

No Child Left Behind Act of 2001

Public Law 107-110

Title II, Part B

**Mathematics and Science
Partnership Program**

Request for Proposals

2005 - 2006 Awards

Deadline for Applications: December 2, 2005

**Utah State Office of Education
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**Mathematics and Science Partnership Program
Request for Proposals 2005-2006**

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APPLICATION INSTRUCTIONS FOR INSTITUTIONS OF HIGHER EDUCATION, SCHOOL DISTRICTS, AND NONPROFIT ORGANIZATIONS SEEKING A MATHEMATICS AND SCIENCE PARTNERSHIP GRANT

I. Introduction/Background

In January of 2002, the No Child Left Behind Act of 2001 (NCLB) became law. Title II, Part B of this legislation authorizes a Mathematics and Science Partnership (MSP) competitive grant program. The purpose of this program is to improve the academic achievement of students in the areas of mathematics and science by encouraging state education agencies, institutions of higher education, local education agencies, elementary schools, and secondary schools to participate in programs that improve instruction and upgrade the status and stature of mathematics and science teaching.

The Utah State Office of Education (USOE) is responsible for the administration of this program. Funds available for the Mathematics and Science Partnership competitive grant program will be awarded by the USOE to support successful proposals submitted by Utah institutes of higher education (IHEs), school districts, or nonprofit organizations (NPOs), that have formed partnerships focused on the improvement of mathematics and science instruction. Partnerships must include, at a minimum, a high-need district and a department of mathematics, engineering, or science in an IHE.

II. Program Description

A. Purpose: The purpose of this program is to:

1. Provide professional development that has significant and meaningful mathematics and science content that models the instructional strategies that will enable teachers to teach in a manner that will improve student achievement in mathematics and science.
2. Improve and upgrade the status and stature of mathematics and science teaching by encouraging institutions of higher education to assume greater responsibility for improving mathematics and science teacher education.
3. Focus on the education of mathematics and science teachers as a career-long process that continuously stimulates teachers' intellectual growth and upgrades teachers' knowledge and skills.
4. Bring mathematics and science teachers in elementary schools and secondary schools together with scientists, mathematicians, and engineers to increase the subject matter knowledge of mathematics and science teachers and improve such teachers' teaching skills through the use of sophisticated laboratory equipment and work space.
5. Develop more concise and rigorous mathematics and science instructional resources that are precisely aligned to state and local academic content standards, and with the standards expected for preparation of students for post-secondary study in engineering, mathematics, and science.
6. Improve and expand training of mathematics and science teachers, including training such teachers in the effective integration of technology into curricula and instruction.

B. Eligible Partners:

1. Partnerships applying for a Mathematics and Science Partnership grant **must** include:
 - a) An engineering, mathematics, or science department of an institution of higher education; and
 - b) A high-need local education agency.
2. Partnerships may also include:
 - a) Another engineering, mathematics, science, or teacher training department of an institution of higher education.
 - b) Additional local education agencies, public charter schools, public or private elementary schools or secondary schools, or a consortium of such schools.
 - c) A business.
 - d) A nonprofit or for-profit organization of demonstrated effectiveness in improving the quality of mathematics and science teachers.

C. Use of Funds: A partnership shall use funds provided for one or more of the following activities related to elementary schools or secondary schools:

1. Creating opportunities for enhanced and ongoing professional development of mathematics and science teachers that improves the subject matter knowledge of such teachers.
2. Establishing and operating mathematics and science summer workshops or institutes, including follow-up training, for elementary school and secondary school mathematics and science teachers that shall:
 - a) Directly relate to the curriculum and academic areas in which the teacher provides instruction, and focus only secondarily on pedagogy.
 - b) Enhance the ability of the teacher to understand and use the challenging state academic content standards for mathematics and science and to select appropriate curricula.
 - c) Provide teachers with experiences that lead them to value and effectively use curricula that are based on scientific research, aligned with challenging state academic content standards, and are objective-centered, experiment-oriented, and concept- and content-based.
3. Other uses of funds as selected from those listed in Title II, Part B that are substantively supported by the needs assessment and the Intended Learning Outcomes for mathematics and science in Utah.

