

What's different about it?

BUSH'S PROPOSAL FOR IMPROVING MATH & SCIENCE ACHIEVEMENT

*The presidential campaign this year is unusual in that both Al Gore and George W. Bush are placing so much emphasis on improving education. Proposals from both candidates could significantly change the federal government's role in education. This is one in a series of issue briefs intended to help people understand how each candidate's major proposals **differ** from what the federal government already does in the field of education. To analyze these proposals, the Center on Education Policy drew from information on each candidate's Web site and from news reports as of August 15, 2000. These briefs are not meant to judge the merit of these proposals.*

How does Bush's math and science proposal differ from current federal actions?

George W. Bush proposes several new initiatives, totaling \$2.3 billion over five years, aimed at improving student achievement in mathematics and science. Under his proposed Math and Science Partnership Fund, states would form partnerships with institutions of higher education to carry out a variety of activities to improve student achievement in these two subjects, including recruiting math and science teachers, conducting professional development activities, increasing the proportion of students completing a college-preparatory curriculum, funding Advanced Placement (AP) courses on-line for students attending schools that do not offer such course work, and aligning high school graduation standards and assessments with standards and assessments used for college entrance exams. Bush would also forgive student loans for college mathematics and science majors who agree to teach in a high-need school for at least five years, and would provide bonus Pell Grant payments for college to students who complete rigorous math and science courses while in high school.

Currently, the federal government funds or encourages many of the same activities outlined in the Bush proposal. For example, the federal government makes grants to states and school districts for teacher professional development in core curriculum areas; a specific portion of these grants is reserved for mathematics and science educators. The National Science Foundation also administers programs for teacher professional development in math and science and to strengthen K–12 mathematics and science education for students. Also, repayment of federal student loans can be forgiven for those who major in math or science and agree to teach in a school with high-poverty or with a shortage of math and science teachers. Bush's ideas differ from what is being done now in these ways:

1. Strengthen state academic standards in science and mathematics.

States that participate in Bush's Partnership Fund initiative would be held accountable for increasing student achievement in math and science and would be required to include learning objectives in their state academic standards.

2. Form partnerships with institutions of higher education.

States participating in the Partnership Fund program would be required to form partnerships with institutions of higher education to improve K–12 math and science education. This would be a new requirement.

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3. Hold partnerships accountable for results.

The partnerships would be held accountable to achieving goals such as improved student achievement on the mathematics and science portions of state tests; increased participation and passing rates of students on mathematics and science AP exams; increased college enrollment rates; decreased rates of college students taking remedial courses; and increased numbers of mathematics and science majors who enter the teaching profession.

4. Provide bonus Pell Grant payments for students completing rigorous math and science courses in high school.

Students who either pass AP math and science exams or have passed college math and science

courses while in high school, and who otherwise qualify for a Pell Grant, would be eligible to receive a one-time \$1,000 Pell Grant payment to help pay for college tuition.

5. Increase the amount of student loans forgiven for teaching in high-poverty schools.

College graduates who majored or minored in math or science could have forgiven as much as \$17,500 of their student loans if they teach for five years in schools with high percentages of low-income students or in schools where there is a shortage of qualified math and science teachers. Currently, up to \$5,000 of student loans can be forgiven.

What are some questions that can be asked about Bush's proposal?

■ *Would the current federal efforts to improve math and science instruction and to strengthen the preparation of future mathematics and science teachers continue, or would these programs be terminated? In other words, is this a major new initiative or simply a repackaging of current efforts?*

■ *Do the proposals adequately address increasing the mathematics and science achievement of all students,*

or are the initiatives more focused on those students who are college bound?

■ *Is it fair to tie the level of the Pell Grant award to courses taken in high school, especially when so many high schools do not offer AP programs, and when many high schools are not located near a college or university where a student could enroll in courses while still in high school?*

FOR MORE INFORMATION, contact John F. (Jack) Jennings, director, Center on Education Policy

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1001 Connecticut Avenue, NW, Suite 619, Washington, D.C. 20036

Phone: 202-822-8065 Fax: 202-822-6008

Email: ctredpol@ctredpol.org Web site: www.ctredpol.org