

NEWS RELEASE

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Mathematics and Reading Scores of Fourth- and Eighth-Graders Declined in Most States During Pandemic, Nation's Report Card Shows

Mathematics scores declined for both fourth- and eighth-graders in nearly all districts and states

WASHINGTON (October 24, 2022)—A majority of states saw scores decline for fourth- and eighth-graders in mathematics and reading between 2019 and 2022, according to the latest results from the National Assessment of Educational Progress (NAEP), also known as The Nation's Report Card, released today by the U.S. Department of Education's National Center for Education Statistics (NCES). The national average score declines in mathematics for fourth- and eighth-graders were the largest ever recorded in that subject.

"The results show the profound toll on student learning during the pandemic, as the size and scope of the declines are the largest ever in mathematics," said NCES Commissioner Peggy G. Carr. "The results also underscore the importance of instruction and the role of schools in both students' academic growth and their overall wellbeing. It's clear we all need to come together—policymakers and community leaders at every level—as partners in helping our educators, children, and families succeed."

There were no improvements in mathematics in any state or large urban district, and eighth-grade mathematics scores declined in 51 participating states and jurisdictions since the assessment was last given in 2019, the year prior to the onset of the COVID-19 pandemic in the United States. Eighth-grade mathematics scores did not change in Utah or the U.S. Department of Defense Education Activity schools.

"Eighth grade is a pivotal moment in students' mathematics education, as they develop key mathematics skills for further learning and potential careers in mathematics and science," said Daniel J. McGrath, acting as NCES associate commissioner for assessment. "If left unaddressed, this could alter the trajectories and life opportunities of a whole cohort of young people, potentially reducing their abilities to pursue rewarding and productive careers in mathematics, science, and technology."

"Despite the countless obstacles that students faced over the course of the pandemic—including instability at home, decreased access to resources, teacher shortages, cyberbullying, and an uptick in violence once schools reopened—we also see pockets of remarkable resilience across the country, particularly in the country's urban districts," said Commissioner Carr. "But academic recovery cannot simply be about returning to what was 'normal' before the pandemic, as the pandemic laid bare an 'opportunity gap' that has long existed. It also showed how every student was vulnerable to the pandemic's disruptions. We do not have a moment to waste."

The data from The Nation's Report Card released today offer the first look at the COVID-19 pandemic's impact on what the nation's fourth- and eighth-graders know and can do using a common measure of student achievement and the first student-level achievement data for all 50 states, the District of Columbia, the Department of Defense Schools, Puerto Rico, and 26 large urban districts that volunteered to participate in the assessment.

National Results

Nationally, the average mathematics score for fourth-graders fell five points since 2019 (from 241 to 236), while the score for eighth-graders dropped eight points (from 282 to 274). In reading, average scores for both grades fell three points (from 220 to 217 at fourth grade and from 263 to 260 at eighth grade).

The percentage of students performing below the *NAEP Basic* level increased across both subjects and grade levels. In mathematics, 25 percent of fourth-graders were below the *NAEP Basic* level in 2022 (an increase from 19 percent in 2019) and 38 percent of eighth-graders were below *NAEP Basic* (an increase from 31 percent in 2019). In reading, the percentage of fourth-graders below the *NAEP Basic* level increased from 34 percent in 2019 to 37 percent in 2022, and the percentage of eighth-graders below *NAEP Basic* increased from 27 percent in 2019 to 30 percent in 2022. The *NAEP Basic* achievement level represents partial mastery of the prerequisite knowledge and skills that are fundamental for performance at the *NAEP Proficient* level, which represents competency over challenging subject matter. The *NAEP Basic* level is the least stringent of the three achievement level goals for American students that are set by the National Assessment Governing Board.

Declines were most widespread on the eighth-grade mathematics assessment, where scores declined across most racial and ethnic groups and for students across the performance distribution (lower-, middle-, and higher-performing students). Fourth-grade mathematics scores declined for all racial and ethnic groups except native Hawaiian-Pacific Islander students.

In eighth-grade reading, scores declined only for White students among the racial/ethnic groups, by four points. Scores declined in fourth-grade reading for American Indian/Alaska Native, Black, Hispanic, and White students.

