for students with disabilities and English language learners for three of the four assessments.[36] For the 2013 NAEP, Tennessee "made a massive effort to significantly increase the inclusion rates for students with disabilities," according to the Tennessee Department of Education Commissioner, cutting exclusion rates for students with disabilities by more than half on three of the four exams. The Commissioner acknowledged that the state still needs to make more progress in this area in future NAEP testing.[37] In 2013, Tennessee met the 85 percent inclusion goal for students with disabilities in three of the four assessments, as opposed to only one of the four in 2011.[38] See Exhibit 3 and Exhibit 4 for Tennessee's exclusion rates for NAEP 2011 and 2013, and the lowest and highest rates by state for NAEP 2013.

**When and how is NAEP administered in schools?**

NAEP national and state assessments are administered from the last week of January through the first week of March. Responses to the background questions for the national and state NAEP are collected at the same time.[39] Results are published for math, reading, science, and writing assessments six months to a year after the assessment is complete.[40]

NAEP field staff personnel go into schools across the nation to administer assessments to students who are part of the sample. NAEP requires participating schools to designate a School Coordinator to work in partnership with NAEP field staff. NAEP field staff responsibilities include scheduling assessments with the schools, providing schools with information about notifying

**Exhibit 3: Exclusion rates for students with disabilities, Tennessee, NAEP 2011 and 2013, and lowest and highest rates (by state) in 2013**

| Subject / Grade | TN 2011 | TN 2013 | 2013, of all participating states | |
|---|---|---|---|---|
| | | | Lowest | Highest |
| Reading / Grade 4 | 49% | 18% | 5% (LA, MS, NY RI) | 66% (MD) |
| Reading / Grade 8 | 51% | 27% | 3% (NY, VT) | 60% (MD) |
| Math / Grade 4 | 24% | 7% | 4% (IA) | 17% (ND) |
| Math / Grade 8 | 31% | 14% | 2% (DC) | 17% (KY) |

Source: National Center for Education Statistics, *2013 Reading Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified,* pp. 17 and 18, and *2013 Mathematics Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified*, pp. 17 and 18, http://nationsreportcard.gov/ (accessed Dec. 18, 2013).

parents, distributing student assessment materials, timing the administration of the assessments, administering any needed accommodations sessions, and conducting quality control of all assessment materials following testing.[41]

NAEP School Coordinators also collaborate with the NAEP State Coordinator, a position assigned within the state education agency. The state coordinator position is funded through a NAEP grant.[42]

Principals and teachers complete questionnaires about their education, their classroom procedures, and their schools' policies and characteristics. Teachers may also be asked to collect information about participating students who are classified as English language learners and students with disabilities. Students complete questionnaires about their demographic characteristics, classroom experiences, and educational support. Completion of the student questionnaires is voluntary, and student responses are kept confidential.[43]

NAEP supplies participating schools with Sample Questions booklets, which provide administrators and teachers with an idea of what to expect during an assessment. The booklets also give teachers and parents of participating students an opportunity to examine the types of questions students will be answering.[44] The booklets contain many of the features of the actual test booklets, including instructions, sample subject-area questions and student responses from previous NAEP assessments, and questions about the student's activities and characteristics related to education and the subject being assessed.[45]

To obtain reliable test results, NAEP assessments include several hundred questions. Since having each participating student respond to every question would not be practical, NAEP divides the test questions into different portions, or blocks, and administers the various blocks to different but equivalent student samples. NAEP assessments, including background questions, are designed to require approximately 90 minutes. NAEP asks each student to answer questions in only one subject, using 20 to 60 varying combinations of different blocks from the item pool.[46] Students sitting next to each other are not tested on the

**Exhibit 4: Exclusion rates for English language learners, Tennessee, NAEP 2011 and 2013, and lowest and highest rates (by state) in 2013**

| Subject / Grade | TN 2011 | TN 2013 | 2013, of all participating states | |
|---|---|---|---|---|
| | | | Lowest | Highest |
| Reading / Grade 4 | 18% | 18% | 2% (AR, KS, MO) | 61% (MD) |
| Reading / Grade 8 | ** | ** | 2% (KS, NV) | 61% (MD) |
| Math / Grade 4 | 8% | 9% | 1% (SC, AR) | 12% (ME) |
| Math / Grade 8 | ** | ** | 1% (IA, KS) | 17% (MD) |

Note: ** indicates that Tennessee did not meet the reporting standards for this category (i.e., sample size was insufficient to permit a reliable estimate).
Source: National Center for Education Statistics, *2013 Reading Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified,* pp. 19 and 20, and *2013 Mathematics Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified*, pp. 19 and 20, http://nationsreportcard.gov/ (accessed Dec. 18, 2013).

same subject, thus ensuring an additional level of test security.[47]

Only when the student scores are aggregated at the state or national level are the data considered reliable and valid estimates of what students know and can do in the content area; consequently, NAEP does not report scores for individual students or schools.[48]

**How are the NAEP assessments developed?**
The Commissioner of Education Statistics, who heads the National Center for Education Statistics in the U.S. Department of Education, is responsible by law for carrying out the NAEP project. The National Assessment Governing Board, appointed by the Secretary of Education but independent of the Department, sets policy for NAEP and is responsible for developing the framework and test specifications that serve as the blueprint for the assessments. The Governing Board is a bipartisan group whose members include governors, state legislators, local and state school officials, educators, business representatives, and members of the general public. Congress created the 26-member Governing Board in 1988.[49]

