MSP

Wisconsin Mathematics & Science Partnership

LEARNING NETWORK CONFERENCE

2010
Teacher Effectiveness

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

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Mathematics & Science Partnerships

2007

Chetek Mathematics

Linn J6 Mathematics

Phillips Mathematics

2008

Green Bay Mathematics

UW-Oshkosh Mathematics

Milwaukee Science

2009

Milwaukee Mathematics

Neenah Mathematics

Sparta STEM

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Introduction

With the reauthorization of the Elementary and Secondary Schools Act in January of 2002 (also known as the No Child Left Behind Act, NCLB) introduced the Improving Teacher Quality Grant Programs (Title IIB). These programs encourage scientifically based professional development as a means for improving student academic performance in all 50 states.

Each state's department of education is responsible for administering the program on a competitive basis. The program is a formula grant program, with each state's funding determined by student population and poverty rates. The program is commonly known as the Mathematics and Science Partnership Program (MSP).

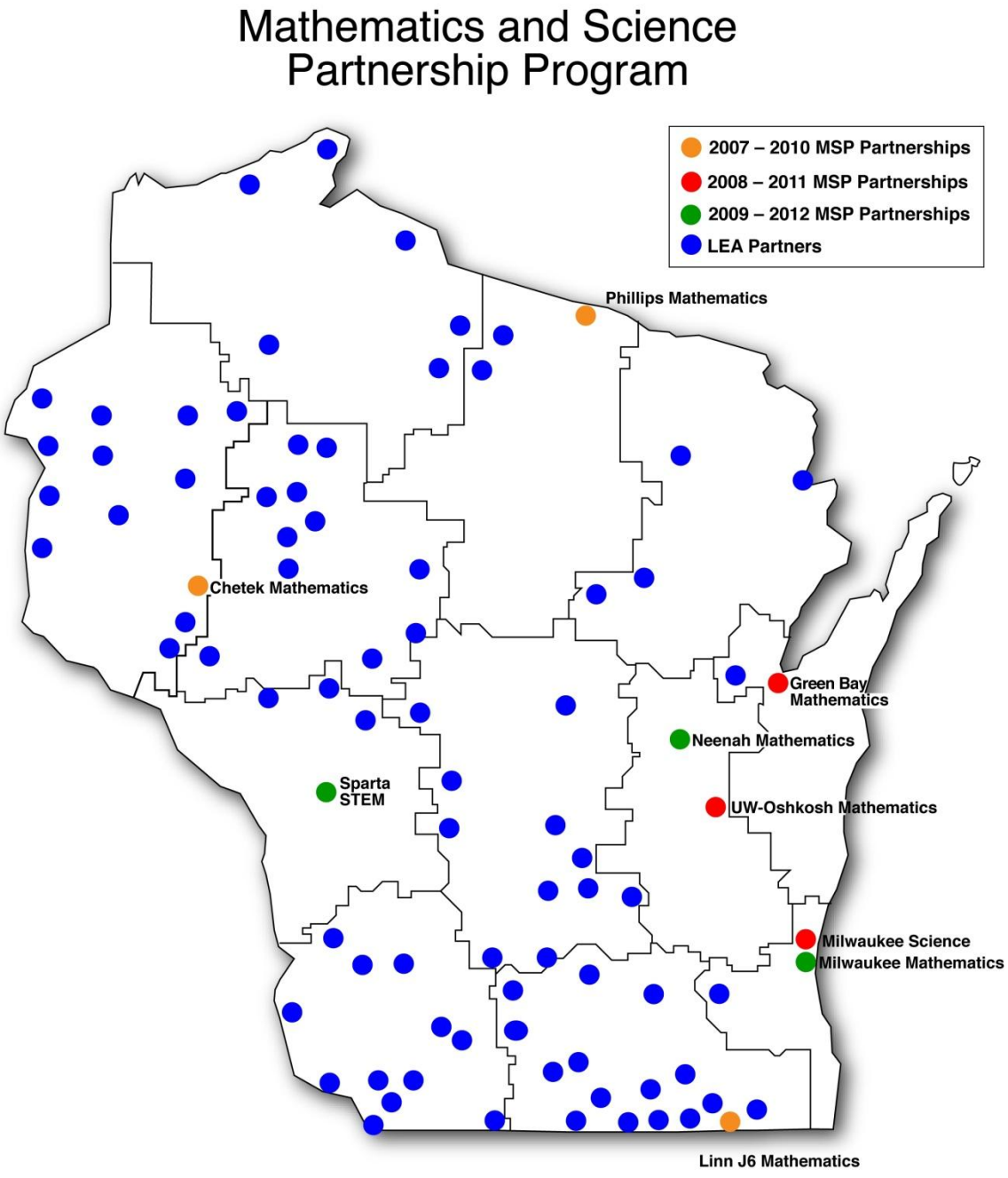
Wisconsin's MSP *strives to improve teacher quality* through partnerships between state education agencies, institutions of higher education, local and regional education agencies, and school districts; And *to increase student academic achievement in mathematics and science*. The program supports partnerships between one or more of Wisconsin's high-need Local Educational Agencies (LEA) and at least one institution of higher education department of science, mathematics, and/or engineering.

Partnerships between these high-need school districts and the science, technology, engineering, and mathematics (STEM) faculty in institutions of higher education are at the core of each MSP. Each individual partnership focuses on increasing and enhancing the content knowledge and teaching skills of classroom teachers of mathematics and science; are typically for two to three years in duration, and includes face-to-face instruction and a continual electronic dialog among participants.

*A high need LEA is any district where mathematics or science student proficiency scores do not exceed 65 percent, based on disaggregated Wisconsin Knowledge & Concept Examination (WKCE) scores, and where there is no currently active Title II, Part B grant, in the same content area, and one of the following:

1. At least 10 percent of the student population is from families with income below the poverty line as identified by the Census 2005, or
2. Schools/districts having Rural Education Achievement Program (REAP) or meeting local codes of 6, 7, or 8, or
3. Not achieving Adequate Yearly Progress (AYP) in mathematics based on 2008/09 data.

MSP Program Locations



Mathematics & Science Partnerships

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Chetek School District

Clayton School District

Clear Lake School District

Durand School District

Grantsburg School District

Luck School District

Menomonie Area School District

Osceola School District

Saint Croix Central School District

Somerset School District

Unity School District

UW - Stout

MATH & Science Partnership Grant

The Creating Mathematics Excellence (CME) partnership between the University of Wisconsin – Stout, and a total of 14 rural and high poverty school districts in northwestern Wisconsin – including Barron, Birchwood, Chetek, Clayton, Clear Lake, Grantsburg, Luck, Menomonie, Osceola, Pepin, Saint Croix Falls, Shell lake, Somerset, and Unity – have joined forces to develop this project. It is designed to increase the mathematical knowledge of both regular and EEN teachers' grades 3-9 and their students. CME is a comprehensive and focused project supporting the identified needs within the consortium. The partnership utilizes scientifically based research and effective practices in mathematics and professional development and the activities are in line with the stated purpose of the Math and Science Partnerships, Title II, Part B as well as the PI34 and NSDC standards. The CME project is predicated on research findings that indicate that experienced teachers who know both their content and effective instructional strategies tend to produce higher achievement outcomes among their students.

Mathematics faculty from UW-Stout and UW-Eau Claire who have considerable experience working with the K-12 schools will deliver 8 days of professional development seminars focused on the Wisconsin Model Academic Standards for Mathematics relevant to grades 3-9 over three summers. They will also provide extended classroom consultation and regional workshop support for a total of 4 days each year. An ongoing electronic communication will help project participants and faculty maintain a continuous reflective dialog. Participants will receive a summer stipend and mileage.

CME will support upwards of 60 teachers of grades 3-9 who are highly qualified in their areas of licensure, but have identified needs in mathematics content and instructional strategies. As a result of participation in this program, 50 teachers will:

1. More confidently know and understand the mathematics concepts necessary to teach at their grade level and beyond.
2. Design instruction using the tools of inquiry and structures of the discipline in order to create learning experiences that make the aspects of mathematics more meaningful to students.
3. Make wise choices about classroom curricular materials that support a standards-based classroom for all students.
4. Help their students make sense of mathematics.
5. Learn how to formatively and summatively assess student work and adjust instruction according to data and assessment results.

Mathematics & Science Partnerships

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Beloit Turner School District

Delavan-Darien School District

Dynamic Math Institute
Streamwood, Ill.

Fontana J8 School District

Linn J4 School District

Linn J6 School District

Marquette University
College of Engineering

Parkview School District

Sharon J11 School District

Twin Lakes J4 School District

Walworth J1 School District

UW – La Crosse
Department of Education:
Master's Program

UW - Platteville
Department of Education:
Mathematics

Understanding the World Through the Language of Mathematics: Math Literacy for All

The three-year grant project, Meeting the Challenges of the 21st Century: Building Mathematical Proficiency for All Students grounds its partnerships and work in the belief that we are responsible for preparing all students to be mathematically proficient for their next level of education, and ultimately, to be a productive and informed member of our democratic society and the world. The grant project aspires to the vision described in the opening chapter of Principles and Standards for School Mathematics. "Imagine a classroom…where all students have access to high-quality, engaging mathematics instruction. There are ambitious expectations for all, with accommodation for those who need it."

In collaboration with Dr. Robert Weber from Marquette University - Department of Engineering and the nine school districts of Beloit Turner, Delavan-Darien, Fontana J8, Linn J4, Linn J6, Parkview, Sharon J11, Twin Lakes #4, and Walworth J1, the Southeastern Consortium identified two goals for the project. The goals are (1) increase student mathematical proficiency and achievement and (2) increase teacher content knowledge of mathematics, pedagogical skills to meet the needs of all learners, and the knowledge of how students learn mathematics. The Southeastern Consortium selected the project design because the goals of the project align with the Math Partnership goals, the Wisconsin Model Academic Standards, the Wisconsin Teacher Standards, PI 34, and the goals of NCLB to assure that all students have equitable access to instruction grounded in research and best practice. Project activities are designed to address the gaps identified in the needs assessment. The activities involve teachers using problem-solving strategies to solve real world problems, applying the concepts in mathematics, demonstrating pedagogical practices in a collegial team setting, and applying new skills in their classroom. The key features include 1) learning teams using real-life applications, 2) lesson study, and 3) reflection through journal writing and collegial dialogue.

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Walworth J1 School District

UW – La Crosse
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Master's Program

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Understanding the World Through the Language of Mathematics: Math Literacy for All-continued

The project targets the math needs of 3,222 students in grades K-5. Eighty-six percent of the total student population represents high-need districts. The grant provides training for 145 teachers from the Southeastern Consortium. Eighty-four percent of the total teacher population represents high-need districts. The data analysis for the needs assessment examined trend and cohort achievement data. The findings from the trend data indicated that six out the nine districts had achievement gaps at grade three. Four out of the nine districts had achievement gaps at grade five and no more than two gaps appeared at the remaining grade levels. The cohort analysis revealed interesting results. Six different grade levels with a gap in 2005 made sufficient gains that did not create a gap in the following year for the cohort group. Seven grade levels that did not have a gap in 2005 lost points in the following 2006 year. The unevenness in gain and losses, as well as the wide ranges in gains and losses after an additional year of instruction, strongly indicated that the mathematical learning experience made a difference in achievement for students. To build a classroom across all grade levels and school districts where all students have access to high-quality, engaging mathematics instruction guided the development of the experimental design.

