

## Math Scores Fell in Nearly Every State, and Reading Dipped on National Exam

By Sarah Mervosh, *The New York Times*

Required Annotations	Student-Created Annotations	Summary / Questions / Reflection
Student-created		Required (bold)

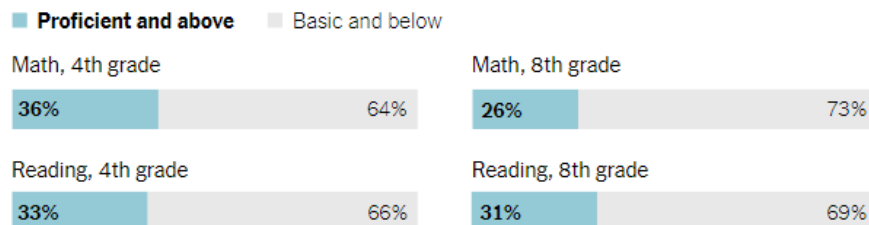
U.S. students in most states and across almost all demographic groups have experienced troubling setbacks in both math and reading, according to an authoritative national exam released on Monday, offering the most definitive indictment yet of the pandemic's impact on millions of schoolchildren.

In math, the results were especially devastating, representing the steepest declines ever recorded on the National Assessment of Educational Progress, known as the nation's report card, which tests a broad sampling of fourth and eighth graders and dates to the early 1990s.

In the test's first results since the pandemic began, math scores for eighth graders fell in nearly every state. A meager 26 percent of eighth graders were proficient, down from 34 percent in 2019. Fourth graders **fared** only slightly better, with declines in 41 states. Just 36 percent of fourth graders were proficient in math, down from 41 percent.

Reading scores also declined in more than half the states, continuing a downward trend that had begun even before the pandemic. No state showed sizable improvement in reading. And only about one in three students met proficiency standards, a designation that means students have demonstrated **competency** and are on track for future success.

### National proficiency levels in math and reading in 2022



Note: Percentages may not sum to 100 because of rounding. • Source: National Center for Education Statistics

And for the country's most vulnerable students, the pandemic has left them even further behind. The drops in their test scores were often more pronounced, and their climbs to proficiency are now that much more daunting.

"I want to be very clear: The results in today's nation's report card are appalling and unacceptable," said Miguel Cardona, the secretary of education. "This is a moment of truth for education. How we respond to this will determine not only our recovery, but our nation's standing in the world."

The exam, which is administered by federal officials and is considered more rigorous than many state tests, sampled nearly 450,000 fourth and eighth graders in more than 10,000 schools between January and March. The results are detailed for each state, as well as more than two dozen large school districts.

The findings raise significant questions about where the country goes from here. Last year, the federal government made its largest single investment in American schools — \$123 billion, or about \$2,400 per student — to help students catch up. School districts were required to spend at least 20 percent of the money on academic recovery, a **threshold** some experts believe is inadequate for the magnitude of the problem. With the funding slated to expire in 2024, research suggests that it could take

billions more dollars and several years for students to properly recover.

The test results could be seized as political **fodder** — just before the midterms — to re-litigate the debate over how long schools should have stayed closed, an issue that **galvanized** many parents and teachers.

The bleak results underscored how closing schools hurt students, but researchers cautioned against drawing fast conclusions about whether states where schools stayed remote for longer had significantly worse results. Decisions about how long to keep schools closed often varied even within states, depending on the local school district and virus transmission rates. And other factors, such as poverty levels and a state's specific education policies, may also influence results.

The picture was mixed, and performance varied by grade level and subject matter in ways that were not always clear cut. For example, Texas, where many schools opened sooner, held steady in reading but posted declines similar to national averages in math. In California, which stood out for its caution in reopening schools, scores declined slightly less than national averages in several categories — about in line with Florida, which was a leader in opening schools sooner. Los Angeles stayed closed longer than almost anywhere else in the country, according to data by Burbio, a school tracking site, yet it was the only place to show significant gains in eighth-grade reading.

“Comparing states is tricky and people will likely go to red state, blue state, which is not the most helpful framing,” said Sean Reardon, a professor of education at Stanford University who is conducting a deeper analysis to try to come to more definitive answers.