The National Assessment Governing Board selects the subjects to be assessed and oversees creation of both the NAEP assessment frameworks and the specifications that guide the development of the assessment instruments. The framework for each subject area is determined through a collaborative process involving teachers, curriculum specialists, subject-matter specialists, school administrators, parents, and members of the general public.[50]

Under the direction of NCES, NAEP contractors develop the questions and tasks based on the subject-specific frameworks. National, state, and urban district NAEP assessments use the same assessment instruments. For each subject area assessment, a national committee of teachers, subject-matter specialists, and measurement experts provide guidance and review the questions to ensure that they meet the framework specifications. For each state assessment, state curriculum and testing directors review the questions.[51]

**What are the NAEP achievement levels? How and by whom are they determined?**
There are three achievement levels for each grade assessed by NAEP (4, 8, and 12): Basic, Proficient, and Advanced. The following definitions apply to all subjects and all grades assessed by NAEP.[52]

For each grade, the levels are cumulative; that is, abilities achieved at the Proficient level presume mastery of abilities associated with the Basic level, and attainment of the Advanced level presumes mastery of both the Basic and Proficient levels.[53]

**Exhibit 5: NAEP Achievement Level Policy Definitions**

| | |
|---|---|
| **Basic** | Partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade. |
| **Proficient** | Solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter. |
| **Advanced** | Superior performance. |

Source: National Center for Education Statistics, NAEP Achievement Levels, http://nces.ed.gov/ (accessed Feb. 24, 2014).

The Governing Board develops the NAEP achievement levels that provide information about what students should know and be able to do at the three grade levels tested (grades 4, 8, and 12) within each subject area tested. A broadly representative panel of teachers, education specialists, and members of the general public help to define and review achievement levels.[54]

Panelists involved in setting the achievement levels include judges who are expert in the subject matter, including not only classroom teachers in the subject and grade being assessed, but also other educators (such as college faculty and curriculum directors) and representatives of the general public who are trained in the content area and have knowledge of the skills and educational requirements for students at the grade levels assessed by NAEP.

For each NAEP assessment, the panel develops a description of what students should know and be able to do to qualify for performance at each of the three NAEP achievement levels. (See, for example, Exhibit 6 for Grade 4 achievement levels for the NAEP reading test. Also see descriptions of achievement levels in each subject and grade at http://nces.ed.gov/nationsreportcard/achievement.aspx.) A cut score is set to represent the minimal performance required for each achievement level.[55]

**How does NAEP compare to TCAP?**

NAEP and TCAP (the Tennessee Comprehensive Assessment Program) differ in several ways. NAEP provides a snapshot of the state's academic achievement, based on results from a random sample of about 3,000 students throughout the state. NAEP results are not reported at the district, school, or individual student level. TCAP is a set of statewide assessments, including Achievement Tests and End of Course exams, based on Tennessee's academic standards and given annually to measure each individual student's skills and progress. Students in grades 3 through 8 take the Achievement Test, and high school students take End of Course exams for various subjects. Student results are reported to parents, teachers, and administrators. TCAP results also are reported at the state, district, and school levels on the TDOE website and on the Annual Report Card.

TCAP is based on Tennessee's curriculum standards and is used for accountability purposes; neither of these is true of NAEP. See Exhibit 11 for a comparison between NAEP and state assessments.

Although NAEP is different from Tennessee's state assessments, and all other states' assessments, NCES regularly publishes studies that compare

**Exhibit 6: Grade 4 Achievement Levels for NAEP Reading Assessment**

| | |
|---|---|
| **Basic** | Fourth-grade students performing at the Basic level should be able to locate relevant information, make simple inferences, and use their understanding of the text to identify details that support a given interpretation or conclusion. Students should be able to interpret the meaning of a word as it is used in the text. |
| **Proficient** | Fourth-grade students performing at the Proficient level should be able to integrate and interpret texts and apply their understanding of the text to draw conclusions and make evaluations. |
| **Advanced** | Fourth-grade students performing at the Advanced level should be able to make complex inferences and construct and support their inferential understanding of the text. Students should be able to apply their understanding of a text to make and support a judgment. |

Source: National Center for Education Statistics, The NAEP Reading Achievement Levels by Grade, http://nces.ed.gov/.

NAEP and state proficiency standards. Published beginning in 2003, the NCES studies compare state standards for proficient performance in reading and mathematics by placing each state's standards onto the NAEP scales. This procedure, called "mapping," allows the level of achievement required for proficient performance in one state to be compared with the level of achievement required in another state. Every NCES mapping study has found wide variation in how states define academic achievement.[56]

The most recent mapping report, published in 2011, analyzed data from the 2009 NAEP. The report found that in grade 4 reading, 35 of 50 states set standards for proficiency (as measured on the NAEP scale) that were lower than the scale score for Basic performance on NAEP and another 15 were in the NAEP Basic range. In grade 8 reading, 16 of 50 states set standards for proficiency that were lower than the cut-point for Basic performance on NAEP and another 34 were in the NAEP Basic range.[57]