The experimental design of the project engages teachers in sustained professional development in small, supportive grade level groups. During year one and year two, treatment groups receive one year of training that includes three non-consecutive days of training and three additional follow-up days focusing on lesson study. A two-week summer session provides a capstone experience for members of the treatment group following their year of training. In the third year, a new treatment group randomly selected from participants in year one and two, receives an additional three days of lesson study. The project design also includes training for the math leaders over the three-year period. Math leadership teams developed in each district will provide on-going support for teachers during training and after the project is completed.

The benefits of the proposed design support the increased use of constructivist teaching, job-embedded support with sustained professional development, and implementation of lessons and activities developed during the institute and training ultimately leading to increase mathematical proficiency for all students.

Mathematics & Science Partnerships

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CESA #10

Abbotsford School District

Cadott School District

Cornell School District

Ladysmith-Hawkins School District

Lake Holcombe School District

Mondovi School District

Neillsville School District

Spencer School District

Stanley-Boyd School District

Weyerhaeuser School District

CESA #12

Bayfield School District

Butternut School District

Hurley School District

Mellen School District

Mercer School District

Phillips School District

South Shore School District

Superior School District

Washburn School District

Northern Wisconsin Rural Partnership for Mathematics Education

Teams of three teachers from grades three through eight from each partner district will attend two-week summer institutes conducted by current or retired faculty members of the University of Wisconsin-Eau Claire Mathematics Department. Each of these individuals has many years of experience teaching in K-12 schools and in working with teachers at these levels. These institutes will be done at two sites – one for CESA 10 area schools and one for CESA 12 area schools. Each year there will also be two weekend (Friday-Saturday) sessions that will be held for combined groups. In-school consultations during the academic year of years two and three of the project will assist the participating teachers in implementing the work from the summer and will assist the entire school and/or district in implementing a mathematics program based on high standards for all and an online component will connect participants between sessions.

As a result of this program teachers will:

1. Know mathematics necessary to teach mathematics at their grade level and beyond.
2. Capitalize upon the connections between how mathematics is learned and the mathematics that is learned
3. Select appropriate rich mathematical tasks to exemplify and clarify important mathematical topics.
4. Answer classroom questions that arise and stretch the mathematics covered by having competence and confidence in their own mathematical understandings.
5. Make wise choices about classroom curricular materials that will truly implement a standards based classroom as a curriculum for all.
6. Help students make sense of mathematics.

Evaluation:
Teacher knowledge gain will be connected to student achievement on Wisconsin Knowledge and Concept Examinations and through this approach demonstrate the worth of this particular regimen of professional development for teachers. Rural teachers will also reduce their isolation by establishing a network of colleagues in similar schools and be connected online to these colleagues and mathematics professors. With a three-year project building ongoing competence for these teachers, and the presence of a team of two or three in each building, capacity is expected to grow as these more highly qualified teachers exercise leadership. The growth of teacher content knowledge will be measured by the use of the Knowledge of Mathematics for Teaching measures developed by Ball and associates at the University of Michigan.

Mathematics & Science Partnerships

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Partners:
Green Bay Area Public School District

School District of Wausaukee

St. Norbert College

Northeast Wisconsin (NEW) Mathematics Partnership

The Green Bay Area Public School District, the School District of Wausaukee, and St. Norbert College are partnering to provide an opportunity for approximately 34 elementary and middle school mathematics teachers to work together with mathematics professors from St. Norbert College. During this professional development partnership, participating teachers will take a series of three graduate level courses, for a total of six credits. These courses will deepen and broaden their knowledge and understanding of important mathematical concepts.

In June of 2009, these teachers will take a two-week summer course focusing on increasing their math content knowledge. During the 2009-10 school year, teachers will take a course on math pedagogy, followed by a two-week summer course exploring 21st century applications of mathematics. The grant partnership will concentrate on strengthening comprehension and building proficiency with standards-based instructional practices among participating teachers from grades four through eight. Teachers will develop a clear vision of the mathematics scope and sequence in the Green Bay Area Public School District and the School District of Wausaukee and will focus on the seamless articulation of mathematics instruction for students progressing from elementary to middle schools.

In addition to deepening their mathematical content knowledge, participating teachers will increase their repertoire of successful mathematics instructional strategies by focusing on best teaching practices Further, participating teachers will develop congenial and collegial relationships with their peers and with the St. Norbert College faculty. The three graduate level courses were developed to fit the needs of the districts' teachers. Throughout the project and upon completion, these teachers will share the knowledge learned with their colleagues in their respective schools and work to assure that students benefit through improved academic achievement.

Mathematics & Science Partnerships

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UW - Whitewater

Partners:
Bayfield School District

Bowler School District

Crandon School District

Ho Chunk Nation After School Programs

Lac du Flambeau School District

Menominee Indian School District

Naytawaush Charter School, MN

Seymour School District

Wabeno School District

Winter School District

Closing the Mathematics Achievement Gap of Native American Students Identified as Learning Disabled Project (CMAG)

Development of the **Closing the Mathematics Achievement Gap (**CMAG) Project was motivated by the fact that there is a disproportional number of Native American students identified as learning disabled (LD) who demonstrate limited mathematical understanding. The study hypothesis is that by preparing teachers of these students to effectively implement Cognitively Guided Instruction (to base their instruction on student understanding and to focus on the development of mathematical reasoning through problem solving) the students will perform significantly better on the reasoning–based Wisconsin Knowledge and Concept Exam. It is also hypothesized that this improved performance will reduce the achievement gap between Native American and non-Native students within the CMAG participating districts.

Major Objectives

1. Increase mathematics content knowledge of Native American students identified as LD .
2. Improve the mathematical problem solving abilities of Native students identified as LD.
3. Native American students identified as LD will report more positive attitudes toward learning mathematics.
4. Teachers of Native students identified as LD and will develop greater knowledge of mathematics content.
5. Teachers of Native students identified as LD will develop greater knowledge of the NCTM Process Standards.
6. Teachers of Native students identified as LD will develop greater knowledge of how to align instruction with assessment.
7. Teachers of Native students identified as LD will demonstrate knowledge of culturally responsive methods of teaching methods.
8. Teachers of Native students identified as LD and EBD will gain knowledge about web-based curriculum and learn mathematics content through high interest thematic units and learn to adapt these units for use with LD students.

Activities:

During year one, the project teachers participated in two one-week workshops, two two-day reflection sessions, and at least two site-visit conferences following field observations conducted by project faculty (a total of approximately 80 face-to-face hours per teacher).

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Mathematics & Science Partnerships

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Crandon School District

Ho Chunk Nation After School Programs

Lac du Flambeau School District

Menominee Indian School District

Naytawaush Charter School, MN

Seymour School District

Wabeno School District

Winter School District

Closing the Mathematics Achievement Gap of Native American Students Identified as Learning Disabled Project (CMAG) - continued

Teacher Assessment Findings:

During the Level I workshop, August 2008, participants completed the Mathematics Content Knowledge Pre-Assessment, which consisted of 25 multiple-choice items. The test items assessed elementary mathematics knowledge in the areas of whole number operations, fractions, decimals, percents, ratio/proportion, geometry, probability, data analysis, and algebra. The mean score of this pre-assessment was 50.3% with a standard deviation of 22.9. Teachers were post assessed during the Level II workshop, August 2009, with a 25 multiple-choice like-item post assessment. The mean score of this post-assessment was 77.9% with a standard deviation of 19.1. A two-tailed, paired t-test showed that there was a significant improvement ($\alpha < .01$) in mathematics content knowledge from the pre-assessment to the post-assessment. These results were obtained from the 21 participants who completed both the pre-assessment and the post-assessment (attachment #1A).

One of the CMAG Objectives states that teachers will develop knowledge of the NCTM Process Standards and apply this knowledge during instruction. In an effort to document implementation of the Process Standards, teachers were observed and interviewed at least two times by project faculty between September 2008 and May 2009. Following each observation and interview, the observed lesson was rated on a zero to 4-point implementation scale. Observer ratings were averaged and each teacher was given an implementation score. The implementation scores of twenty teachers ranged from 1.0 to 3.5, mean score 2.5, with a standard deviation of .74.

An email survey was sent to project teachers in September 2009 with two short-answer questions: 1. Since beginning the CMAG Project, have you observed noticeable improvements in your students' mathematics performance and achievement? 2. If so, what are the three main reasons for this improvement? Please begin with the one that you feel had the greatest influence. Twenty-two teachers replied, and an analysis of their responses revealed that all twenty-two respondents believed that their students' math achievement had improved.

Below is one teacher's verbatim email response:
The largest improvements have come in the area of self-confidence. The kids are not afraid to share or make mistakes. They can also solve more problems because they can do it any way they know how to instead of relying on the one procedure they had been taught in the past.

1. *They have been given permission to use their own thinking*
2. *The students are learning from each other.*
3. *They actually understand what they are doing and can explain it!*

Mathematics & Science Partnerships

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Milwaukee Public Schools

UW-Milwaukee

The Better Elementary Science Teaching (BEST) program

The Better Elementary Science Teaching (BEST) program will engage 60 elementary level teachers [K-8, regular, exceptional education, and English as a Second Language (ESL)] from the Milwaukee Public School District (MPS). In partnership with the University of Wisconsin-Milwaukee (UWM) College of Letters and Science (L&S), College of Engineering and Applied Sciences (CEAS) and the School of Education (SOE), MPS teachers will engage in a sustained and rigorous program (nine semester sessions over a three year period) to increase their science content knowledge and improve their ability to teach science effectively. As a result of the building of their own knowledge base of science content and teaching pedagogy, the teachers will then serve in science leadership roles at their schools.

Three goals provide the framework for obtaining the vision of the BEST program:

1. increasing the science content knowledge of MPS elementary grade level teachers (K-8) and improve student achievement in science;

2. increasing teacher pedagogical content knowledge (PCK) and use of effective standards-based science teaching methodologies, curriculum and assessments (i.e. PCK; standard-based instruction, use of inquiry-based activities, formative and summative assessments, inclusion of the nature of science, use community-based resources for teaching science content, establishing linkages between science and language art instruction, adaptations for exceptional students and;

3. improve the quality of science teaching through sustained professional development and the establishment of the program's participants as science instructional leaders at their schools.

Mathematics & Science Partnerships

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Alliance for Teaching Mathematics to Special Education Learners: Strengthening Content Knowledge and Collaboration of General and Special Education Teachers

The *Alliance for Teaching Mathematics to Special Education Learners* is a partnership of the Milwaukee Public Schools (MPS) and the University of Wisconsin-Milwaukee (UWM). The *Math Alliance*, over three years, will engage 50 teachers of grades 4 through 9 who work with students with math learning difficulties and disabilities. School teams are comprised of at least one regular education and one special education teacher. The instructional team is comprised of university faculty and district teachers and leaders that bring expertise and experience in mathematics content, mathematics education, and special education.

The goals of the Math Alliance are threefold:

1. to strengthen the mathematics content knowledge of general and special education teachers

2. to enhance mathematics instructional and assessment practices, focusing on appropriate accommodations and modifications for students with special education needs; and

3. to increase collaboration on math instruction between general and special education teachers. An expected outcome is that general and special education teachers will increase and improve their collaborative efforts in meeting the needs of ***all*** students in mathematics.

The teachers will engage in a sustained and rigorous program to increase their mathematics content knowledge and improve their teaching practices, with emphasis on the needs of special education and struggling learners. Three program strands will be closely integrated and aligned throughout the project:

1. mathematics content

2. pedagogical content knowledge, and

3. differentiation for students with special needs.

