

# METS SCHOOL GRANTS PROGRAM

## FY09 Programs At-A-Glance

<b>Program</b>	<b>eMINTS/METS School Grants Program</b>	<b>METS/Mathematics School Grant Program</b>	<b>METS/Science School Grant Program</b>
<b>Program Purpose</b>	To establish 12 school-wide implementations of the eMINTS instructional model with a focus on mathematics and science	To establish 12 school-wide implementations of NSF-supported mathematics curriculum	To establish 12 school-wide implementations of NSF-supported science curriculum
<b>Grant Type(s)</b>	One-year School-wide implementation grants		
<b>Applicants</b>	Missouri school districts and charter LEAs		
<b>Eligibility Requirements</b>	Districts and Charter LEAs may submit only one METS application (eMINTS, Mathematics, OR Science)		
<b>Appropriation Amounts</b>	\$2.9 million	\$2.1 million	
<b>Funds Distribution</b>	Funds are distributed across four geographic areas: NE, NW, SE, SW		
<b>Expected Number of Grant Awards</b>	To award a minimum of 12 eMINTS grants – one Elementary, one Middle, and one High School grant in each of four quadrants	To award a minimum of 12 Mathematics grants – one Elementary, one Middle, and one High School grant in each of four quadrants	To award a minimum of 12 Science grants – one Elementary, one Middle, and one High School grant in each of four quadrants
<b>Maximum Grant Award Amounts</b>	Elementary: \$184,000 Middle: \$282,000 High: \$282,000	Elementary: \$105,000 Middle: \$65,000 High: \$175,000	Elementary: \$118,000 Middle: \$138,000 High: \$130,000
<b>Grant Expenditures</b>	One-year grants support eMINTS-required technology equipment and resources and Year 1 professional development costs.	One-year grants support initial curriculum set-up costs and Year 1 professional development costs.	One-year grants support initial curriculum set-up costs and Year 1 professional development costs.
<b>Match Requirement</b>	Districts cover Year 2 professional development costs; districts must provide at least 30% of the overall costs to implement the two-year professional development project.	Districts cover Year 2 professional development costs and classroom replacement materials; districts must provide at least 30% of the overall costs to implement the two-year professional development project.	Districts cover Year 2 professional development costs and classroom replacement materials; districts must provide at least 30% of the overall costs to implement the two-year professional development project.
<b>Application Due Date</b>	March 31		
<b>Submission Process</b>	Paper application (original plus two copies)		
<b>Grant Program Contacts</b>	DESE Instructional Technology 573-751-8247 <a href="mailto:inststech@dese.mo.gov">inststech@dese.mo.gov</a>	DESE Mathematics Curriculum Services 573-751-1395 <a href="mailto:Cindy.bryant@dese.mo.gov">Cindy.bryant@dese.mo.gov</a>	DESE Science Curriculum Services 573-4445 <a href="mailto:shaun.bates@dese.mo.gov">shaun.bates@dese.mo.gov</a>
	eMINTS National Center 573-884-7202 <a href="mailto:emints-info@emints.org">emints-info@emints.org</a>		

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# Missouri METS School Grants Program

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## PROGRAM OVERVIEW

The Missouri Mathematics, Engineering, Technology and Science (METS) Coalition (see <http://www.missourimets.com>) was formed following the METS Summit held by Governor Blunt in April 2006. The Coalition includes business leaders, educators, and policy makers from a diverse group of stakeholders across Missouri. The METS Coalition created a set of strategies based on discussions held since the Summit and in September 2006 presented Governor Blunt with a set of recommendations to achieve each strategy. The Coalition worked throughout 2007 to secure state-wide awareness of and support for the initiatives embedded in the strategies. The five strategies include:

1. Improving the performance of all pre-school through graduate school students.
2. Expanding the pool of students motivated to pursue METS careers.
3. Expanding the pool of quality METS educators.
4. Establishing a technology plan to support METS efforts.
5. Increasing public awareness of the value of METS knowledge and METS-related careers.

In FY08 the Missouri State Legislature approved funds to begin addressing the strategies such as after-school programs to promote informal mathematics and science education, professional development for Advanced Placement (AP) teachers, and financial assistance to students to cover the costs of AP tests. Work continued on the revision of the Missouri Grade Level Expectations (GLEs) and accompanying assessments in mathematics and science. Other educational agencies such as the Missouri Higher Education Loan Authority (MOHELA) provided support in the form of loan forgiveness for Engineering majors. The Missouri Chamber of Commerce started the Show-Me Scholars program to increase the percentage of students graduating from high school with a rigorous, defined academic course of study sufficient to prepare them for higher education, the workforce or the military.

The Missouri State Legislature also appropriated funds in FY08 that were awarded through a competitive grant process called the eMINTS-METS Classroom Grant Program. The Program's purpose was to create a set of model classrooms across the state that would demonstrate the power of technology-rich learning environments in combination with National Science Foundation (NSF) research-based mathematics or science curricula. The model combined the eMINTS (enhancing Missouri's Instructional Networked Teaching Strategies) program with high-quality curriculum programs in mathematics and science at the elementary, middle and high school levels to produce 102 eMINTS-METS classrooms in 63 LEAs. The eMINTS-METS classrooms became operational in September 2007.

### **Grant Programs**

Expanded for FY09, the METS School Grants Program supports eMINTS implementation grants AND mathematics and science implementation grants. The goal is to increase the number of school-wide eMINTS implementations focused on mathematics and science and for Missouri LEAs to obtain high quality National Science Foundation (NSF) research-based mathematics or science curriculum materials. One-year grants are provided through a competitive grant process. The one-year grants support programs that require a two-year implementation commitment.

Specifically, grant recipients are expected to implement **one** of the following programs at one school in one grade span (elementary, middle or high school) over a two-year period:

- eMINTS instructional model focused on mathematics and/or science, OR
- an NSF research-based mathematics curriculum, OR
- an NSF research-based science curriculum.

## **eMINTS Professional Development**

The eMINTS school grants must be used to equip classrooms with the technology resources needed for teachers to participate in the eMINTS Comprehensive or eMINTS4All professional development programs at the ratio required by the eMINTS National Center.

## **Mathematics Curriculum**

The mathematics curriculum grants must be used to equip classrooms with NSF-funded, research-based curriculum resource materials and provide teacher professional development needed to adopt and implement one of the eligible mathematics curricula. The METS mathematics group recommends the following curricula. Those noted with an asterisk (\*) indicate that professional development is readily available.

- Elementary Mathematics
  - \*Everyday Mathematics®
  - \*Investigations in Number, Data, and Space®
  - Math Trailblazers™
- Middle School (Junior High School) Mathematics
  - \*Connected Mathematics 2™
  - Mathematics in Context®
  - MathScape: Seeing and Thinking Mathematically™
  - MATH *Thematics*
- High School Mathematics
  - \*Contemporary Mathematics in Context© (also known as Core-Plus Mathematics)
  - Interactive Mathematics Program™
  - MATH *Connections*®: A Secondary Core Mathematics Curriculum
  - Mathematics: Modeling Our World
  - SIMMS: Integrated Mathematics

## **Science Curriculum**

The science curriculum grants must be used to equip classrooms with NSF-funded, research-based curriculum resource materials and provide teacher professional development needed to adopt and implement one of the eligible science curricula. The METS science group is prepared to support the following curricula:

- EBS (Event Based Science)  
<http://www.ebsinstitute.com/>
- FOSS (Full Option Science System)  
<http://www.lawrencehallofscience.org/foss/>
- IMaST (Integrated Mathematics, Science, & Technology)  
<http://www.cemast.ilstu.edu/programs/imast/index.shtml>
- SEPUP (Science Ed. for Public Understanding Program)  
<http://www.lawrencehallofscience.org/sepup/>
- STC (Science & Technology for Children)  
[http://www.carolina.com/carolina\\_curriculum/stc/](http://www.carolina.com/carolina_curriculum/stc/)
- GEMS (Great Explorations in Math and Science)  
[http://www.carolina.com/carolina\\_curriculum/gems/](http://www.carolina.com/carolina_curriculum/gems/)
- GLOBE Program  
[http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)
- CPO (Physics First)  
[http://www.cpo.com/tp\\_pfc\\_entry.shtml](http://www.cpo.com/tp_pfc_entry.shtml)
- ChemCom (Chemistry in the Community)  
<http://www.whfreeman.com/Chemcom/>

- BSCS Science Programs  
<http://www.bsos.org/page.asp?pageid=31>
- Active Physics – Active Chemistry  
<http://www.its-about-time.com/htmls/ac/ac.html>

eMINTS professional development programs are available only through the eMINTS National Center. Mathematics and science curriculum professional development is available through the curriculum program publishers and must be followed up by minimum levels of in-state professional development delivered by approved in-state providers.

## PROGRAM RULES

### **Funding**

The General Assembly makes an annual appropriation for Missouri METS Grants Program. The Department advises districts of the estimated appropriation and the purpose for which grants may be awarded.

### **Funding Period**

The fiscal year is July 1 to June 30. The funding period for competitive grants begins the date the grant is approved by the Department but not earlier than July 1. Districts awarded grants are expected to purchase all needed equipment and software during the fiscal year. No funding is anticipated beyond the initial grant period.

### **Eligible Applicants**

Eligible applicants include Missouri school districts and Charter LEAs. School districts and Charter LEAs with partial implementations of any program (eMINTS, mathematics or science curricula) are eligible to apply. The applicant must fully describe the partial implementation and the existing opportunity or need that justifies the application for school-wide award funding.

### **Type of Grants**

The intent of the Missouri METS Grants Program is to support schools in creating school-wide reform that results in improved instruction and student achievement that focus on mathematics, science, and technology.

Specifically, the program supports school-wide implementation of:

1. eMINTS technology and professional development focused on mathematics and/or science, OR
2. NSF research-based mathematics curriculum and professional development, OR
3. NSF research-based science curriculum and professional development.

***Districts may submit applications for one program only. Further, districts may submit an application that covers only one school building, according to the following grade spans:***

- elementary (grades K-6),
- middle or junior high (grades 5-8), or
- high school (grades 9-12).

### **Distribution of State Funds**

The Department will allocate program funds to four geographic regions (quadrants) of the state and to each grade-span level identified above to achieve equitable distribution of the funds. District applications will compete only with districts in their geographical areas. (See website for quadrant information.)

## Grant Awards

Each program will fund one elementary, one middle, and one high school grant in each quadrant, totaling 12 eMINTS, 12 Mathematics, and 12 Science grants statewide. The maximum award amount by program type and building / grade span are as follows:

	<u>eMINTS</u>	<u>Mathematics</u>	<u>Science</u>
Elementary	\$184,000	\$105,000	\$118,000
Middle	\$282,000	\$ 65,000	\$138,000
High	\$282,000	\$175,000	\$130,000

## District Match

**Matching funds are required.** The established maximum award amounts are estimated to cover approximately 70 percent of the overall costs for the two-year implementation commitment. Districts must provide a match of at least 30% of the total project costs, including all costs required to complete the two-year professional development programs involved.

District matching funds are required to ensure that school-wide eMINTS, mathematics, and science program implementations match all program requirements of the eMINTS National Center (for eMINTS) or best practices in mathematics and science professional development. See Loucks-Horsley, *Designing Professional Development for Teachers of Science and Mathematics*, 2003).

- For eMINTS, requirements include:
  - specific equipment and software (<http://www.emints.org/equipment/index>);
  - payment of professional development fees to the eMINTS National Center (Year 1 and Year 2); and,
  - support to teachers (teacher stipends, covering travel-relate costs to participate in the two-year professional development program, and other related costs).
- For mathematics and science, requirements include:
  - resources needed to replenish student and teacher curriculum consumables in Year 2
  - payment of professional development fees to approved mathematics or science professional development providers (Year 1 and Year 2); and,
  - support to teachers (teacher stipends, covering travel-relate costs to participate in the two-year professional development program, and other related costs).

## APPLICATION PROCEDURES

### **Application Deadline**

Applications are due March 31. An application with original signatures must be submitted along with two copies of each application. Applications must be postmarked no later than March 31 or hand-delivered to the Division of School Improvement (8th floor of the Jefferson Building, 205 Jefferson Street, Jefferson City) by 4:00 PM on March 31.

Note: In years where March 31 falls on a weekend, applications submitted by mail still must be postmarked no later than the deadline date but hand-delivered applications must be received in the office (8<sup>th</sup> floor of the Jefferson Office Building, Jefferson City) by no later than 4:00 p.m. on the following Monday.

### **Application Contact Person**

Each application requires designation of a project contact person. The contact person must be able to make decisions about the application and be available throughout the summer months.

Ideally, the contact should be a building principal or central office administrator (e.g., a curriculum and instruction, elementary education, or technology coordinator).

### **Application Components**

Each application consists of forms provided by the Department and a project narrative to be created by the applicant using a word processing program. The proposal submitted must include the cover form, narrative, budget explanation, and appropriate letters of understanding and commitment. [Refer to program-specific sections of this manual for more information about the application components, required forms, and scoring criteria.]

### **The application should not exceed 25 pages in total (excluding forms and letters of commitment).**

Narratives must:

- not exceed twenty-five pages in length (excluding cover form, budget form, narrative, and letters of understanding and commitment),
- be single spaced with black [or dark blue] print and printed on 8½ x 11 white paper,
- use Arial 11 font,
- have left and right margins no less than one inch and top and bottom margins no less than half inch,
- begin each section with the appropriate narrative header,
- include a page footer detailing name of the district and page number of application (e.g., Maple Brook R-IV, page 8). The first narrative page will be page number 3 or higher), and be stapled in the upper left corner (no covers or bindings).

### **Allowable Costs**

Only costs associated with implementing the specific programs will be approved. Costs will vary depending on the number of teachers, number of students in each classroom, and the current curriculum and technology resources available. [Refer to program-specific sections of this manual for more information about allowable and expected costs.]

### **Unallowable Costs**

Grant funds may not be used to:

- support customary district expenses,
- construct, remodel, or prepare the site (including air conditioning),
- pay administrative or indirect costs,
- pay fees for college credit, or
- supplant existing positions, programs, or services.

### **Assurances and Submission Process**

To submit a grant application, a representative authorized by the local district/LEA must agree to program assurances. Submission of the grant assures the Department that the board-authorized representative fully understands the assurances and the responsibility for compliance placed upon the district by the assurances. The district will refund directly to the Department the amount of any funds made available to the district, which may be determined by the Department, or an auditor representing the Department, to have been misspent or otherwise misapplied.

## **APPLICATION REVIEW AND APPROVAL PROCESS**

### **Review Process**

As applications are received, appropriate Department staffs screen the proposals for completeness and compliance with program rules. A proposal will be withdrawn for the competition if, in the judgment of the Department, the proposal is late, is significantly incomplete,

exceeds the maximum request amount, or violates program rules. Only one application per district will be accepted.

Program applications are due March 31 and reviewed in mid-April. The reviewers' scores (100 points possible) and Department-assigned economic bonus points (10 points possible) form the basis for award selection. Applications are ranked by total score, and the highest scoring grant in each competition (program, quadrant, grade span) is selected for negotiation and final approval.

#### APPLICATION NARRATIVE CRITERIA

The application narratives are reviewed by panels of readers comprised of Missouri educators. [Missouri educators interested in serving as a reader can submit a completed reader application form available on the DESE website at <http://dese.mo.gov/divimprove/index.html>.] The evaluators review narrative components, score them using set criteria, and provide comments and recommendations to the Department in the areas of program, budget, and efficacy. [See program-specific sections for more detailed criteria and scoring information.]

##### Introduction (10 points)

- The introduction provides an easily understood, clear description of the proposed project.
- The introduction describes the target population, expected outcomes, and the process for achieving these outcomes.

##### Evidence of Need or Opportunity (15 points)

- The educational need or opportunity is well documented with local data and evidence.
- The educational need or opportunity is significant for the school.

##### Focus on eMINTS or Mathematics Curriculum or Science Curriculum, and Capacity to Serve as Model School (15 points)

- The narrative provides a clear description of the mathematics and/or science curriculum that is being implemented.
- The narrative indicates the specific grade(s), curricular content area, and explains how the curriculum meets the intent and purpose of the [specific] METS program.
- Prior implementation experience [NSF-funded or other research-based curriculum or eMINTS professional development] is described in sufficient detail, indicating start date and how long implementation has been in place in the district, school, or grades.
- Applicant indicates willingness to serve as a model school, detailing appropriate credentials, prior experiences, or knowledge/skills related to content rigor, master teaching, and/or educational research.