D. Duration of Grants: Grants may be awarded for a period of 3 years, subject to: (1) federal appropriations, (2) compliance with program requirements, (3) demonstration of effectiveness, and (4) timely reporting of findings and budgets by partnerships.

E. Supplement Not Supplant: Funds received shall be used to supplement, and not supplant, funds that would otherwise be used for proposed activities.

III. Proposal Requirements

Each proposal submitted **must** include:

- A. Evidence of Meaningful Partnerships: Partnerships should exhibit characteristics including, but not limited to, the following:
 1. **Sustainability**: A partnership must demonstrate an ability to maintain the targeted activities beyond the length of the project and include a description of how the partnership will continue the activities funded under this proposal after the original grant period has expired.
 2. **Commitment**: Evidence of active long-term planning and involvement of all partners must be documented.
 3. **Capacity**: Evidence of the number and quality of staff to carry out the proposed activities and the institutional resources to support the activities must also be included.
 4. **Scope and Impact**: A partnership must demonstrate that the scope of the project and the impact are of sufficient scale to warrant funding.

- B. Needs Assessment: The results of a comprehensive assessment that identifies the teacher quality and professional development needs for school districts and schools in the partnership with respect to the teaching and learning of mathematics and science.

- C. Project Plan That Meets Identified Needs: Implementation plans shall include:
 1. Evidence that the planned activities will achieve the long- and short-term goals and objectives of the program.
 2. A description of how the activities to be carried out by the eligible partnership will address the most pressing professional development needs of the participating school districts or schools, as determined by the needs assessment, and how these activities will be aligned with challenging state academic content and student academic achievement standards in mathematics and science, and with other educational reform activities that promote student academic achievement in mathematics and science.
 3. A description of how the eligible partnership will carry out the authorized activities.
 4. A description of the instructional strategies that will be modeled, that are supported by scientifically based research (SBR), and that meet the educational needs of **all students**.

- D. Research Base: A description of how the activities to be carried out by the eligible partnership shall be based on a review of SBR specific to teaching and learning mathematics and science, and an explanation of how the activities are expected to improve student academic achievement and strengthen the quality of mathematics and science instruction.

- E. Evaluation and Accountability Plan: An evaluation and accountability plan shall include rigorous objectives that measure the impact of funded activities on student achievement in participating schools. The evaluation shall include measures of gains in teacher content knowledge.

- F. Sustainability: A description of how activities funded in the partnership shall continue beyond the period of the original grant.

IV. Preparation of Application

Listed below are the required components of an acceptable application. The narrative sections of the proposal must be double-spaced, and the font used must not be smaller than 12-point. The application, not including the appendix, shall not exceed 20 pages. Applicants must adhere to the page limitations on the narrative sections, and may not append additional material beyond that allowed in the following list.

- A. Cover Page: Use the form provided in Appendix A. The cover page should be the first page of the application.
- B. Assurances: Use the form provided in Appendix B. Attach the assurances page behind the cover page as the second page of the application.
- C. Partnership Agreements: This section shall include a narrative of the roles of the partners and their duties and responsibilities related to the goals and objectives of the project. This section shall provide the scope and scale of the partnership and the demographics of the schools positively impacted by the partnership. This section shall also describe the partnership's governance structure specific to decision-making, communication, and fiscal responsibilities. In addition to this narrative section, each application must append:
 - 1. A Partner Identification Form (see Appendix C) for each partner; and
 - 2. Letters of commitment from each partner outlining the role and contributions of the partner and providing evidence that the proposed partnership activities are integral to the partner's instructional mission.
- D. Results of Needs Assessment: This section will:
 - 1. Identify and prioritize baseline professional development needs of teachers in partnered school districts and include the number of teachers in these districts who do not meet the state's definition of a highly qualified teacher, disaggregated by grade level or subject area that they teach. This baseline information must be determined using a current (within the past 12 months) assessment of teacher quality and professional development needs.
 - 2. Include data on student achievement specific to the target audience. This section will also include a description of the methodologies used to collect this information.
 - 3. Describe how the results of the assessments have been used in the establishment of the goals and objectives for this proposal.
 - 4. Relate priority needs in (1) to student achievement in (2).
- E. Abstract: Provide an abstract of the proposal that briefly and concisely describes the program to be implemented and summarizes the intended results of the program. The abstract may not exceed 250 words.
- F. Project Narrative and Timeline: The program narrative must include a timeline for the implementation of activities and address each of the following items. The narrative section must be double-spaced and may not exceed ten (10) pages.
 - 1. Needs Addressed
 - 2. Program Goals and Objectives