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Alliance for Teaching Mathematics to Special Education Learners: Strengthening Content Knowledge and Collaboration of General and Special Education Teachers continued

The participants will take a total of seven courses over three years. Nine credits in mathematics and eight credits in curriculum and instruction and exceptional education. A selected mathematics strand will be the focus for each year of the project:

1. number and operations,

2. geometry and measurement, and

3. statistics and probability. The education courses will focus on the development of mathematical knowledge with differentiation for students with special needs and curriculum planning for differentiation in mathematics.

Participants were recruited in Fall 2009. Project sessions began in Spring 2010 with participants meeting two or three times per month on Tuesday evenings for three hours. During Summer 2010, participants will meet weekly on Tuesdays for four hours until early August. The project is taking an integrated approach in that participants are deepening their mathematics content knowledge while studying ways to meet the needs of students who struggle in mathematics. Each project session is co-developed and co-facilitated by the instructional team representing mathematics, mathematics education, and special education.

In addition, the project will promote teacher leadership for collaborative practices centered on needs of special education learners. During the first year of the program, the participants will begin by examining their own teaching experience with and collaborative practices for special education learners. Then they will begin conversations with the school's Mathematics Teacher Leader and another special education teacher in the school to examine student achievement data and begin considering implications for actions. During the second and third years, the participants will be expected to take on further leadership for mathematics special education in their schools by designing and carrying out grade-level and school-based projects for building school capacity in teaching mathematics to ***all*** students.

Mathematics & Science Partnerships

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Neenah School District

New London School District

North Fond du Lac School District

Wildrose School District

UW - Oshkosh

Making Mathematical Connections

Making Mathematical Connections is a partnership between UW Oshkosh and seven Northeastern Wisconsin school districts to provide intensive professional development in mathematics content for mathematics teachers in grades 4 through 8, supported by a Mathematics and Science Partnerships Program grant through the US Department of Education.

The goals of this project are to improve student achievement in mathematics through a deepening teachers' mathematics knowledge for teaching. Project activities will focus on mathematical thinking, conceptual understanding of fundamental concepts in the curricula, the relationships between these concepts, and multiple representations and strategies for solving problems. The project will prepare teachers to actively engage their students in solving problems with a high level of cognitive demand, press their students for conceptual understanding, and prepare teachers to evaluate and respond to student reasoning and multiple ways of thinking.

Project Objectives:

- Increase student achievement in mathematics
- Increase teachers' mathematics content knowledge for teaching
- Shift teachers attitudes and beliefs about mathematics and what it means to know and do mathematics
- Change teachers' instructional practices to focus more on mathematical reasoning
- Increase teacher professional development, collaboration and discussion of mathematics and mathematics teaching

Project Activities:

- Two-week intensive summer workshop on mathematics content
- Professional development seminars during the academic year on lesson implementation and mathematics education research
- Content-Focused Coaching. The mathematics faculty will visit classrooms to work with the participants through mathematics content-focused coaching

Participants will receive 4 graduate credits each year for participation in the program.

Mathematics Content Focus:

- Number and Algebraic Thinking (Year One)
- Geometry and Measurement (Year Two)
- Probability and Statistics (Year Three)

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Mathematics & Science Partnerships

Neenah
Est. 2009

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Dr. Jennifer Szydlik

Dr. John Beam

Partners:
Clintonville School District

Manawa School District

Menasha School District

Neenah School District

New London School District

North Fond du Lac School District

Wildrose School District

UW - Oshkosh

Making Mathematical Connections - continued

Program Workshop Sessions:

Problem-Based Inquiry (PBI). Teachers will deepen their understanding of a specific content topic through problem solving. Each workshop day will begin with working in small groups on rich problems designed to spark and sustain conversation about, and exploration of, a specific piece of the school curriculum. Participants will be engaged in analyzing solutions and methods, exploring representations, communicating, and making mathematical arguments.

Focus on Children's Thinking. We will then study children's thinking and misconceptions about the specific content topic, as identified in the research literature. Participants will appraise children's methods and discuss whether they are correct and generalizable. We will view video clips of children thinking aloud as they solve problems in order to better understand the ways children reason mathematically. We will also discuss how to respond to common student questions (as established in the research literature) related to the content, and address how to assess student written work (constructed response) in mathematics.

Connections to the Curriculum. We will also study how the specific content topic is treated in the various curricula used by the partner districts. We will analyze activities and discuss the underlying concepts and the purpose and motivation for their approach. Participants will present ideas for how to teach the content in the classroom.

Academic Year Workshops. Participants will look at an upcoming unit from the curriculum, work collaboratively in teams to identify the key content and concepts underlying the unit, and develop strategies and lessons to implement in the classroom that will have a high level of cognitive demand for student understanding. Participants will be charged with implementing these lessons in their classroom. The next one-day workshop will then begin with sessions where teachers reflect and discuss the mathematical issues arising from the previous lesson implementation.

Content-Focused Coaching. Once each year, one of the program leaders will visit teachers' classes for some content-focused coaching. Teachers will identify the goals and strategies of the lesson and some specific focal points of attention for the teacher and coach. The goal of this coaching component of the program is not to evaluate teachers but to help them enrich and refine the mathematical depth and accuracy of their lessons, and increase the level of cognitive demand and press for student understanding in the classroom.

Mathematics & Science Partnerships

Sparta
Est. 2009

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Partners:
Bangor School District

Black River Falls School District

Cashton School District

LaFarge School District

Mauston School District

Melrose-Mindoro School District

Norwalk-Ontario-Wilton School District

Royall School District

Sparta Area School District

UW - Stout

Western Technical College

CESA #4

7-Rivers Alliance

SySTEMically Improving Student Academic Achievement in Mathematics and Science

This project will improve student achievement in mathematics and science by improving teachers' content knowledge and pedagogy in mathematics and science. Sixty teachers from nine school districts will be organized into grade-band teams (PK-2; 3-5; 6-8; 9-12) that will work collaboratively to develop Integrated Curriculum Projects that connect math and science to real-world contexts by using Career Clusters as the organizing framework for curriculum development.

Six project goals provide the framework for project activities and evaluation measures:

1. Provide 60 elementary, middle, and high school teachers with professional development in mathematics and science content

2. Increase student achievement in mathematics and science as measured by WKCE data and Benchmark Assessments

3. Provide 60 elementary, middle, and high school teachers with professional development in evidence-based practices including contextual teaching and learning strategies, differentiated instruction, balanced assessment, and technology integration

4. Develop integrated curriculum projects for STEM-related Career Clusters using the STEM Transitions model

5. Align each of the integrated curriculum projects with Wisconsin Model Academic Standards in mathematics and science

6. Build strong, collaborative relationships among K-12, higher education, and business partners that will foster sustainability of grant activities after grant funding has ended.

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Mathematics & Science Partnerships

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Est. 2009

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Partners - continued
Center for Occupational Research & Development (CORD)

Fort McCoy Military Installation

Juneau County Economic Development Corporation

Greater Mauston Area Development Corporation

SySTEMically Improving Student Academic Achievement in Mathematics and Science - continued

Five major components will be used to achieve project goals:

1. STEM Summer Academy
2. Professional Development Seminars
3. Grade Band Teams
4. Peer Coaching
5. Partnerships.

Faculty from the University of Wisconsin—Stout and Western Technical College will provide instruction in both math and science content and pedagogy during the two-week STEM Summer Academy. Business partners will play a significant role in the project by providing a real-world context for development of the integrated projects. Follow-up activities and training will be conducted during each academic year using on-going Professional Development Seminars, Peer Coaching, and Online Collaboration.

The Evaluation Plan includes both experimental and quasi-experimental design methods that will be used to collect both formative and summative data. Examples of evaluation measures include the following:

- Pre-Post Surveys
- AIM: K-8 Science Test
- Lesson Plan—Rubric
- WKCE
- Teacher Perception Survey
- Reflective Journals
- Career Cluster Inventory
- Integrated Project - Rubric
- Exit Interviews.

MSP Resources

The National Research Council (NRC) has produced an excellent series of books related to learning, especially in the areas of mathematics and science. They can be ordered from the National Academy Press. Their website address is: www.nap.edu. In 1999, the NRC published two very significant books titled How People Learn: Brain, Mind, Experiences, and School (NRC, 1999) and How People Learn: Bridging Research and Practice (NRC, 1999). The next year, these two publications were combined into one expanded version titled How People Learn: Brain, Mind, Experience, and School Expanded Edition (NRC, 2000). The NRC then published Adding It Up Helping Children Learn Mathematics (NRC, 2001). This book really looked at how elementary students learn mathematics and presented a complete example of how the teaching of the content area of numbers unfolds throughout the elementary curriculum. It also provides some ideas for the other five content areas. Last year the NRC published its most recent contribution in the area of learning titled How Students Learn: History, Mathematics, and Science in the Classroom (NCR, 2005). Subsequently they published three separate smaller books. Each book contains: the introductory material, the content chapters relevant to that particular content area, and the conclusions reached by the authors.

Meanwhile, the professional associations were equally hard at work. The National Council of Teachers of Mathematics (NCTM) published: Curriculum and Evaluation Standards for School Mathematics (NCTM, 1989), Professional Standards for Teaching Mathematics (NCTM, 1991), and Assessment Standards for School Mathematics (NCTM, 1995). By 2000, the NCTM revised and updated its standards with the publication of Principle and Standards for School Mathematics (PSSM) (NCTM, 2000). They also have a set of E-Standards available on their website. This is a fixed set of sample lessons for implementing the PSSM philosophy and ideas into a teacher's classroom. They have also teamed up with a group of business partners to create a website titled Illuminations. This website differs from the E-Standards in the sense that it is designed to be "infinitely" expanding. There is an appointed committee that approves the best lesson plans (of those submitted for consideration) to be added to the Illuminations collection. To supplement the PSSM, NCTM has published A Research Companion to Principles and Standards for School Mathematics (NCTM, 2003). The most recent publication from NCTM is Curriculum Focal Points for Pre-kindergarten through Grade 8 Mathematics A Quest for Coherence (CFP)(NCTM, 2006). At each grade level three major topics are identified to be emphasized at that grade level. It also lists topics designed to enhance the learning of those three topics. The appendix provides a match up between the material in the CFP and the PSSM. NCTM anticipates that a similar publication involving lenes, rather than focal points will be available in late 2008. The lenses will be designed to look at the high school mathematics curriculum and individual courses, rather than grade levels like the focal points. All these publications are listed on the NCTM's website. The address is: www.nctm.org.

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MSP Resources

The state affiliate of NCTM is the Wisconsin Mathematics Council (WMC). Its main event is the Annual Green Lake Meeting which is held the first Thursday and Friday of May. Each of the last two years over 1,800 teachers of mathematics K-16 have attended the two-day conference. In addition to numerous local speakers, the conference invites noted speakers in mathematics education from all over the country to speak. Every year WMC presents two scholarships to students who are one year from their bachelor's degree in mathematics education and one scholarship to a deserving high school senior who plans to go into the area of mathematics education. Other activities sponsored by the WMC are workshops on topics relative to mathematics teaching and learning. Their newsletter is published three times during the school year and keeps members informed on what WMC and other mathematics education activities are occurring in Wisconsin and neighboring states. Every year WMC members look forward to receiving three issues of their superb journal titled Wisconsin Mathematics Teacher. The articles cover contemporary mathematics education issues in K-12. Many of the articles are written by WMC members and often include activities that can be implemented right into the classroom. For further information on the WMC and its activities visit its website at: www.wismath.org.