##### Prior Planning and Local Commitment (15 points)

- Direct involvement of proposed implementers, school personnel, and/or community personnel in the planning of the proposed program is documented.
- The planning reflects a systemic approach to directly address the stated educational need or opportunity.
- The letters of commitment indicate proposed implementers understand the [specific] METS program and are committed to fulfill all implementation requirements.

##### Goals and Objectives (20 points)

- The goal(s) and objectives directly address the stated opportunity or educational need for the target population.
- The objectives describe measurable, anticipated, and beneficial changes in an identified target population (teachers, students, and parents).
- The proposed evaluation procedures use appropriate assessment measures that will provide objective data about the success of the project.

#### Activities (Including Dissemination) (15 points)

- The planned activities include a description of the major learner activities and deadlines, and relate to the goals, objectives, and evaluation of the proposed project.
- The activities listed include a plan to disseminate information about the project to the local community, educators within the district and other educators.

#### Budget Explanation (10 points)

- Budget items directly relate to the proposed project's identified target population and stated need/ opportunity, goals, objectives, and activities.
- The proposed project is based on a desire for instructional improvement rather than an "opportunistic" approach to securing equipment, materials, etc.

#### ECONOMIC NEED CRITERIA

Department staffs assign additional points, based on economic need, using data supplied by districts via the Department's core data collection system. The economic need scores are based on the applicant school building's rate of students eligible for the Free and Reduced Lunch program and assigned according to the following table. A total of 10 points is possible.

Free/Reduced Lunch Rate	Assigned Score
81.4% or higher	10
66.4 – 81.3%	9
59.1 – 66.3%	8
51.3 – 59.0%	7
45.1 – 51.2%	6
39.3 – 45.0%	5
33.7 – 39.2%	4
26.1 – 33.6%	3
17.7 – 26.0%	2
17.6% or lower	1

#### Notification of Award

The Department notifies districts of their grant approval status in mid to late-May. Funding decisions are announced via correspondence with applicants and postings of the "tentatively approved" grants on appropriate Department/program websites. Applications noted as "tentatively approved" receive final approval upon successful negotiation of the grant. The negotiation process examines budget details and planned activities to ensure all necessary components are covered. The final approved grant amount is determined during the negotiation. Grant negotiations occur in June, with the expectations that all grant recipients receive final approval by June 30. **All funding decisions are contingent upon the Department's receiving the program allocation.**

#### Reporting Requirements

Grant recipients must report annually to the Department regarding progress in meeting the objectives and annual targets described in the approved grant narrative. Mid-year and end-of-year reports will be submitted to the Department during the grant year. An end-of-project report will be submitted within sixty days of completion of the two-year professional development programs.

#### GRANT MANAGEMENT

##### Authorized Representative

The authorized representative is a district employee, typically the superintendent or a central office administrator, approved by the board to sign fiscal assurances and submit grant

applications. The authorized representative of the district must agree to all assurances prior to the submission of the application.

### **Revenue Code and Payment Schedule**

The **METS Grants Program revenue code is 5364**. Grant recipients receive payments via the Payment Request form. The form may be submitted monthly to request reimbursement for actual expenses. A district may only request funds up to seventy-five percent of the actual expenditures prior to submitting the final expenditure report for approval. See the program website to download a copy of the payment form.

### **Expenditures**

Obligations for Purchased Services (6300) are incurred when the services are formally agreed to or contracted, no later than May 1. These obligations may be accurately projected and paid through June 30. Obligations for Materials and Supplies (6400) and Capital Outlay (6500) are incurred when a purchase order is signed/issued and must be incurred by March 31 and paid by June 30. Any funds not properly obligated must be refunded to the Department.

### **Non-Supplant**

Each program has allowable and unallowable costs. Grant funds may not supplant programs, services, or expenditures that are already a function of the district. Capital projects such as remodeling and/or indirect costs are unallowable.

### **Inventory Control**

Capital outlay costing \$1000 or more per unit is subject to inventory management and control. Inventory must be current and available for review and audit. Adequate safeguards must be in effect to protect the property. Any loss, damage, or theft must be investigated and fully documented. The district is responsible for replacing or repairing the property. Adequate maintenance procedures must be implemented. For federal programs (and recommended for state programs) a physical inventory of items must be taken and results reconciled with the inventory records at least once every two years. Project equipment and materials are vested in the district upon receipt and approval of the Project Evaluation Narrative, Final Expenditure Report, and completion of the professional development program(s).

The following information must be included on the inventory:

- date of inventory
- description of property, including manufacturer's model number
- manufacturer's serial number or other identification number
- identification of the funding source
- acquisition date
- place of purchase (company name)
- physical location
- condition of the property
- unit cost
- all pertinent information on the ultimate transfer, replacement, or disposition of the equipment

### **Audits**

Each district receiving a grant must keep records according to generally accepted accounting principles and provide any information necessary for fiscal and program auditing. All records and supporting documents must be retained in accordance with current state and federal laws and regulations. Districts must provide the Department, as part of its statutory independent audit or other independent audit, a report of the results of the audit performed in accordance with the Department's general policy on audits.

## **Monitoring**

Grant recipients are subject to monitoring. Department staff will visit some of the projects in conjunction with the Missouri School Improvement Program (MSIP) reviews. Note that grant recipient districts with a scheduled MSIP (districts with full reviews or partial reviews and those with waivers) will receive a self-monitoring checklist to complete and return in the fall prior to the visit. In addition, program staff may conduct telephone and/or on-site monitoring during the project's implementation period, as determined by the Department or requested by the district.

## **Amendments**

Amendments to the approved budget are allowed, up to four amendments per year. Budget changes may be necessary because of price changes, product changes, or unexpected opportunity. Amendments to the approved budget may be made in the following ways.

*Self-amendment* – An expenditure variation of 10 percent or less between two approved expense codes (6100-6500) is allowed without prior Department approval. Neither expense code item may be increased or decreased by more than 10 percent of the lesser of the two expense codes. The total state expenditures cannot exceed the total state approved budget. Expense codes with no allocated funds cannot be increased via a self-amendment.

*Budget Amendment Request* – Submission of the Budget Amendment Request form is required to allocate money to an expense code in excess of the accepted 10 percent variance or to an expense code that had no approved funds. The form must be completed as instructed and mailed or faxed to the Department for approval, after which time the district may execute the change(s). See the program website to download a copy of the budget amendment request form.

## **Time and Effort Reports**

Time and effort reports are required for payment of stipends and appropriate purchased services. Performance of service for stipends must occur before or after the contracted hours for the school district, such as after all teachers are released for the day/school year, before the time teachers are required to begin the day/school year, or during scheduled vacations. For additional salaries and stipends (i.e., Purchased Services), the report should reflect the date, type of work, and the length of time and actual hours worked, and should be signed by the person performing the extra duties. Both reports must be signed and approved by an authorized representative of the district. See the program website to download a sample time and effort report form.

Note: The eMINTS National Center will maintain records of teacher attendance at required eMINTS professional development sessions and provide quarterly reports to each district for payment of teacher stipends. The Department is in the process of identifying the organization that might provide similar records for districts receiving mathematics or science curriculum grants.

## **Program Evaluation Assurances**

Program Evaluation Assurances are part of the program applications. These provide assurance that participating teachers complete their professional development obligations and related evaluation activities and documents. This also provides assurance that the applicant district will provide school-level evaluation data as described in the goals and objectives section of the narrative. Copies of the signed assurances will reside with the applicant district and the Department (and professional development providers as appropriate).

## **Final Expenditure Report (FER)**

Grant recipients receive all payments via the Payment Request form. On the Payment Request form is a box to indicate the filing of the Final Expenditure Report (FER). The final payment request (indicating FER) must be submitted and received in the department no later than May 15. A completed form may be submitted to the Department via mail or fax.

*Required Refund* – If the Department, based on its own findings or those of an independent auditor, determines an applicant has misspent, misapplied, or otherwise used funds from a program in violation of any applicable regulation or statutory provision, the applicant must refund to the Department the amount determined to have been improperly expended. If the applicant does not refund the money within a reasonable time after requested to do so, the Department will withhold payments due to the applicant under that program and may adjust payments due to the applicant under other programs administered by the Department.

Districts will not be allowed to carry over any approved funds not expended during the fiscal year. If payments from the state to the district exceed the total expenditures, a refund must be made.

### **Evaluation Narratives**

Grant recipients must file an annual mid-year and end-of-year narrative reports. The mid-year progress report, due by January 31 of each year of the project, asks the grant contact to respond to a series of questions related to how the professional development events are progressing. The Program Evaluation Narrative report, due by June 30 of each year of the project, asks the grant contact about the project's degree of success in meeting its first and second-year goals and objectives as well as general information about the implementation of the project. See the program website to download copies of the mid-year progress report questions and the annual program evaluation narrative forms.

# eMINTS-METS School Grants Program

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eMINTS stands for *enhancing* Missouri's Instructional Networked Teaching Strategies. Its instructional model is a set of research-based strategies grounded in constructivist theory. The model supports teachers in integrating technology and best teaching practices to create a learning community where teachers and students explore and create knowledge together using a variety of resources. Teachers facilitate student learning through the use of essential questions that stimulate thinking, build curiosity, create connections, and generate long lasting knowledge through issues that matter to students.

The eMINTS Comprehensive professional development program for teachers is a two-year program that provides extensive professional development (over 250 hours), frequent classroom visits, and access to a variety of instructional support materials.

The METS Coalition supports the expansion of the eMINTS instructional model along with other programs that create technology-rich learning environments for students and teachers. See “A Solution for Modernizing Missouri’s Schools” that outlines the Coalition’s goals and objectives for technology at <http://www.missourimets.com/mx/hm.asp?id=legislative>. Program evaluation results from eMINTS demonstrate a six-year trend towards improved student learning outcomes when compared to students whose teachers do not have eMINTS professional development and who do not have the same technology resources in their classrooms.

## PROGRAM OVERVIEW

**Proposed projects must focus on school-wide implementation of the eMINTS instructional model with a focus on mathematics or science.**

Teachers in schools receiving grant funds will participate in either the Comprehensive eMINTS or the eMINTS4All professional development programs. The two-year Comprehensive eMINTS professional development program helps teachers realize the power of technology and instructional strategies grounded in constructivism to transform teaching and learning. The two-year eMINTS4All program helps teachers in other classrooms extend the eMINTS instructional model throughout the school. eMINTS4All classrooms are implemented only in schools where Comprehensive eMINTS classrooms are already established or are also being implemented.

The proposed school-wide implementation model must promote interdisciplinary instruction. Projects should designate one primary focus area (mathematics or science) and one complimentary core subject area (mathematics, science, language arts, or social studies). Teachers participating in the Comprehensive eMINTS professional development – particularly in middle, junior, and high schools – must teach the primary focus subject. Teachers in the eMINTS4All program may teach in the complementary subject area.

Grant funds are intended to be used to equip classrooms with the technology resources needed for eMINTS Comprehensive or eMINTS4All professional development and implementation. Teacher and classroom technology resources must meet the technical and ratio specifications established by the eMINTS National Center for specific professional development programs.

## PROGRAM RULES

### **Eligible Applicants**

Eligible applicants include Missouri public school districts and charter LEAs. Applicant schools must be willing to commit to the two-year implementation process for a school-wide

implementation of eMINTS Comprehensive and eMINTS4All classrooms focused on mathematics and science instruction using eMINTS instructional strategies. Districts with partial eMINTS implementations are eligible to apply.

Applicant schools and participating teachers must commit to meeting all professional development requirements over the two-year program implementation commitment. The application requires a signature from board-authorized representative, indicating the district has read and agrees to all assurances and matching funds requirement. The application also requires signature of the building principal and letters of understanding and commitment from all teachers involved in the proposed project's implementation.

### **Grant Awards**

It is the intent of the FY09 eMINTS-METS School Grants Program to fund at least 12 school-wide projects: one elementary, one middle, and one high school implementation project per quadrant. Grants are awarded for one year only. The size of the grant awards may not exceed the caps listed below.

<u>Grade Span</u>	<u>Maximum Grant Request</u>
Elementary	\$184,000
Middle/Junior High	282,000
High	282,000

### **District Match**

Districts must provide a match of at least thirty percent (30%) of the total project costs, including all costs required to complete the two-year professional development programs involved. As a guiding rule, a district providing a match of around 15 percent in year one, plus all the necessary costs associated with the second year of professional development, should meet the overall 30 percent match requirement.

Costs will vary across projects, based on the schools size and implementation models. Customary expenses that districts may include in their district match include:

- Project orientation and leadership meetings:
  - mileage (district rate) for a one-day Orientation meeting in summer 2008 for building principal(s), technology coordinator, and two or three representative teachers, and for a one-day Leadership Institute for the same group in fall 2008 – location TBA for a round trip of approximately 150 miles
  - one (1) night of lodging, three (3) meals and round-trip mileage (district rate) for the eMINTS Winter Conference in Columbia, Missouri for teachers in Year 2 of the Comprehensive eMINTS professional development program
- Comprehensive eMINTS professional development program:
  - stipends and any associated benefits (at district-approved rate) for 100 hours of professional development in Year 1 and 75 hours in Year 2
  - substitute teacher pay and any associated benefits (district rate) for four (4) days of teacher release in Year 1 and two (2) days of teacher release in Year 2
  - mileage (district rate) for 28 round trips of approximately 100 miles each for Year 1 and 20 round trips of approximately 100 miles each for Year 2
- eMINTS4All professional development program:
  - stipends and any associated benefits (at district-approved rate) for 50 hours of professional development in Year 1 and 40 hours in Year 2
  - substitute teacher pay and any associated benefits (district rate) for one (1) day of teacher release in Year 1 [there are not release days for Year 2 eMINTS4All]

- mileage (district rate) for 12 round trips of approximately 100 miles each for Year 1 and 10 round trips of approximately 100 miles each for Year 2

### **Application Requirements**

Applicant districts must:

- show financial and personnel commitment to the two-year intensive Comprehensive eMINTS and eMINTS4All professional development programs,
- show commitment to make the appropriate resources available for the teachers and students,
- show commitment to follow the established rules and timelines of the program (and not include software or hardware outside the scope of the eMINTS program with the exception of allowable subject-specific software or hardware),
- document commitment to the matching fund requirement,
- agree that principals, technology coordinators, and representative applicant teachers in buildings awarded grant funds attend a one-day, summer Orientation program and one-day fall Leadership Institute,
- agree to share (publish) at least one exemplar lesson plan or unit in mathematics or science at the conclusion of Year 1 of the Comprehensive eMINTS or eMINTS4All professional development programs,
- agree to reporting requirements and providing evaluation data specific to the project's goals and objectives at the end of each year of the project, and
- agree to participate in program evaluation requirements (production of an electronic teacher portfolio and provision of student rosters for MAP analysis) at the conclusion of Year 2 of the Comprehensive eMINTS or eMINTS4All professional development programs.

### **APPLICATION PROCEDURES**

**A district may only submit one Missouri METS Program application, and a district's application to the eMINTS-METS School Grants Program may only address one grade span: elementary (K-6), middle or junior high (5-8) or high (9-12) school.**

#### **Application Deadline**

Applications are due March 31. An application with original signatures must be submitted along with two copies. FY09 applications must be postmarked no later than March 31 or hand-delivered to the Instructional Technology section office (8th floor of the Jefferson Building, 205 Jefferson Street, Jefferson City) by 4:00 PM on March 31.

Note: In years where March 1 falls on a weekend, applications submitted by mail still must be postmarked no later than the deadline date, and hand-delivered applications must be received in the section (8<sup>th</sup> floor of the Jefferson Office Building, Jefferson City) by no later than 4:00 p.m. on the following Monday.

#### **Application Contact Person**

Each application requires designation of a project contact person. The contact person must be able to make decisions about the application and be available throughout the summer months. Ideally, the contact should be a building principal or central office administrator (e.g., a curriculum and instruction, elementary education, or technology coordinator).

#### **Application Components**

Each application consists of forms provided by the Department and a project narrative to be created by the applicant using a word processing program. **The application should not exceed 25 pages in total (excluding forms and letter of understanding and commitment).**

The application should be constructed in the following order:

1. Application for State Assistance under the FY09 eMINTS-METS School Grants Program (form provided)
2. Proposed Budget for FY09 eMINTS-METS School Grants Program (form provided)
3. Project narrative and letters of understanding and commitment

### **Completing the Application for State Assistance**

Use the application cover form provided.

*For Department Use* – Do not complete this section. It will be completed by the Department should the application receive funding approval.

*District Information* – Provide details about the applicant district/LEA: district name, county-district code, and geographic quadrant. Provide project contact information: contact person name, title, email address, work and summer phone numbers.