In grade 4 mathematics, seven states set standards for proficiency (as measured on the NAEP scale) that were lower than the Basic performance on NAEP, 42 states were in the NAEP Basic range, and one state was in the Proficient range. In grade 8 mathematics, 12 of 49 states included in the analysis set proficiency standards that were lower than the Basic performance on NAEP, 36 were in the NAEP Basic range, and one was in the Proficient range.[58]

The NAEP mapping report showed that in 2009 Tennessee, like many other states, had a much higher percentage of students meeting state proficiency standards than the percentage at or above the NAEP proficient level in both reading and math for grades 4 and 8. (For example, in reading, 90 percent of Tennessee 4th graders reached the state's proficiency standard but only 28 percent scored at or above the NAEP proficiency level.)[59] Much has changed in Tennessee, however, since this study was conducted – the state has adopted more challenging academic standards with new assessments on the horizon. A future mapping

**Exhibit 7: States' proficiency standards for grade 4 reading classified into NAEP achievement levels: 2009**


Source: Victor Bandeira de Mello, U.S. Department of Education, National Center for Education Statistics, *Mapping State Proficiency Standards Onto NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005-2009*, Aug. 10, 2011, p. 10, http://nces.ed.gov/.

**Exhibit 8: States' proficiency standards for grade 8 reading classified into NAEP achievement levels: 2009**


Source Victor Bandeira de Mello, U.S. Department of Education, National Center for Education Statistics, *Mapping State Proficiency Standards Onto NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005-2009*, Aug. 10, 2011, p. 11, http://nces.ed.gov/.

study based on results of the 2013 NAEP, on which Tennessee students made exceptional gains, will likely tell a different story about the rigor of the state's academic standards. See Exhibits 7, 8, 9, and 10.

**How does NAEP compare to international tests?**

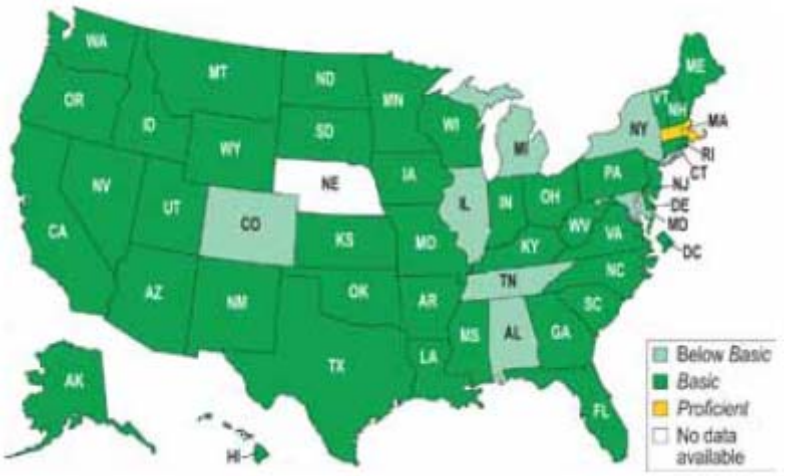
International assessments differ from the National Assessment of Educational Progress (NAEP) in several important ways.[60] NAEP is designed to measure the knowledge, skills, and competencies needed by U.S. students. International assessments, which include

- the Progress in International Ready Study (PIRLS),
- the Trends in International Mathematics and Science Study (TIMSS), and
- Program for International Student Assessment (PISA),

are each developed in an internationally collaborative manner to reflect the interests of a wide range of countries, including the U.S.

- *Participating countries:* NAEP is given only in the U.S. The International Association for the Evaluation of Educational Achievement (which administers TIMSS and PIRLS) includes in its assessments a diverse group of countries and jurisdictions, some of which are developing countries. The Organization for Economic Cooperation and Development (OECD) conducts PISA assessments in all 30 member nations of the OECD, with some participation by non-OECD countries and jurisdictions.
- *Populations tested:* NAEP tests students in grades 4, 8, and 12; PIRLS tests only grade 4; TIMSS tests grades 4 and 8 (and has tested grade 12 twice); and PISA tests 15-year-olds.
- *Sample sizes on which the tests are based:* All of the assessments are sample-based. Because NAEP is reported at the state level, NAEP samples a much larger

**Exhibit 9: States' proficiency standards for grade 4 mathematics classified into NAEP achievement levels: 2009**




Source Victor Bandeira de Mello, U.S. Department of Education, National Center for Education Statistics, *Mapping State Proficiency Standards Onto NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005-2009*, Aug. 10, 2011, p. 12, http://nces.ed.gov/.

**Exhibit 10: States' proficiency standards for grade 8 mathematics classified into NAEP achievement levels: 2009**


Source Victor Bandeira de Mello, U.S. Department of Education, National Center for Education Statistics, *Mapping State Proficiency Standards Onto NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005-2009*, Aug. 10, 2011, p. 13, http://nces.ed.gov/.

number of students than does PIRLS, TIMSS, and PISA. The NAEP national sample comprises individual state samples of public school students, supplemented by a national sample of nonpublic school students.[61] According to NCES, "NAEP generally measures performance at a finer level of precision than TIMSS or PISA, and these differences can have an impact on the assessments' sensitivities in detecting changes in student performance."