The National Science Teachers Association (NSTA) continued along the same line. They joined with Project 2061 sponsored by the American Association for the Advancement of Science (AAAS) to publish Science for All Americans (AAAS, 1989) and Benchmarks for Scientific Literacy (AAAS, 1993). In 1995, the NRC published National Science Education Standards (NRC, 1995). The AAAS and the NSTA has published several books providing resources for scientific literacy. Of particular note is Atlas of Scientific Literacy (AAAS, 2001) and NSTA's Pathways to the National Science Education Standards (NSTA, 2000) for the elementary, middle level, high school, and college level classrooms. In 2005 NSTA and Corwin Press teamed up to produce the publication Science Curriculum Topic Study (NSTA, 2005); the publication is designed to bridge the gap between research and practice. Each of the publication and much more can be found on NSTA's website at www.NSTA.org.

The Wisconsin Society of Science Teachers (WSST) has been instrumental at the state level with implementing both the state and national standards. In 1996, WSST promoted and sold many copies of the national standards. Those standards became the cornerstone for all their activities.

Wisconsin is also home to one major MSP-NSF initiatives. Milwaukee Public Schools is involved with the University of Wisconsin in a five year Mathematics and Science Partnership (MSP) grant from the National Science Foundation (NSF).

Finally the National Assessment of Educational Progress (NAEP) provides a powerful on-line question tool. The NAEP Questions Tool provides easy access to NAEP questions, student responses, and scoring guides that are released to the public. These questions can be used for both professional development as well as actual student worksheets. The question tool can be accessed at the following address: http://nces.ed.gov/nationsreportcard/itmrls

MSP Resources

U.S. Department of Education/MSP Program:
The website of the U.S. Department of Education offers background and legislative information on the MSP Program: http://www.ed.gov/programs/mathsci/index.html.

Teacher Education Materials Project (TE-MAT):
The TE-MAT site offers a database of resources to support mathematics and science professional development providers as they design and implement programs for in-service teachers: http://www.te-mat.org

National Staff Development Council (NSDC):
The website of the NSDC offers information and resources for professional development providers: http://www.nsdc.org

Horizon Research, Incorporated (HRI):
The website of HRI offers a wealth of information related to research and evaluation of mathematics and science initiatives. Some of its tools may be helpful in conducting a professional learning needs assessment: http://www.horizon-research.com/instruments

Learning Mathematics for Teaching (LMT) Project:
The LMT Project website offers information on the assessment instruments required by all funded mathematics MSP projects: http://sitemaker.umich.edu/lmt/home

Project MOSART:
Project MOSART's website offers thorough information, including a tutorial, on the required assessment instruments:
http://www.cfa.harvard.edu/smgphp/mosart/about_mosart.html

Vertical Teams

What is a Vertical Team?

Most commonly a vertical team consists of middle school and high school educators who teach in the same academic area. It may also include elementary teachers, school counselors, administrators, department chairs, or curriculum specialists. Through communication and cooperation, teams design curricular change and create support structures necessary to make high achievement by all students a reality.

Purpose of a Vertical Team

In vertical teams, teachers from different grade levels work together to develop a continuum of knowledge and skills that build from one grade level to the next. Team communication leads to a greater understanding of what is taught each year, which helps teachers organize strategies, plan introduction of concepts, and reduce repetition of content. As a result, student achievement and success is enhanced.

Goals of a Vertical Team

- To increase achievement of all students to close the achievement gap
- To bring about coordination and communication between grade levels
- To foster greater inclusion and to build enrollment in advanced coursework
- To introduce skills, concepts, and assessment methods to prepare students for success in advanced coursework
- To encourage innovation
- To stimulate enthusiasm for advanced coursework in the school, family and community

Benefits for Students

A successful vertical team will:

- Prepare students for the next level of challenge by developing skills and strategies necessary for success in advanced coursework
- Promote greater inclusion and progress towards closing the achievement gap
- Improve student achievement

Equity and Access

The concept of vertical teams is based on a philosophy of inclusion; on the notion that all students benefit from experiencing a rich and rigorous curriculum. Research shows that students of color and socio-economically disadvantaged students tend to be under-represented in advanced coursework. The goal of vertical teams is to prepare all students for success in rigorous courses at the secondary level, not only certain groups. This results in an organizational pipeline that promotes equity and access for all.

Title I

Part of the No Child Left Behind (NCLB) Act of 2001:

Part A: Improving Basic Programs operated by Local Education Agencies.

Title I, Part A is the largest federal education available to states and districts. It is designed to supplement educational opportunities for children from high poverty areas so they can meet the state content and performance standards. Services can be provided as Targeted Assistance or Schoolwide programs.

A Targeted Assistance program is one which individual students are targeted to receive Title I services. They are identified through the use of multiple, objective and educationally-related criteria. Services may be delivered in a variety of ways, such as in-class instruction, extended day, week or year programming, or small group supplemental support during non-instructional periods of the school day.

A school receiving Title I funds is eligible to provide services as a Title I Schoolwide program when the poverty level is at least 40 percent, the school has engaged in a year-long needs assessment and planning process, and has developed an implementation and evaluation program that includes required components. A Schoolwide program provides greater flexibility in the use of Title I funds. This whole-school reform model focuses on improving teaching and learning for all students, especially those who struggle the most to meet the state academic standards. This model is expected to provide extended learning time for all students who need it and encompasses all core subject areas.

Title I and Mathematics
Title I services are generally provided in reading and mathematics. In Wisconsin, services have historically focused more on reading than mathematics. It is important that each school use multiple sources of data to determine where the greatest needs exist. Results of state testing suggest that in many cases, mathematics is emerging as a priority need. When developing a Title I mathematics program it is important to keep many things in mind, including:

- Providing supplemental instruction that supports the classroom mathematics experiences - a variety of support models can be used: within the classroom, outside of the classroom (during the school day), outside of the school day (before school, after school, summer programs)
- Assigning highly qualified staff (teachers and paraprofessionals) who know how children learn mathematics, understand how to effectively build students' mathematical understanding, and have a strong understanding of mathematics content and pedagogy
- Providing rich mathematical experiences that support the mathematics curriculum to ensure mathematical proficiency: conceptual understanding, procedural fluency, strategic competence, adaptive reasoning and productive disposition (*Adding It Up: Helping Children Learn Mathematics*, 2001)
- Using a variety of approaches to learning mathematics, including the use of mathematical tools such as manipulatives, measuring tools, computers and calculators
- Working with parents as partners to reinforce positive attitudes and experiences with mathematics

Notes

Notes

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

REQUEST FOR PROPOSAL
for
MATHEMATICS AND SCIENCE PARTNERSHIPS GRANT

NO CHILD LEFT BEHIND ACT OF 2001
TITLE II, PART B

2010/11

Due on May 14, 2010

These instructions are provided to help prepare a grant application/proposal for the Mathematics and Science Partnerships Program. Specific requirements are provided for key features and proposal requirements. If you have any questions, please call Abdallah Bendada at 608-267-9270.

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Division for Academic Excellence
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
Tony Evers, PhD, State Superintendent

Table of Contents

APPLICATION INSTRUCTIONS

For Institutions of Higher Education, School Districts, and Nonprofit Organizations Seeking A MATHEMATICS AND SCIENCE PARTNERSHIPS GRANT

I. Introduction/Background

In January of 2002, the No Child Left Behind Act of 2001 (NCLB) became law. The Improving Teacher Quality Grant Programs (Title II) are a major component of the No Child Left Behind legislation. These programs encourage scientifically based professional development as a means for improving student academic performance. As schools are responsible for improving student learning, it is essential to have highly qualified teachers leading the way.

Title II, Part B of NCLB authorizes the Mathematics and Science Partnerships (MSP) program. MSP 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. Additional partners may include other public school districts, public charter schools, businesses, and nonprofit or for-profit organizations concerned with mathematics and science education. Private schools are encouraged to participate in the program. Private schools within the boundaries of any high need Local Education Agency (LEA) may participate directly in the program through the local public school district. Other private schools may participate as a secondary partner with any high need LEA.

The State of Wisconsin has been allotted $2,098,642, and the Department of Public Instruction is responsible for the administration of this program. Funds available for the Mathematics and Science Partnership competitive grant program will be awarded by the Department of Public Instruction to support proposals submitted by eligible partnerships that provide programs to improve mathematics and science instruction.

II. Program Description

1. **Purpose:** The Mathematics and Science Partnership program is a formula grant program to states that supports improved student achievement in mathematics and science through enhanced training for mathematics and science teachers. The states are responsible for conducting a competitive grant program that makes awards to partnerships of high-need school districts and science, mathematics, and engineering departments within universities, giving districts and arts and science faculty joint responsibility for improving mathematics and science instruction.

MSP seeks ways to sustain intensive, high-quality professional development activities that focus on deepening teachers' content knowledge. It is also interested in increasing the knowledge of how students learn particular content, providing opportunities for engaging learning, and establishing coherence in teachers' professional development experiences.

B. Wisconsin Priority:

1. K-12 Science
2. K-12 STEM
3. K-12 Mathematics
4. K-12 Mathematics and Science (districts with less than 2,500 student population)

The analysis of student achievement data revealed that mathematics and science are areas in great need at all levels. Further data analysis showed that science needs are growing in a faster rate. Therefore, the MSP program will target the areas of science and STEM initiatives, then mathematics. Grants will be awarded each year for up to three years depending on funding from the U.S. Department of Education as follows:

- **Year 1: July 1, 2010 through August 31, 2011**
- **Year 2: September 1, 2011 through August 31, 2012**
- **Year 3: September 1, 2012 through August 31, 2013**

Each project will be required to incorporate summer institutes at least two weeks in length (80 hours) each year combined with additional contact hours of follow-up during the academic year.

Priority will be given to eligible High-Need LEAs that are:

- Districts with SIFI schools
- Districts with small student population that partner together to serve a minimum of 1,500 students

Teachers in private schools located in LEAs or school attendance areas participating in these partnerships, regardless of the entity that received the grant and whether or not the private school is a member of the partnership, must be offered equitable participation.

The program will support projects to:

- **Increase the subject matter knowledge and teaching skills of mathematics and science teachers at all levels.** Programs will bring together mathematics and science teachers with mathematicians, scientists, and engineers to expand teachers' subject matter knowledge of mathematics, science, and STEM. Activities will include summer institutes that directly relate to mathematics, science curricula, and STEM to enhance the ability of teachers to understand and use *Wisconsin's Model Academic Standards for Mathematics and Wisconsin Model Academic Standards for Science.*

- **Focus on professional development of mathematics and science teachers as a career-long process.** Programs will provide opportunities for advanced and ongoing professional development activities that improve teachers' subject matter knowledge and knowledge of how students learn particular content. Projects will also provide teachers

with the opportunity to work with experienced teachers and university faculty.

III. MSP Key Features

A. Partnerships: MSP projects are designed and implemented by partnerships that include K-12 administrators, faculty, and guidance counselors in participating K-12 schools, STEM faculty, and administrators in higher education organizations. Additional partners are encouraged and may include businesses, private schools, nonprofit organizations, and teacher training departments of an institution of higher education (IHE). These partners and other stakeholders engage in the effort at both the institutional and individual levels, and share goals, responsibilities, and accountability for the project. The primary partnerships must include a high need LEA and a mathematics, science, physics, chemistry, or engineering department at an IHE. The partnership must include at least 80% of participants from high need LEAs or at least 80% of the participating LEAs are high need LEAs. The fiscal agent can be the primary High need LEA or the primary IHE. All coursework must be approved by the IHE, and all credits must be awarded by the primary IHE. The teaching staff must be employed by the primary IHE. All participating teachers must be American citizens or hold permanent residency status.