*School Information* – Enter school name and address of the applicant school building. Enter principal name, principal's signature, and date of signature. Check the grade levels that will be served in the proposed project.

*Project Information* – Enter the two-year project total (including district match) and the state amount requested for FY09. Enter the numbers of teachers and students that will be served by the project. Check the primary and complementary curriculum focus areas.

*Project Assurances and DESE IX Assurances* – Review the list of assurances to which the district must agree in order to receive consideration for funding.

*Signature* – A representative authorized by the board to submit the application must agree to project assurances by affixing his/her signature and entering his/her name, title, and signature date.

### **Completing the Proposed Budget Form**

Use the proposed budget grid form provided.

*For Department Use* – Do not complete this section. It will be completed by the Department should the application receive funding approval.

*District Information* – Type in district name and county-district code number.

*Project Information* – Enter project contact person information as indicated.

*Project Financial Data* – Transfer amounts from the budget explanation in the narrative to the project budget information grid. (See the project narrative section, and tips for writing the narrative, for more details about developing the project budget.) Apply amounts by expense code (Salaries, Benefits, etc.) and function code (Curriculum/Instruction, Professional Development, and/or Facilities). Include all costs associated with the state amount requested, and district match. **Round budget figures to whole dollar amounts.**

- Year 1 Budget– Enter funding amounts requested under the grant program, the district's matching funds, and the total amount to complete year one activities.
- Year 2 Budget – Enter district matching funds necessary to complete the two-year professional development project.
- Total Project Budget – Total Year 1 state and Year 1 and Year 2 matching funds to determine the Project Total. Transfer the state request and project total amounts to the application cover form, as indicated in the Project Information section.

## Completing the Project Narrative

Using a word processor, develop the project narrative, addressing all components listed below. Write the narrative using the active voice. (See appendix for a grant writing checklist that provides examples of the types of information to be included in the narrative sections).

### *Brief Project Summary –*

Begin the project narrative with a brief (50 words or less) summary of the project, which will be posted in a project summaries document. Describe the population targeted by the proposed project, the expected outcomes, and how the outcomes will be accomplished.

### *Introduction –*

Provide a descriptive, yet concise, overview of the proposal. This description should illustrate to grant reviewers an understanding of the purpose of the eMINTS-METS School Grants Program components. Include information such as the population targeted by the project, the expected outcome(s), and how the outcome(s) will be accomplished. Include also a brief description of the community.

Specifically, detail teacher and student population. List teachers by name and indicate his/her curriculum focus area(s), grade level(s), number of students, and eMINTS professional development program. Middle and high school implementation projects, and elementary projects with departmentalized teachers, should indicate the largest class enrollment and the total numbers of students served.

### *Evidence of Need or Opportunity –*

The purpose of this section is to demonstrate that there is an educational need or opportunity for the proposed eMINTS school-wide implementation focused on mathematics or science. In describing the opportunity and/or educational need for improvement, be specific and indicate the sources of information. This section should be convincing but concise.

An **educational need** is characterized by a lack of achievement, lack of specialized instructional materials, or the necessity to establish an instructional program not previously offered by the district. Examples of an educational need might be low test scores on standardized tests or end-of-course assessments, lack of appropriate technology for instructional purposes, or lack of specialized services for students. Personal experience may be used, but personal experience alone is not sufficient. Provide a variety of sources. Data from sources such as the following might be used:

- standardized achievement tests;
- attitude, aptitude or interest inventories;
- questionnaires, opinion surveys, self-report scales, or structured interviews;
- direct systematic observation of student behavior;
- demographic or socioeconomic surveys;
- MSIP findings;
- school and agency records (e.g., drop-out rates, suspension rates, absentee rates); or
- state and local assessment studies made by other agencies or organizations.

An **opportunity** is created by a unique set of circumstances that could be transformed into a learning experience for local students. Examples of an opportunity might include:

- the proposed school in the applicant district has a teacher who was awarded an FY08 eMINTS-METS Classroom Grant project,
- the district has a certified eMINTS instructional specialist on staff who is already providing eMINTS professional development to teachers in the district,
- the proposed school in the applicant district is working with mathematics or science education or instructional technology faculty members at a nearby university to align the district's curricula with state and national standards,

- the proposed school in the applicant district has teachers who have participated in state or local initiatives or projects focused on improving mathematics and science instruction such as the Mathematics Professional Development Series (Missouri MAP Program), Missouri Elementary Mathematics Leadership Academy (University of Central Missouri), Missouri Middle School Math Academy (Drury University), MySci Project (St. Louis), PRISM (Northwest Missouri State University), Kansas City Life Sciences Institute programs, Kauffman Foundation, and others,
- the proposed school in the applicant district has teachers who are experienced in providing professional development to other teachers in research-based mathematics or science instructional strategies, or
- a business is offering free materials, supplies, or technology resources to a school district for use in the science [or mathematics] curriculum.

*Focus on eMINTS, Mathematics/Science Curriculum, and Capacity to Serve as Model eMINTS-METS School –*

Provide descriptions of current implementations of mathematics or science curriculum and/or instructional technology programs that show a focus on high quality instruction. Fully describe the curriculum and specify the content area upon which the school is focusing (e.g., mathematics and science at the elementary level, mathematics at the middle/junior high school level, or science at the high school level). Provide evidence of how the curriculum and/or instructional technology program contribute to high quality instruction. Provide dates of initial implementation and the length of implementation by describing when the curriculum/program was first implemented in the school or district and how long it has been in place.

Each teacher's professional development and advanced study preparation in mathematics, science and/or technology should be described. The narrative should include a complete description of the teachers' capacity and experience to contribute to the overall model school implementation and include the willingness of the school's teachers to provide opportunities to other educators for observations and visits.

*Prior Planning and Local Commitment –*

It is important to demonstrate that careful consideration has been given to those affected by the proposed school-wide eMINTS implementation. Describe the process used to prepare the application, gather information, and solicit input from others. Include information pertaining to individual or group meetings with local educators, other persons pertinent to the planned eMINTS school-wide implementation, parents, and the community. A chronology of planning is recommended. Attach letters indicating the principal's and each teacher's commitment to successful implementation of the proposed eMINTS project.

*Goals and Objectives –*

Provide a **goal** statement which relates directly to the target population and the stated need/opportunity and includes the expected overall results of implementing the Comprehensive eMINTS and eMINTS4All classrooms.

Each application is required to provide a minimum of **two objectives (one objective each for students and teachers)** that detail expected learning outcomes for teachers and students at the conclusion of the one-year grant period AND at the conclusion of the two-year professional development period. Additional objectives (maximum of two) focused on others (such as parents or community members) may be provided but are not required.

Each objective should indicate who will do what, how well, when, and according to what measurement instrument. Objectives should be stated in measurable terms, be easily measured and communicated, and be reflected in the evaluation. Notes: Performance on objectives must be *reportable* for the end-of-year reports due June 30. Student outcomes

should NOT include Missouri Assessment Program (MAP) results, as these results are typically not released until after the June 30 reporting deadline and the eMINTS National Center external evaluator will collect and analyze student MAP results at the conclusion of participating teachers' second year of professional development.

Indicate the **evaluation** plan for each objective. The evaluation plan should describe how the attainment or degree of attainment of each objective is to be measured. Helpful questions to ask when writing objectives are, "What do I want to accomplish?" "When should I expect this to be accomplished?" and "How will I be able to tell it has been accomplished?"

Following are some examples of easily communicated, measurable objectives and the evaluation of each objective:

### **Examples of REQUIRED Teacher Learning Objectives:**

#### **Year 1 Example:**

*Objective:* By the end of Year 1 of the Comprehensive eMINTS or eMINTS4All professional development programs, participating teachers will submit two model lesson plans in mathematics (or science) that successfully meet all criteria established by the eMINTS National Center. *Evaluation Plan:* The lesson plans submitted by teachers will be scored by an eMINTS evaluator against criteria established by the eMINTS National Center. An aggregate score for all teachers will be submitted by the project contact in the end-of-Year 1 Project Evaluation Report.

#### **Year 2 Example:**

*Objective:* By the end of Year 2 of the Comprehensive eMINTS or eMINTS4All professional development programs, participating teachers will submit a WebQuest featuring mathematics (or science) content that successfully meets all criteria established by the eMINTS National Center. *Evaluation Plan:* The WebQuest submitted by the teacher will be scored by an eMINTS evaluator as successfully meeting all criteria of a quality WebQuest. An aggregate score for all teachers will be submitted by the project contact in the Final Evaluation Report.

### **Examples of REQUIRED Student Learning Objectives:**

#### **Year 1 Example:**

*Objective:* By the end of Year 1, 90% of targeted students will score at the "proficient" level on a district-developed common mathematics assessment based on grade level expectations (GLEs). *Evaluation Plan:* Participating teachers will administer a pretest during the first two weeks of school. A similar test will be given during the last month of school and comparisons made of the two sets of scores. Skills tested will focus on number operations items. Scores from the pre and post tests will be compiled by the project contact for inclusion in the end-of-Year 1 Project Evaluation Report.

#### **Year 2 Example:**

*Objective:* By the end of Year 2, 90% of targeted students will score at the "proficient" level on at least two constructed response items (see note below) for their grade level. *Evaluation Plan:* Participating teachers will administer the assessment items during one class period in the last month of the school year. Scores will be computed by a committee of teachers from the school based on scoring guides published on the DESE website. Teachers will score each other's student responses for impartiality. Student scores will be reported by the committee chair to the project contact for inclusion in the Final Evaluation Report.

Note: Appropriate constructed response items may be selected from MAP and/or NAEP released items, *Mathematics Assessment Sampler* (NCTM) items, and other appropriate resources as approved.

### Examples of Optional Parent/Community Objectives:

#### **Year 1 Example:**

*Objective:* By the end of the 2008-09 school year, 80% of eligible parents will demonstrate involvement in their child's mathematics education by participating in at least two [of four] parent workshops. *Evaluation Plan:* Facilitators will keep records and document parent participation. Records of parent participation will be summarized by the project contact and submitted for inclusion in the end-of-Year 1 Project Evaluation Report.

#### **Year 2 Example:**

*Objective:* By the end of the 2009-2010 school year, selected eMINTS students will make a 20 minute presentation to the School Board showing their academic progress and fluency in multimedia. *Evaluation Plan:* Project contact will include a copy of the presentation in the Final Evaluation Report along with a record of comments from Board members.

The narrative should also reflect district and school willingness to participate in required program evaluation activities (provision of teacher electronic portfolios) and the district's willingness to provide student roster information to assist in the program's MAP analysis.

#### *Activities (Including Dissemination) –*

Since teacher activities are defined by the eMINTS Comprehensive professional development program, it is not necessary to state teacher professional development activities. Instead, applicants should describe the major learner/student activities of the proposed school-wide eMINTS-METS implementation. Include a schedule showing the dates of activities. Tie the planned activities to the stated need/opportunity statement, goal, and objectives.

Describe how the materials and procedures that are part of the mathematics or science curriculum will be used with the eMINTS technology and instructional strategies. Additional activities might include:

- assessment of needs,
- discussions with parents, other teachers, or students,
- providing training sessions for other teachers,
- providing open-house observation opportunities for parents and community members,
- periodic assessment of progress in teaching strategies, and/or
- community cooperation or curriculum alignment.

#### *Budget Explanation –*

Include a description and itemization of estimated costs of each proposed budget activity and expenditure (including state and district dollars) necessary to complete the proposed two-year professional development programs. Model numbers, software titles, hourly rates of pay and other pertinent information should be detailed appropriately. Round budget amounts to whole dollars. Calculate the district's match percentages to ensure match equals at least 30 percent of the overall costs for the two-year implementation project.

For each budget category (salaries, employee benefits, etc.) describe the purpose and the amount for which the funds are to be expended. Be specific. For example, since district matching funds may be expended for substitutes, provide the cost for each substitute per day. Subtotals should add up to the totals listed on the provided proposed budget form.

Following are examples of how to format a Budget Explanation for an elementary school and for a middle or high school. [The examples addresses format only; details may or may not list actual costs or address all necessary costs. Itemized costs represent maximum allowable costs to be paid from state request. If costs exceed maximum allowed, district is responsible for remainder. Districts are responsible to maintain the required student-to-computer ratios throughout the grant period even if enrollment increases.]

**Example of eMINTS Elementary School Budget Explanation:** (Based on a school with 10 classrooms total: 5 Comprehensive eMINTS and 5 eMINTS4All, with 24 students per classroom)

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Year 1 Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – Comprehensive eMINTS [number teachers X hours X district stipend rate] Yr 1: 5 X 100 hours @ \$18 = \$9000 Yr 2: 5 X 75 hours @ \$18 = \$6750	\$0	\$9,000	\$9,000	\$6,750	\$15,750
Stipends – eMINTS4All Yr 1: 5 X 50 @ \$18 = \$4500 Yr 2: 5 X 40 @ \$18 = \$3600	\$4,500	\$0	\$4,500	\$3,600	\$8,100
Teacher substitutes – Comp eMINTS [number teachers X days X district sub-pay rate] Yr 1: 5 X 4 @ \$75 = \$1500 Yr 2: 5 X 2 @ \$75 = \$750	\$0	\$1,500	\$1,500	\$750	\$2,250
Teacher substitutes – eMINTS4All Yr 1: 5 X 1 @ \$75 = \$375 (Yr 2: Not applicable)	\$375	\$0	\$375	\$0	\$375
<b>SALARIES TOTAL</b>	<b>\$4,875</b>	<b>\$10,500</b>	<b>\$15,375</b>	<b>\$11,100</b>	<b>\$26,475</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$1,823	\$1,823	\$1,397	\$3,220
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$1,823</b>	<b>\$1,823</b>	<b>\$1,397</b>	<b>\$3,220</b>
<b>6300 Purchased Services</b>					
eMINTS Professional Development services					
• Organizational fee (\$5,000 per year)	\$5,000		\$5,000	\$5,000	\$10,000
• eMINTS Comp PD (2 @ \$5,000, 3 @ \$2,500 per year)	\$17,500	\$0	\$17,500	\$17,500	\$35,000
• eMINTS4All PD (5 @ \$2,500 per year)	\$12,500	\$0	\$12,500	\$12,500	\$25,000
Mileage for training – Comprehensive eMINTS [# cars X trips X miles X district mileage rate] Yr 1: 2 cars X 28 trips x 60 miles @ \$.30 = \$1008 Yr 2: 2 cars X 20 trips x 60 miles @ \$.30 = \$720	\$1,008	\$0	\$1,008	\$720	\$1,728
Mileage for training – eMINTS4All Yr 1: 2 cars X 12 trips x 60 miles @ \$.30 = \$432 Yr 2: 2 cars X 10 trips x 60 miles @ \$.30 = \$360	\$432	\$0	\$432	\$360	\$792
Mileage – Orientation/Leadership Team Meetings Yr 1: 2 cars X 2 trips x 150 miles @.30 = \$180 Yr 2: Mileage/Lodging for Winter Conference (for Comp eMINTS) estimated @ \$70 each = \$350	\$180	\$0	\$180	\$350	\$530
Installation of computers (local contractor) \$35/hour for 20 hours	\$700	\$0	\$700	\$0	\$700
<b>PURCHASED SERVICES TOTAL</b>	<b>\$37,320</b>	<b>\$0</b>	<b>\$37,320</b>	<b>\$36,430</b>	<b>\$73,750</b>
<b>6400 Materials and Supplies</b>					
All in One Printer/Scanner for Comp eMINTS [e.g., 3 @ \$700, networked between 2 rooms]	\$2,100	\$0	\$2,100	\$0	\$2,100
Digital camera for Comp eMINTS [e.g., 5 @ \$350 each]	\$1,750	\$0	\$1,750	\$0	\$1,750

