

Maintain the Federal Commitment to K-12 STEM Education

Department of Education

No Child Left Behind (NCLB) Title II Part B — Math and Science Partnerships

An adequate level of federal support must be provided so that states and schools will have the much needed assistance to address the critical crisis in science and mathematics education. The shortage of teachers in math and science continues nationwide, as does the demand for ongoing, high-quality professional development opportunities for math and science teachers necessary to rebuild America's education dominance.

The Mathematics and Science Partnership (MSP) program is intended to increase the academic achievement of students in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. Partnerships between high-need school districts and the science, technology, engineering, and mathematics (STEM) faculty in institutions of higher education are at the core of these improvement efforts. These partnerships allow for community investment through the potential for inclusion of state education agencies, public charter schools or other public schools, businesses, and nonprofit or for-profit organizations concerned with mathematics and science education.

The authorized funding level for this program under No Child Left Behind is \$450 million. NCLB stipulates that appropriations for the Department of Education MSP program must be distributed as formula grants directly to states when the funding exceeds \$100 million. If the program is funded at less than \$100 million, then it will revert back to a national competition run by the Department of Education.

The \$269 million requested in the FY 2006 budget proposal is a sufficient level of funding to ensure that these funds will continue to go to every state for local math and science education reform initiatives. The Administration's request to direct \$120 million of MSP funds away from the state-based ED MSP programs and instead create a new federal competitive grant program is misguided and has the net effect of reducing the amount of funds available to the states from the FY 2005 appropriated levels. All MSP funds should go to the states for local improvement efforts.

National Science Foundation

Math and Science Partnerships, Education and Human Resources Directorate

Successful Math and Science Partnerships awarded by the NSF will serve as models that can be widely replicated by the state math and science partnerships under NCLB in educational practice to improve student mathematics and science achievement. The three goals of the program are: ensuring that all students have access to, are prepared for, and are encouraged to participate and succeed in, challenging and advanced mathematics and science courses; enhancing the quality, quantity and diversity of the K-12 mathematics and science teacher workforce; and developing evidence-based outcomes that contribute to our understanding of how students effectively learn mathematics and science. Authorizing language in the National Science Foundation Authorizing Act of 2002 calls for \$300 million for these partnerships.

Under the Administration's budget, the NSF Math and Science Partnerships would be cut by 24 percent. An adequate level of support (\$200 million for FY2006) is critical for these partnership programs. This support funds a limited number of large innovative partnership programs—model programs which can be replicated in every state with the Department of Education Math and Science Partnerships.

**National Science Foundation
Elementary, Secondary, and Informal Education — Education and Human Resources
Directorate**

Strengthening science and math education is a core mission of the National Science Foundation.

NSF does not directly educate students. NSF invests in the people, ideas, and tools to develop an educational infrastructure that leads to breakthrough innovations, inventions, and improvements in math and science education at all levels. These innovations ensure that students have greater access to, and engagement with, good teaching, better-designed materials and assessments, and more opportunities with high-quality out-of-school learning experiences.

For over 50 years NSF has relied on the principles of the R&D scientific process and experts from science and education to take promising ideas and move them from research into effective programs and tools that work in K-12 science and math classrooms. NSF's highly-regarded peer review system is at the center of this education improvement infrastructure. This merit based peer review system for science and math education enlists leading scientists, mathematicians, engineers, and academicians to improve K-12 STEM education programs.

Research, education, the technical workforce, scientific discovery, innovation and economic growth are intertwined. To remain competitive on the global stage, we must ensure that each remains vigorous and healthy. That requires sustained investments and informed policies. If NSF ceases to fulfill its educational mission of stimulating innovation and building capacity, then that withdrawal would leave a critical gap in applied research and development and the infrastructure necessary to effect changes to K-12 STEM education. A reduction in NSF science and math education funding would lead to irreversible losses in the nation's improvement infrastructure, with no way to rebuild quickly what is lost.

NSF's educational investments—which amount to less than 0.1 percent of the nation's education enterprise—are critically important to our national interest. The US economic success, our global competitiveness and ultimately our national security depend on a scientifically literate and skilled workforce—not just scientists and engineers but nurses, medical technicians, biotech lab technicians and even plant floor supervisors who must have a solid grounding in the sciences and mathematics.

Under the Administration's FY2006 funding proposal, the total budget under the NSF Education and Human Resources (EHR) directorate would decline 12.4 percent from \$841 million to \$737 million. Funding for programs under Elementary, Secondary, and Informal Education division (ESIE) would be cut 22 percent.

The double digit cuts to NSF K-12 math and science education programs in the FY2006 NSF Education and Human Resources Directorate budget proposed by the Administration are not acceptable. This would lead to cuts in K-12 STEM curriculum development, preservice and inservice teacher education, the informal science infrastructure, and uses of technology to enhance K-12 instruction and create systemic reform. Funding to the programs under EHR Directorate at the National Science Foundation should be restored minimally to FY2004 levels.