State Results

A majority of states saw lower scores, on average, across grades and subjects since 2019. There were no improvements in fourth- and eighth-grade mathematics, as average fourth-grade mathematics scores declined in 43 states and jurisdictions and did not change in 10, and eighth-grade mathematics scores declined in 51 states and jurisdictions and remained steady in two. There were no improvements in fourth-grade reading, as average fourth-grade reading scores declined in 30 states and jurisdictions and did not change in 22. At eighth grade, reading scores declined in 33 states and jurisdictions, did not change in 18, and rose in one (the Department of Defense Education Activity).

	MATHEMATICS		READING	
	GRADE 4	GRADE 8	GRADE 4	GRADE 8
▲ INCREASE	0	0	0	▲ 1 Department of Defense Education Activity

NO CHANGE				
▼ DECREASE	▼ 43 South Dakota, Montana, Wyoming, North Dakota, Tennessee, Ohio, Michigan, Utah, California, Kansas, Washington, Vermont, Texas, Arkansas, Florida, New Hampshire, Rhode Island, North Carolina, Kentucky, West Virginia, Massachusetts, Arizona, Colorado, Idaho, Indiana, Missouri, Nevada, Alaska, Pennsylvania, New Jersey, Connecticut, Mississippi, Maine, Oklahoma, Oregon, Minnesota, New York, New Mexico, Maryland, Virginia, District of Columbia, Delaware, Puerto Rico	▼ 51 Idaho, Alabama, Alaska, Iowa, Nevada, Hawaii, Rhode Island, Wyoming, Nebraska, South Dakota, California, Louisiana, New York, Montana, Texas, Indiana, North Dakota, Florida, South Carolina, Illinois, Arkansas, Wisconsin, Michigan, Virginia, Tennessee, Mississippi, Georgia, Missouri, New Hampshire, Kentucky, Oregon, Arizona, Colorado, District of Columbia, Ohio, Connecticut, Washington, New Mexico, Maine, North Carolina, Vermont, Kansas, Minnesota, Pennsylvania, Massachusetts, New Jersey, Maryland, West Virginia, Delaware, Oklahoma, Puerto Rico	▼ 30 Ohio, North Dakota, Nebraska, South Dakota, Utah, Massachusetts, Pennsylvania, Kentucky, Indiana, Kansas, New Jersey, Missouri, Vermont, Tennessee, North Carolina, Connecticut, New Mexico, New York, Nevada, Michigan, Minnesota, Maryland, Oregon, District of Columbia, Idaho, West Virginia, Oklahoma, Maine, Delaware, Virginia	▼ 33 Rhode Island, Idaho, Mississippi, Montana, Florida, Arkansas, Colorado, Wyoming, New Mexico, Michigan, Massachusetts, Kentucky, Nebraska, Vermont, Washington, New Hampshire, Tennessee, Ohio, Pennsylvania, Maryland, South Carolina, North Dakota, Wisconsin, Indiana, Missouri, Connecticut, West Virginia, North Carolina, Kansas, Oregon, Delaware, Oklahoma, Maine

District Results

NCES also reports student achievement for selected large urban school districts through the NAEP Trial Urban District Assessment (TUDA) program. Fourth- and eighth-graders in 26 urban districts participated in the mathematics and reading assessments in 2022.

A useful benchmark for comparing the progress of the urban districts participating in NAEP is the average

score for the “Large City” group—the NAEP classification for cities with populations of 250,000 or more. Since the last assessment in 2019, the average fourth-grade reading scores for large city schools declined three points; and in mathematics, the average score for large city schools declined 8 points for both fourth and eighth grades, reflecting the national pattern. However, unlike for the nation and most states, the large city average score did not decline for grade 8 reading.