MS Office Suite Standard for Comp eMINTS [e.g., 60 student computers (12 per classroom) @ \$50 each + \$30 media X 5 teachers]	\$3,150	\$0	\$3,150	\$0	\$3,150
MS Office Pro for 5 Comp and 5 eMINTS4All teachers [e.g., 10 @ \$75 + \$35 disk]	\$1,100	\$0	\$1,100	\$0	\$1,100
Dream Weaver and Fireworks for Comp eMINTS teachers [5 @ \$300] (eMINTS4All teachers use nVu – open source at no cost)	\$1,500	\$0	\$1,500	\$0	\$1,500
Printing costs for professional development materials (paper, toner/ink, etc.) [e.g., approx. 1,100 pgs @ \$.05/pg for 10 teachers for 2 years]	\$350		\$350	\$200	\$550
Smart Ideas (Site license)	\$1,995	\$0	\$1,995	\$0	\$1,995
Student desks for 2 students per desk [e.g., 60 @ \$300] + \$1,050 shipping (estimated)]	\$0	\$19,050	\$19,050	\$0	\$19,050
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$11,945</b>	<b>\$19,050</b>	<b>\$30,995</b>	<b>\$200</b>	<b>\$31,195</b>
<b>6500 Capital Outlay</b>					
Teacher laptop & docking station [e.g., 10 @ \$1800]	\$18,000	\$0	\$18,000	\$0	\$18,000
Student computers for Comp eMINTS [e.g., 60 @ \$900 each] (eMINTS4All will use computer lab and existing computers in classrooms)	\$54,000	\$0	\$54,000	\$0	\$54,000
Interactive whiteboard and projector [e.g., 10 @ \$5000] includes installation and cabling	\$50,000	\$0	\$50,000	\$0	\$50,000
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$122,000</b>	<b>\$0</b>	<b>\$122,000</b>	<b>\$0</b>	<b>\$122,000</b>
<b>TOTALS</b>	<b>176,140</b>	<b>31,373</b>	<b>207,513</b>	<b>49,127</b>	<b>256,640</b>
<b>State Request Percentage</b>			85%		69%
<b>District Match Percentage</b>			15%		31%

**Example of eMINTS Secondary School Budget Explanation:** (Based on a school with 8 classrooms total: 4 Comprehensive eMINTS in Mathematics and 4 eMINTS4All in Language Arts)

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Year 1 Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – Comprehensive eMINTS [number teachers X hours X district stipend rate] Yr 1: 4 X 100 hours @ \$18 = \$7200 Yr 2: 4 X 75 hours @ \$18 = \$5400	\$7,200	\$0	\$7,200	\$5,400	12,600
Stipends – eMINTS4All Yr 1: 4 X 50 hours @ \$18 = \$3600 Yr 2: 4 X 40 hours @ \$18 = \$2880	\$3,600	\$0	\$3,600	\$2,880	\$6,480
Teacher substitutes – Comp eMINTS [number teachers X days X district sub-pay rate] Yr 1; 4 X 4 days @ \$75 = \$1200 Yr 2: 4 X 2 days @ \$75 = \$600	\$0	\$1,200	\$1,200	\$600	\$1,800
Teacher substitutes – eMINTS4All Yr 1: 4 X 1 @ \$75 = \$300 (Yr 2: not applicable)	\$0	\$300	\$300	\$0	\$300
<b>SALARIES TOTAL</b>	<b>\$10,800</b>	<b>\$1,500</b>	<b>\$12,300</b>	<b>\$8,880</b>	<b>\$21,180</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$1,458	\$1,458	\$1,863	\$3,321
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$1,458</b>	<b>\$1,458</b>	<b>\$1,863</b>	<b>\$3,321</b>
<b>6300 Purchased Services</b>					
eMINTS Professional Development services: • Organizational fee (\$5,000 per year)	\$5,000	\$0	\$5,000	\$5,000	\$10,000

• eMINTS Comp PD (3 @ \$5,000, 1 @ \$2,500 per year)	\$17,500	\$0	\$17,500	\$17,500	\$35,000
• eMINTS4All (4 @ \$2,500 per year)	\$10,000	\$0	\$10,000	\$10,000	\$20,000
Mileage for training – Comprehensive eMINTS [# cars X trips X miles X district mileage rate] Yr 1: 2 cars X 28 trips x 60 miles @ \$.30 = \$1008 Yr 2: 2 cars X 20 trips x 60 miles @ \$.30 = \$720	\$0	\$1,008	\$1,008	\$720	\$1,728
Mileage for training – eMINTS4All Yr 1: 2 cars X 12 trips x 60 miles @ \$.30 = \$432 Yr 2: 2 cars X 10 trips x 60 miles @ \$.30 = \$360	\$0	\$432	\$432	\$360	\$792
Mileage – Orientation/Leadership Team Meetings Yr 1: 2 cars X 2 trips x 150 miles @.30 = \$180 Yr 2: Mileage/Lodging for Winter Conference (for Comp eMINTS) estimated @ \$70 each = \$280	\$0	\$180	\$180	\$280	\$460
Installation of computers (local contractor) \$35/hour for 20 hours	\$700	\$0	\$700	\$0	\$700
<b>PURCHASED SERVICES TOTAL</b>	<b>\$33,200</b>	<b>\$1,620</b>	<b>\$34,820</b>	<b>\$33,860</b>	<b>\$68,680</b>
<b>6400 Materials and Supplies</b>					
All in One Printer/Scanner for Comp eMINTS [e.g., 2 @ \$700, networked between 2 rooms]	\$0	\$0	\$1,400	\$0	\$1,400
Digital camera for Comp eMINTS [e.g., 4 @\$350 each]	\$0	\$1,400	\$1,400	\$0	\$1,400
MS Office Suite Standard for Comp eMINTS and eMINTS4All [e.g., 144 student computers @ \$50 each + \$30 media X 8 teachers]	\$0	\$7,440	\$7,440	\$0	\$7,440
MS Office Pro for Comp and eMINTS4All teachers [e.g., 8 @ (\$75 + \$35) disk]	\$0	\$880	\$880	\$0	\$880
Dream Weaver and Fireworks Comp eMINTS teachers [4 @ \$300] (eMINTS4All teachers use nVu, open source at no cost)	\$0	\$1,200	\$1,200	\$0	\$1,200
Printing costs for professional development materials (paper, toner/ink, etc.) [e.g., approx. 1,100 pgs @ \$.05/pg for 10 teachers for 2 years]	\$350	\$0	\$350	\$200	\$550
Smart Ideas (Site license)	\$1,995	\$0	\$1,995	\$0	\$1,995
Wireless Access Hubs and Cabling	\$3,200	\$0	\$3,200	\$0	\$3,200
Geometer Sketchpad Software	\$0	\$3,000	\$3,000	\$0	\$3,000
TI Emulator for Teacher	\$0	\$2,000	\$2,000	\$0	\$2,000
TI Graphing Calculators (4 class sets @ \$1500)		\$6,000	\$6,000	\$0	\$6,000
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$3,550</b>	<b>\$23,600</b>	<b>\$27,150</b>	<b>\$200</b>	<b>\$27,350</b>
<b>6500 Capital Outlay</b>					
Teacher laptop & docking station [e.g., 8 @ \$1800]	\$14,400	\$0	\$14,400	\$0	\$14,400
144 Student computers (1:1 in Comp eMINTS classrooms and two laptop carts shared between eMINTS4All classrooms) [e.g., 144 @ \$1000]	\$144,000	\$0	\$144,000	\$0	\$144,000
Interactive whiteboard and projector [e.g., 8 @ \$5000] includes installation and cabling	\$40,000	\$0	\$40,000	\$0	\$40,000
Laptop batteries (144 @ \$150 each)	\$0	\$21,600	\$21,600	\$0	\$21,600
Laptop carts (6 @ \$3000 each)	\$0	\$18,000	\$18,000	\$0	\$18,000
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$198,400</b>	<b>\$39,600</b>	<b>\$238,000</b>	<b>\$0</b>	<b>\$238,000</b>
<b>TOTALS</b>	<b>\$245,950</b>	<b>\$67,778</b>	<b>\$313,728</b>	<b>\$44,803</b>	<b>\$358,531</b>
<b>State Request Percentage</b>			78%		69%
<b>District Match Percentage</b>			22%		31%

## **Allowable Costs**

Only costs associated with implementing the eMINTS instructional model in Comprehensive eMINTS or eMINTS4All classrooms will be approved. Costs will vary depending on the number of students in the classrooms, current technology resources available, and the ratio of students to computers.

Grant funds may only be used to purchase technology resources needed for a Comprehensive eMINTS or eMINTS4All classroom, not to adopt or implement mathematics or science curricula. The eMINTS National Center will cover program evaluation costs based on organization fees charged to participating districts. Districts are responsible for costs associated with the collection and analysis of school data needed to demonstrate achievement of goals or objectives outlined in the proposal narrative.

**SALARIES (6100) – Must be obligated by May 1 (state and district match dollars)**

Payment of professional and nonprofessional salaries and stipends will be allowed at district-approved rates. This applies to additional staff members necessary to carry out the project and for work performed by existing staff outside the regular school day, term, or year. Performance of services by staff already employed by the district must occur outside the contracted hours for the school district (e.g., after all teachers are released for the day/school year, before the time teachers are required to begin the day/school year, or during scheduled vacations).

The eMINTS National Center will maintain attendance records for teachers participating in eMINTS professional development sessions. Quarterly reports of teacher attendance will be provided to participating districts for calculation of teacher stipends. Stipends should be paid quarterly, based on actual attendance. Stipends should not be paid in lump sums prior to teachers' completion of the professional development program hours.

**BENEFITS (6200) – Must be obligated by May 1**

The applicant district is expected to cover the benefits for stipends and substitute teacher salaries associated with teachers in eMINTS professional development programs.

**PURCHASED SERVICES (6300) – Must be obligated by May 1**

Purchased services result when work for a district or building is completed by an individual not on the district's payroll or a service is purchased from a source outside the district.

eMINTS professional development and organizational fees are also considered purchased services. The applicant district is expected to cover any costs associated with the collection and analysis of school data needed to demonstrate achievement of goals or objectives outlined in the proposal narrative. Examples of allowable purchased services include:

- installation of hardware/software performed by an individual not employed by the school/district
- T-1 connection to the eMINTS building (a reliable 1-2 Mbps connection)
- upgrade of electrical service in eMINTS classrooms to support the computers, interactive whiteboard, and projector
- networking (bandwidth, switches, and cabling for eMINTS teacher workstation, networked printer and classroom computers)

**MATERIALS AND SUPPLIES (6400) – Must be obligated by March 31**

Items that are consumed in use, have a reasonably short life, are more feasibly replaced than repaired, or cost \$999 or less per unit, and all software, regardless of price, are considered Materials and Supplies. Examples of allowable Materials and Supplies expenditures are listed below. Unless otherwise noted, expenditures are limited to eMINTS classroom costs and may include:

- approved computer and networking software (regardless of unit cost)

- storage drives
- networking and wiring supplies
- printers and printing supplies
- computer furniture (chairs, carts, and tables for teacher and student use)
- filtering software (if needed to meet CIPA requirements)
- productivity software allowed by the eMINTS equipment specifications
- other software allowed by the eMINTS program and required by the curricular program (refer to eMINTS website for current listing)
- scanner
- digital camera

**CAPITAL OUTLAY (6500) – Must be obligated by March 31**

Items that are electrical/mechanical in nature, have a useful life of at least one year, or cost \$1000 or more per unit are considered Capital Outlay. The deciding factor is the unit cost. All technology purchases must meet eMINTS program specifications. The following are examples of allowable Capital Outlay expenditures:

- teacher laptop with docking station
- student computers (server-based or wireless units are acceptable)
- networking hardware
- interactive whiteboard (permanent installation in classroom)
- data projector (permanent installation in classroom)

### **Unallowable Costs**

Grant funds may not be used to:

- purchase student response systems or classroom management software
- construct, remodel, or prepare the site including air conditioning,
- pay administrative or indirect costs,
- pay fees for college credit, or
- supplant existing positions, programs, or services.

### **Assurances and Submission Process**

To submit a grant application, a representative authorized by the local district/LEA must agree to program assurances for the school for which an application is submitted. The submission of the grant assures the Department that the board-authorized representative fully understands the assurances and the responsibility for compliance placed upon the applicant by the assurances. The applicant will refund directly to the Department the amount of any funds made available to the applicant, which may be determined, by the Department or an auditor representing the Department, to have been misspent or otherwise misapplied.

## **APPLICATION REVIEW AND APPROVAL PROCESS**

### **Review Criteria**

The eMINTS-METS school grant applications are evaluated through a peer review of the project narratives, using the established criteria listed below.

### **APPLICATION NARRATIVE SCORING CRITERIA**

#### *Introduction (10 points)*

- The introduction provides an easily understood, clear description of the proposed project.
- The introduction describes the target population, expected outcomes, and the process for achieving these outcomes.

#### *Evidence of Need or Opportunity (15 points)*

- The educational need or opportunity is well documented with local data and evidence.

- The educational need or opportunity is significant for the school.

*Focus on eMINTS, Mathematics/Science Curriculum, and Capacity to Serve as Model eMINTS-METS School (15 points)*

- The narrative provides a clear description of the mathematics and/or science curriculum that is being implemented.
- The narrative indicates the specific grade(s), curricular focus content area, and explains how the curriculum meets the intent and purpose of the eMINTS instructional model (inquiry-based teaching powered by technology).
- Prior experience in school's participation in state-wide or national mathematics or science curriculum initiatives (such as implementing NSF-funded or other research-based curriculum) or with the eMINTS instructional model is described in sufficient detail, indicating start date and how long implementation has been in place in the district, school, or grades.
- Applicant indicates willingness to serve as a model school, detailing appropriate teachers' credentials, prior experiences, or knowledge/skills related to content rigor, master teaching, and/or educational research.

*Prior Planning and Local Commitment (15 points)*

- Direct involvement of proposed implementers, school personnel, and/or community personnel in the planning of the proposed program is documented.
- The planning reflects a systemic approach to directly address the stated educational need or opportunity.
- Letters of commitment indicate applicant school's teachers understand the eMINTS instructional model and are committed to fulfill all implementation requirements.
- Letters of commitment indicate applicant administration's commitment to fulfill all project evaluation requirements at the conclusion of the two-year professional development programs.

*Goals and Objectives (20 points)*

- The goal(s) and objectives directly address the stated opportunity or educational need for the target population.
- Required and optional objectives describe measurable, anticipated, and beneficial changes in an identified target population (teachers - required, students - required, and parents - optional).
- The proposed evaluation procedures use appropriate assessment measures that will provide objective data about the success of the project.

*Activities (Including Dissemination) (15 points)*

- The planned activities include a description of the major learner activities and deadlines, and relate to the goals, objectives, and evaluation of the proposed project.
- The activities listed include a plan to disseminate information about the project to the local community, educators within the district and other educators.

*Budget Explanation (10 points)*

- Budget items directly relate to the proposed project's identified target population(s) and stated need/opportunity, goals, objectives, and activities.
- The proposed project is based on a desire for instructional improvement rather than an "opportunistic" approach to securing equipment, materials, etc.

## ECONOMIC NEED SCORING CRITERIA

Department Instructional Technology staff assign additional points, based on economic need, using data supplied by districts via the Department's core data collection system. Economic need scores (up to 10 points possible) are based on the applicant school building's rate of students eligible for the Free and Reduced Lunch program and assigned according to the following table.

Free/Reduced Lunch Percentage Rate	Assigned Score
81.4% or higher	10
66.4 – 81.3%	9
59.1 – 66.3%	8
51.3 – 59.0%	7
45.1 – 51.2%	6
39.3 – 45.0%	5
33.7 – 39.2%	4
26.1 – 33.6%	3
17.7 – 26.0%	2
17.6% or lower	1

## FY09 eMINTS-METS SCHOOL GRANTS PROGRAM –

### GRANT WRITING GUIDING QUESTIONS

*Following are the narrative components of the eMINTS-METS School Grants Program application, along with guiding questions to help grant writers align grant narratives with the scoring criteria.*

#### **Brief Project Summary**

Begin the grant narrative with a brief (50 words or less) summary of the project, describing the target population, the expected outcomes, and how the outcomes will be accomplished.

#### **Introduction** (10 points possible)

Provide a descriptive, yet concise, overview of the proposal. Describe the target population, the curriculum, expected outcomes, and the activities for accomplishing the outcomes. Include a brief description of the district and/or school community.

- Does the narrative describe the school community, target population, the major implementation strategies, and the expected outcomes of the proposed project?
  - Did you provide district or school community demographics, such as location, rural/urban, enrollment, and other pertinent socio-economic characteristics?
  - Did you provide an overview of the proposed project in terms of the target population, major implementation strategies, and expected outcomes?
  - Did you describe the key stakeholders who will be directly and indirectly affected by the proposed project, such as teachers, students, parent, or others)? Is it clear what teachers will participate in the two eMINTS professional development, who they are, their curriculum focus area(s), and the numbers of students impacted?
  - What are your expected outcomes? What major strategies do you plan to implement to produce the outcomes?

#### **Evidence of Need or Opportunity** (15 points possible)

Describe the educational need and/or opportunity for the proposed project and implementation of the eMINTS instructional model. Provide relevant teaching and learning performance information and discussion of how the proposed project will meet the needs described.