Content-Based Professional Development: The project focuses professional development on the deep mathematics and science content teachers need to understand for effective instruction, assessment, and evaluation.

1. Needs Assessment: The project must address the results of a comprehensive assessment of the teacher quality and ctive - sional development needs with respect to the teaching and learning of mathematics and science of any schools and LEAs that comprise the eligible partnership.

2. Scientifically-Based Research (SBR): The activities to be carried out by the partnership must be based on a review of SBR. An explanation of how the activities expect to improve student academic achievement and strengthen the quality of mathematics and science instruction must be included.

3. Evaluation: Each partnership project shall develop an evaluation and accountability plan for activities of the project that include rigorous objectives that measure the impact of the activities. Measurable objectives to increase the number of mathematics, science, and STEM teachers who participate in content-based professional development activities must be included. Additionally, measurable objectives for improved student academic achievement are required. The partnership shall report annually to the US Department of Education Secretary and DPI regarding progress in meeting the objectives described in the evaluation and accountability plan.

4. Eligible High Need LEAs: To be eligible for a Mathematics and Science Partnership Grant, an applicant must demonstrate a need for improvement in student mathematics or science performance for which each school/district meets one of the enumerated requirements listed below. The demonstration of need must use recent data on student achievement and teacher qualification. Further, the proposal must demonstrate that the participating teachers serve a sufficient number of students exhibiting this need.

A high need LEA is any district where mathematics or science student proficiency scores do not exceed 65%, based on disaggregated 2008/09 WKCE scores, and where there is no currently active Title II, Part B grant, in the same content area at the time of application submission, and one of the following:

2. At least 10 percent of the student population is from families with income below the poverty line as identified by the Census 2008, or
3. Schools/districts having Rural Education Achievement Program (REAP) or meeting local codes of 6, 7, or 8, or
4. Not achieving AYP in mathematics based on 2008/09 data.
5. **Project Criteria:** Projects must also meet the following criteria:

- Projects must focus on mathematics, science, or STEM. An applicant may apply for more than one project; i.e., one application for science and another for mathematics.
- If participating schools are involved in a mathematics/science school reform initiative, the proposal must clearly articulate how this program will integrate with ongoing reform efforts.
- Projects employ the five components of SBR. See Definitions.
- Projects must have an active and well-defined partnership between STEM staff and schools/districts in all aspects of the grant including planning and delivery of professional development.

IV. Proposal Requirements

The proposal sections (excluding appendices) of the proposal must be double-spaced and the font used must be at least 12-point. Proposals must contain the following sections:

A. General Information: School District Partner Identification Form, Higher Education Partner Identification Form, Other Partners Identification Form, Statement of Assurances, and Eligibility. The cover page must be signed by official representatives from the IHE and the LEA. See definition for details.

B. 1- Abstract: All applicants must provide a summary that briefly describes the project vision, goals, activities, and key features that will be addressed and expected benefits of the work. The abstract may not exceed 1 page.

2- Prior Work: Repeat Applicants only: Partnerships or participating LEAs that have previously received MSP program funding must include an abstract of prior work. The abstract must describe the projects' intended goals, the amount of funding received by project year, the number of teachers it intended to serve (according to its formal proposal), the number of teachers it actually served, an explanation of how the budget was spent, qualitative and quantitative evidence of progress towards goals, a description of partnership roles, and an indication of how the proposed work differs from, builds on, or is otherwise informed by prior efforts. The abstract may not exceed 2 pages.

C. Program Narrative: The project narrative should contain the following elements and shall not exceed 20 pages:

Section 1: Needs Assessment

The project description should indicate a clear understanding of results of a needs assessment and how the goals and activities of the program are directly related to those needs. The following items are required to satisfy the needs assessment:

- Identify specific gaps or weaknesses in teacher and student mathematic and/or science knowledge and achievement to be addressed by the proposed MSP program.
- Provide convincing evidence that the LEA has a large population of students who have historically been under-represented and under-served.
- Include an analysis of objective data to establish a baseline that will guide the proposed program. (Attach relevant student achievement and LEA performance data.)

Section 2: Scientifically-Based Research (SBR)

The project description should discuss and cite the current state of knowledge to support the project. This brief literature review should clearly indicate why the proposed activities were selected or designed. If the proposal builds on prior work, the project description should indicate what was learned from this work and how these lessons learned are incorporated in the project. The following items are required to satisfy SBR:

- Provide a literature review that defines and supports the proposed activities selected or designed in this program.
- Provide references that employ sound research methods such as (a) experimental design, and (b) quasi-experimental design using demographic alignment of similar schools and/or districts and others.
- If the program builds on prior work, include a discussion about the lessons learned.

Section 3: Work Plan

A proposal must clearly describe the goals and objectives for the project. The project description should indicate a timeline and an estimate of the number, type, duration, and intensity of professional development activities and the responsibility of each of the partners. The professional development activities should develop the pedagogical content knowledge of teachers in the areas of mathematics and/or science that are a part of the state content standards. The following items are required to satisfy the work plan:

- Describe specific program activities to address the identified needs.
- Define the responsibilities of the partners. How will the partners account for all the goals and objectives?
- Include a timeline showing when activities will occur and their duration.
- Describe how the activities will increase the number of mathematics and/or science teachers who participate in content-based professional development activities.
- Explain how professional development activities of the program are aligned with the state Model Academic Standards for mathematics or science.
- Explain how professional development activities of the program are aligned with Chapter PI 34.
- **If any of the primary partners is currently participating in Wisconsin ESEA Title II Improving Teacher Quality Program in the respecting area, describe how the two programs supplement one another.**

Section 4: Commitment and Capacity of Partnership

The project description must clearly demonstrate that the submitting entity has the capability of managing the project, organizing the work, and meeting deadlines. The following items are required to satisfy the commitment and capacity partnership:

- Describe how the program team members will manage the program and meet the deadlines set forth in the proposal.
- Provide a brief description of the program team's process for meeting identified needs and deadlines.
- Provide a brief description of the program team's decision making process.
- Describe the role of each of the partners in a collaborative relationship.
- Explain how the partnership will function beyond the three year grant period.
- Provide a brief description of how the partnership selected/developed the MSP program activities, including the types of organizations involved in the process (e.g., STEM faculty, districts, and other potential partners).

Section 5: Evaluation Plan

Each application should provide a description, identify the research and evaluation methods that the project will use, and explain why those methods are appropriate to the issues or questions that the proposal addresses. All projects must have an external evaluator. DPI requires applicants to use at least quasi-experimental designs. The proposal must make a compelling case for the activities of the project and describe how the activities will help the MSP Program build a rigorous, cumulative, reproducible, and usable body of findings. The following items are required to satisfy the evaluation:

- Provide a description that links the external evaluation to the desired teacher and student outcomes.
- Describe a process evaluation plan that provides detailed information on participants that were served as well as service delivery methods to include scope, duration, and other indicators of implementation fidelity.
- Provide an evaluation plan based on an experimental or quasi-experimental design (see Definitions).
- Provide an evaluation plan that states measurable teacher and student objectives and annual targets which describe progress toward meeting the goals and established ctive-tives.
- Describe how the activities in the MSP will increase the number of mathematics and/or science teachers who participate in content-based professional development.
- Describe how the evaluation plan measures student academic achievement using student data assessment.

Section 6: Budget Justification

The budget must clearly be tied to the scope and requirements of the project. The budget narrative should describe the basis for determining the amounts shown on the project budget page.

All proposals should include provision for evaluation of the activities in budget. The following items are required to satisfy the budget justification:

- Provide details for each budget category.

- Describe how other available funds will be used to help support this program.
- Include the budget summary.

Appendix: While reviewers are only expected to read and score the 20-page narrative, the Appendix, which is not counted as part of the 20-page limit, **may** include the following:

- Letters of commitment from the partners;
- Resumes of key faculty and staff; (each resume cannot be over 2 pages);
- Elaboration of data (e.g., charts, tables, graphs, etc.) used to establish need, or elaboration of research or evidence base used to design this program;
- Evidence of impact from prior professional development efforts; and/or

Proposal Submission and Review

6. **Submission**: Applicants must submit the full proposal to the Wisconsin Department of Public Instruction. The signature pages must include the original signatures of all partners. Fax and e-mail transmissions are not acceptable. To be considered for funding, proposals must be submitted electronically to the department by 4:30 pm on May, 14 2010. Incomplete applications will not be considered. Applications must not exceed 10 MB. Proposals must be submitted electronically at: **http://dpi.wi.gov/cal/t2bgrant.html .**

B. Review Process: Proposals will be reviewed for completeness and compliance with the requirements set forth by DPI to determine applicant eligibility. If the proposal is late, incomplete, or an applicant cannot establish its eligibility, the proposal will be eliminated from the competition. The decision of the department is final. Applicants submitting proposals that are eliminated 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 department. Consideration is 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 total cost of the program; and geographic distribution.

Following the review, the department staff will contact selected project directors to discuss any modifications of the project plan that may be required. To maximize the effects of limited funds, applicants whose grants are recommended may be requested to revise the project budget and/or scope of work.

Award Administration

7. **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 2009-2010 competition, approximately $2,098,642 is available for Mathematics and Science Partnership awards. The department will fund a minimum of three projects; however, as many as ten may be awarded.

8. **Reporting Requirements:** Each eligible partnership receiving a grant must report annually to the Department of Public Instruction by submitting the ANNUAL PERFORMANCE REPORTING. Further information regarding reporting requirements and forms are available on the MSP website at http://www.dpi.wi.gov/cal/t2bgrant.html.

D. Participation in State and National Conferences: The coordinators and evaluators of the grant recipients are required to attend the Fall MSP meeting, the Annual MSP Conference, and one USDE Regional MSP Conference annually.

Definitions

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

A. **Highly Qualified Teacher**: A highly qualified teacher meets all of the requirements of PI 34 for the subjects and levels that he/she is teaching. The requirements include, but are not limited to, a bachelor's degree, completion of an approved licensing program, and a rigorous exam in the subjects being taught. In addition, a highly qualified teacher may be a teacher of record who is enrolled in a state-approved alternative teacher-training program.

B. **Professional Development**: The term "professional development" means instructional activities that:

1. Are based on SBR 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; and
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. **Experimental Design:** The term experimental design is a research method using the power of statistics to measure the growth of a given variable or treatment of a group compared to a baseline group. The group in an experiment which receives the specified treatment is called the ***Treatment Group*** or the experimental group. However, the term ***Control Group*** refers to another group assigned to the experiment, but not for the purpose of being exposed to the treatment. Thus, the performance of the control group usually serves as a baseline against which to measure the effect of the full treatment on the treatment group. All members of each group should be selected randomly.

D. **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 ctiveties 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; and
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.

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 at least two weeks or 80 contact hours;
2. Includes, as a component, a program that provides direct interaction between teacher participants and faculty; and
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.

F. Partnership: Partnership means an agreement between two or more high need local educational agencies and the science, technology, engineering, or mathematics departments of the higher education institutes that have agreed to work together in the pursuit of common goals in an attempt to improve K-12 instructional quality and student performance in relative isolation from each other. It is expected that each partner normally contributes resources, exchange ideas, and assumes responsibility.

