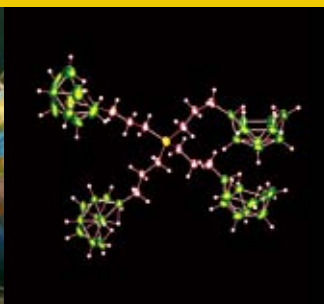


MSP



Math and Science Partnership Program



Strengthening America
by advancing academic
achievement in
mathematics and science



National Science Foundation

Directorate for Education and Human Resources
National Science Foundation
<http://www.nsf.gov>

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About the National Science Foundation

Created by Congress in 1950, the National Science Foundation (NSF) is the steward of America's science and engineering enterprise. The Foundation's role in discovery, learning, and innovation is that of a catalyst, seeking out and funding the best ideas and most capable people, and making it possible for them to pursue new knowledge, discoveries, and innovation.

As an independent federal agency, NSF is tasked with keeping the United States at the leading edge of discovery in areas from astronomy to zoology. Central to that mission is supporting science and engineering education at all levels, so that today's revolutionary work will also inform the training of tomorrow's top scientists and engineers.

The Math and Science Partnership (MSP) program is one way NSF strives to strengthen America by advancing academic achievement in mathematics and science.

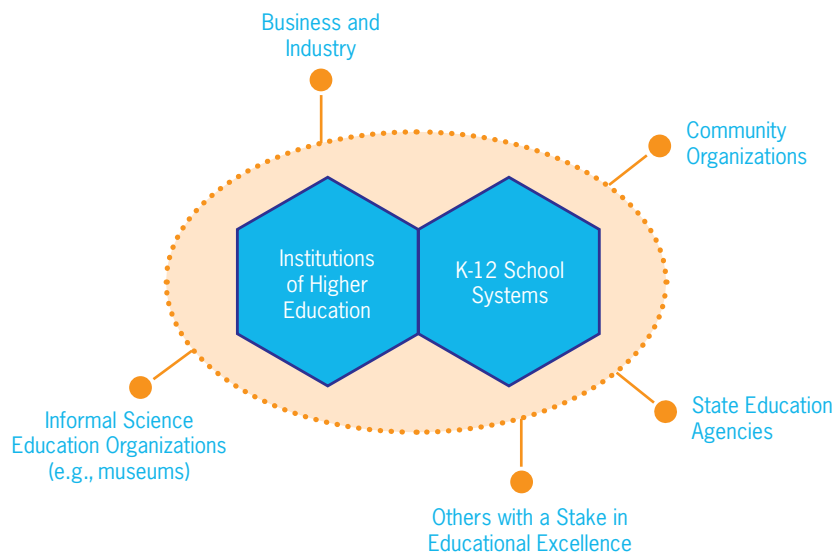




The Math and Science Partnership Program at NSF—An Overview

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, NSF awards competitive, merit-based grants to teams composed of institutions of higher education, local K-12 school systems, and their supporting partners.



These partnerships develop and implement pioneering ways of advancing mathematics and science education for students. They bring innovation, inspiration, support, and resources to educators and students in local schools, colleges, and universities.

Participating in MSP benefits the partner organizations as well. Active partners cultivate and enhance their own strengths as they contribute to their MSP teams. And, their efforts result in better prepared students, and, ultimately, a better prepared American workforce.

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What Makes MSP Exceptional

The right people...

MSP partnerships concentrate the varied skills of top educators; academicians in science, technology, engineering, and mathematics; and leaders of business and industry.

Using and developing evidence...

Partnerships must base their work on educational strategies that have been shown to be effective. And they fuel the work of future educators by studying and evaluating their own efforts, and sharing what they learn.

And aiming for large-scale educational change that matters.

When MSP teams talk about “advancing academic achievement in mathematics and science,” they are literally talking about transforming institutions across the entire spectrum of education — from elementary schools to universities.

“MSP partnerships are made up of people committed to improving how we educate all of our students. We realize that, to be successful, we must also change ourselves. It is this process of advancement for both our systems and the very people within them that enables MSP to find and implement the best ways to educate our country’s young mathematics and science students.”

— George “Pinky” Nelson, Principal Investigator, North Cascades and Olympic Science Partnership
Director, Science, Mathematics, and Technology Education, Western Washington University
Former NASA Astronaut





MSP Goals

MSP serves students and educators by emphasizing 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.

MSP Structure and Composition

Four components make up the MSP program.