- Does the narrative detail the educational need?
  - What information or needs assessments were used in determining need for the proposed project? Do the need assessments address needs of all key stakeholders, such as principals, teachers, students, parents, or others?
  - What evidence and data have been analyzed to indicate an educational need for the proposed project? Are the kinds of data appropriate and useful in examining project needs in a comprehensive manner?
- Does the narrative explain an opportunity for improvement?
  - Does the narrative describe unique resources/services that are available to the district, school, and/or teacher that likely could transform teaching and learning in the classroom?

#### **Focus on eMINTS, Mathematics/Science Curriculum, and Capacity to Serve as Model eMINTS-METS School** (15 points possible)

Indicate the eMINTS implementation and/or the mathematics and/or science curriculum that is being implemented (or will be implemented) and fully describe how it meets the METS School

Grants program requirements (developed or recognized by the NSF). Provide evidence of professional development, advance study, or other credentials that detail teachers' capacity to serve as a model school.

- Does the narrative detail the prior curriculum implementation?
  - Does the narrative describe adequately the curriculum being used to address the primary and complementary focus areas? What are they and are they NSF-funded and/or standards based? How long have they been used in the school or district?
- Does the narrative detail capacity of school personnel to serve as model school?
  - What credentials, knowledge, skills, and experiences does the school have to indicate capacity to serve as a model for the program?

### **Prior Planning and Local Commitment** (15 points possible)

Describe the process and information used to develop the proposed project and prepare the application. Include information pertaining to individual or group meetings with local educators and others pertinent to the planned project. Attach a letter from the applicant that indicates understanding of program requirements and commitment to successful project implementation.

- Does the narrative detail the planning process used to develop the application/proposed project?
  - What methods and strategies did you use in determining the need for your proposed project and designing the project details? Did the school leadership help to arrange planning meetings, allow teachers and other personnel to visit other schools, and/or assist in the planning process?
  - Who was involved in the planning and design process? Were all the key stakeholders adequately represented? What roles and responsibilities did each plan in the planning and design process?
- Does the narrative detail the school's understanding of and commitment to the proposed project?
  - Do letters of the key stakeholders indicate understanding of the program components and commitment to successful implementation of the proposed project? Do they acknowledge and address the commitment of the school to complete the two-year projects (that extend beyond the one-year grant period)? Does the applicant explain how the necessary match requirements will be fulfilled and how the project will be supported and expanded in the future?
  - How do teacher letters indicate individual and/or collective commitment to completing the professional development sessions, implementing the instructional strategies, and fulfilling reporting and evaluation requirements?

### **Goals and Objectives** (20 points possible)

Provide an overall project goal that relates directly to the target population and the stated need/opportunity. Provide a minimum of two objectives (one objective for teachers and one objective for students) that detail the learner outcomes expected at the conclusion of the one-year grant project AND at the conclusion of the two-year professional development period.

- Does the narrative describe the overall goal of the proposed project?

- Is there a statement of the overall purpose for the grant project and does it address the target focus areas, populations, major implementation strategies, and expected outcomes?
  - Does the goal statement address program goals, relate to the stated need and/or opportunity statements for the proposed project, and can it be reasonably achieved by project completion?
- Does the narrative detail appropriate objectives of the proposed project?
- Are there the required number of specific objectives that align with required and optional evaluative information?
  - Do the objectives detail the learners, what they will do or know, the instruments that will be used to assess progress, and when the assessments will occur? Do the measures align with need and project implementation? How well can the expected results be attributed to the project?
  - Do the objectives provide meaningful and useful data? Are they realistic and will they result in beneficial and significant change?

**Activities (Including Dissemination) (15 points possible)**

Describe the major teacher and student development activities, including a timeline or schedule of the planned implementation strategies. Describe how the applicant/school will disseminate project details within the school and district and for others outside the community.

- Does the narrative describe the major implementation strategies?
- What are your major strategies for addressing the need and realizing the intended outcomes? Do the planned activities address the target population and the goals and objectives of the proposed project?
  - Do the activities detail implementation plans? Is it clear who will do what, when? Did you include a timeline of when certain project elements will be implemented? Did you include benchmarks events and dates, such as when to set baseline data, when to conduct periodic assessment or take stock of progress, and when to administer summative assessment and analyze the data?
  - Is it clear who has responsibility for assessing, reporting, and disseminating project information? When and how will that occur? Who are the intended audiences? How will dissemination activities help meet the program goal of creating model schools?

**Budget Explanation (10 points possible)**

Itemize and describe estimated costs to complete the proposed activities. Provide specific information as needed or appropriate.

- Does the narrative describe the proposed budget in sufficient detail?
- Is there sufficient narrative to explain and justify expenses? Did you provide unit descriptions (district-approved rates for teacher stipends, substitute pay, and mileage, book titles, equipment/software titles and model numbers), unit costs, and numbers of units being purchased? Do proposed costs align with program requirements (technical specifications and in the proper ratio) and the proposed project's stated need and major activities?
  - Did you detail expenditures by appropriate budget code (salaries, benefits, purchased service, materials/supplies, and capital outlay) and function code (curriculum/instruction, professional development, and facilities)?
  - Does the budget itemize state and district match funds? Does the district match meet program guidelines in terms of allowable costs and percentage rate?

## **FY09 eMINTS-METS SCHOOL GRANTS PROGRAM – FREQUENTLY ASKED QUESTIONS**

### **PROGRAM RULES AND GUIDELINES**

#### **1. What is the eMINTS-METS School Grants Program?**

Funded as part of Missouri’s Mathematics, Engineering, Technology, and Science (METS) Initiative, the eMINTS-METS School Grants Program is administered through the Department’s Instructional Technology Section to create model schools across Missouri where eMINTS classrooms focused on research-based mathematics and/or science curricula are implemented together to demonstrate “best practice” in METS education for other educators to observe and learn from.

The eMINTS-METS School Grants Program solicits competitive applications from educators in Missouri public school districts (including charter LEAs) in grades K-12.

#### **2. What is the funding outlook of the eMINTS-METS School Grants Program?**

The General Assembly determines the appropriation and the Department advises districts of the estimated appropriation and the purposes for which grants may be awarded.

#### **3. What is the funding period for the eMINTS-METS School Grants Program?**

Grants are awarded for one year: July 1 through June 30. However, districts and teachers must commit to both years of the two-year eMINTS Comprehensive and eMINTS4All professional development programs, program evaluation requirements, and successful implementation of the eMINTS instructional model.

#### **4. How will the program funds be distributed?**

To ensure equitable participation, program funding will be allocated to four geographic regions (quadrants) of the state and to the three grant types (grade spans). Districts will be competing only with districts in their geographic areas and grade spans. (See program website for a state map and a listing of the districts residing within each quadrant.)

#### **5. How many grants will be awarded? Is there a maximum amount that may be awarded?**

The intent of the grant program is to create at least 12 eMINTS-METS schools: one elementary, middle/junior high, and high school grant in each quadrant. The total number of grants awarded is dependent on the final appropriation and the budget amounts requested in applications. Awards will not exceed amounts listed in the table found in the Program Guidelines section.

#### **6. Who may apply for a grant under the eMINTS-METS School Grants Program?**

Eligible applicants include Missouri public school districts and charter LEAs. Applicant schools must be willing to commit to the two-year implementation process for a school-wide implementation of eMINTS Comprehensive and eMINTS4All classrooms focused on mathematics and science instruction using eMINTS instructional strategies. Districts with partial eMINTS implementations are eligible to apply.

#### **7. When are the applications due?**

Applications are due March 31. An application with original signatures and two copies must be submitted. Applications must be postmarked no later than March 31 or hand-delivered to the Division of School Improvement (8th floor of the Jefferson Building, 205 Jefferson Street, Jefferson City) by 4:00 PM on March 31.

**8. Is there a limit to how many applications may be submitted by a district?**

While submitted at the district level, an application must have a singular school-wide focus, addressing one of the following building/grade spans.

- Elementary – an elementary building serving grades K – 5 or 6
- Middle/Junior High – a middle or junior high school building serving grades 5, 6, 7 and/or 8
- High – a high school building serving grades 9, 10, 11 and/or 12

Note: In middle or junior high school classrooms, either mathematics or science should be the focus with a complimentary focus on one other core content area. In elementary schools, mathematics or science as well as combinations of mathematics and science may be the focus, since elementary teachers usually teach all subjects in self-contained classrooms. Departmentalized classrooms at the elementary grade span are also eligible provided the Comprehensive eMINTS implementation focuses on teachers in one of the two subject areas – mathematics or science.

**9. What is the eMINTS instructional model?**

eMINTS stands for *enhancing* Missouri's Instructional Networked Teaching Strategies. Its instructional model is a set of research-based strategies grounded in constructivist theory. The model supports teachers in integrating technology and best teaching practices to create a learning community where teachers and students explore and create knowledge together using a variety of resources. Teachers facilitate student learning through the use of essential questions that stimulate thinking, build curiosity, create connections, and generate long lasting knowledge through issues that matter to students.

The eMINTS Comprehensive and eMINTS4All professional development programs for teachers is a two-year program that provides extensive professional development, frequent classroom visits, and access to a variety of instructional support materials.

**10. What are mathematics and science curriculum models are recommended?**

Competitive priority will be given to applicants who have implemented or will implement National Science Foundation (NSF) funded mathematics and/or science curriculum that is research-based and standards-based. Prior implementation is defined as a minimum of one school year, including the current school year.

*Mathematics* – Eligible mathematics curricula include the following:

- Elementary Mathematics
  - Everyday Mathematics®
  - Investigations in Number, Data, and Space®
  - Math Trailblazers™
- Middle School (Junior High School) Mathematics
  - Connected Mathematics 2™
  - Mathematics in Context®
  - MathScape: Seeing and Thinking Mathematically™
  - MATH *Thematics*
- High School Mathematics
  - Contemporary Mathematics in Context© (also known as Core-Plus Mathematics)
  - Interactive Mathematics Program™
  - MATH *Connections*®: A Secondary Core Mathematics Curriculum
  - Mathematics: Modeling Our World
  - SIMMS: Integrated Mathematics

Science – Examples of eligible science curricula include (but are not limited to):

- EBS (Event Based Science) <http://www.ebsinstitute.com/>
- FOSS (Full Option Science System) <http://www.lawrencehallofscience.org/foss/>
- IMaST (Integrated Mathematics, Science, & Technology) <http://www.cemast.ilstu.edu/programs/imast/index.shtml>
- SEPUP (Science Ed. for Public Understanding Program) <http://www.lawrencehallofscience.org/sepup/>
- STC (Science & Technology for Children) [http://www.carolina.com/carolina\\_curriculum/stc/](http://www.carolina.com/carolina_curriculum/stc/)
- GEMS (Great Explorations in Math and Science) [http://www.carolina.com/carolina\\_curriculum/gems/](http://www.carolina.com/carolina_curriculum/gems/)
- GLOBE Program [http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)
- CPO (Physics First) [http://www.cpo.com/tp\\_pfc\\_entry.shtml](http://www.cpo.com/tp_pfc_entry.shtml)
- ChemCom (Chemistry in the Community) <http://www.whfreeman.com/Chemcom/>
- BSCS Science Programs <http://www.bsos.org/page.asp?pageid=31>
- Active Physics – Active Chemistry <http://www.its-about-time.com/htmls/ac/ac.html>

**11. Why does the program promote implementation of NSF-funded, research-based mathematics and science curricula?**

The METS Coalition spent significant time studying curriculum issues with input from nationally recognized experts. The METS Coalition supports opportunities for teachers and schools engaged in using high-quality research-based and standards-based curricula to obtain additional resources. One goal of the eMINTS-METS School Grants Program is to demonstrate best practices in teaching and learning for mathematics and science. Another goal is to pair inquiry-based curriculum with the technology-rich eMINTS instructional model to determine the impact on student performance.

**12. What if a school or district has not implemented one of the mathematics or science curricula described in the program guide? Is there any chance of getting a grant?**

While competitive priority will be given to the NSF-funded mathematics and science curricula outlined in the eligibility section, it is possible that applications from districts or schools with other mathematics or science curricula may still be competitive. These applicants would need to indicate the curriculum they propose to implement and explain why that curriculum was selected.

**13. May current eMINTS classrooms be included in the application?**

Yes. Current eMINTS classrooms may be included in the application both to upgrade and improve technology and to provide eMINTS professional development programs (see Veteran eMINTS Professional Development options on the eMINTS website at: <http://www.emints.org/programs/veteran/index.shtml>)

**14. May current eMINTS4All classrooms be included in the application?**

Yes, classrooms with teachers who have completed or are currently enrolled in the eMINTS4All program may apply to receive the additional equipment and professional development outlined for official Comprehensive eMINTS classrooms in the eMINTS-METS School Grants Program. An eMINTS4All teacher included in an eMINTS-METS School Grants Program will not have to repeat professional development sessions but will need to complete the remaining sessions in the eMINTS Comprehensive professional development program. (For more information about the eMINTS4All program, see: <http://www.emints.org/programs/emints4all/index.shtml>).

**15. How may grant funding be used? Does it cost a district to participate in the program?**

Full implementation of the eMINTS instructional model requires a prescribed set of teacher and student technology resources and teacher completion of the two-year eMINTS Comprehensive or eMINTS4All professional development programs. Successful implementation of the eMINTS-METS School Grants Program requires a combination of Department grant funds, eMINTS support, and district match funds as outlined in the Program Guidelines.

Grant funds may only be used to purchase technology resources needed for a Comprehensive eMINTS or eMINTS4All classroom and not to adopt or implement mathematics or science curricula. The eMINTS National Center will cover program evaluation costs based on organization fees charged to participating districts. Districts are responsible for costs associated with the collection and analysis of school data needed to demonstrate achievement of goals or objectives outlined in the proposal narrative.

**16. What is the district match required by the program?**

Yes, districts are required to provide a local match equal to at least thirty percent (30%) of the overall costs associated with the two-year eMINTS professional development implementation model. As a guiding rule, a district providing a match of around 15 percent in year one, plus all the necessary costs associated with the second year of professional development, should meet the overall 30 percent match requirement.

Examples of items that may require matching funds include:

- Project orientation and leadership meetings:
  - mileage (district rate) for a one-day Orientation meeting in summer 2008 for building principal(s), technology coordinator, and two or three representative teachers, and for a one-day Leadership Institute for the same group in fall 2008 – location TBA for a round trip of approximately 150 miles,
  - one (1) night of lodging, three (3) meals and round-trip mileage (district rate) for the eMINTS Winter Conference in Columbia, Missouri for teachers in Year 2 of the eMINTS professional development program.
- Comprehensive eMINTS professional development program:
  - stipends and any associated benefits (at district-approved rate) for 100 hours of professional development in Year 1 and 75 hours in Year 2
  - substitute teacher pay and any associated benefits (district rate) for four (4) days of teacher release in Year 1 and two (2) days of teacher release in Year 2
  - mileage (district rate) for 28 round trips of approximately 100 miles each for Year 1 and 20 round trips of approximately 100 miles each for Year 2
- eMINTS4All professional development program:
  - stipends and any associated benefits (at district-approved rate) for 50 hours of professional development in Year 1 and 40 hours in Year 2
  - substitute teacher pay and any associated benefits (district rate) for one (1) day of teacher release in Year 1 [there are not release days for Year 2 eMINTS4All]
  - mileage (district rate) for 12 round trips of approximately 100 miles each for Year 1 and 10 round trips of approximately 100 miles each for Year 2

**17. What must be included in the application? What type of school is most competitive?**

Applications for an eMINTS-METS School Grants Program include the application cover with participant details and project assurances (form provided), project narrative, letter of commitment, budget explanation, and budget grid (form provided). See the program website to download copies of the application forms and narrative component descriptions.

The application narrative should detail what learner needs are present as well as the capacity the applicant school has to serve as a model eMINTS-METS school. The narrative should provide an introduction that details the school, community, and district along with the student population(s) served. The current eMINTS and/or mathematics and/or science curriculum implementation details should be described, including any teacher professional development and advanced study preparation in mathematics and/or science. Also, the narrative should include a complete description of the school's capacity to serve as model and experience of any master teachers or model classrooms including the professional development opportunities the teachers are willing to provide to other educators in the area. The narrative should reflect the participating teachers' willingness to participate in required evaluation activities (lesson plan and electronic portfolio) and the district's willingness to provide student roster information to assist in the eMINTS program's MAP analysis.