Conditions for success

- Create relationships between institutes not between individuals only
- Create a bond of trust and demonstrate openness
- Work as a team, for consensus and consultation
- Respect the organizational mission of each partner
- Respect the expectations and limits of each partner
- Share power, risks and responsibilities
- Invest jointly in resources
- Encourage commitment and permanency from the stakeholders
- Evaluate the impact of the project on each partner regularly

G. Other Partners: This may include educational organizations, nonprofit organizations, for profit organizations, education departments, science education and mathematics education departments. It is expected that all partnerships will contribute to the project by direct involvement, or by providing funds, resources, or services.

H. Official Representatives: The official LEA representative is the superintendent/ designee.

The official IHE representative includes any of the following:

- President/Vice President
- Chancellor/ Vice Chancellor
- Prevost
- Research Office
- Grant Office
- Sponsor Office

I. Assurances: The partnership assures that:

1) the partners will comply with all assurances associated with the ESEA and EDGAR provisions;
2) The partners will follow the protection of human subjects (IRBs), and FERPA policies; and
3) the partners will contact private schools within the partnership geographic area to give the opportunity to participate in the program.

Allowable Expenditures

The MSP program funds must be spent **exclusively** on costs associated with providing high quality, content-specific professional learning opportunities to mathematics and/or science teachers of grades K-12. In general, it is expected that MSP partnerships will spend approximately $35 per teacher per contact hour on the total cost of their MSP program work i.e. about $3500 per program participant per year. The following table provides further specificity to allowable expenses:

Category	Guidelines
Teacher Stipends	The approved rate per 8-hour day during off-contract time; teacher fringe benefits may be covered by MSP grant funds. All teachers must be US citizens or hold a permanent residency in the US.
Substitutes	The approved rate per day when MSP training sessions take place during teacher contract time.
Project Management Team Salaries	Not to exceed 10% of the project director's salary and 5% of the site coordinators' salaries. The salary of the program coordinators, project director, and site coordinators should not exceed 10% of the grant amount and must be covered by the Administration section.
Fiscal Agent	The administration and the management of the grant is the responsibility of the Fiscal Agent. Fiscal Agents are not allowed to subcontract any duties to a third party.
Subcontracts	Are not allowed under the program.
Indirect Costs	Not to exceed 10% of the total award
Consultants	Not to exceed $500 per day. The total funds for consultants not to exceed 5% of the grant amount.
Higher Education Faculty	Regular salary per hour of contact time. No additional money for preparation is allowed
Evaluator	At least 10% of total project budget must be spent on a formal project evaluator.
Travel	Reimburse mileage, meals, and lodging according to state/system guidelines for project-related travel.
Carryover	Carryover from one year to another is not allowed under the program. All funds must be expended by the end of each year.
Meeting Events	Reimburse travel expenses for management team participation in ED and DPI-hosted MSP events according to state/system guidelines.
Materials and Supplies	Funds may be spent on materials and supplies to facilitate professional learning of teachers, not on classroom instructional materials.

Additionally, MSP program funds **cannot** be spent on equipment (e.g., smart boards, computers, printers, camcorders, etc.), capital improvements, facility rentals, full salaries of administrative or clerical personnel, and tuition charges and/or university fees (already covered in higher education partner's salaries and fringe).

Scoring Rubric
for MSP Abstract and Prior Work

A. Are all signatures provided and all forms complete and signed by the official authorized personnel only.

B. **1 Abstract:** Does the abstract clearly describe the vision, goals, activities, and key features? Are the goals and activities aligned with the vision? Is the Summary Table complete? Does it provide enough details about the progress towards meeting the goals?

Weak	Average	Strong
The vision is not clear, or the proposal does not discuss the vision.	The vision was discussed; however, it is not aligned with needs of the project.	The vision is very clear and is fully aligned with the needs of the project.
The goals were not discussed, are not measurable or are not aligned with the vision of the project.	The goals are stated and discussed, however, they are not fully aligned with the vision of the project.	The goals were discussed very well and are fully aligned with the vision.
The activities are not clear or are not aligned with the goals.	The activities were discussed, however, they did not address all goals.	The activities were fully discussed and addressed all goals very well.
The key features are not discussed or are not aligned with the vision.	The key features were discussed, however, they were not fully aligned with the vision of the project.	The key features were discussed very well and are fully aligned with the vision and the activities.
The Summary Table is not clear or the components are not aligned with one another (i.e. the goals, activities, and indicators).	The Summary Table is complete, however, components lack enough information to ensure alignment.	The Summary Table is complete and all components were fully discussed and are fully aligned with one another.

B. **2 Prior Work:** Does proposal clearly describe the goals and objectives of its funded project? Does it delineate how the project budget was spent during each year of funding? Does it include the number of teachers it intended to serve (as evidenced in the funded proposal) as well as the number it actually served? Does it effectively describe progress towards goals through a thorough description of the work that was performed and evaluated? Is compelling justification provided to explain any unintended results or challenging situations faced by the partnership?

Weak	Average	Strong
Evidence that prior project worked with significantly fewer teachers than intended; **or** Lacks evidence that prior project worked with intended number of teachers as stated in its funded proposal.	Evidence that prior project worked with as many or nearly as many teachers as it originally intended; **or** Provides acceptable explanation of why project did not work with intended number of teachers.	Strong evidence that prior project worked with more teachers than intended according to its funded proposal.
Lacks evidence that prior project spent its allotted budget effectively and appropriately.	Evidence that prior project used the majority of its allotted budget; Evidence that budget was spent appropriately on teacher needs.	Evidence that prior project used most or all of its allotted budget; Evidence that budget was spent effectively and appropriately to meet teacher needs.
Lacks evidence that prior project work resulted in gains in teacher content knowledge.	Quantitative and qualitative evidence that prior project work resulted in gains in teacher content knowledge.	Reliable quantitative **and** qualitative evidence that prior project work resulted in substantial gains in teacher content knowledge.
Lacks evidence that prior project met goals and objectives; **or** Lacks narrative evidence justifying why prior project did not meet its intended goals and objectives.	Clear evidence that prior project completed proposed work and met goals and objectives; **or** Provides acceptable justification of why prior project was not able to meet goals	Compelling quantitative **and** qualitative evidence that prior project completed proposed work and met goals and objectives.

	and objectives.	
Lacks narrative explanation of how prior project intends to use new funding to inform or build upon previous successes and lessons learned.	Acceptable description of how prior project generally intends to use new funding to inform or build upon previous successes and lessons learned.	Clear and compelling description of how prior project intends to use new funding to inform or build upon previous successes and lessons learned.

C.1 Needs Assessment: The needs assessment should indicate a clear statement of needs derived from a comprehensive needs assessment and how the goals and objectives of the program are directly related to those needs.

Weak	Average	Strong
The needs assessment: • did not identify gaps or weaknesses addressed by the program. • provides no evidence the LEA has a large population of students who have historically been under-represented using WINSS and WKCE. • provides little or no baseline data and analysis using local assessment, WKCE, and WINSS to guide the program. • goals and objectives are not measurable and do not address identified needs. • provides no information how the partnership selected the program developed.	**The needs assessment:** • identifies some gaps or weaknesses addressed by the program. • provides some evidence the LEA has a large population of students who have historically been under-represented using WINSS and WKCE. • provides some baseline data and analysis using local assessment, WKCE, and WINSS to guide the program. • goals and objectives are measurable and address some identified needs. • provides some information on how the partnership selected the program developed.	**The needs assessment:** • identifies very specific gaps or weaknesses addressed by the program. • provides clear and convincing evidence the LEA has a large population of students who have historically been under-represented using WINSS and WKCE. • provides clear quantitative baseline data and analysis using local assessment, WKCE, and WINSS to guide the program. • goals and objectives are specific and measurable and address each need identified. • provides clear information how the partnership selected the program developed.

C.2 Scientifically-Based Research: The literature review should discuss and cite the current state of knowledge relevant to the program. This brief literature review should clearly indicate why the proposed activities were selected or designed. If the proposal builds on prior work, lessons learned are described and how these lessons are incorporated in the program is included.

Weak	Average	Strong
The literature reviewed: • does not support the program. • vaguely states lessons learned from prior work. • does not provide references that employ sound research methods. • does not cite research from peer reviewed journals.	**The literature reviewed:** • supports some of the proposed activities selected or designed in the program. • states some lessons learned from prior work. • provides references that employ some sound research methods. • cites some accepted research sources from peer reviewed journals.	**The literature reviewed:** • clearly defines and supports the proposed activities selected or designed in the program. • supports and clearly states lessons learned on prior work. • provides references that employ sound research methods. • cites accepted research sources from peer reviewed journals.

C.3 Work Plan: A proposal must clearly describe the program activities based on the measurable goals, objectives, and the responsibility of each of the partners. The program description should indicate a timeline and an estimated number, type, duration, and intensity of professional development activities. The plan should describe the integration of all federal, state, and local programs into the current project.

Weak	Average	Strong
The work plan: • does not describe specific program activities that link the goals and objectives stated in the program or the data provided by the needs assessment. • the responsibilities of the partners are not defined and they account for few goals and objectives. • does not define the timelines for the program. • does not describe how activities will increase the number of teachers who participate in the professional development. • does not explain how professional development activities are linked with state content standards. • does not explain how professional development activities are linked with teacher standards. • does not explain how professional development activities aligned with PI 34.02 1-10. • **has other grants such as Wisconsin ESEA Title II Improving Teacher Quality Program in the respective area, but fails to make describe the connection**	**The work plan:** • provides some program activities that link the goals and objectives stated in the program and the data provided by the needs assessment. • describes some responsibilities of the partners and accounts for how some of the goals and objectives in the program will be met. • provides general timelines as to when activities will occur. • describes how the activities will increase the number of teachers who will participate in the professional development. • links the professional development activities with state content standards. • links professional development activities with teacher standards. • links professional development activities with PI 34.02 1-10. • **has other grants such as Wisconsin ESEA Title II Improving Teacher Quality Program in the respective area and eludes to the project without details**	**The work plan:** • provides specific and clear program activities that link the goals and objectives stated in the program and the data provided by the needs assessment. • clearly defines the responsibilities of partners and fully accounts for how all the goals and objectives in the program will be met. • provides definitive timelines as to when activities will occur and their duration. • clearly describes how the activities will increase the number of teachers who will participate in professional development. • clearly aligns professional development activities with state content standards. • clearly aligns professional development activities with teacher standards. • clearly aligns professional development activities with PI 34.02 1-10. • **has other grants such as Wisconsin ESEA Title II Improving Teacher Quality Program in the respective area and describes the connection.**

C.4 Commitment and Capacity of Partnership: The program description must clearly demonstrate the submitting partnership has the capability of managing the program, organizing the work, and meeting deadlines.

Weak	Average	Strong
The partnership: • does not provide information about how the program will be managed. • does not describe a process for meeting critical needs and/or deadlines. • does not describe an explanation for making decisions. • does not describe roles for each partner in the program. • does not explain how the partnership will continue beyond the three year grant.	**The partnership:** • demonstrates the ability to manage the program. • describes a general process for meeting critical needs and deadlines. • describes a general explanation for making decisions. • describes roles for each partner in the program. • explains in general terms how the partnership will continue beyond the three year grant.	**The partnership:** • provides a management plan outlining the ability to manage the program. • outlines a clear process for meeting identified needs and deadlines. • describes a clear process for making decisions. • describes specific and definitive roles for each partner in the program. • provides a projected plan and timeline for how the program will continue beyond the three year grant funding.

C.5 Evaluation Plan: Each application should identify process and outcome research and evaluation methods that the program will use and explain why those methods are appropriate to the identified needs the proposal addresses. A proposal must make a compelling case for the activities of the program and describe how the activities will help the MSP program build a rigorous, cumulative, reproducible, and usable body of findings. The project must have an external evaluator with strong statistical background and experience conducting research-based evaluations.