- **Comprehensive Partnerships** implement change across the K-12 continuum in mathematics, science, or both.
- **Targeted Partnerships** focus on improved student achievement in a narrower grade range or disciplinary focus in mathematics and/or science.
- **Institute Partnerships** develop mathematics and science teachers as school- and district-based intellectual leaders and master teachers.
- **Research, Evaluation, and Technical Assistance (RETA)** activities assist partnership awardees in the implementation and evaluation of their work.

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MSP Partnerships State-by-State

For contact information and additional details about MSP, each partnership, and the Research, Evaluation, and Technical Assistance Projects that assist them, visit **www.mspnet.org**.

| State | Lead Partner | Project Title | Type of Partnership Targeted T Comprehensive C Institute I | Year First Funded |
|-------|---|--|---|-------------------------|
| AL | Auburn University | Transforming East Alabama Mathematics (TEAM–Math) (http://ea.mspnet.org/ or http://team-math.net/) | T | 2003 |
| | Birmingham – Southern College | The Greater Birmingham Mathematics Partnership: Building Communities of Learners and Leaders in Middle School Mathematics (http://gbmp.mspnet.org or www.bsc.edu/gbmp) | T | 2004 |
| AZ | Arizona State University | Project Pathways: Opening Routes to Math and Science Success for All Students (http://pp.mspnet.org) | T | 2004 |
| CA | University of California Riverside | Mathematical Achievement and Collaboration for Teachers and Students (ACTS) (http://mathacts.mspnet.org or http://mathacts.ucr.edu) | T | 2002 |
| | San Francisco State University | REvitalizing ALgebra (REAL) (http://real.mspnet.org or http://math.sfsu.edu/hsu/msp/index.html) | T | 2002 |
| | University of California Irvine | FOCUS: Faculty Outreach Collaborations Uniting Scientists, Students and Schools (http://focus.mspnet.org) | C | 2002 |
| | California State University, Fullerton | Teachers Assisting Students to Excel in Learning Mathematics (TASEL–M) (http://taselm.mspnet.org or http://taselm.fullerton.edu) | T | 2002 |
| | Palo Alto Unified School District | Partnership for Student Success in Science (PS ³) (http://ps3.mspnet.org or http://www.pscubed.org) | T | 2003 |

| State | Lead Partner | Project Title | Type of Partnership Targeted T Comprehensive C Institute I | Year First Funded |
|-------|---|---|---|-------------------------|
| CO | University of Colorado at Denver and Health Sciences Center | Rocky Mountain Middle School Math Science Partnership: 15 Months to Highly Qualified (http://mms.mspnet.org or http://rmmsmsp.cudenver.edu) | T | 2004 |
| FL | Florida Atlantic University | Standards Mapped Graduate Education and Mentoring (http://smgem.mspnet.org or http://www.math.fau.edu/Teacher/MSP) | I | 2004 |
| GA | University System of Georgia | Partnership for Reform in Science and Mathematics (PRISM) (http://prism.mspnet.org or http://www.gaprism.org) | C | 2003 |
| IN | Indiana University | Indiana University – Indiana Mathematics Initiative Partnership (http://iu-imi.mspnet.org or http://www.indiana.edu/~iucme) | T | 2002 |
| KY | University of Kentucky | Appalachian Mathematics and Science Partnership (http://appalachian.mspnet.org or http://www.appalmsp.org) | C | 2002 |
| MA | Boston University | Focus on Mathematics (http://fom.mspnet.org or http://www.focusonmath.org) | T | 2003 |
| | Tufts University | The Fulcrum Institute for Education in Science (http://fulcrum.mspnet.org or http://fulcrum.tufts.edu) | I | 2004 |
| | University of Massachusetts Boston | Boston Science Partnership (http://bsp.mspnet.org) | T | 2004 |
| MD | University System of Maryland | Vertically Integrated Partnerships K–16 (VIP K–16) (http://vipk16.mspnet.org or http://www.scienceinquiry.org) | T | 2002 |
| | University of Maryland Baltimore County | UMBC–BCPS STEM Project (http://superstem.mspnet.org) | C | 2002 |
| MI | Michigan State University | Promoting Rigorous Outcomes in Mathematics/ Science Education (PROM/SE) (http://promse.mspnet.org or http://www.promse.msu.edu/) | C | 2003 |
| MO | Washington University | St. Louis Inner Ring Cooperative (SIRC): Intervention Case Studies in K–12 Math & Science (http://sirc.mspnet.org or http://www.so.wustl.edu/science_outreach/partners/mspabout.html) | T | 2002 |