Other district findings included:

- Average scores for fourth-grade mathematics did not change in three districts: Hillsborough County (Florida), Dallas, and Austin. Fourth-grade mathematics scores declined for the other 23 participating urban districts.
- Average scores for eighth-grade mathematics did not change in four of the districts: Los Angeles, Miami-Dade, New York City, and Philadelphia. Eighth-grade mathematics scores declined for the other 22 participating urban districts.
- Average scores for fourth-grade reading held steady in a majority of the participating districts (17): Austin, Hillsborough County (Florida), Los Angeles, Dallas, Miami-Dade, the District of Columbia Public Schools, San Diego, New York City, Houston, Philadelphia, Milwaukee, Albuquerque, Chicago, Boston, Jefferson County (Kentucky), Fort Worth, and Denver. Fourth-grade reading scores declined for the other 9 participating urban districts.
- Average scores for eighth-grade reading increased in one district: Los Angeles. Eighth-grade reading scores held steady in a majority of the participating districts (21): New York City, Miami-Dade, Clark County (Nevada), Duval County (Florida), Dallas, Baltimore, Fort Worth, Milwaukee, Albuquerque, Philadelphia, Chicago, Atlanta, the District of Columbia Public Schools, Denver, Hillsborough County (Florida), Houston, San Diego, Boston, Austin, Charlotte-Mecklenburg, and Detroit. Eighth-grade reading scores declined for the other four participating urban districts.

Learning Opportunities and Teacher Confidence During the Pandemic

NCES collected information on how the pandemic affected student learning experiences and opportunities as part of the 2022 NAEP administration.

Across both subjects and grades, higher percentages of higher-performing students (students performing at or above the 75th percentile) had access to key educational resources than lower-performing students (students performing below the 25th percentile) during remote learning in the 2020–21 school year, including the following:

- Access to a desktop computer, laptop, or tablet all the time;
- A quiet place to work at least some of the time;
- Their teacher available to help with schoolwork at least once or twice a week; and
- For eighth-graders, real-time video lessons with their teacher every day or almost every day.

NCES also collected information on teacher confidence in performing remote instruction tasks, including addressing knowledge and skill gaps that may have occurred due to pandemic-related school closures. Fifty percent of teachers or fewer reported feeling “quite” or “extremely” confident in their ability to address learning gaps:

- At fourth grade, 11 percent of students had teachers who reported being “extremely confident” in addressing knowledge and skills gaps, while 35 percent of teachers in mathematics and 36 percent of teachers in reading reported being “quite confident.”

- At eighth grade, 14 percent of students had teachers who reported being “extremely confident” in addressing knowledge and skills gaps, while 35 percent of teachers in mathematics and 36 percent of teachers in reading reported being “quite confident.”

About the Assessment

Since 1969, the National Assessment of Educational Progress, also known as The Nation’s Report Card, has been the largest nationally representative and continuing assessment of what students in public and private schools in the United States know and are able to do in various subjects. In 2022, NCES administered the NAEP mathematics and reading assessments to fourth- and eighth-graders in public and private schools in all 50 states, the District of Columbia, the U.S. Department of Defense Education Activity schools, Puerto Rico (mathematics only), and in 26 urban districts. The assessments were administered between January and March of 2022. Results for states and districts are for public schools only. Approximately 224,400 fourth-graders from approximately 5,780 schools and 222,200 eighth-graders from approximately 5,190 schools participated in the 2022 mathematics and reading assessments. Representative samples of schools and students are drawn from each state, district, Puerto Rico, the District of Columbia, and the U.S. Department of Defense Education Activity schools.

Visit <https://www.nationsreportcard.gov/> to view the report.

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The National Center for Education Statistics, a principal agency of the U.S. Federal Statistical System, is the statistical center of the U.S. Department of Education and the primary federal entity for collecting and analyzing data related to education in the U.S. and other nations. NCES fulfills a congressional mandate to collect, collate, analyze, and report complete statistics on the condition of American education; conduct and publish reports; and review and report on education activities internationally.

The National Assessment of Educational Progress (NAEP) is a congressionally authorized project sponsored by the U.S. Department of Education. The National Center for Education Statistics, within the Institute of Education Sciences, administers NAEP. The commissioner of the National Center for Education Statistics is responsible by law for carrying out the NAEP project. Policy for the NAEP program is set by the National Assessment Governing Board, an independent, bipartisan board whose members include governors, state legislators, local and state school officials, educators, business representatives, and members of the general public. NAEP has been reporting information about what students across the country know and can do in major school subjects since 1969.