All proposed activities and expenditures must relate to implementation of the eMINTS instructional model with a focus on mathematics and/or science. The eMINTS National Center offers a set of online resources to eMINTS- METS competitive grant applicants to assist them with information needed to prepare a complete proposal. For more information, see the eMINTS Funding Portal at: <http://emints.org/application/index.shtml>.

**18. Who should be involved in writing the eMINTS-METS School Grants Program application?**

The key stakeholders who will be directly responsible for the eMINTS implementation should be involved in writing the grant application. A team approach that includes the building principal, technology personnel, teachers, parents and students will likely produce a more competitive application than one written by an individual.

The application requires designation of a contact person, someone familiar with the project and able to make decisions about the project. Ideally, the contact should be a building principal or central office administrator (such as a coordinator of curriculum, instruction, elementary education, or technology). This person must be available to contact throughout the summer months.

**19. What professional development services are available from the eMINTS National Center? Who must participate and what are the expectations?**

Professional development services provided during the program will be delivered by eMINTS National Center staff and/or by certified eMINTS instructional specialists who have successfully completed the eMINTS Professional Development for Educational Technology Specialists (PD4ETS) program employed by applicant districts. A determination of how professional development services will be delivered and by whom will be finalized upon grant award and is subject to final negotiation.

Teachers will participate in either eMINTS Comprehensive or eMINTS4All professional development based on the hardware and software provided for their classroom. School building administrators and district or school-level technology coordinators are expected to participate in the eMINTS4Administrators or eMINTS4Technology Coordinators program.

**20. What are the costs for eMINTS professional development?**

Costs for eMINTS professional development services associated with the program (including the required Organization Participation fee) are outlined on the eMINTS website at:

<http://www.emints.org/programs/costsummary.shtml>. Estimates of eMINTS professional development fees are available on the eMINTS website at: <http://www.emints.org/application/index.shtml> - follow the links to eMINTS-METS program information and the online cost estimate request form.

- 21. Are meetings required of staff from grant-recipient districts, other than the applicants?**  
Principals, technology coordinators, and representative teachers awarded grant funds under the eMINTS-METS School Grants Program will be required to attend a one-day summer Orientation program. [Location of the meeting is TBA.] The same team will also be required to attend a one-day Leadership Institute and follow-up e-conference sessions in Year 1 and Year 2 of the program implementation.
- 22. What other costs are allowable under the grant program?**  
Only costs associated with equipping official Comprehensive eMINTS and eMINTS4All classrooms will be approved. Costs will vary depending on class size, equipment and/or software already available, and the type of computers selected (laptops or desktops, PC or Mac). Connectivity and electrical service expenses may also be allowable if necessary and grant funds are sufficient to cover these costs. Grant funds may not be used to purchase, adopt or implement mathematics or science curricula.
- 23. What equipment and software specifications are required for the program?**  
eMINTS professional development is based on teachers having a standard suite of hardware and software. Specifications for any equipment or software purchased using grant funds are outlined on the eMINTS website based on the grade levels included in the application. Different equipment configurations are outlined for elementary grades and for middle school and high school grades. The required timeline for installation of equipment is also included on the website <http://www.emints.org/equipment/>. Only items that meet the eMINTS equipment and software specifications or support mathematics or science content may be purchased using grant funds.
- 24. May curriculum-related technology and equipment be purchased, such as graphing calculators and probes?**  
Subject-specific technology is allowed in the eMINTS-METS classrooms. Supplemental items such as graphing calculators and probes may be purchased if funds are available after all required eMINTS equipment and software has been purchased. Districts may also purchase subject-specific technology items using other funds, or use in-kind donations, to procure supplemental technology.
- 25. What are the evaluation requirements for the program?**  
Local Grant Evaluation Requirement – Each applicant district is expected to provide evaluation data specific to the proposal goals and objectives as outlined in the proposal narrative. These activities are designed and managed by the applicant district. Costs related to evaluation activities specific to the proposal goals and objectives are the district’s responsibilities.
- Program Evaluation Requirement – Each participating district is also expected to participate in the statewide eMINTS-METS program evaluation requirements including:
- provision of a lesson plan and permission to publish the lesson plan at the end of Year 1 (Comprehensive and eMINTS4All),
  - production of an electronic teacher portfolio (classroom website/portal, lesson plan and WebQuest) at the conclusion of Year 2 of the eMINTS professional development program (Comprehensive eMINTS only), and
  - provision of student rosters for MAP analysis) at the conclusion of Year 2 of the eMINTS professional development programs (Comprehensive and eMINTS4All).
- The eMINTS-METS program evaluation activities are designed and managed by the eMINTS Evaluation Project. Costs related to these activities are covered by the eMINTS National Center.

## APPLICATION APPROVAL PROCESS

- 26. What criteria will be used to award grants?**  
Grant applications are reviewed using scoring criteria totaling up to 100 points. A panel of readers reads and evaluates the application narratives, in mid-June. (See the administrative

manual for a complete listing of the criteria.)

**27. Is it possible to get a copy of a successful or model eMINTS-METS School Grants Program application?**

No. FY09 marks the first year eMINTS-METS School Grants will be awarded.

**28. What additional information or technical assistance is available for teachers and districts interested in applying for an eMINTS-METS school grant?**

Copies of the application forms, administrative manual, FAQ, related correspondence, and can be downloaded from the METS School Grants Program website at <http://dese.mo.gov/divimprove/index.html>.

A program information workshop, co-hosted by Instructional Technology and eMINTS, will be offered on February 7, 2008, in the Truman Hotel, 1510 Jefferson Street, Jefferson City, Missouri. Look for workshop details to be posted on the Program website.

Grant writing technical assistance is available by request. Contact Instructional Technology staff by telephone at 573-751-8247 or by email at [instrtech@dese.mo.gov](mailto:instrtech@dese.mo.gov).

**29. When will the eMINTS-METS School Grants Program awards be announced?**

The Department expects to review the grant narratives April 15-17 and announce applicants receiving tentative approval by mid-May. Following notification of tentative grant awards, eMINTS staff will review the applications and work with districts to finalize equipment and software purchase plans and to ensure all required matching costs have been budgeted. In June or early July, Program staff will conduct a final review of grant applications and determine the final approved grant amount based on the state funding available.

**30. Is it possible for districts that do not receive eMINTS-METS School Grants to participate in eMINTS programs?**

Yes. Districts that do not receive grants may use other district, state, or federal resources to participate in eMINTS programs. (See the eMINTS website for program details and requirements and application forms.) Districts may use the following sources to supplement grant funds or to fund eMINTS programs and classrooms: local Professional Development and At-Risk funds, other federal and state technology grants (when available), and other Title programs (e.g., Titles I, II.A, IV, V, as appropriate). Contact the appropriate grant administrator for specific information.

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# Mathematics and Science-METS School Grants Program

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## PROGRAM OVERVIEW

The first strategy adopted by the Missouri METS Coalition and presented to Governor Blunt in the September 2007 report (<http://www.missourimets.com/docs/METS%20Alliance%20Report.pdf>) is:

### **STRATEGY 1: Improve the performance of all P-20 students.**

Recommendation 1: Improve METS curricula and assessments. Revise Missouri's K-12 GLEs and assessments for mathematics and science to support focused, inquiry-based instruction modeled on internationally recognized best practices. Ensure that collegiate-level METS curricula follow the same focused, inquiry-based instruction.

The Mathematics and Science – METS Grant program is intended to assist schools and districts in acquiring the curriculum materials, resources and teacher professional development needed to adopt and implement focused inquiry-based instruction modeled on internationally recognized best practices.

Research indicates that learning with National Science Foundation (NSF) research-based (standards-based) curriculum improves both academic achievement and student interest in mathematics and science. For example, fully implemented standards-based curricula in mathematics can produce statistically significant differences in Missouri Assessment Program (MAP) scores for students, especially in the areas of data analysis, probability, statistics and algebra.<sup>1</sup>

A study of mathematics achievement of eighth graders in the first three school districts in Missouri to adopt NSF-funded standards-based middle grades mathematics curricula (MATH Thematics or Connected Mathematics Project) was completed in 2003. The study compared students who had similar prior mathematics achievement and family income levels from other districts. Achievement was measured using the mathematics portion of the Missouri Assessment Program (MAP) administered to all 8<sup>th</sup> graders in the state. "Significant differences in achievement were identified between students using standards-based curriculum materials for at least 2 years and students from comparison districts using other curriculum materials. All of the significant differences reflected higher achievement for students using standards-based materials."<sup>2</sup> Scientific research studies conducted by San Diego State University, University of Pittsburgh, University of Rhode Island, and George Washington University indicate the importance of research-based curricula.<sup>3 4 5 6</sup>

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<sup>1</sup> Reys, R., Reys, B, Lapan, R, Holliday, G., and Wasman, D. (2003), Assessing the Impact of Standards-based Middle Grades Mathematics Curriculum Materials on Student Achievement. *Journal for Research in Mathematics Education*.34 (1), 74-95.

<sup>2</sup> Amarai, O, Garrison, L, & Klentschy, M., (2002). Helping English Learners Increase Achievement through Inquiry-Based Science Instruction. *Bilingual Research Journal*. 26, 213-239.

<sup>3</sup> Riordan, J, and Noyce, P, (2001), The Impact of Two Standards-Based Mathematics Curricula on Student Achievement in Massachusetts, *Journal for Research in Mathematics Education*, 32 (4), 368-398.

<sup>4</sup> Science It's Elementary Pennsylvania Initiative: *School Science and Mathematics Journal*. (2001), 101 (8), 417-426.

<sup>5</sup>Young, B.J., & Lee, S. K. (2005). The Effects of a kit-based science curriculum and intensive science professional development on elementary student science achievement. *Journal of Science Education and Technology*. 14, 5/6,471-481

<sup>6</sup> Lynch, S. Kulpers, J., Pyke, C. & Szesze, M., (2005) Examining the effects of a highly rated science curriculum unit on diverse populations. Results from a planning grant, *Journal of Research in Science Teaching*. 42(8), 912-948.

Research studies and recommendations from nationally recognized mathematics and science experts such as Dr. Bill Schmidt from the University of Michigan have led the METS Coalition to support the implementation of NSF-funded research-based (standards-based) in Missouri schools as one of the methods for achieving METS strategies.

### **Mathematics Curriculum**

The mathematics curriculum grants must be used to equip classrooms with NSF-funded, research-based curriculum resource materials and provide teacher professional development needed to adopt and implement one of the eligible mathematics curricula. The METS mathematics group recommends the following curricula. Those noted with an asterisk (\*) indicate that professional development is readily available.

- Elementary Mathematics
  - \*Everyday Mathematics®
  - \*Investigations in Number, Data, and Space®
  - Math Trailblazers™
- Middle School (Junior High School) Mathematics
  - \*Connected Mathematics 2™
  - Mathematics in Context®
  - MathScape: Seeing and Thinking Mathematically™
  - MATH *Thematics*
- High School Mathematics
  - \*Contemporary Mathematics in Context© (also known as Core-Plus Mathematics)
  - Interactive Mathematics Program™
  - MATH *Connections*®: A Secondary Core Mathematics Curriculum
  - Mathematics: Modeling Our World
  - SIMMS: Integrated Mathematics

### **Science Curriculum**

The science curriculum grants must be used to equip classrooms with NSF-funded, research-based curriculum resource materials and provide teacher professional development needed to adopt and implement one of the eligible science curricula. The METS science group is prepared to support the following curricula:

- EBS (Event Based Science)  
<http://www.ebsinstitute.com/>
- FOSS (Full Option Science System)  
<http://www.lawrencehallofscience.org/foss/>
- IMaST (Integrated Mathematics, Science, & Technology)  
<http://www.cemast.ilstu.edu/programs/imast/index.shtml>
- SEPUP (Science Ed. for Public Understanding Program)  
<http://www.lawrencehallofscience.org/sepup/>
- STC (Science & Technology for Children)  
<http://www.carolinacurriculum.com/stc/>
- GEMS (Great Explorations in Math and Science)  
<http://www.carolinacurriculum.com/gems/>
- GLOBE Program  
[http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)
- CPO (Physics First)  
[http://www.cpo.com/tp\\_pfc\\_entry.shtml](http://www.cpo.com/tp_pfc_entry.shtml)
- ChemCom (Chemistry in the Community)  
<http://www.whfreeman.com/Chemcom/>

- BSCS Science Programs  
<http://www.bsccs.org/curriculumdevelopment/>
- Active Physics – Active Chemistry  
<http://www.its-about-time.com/htmls/ac/ac.html>

## PROGRAM RULES

### **Proposed projects must focus on school-wide adoption and implementation of an NSF research-based mathematics or science curriculum program.**

Teachers in schools receiving grant funds will participate in professional development provided by both the commercial vendors of the mathematics or science curriculum programs they purchase (if available) as well as professional development delivered by approved in-state mathematics or science providers. Professional development contact hours should total approximately seventy-five (75) hours in Year 1 and fifty (50) hours in Year 2 for a total of 125 hours over the two years of the project. Teacher professional development also includes two (2) days of substitute release each year of the program for all-day professional development sessions and/or visits to model classrooms implementing the curricula.

Projects should designate one primary focus area (mathematics or science). Teachers in the proposed school-wide implementation model must – particularly in middle, junior, and high schools – teach the primary focus subject. Teachers in elementary school implementations generally teach all other subjects as well; however, if elementary schools are departmentalized, the participating teachers must teach the primary focus subject (mathematics or science).

Grant funds are intended to be used to equip classrooms with the curriculum resources needed to fully implement high-quality mathematics or science instruction for an entire school. District matching funds will be required to ensure that the school-wide mathematics or science program includes all essential program requirements as described in the mathematics or science curriculum program design, including student texts, manipulative materials, and consumable supplies.

### **Eligible Applicants**

Eligible applicants include Missouri public school districts and charter LEAs. Applicant schools must be willing to commit to the two-year implementation process for a school-wide implementation of mathematics or science instruction curricula using NSF research-based programs, including all professional development requirements, replenishment of student consumables and manipulatives needed to implement the program for a minimum of two years.

Schools that currently have partial adoptions of the curricula required in the grant application are eligible to apply. Partial adoptions are defined as

- use of less than 50% of the core program elements by any number of teachers due to lack of materials or resources or teacher professional development required by the program, or
- use of more than 75% of the core program elements by fewer than 50% of the teachers in the school due to lack of materials or resources or teacher professional development required by the program, or
- entire grades or classrooms that lack the necessary materials or resources or teacher professional development to implement the program throughout the school.

Curriculum materials, resources or teacher professional development that the school/district has already purchased or invested in should be noted in the application. Partial adoptions may show a school commitment to using high quality curriculum even though all of the necessary components may not be available due to lack of resources.

Applicant schools and participating teachers must commit to meeting all professional development requirements and materials refurbishment the two-year program implementation commitment. The application requires signature from board-authorized representative, indicating the district has read and agrees to all assurances and matching funds requirement. The application also requires signature of the building principal and letters of understanding and commitment from all teachers involved in the proposed project's implementation.

### Grant Awards

It is the intent of the FY09 Mathematics and Science - METS School Grants Program to fund at least 24 school-wide projects (12 for mathematics curriculum and 12 for science curriculum): one elementary, one middle, and one high school implementation project per content area per quadrant. Grants are awarded for one year only. The size of the grant awards may not exceed the caps listed below.

<u>Grade Span</u>	<u>Maximum Mathematics Grant Request</u>	<u>Maximum Science Grant Request</u>
Elementary	\$105,000	\$118,000
Middle/Junior High	\$ 65,000	\$138,000
High	\$175,000	\$130,000

### District Match

Districts must provide a match of at least thirty percent (30%) of the total project costs, including all costs required to complete the two-year professional development programs involved. As a guiding rule, a district providing a match of around 5 percent in year one, plus all the necessary costs associated with the second year of professional development, should meet the overall 30 percent match requirement.