3. Program Activities
4. Qualifications of Program Personnel (Place two-page CVs for the project's principals in the appendix, and describe the qualifications of others in the narrative section.)
5. Institutional Capacity
6. Follow-up Activities
7. Coordination with Existing Programs and Initiatives
8. Research Base to Support Project

G. Bibliography

H. Description of Alignment to State Content and Professional Development Standards: This section shall describe how the activities included in this program:

1. Provide instruction to teachers at a level beyond the level of content they are expected to teach to students.
2. Model instructional strategies that will provide teachers with the methodologies to effectively improve student achievement.
3. Align activities to state and national professional development standards for the content area.

I. Evaluation and Accountability Plan: Describe the plan that will be used to evaluate the program during each year of the program. This plan **must** include:

1. Measurable objectives and annual targets that describe progress toward meeting the goals and objectives established in response to the comprehensive needs assessment and reducing the number of teachers who do not meet the definition of a highly qualified teacher.
2. Measurable objectives to increase the number of mathematics and science teachers who participate in content-based professional development activities.
3. Measurable objectives for improved student academic achievement on state mathematics and science assessments.

J. Budget: Use the form provided in Appendix D.

K. Budget Narrative: The budget narrative should describe the basis for determining the amounts shown on the budget page. The budget narrative may be single-spaced. Both the budget and the narrative should be aligned with the activities described in the proposal narrative, and should justify effective and efficient use of funds and describe clearly the full range of resources that will be used to accomplish the goal of the project.

L. Appendix: The proposal appendix should include only the following documents:

1. Cover Page
2. Statement of Assurance
3. Partnership Identification Form (see Appendix C) for each partner
4. Budget Forms
5. Letters of commitment from each partner
6. Partner Funding Request (see Appendix E) for each partner

V. Proposal Submission and Review

- A. Submission: Applicants must submit an original and ten copies of the full proposal to the USOE. The original must include an original signature of the authorized institutional official on the cover page. Fax and e-mail transmissions are not acceptable. To be considered for funding, proposals must be received at the USOE by 5:00 p.m. on **December 2, 2005**. Incomplete applications will not be considered. Proposals should be mailed or delivered to:

Nicole Paulson
Title II Part B—MSP Program Director
Utah State Office of Education
250 East 500 South
P.O. Box 144200
Salt Lake City, Utah 84114-4200

- B. Review Process: As proposals are received at the USOE, they will be reviewed by staff for completeness and compliance with the requirements set forth in Title II, Part B of NCLB to determine applicant eligibility. Any questions about significant omissions from a proposal or about applicant eligibility will be referred to the proposing organization. If, in the judgment of the USOE, a proposal is late, significantly incomplete, or an applicant cannot establish its eligibility, the proposal will be omitted from consideration. The decision of the USOE is final. Applicants submitting proposals that are withdrawn due to incompleteness or ineligibility will be notified in writing.

An expert review panel will evaluate eligible applications in light of the required application components and the established criteria. The review panel will review each eligible application and make recommendations to the USOE in the areas of program, budget, and efficacy. The review panel's scores and recommendations will be the primary determinant of successful proposals and will form the basis for negotiation and final selection. Proposals will be ranked according to the final score assigned by the review panel and selected for funding consideration based upon the following criteria: final score assigned each proposal by the review panel; a cost-effectiveness ratio determined by the relationship between the number of teachers served, the actual amount of teacher-faculty instructional contact time, and the total cost of the program; geographic distribution; and an equitable distribution of funding between mathematics- and science-related proposals.