Weak	Average	Strong
The evaluation plan: • is not based on the use of scientific methods or comparison groups. • has no measurable objectives or annual targets which describe progress towards meeting the goals and objectives established in response to the identified needs. • does not measure activities and the number and characteristics of teachers participating in professional development. • does not measure student academic achievement or compare with baseline data. • does not have an external evaluator or the external evaluator does not the statistical background necessary to conduct research-based evaluation.	**The evaluation plan:** • is based on the use of a comparison group of students, schools, or districts utilizing experimental or quasi-experimental design. Description of comparison group(s) is vague or incomplete. • has some measurable objectives and targets which may indicate progress towards meeting the goals and objectives in response to the identified needs. • measures some of the activities and the number and characteristics of teachers participating in professional development. • measures student academic achievement on WKCE in mathematics and/or science assessments compared to baseline data. • has an external evaluator, however, the evaluator does not the experience	**The evaluation plan:** • provides an evaluation plan based on an experimental or quasi-experimental design. Description of comparison group(s) construction is thorough and clear. • has clear measurable objectives and annual targets which describe progress toward meeting the goals and objectives in response to the identified needs. • clearly measures all activities and the number and characteristics of teachers participating in professional development. • clearly measures the student academic achievement on local assessment, WKCE, and other mathematics and/or science assessments compared to baseline data. • has an external evaluator whose statistical background and experience

	necessary to conduct research-based evaluation.	conducting research-based evaluation are very strong

C.6 Budget Justification: The budget must clearly be tied to the scope and requirements of the project. The budget narrative should describe the basis for determining the amounts shown on the project budget page.

Weak	Average	Strong
• Budget justification is not provided or does not provide enough detail to justify expenditures. • Descriptions are not provided for all budget categories. • The budget and budget justification are not directly tied to the work plan outlined in Part C. • Does not indicate whether additional funds will be used to help support this program.	• Provides adequate justification that the costs of the program are reasonable and meet the program needs. • Descriptions are provided for all budget categories. • The budget and budget justification are directly tied to the work plan outlined. • Includes a description of how other available resources will be used to support the program.	• Provides strong justification that costs of the program are reasonable and clearly shows that the budget is sufficient to meet the program needs. • Detailed descriptions are provided for all budget categories. • The budget and budget justification are directly tied to the work plan and clearly shows how all aspects of the work plan will be supported. • Includes a specific description about how all available resources will be leveraged to coordinate services to support and sustain the program.

ESEA, Title II, Part B
Mathematics and Science Partnership Grant
FY 2010
High Need LEAs

Science

ADAMS FRIEND	CLAYTON	MADISON	SIREN
ALMA CENTER	COLBY	MANITOWOC	TIGERTON
ALMOND BANCR	COLEMAN	MARION	TOMAH
ANTIGO	CRANDON	MENASHA	UNITY
ARGYLE	DELAVNDARIEN	MENOMINEE INDIAN	VALDERS
AUBURNDALE	DENMARK	MENOMONIE AREA	WABENO
AUGUSTA	GOODMAN ARMSTRONG	MISHICOT	WASHBURN
BARRON	GRANTON	NECEDAH	WAUSAU
BAYFIELD	GRANTSBURG	NEW LISBON	WAUTOMA
BEAVER DAM	GREEN BAY	NEW LONDON	WEST ALLIS
BEECHERDUNBA	HAYWARD	NORRIS	WESTFIELD
BELOIT	INDEPENDENCE	OCONTO FALLS	WEYERHAEUSER
BIRCHWOOD	JANESVILLE	PARKVIEW	WHITE LAKE
BLACK HAWK	KENOSHA	RACINE	WI DELLS
BLAIR TAYLOR	LA CROSSE	RIVERDALE	WI RAPIDS
BOSCOBEL	LAC DU FLAMB	SHARON J11	WONEWOCUNION
CHIPPEWA FALLS	LAKE HOLCOMB	SHEBOYGAN	

Mathematics

ADAMS FRIEND	FLORENCE	MARION	SHEBOYGAN
ALMA CENTER	GOODMAN ARMSTRONG	MEDFORD	SHULLSBURG
ANTIGO	GRANTON	NECEDAH	SIREN
BEAVER DAM	HAYWARD	NEW LISBON	THORP
BELOIT	HIGHLAND	NORRIS	TOMAH
BRUCE	INDEPENDENCE	NORTHLAND PI	UNITY
CAMERON	JANESVILLE	OCONTO	VALDERS
CAMPBELLSPT	KENOSHA	OCONTO FALLS	WAUSAU
COLBY	LA CROSSE	OSSEO FAIRCH	WAUTOMA
COLEMAN	LAONA	PRENTICE	WEST ALLIS
CUMBERLAND	LENA	RACINE	WESTFIELD
DENMARK	MADISON	RHINELANDER	WHITE LAKE
ELCHO	MANITOWOC	RIVERDALE	WI RAPIDS

Wisconsin Department of Public Instruction
MATHEMATICS AND SCIENCE PROGRAM PARTNERSHIPS APPLICATION / NEW
PI-9550-IIB-New (Rev. 01-10)

Collection of this information is a requirement of ESEA 2001, NCLB Education Act, Title II, Part B—Mathematics and Science Partnerships Program

Refer to detailed instructions and information contained in the handbook.

INSTRUCTIONS: Applicants must submit the full proposal to the Wisconsin Department of Public Instruction (DPI) electronically by **4:30 pm on May 14, 2010,** at: http://www.dpi.wi.gov/tepdl/t2bgrant.html

The signature pages must include the original signatures of all partners and must be delivered to DPI by **4:30 on May 14, 2010,** via US mail to

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
DIVISION FOR ACADEMIC EXCELLENCE
ATTN: Roselynn Bittorf
PO BOX 7841
MADISON, WI 53707-7841

Fax and e-mail transmissions are not acceptable. Application must not exceed 10 MB. For Assistance contact: Roselynn Bittorf, email: roselynn.bittorf@dpi.wi.gov or by telephone:608-267-9279.

GENERAL INFORMATION

Institute of Higher Education (IHE)	Local Educational Agency (LEA)
Name	Name
Address	Address
Contact Person	Contact Person
Telephone *Area/No.*	Telephone *Area/No.*
Email	Email

Principle Investigator

Mailing Address

Total Funds Requested	Number of Teachers	Indicate Fiscal Agency (must be IHE or LEA)

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 signatures below certify to the Department of Public Instruction that the authorized official will:

1. Partners will follow the protection of human subject Institutional Review Boards (IRBs), and Family Educational Rights and Privacy Act (FERPA) policies; and
2. Partners will contact private schools within the partnership geographic area to give the opportunity to participate in the program.
3. Upon request, provide the Department of Public Instruction with access to records and other sources of information that may be necessary to determine compliance with appropriate federal and state laws and regulations;
4. 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. Elementary and Secondary Schools Act (No Child Left Behind Act of 2001)
5. Use grant funds to supplement and not supplant funds from nonfederal sources.
6. The focus of the program is on teachers who work with children of color and teachers who work with economically disadvantaged children.
7. Submit, in accordance with stated guidelines and deadlines, all program and evaluation reports required by the U.S. Department of Education and the Department of Public Instruction.

SIGNATURES

WE HEREBY CERTIFY that to the best of our knowledge the information in this application is correct, that the filing of this application is duly authorized by the governing body of the organizations and institutions, and that the applicants will comply with the statement of assurances.

Name of Authorized School District Official	Signature of School District Official ➢	Date Signed
Name of Authorized Higher Education Institution Official	Signature of Authorized Higher Education Institution Official ➢	Date Signed

PARTNER IDENTIFICATION

Other Partners *Attach additional sheet(s) as necessary.*

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*	
E-Mail	Signature ➢		Date Signed

PARTNER IDENTIFICATION

Other Partners *Attach additional sheet(s) as necessary.*

Partner		
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E-Mail	Signature ➢	Date Signed

Partner		
Administrator	Title	
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*
E-Mail	Signature ➢	Date Signed

Partner		
Administrator	Title	
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*
E-Mail	Signature ➢	Date Signed

Partner		
Administrator	Title	
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*
E-Mail	Signature ➢	Date Signed

Partner		
Administrator	Title	
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*
E-Mail	Signature ➢	Date Signed

Partner		
Administrator	Title	
Address *Street, City, State, ZIP*	Telephone *Area/No.*	Fax *Area/No.*
E-Mail	Signature ➢	Date Signed

ABSTRACT

Briefly describe the project vision, goals, activities, and key features that will be addressed and expected benefits of the work. Limit response to the space provided below.

PROJECT GOALS

Directions: Identify project goals, activities, and indicators. Tab from the last cell of the table to add additional rows.

Goal	Activity	Indicator(s)

NARRATIVE

1. **Needs Assessment** The project description should indicate a clear understanding of results of a needs assessment and how the goals and activities of the program are directly related to those needs.

2. **Scientifically Based Research** The project description should discuss and cite the current state of knowledge to support the project. This brief literature review should clearly indicate why the proposed activities were selected or designed. If the proposal builds on prior work, the project description should indicate what was learned from this work and how these lessons learned are incorporated in the project.

3. **Plan of Work** The proposal must clearly describe the goals and objectives for the project and the responsibility of each of the partners. The project description should indicate a timeline and an estimate of the number, type, duration, and intensity of professional development activities.

4. **Commitment and Capacity of Partnership** The project description must clearly demonstrate that the submitting entity has the capability of managing the project, organizing the work, and meeting deadlines.

5. **Evaluation of MSP Program** Each application should provide a description, identify the research and evaluation methods that the project will use, and explain why those methods are appropriate to the issues or questions that the proposal addresses. DPI encourages applicants to use experimental or quasi-experimental designs. The proposal must make a compelling case for the activities of the project and describe how the activities will help the MSP Program build a rigorous, cumulative, reproducible, and usable body of findings.

6. **Budget Justification** The budget must clearly be tied to the scope and requirements of the project. The budget narrative should describe the basis for determining the amounts shown on the project budget page. All proposals should include provision for evaluation of the activities in an annual performance report.

BUDGET SUMMARY

Fiscal Agent	Grant Period Beg. Date *Mo./Day/Yr.*	Date Submitted: Initial Request	First Revision	Second Revision
Project Number ***For DPI Use Only***	End Date *Mo./Day/Yr.*			

WUFAR Function	WUFAR Object	Year 1	Year 2	Year 3
Instruction (100 000 Series) Activities dealing directly with the interaction between Higher Education faculty and K-12 staff.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Instruction	$0	$0	$0
Support Services—Pupil and Instructional Staff Services (in 210 000 and 220 000 Series) Support services are those which facilitate and enhance instructional or other components of the grant. This category includes staff development, supervision, and coordination of grant activities.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Pupil/Instructional Staff Services	$0	$0	$0
Support Services—Administration (Associated with functions in 230 000 series and above.) Includes general; building; business; central service administration, and insurances.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Insurance (700s)			
	g. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Admin.	$0	$0	$0
	SUBTOTAL	$0	$0	$0
Approved Percentage Rate Maximum 8% of subtotal costs	**INDIRECT COSTS**			
	TOTAL BUDGET	$0	$0	$0

DPI Approval DPI Reviewer Signature/Date ➢

ATTACHMENTS

This space is intended for attaching resumes, appendices and additional information.

