

22

Award ID : 0227325**Title :** Vertically Integrated Partnerships K-16 (VIP K-16)**Type :** Award**NSF Org :** EHR**Date :** Sep 30 2002**File :** a0227325**Award Number :** 0227325**Award Instr. :** Standard Grant**Prgm Manager :** Kathleen Bergin**Division :** EHR DIRECT FOR EDUCATION AND HUMAN RESOURCES**Start Date :** Oct 1 2002**Expires :** Sep 30 2007 (Estimated)**Total Amt. :** \$7,499,997.00 (Estimated)**Investigator :** Nancy Shapiro nshapiro@usmd.edu

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NSF Program : 1792 MSP-Targeted Awards**Abstract :**

ABSTRACT

Proposal No.: 0227325
Proposal Title: Vertically
Integrated Partnerships K-16
Principal Investigator: Nancy Shapiro
Lead

Institution: University System of Maryland
The University System of

Maryland (USM) in partnership with the Montgomery County Public Schools (MCPS) will develop a sustainable K-16 professional development model for high school science teachers, prospective pre-service science teaching candidates, and college faculty. The project, "Vertically Integrated Partnerships K-16" (VIP K-16) has two major aims (a) To enrich science teacher knowledge in order to improve high school science instruction to better enable students to meet rigorous state science standards as measured on the Maryland Science High School Assessments, and (b) To improve the teaching skills of college science faculty in order to improve the quality of undergraduate general education science courses.

USM institutions

that will participate as core partners, with commitments to institutional change, include the University of Maryland College Park, the University of Maryland Baltimore County, and Towson University. Montgomery College and the Montgomery County Public Schools complete the core member partners

22

of VIP K-16. The University of Maryland Biotechnology Institute, the University of Maryland Universities at Shady Grove, the University of Maryland Center for Environmental Science, and the University System of Maryland are service provider partners. Through summer institutes and school-year collaborative sessions, small professional learning communities-vertically integrated partnerships (VIPs) consisting of teachers, STEM disciplinary faculty, graduate students, and undergraduate interns and pre-service science teachers-will collegially learn about and develop best instructional practices and instructional materials linked to high school assessments.

Phasing in biology, earth/space science, and physics/chemistry over a three-year period, VIP K-16 will involve 350 science teachers serving approximately 37,000 high school students, and substantively involving 36-university faculty.

The VIP K-16 will bring together high school science teachers with their peers from Montgomery College and the USM institutions to form the "Maryland Science Faculty," charged with collaboratively rethinking and redesigning how science is learned, both in high school and in college.

To that end, the Partnership commits to five key goals: (1) Improve student learning outcomes, as measured by high school assessments; (2) Improve teacher content knowledge in the sciences by providing high quality professional development to inservice high school teachers; (3) Improve college faculty teaching skills by providing them with expert mentor/master teacher during summer institutes; (4) Enhance graduate student teaching skills by exposing them to expert mentor/master teachers during summer workshops, and having them complete teaching portfolios; and (5) Increase the number of undergraduate science students who choose teaching as a career

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NSF PR 02-81 - September 30, 2002****Media contact:** Bill Noxon (703) 292-8070 wnoxon@nsf.gov
Program contact: Deborah Crawford (703) 292-8602 dcrawfor@nsf.gov**Math and Science Partnership Awards Announced**
K-12, higher education institutions unite in effort to boost learning

The National Science Foundation (NSF) has announced 24 awards under the new Math and Science Partnership (MSP) program - an anticipated investment of \$240 million over five years in projects to improve the achievement of K-12 students in science and mathematics. The Department of Education (ED) is an NSF partner in this effort, co-funding two projects involving state education agencies.

A key facet of President Bush's *No Child Left Behind* education plan and the first investment in his five-year \$1 billion math and science partnership initiative, these new partnership activities are designed to enhance the performance of U.S. students in mathematics and science. Partnership projects address key contributing factors such as: too many teachers who are not fully trained to teach math and science subjects; too few students who take advanced coursework; and too few schools that offer challenging curricula and textbooks.

The new partnership program will unite teachers and administrators in K-12 schools, mathematics, science and engineering faculty in colleges and universities, and other stakeholders in K-12 education to improve student outcomes. The new projects will seek to enhance the quantity, quality and diversity of the math and science teacher workforce at a time when many teachers are retiring or otherwise leaving the profession. Designed to raise mathematics and science achievement of all students, MSP projects are also expected to reduce the well-documented achievement gaps among segments of student populations.

"These partnerships will become part of a broad national network of interconnected sites that will share successful instructional strategies, entice and train competent science and math teachers and improve learning for millions of students," said NSF Director Rita Colwell.

"One of the key outcomes of these grants will be the improved content knowledge of teachers of mathematics and science in districts across America," said U.S.

Secretary of Education Rod Paige. "This will undoubtedly lead to improved student achievement."

The seven comprehensive awards announced today total about \$147 million over five years and will affect about 1.8 million students in 11 states. Comprehensive MSP projects are designed to continuously improve student achievement in math and science from the earliest grades through grade 12.

Seventeen targeted partnership grants are designed to improve achievement in specific disciplines or grade ranges. They total about \$90 million over five years and will affect about 200 school districts and some 600,000 pre-K through grade 12 students in 11 states.

Also, 12 smaller awards for capacity building projects will focus on research, evaluation and technical assistance for the MSP Learning Network. Through this vehicle, researchers and practitioners in MSP and other related projects will unite in a national effort to further develop understanding of how students best learn mathematics and science. It will also promote broad dissemination and emulation of successful strategies in educational practice.

"These partnerships will increase our nation's ability to serve all of our students well and will support the quality of our science and engineering enterprise," said Judith Ramaley, NSF's Assistant Director for Education and Human Resources.

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See also:

- [Fact Sheet: Math and Science Partnership Program](#)
- [Lists of FY 2002 Math and Science Partnership Awards](#)
- [Math and Science Partnership Program Solicitation](#)

For more information, see: <http://www.nsf.gov/home/ehr/>



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