Costs will vary across projects, based on the schools size and implementation models. Customary expenses that districts may include in their district match include:

- Project orientation and leadership meetings:
  - mileage (district rate) for a one-day Orientation meeting in summer 2008 for building principal(s), district curriculum staff, and 2-3 representative teachers and for a one-day Leadership Institute for the same group in fall 2008 – location TBA for a round trip of approximately 150 miles
- Teacher professional development:
  - teacher stipends and any associated benefits (at district-approved rate) for up to 75 hours of professional development outside of contract time with an approved provider during Year 1
  - teacher stipends and any associated benefits (district rate) for up to 50 hours of professional development outside of contract time with an approved provider during Year 2
  - substitute teacher pay and any associated benefits (district rate) for 2 days of teacher release for professional development or visits to model classrooms in Year 1
  - substitute teacher pay and any associated benefits (district rate) for 2 days of teacher release for professional development or visits to model classrooms in Year 2
  - mileage (district rate) for 20 round trips of approximately 100 miles each for Year 1
  - mileage (district rate) for 10 round trips of approximately 100 miles each for Year 2

## **Application Requirements**

Applicant districts must:

- show financial and personnel commitment to the two-year intensive professional development program involved in the adoption of an NSF research-based mathematics or science curriculum.
- show financial and personnel commitment to the ongoing costs and activities involved in materials replenishment and/or kit refurbishment involved in the adoption of an NSF research-based mathematics or science curriculum
- show commitment to make the appropriate resources available for the teachers and students,
- document commitment to the matching fund requirement,
- agree that principals, curriculum and instruction staff, and representative applicant teachers in buildings awarded grant funds attend a one-day, summer Orientation program and one-day fall Leadership Institute,
- agree to share (publish) at least one exemplar lesson plan or unit in mathematics or science at the conclusion of Year 1, and
- agree to participate in program evaluation requirements at the conclusion of Year 2 of the project.

## **APPLICATION PROCEDURES**

**A district may only submit one Missouri METS Program application, and a district's application to the METS Mathematics and Science Grant Program may only address one grade span: elementary (K-6), middle or junior high (5-8) or high (9-12) school in one subject area (mathematics or science).**

### **Application Deadline**

Applications are due March 31. An application with original signatures must be submitted along with two copies. FY09 applications must be postmarked no later than March 31 or hand-delivered to the School Improvement section office (8th floor of the Jefferson Building, 205 Jefferson Street, Jefferson City) by 4:00 PM on March 31.

Note: In years where March 31 falls on a weekend, applications submitted by mail still must be postmarked no later than the deadline date but hand-delivered applications must be received in the section (8<sup>th</sup> floor of the Jefferson Office Building, Jefferson City) by no later than 4:00 p.m. on the following Monday.

### **Application Contact Person**

Each application requires designation of a project contact person. The contact person must be able to make decisions about the application and be available throughout the summer months. Ideally, the contact should be a building principal or central office administrator (e.g., a curriculum and instruction or elementary education coordinator).

### **Application Components**

Each application consists of forms provided by the Department and a project narrative to be created by the applicant using a word processing program. **The application should not exceed 25 pages in total (excluding forms and letter of understanding and commitment).**

The application should be constructed in the following order:

1. Application for State Assistance under the FY09 Mathematics and Science METS School Grants Program (form provided)
2. Proposed Budget for FY09 Mathematics and Science METS School Grants Program (form provided)
3. Project narrative and letter of understanding and commitment

## **Completing the Application for State Assistance**

Use the application cover form provided.

*For Department Use* – Do not complete this section. It will be completed by the Department should the application receive funding approval.

*District Information* – Provide details about the applicant district/LEA: district name, county-district code, and geographic quadrant. Provide project contact information: contact person name, title, email address, work and summer phone numbers.

*School Information* – Enter school name and address of the applicant school building. Enter principal name, principal's signature, and date of signature. Check the grade levels that will be served in the proposed project.

*Project Information* – Enter the two-year project total (including district match) and the state amount requested for FY09. Enter the numbers of teachers and students served by the project. Check the primary curriculum focus area.

*Project Assurances and Signatures* – A representative authorized by the board to submit the application should read and agree to project assurances by affixing his/her signature and entering the representative's name, title, and signature date.

## **Completing the Proposed Budget Form**

Use the proposed budget grid form provided.

*For Department Use* – Do not complete this section. It will be completed by the Department should the application receive funding approval.

*District Information* – Provide details about the applicant district. Insert district name, county-district code, and the contact information.

*School Building Information* – Enter the required information.

*Project Information* – Enter contact information for the project contact person.

*Project Financial Data* – Transfer amounts from the budget explanation in the narrative to the Proposed Information grid. (See the project narrative section, and tips for writing the narrative, for more details about developing the project budget.) Apply amounts by expense code (Salaries, Benefits, etc.) and function code (Curriculum/Instruction, Professional Development, and/or Facilities). Include all costs associated with the state amount requested, district match, and in-kind support as appropriate. **Round budget figures to whole dollar amounts.**

## **Completing the Project Narrative**

Using a word processor, develop the project narrative, addressing all components listed below. Write the narrative using the active voice. (See appendix for a grant writing checklist that provides examples of the types of information to be included in the narrative sections)

*Brief Project Summary* – Begin the project narrative with a very brief (50 words or less) summary of the project, which will be posted in a program abstract book. Describe the population targeted by the proposed project, the expected outcomes, and how the outcomes will be accomplished.

*Introduction* – Provide a descriptive, yet concise, overview of the proposal. This description should illustrate to grant reviewers an understanding of the purpose of the Mathematics and Science METS Grant Program. Include information such as the population targeted by the

project, the expected outcome(s), and how the outcome(s) will be accomplished. Include also a brief description of the community.

*Evidence of Need or Opportunity* – The purpose of this section is to demonstrate that there is an educational need and/or opportunity for the proposed Mathematics and Science METS school implementation. In describing the educational need for improvement and/or opportunity, be specific and indicate the sources of information. This section should be convincing but concise.

An **educational need** is characterized by a lack of achievement, lack of specialized instructional materials, or the necessity to establish an instructional program not previously offered by the district. Examples of an educational need might be low test scores on standardized tests or end-of-course assessments, lack of appropriate technology for instructional purposes, or lack of specialized services for students. Personal experience may be used, but personal experience alone is not sufficient. Provide a variety of sources. Data from sources such as the following might be used:

- standardized achievement tests;
- attitude, aptitude or interest inventories;
- questionnaires, opinion surveys, self-report scales, or structured interviews;
- direct systematic observation of student behavior;
- demographic or socioeconomic surveys;
- MSIP findings;
- school and agency records (e.g., drop-out rates, suspension rates, absentee rates); or
- state and local assessment studies made by other agencies or organizations.

An opportunity is created by a unique set of circumstances that could be transformed into a learning experience for local students. Examples of an **opportunity** might include:

- the proposed school in the applicant district has a teacher who was awarded an FY08 eMINTS-METS Classroom Grant project,
- the proposed school in the applicant district is working with mathematics or science education faculty members at a nearby university to align the district's mathematics curriculum with state and national standards,
- the proposed school in the applicant district has teachers who have participated in state or local initiatives or projects focused on improving mathematics and science instruction such as the Mathematics Professional Development Series (Missouri MAP Program), Missouri Elementary Mathematics Leadership Academy (University of Central Missouri), Missouri Middle School Math Academy (Drury University), MySci Project (St. Louis), PRISM (Northwest Missouri State University), Kansas City Life Sciences Institute programs, Kauffman Foundation, and others,
- the proposed school in the applicant district has teachers who are experienced in providing professional development to other teachers in NSF research-based mathematics or science instructional strategies, or
- a business is offering free materials, supplies, or technology resources to a school district for use in the science [or mathematics] curriculum.

*Curriculum Focus and Capacity to Serve as a Model School* – Provide assurances that describe the school's commitment to adopt and implement one of the required NSF research-based curriculum programs with a focus on high quality instruction. Fully describe the curriculum and specify the content area (mathematics or science) upon which the school is focusing. Provide dates of initial implementation and the length of implementation for any partial adoptions by describing when the curriculum was first implemented in the school or district and how long it has been in place. Describe how the grant funds will be used to accomplish a full adoption of the program.

Each teacher's professional development and advanced study preparation in mathematics or science should be described. The narrative should include a complete description of the teachers' capacity and experience to contribute to the overall model Mathematics and Science – METS school implementation and include the willingness of the school's teachers to provide opportunities to other educators for observations and visits in the future.

*Prior Planning and Local Commitment* – It is important to demonstrate that careful consideration has been given to those affected by the proposed school-wide Mathematics and Science – METS Grant implementation. Describe the process used to prepare the application, gather information, and solicit input from others. Include information pertaining to individual or group meetings with local educators, other persons pertinent to the planned school-wide implementation, parents, and the community. A chronology of planning is recommended.

Attach letters indicating each teacher's commitment to successful implementation of the proposed project.

*Goals and Objectives* – Provide a **goal** statement which relates directly to the target population and the stated need/opportunity and includes the expected overall results of implementing the mathematics or science curriculum offered in the Mathematics and Science - METS Grant program.

Each application is required to provide a minimum of **two objectives (one objective each for students and teachers)** that detail expected learning outcomes for teachers and students at the conclusion of the one-year grant period AND at the conclusion of the two-year professional development period. Additional objectives (maximum of two) focused on others (such as parents or community members) may be provided but are not required.

Each objective should indicate who will do what, how well, when, and according to what measurement instrument. Objectives should be stated in measurable terms, be easily measured and communicated, and be reflected in the evaluation. Notes: performance on objectives must be *reportable* for the end-of-year reports due June 30. Student outcomes should NOT include Missouri Assessment Program (MAP) results, as these results are typically not released until after the June 30 reporting deadline and the eMINTS National Center external evaluator will collect and analyze student MAP results at the conclusion of participating teachers' second year of professional development.

Indicate the **evaluation** plan for each objective. The evaluation plan should describe how the attainment or degree of attainment of each objective is to be measured. Helpful questions to ask when writing objectives are, "What do I want to accomplish?" "When should I expect this to be accomplished?" and "How will I be able to tell it has been accomplished?"

Following are some examples of easily communicated, measurable objectives and the evaluation of each objective:

### **Examples of REQUIRED Teacher Learning Objectives:**

#### **Year 1 Example:**

*Objective:* By the end of Year 1 of the adoption of the *Connected Mathematics Program (CMP)*, participating teachers will submit two original lesson plans in mathematics that expand upon topics included in the CMP. The lesson plans will successfully meet all criteria for high-quality inquiry-based lesson plans as established by the Mathematics/Science-METS program. *Evaluation Plan:* The lesson plans submitted by teachers will be scored against the program's established criteria. An aggregate score for all teachers will be submitted by the project contact in the end-of-Year 1 Project Evaluation Report. [Note: The Department is in

the process of identifying the organization that will help with establishing the lesson plan criteria and scoring lessons submitted for review.]

**Year 2 Example:**

*Objective:* By the end of Year 2 of the adoption of the *Connected Mathematics Program (CMP)*, participating teachers design and offer a one-day introductory seminar for at least 20 area teachers on the use of CMP in middle school mathematics. *Evaluation Plan:* The project contact will assist teachers with the logistics and marketing of the seminar to surrounding schools. The seminar agenda, records of attendance, and participant ratings will be submitted in the Final Evaluation Report.

**Examples of REQUIRED Student Learning Objectives:**

**Year 1 Example:**

*Objective:* By the end of Year 1, 90% of targeted students will score at the “proficient” level on a district-developed common mathematics assessment based on grade level expectations (GLEs). *Evaluation Plan:* Participating teachers will administer the common assessment during the first two weeks of school. A similar test will be given during the last month of school and comparisons made of the two sets of scores. Skills tested will focus on number operations items. Scores from the pre and post tests will be compiled by the project contact for inclusion in the end-of-Year 1 Project Evaluation Report.

**Year 2 Example:**

*Objective:* By the end of Year 2, 90% of targeted students will score at the “proficient” level on at least two constructed response items (see note below) for their appropriate grade levels. *Evaluation Plan:* Participating teachers will administer the assessment items during one class period in the last month of the school year. Scoring guides and score points will be created and determined by grant teachers based upon scoring criteria provided with assessment items. Teachers will score each other’s student responses for impartiality. Scores will be reported to the project contact for inclusion in the Final Evaluation Report.

Note: Appropriate constructed response items may be selected from MAP and/or NAEP released items, *Mathematics Assessment Sampler* (NCTM) items, and other appropriate resources as approved.

**Example of Optional Community Objective:**

**Year 1 Example:**

*Objective:* By the end of the 2008-09 school year, 80% of eligible parents will demonstrate involvement in their child’s mathematics education by participating in at least two [of four] parent workshops. *Evaluation Plan:* Facilitators will keep records and document parent participation. Records of parent participation will be summarized by the project contact and submitted for inclusion in the end-of-Year 1 Project Evaluation Report.

**Year 2 Example:**

*Objective:* By the end of the 2009-2010 school year, selected students will make a 20 minute presentation to the School Board showing their academic progress and understanding of complex mathematical concepts. *Evaluation Plan:* Project contact will include a copy of the presentation in the Final Evaluation Report along with a record of comments from Board members.

The narrative should also reflect district and school willingness to participate in required program evaluation activities (provision of teacher lesson plans) and the district’s willingness to provide student roster information to assist in the program’s MAP analysis.

*Activities (Including Dissemination)* – State teachers’ professional development activities and how the activities will be completed. Describe the professional development to be provided by the curriculum program vendor providing the curriculum materials along with in-state professional development delivered by approved in-state providers. Describe how the in-state professional development activities meet best practices in mathematics and science professional development (see Loucks-Horsley, *Designing Professional Development for Teachers of Science and Mathematics*, 2003).

Applicants should also describe the major learner/student activities of the proposed school-wide Mathematics and Science – METS Grant implementation. Include a schedule showing the dates of activities. Tie the planned activities to the stated need/opportunity statement, goal, and objectives.

Describe how the materials and procedures that are part of the mathematics or science curriculum will be used in classrooms. Additional activities might include:

- assessment of needs,
- discussions with parents, other teachers, or students,
- providing training sessions for other teachers,
- providing open-house observation opportunities for parents and community members,
- periodic assessment of progress in teaching strategies, and/or
- community cooperation or curriculum alignment.

*Budget Explanation* – Include a description and itemization of estimated costs of each proposed budget activity and expenditure (including state and district dollars) necessary to complete the proposed two-year professional development programs... Curriculum components such as teacher resource kits, specific titles and publishers, hourly rates of pay and other pertinent information should be detailed appropriately. Round budget amounts to whole dollars.

For each budget category (salaries, employee benefits, etc.) describe the purpose and the amount for which the funds are to be expended. Be specific. For example, since district matching funds may be expended for substitutes, provide the cost for each substitute per day. Subtotals should add up to the totals listed on the provided proposed budget form.

Following are examples of how to format a Budget Explanation for an elementary school and for a secondary (middle/junior or high) school.