Wisconsin Department of Public Instruction

MATHEMATICS AND SCIENCE PROGRAM PARTNERSHIPS APPLICATION / REQUEST FOR PROPOSAL—RENEWAL

PI-9550-IIB-Renewal (Rev. 01-10)

Collection of this information is a requirement of ESEA 2001, NCLB Education Act, Title II, Part B—Mathematics and Science Partnerships Program

Refer to detailed instructions and information contained in handbook.

INSTRUCTIONS: Applicants must submit the full proposal to the Wisconsin Department of Public Instruction (DPI) electronically by **4:30 pm on May 14, 2010,** at: http://www.dpi.wi.gov/tepdl/t2bgrant.html

The signature pages must include the original signatures of the primary partners and must be delivered to DPI by **4:30 on May 14, 2010,** via US mail to

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
DIVISION FOR ACADEMIC EXCELLENCE
ATTN: Roselynn Bittorf
PO BOX 7841
MADISON, WI 53707-7841

Fax and e-mail transmissions are not acceptable. Application must not exceed 10 MB. For Assistance contact: Roselynn Bittorf, email: roselynn.bittorf@dpi.wi.gov or by telephone:608-267-9279.

GENERAL INFORMATION

Institute of Higher Education (IHE)	Local Educational Agency (LEA)
Name	Name
Address	Address
Contact Person	Contact Person
Telephone *Area/No.*	Telephone *Area/No.*
Email	Email

Principle Investigator

Mailing Address

Total Funds Requested	Number of Teachers	Indicate Fiscal Agency (must be IHE or LEA)

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 signatures below certify to the Department of Public Instruction that the authorized official will:

1. Partners will follow the protection of human subject Institutional Review Boards (IRBs), and Family Educational Rights and Privacy Act (FERPA) policies; and;
2. Partners will contact private schools within the partnership geographic area to give the opportunity to participate in the program;
3. Upon request, provide the Department of Public Instruction with access to records and other sources of information that may be necessary to determine compliance with appropriate federal and state laws and regulations;
4. 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. Elementary and Secondary Schools Act (No Child Left Behind Act of 2001)
5. Use grant funds to supplement and not supplant funds from nonfederal sources.
6. The focus of the program is on teachers who work with children of color and teachers who work with economically disadvantaged.
7. Submit, in accordance with stated guidelines and deadlines, all program and evaluation reports required by the U.S. Department of Education and the Department of Public Instruction.

SIGNATURES

WE HEREBY CERTIFY that to the best of our knowledge the information in this application is correct, that the filing of this application is duly authorized by the governing body of the organizations and institutions, and that the applicants will comply with the statement of assurances.

Name of Authorized School District Official	Signature of School District Official ➢	Date Signed
Name of Authorized Higher Education Institution Official	Signature of Authorized Higher Education Institution Official ➢	Date Signed

PARTNER IDENTIFICATION

Other Partners *Attach additional sheet(s) as necessary.*

Partner			
Administrator	Title		
Address Street, City, State, ZIP	Telephone *Area/No.*	Fax Area/No.	
E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address Street, City, State, ZIP	Telephone *Area/No.*	Fax Area/No.	
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Partner			
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E-Mail	Signature ➢		Date Signed

Partner			
Administrator	Title		
Address Street, City, State, ZIP	Telephone *Area/No.*	Fax Area/No.	
E-Mail	Signature ➢		Date Signed

PROJECT GOALS

Directions: Identify project goals, activities, and indicators. Tab from the last cell of the table to add additional rows.

Goal	Activity	Indicator(s)

RENEWAL APPLICANT ABSTRACT

Describe the goals and objectives of the funded proposal. Delineate how the project budget was spent during the first year of funding. Include the number of teachers it intended to serve (as evidenced in the funded proposal) as well as the number it actually served. Describe the progress towards goals through a thorough description of the work that was performed and evaluated. (Limit narrative to this page.)

PARTICIPANT

List all participants involved. Tab from within the last cell to add additional rows.

Name of Participant	District	Grade Assignment

EVALUATION

Describe the evaluation design, the assessment instruments, and provide timelines.

a. Evaluation Design

b. Assessment Instrument
   1. Teachers:
   2. Students:

c. Timelines

Teachers		Students	
Pretest	Post-Test	Pretest	Post-Test

BUDGET SUMMARY

Fiscal Agent	Grant Period Beg.	Date Submitted: Initial Request	First Revision	Second Revision
Project Number *For DPI Use Only*	End			

WUFAR Function	WUFAR Object	Year 3	Revision 1	Revision 2
Instruction (100 000 Series) Activities dealing directly with the interaction between Higher Education faculty and K-12 staff.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Instruction	$0		
Support Services—Pupil and Instructional Staff Services (in 210 000 and 220 000 Series) Support services are those which facilitate and enhance instructional or other components of the grant. This category includes staff development, supervision, and coordination of grant activities.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Pupil/Instructional Staff Services	$0		
Support Services—Administration (Associated with functions in 230 000 series and above.) Includes general; building; business; central service administration, and insurances.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Insurance (700s)			
	g. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Admin.	$0		
Indirect Cost	Approved Rate % *Maximum 8% of subtotal costs*			
TOTAL BUDGET		$0		

DPI Approval DPI Reviewer Signature/Date ➢

BUDGET SUMMARY (cont'd.)

Fiscal Agent

PART B—BUDGET DETAIL

Purchased Service Object

Item Name	Date(s) Service to be Provided	Unit Cost	Quantity	Total Cost	Function Code
				$0.00	
				$0.00	
				$0.00	
				$0.00	
				$0.00	
				$0.00	
				$0.00	
				$0.00	
			Total ➢	$0.00	

Capital Object

Item Name	Unit Cost	Quantity	Total Cost	Function Code
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
		Total ➢	$0.00	

Non-Capital Object

Item Name	Unit Cost	Quantity	Total Cost	Function Code
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
			$0.00	
		Total ➢	$0.00	

BUDGET SUMMARY (cont'd.)

Fiscal Agent

Part B—Budget Detail (cont'd.)

Personnel Summary Object—Salary

List all personnel of the fiscal agent to be paid from MSP Funds. If a vacancy exists which will be filled indicate "Vacant."

Name	Position Title	FTE	Date(s) Service to be Provided	Total Cost	Function Code
			Total ➢	$0	

BUDGET SUMMARY (cont'd.)

Fiscal Agent

Part B—Budget Detail (cont'd.)

Personnel Summary Object—Fringe

List all personnel of the fiscal agent to be paid from MSP Funds. If a vacancy exists which will be filled indicate "Vacant."

Name	Position Title	FTE	Date(s) Service to be Provided	Total Cost	Function Code
			Total ➢	$0	

ATTACHMENTS

Add any pertinent attachments here.

Wisconsin Department of Public Instruction
MATHEMATICS AND SCIENCE PROGRAM PARTNERSHIPS APPLICATION / REPEAT
PI-9550-IIB-Repeat (Rev. 01-10)

Collection of this information is a requirement of ESEA 2001, NCLB Education Act, Title II, Part B—Mathematics and Science Partnerships Program

Refer to detailed instructions and information contained in the handbook.

INSTRUCTIONS: Applicants must submit the full proposal to the Wisconsin Department of Public Instruction (DPI) electronically by **4:30 pm on May 14, 2010,** at: http://www.dpi.wi.gov/tepdl/t2bgrant.html

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WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
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ATTN: Roselynn Bittorf
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1. Partners will follow the protection of human subject Institutional Review Boards (IRBs), and Family Educational Rights and Privacy Act (FERPA) policies; and
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Name of Authorized Higher Education Institution Official	Signature of Authorized Higher Education Institution Official ➢	Date Signed

PARTNER IDENTIFICATION

Other Partners *Attach additional sheet(s) as necessary.*

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E-Mail	Signature ➢		Date Signed

PARTNER IDENTIFICATION (cont'd.)

Other Partners *Attach additional sheet(s) as necessary.*

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Administrator	Title		
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E-Mail	Signature ➢		Date Signed

PROJECT GOALS

Directions: Identify project goals, activities, and indicators. Tab from the last cell of the table to add additional rows.

Goal	Activity	Indicator(s)

REPEAT APPLICANT SUMMARY

Describe the goals and objectives of the funded proposal. Delineate how the project budget was spent during each year of funding. Include the number of teachers it intended to serve (as evidenced in the funded proposal) as well as the number it actually served. Describe the progress towards goals through a thorough description of the work that was performed and evaluated. **Limit response to two pages.**

ABSTRACT

Briefly describe the project vision, goals, activities, and key features that will be addressed and expected benefits of the work. Limit response to the space provided below.

NARRATIVE

1. **Needs Assessment** The project description should indicate a clear understanding of results of a needs assessment and how the goals and activities of the program are directly related to those needs.

2. **Scientifically Based Research** The project description should discuss and cite the current state of knowledge to support the project. This brief literature review should clearly indicate why the proposed activities were selected or designed. If the proposal builds on prior work, the project description should indicate what was learned from this work and how these lessons learned are incorporated in the project.

3. **Plan of Work** The proposal must clearly describe the goals and objectives for the project and the responsibility of each of the partners. The project description should indicate a timeline and an estimate of the number, type, duration, and intensity of professional development activities.

4. **Commitment and Capacity of Partnership** The project description must clearly demonstrate that the submitting entity has the capability of managing the project, organizing the work, and meeting deadlines.

5. **Evaluation of MSP Program** Each application should provide a description, identify the research and evaluation methods that the project will use, and explain why those methods are appropriate to the issues or questions that the proposal addresses. DPI encourages applicants to use experimental or quasi-experimental designs. The proposal must make a compelling case for the activities of the project and describe how the activities will help the MSP Program build a rigorous, cumulative, reproducible, and usable body of findings.

6. **Budget Justification** The budget must clearly be tied to the scope and requirements of the project. The budget narrative should describe the basis for determining the amounts shown on the project budget page. All proposals should include provision for evaluation of the activities in an annual performance report.

BUDGET SUMMARY

Fiscal Agent	Grant Period Beg. Date *Mo./Day/Yr.*	Date Submitted: Initial Request	First Revision	Second Revision
Project Number ***For DPI Use Only***	End Date *Mo./Day/Yr.*			

WUFAR Function	WUFAR Object	Year 1	Year 2	Year 3
Instruction (100 000 Series) Activities dealing directly with the interaction between Higher Education faculty and K-12 staff.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Instruction	**$0**	**$0**	**$0**
Support Services—Pupil and Instructional Staff Services (in 210 000 and 220 000 Series) Support services are those which facilitate and enhance instructional or other components of the grant. This category includes staff development, supervision, and coordination of grant activities.	a. Salaries (100s)			
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	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Pupil/Instructional Staff Services	**$0**	**$0**	**$0**
Support Services—Administration (Associated with functions in 230 000 series and above.) Includes general; building; business; central service administration, and insurances.	a. Salaries (100s)			
	b. Fringe Benefits (200s)			
	c. Purchased Services (300s)			
	d. Non-Capital Objects (400s)			
	e. Capital Objects (500s)			
	f. Insurance (700s)			
	g. Other Objects (e.g., fees) (900s)			
	TOTAL Support Services—Admin.	**$0**	**$0**	**$0**
	SUBTOTAL	**$0**	**$0**	**$0**
Approved Percentage Rate Maximum 8% of subtotal costs	**INDIRECT COSTS**			
	TOTAL BUDGET	**$0**	**$0**	**$0**

DPI Approval DPI Reviewer Signature/Date ➢

ATTACHMENTS

This space is intended for attaching resumes, appendices and additional information.