| State | Lead Partner | Project Title | Type of Partnership Targeted T Comprehensive C Institute I | Year First Funded |
|-------|--|---|---|-------------------------|
| NC | University of North Carolina, General Administration Office | North Carolina Partnership for Improving Mathematics and Science (NC-PIMS) (http://ncpims.mspnet.org/ or http://ncpims.northcarolina.edu) | C | 2002 |
| | Duke University | Teachers and Scientists Collaborating (TASC) (http://tasc.mspnet.org or http://tasc.pratt.duke.edu) | T | 2002 |
| NE | University of Nebraska – Lincoln | Math in the Middle Institute Partnership (http://mim.mspnet.org or http://scimath.unl.edu/MIM/mimgrant.html) | I | 2004 |
| NJ | Rutgers University New Brunswick | New Jersey Math Science Partnership (http://nj.mspnet.org/ or http://njmsp.rutgers.edu) | C | 2002 |
| | Merck Institute for Science Education | Consortium for Achievement in Mathematics and Science (http://consortium.mspnet.org) | T | 2003 |
| | Institute for Advanced Study | Math Science Partnership Project: PD ³ (http://iaspc.mspnet.org or http://www.admin.ias.edu/ma/current/mspp.php) | I | 2003 |
| NY | SUNY College at Brockport | SUNY–Brockport College and Rochester City (SCOLLARCITY) Math and Science Partnership: Integrative Technology Tools for Preservice and Inservice Teacher Education (http://scollarcity.mspnet.org or http://www.brockport.edu/cmst) | T | 2002 |
| | University of Rochester | Deepening Everyone's Mathematics Content Knowledge: Mathematicians, Teachers, Parents, Students & Community (http://dmc.mspnet.org/) | T | 2002 |
| | Hofstra University | The MSTP Project: Mathematics Across the MST Curriculum (http://mstp.mspnet.org or http://www.hofstra.edu/Academics/SOEHS/tec/tec_mstp.cfm) | T | 2003 |
| | City University of New York | Math and Science Partnership in New York City (MSPinNYC) (http://mspnyc.mspnet.org) | T | 2004 |
| OH | Stark County Educational Service Center | Stark County Math and Science Partnership (http://stark.mspnet.org or http://www.sparcc.org/msp) | T | 2002 |
| | Cleveland Municipal School District | Cleveland Math and Science Partnership (http://cleveland.mspnet.org or http://www.cwru.edu/artsci/csm/CMSP.html) | T | 2002 |
| OR | Oregon State University | Oregon Mathematics Leadership Institute Partnership (http://ormath.mspnet.org or http://omli.org) | I | 2004 |
| PA | La Salle University | The Mathematics and Science Partnership of Greater Philadelphia (MSPGP) (http://mspgp.mspnet.org or http://www.mspgp.org) | T | 2003 |

| State | Lead Partner | Project Title | Type of Partnership Targeted T Comprehensive C Institute I | Year First Funded |
|-------|---|---|---|-------------------------|
| PA | University of Pennsylvania | Penn Science Teacher Institute (http://sti.mspnet.org/ or http://www.sas.upenn.edu/PennSTI/) | I | 2004 |
| | Allegheny Intermediate Unit | Southwest Pennsylvania Math Science Partnership (http://swpa.mspnet.org/ or http://www.aiu3.net/MSC) | C | 2003 |
| PR | University of Puerto Rico – Rio Piedras | Puerto Rico Math and Science Partnership (http://puertorico.mspnet.org or http://www.prmisp.org/english/home.htm) | C | 2003 |
| SD | Black Hills Special Services Cooperative | PRIME: Promoting Reflective Inquiry in Mathematics Education (http://prime.mspnet.org/ or http://www.primeproject.org) | T | 2002 |
| TX | Del Mar College | Alliance for Improvement of Mathematics Skills PREK–16 (AIMS) (http://alliance.mspnet.org or http://www.delmar.edu/aims) | T | 2002 |
| | University of Texas at El Paso | El Paso Math and Science Partnership (http://elpaso.mspnet.org or http://epcae.org/msp) | C | 2002 |
| | Stephen F. Austin State University | Texas Middle and Secondary Mathematics Project (http://texas.mspnet.org or http://www.faculty.sfasu.edu/kchilds/nsf2.html) | T | 2002 |
| | William Marsh Rice University | The Rice University Mathematics Leadership Institute (http://mli.mspnet.org or http://nsfmli.rice.edu/) | I | 2004 |
| VA | National Science Teachers Association | e-Mentoring for Student Success (http://ementoring.mspnet.org or http://emss.nsta.org/ or http://newteachercenter.org/eMSS) | T | 2002 |
| | Virginia Commonwealth University | NSF Institute: Preparing Virginia's Mathematics Specialists (http://vamath.mspnet.org) | I | 2004 |
| VT | The Vermont Institutes | Vermont Mathematics Partnership (http://vermont.mspnet.org or http://www.vermontmathematics.org) | T | 2002 |
| WA | Western Washington University | North Cascades and Olympic Science Partnership (http://cascadesolympic.mspnet.org or http://www.ncosp.wvu.edu) | T | 2003 |
| WI | University of Wisconsin – Madison | System-Wide Change for All Learners and Educators (SCALE) (http://scale.mspnet.org or http://scalemsp.wceruw.org) | C | 2002 |
| | University of Wisconsin – Milwaukee | Milwaukee Mathematics Partnership: Sharing in Leadership for Student Success (http://milwaukee.mspnet.org or http://www.mmp.uwm.edu) | C | 2003 |