Following the review, eligible project directors will be contacted by USOE staff to discuss any modifications of the project plan that may be required. The USOE will seek to fund those proposals that show the most promise for successful professional development programs. In order to maximize the effects of limited funds, applicants whose grants are recommended at less than the amount requested may be asked to revise the project budget and/or scope of work.

C. Review Criteria:

Criteria	Points
Strength of Partnership and Scope	10
Quality and Use of Needs Assessment in Proposed Plan	10
Efficacy of Plan (as described in the narrative section). Assign 5 points to each of the 8 sections in the project narrative.	40
Alignment to State Core Curriculum/Intended Learning Outcomes, national standards, and state/national professional development standards	10
	10
Evaluation and Accountability Plan	20
Budget and Cost Effectiveness	10
Research Base	10

VI. Award Administration

- A. Notification of the Award: Within thirty days of completion of the review process, the project director and chief financial officer will be notified of the status of their proposal.
- B. Award Conditions: For the 2005-2006 competition, approximately \$500,000 is available for Mathematics and Science Partnership awards. The USOE expects to fund approximately 3 to 6 MSP programs. Applicants should note that Congress has not yet appropriated any funds for the 2006-2007 or 2007-2008 MSP programs. Second- and third-year awards are contingent upon this program receiving funding through the U.S. Department of Education and upon the state's evaluation of funded programs.
- C. Reporting Requirements: Each eligible partnership receiving a grant or sub-grant must report annually to the Utah State Office of Education and to the U.S. Secretary of Education regarding the eligible partnership's progress in meeting the objectives and annual targets described in the partnership's accountability plan. Further information regarding reporting requirements and forms will be made available on the Department of Education's web site.

VII. Definitions—The following definitions are based on the definitions included in the No Child Left Behind Act of 2001.

- A. Highly Qualified Teacher: The term "highly qualified teacher" means that a teacher has met the requirements of ESEA No Child Left Behind Section 200.56, which requires that the teacher have at least a bachelor's degree from an accredited post-secondary institution **and one of the following** (see R277-520-7):
- ✓ Major or advanced degree in the subject.
 - ✓ National Board Certification in the subject.
 - ✓ Passed a subject area test in each of the core areas, as defined under ESEA, that the teacher teaches.
 - ✓ Satisfied HOUSSSE rules, if employed prior to the first day of school in the 2002-03 school year, in each core subject teaching assignment.

- B. Professional Development: The term “professional development” means instructional activities that:
1. Are based on scientifically based research and state academic content standards, student academic achievement standards, and assessment.
 2. Improve and increase teachers’ knowledge of the academic subjects they teach.
 3. Enable teachers to become highly qualified.
 4. Are sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and the teacher’s performance in the classroom.
- C. Scientifically Based Research: The term “scientifically based research” means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs, and includes research that:
1. Employs systematic, empirical methods that draw on observation or experiment and involve rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn.
 2. Relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators.
 3. Is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions, with appropriate controls to evaluate the effects of the condition of interest, and with a preference for random-assignment experiments or other designs to the extent that those designs contain within-condition or across-condition controls.
 4. Ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at minimum, to offer the opportunity to build systematically on their findings.
 5. Has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.
- D. High-Need School District: The term “high-need school district” means a school district that:
1. Serves no fewer than 10,000 children from families with incomes below the poverty line, or a school district for which 20 percent of the children are from families with incomes below the poverty line; **OR**
 2. Has a high percentage of teachers not teaching in the academic subjects or grade levels that the teachers were trained to teach; **OR**
 3. Has a high percentage of teachers with emergency, provisional, or temporary licensing when compared to other districts in the state.
- E. Summer Workshop or Institute: The term “summer workshop or institute” means a workshop or institute, conducted during the summer, that:
1. Is conducted for a period of not less than two weeks.
 2. Includes, as a component, a program that provides direct interaction between students and faculty.
 3. Provides for follow-up training during the academic year that is conducted in the classroom for a period of not less than three consecutive or nonconsecutive days.

