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## Nation's Science Test: Students Show Low Proficiency, Expert Calls Scores 'Unacceptable'

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About a third of eighth-graders who took a national science exam in 2011 were proficient, according to results released Thursday, a statistic called "unacceptable" by a teachers association leader.

Average scores on the [National Assessment of Educational Progress science test](#) inched up two points from 150 in 2009 to 152 (out of 300) in 2011, the U.S. Department of Education's research arm reported, but experts are cautioning against calling it a victory.

"There is no cause for optimism," Gerry Wheeler, interim director of the [National Science Teachers Association](#) wrote in a statement, because "the results show miniscule gains in student achievement." He lamented that "the majority of our eighth-grade level students still fall below the proficiency level," calling the scores "simply unacceptable."

Besides, Wheeler notes, the increase was concentrated: Of the 47 states tested in both 2009 and 2011, only 16 had higher scores this time around. The number of students scoring at the basic and proficient levels increased, but not those at the advanced level.

U.S. Secretary of Education Arne Duncan offered a more positive interpretation. "Today's results offer encouraging signs that our nation's eighth-graders are improving in science education," Duncan said in a statement. "When the last assessment was done, there was no significant change in the percentage of students at the Advanced level. This tells me that we need to work harder and faster to build capacity in schools and in districts across the country."

The voluntary exam is considered a gold standard measurement of student achievement.

All 50 states and Washington, D.C., participated; 122,000 students took it, providing what its administrator, the National Center for Education Statistics, called a nationally representative sample. The National Assessment Governance Board, which sets NAEP policy, retooled the content in 2009, making a comparison of the 2009 and 2011 tests impossible. North Dakota, Montana and Vermont students performed the best, with Washington, D.C., California and Mississippi getting the lowest average scores.

"Students do have to read text in order to answer science questions," Cornelia Orr, who directs the [board](#), said on a call with reporters. "Any improvement we might see in science means they might be able to read better."

Two test administrations hardly provide enough information for spotting trends. But the center for statistics said results show that racial achievement gaps in science are narrowing: White students' scores grew by one point, black students' scores grew by three points and Hispanic students' scores grew by five points.

"That's a substantively significant increase," said [center](#) commissioner Jack Buckley, referring to Hispanic students. "[They're] getting much closer to the 'basic' level."

The results come as a movement to make science (and related fields like technology, engineering and mathematics, commonly known as "STEM") more popular and important in schools grows.

"It's important to move the needle because every job that pays a living wage includes STEM literacy and science as a component," said Linda Rosen, who leads a group known as [Change the Equation](#). She fell in love with math when she was in school, and her class was included in the country's first post-Sputnik math curriculum.

Despite the national attention, though, schools and their districts have cut funding for science programs, Wheeler notes. According to a 2008 [report](#) from the Center on Education Policy, average instructional time for science decreased by one-third (or 75 minutes per week) since the implementation of the No Child Left Behind act, the 2001 Bush law that required standardized testing in reading and math.

Standards for science vary from state to state, according to STEM advocates. [A report from Rosen's group](#), called "All Over the Map," showed that whether students are deemed proficient "may have more to do with where you live than what you have learned." CTE argues that the mess of standards undercuts the point of testing, since it fails to provide a uniform, comparable metric of science knowledge across the country.

Partly in response to such concerns, a consortium of 26 states will release the [first draft of common science standards this week](#). The group hopes to expand these standards throughout all states.

"Old science curriculum would ask students to name the parts of the cell," Rosen said. "New standards would ask, what do the different parts of the cell do? That's a game-changer."

Pushing STEM has also become a plank of the Obama administration's education platform. The latest round of the school-reform competition Race to the Top required states to emphasize related programming and recruiting. Such initiatives are poised to figure into the president's reelection campaign. "Improving our nation's human capital in STEM has been a priority for this administration," Buckley said.

On Tuesday, the White House invited about 50 STEM and research advocates to a budget meeting led by representatives from NASA, the White House Office of Science and Technology Policy and the office for public engagement. "They were expressing concern because the Ryan budget doesn't give very much funding to any one of the STEM subjects," Rosen said.