

The Nation's Report Card™

Mathematics 2009 Trial Urban District Assessment

Frequently Asked Questions

What is the NAEP Trial Urban District Assessment?

The Trial Urban District Assessment (TUDA) is a special project of the National Center for Education Statistics, the National Assessment Governing Board, and the Council of the Great City Schools to determine the feasibility of reporting district-level results for the National Assessment of Educational Progress (NAEP). The 2009 assessment marks the fourth assessment in mathematics since 2003.

How many districts participate each year, and how are they chosen?

A total of 18 urban districts participated in the 2009 mathematics assessment, including 11 districts that also participated in earlier assessment years, and 7 districts participating for the first time in 2009 (listed below in italics).

Atlanta Public Schools	<i>Fresno Unified School District</i>
Austin Independent School District	<i>Jefferson County Public Schools (Louisville, KY)</i>
<i>Baltimore City Public Schools</i>	Houston Independent School District
Boston Public Schools	Los Angeles Unified School District
Charlotte-Mecklenburg Schools	<i>Miami-Dade County Public Schools</i>
Chicago Public Schools	<i>Milwaukee Public Schools</i>
Cleveland Metropolitan School District	New York City Department of Education
<i>Detroit Public Schools</i>	San Diego Unified School District
District of Columbia Public Schools	<i>School District of Philadelphia</i>

Districts are invited by the National Assessment Governing Board to participate in the assessment based on a selection process that considers a number of factors including the district's size and racial/ethnic diversity. The maximum number of districts participating in a given assessment year is based on the level of Congressional funding for the program.

Are the districts included in the recently released national and state NAEP results?

Yes. Students in the TUDA samples are also included as part of the state and national samples. For example, the results reported for students in Boston also contribute to the results reported for Massachusetts and to the results for the nation. The districts' results are weighted so that their contribution to the state results reflects the actual proportion of students in the population.

What are "large cities" and why are they used as a point of comparison?

Just as the national public sample is used as a benchmark for comparing results for states, results for urban districts are compared to results from large cities nationwide. Referred to as "large central cities" in previous TUDA reports, results for large cities are for public schools located in the urbanized areas of cities with populations of 250,000 or more. Large city is not synonymous with "inner city." Schools in participating TUDA districts are also included in the results for large cities, even though some districts (Atlanta, Austin, Charlotte, Cleveland, Fresno, Houston, Jefferson County, Los Angeles, and Miami-Dade) include some schools not classified as large

city schools. Students in the 18 TUDA districts represent nearly half of the students who attend schools in large cities nationally. The comparison to students in large cities is made because the demographic characteristics of those students are most like the characteristics of students in the urban districts. Both the districts and large cities overall generally have higher concentrations of Black or Hispanic students, lower-income students, and English language learners than in the nation as a whole.

How is the assessment developed?

Like every NAEP assessment, the mathematics assessment is based on a framework for the assessment. Frameworks are developed by the National Assessment Governing Board through a process that incorporates input from subject experts, school administrators, policymakers, teachers, parents, and others and are revised periodically to reflect what students are learning in schools. Test specifications based on the frameworks provide guidelines for developing the actual questions used on NAEP assessments which are developed in consultation with classroom teachers, curriculum specialists, and test development specialists and reviewed by the Governing Board.

What types of questions do students answer?

Students answer both multiple-choice and constructed-response questions covering five mathematics content areas: number properties and operations; measurement; geometry; data analysis, statistics, and probability; and algebra. Testing time on NAEP is divided evenly between multiple-choice items and constructed-response questions.

Each student responds to two 25-minute sections, each containing both multiple-choice and constructed-response questions. Questions in each section come from all of the content areas and vary in difficulty. They also vary by level of mathematical complexity. Low complexity questions often require students to carry out routine mathematical procedures, for example finding the area of a rectangle given the length and the width. Moderate complexity questions require responses with multiple steps. High complexity questions tend to require abstract reasoning or analysis. Mathematical complexity describes the demands that a question makes on students' thinking and is not directly related to the format of the question or question difficulty. Some sections incorporated the use of a ruler (grade 4) or ruler/protractor (grade 8) or other manipulatives such as geometric shapes that were provided. At fourth-grade, each section contained between 15 and 19 questions. At eighth grade, there were between 14 and 18 questions in each section.

How can a score change be significant for one group, but similar or larger change not be significant for another group?

Estimates (like averages and percentages) in this report all have a margin of error associated with them. These margins of error are called standard errors, and the sizes of the standard errors influence the results of statistical tests. Comparisons over time or between groups are based on statistical tests that consider both the size of the differences between estimates and the standard errors of the two estimates being compared. Estimates based on smaller groups are likely to have larger standard errors. When an estimate has a large standard error, a numerical difference that seems large may not be statistically significant. For example, a 3-point change in the average score for large cities may be statistically significant, while a 3-point change for a district may not

be. Standard errors for the district results are available in the NAEP Data Explorer at <http://nces.ed.gov/nationsreportcard/naepdata/>

What testing accommodations does NAEP offer?

NAEP allows many of the same types of testing accommodations that students with disabilities and English language learners receive for state or district tests. The most commonly used accommodations are extended time and small-group administration. Bilingual test booklets in English and Spanish are available for the mathematics assessment. Although the use of calculators is permitted for specific sections of the NAEP mathematics assessment, calculators are not allowed as an accommodation since it would alter what is being tested (i.e., the student's ability to do arithmetic operations).

How should high exclusion rates be interpreted? What is the potential impact of these rates on scores?

When making comparisons across districts or within districts over time, it is always important to consider variations in exclusion rates because of a wide range of proportions of students with disabilities (SD) and/or English language learners (ELL) among districts. Districts follow the accommodation policies set by their state. Although every effort is made to include as many students as possible, different jurisdictions have different exclusion policies, and those policies may have changed over time. Because SD and ELL students typically score lower than students not categorized as SD or ELL, jurisdictions that are more inclusive—that is, jurisdictions that assess greater percentages of these students—may have lower average scores than if they had a less inclusive policy. Exclusion rates for SD and/or ELL fourth- and eighth-graders in mathematics ranged from 1 to 11 percent across the participating districts in 2009. In large cities, the exclusion rate was 3 percent at both grades. More information on the inclusion and accommodation rates in each district is available in appendix tables A-2 through A-5 in the report.

What additional information is available on individual district performance?

A wealth of information on the performance of students in each district is available on the Web.

- Browse highlights of the 2009 mathematics results for participating districts on The Nation's Report Card website at <http://nationsreportcard.gov>.
- View individual snapshots of districts' performance at <http://nces.ed.gov/nationsreportcard/pubs/dst2009/2010455.asp>.
- Use the NAEP Data Explorer to create statistical tables and charts summarizing district results at <http://nces.ed.gov/nationsreportcard/naepdata>.
- See how districts performed on released questions from the mathematics assessment in the NAEP Question Tool at <http://nces.ed.gov/nationsreportcard/itmrlsx>.
- Read the *Mathematics Framework for the 2009 National Assessment of Educational Progress and Assessment and Item Specifications for the NAEP 2009 Mathematics Assessment* on the Governing Board website at <http://www.nagb.org/publications/frameworks.htm>.