<p>Utah State Office of Education 250 East 500 South P.O. Box 144200 Salt Lake City, Utah 84114-4200</p>

**Application for 2005-2006
Mathematics and Science Partnership Grant**

Applying Institution or Organization: _____

Program Title: _____

Program Director

Name: _____

Title: _____

Address: _____

Telephone: _____ **Fax:** _____

E-mail: _____

Amount of MSP Funding Requested: _____ \$

Number of Teachers to Be Served Directly: _____

<p>Certification by Authorized or Institutional Official:</p> <p>The applicant certifies that to the best of his/her knowledge the information in this application is correct, that the filing of this application is duly authorized by the governing body of this organization, or institution, and that the applicant will comply with the attached statement of assurances.</p>	
_____ Typed or Printed Name of Authorized Official Grants Officer or Superintendent of Fiscal Agent	_____ Title
_____ Signature of Authorized Official	_____ Date

STATEMENT OF ASSURANCES

Should an award of funds from the Mathematics and Science Partnership Program be made to the applicant in support of the activities proposed in this application, the authorized signature on the cover page of this application certifies to the USOE that the authorized official will:

1. Upon request, provide the Utah State Office of Education with access to records and other sources of information that may be necessary to determine compliance with appropriate federal and state laws and regulations.
2. Conduct educational activities funded by this project in compliance with the following federal laws:
 - a. Title VI of the Civil Rights Act of 1964
 - b. Title IX of the Education Amendments of 1972
 - c. Section 504 of the Rehabilitation Act of 1973
 - d. Age Discrimination Act of 1975
 - e. Americans with Disabilities Act of 1990
 - f. Improving America's Schools Act of 1994
3. Use grant funds to supplement and not supplant funds from non-federal sources.
4. Take into account, during the development of programming, the need for greater access to and participation in the targeted disciplines by students from historically underrepresented and underserved groups.
5. Submit, in accordance with stated guidelines and deadlines, all program and evaluation reports required by the U.S. Department of Education and the Utah State Office of Education.
6. The applicant will retain records of the program for five years and will allow access to those records for purposes of review and audit.

Partner Identification Form

Include a Partnership Identification Form for each of the partner institutions/organizations.

PARTNER INSTITUTION: _____

Contact Name/Title: _____

Contact Mailing Address: _____

Telephone: _____

Fax: _____

E-mail: _____

Type of Institution/Organization: _____

Partner School District Demographics:

Title II, Part B: Math and Science Partnerships

Budget

Partnership Funding Request

Program Title:

Direct Cost Requested for Partner	YR 1	YR 2	YR 3	TOTAL
1. Salaries & Wages (Professional and Clerical)				
2. Employee Benefits				
3. Travel in State				
4. Travel Out of State (attach justification)				
5. Materials and Supplies				
6. Consultants and Contracts				
7. Teacher Stipends				
8. Equipment (Purchase)				
9. Other (Equipment Rental, Printing, Etc.)				
B. Indirect Costs* (if appropriate)				
Total				

* The indirect cost rate shall not exceed the indirect cost rate for the partner with the lowest indirect cost rate.

This form is a required element of the grant application. Justification for each of the categories shall be included in the budget narrative portion of the application. Modifications to the grant must be reflected over the three years of the grant and included as part of the annual reporting. Annual reapplication is required for continuation of funding for all grants. For reporting, it must include an itemized breakdown of these budget categories and a budget narrative explaining how you calculated each line item and the actual total project cost share.

Title II, Part B: Math and Science Partnerships

Partner Funding Request

Name of Partner Organization:

On this form, list only the funding this partner will receive from the grant.

Direct Cost Requested for Partner	YR 1	YR 2	YR 3	TOTAL
1. Salaries & Wages (Professional and Clerical)				
2. Employee Benefits				
3. Travel in State				
4. Travel Out of State				
5. Materials and Supplies				
6. Consultants and Contracts				
7. Teacher Stipends				
8. Equipment (Purchase)				
9. Other (Equipment Rental, Printing, Etc.)				
Total Funding to Partner From Grant				