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MSP Research, Evaluation, and Technical Assistance Projects State-by-State

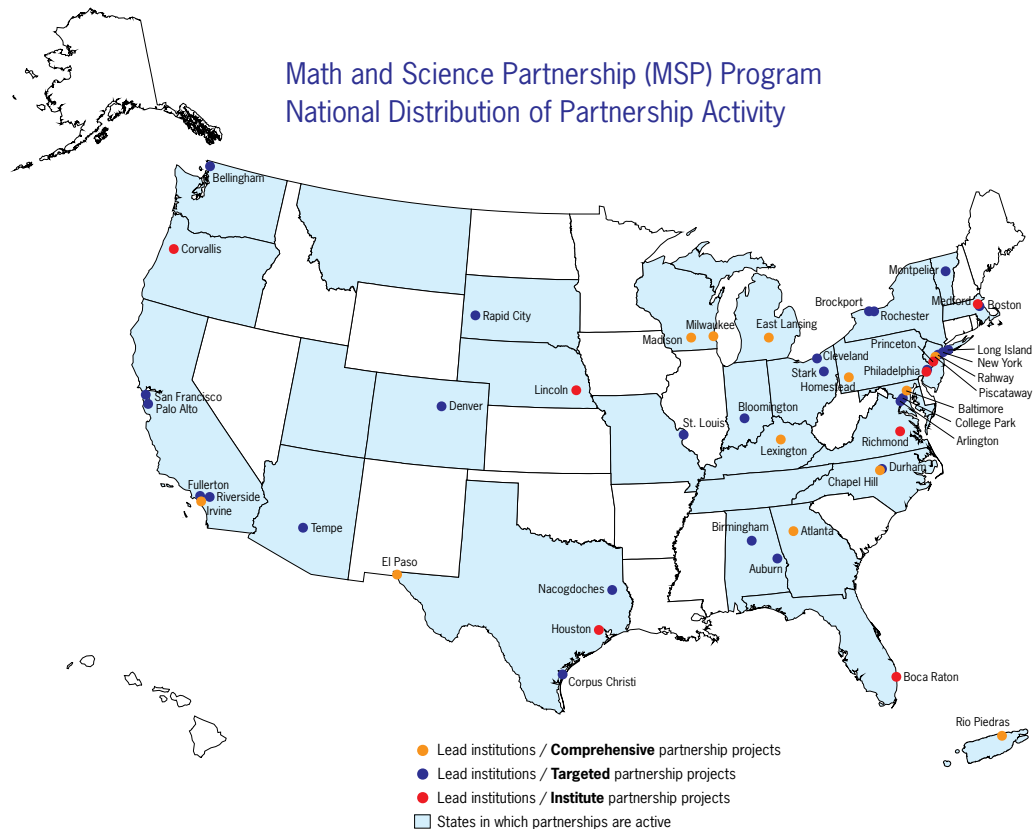
| State | Lead Partner | Project Title | Year First Funded |
|-------|--|--|-------------------|
| CA | WestED | Research on MSP Teacher Recruitment, Induction, Retention (http://rir.mspnet.org) | 2003 |
| DC | Council of Chief State School Officers | Development in Improving Quality of Instruction in Mathematics and Science (http://ld.mspnet.org or http://www.ccsso.org/projects/surveys_of_enacted_curriculum) | 2002 |
| | National Academy of Sciences | Facilitating Mathematics/Science Partnerships (http://facilitating.mspnet.org or http://www7.nationalacademies.org/msp) | 2002 |
| | | Building from the Research: Envisioning Quality Science Assessments (http://sciassessments.mspnet.org) | 2002 |
| FL | University of South Florida | Florida Science and Mathematics Education Summit (http://fsmes.mspnet.org) | 2004 |
| GA | Georgia Institute of Technology | Alternative Approaches to Evaluating STEM Education Partnerships: A Review of Evaluation Methods and Application of an Interorganizational Model (http://sp.mspnet.org or http://www.prism.gatech.edu/~gk18/STEM) | 2002 |
| IL | Northwestern University | Developing Distributed Leadership: Understanding the Role Boundary Tools in Developing and Sustaining Leadership for Learning Networks (http://distleadership.mspnet.org or http://www.distributedleadership.org) | 2003 |
| | | Distributed Leadership for Middle School Mathematics Education: Content Area Leadership Expertise in Practice (http://leadership.mspnet.org or http://www.sesp.northwestern.edu/dls) | 2004 |