- *Content:* According to NCES, NAEP and the international assessments differ (sometimes considerably) in various aspects of the content tested, including content coverage and item format. "Overall assessment scores can depend on the extent to which the proportion of the items devoted to various topics or skills aligns with the emphases of the education system's [i.e., that of the country or state] curriculum." In the mathematics assessments, TIMSS and NAEP both have a majority of multiple-choice test items, and about two-thirds of the items on PISA are constructed response, which require students to produce their own answers rather than choose from a list of items. Item formats in science, mostly multiple choice and some constructed response, are similar on all three tests.[62]

In 2011, NCES initiated a study in an effort to link the NAEP scale to the Trends in International Mathematics and Science Study (TIMSS) scale so that states could compare the performance of their students with that of students in other countries. The study was conducted with 8th grade students in all 50 states plus D.C. and Department of Defense schools,[63] participants in the NAEP mathematics and science assessments.[64]

The NAEP-TIMSS linking study used states' NAEP scores to predict performance on TIMSS. Nine states participated in 2011 TIMSS at the state level.[65] (Tennessee did not participate.) In the linking study, the participating states' actual TIMSS scores were used to validate their predicted results. For all states that did not participate, including Tennessee, the study results were used to predict what their TIMMS scores would have been had they taken the actual test.[66]

*Mathematics (Context: In 2011, the average mathematics score of U.S. 8th-graders (509) was higher than the international TIMSS scale average, which is set at 500. The 11 education systems with average mathematics scores above the U.S. score were Korea, Singapore, Chinese Taipei, Hong Kong-CHN, Japan, Massachusetts-USA, Minnesota-USA, the Russian Federation, North Carolina-USA, Quebec-CAN, and Indiana-USA.)*[67]

- Average scores for public school students in 36 states were higher than the TIMSS average of 500; 10 states' scores were not significantly different than the TIMSS average score; six states' scores (including Tennessee's predicted score) were lower.
- Scores ranged from 466 for Alabama to 561 for Massachusetts. Tennessee scored 490.[68]

*Science (Context: In 2011, the average science score of U.S. 8th-graders (525) was higher than the TIMSS scale average, which is set at 500. The 12 education systems with average science scores above the U.S. score were Singapore, Massachusetts-USA, Chinese Taipei-CHN, Korea, Japan, Minnesota-USA, Finland, Alberta-CAN, Slovenia, the Russian Federation, Colorado-USA, and Hong Kong-CHN.)*[69]

- Average scores for public school students in 47 states (including Tennessee) were higher than the TIMSS average of 500; two state's average scores were not

significantly different; three states' scores were lower.
- Scores ranged from 453 for the District of Columbia to 567 for Massachusetts. Tennessee scored 524 and was in the group with average scores higher than the TIMMS average.[70]

**Who evaluates NAEP?**

In the law that established NAEP, Congress included a requirement for the ongoing evaluation of the assessment as a whole by one or more professional assessment evaluation organizations. Reviews are to address whether NAEP is properly administered, produces high quality data that are valid and reliable, and is consistent with relevant widely accepted professional assessment standards, and whether student achievement levels are reasonable, valid, and reliable. The Secretary of the USDOE must report findings and recommendations from the review of NAEP to the Committee on Education and the Workforce of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate, the President, and the nation.[71]

The law further requires the Commissioner of Education Statistics and the National Assessment Governing Board to consider the findings and recommendations when selecting the contractors through which NAEP is carried out. In response to these requirements, NCES has established panels of technical experts to study NAEP, and panels are formed periodically by NCES or external organizations, such as the National Academy of Sciences, to conduct evaluations.[72]

In 2009, the Buros Center for Testing, in collaboration with the Center for Educational Assessment in the School of Education at the University of Massachusetts Amherst and the University of Georgia, published the most recent external evaluation of NAEP. Major findings were:[73]

- The procedures for developing and maintaining NAEP are generally consistent with professional testing standards, but NAEP lacks an organized program of research for providing evidence of the validity of intended uses and interpretations.
- Many of the procedures for setting NAEP achievement levels are consistent with professional testing standards, with a notable exception regarding external evidence to inform policy decisions for where to make the cut scores defining basic, proficient, and advanced levels of achievement.
- Although NAEP data are available to compare state performance levels, the appropriateness of doing so is affected by many factors, including alignment between NAEP content frameworks and state education programs, and differences in state student participation rates in NAEP.
- NAEP's website contains both depth and breadth of information, but the information may not be reaching some intended stakeholders in ways that facilitate distinguishing between NAEP achievement levels and those that were developed by states for ESEA reporting purposes.

