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Low Scores on Science Test Revive Concerns

By **STEPHANIE BANCHERO**

U.S. eighth graders made modest gains on the latest national science exam, but more than two-thirds still lacked a solid grasp of science facts, according to figures released Thursday that renewed concerns American schools are inadequately preparing children for college and the workforce.

The 2011 National Assessment of Educational Progress, an exam administered by the U.S. Department of Education, showed that 32% of students were proficient in science, compared with 30% the first time the new version of the science exam was administered, in 2009.

The continued lackluster showing prompted concern from teachers and policy makers. "This is deeply disappointing," said Gerry Wheeler, interim executive director of the National Science Teachers Association. "This performance won't get us where we need to go to create the science-literate workforce we need."



Associated Press

An eighth-grade science class last year in Rio Rancho, N.M.

Teachers and education-advocacy groups cite various possible causes for weak scores, including a lack of qualified science teachers, budget cutbacks and a narrowing of the curriculum prompted by the No Child Left Behind law. That 2002 U.S. statute caused schools to be evaluated solely on math and reading tests, which persuaded some to reduce science education.

"There is no coherency in science education in the U.S., so we end up with a scattered approach and that harms our students," said Steven Long, who heads the science department at Rogers High School in Rogers, Ark.

The Obama administration and some state leaders, including the Republican governors of New Jersey and Iowa, in recent years have pushed districts to alter union contracts to allow higher salaries for teachers in sciences and other hard-to-staff subjects. Christopher Cerf, New Jersey Gov. Chris Christie's education commissioner, said the "market" for science teachers is highly competitive so schools should "use compensation creatively to maximize outcomes for kids." Teachers have insisted that pay changes be made only as part of broader contract negotiations, giving them more input into the process.

President Barack Obama in 2009 launched a \$260 million public-private partnership to train 10,000 new math and science teachers and replicate high-quality math and science programs in classrooms. He also has called on colleges and universities to improve how they teach science, technology, engineering and math courses.

The 2011 NAEP was given to a representative sample of 122,000 eighth graders last spring in public and private schools nationwide. It measures knowledge of physical, life, earth and space sciences on a 0-to-300-point scale.

Scores for fourth graders will be released later this year.

The assessment is considered more rigorous than state exams. Scores are ranked as advanced, proficient, basic and below basic. To score "proficient," eighth graders should know, for example, that water is composed of two atoms of hydrogen and one of oxygen, and that the collision of tectonic plates in Asia causes the Himalayas to increase in height.

Eighth graders scored an average of 152 on the exam, compared with 150 in 2009. Minor improvement was registered for students of virtually every race, income level and gender.

Jack Buckley, commissioner of the National Center for Education Statistics, which administers the exam, said it is tough to quantify what the two-point gain means in terms of additional learning, but said it was barely above the threshold of what it takes to make it a mathematically significant increase.

Hispanic students posted the highest gains, jumping to an average score of 137 from 132, but still 26 points below the average score of white students.

Only 2% of all students were ranked "advanced."

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