| State | Lead Partner | Project Title | Year First Funded |
|-------|-----------------------------------|---|-------------------|
| MA | Education Development Center | Online Technologies to Enhance MSP Teacher Quality Programs (http://ot.mspnet.org or http://www2.edc.org/cope_mspreta) | 2003 |
| | | Leadership Content Knowledge and Mathematics Instructional Quality in the MSPs: A Study of Elementary and Middle School Principals (http://sop.mspnet.org or http://www2.edc.org/CDT/cdt/cdt_tmi.html) | 2003 |
| | Harvard University | MOSART: Misconception Oriented Standards-based Assessment Resource for Teachers (http://mosart.mspnet.org) | 2004 |
| | TERC Inc. | MSPnet : An Electronic Community of Practice Facilitating Communication and Collaboration (http://mspnet.mspnet.org or http://www.terc.edu/) | 2003 |
| MD | Westat | The Effect of STEM Faculty Engagement in MSP: A Longitudinal Perspective (http://esfe.mspnet.org) | 2003 |
| MI | Michigan State University | Causal Inference in Instructional Workforce Research (http://tqqt.mspnet.org or http://www.msu.edu/user/mkennedy/TQQT) | 2003 |
| | University of Michigan Ann Arbor | MSP Motivation Assessment Program (http://ma.mspnet.org or http://www.mspmap.org) | 2003 |
| | | Design, Validation, and Dissemination of Measures of Content Knowledge for Teaching Mathematics (http://mathknowledge.mspnet.org or http://sitemaker.umich.edu/lmt) | 2003 |
| NC | Horizon Research | Assessing Teacher Learning About Science Teaching (http://atl.mspnet.org) | 2003 |
| | | Knowledge Management and Dissemination for the MSPs (http://km.mspnet.org) | 2004 |
| NJ | Institute for Advanced Study | Mathematician Study Group of State Standards in Mathematics, Park City Utah, July 21-25, 2004 (http://mathstudy.mspnet.org) | 2004 |
| NY | The College Board | Redesign of the AP Biology Course, Examination, and Teacher Professional Development Experience (http://rapb.mspnet.org) | 2003 |
| UT | Utah State University | Building Evaluation Capacity of STEM Projects (http://be.mspnet.org or http://www.usu.edu/cbec) | 2002 |
| WI | University of Wisconsin – Madison | Adding Value to the Mathematics and Science Partnerships Evaluations (http://av.mspnet.org or http://www.addingvalue.org) | 2002 |

MSP Partners

Funded partnerships bring together about 150 institutions of higher education with some 450 K-12 school districts and a host of other stakeholders.

Corporate and business partners include Pfizer, Inc.; Ford Motor Company; Texas Instruments, Inc.; Xerox Corporation; GlaxoSmithKline; Progress Energy; International Business Machines Corporation; Merck & Company, Inc.; Synopsys, Inc.; Agilent Technologies; and Intel Corporation.



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“Responsibility for preparing our children, and indeed our country, to thrive in the 21st century world extends far beyond the classroom. We know that we must ensure that America’s children are well prepared for the scientific and technological opportunities and challenges of the future.

With an eye on the future, the Math and Science Partnership Program concentrates the power and expertise of higher education institutions, K-12 school systems, and businesses across the country in a research and development effort to improve our students’ mathematics and science achievement.”

– Dr. Arden L. Bement, Director, National Science Foundation