## Exhibit 11: Comparing NAEP and State Assessments

| | NAEP Assessments | State Assessments |
|---|---|---|
| ***Purpose*** | ▪ Measure student performance nationally and report changes over time<br>▪ Provide results for the nation, states, and some urban districts<br>▪ Allow comparisons between states and the nation | ▪ Measure progress of schools, districts, and states toward adequate yearly progress (AYP) goals as required by federal law<br>▪ Provide state, district, school, and individual student data<br>▪ Track progress toward state education goals<br>▪ Measure performance according to each state's content standards |
| ***Frameworks*** | ▪ Are developed by the National Assessment Governing Board to specify what students should know and be able to do in each content area at a given grade level<br>▪ Are not aligned to any particular content standards<br>▪ Reflect the knowledge and experience of subject area experts, school administrators, policymakers, teachers, parents, and others | ▪ Are set and defined by each state based on its content standards<br>▪ Include input from a diverse group of stakeholders, including policymakers and educators |
| ***Achievement Levels (also referred to as "Performance Standards")*** | ▪ Are measured according to three specified achievement levels—*Basic*, *Proficient*, and *Advanced*—set by the National Assessment Governing Board<br>▪ Define *Proficient* as "competency over challenging subject matter" | ▪ Are measured by achievement levels that are set and defined by each state individually<br>▪ Define *Proficient* as "at grade level" performance |
| ***About the Assessments*** | ▪ Include multiple-choice, short constructed-response, extended-response, and computer-based questions<br>▪ Assess students with disabilities and English language learners based on NAEP-allowable accommodations<br>▪ Are administered by NAEP field staff during regular school hours | ▪ Consist of a variety of formats, which vary by state, such as multiple-choice, constructed-response, performance events, portfolios, alternative assessments, and computer-based assessments<br>▪ Assess students with disabilities and English language learners according to the state's accommodation policy<br>▪ Are administered by school and district personnel during regular school hours |
| ***Assessment Participation*** | ▪ Assess representative samples of students in grades 4 and 8 from each state in reading and mathematics every other year<br>▪ Periodically assess national and state samples of students at grades 4, 8, and 12 in other subject areas such as science and writing<br>▪ Do not require student participation but highly encourage it<br>▪ May exclude students with disabilities and English language learners who require test accommodations other than those allowed by NAEP | ▪ Assess all students in grades 3 through 8 every year in reading and mathematics<br>▪ Assess students in grades 3 through 8 in science at least once in elementary school (3-5) and once in middle school (6-8)<br>▪ Assess high school students at least once in reading, mathematics, and science<br>▪ Offer alternative or modified assessments to students with disabilities and English language learners when necessary<br>▪ Require participation by all schools |
| ***Assessment Results*** | ▪ Are used by the President, Congress, and state leaders to develop ways to develop educational improvements in the nation<br>▪ Allow comparisons between states and the nation<br>▪ Allow trend comparisons over time<br>▪ Do not report performance for individual schools, students, or most school districts | ▪ Are used by governors, state legislatures, state leaders, and state educators to set education policy and examine school and group performance<br>▪ Are used by teachers, parents, and other school staff to review individual student performance<br>▪ Aid in making local decisions about curriculum and instruction<br>▪ May also be used for promotion/retention decisions and/or graduation requirements<br>▪ May be used to inform state accreditation decisions |

Source: National Center for Education Statistics, "Comparing NAEP and State Assessments," http://nces.ed.gov/ (accessed Feb. 6, 2014).

**The intersection of NAEP, PARCC, and Smarter Balanced assessments**

Because states have long developed their K-12 assessments independently, states' results on those assessments could not be compared. States also define "proficiency" differently, setting their own cut scores (i.e., scores used to determine the minimum performance level students must achieve on a test) for different levels of mastery (e.g., below basic, basic, proficient, and advanced). Among the anticipated outcomes of the tests being developed by the PARCC Consortium (of which Tennessee is a member) and the Smarter Balanced Assessment Consortium are that all participating states will agree on a common level of mastery and will report student achievement on a shared scale, which will allow state (and even district) comparisons.

The NAGB notes how this may affect the future of NAEP, which has historically provided the only sound basis for a comparison of student achievement among states:

> NAEP must provide value as a nationally representative assessment when it is likely that other assessments will also provide information about student achievement that may be aggregated and compared across districts, states, and even at the national level. . . . If NAEP remains a low-stakes assessment program aligned to frameworks that reach beyond the confines of the CCSS [Common Core State Standards], then it will be well positioned to provide uniquely valuable information about the extent to which other learning is maintained or declines as curriculum and instruction evolve toward the CCSS. History suggests that even for ELA [English language arts] and mathematics content included in the CCSS, achievement trends shown on NAEP will likely differ from those seen on high stakes tests themselves.

Source: National Assessment Governing Board, *NAEP: Looking Ahead, Leading Assessment into the Future*, Recommendations to the Commissioner, National Center for Education Statistics, May 2012, p. 5, http://www.nagb.org/.

**Endnotes**

1 National Assessment Governing Board, "Latest Reading, Mathematics Assessments Show Progress," News Release, Nov. 7, 2013, http://www.nagb.org/ (accessed Feb. 6, 2014).

2 The other two jurisdictions were the District of Columbia and the Department of Defense schools. The Nation's Report Card, 2013 Mathematics and Reading, "What states are making gains?" http://nationsreportcard.gov/ (accessed Jan. 24, 2014).

3 The Nation's Report Card, 2013 Mathematics and Reading, "How are states performing?" http://nationsreportcard.gov/ (accessed Jan. 24, 2014).

4 NAEP is a congressionally authorized project of the National Center for Education Statistics within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP. The Nation's Report Card, About The Nation's Report Card, http://nationsreportcard.gov/ (accessed Feb. 24, 2014).

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7 National Assessment of Educational Progress, Frequently Asked Questions, http://nces.ed.gov/ (accessed Feb. 24, 2014). The Nation's Report Card, Trial Urban District Assessment, http://nationsreportcard.gov/ (accessed Jan. 16, 2014).