## **The Math Problem**

Students today are still performing better than they did 30 years ago in math. For the last decade, math scores had held steady, with small fluctuations here and there. But this year, that stability was shattered.

In eighth-grade math, the average score fell in all but one state. Seventeen states and the District of Columbia experienced double-digit drops, including higher-performing states like Massachusetts and New Jersey, and lower-performing states like Oklahoma and New Mexico. Utah was the only state where the eighth-grade math declines were not deemed **statistically significant**. Places like Delaware, Maryland and Washington, D.C., fell by double digits in both fourth- and eighth-grade math.

The scores for older students were particularly concerning because “eighth grade is that gateway to more advanced mathematical course taking,” said Peggy Carr, commissioner of the National Center for Education Statistics, the research arm of the Department of Education, which administers the exam. She said students may be missing foundational skills in algebra and geometry, which would be needed in high school and for future careers in math and science. For example, compared with 2019, fewer eighth graders could measure the length of a diagonal of a rectangle, or convert miles to yards. Reading was less affected, perhaps, in part, because students received more help from parents during the pandemic.

Matthew Chingos, who directs the Center on Education Data and Policy at the Urban Institute, a research group, said the national results are consistent with other data that suggests math scores, in general, tend to be more dependent on what is being taught in school, whereas reading scores can also be driven by “what happens in the home.”

Still, reading was not spared, and in both grades, more than half the states saw significant declines. In 2019, reading scores had also declined in many states.

## **A Sharp Drop, a Wider Gap**

The pandemic laid bare the deep and troubling inequalities that dominate many aspects of American life — especially in education. In fourth grade, for both math and reading, students in the bottom 25th percentile lost more ground compared with students at the top of their class, leaving the low-performing students further behind. And Black and Hispanic students, who started out behind white and Asian peers, experienced sharper declines than those groups in fourth-grade math. Black and Hispanic students are more likely to attend schools segregated in poverty, and those schools stayed remote for longer than wealthier schools did during the pandemic, deepening divides.

The impact was especially stark for struggling students. In a survey included in the test, only half of fourth graders who were low performing in math said they had access to a computer at all times during the 2020-21 school year, compared with 80 percent of high-performing students. Similarly, 70 percent said they had a quiet place to work at least some of the time, compared with 90 percent for high performers. In one bright spot, most big city school districts, including New York City, Dallas and Miami-Dade, held steady in reading.

Raymond Hart, executive director of the Council of the Great City Schools, which works with 77 of the nation's largest urban public school districts, saw it as a hopeful sign that the remedies districts put in place may be making a difference. "We believe recovery and rebound is possible for students," he said.

But students in some districts like Cleveland and Memphis could afford to lose little ground. Many experience deep poverty and were already struggling entering the pandemic, yet they showed large declines this year across both grade levels and subjects. In Detroit, where nearly one in two schoolchildren live in poverty, just 6 percent of fourth graders were proficient in math in 2019. This year, that number fell to 3 percent.

## Now What?

Test scores are not the only factors that matter for a child's future, but research has documented the importance of academic preparedness, starting early. Students who do not read well in elementary school are more likely to drop out of high school, or not graduate on time. And ninth grade — where eighth graders who took the test in the spring are now — is considered a critical year for setting students up to graduate high school and attend college.

"We need to be doing something to target our resources better at those students who have been just historically underserved," said Denise Forte, the interim chief executive at the Education Trust, which focuses on closing gaps for disadvantaged students.

Much of the nation's hope for recovery rests on the billions of dollars in pandemic aid. But districts were given wide latitude for spending the money. "Many districts do not have a concerted plan for math," said Marguerite Roza, the director of the Edunomics Lab at Georgetown University, who is tracking pandemic relief spending. She is among those who believe that districts will need to spend more than 20 percent of their relief money on academic recovery.

One option, research suggests, is simply more time. Frequent small-group tutoring and doubling up on math classes are among the strategies that have shown promise.

Kevin Huffman, a former education commissioner in Tennessee who is now the chief executive of Accelerate, a nonprofit focused on tutoring, urged leaders to set aside finger pointing about what went wrong during the pandemic, and instead make a "moral commitment" to helping students recover. "We cannot, as a country, declare that 2019 was the pinnacle of American education," he said.

