

MSP Math and Science Partnership Program

Strengthening America by
advancing academic achievement
in mathematics and science



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The Math and Science Partnership Program at NSF responds to a growing national concern — the educational performance of U.S. children in mathematics and science.

Through MSP, institutions of higher education, state departments of education, local school systems and business and industry team up to strengthen mathematics and science achievement for all students from kindergarten through high school graduation.



MSP emphasizes strong partnerships that tackle local needs and build grassroots support to:

- Enhance schools' capacity to provide challenging curricula for all students and encourage more students to succeed in advanced courses in mathematics and the sciences;
- Increase the number, quality, and diversity of mathematics and science teachers, especially in underserved areas;
- Engage and support scientists, mathematicians, and engineers at local universities and local industries to work with K-12 educators and students;
- Contribute to a greater understanding of how students effectively learn mathematics and science and how teacher preparation and professional development can be improved; and
- Promote institutional and organizational change in education systems — from kindergarten through graduate school — to sustain partnerships' promising practices and policies.

Benefiting Education and Business

For corporate partners ranging from IBM Corporation, to Pfizer, Inc., to Intel Corporation, to the Ford Motor Company, to the ExxonMobil Foundation, being part of an MSP project means connecting with the community. Participation means bringing the joy of discovery and learning to local students. It means contributing to a better-prepared workforce and scientifically literate citizenry. It means benefits like these...

“In my opinion, the large educational gap between the U.S. and other countries will not go away without strong intervention at all grade levels. Here in Silicon Valley, we see the benefits of strong math and science skills in the creation of new technologies that will solve society’s problems, create vibrant workplaces, and fuel the next-generation technology industry.”

– Associate Professor of Civil Engineering Kurt McMullin, Partnership for Student Success in Science (PS³), a collaboration among nine local school districts in the Silicon Valley area, San Jose State University, Agilent Technologies, and Synopsys, Inc.

“Through MSP, I have had such valuable opportunities to deepen my understanding of the mathematics that I teach as well as to strengthen my teaching practice. I feel well-equipped as a math specialist and coach working with teachers to enhance how they deliver instruction. I am most excited when I see the end result of all of our work — students who are engaged in and energized about mathematics.”

– Che Abdeljawad, Mathematics Specialist, Arlington Public Schools, NSF Teacher Institute: Preparing Virginia’s Mathematics Specialists

Greater Than the Sum of Its Parts

All members of MSP partnerships benefit — students most of all. The mathematics and science education initiatives of current corporate partners see their involvement as a “win-win” opportunity. They put it this way...

“Increasing the number of high quality science, technology, engineering, and mathematics graduates will strengthen the American workforce of tomorrow. We at ExxonMobil believe that the place to begin is elementary school. Through MSP, we work toward the day when all elementary students are equipped with a strong mathematics background. When I see the Mathematics Specialists of our partnership coach classroom teachers and work with young students, I am deeply impressed by the quality of their teaching and by their dedication. Most of all, I am thrilled to be able to contribute to their work and so glad that we all have their help in preparing tomorrow’s workforce.”

– Patrick Dexter, ExxonMobil Corporation

“We want to help ensure that our local math and science teachers have the kinds of training, experiences, and materials that can help them shine in their classrooms. After all, it is those teachers who inspire students to eventually pursue careers in engineering and science — fields that form the core of our workforce.”

– Merrilee Jacobson, Progress Energy

“By working together [with MSP partners], we hope not only to raise the standards of math education, but also to bring many more students along with us.”

– Melody DeRosa, Texas Instruments

Creativity and Collaboration

Across the United States, innovative and thoughtful people in MSP-funded partnerships make it happen like this...

The MSP Teachers and Scientists Collaborating (TASC) joins Duke University's Pratt School of Engineering with eight school districts in North Carolina, the North Carolina Department of Public Instruction, GlaxoSmithKline, Progress Energy, and others. Scientists from universities, government agencies, and industry engage K-8 teachers and students in experiences that help to develop "a scientist's habits of mind" — critical, creative, and independent thinking.

In Georgia, the innovative programs of the state-wide MSP Partnership for Reform in Science and Mathematics (PRISM) benefit the whole K-16 community. For example, to help increase parents' engagement with their children in math and science, PRISM created Math/Science Family Nights. These events are held at schools and challenge parents to interactively learn with their children. They also help keep the community informed about the work of PRISM. On these nights, K-16 learning community members work together, both to lead interactive activities and to show how the lessons

of each align with a Georgia Performance Standard unit. In addition to family nights, business partners such as BellSouth, Northrop Grumman, IBM and McKesson, help make it possible for PRISM to support research at the local level by awarding mini-grants to educators.

Rhode Island Technology Enhanced Science (RITES) is a far-reaching five year project based upon a partnership among the University of Rhode Island (URI), Rhode Island College (RIC), Johnston Public Schools, the Rhode Island Department of Education (RIDE), and the local business community via the Rhode Island Economic Development Corporation and the Concord Consortium. RITES aims to transform the quality of science teaching and learning at all secondary schools in the state. RITES will directly impact over 80,000 students with the goal of increasing the number and diversity of students who are proficient in science and who pursue careers in Science, Engineering, Technology, and Mathematics (STEM). At the heart of this ambitious project is the seamless integration of all segments of the Rhode Island educational community (i.e., teachers and school systems, higher education science departments and schools of education, state offices that monitor and support STEM education and, importantly, the private sector).



There is far more action and good work in MSP than can fit in a brochure.

Online guests can view project showcases at **www.mspnet.org**, the MSP Partners' electronic learning community.