8 The Nation's Report Card, Parents: 8 Things You Should Know, http://nationsreportcard.gov/ (accessed Feb. 24, 2014).

9 National Center for Education Statistics, About National NAEP and About State NAEP, http://nces.ed.gov/ (accessed Feb. 6, 2014).

10 National Center for Education Statistics, National Assessment of Educational Progress, Parents' Frequently Asked Questions About NAEP, http://nces.ed.gov/ (accessed Jan. 24, 2014).

[11] NAEP also administers long-term trend assessments, given at the national level only, which measure the trends of academic progress in mathematics and reading for students at ages 9, 12, and 17. Although long-term trend and the national level NAEP both assess mathematics and reading, there are several differences, particularly in the content assessed, how often the assessment is administered, and how the results are reported. Results from long-term trend and the national-level NAEP cannot be compared directly. This OREA report focuses primarily on the state-level administration of NAEP. See http://nces.ed.gov/ for more information on long-term trend NAEP.

[12] National Assessment of Educational Progress, Frequently Asked Questions, https://nces.ed.gov/ (accessed Feb. 24, 2014).

[13] Ibid.

[14] National Assessment of Educator Progress, Educator Update, http://nces.ed.gov/ (accessed Feb. 24, 2014). National Center for Education Statistics, National Assessment of Educational Progress, About State NAEP, http://nces.ed.gov/ (accessed Jan. 21, 2014).

[15] In 2001, with the reauthorization of the Elementary and Secondary Education Act, commonly referred to since that year as "No Child Left Behind," states receiving Title I federal funding were required to participate in state NAEP beginning in 2002-03 in reading and mathematics at grades 4 and 8 every two years. Since all states currently receive Title I funding, the requirement applies to all states. National Center for Education Statistics, National Assessment of Educational Progress, Important Aspects of No Child Left Behind Relevant to NAEP, http://nces.ed.gov/ (accessed Jan. 16, 2014). Tennessee has participated in every NAEP state assessment given since 1992.

[16] National Center for Education Statistics, National Assessment of Educational Progress, About National NAEP, http://nces.ed.gov/ (accessed Jan. 21, 2014). National Center for Education Statistics, National Assessment of Educational Progress, History of State Participation, 1994-1998: Nonpublic Schools, http://nces.ed.gov/ (accessed Jan. 16, 2014).

[17] The Nation's Report Card, Trial Urban District Assessment, http://nationsreportcard.gov/ (accessed Jan. 16, 2014).

[18] Accommodations are modifications to completing tasks or taking assessments that allow students with disabilities or English language learners to complete the same assignments or assessments as other students. The content of the task or assessment remains unchanged.

[19] U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, *The Nation's Report Card: An Overview of Procedures for the NAEP Assessment*, 2009, pp. 6-7, http://nces.ed.gov/ (accessed Jan. 24, 2014). See also National Center for Education Statistics, National Assessment of Educational Progress, Questionnaires for Students, Teachers, and Schools, http://nces.ed.gov/ for links to questionnaires used for students and school officials from the most recent NAEP tests back to 2004.

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[21] U.S. Department of Education, Overview, ESEA Title I LEA Allocations—FY2013, http://www2.ed.gov/ (accessed Jan. 23, 2014).

[22] The Nation's Report Card, Frequently Asked Questions, Overview of The Nation's Report Card, http://nationsreportcard.gov/ (accessed Jan. 13, 2014).

[23] National Center for Education Statistics, National Assessment of Educational Progress, How States Join, http://nces.ed.gov/ (accessed Jan. 24, 2014).

[24] National Center for Education Statistics, National Assessment of Educational Progress, Participation in NAEP 2013 Is Important to Our Nation, http://nces.ed.gov/ (accessed Jan. 13, 2014).

[25] U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, The Nation's Report Card: An Overview of Procedures for the NAEP Assessment, 2009, p. 13, http://nces.ed.gov/ (accessed Jan. 24, 2014). Since the 2002 NAEP assessments, a combined sample of public schools has been selected for both state and national NAEP. From the schools representing 50 states, a sub-sample is identified as the national subset from which the 10,000 student sample is drawn for the national level NAEP results. National Assessment of Educational Progress, "How the Samples of Schools and Students Are Selected for the Main Assessments (State and National)," http://nces.ed.gov/ (accessed Feb. 21, 2014).

[26] National Assessment of Educational Progress, Parents' Frequently Asked Questions About NAEP, https://nces.ed.gov/ (accessed Feb. 24, 2014).

[27] The Nation's Report Card, Frequently Asked Questions, http://nationsreportcard.gov/ (accessed Dec. 18, 2013).

[28] National Assessment Governing Board, Frequently Asked Questions, http://www.nagb.org/ (accessed Dec. 18, 2013).

[29] National Center for Education Statistics, National Assessment of Educational Progress, Inclusion of Special Needs Students, http://nces.ed.gov/ (accessed Jan. 23, 2014).

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[33] United States Government Accountability Office, *Most Students with Disabilities Participated in Statewide Assessments, but Inclusion Options Could Be Improved*, Report to the Ranking Minority Member, Committee on Health, Education, Labor, and Pensions, U.S. Senate, GAO-05-618, July 2005, pp. 16-18, http://www.gao.gov/ (accessed Jan. 15, 2014).

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[38] National Center for Education Statistics, *2013 Reading Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified,* p. 6, footnote 1, http://nationsreportcard.gov/ and *2013 Mathematics Assessment Report Card: Summary Data Tables for National and State Sample Sizes, Participation Rates, and Proportions of SD and ELL Students Identified*, p. 6, footnote 1, http://nationsreportcard.gov/ (accessed Dec. 18, 2013).

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[53] Ibid.

[54] Ibid. "The 2001 reauthorization law requires that the achievement levels be used on a trial basis until the Commissioner of Education Statistics determines that the achievement levels are 'reasonable, valid, and informative to the public' (see the No Child Left Behind Act of 2001, P.L. 107-110, 115 Stat. 1425 [2002]). Until that determination is made, the law requires the Commissioner and the National Assessment Governing Board to state clearly the trial status of the achievement levels in all NAEP reports. A proven alternative to the current process has not yet been identified. NCES and the Board continue to call on the research community to assist in finding ways to improve standard setting for reporting NAEP results. The National Assessment Governing Board urges all who are concerned about student performance levels to recognize that the use of these achievement levels is a developing process using evolving methods and is subject to various interpretations. The Board and NCES believe that the achievement levels are useful for reporting trends in the educational achievement of students in the United States." National Center for Education Statistics, National Assessment of Educational Progress, The Status of Achievement Levels, http://nces.ed.gov/ (accessed Jan. 16, 2014).

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[63] The other jurisdictions are the District of Columbia and the Department of Defense Schools.

[64] National Center for Education Statistics, *The Nation's Report Card: U.S. States in a Global Context: Results From the 2011 NAEP-TIMSS Linking Study*, Oct. 2013, http://nces.ed.gov/ (accessed Jan. 17, 2014). See also National Center for Education Statistics, National Assessment of Educational Progress, About the Study, http://nces.ed.gov/ (accessed Jan. 17, 2014).

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[70] National Center for Education Statistics, The Nation's Report Card: U.S. States in a Global Context: Results From the 2011 NAEP-TIMSS Linking Study, Oct. 2013, pp. 1, 4, and 34, http://nces.ed.gov/ (accessed Feb. 21, 2014).

[71] 20 U.S. Code Chapter 76, Subchapter III, Section 9622 (f), http://www.law.cornell.edu/ (accessed Jan. 24, 2014).

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## Appendix: NAEP Assessment Schedule, 1969-2017

| Year | National grades 4, 8, and 12 unless indicated | State (also TUDA, since 2002) grades 4 and 8 only, unless indicated | Long-Term Trend ages 9, 13, and 17 |
|---|---|---|---|
| **2017** | Mathematics | Mathematics (4,8,12) | |
| | Reading | Reading (4,8,12) | |
| | Writing | Writing (4,8,12) | |
| **2016** | Arts (8) | | |
| | | | Mathematics, Reading |
| **2015** | Mathematics | Mathematics (4,8,12) | |
| | Reading | Reading (4,8,12) | |
| | Science | Science (4,8,12) | |
| | High School Transcript Study [1] | | |
| **2014** | Civics | | |
| | Geography | | |
| | Technology and Engineering Literacy (8) [2] | | |
| | U.S. History | | |
| **2013** | Mathematics | Mathematics (4,8,12) | |
| | Reading | Reading (4,8,12) | |
| **2012** | Economics (12) | | |
| | | | Mathematics, Reading |
| **2011** | Mathematics (4,8) | Mathematics | |
| | Reading (4,8) | Reading | |
| | Science (8) | Science (8; state only) | |
| | Writing (8,12) [2] | | |
| **2010** | Civics | | |
| | Geography | | |
| | U.S. History | | |
| **2009** | Mathematics [2] | Mathematics (4,8,12) [2, 3] | |
| | Reading [2] | Reading (4,8,12) [2, 3] | |
| | Science [2] | Science [2] | |
| | High School Transcript Study [1] | | |

| Year | National<br>grades 4, 8, and 12 unless indicated | State<br>(also TUDA, since 2002)<br>grades 4 and 8 only, unless indicated | Long-Term Trend<br>ages 9, 13, and 17 |
|---|---|---|---|
| 2008 | Arts (8) | | |
| | | | Mathematics, Reading |
| 2007 | Mathematics (4,8) | Mathematics | |
| | Reading (4,8) | Reading | |
| | Writing (4,8) | Writing (8) | |
| 2006 | Civics | | |
| | Economics (12) | | |
| | U.S. History | | |
| 2005 | Mathematics [2] | Mathematics [2] | |
| | Reading | Reading | |
| | Science | Science | |
| | High School Transcript Study [1] | | |
| 2004 | | | Mathematics, Reading |
| 2003 | Mathematics (4,8) | Mathematics | |
| | Reading (4,8) | Reading | |
| 2002 | Reading | Reading | |
| | Writing | Writing | |
| 2001 | Geography | | |
| | U.S. History | | |
| 2000 | Mathematics | Mathematics | |
| | Reading (4) | | |
| | Science | Science | |
| 1999 | | | Mathematics, Reading, Science[4] |
| 1998 | Civics | | |
| | Reading | Reading | |
| | Writing | Writing (8) | |
| 1997 | Arts (8) | | |
| 1996 | Mathematics | Mathematics | |
| | Science | Science (8) | |
| | | | Mathematics, Reading, Science, Writing [5] |

| Year | National<br>grades 4, 8, and 12 unless indicated | State<br>(also TUDA, since 2002)<br>grades 4 and 8 only, unless indicated | Long-Term Trend<br>ages 9, 13, and 17 |
|---|---|---|---|
| **1994** | Geography | | |
| | Reading | Reading (4) [6] | |
| | U.S. History | | |
| | | | Mathematics, Reading, Science, Writing |
| **1992** | Mathematics | Mathematics [6] | |
| | Reading | Reading (4) [6] | |
| | Writing | | |
| | | | Mathematics, Reading, Science, Writing |
| **1990** | Mathematics | Mathematics (8) [6] | |
| | Reading | | |
| | Science | | |
| | | | Mathematics, Reading, Science, Writing |
| **1988** | Civics | *State assessments began in 1990* | |
| | Document Literacy [7] | | |
| | Geography [7] | | |
| | U.S. History | | |
| | Reading | | |
| | Writing | | |
| | | | Civics,[8] Science, Reading, Writing |
| **1986** | Computer Competence | | |
| | U.S. History [7] | | |
| | Literature [7] | | |
| | Mathematics | | |
| | Science | | |
| | Reading | | |
| | | | Mathematics, Science, Reading [9] |
| **1984** | Reading | | |
| | Writing | | |
| | | | Reading, Writing |

| Year | National grades 4, 8, and 12 unless indicated | State (also TUDA, since 2002) grades 4 and 8 only, unless indicated | Long-Term Trend ages 9, 13, and 17 |
|---|---|---|---|
| 1981-1982 [10] | Citizenship | | |
| | Mathematics | | |
| | Science | | |
| | Social Studies | | |
| | | | Mathematics,[8] Science[8] |
| 1979-1980 | Art | | |
| | Literature | | |
| | Reading | | |
| | | | Reading [8] |
| 1978-1979 | Art | | |
| | Music | | |
| | Writing | | |
| 1977-1978 | Consumer Skills [7] | | |
| | Mathematics | | |
| | | | Citizenship/ Social Studies [8] |
| 1976-1977 | Basic Life Skills [7] | | |
| | Science | | |
| | | | Science [8] |
| 1975-1976 | Citizenship/Social Studies | | |
| | Mathematics [7] | | |
| | | | Citizenship/ Social Studies [8] |
| 1974-1975 | Art | | |
| | Index of Basic Skills | | |
| | Reading | | |
| | | | Reading [8] |
| 1973-1974 | Career/Occupational Development | | |
| | Writing | | |
| 1972-1973 | Mathematics | | |
| | Science | | |
| | | | Mathematics,[8] Science [8] |
| 1971-1972 | Music | | |
| | Social Studies | | |

| Year | National grades 4, 8, and 12 unless indicated | State (also TUDA, since 2002) grades 4 and 8 only, unless indicated | Long-Term Trend ages 9, 13, and 17 |
|---|---|---|---|
| 1970-1971 | Literature | | |
| | Reading | | |
| | | | Reading [8] |
| 1969-1970 | Citizenship | | |
| | Science | | |
| | Writing | | |
| | | | Science [8] |

Notes:

1. The High School Transcript Study collects high school transcripts of high school seniors who graduated the year that the study was conducted.
2. An updated or new framework is planned for implementation in this subject. In the case of subjects for which frameworks are already adopted, the Board will decide whether a new or updated framework is needed for this assessment year. Note: The new framework for Mathematics 2009 was adopted for grade 12 only.
3. For 2009, there was a pilot study of grade 12 state-level results, for which 11 states volunteered.
4. After the 1999 long-term trend in science, it was determined that technical studies are required to enable necessary changes to the design and revisions to the item pool in order to maintain the long-term trend in this subject. For more information, see the National Assessment Governing Board policy on long-term trend assessments.
5. After 1996, long-term trend in writing was no longer reported because of technical reasons having to do with the relatively small number of writing prompts.
6. State assessments in 1990–94 were referred to as trial state assessments (TSA).
7. This was a small, special-interest assessment administered to limited national samples at specific grades or ages and was not part of a main assessment. Note that this chart includes only assessments administered to in-school samples; not shown are several special NAEP assessments of adults.
8. This assessment appears in reports as part of long-term trend. Note that the civics assessment in 1988 is the third point in trend with citizenship/social studies in 1981-82 and in 1975-76. There are no points on the trend line for writing before 1984.
9. The 1986 long-term trend reading assessment is not included on the trend line in reports because the results for this assessment were unusual.
10. Explanation of format for year column: Before 1984, the main NAEP assessments were administered in fall of one year through spring of the next. Beginning with 1984, the main NAEP was administered after the new year in winter, although the assessments to measure long-term trend continued with their traditional administration in fall, winter, and spring. Because the main assessment is the largest component of NAEP, beginning with 1984 NCES listed its administration year rather than the two years over which trend continued to be administered. Note also that the state component is administered at essentially the same time as the main NAEP.

Source: National Center for Educational Statistics, Timeline for National Assessment of Educational Progress (NAEP) Assessments from 1969 to 2017, http://nces.ed.gov/.

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