Elementary Budget Explanations

- Elementary **mathematics** implementation (based on 12 elementary teachers with 24 students per classroom) *Everyday Mathematics* published by McGraw-Hill

	YEAR 1			YEAR 2	PROJECT
<b>6100 Salaries</b>	<b>State Request</b>	<b>District Match</b>	<b>Year 1 Total</b>	<b>District Match</b>	<b>TOTAL</b>
Stipends – Elementary – <i>Everyday Mathematics</i> [number teachers X hours X district stipend rate] Yr 1: 12 X 75 hours @ \$18 = \$16200 Yr 2: 12 X 50 hours @ \$18 = \$10800	\$16,200	\$0	\$16,200	\$10,800	\$27,000
Teacher substitutes – <i>Everyday Mathematics</i> [number teachers X days X district sub-pay rate] Yr 1: 12 X 2 @ \$75 = \$1800 Yr 2: Not applicable	\$0	\$1,800	\$1,800	\$0	\$1,800
<b>SALARIES TOTAL</b>	<b>\$16,200</b>	<b>\$1,800</b>	<b>\$18,000</b>	<b>\$10,800</b>	<b>\$28,800</b>

<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$2,187	\$2,187	\$1,458	\$3,645
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$2,187</b>	<b>\$2,187</b>	<b>\$1,458</b>	<b>\$3,645</b>
<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$0	\$5,000	\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$22,500	\$7,500	\$30,000	\$18,000	\$48,000
Mileage for training – <i>Everyday Mathematics</i> [# cars X trips X miles X district mileage rate] Yr 1: 3 X 20 X 60 @ \$.30 = \$1080 Yr 2: 3 X 12 X 60 @ \$.30 = \$648	\$1,080	\$0	\$1,080	\$648	\$1,728
Mileage – Orientation/Leadership Team Meetings 2 cars X 2 trips x 150 miles @ \$.30 = \$180	\$180	\$0	\$180	\$0	\$180
<b>PURCHASED SERVICES TOTAL</b>	<b>\$23,760</b>	<b>\$12,500</b>	<b>\$36,260</b>	<b>\$23,000</b>	<b>\$59,260</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 12 kits @ \$275 per teacher	\$3,300	\$0	\$3,300	\$0	\$3,300
Student consumables – Mathematics [describe and itemize] 288 students @ \$21 each	\$6,048	\$0	\$6,048	\$0	\$6,048
Student manipulatives [describe and itemize] 12 classroom sets @ \$2880 each	\$34,560	\$0	\$34,560	\$0	\$34,560
Other [describe and itemize] printing and supplies @ \$100 per room per year	\$1,200	\$0	\$1,200	\$1,200	\$2,400
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$45,108</b>	<b>\$0</b>	<b>\$45,108</b>	<b>\$1,200</b>	<b>\$46,308</b>
<b>6500 Capital Outlay</b>					
Not applicable					
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$85,068</b>	<b>\$16,487</b>	<b>\$101,555</b>	<b>\$36,458</b>	<b>\$138,013</b>
<b>State Request Percentage</b>			84%		62%
<b>District Match Percentage</b>			16%		38%

- Elementary **science** implementation (based on 12 elementary teachers with 24 students per classroom) *Full Option Science System (FOSS)* Delta Education

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Year 1 Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – Elementary – Science ( <i>FOSS</i> ) [number teachers X hours X district stipend rate] Yr 1: 12 X 75 hours @ \$18 = \$16200 Yr 2: 12 X 50 hours @ \$18 = \$10800	\$16,200	\$0	\$16,200	\$10,800	\$27,000
Teacher substitutes – Elem. Science ( <i>FOSS</i> ) [number teachers X days X district sub-pay rate] Yr 1: 12 X 2 @ \$75 = \$1800 Yr 2: Not applicable	\$0	\$1,800	\$1,800	\$0	\$1,800
<b>SALARIES TOTAL</b>	<b>\$16,200</b>	<b>\$1,800</b>	<b>\$18,000</b>	<b>\$10,800</b>	<b>\$28,800</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$2,187	\$2,187	\$1,458	\$3,645
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$2,187</b>	<b>\$2,187</b>	<b>\$1,458</b>	<b>\$3,645</b>

<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$5,000	\$0	\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$22,500	\$7,500	\$30,000	\$18,000	\$48,000
Mileage for training – Elem. Science (FOSS) [# cars X trips X miles X district mileage rate] Yr 1: 3 X 20 X 60 @ \$.30 = \$1080 Yr 2: 3 X 12 X 60 @ \$.30 = \$648	\$1,080	\$0	\$1,080	\$648	\$1,728
Mileage – Orientation/Leadership Team Meetings 2 cars X 2 trips x 150 miles @ \$.30 = \$180	\$180	\$0	\$180	\$0	\$180
<b>PURCHASED SERVICES TOTAL</b>	<b>\$27,500</b>	<b>\$8,760</b>	<b>\$36,260</b>	<b>\$23,648</b>	<b>\$59,908</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 12 kits @ \$275 per teacher	\$3,300	\$0	\$3,300	\$0	\$3,300
Student consumables – Science [describe and itemize] 288 students @ \$35 each	\$10,080	\$0	\$10,080	\$0	\$10,080
Student manipulatives – Science [describe and itemize] 12 classroom sets @ \$1950	\$23,400	\$0	\$23,400	\$0	\$23,400
Other [describe and itemize] printing and supplies @ \$100 per room per year	\$0	\$1,200	\$1,200	\$1,200	\$2,400
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$36,780</b>	<b>\$1,200</b>	<b>\$37,980</b>	<b>\$1,200</b>	<b>\$39,180</b>
<b>6500 Capital Outlay</b>					
Not applicable					
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$80,480</b>	<b>\$13,947</b>	<b>\$94,427</b>	<b>\$37,106</b>	<b>\$131,533</b>
<b>State Request Percentage</b>			85%		61%
<b>District Match Percentage</b>			15%		39%

### Middle School Budget Explanations

- Middle school **mathematics** implementation (based on 4 middle school mathematics teachers working with 125 students each) *Connected Mathematics Program* Pearson Learning

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Year 1 Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – MS – <i>Connected Mathematics</i> [number teachers X hours X district stipend rate] Yr 1: 4 X 75 hours @ \$18 = \$5400 Yr 2: 4 X 50 hours @ \$18 = \$3600	\$0	\$5,400	\$5,400	\$3,600	\$9,000
Teacher substitutes – MS <i>Connected Mathematics</i> [number teachers X days X district sub-pay rate] Yr 1: 4 X 2 @ \$75 = \$600 Yr 2: Not applicable	\$0	\$600	\$600	\$0	\$600
<b>SALARIES TOTAL</b>	<b>\$0</b>	<b>\$6,000</b>	<b>\$6,000</b>	<b>\$3,600</b>	<b>\$9,600</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$729	\$729	\$486	\$1,215
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$729</b>	<b>\$729</b>	<b>\$486</b>	<b>\$1,215</b>

<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$5,000	\$0	\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$10,000	\$0	\$10,000	\$6,000	\$16,000
Mileage for training – MS <i>Connected Mathematics</i> [# cars X trips X miles X district mileage rate] Yr 1: 1 X 20 X 60 @ \$.30 = \$360 Yr 2: 1 X 12 X 60 @ \$.30 = \$216	\$0	\$360	\$360	\$216	\$576
Mileage – Orientation/Leadership Team Meetings 1 car X 2 trips x 150 miles @ \$.30 = \$180	\$0	\$90	\$90	\$0	\$90
<b>PURCHASED SERVICES TOTAL</b>	<b>\$15,000</b>	<b>\$450</b>	<b>\$15,450</b>	<b>\$11,000</b>	<b>\$26,450</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 4 kits @ \$170 each	\$0	\$680	\$680	\$0	\$680
Student consumables – Mathematics [describe and itemize] 4 kits/room @ \$1470/kit	\$23,520	\$0	\$23,520	\$0	\$23,520
Student manipulatives – Mathematics [describe and itemize] 4 classrooms @ \$3500	\$14,000	\$0	\$14,000	\$0	\$14,000
Other (e.g., printing/ supplies @ \$300/room in year 1 and \$100/room in year 2)	\$0	\$1,200	\$1,200	\$400	\$1,600
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$37,520</b>	<b>\$1,880</b>	<b>\$39,400</b>	<b>\$400</b>	<b>\$39,800</b>
<b>6500 Capital Outlay</b>					
Not applicable					
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$52,520</b>	<b>\$9,059</b>	<b>\$61,579</b>	<b>\$15,486</b>	<b>\$77,065</b>
<b>State Request Percentage</b>			85%		68%
<b>District Match Percentage</b>			15%		32%

- Middle school **science** implementation (based on 4 middle school science teachers working with 125 students each) *Biological Sciences Curriculum Study (BSCS)* Kendall Hunt

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – MS – <i>Biological Sciences</i> [number teachers X hours X district stipend rate] Yr 1: 4 X 75 hours @ \$18 = \$5400 Yr 2: 4 X 50 hours @ \$18 = \$3600	\$0	\$5,400	\$5,400	\$3,600	\$9,000
Teacher substitutes – MS – <i>Biological Sciences</i> [number teachers X days X district sub-pay rate] Yr 1: 4 X 2 @ \$75 = \$600 Yr 2: Not applicable	\$0	\$600	\$600	\$0	\$600
<b>SALARIES TOTAL</b>	<b>\$0</b>	<b>\$6,000</b>	<b>\$6,000</b>	<b>\$3,600</b>	<b>\$9,600</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$729	\$729	\$486	\$1,215
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$729</b>	<b>\$729</b>	<b>\$486</b>	<b>\$1,215</b>
<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$5,000		\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$0	\$10,000	\$10,000	\$6,000	\$16,000

Mileage for training – MS – <i>Biological Sciences</i> [# cars X trips X miles X district mileage rate] Yr 1: 1 X 20 X 60 @ \$.30 = \$360 Yr 2: 1 X 12 X 60 @ \$.30 = \$216	\$0	\$360	\$360	\$216	\$576
Mileage – Orientation/Leadership Team Mtgs 1 car X 2 trips x 150 miles @ \$.30 = \$90	\$0	\$90	\$90	\$0	\$90
<b>PURCHASED SERVICES TOTAL</b>	<b>\$5,000</b>	<b>\$10,450</b>	<b>\$15,450</b>	<b>\$11,000</b>	<b>\$26,450</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 4 kits @ \$680 per teacher	\$2,720	\$0	\$2,720	\$0	\$2,720
Student consumables – <i>Biological Sciences</i> [describe and itemize] 4 kits per room @ \$2800 and replacements for year 2	\$44,800	\$0	\$44,800	\$16,000	\$44,800
Student manipulatives [describe and itemize] 4 classroom kits @ \$5100	\$20,400	\$0	\$20,400	\$0	\$20,400

Science Probes/Jason Wireless Station/ Microscope Set (one per room @ \$3000)	\$12,000	\$0	\$12,000	\$0	\$28,000
Other [describe and itemize] (e.g., printing and supplies @ \$100 per room per year)	\$400	\$0	\$400	\$400	\$800
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$80,320</b>	<b>\$0</b>	<b>\$80,320</b>	<b>\$16,400</b>	<b>\$96,720</b>
<b>6500 Capital Outlay</b>					
Not applicable					
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$85,320</b>	<b>\$17,179</b>	<b>\$102,499</b>	<b>\$31,486</b>	<b>\$133,985</b>
<b>State Request Percentage</b>			83%		64%
<b>District Match Percentage</b>			17%		36%

### High School Budget Explanations

- High school **mathematics** implementation (based on 6 high school mathematics teachers with 100 students each) *Core Plus Mathematics* Glencoe/McGraw Hill

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – HS – <i>Core Plus Mathematics</i> [number teachers X hours X district stipend rate] Yr 1: 6 X 75 hours @ \$18 = \$8100 Yr 2: 6 X 50 hours @ \$18 = \$5400	\$0	\$8,100	\$8,100	\$5,400	\$13,500
Teacher substitutes – HS <i>Core Plus Math</i> [number teachers X days X district sub-pay rate] Yr 1: 6 X 2 @ \$75 = \$900 Yr 2: Not applicable	\$900	\$0	\$900	\$0	\$900
<b>SALARIES TOTAL</b>	<b>\$900</b>	<b>\$8,100</b>	<b>\$9,000</b>	<b>\$5,400</b>	<b>\$14,400</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$1,094	\$1,094	\$729	\$1,823
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$1,094</b>	<b>\$1,094</b>	<b>\$729</b>	<b>\$1,823</b>
<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$5,000	\$0	\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$0	\$15,000	\$15,000	\$9,000	\$24,000

Mileage for training – <i>Core Plus Mathematics</i> [# cars X trips X miles X district mileage rate] Yr 1: 2 X 20 X 60 @ \$.30 = \$1080 Yr 2: 2 X 12 X 60 @ \$.30 = \$432	\$0	\$720	\$720	\$432	\$1,152
Mileage – Orientation/Leadership Team Mtgs [2 cars X 2 trips x 150 miles @ \$.30 = \$180]	\$0	\$180	\$180	\$0	\$180
<b>PURCHASED SERVICES TOTAL</b>	<b>\$5,000</b>	<b>\$15,900</b>	<b>\$20,900</b>	<b>\$14,000</b>	<b>\$34,900</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 6 kits @ \$300 per teacher	\$1,800	\$0	\$1,800	\$0	\$1,800
Student consumables – <i>Core Plus Mathematics</i> [describe and itemize] 4 sets/room @ \$2520/room and replacements for year 2	\$60,480	\$0	\$60,480	\$9,000	\$69,480
Student manipulatives [describe and itemize] 1 set/room (for 140 students each) @ \$9100	\$54,600	\$0	\$54,600	\$0	\$54,600
Other [describe and itemize] printing and supplies @ \$100 per room per year	\$600	\$0	\$600	\$0	\$600
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$117,480</b>	<b>\$0</b>	<b>\$117,480</b>	<b>\$9,000</b>	<b>\$126,480</b>
<b>6500 Capital Outlay</b>					
Not applicable	\$0	\$0	\$0	\$0	\$0
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$123,380</b>	<b>\$25,094</b>	<b>\$148,474</b>	<b>\$29,129</b>	<b>\$177,603</b>
<b>State Request Percentage</b>			83%		69%
<b>District Match Percentage</b>			17%		31%

- High school **Science** Implementation (based on 6 high school science teachers with 100 students each) *Physics First in physics and Full Option Science System (FOSS) in biology*

	YEAR 1			YEAR 2	PROJECT
	State Request	District Match	Total	District Match	TOTAL
<b>6100 Salaries</b>					
Stipends – HS – <i>Physics First &amp; FOSS</i> [number teachers X hours X district stipend rate] Yr 1: 6 X 75 hours @ \$18 = \$8100 Yr 2: 6 X 50 hours @ \$18 = \$5400	\$0	\$8,100	\$8,100	\$5,400	\$13,500
Teacher substitutes – HS <i>Physics First &amp; FOSS</i> [number teachers X days X district sub-pay rate] Yr 1: 6 X 2 @ \$75 = \$900 Yr 2: Not applicable	\$0	\$900	\$900	\$0	\$900
<b>SALARIES TOTAL</b>	<b>\$0</b>	<b>\$9,000</b>	<b>\$9,000</b>	<b>\$5,400</b>	<b>\$14,400</b>
<b>6200 Benefits</b>					
Benefits for teachers in training at XX% [e.g., Total Stipend Amount x 13.5%]	\$0	\$1,094	\$1,094	\$729	\$1,823
<b>BENEFITS TOTAL</b>	<b>\$0</b>	<b>\$1,094</b>	<b>\$1,094</b>	<b>\$729</b>	<b>\$1,823</b>
<b>6300 Purchased Services</b>					
Professional Development services					
• Organizational fee (\$5,000 per year)	\$0	\$5,000	\$5,000	\$5,000	\$10,000
• Participants (Yr 1 @ \$2500 per teacher and Yr 2 @ \$1500 per teacher)	\$7,500	\$7,500	\$15,000	\$9,000	\$24,000
Mileage for training – HS <i>Physics First &amp; FOSS</i> [# cars X trips X miles X district mileage rate] Yr 1: 2 X 20 X 60 @ \$.30 = \$720 Yr 2: 2 X 12 X 60 @ \$.30 = \$432	\$0	\$720	\$720	\$432	\$1,152

Mileage – Orientation/Leadership Team Mtgs 2 cars X 2 trips x 150 miles @ \$.30 = \$180	\$0	\$180	\$180	\$0	\$180
<b>PURCHASED SERVICES TOTAL</b>	<b>\$7,500</b>	<b>\$13,400</b>	<b>\$20,900</b>	<b>\$14,000</b>	<b>\$34,900</b>
<b>6400 Materials and Supplies</b>					
Teacher resource kits [describe and itemize] 6 kits @ \$275 per teacher	\$3,000	\$0	\$3,000	\$0	\$3,000
Student consumables – <i>Physics First &amp; FOSS</i> [describe and itemize] 4 sets/room @ \$2520/room and replacements for year 2	\$60,480	\$0	\$60,480	\$7,200	\$67,680
Science kits (3 sets per classroom)	\$36,000	\$0	\$36,000	\$0	\$36,000
Additional student consumables @ \$1500/room	\$9,000	\$0	\$9,000	\$0	\$9,000
Other [describe] (e.g., printing and supplies)	\$600	\$0	\$600	\$0	\$600
<b>MATERIALS AND SUPPLIES TOTAL</b>	<b>\$109,080</b>	<b>\$0</b>	<b>\$109,080</b>	<b>\$7,200</b>	<b>\$116,280</b>
<b>6500 Capital Outlay</b>					
Not applicable					
<b>CAPITAL OUTLAY TOTAL</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTALS</b>	<b>\$116,580</b>	<b>\$23,494</b>	<b>\$140,074</b>	<b>\$27,329</b>	<b>\$167,403</b>
<b>State Request Percentage</b>			83%		70%
<b>District Match Percentage</b>			17%		30%

### Allowable Costs

Only costs associated with implementing the Mathematics and Science – METS Grant program will be approved. Costs will vary depending on variables such as the number of students in the classrooms and current curriculum resources available.

Grant funds may only be used to purchase curriculum resources needed for adoption and implementation of an NSF research-based mathematics or science curriculum as well as for content-specific technology and equipment needed to fully implement the curriculum.

Districts are responsible for costs associated with local data collection and analysis needed to demonstrate achievement of goals or objectives outlined in the proposal narrative. The organization fees charged to participating districts will cover program-level evaluation costs. [Note: The Department is in the process of identifying an organization to coordinate program evaluation for the Mathematics/Science-METS grants.]

**SALARIES (6100) – Must be obligated by May 1 (state and district match dollars)**

Payment of professional and nonprofessional salaries and stipends will be allowed at district-approved rates. This applies to additional staff members necessary to carry out the project and for work performed by existing staff outside the regular school day, term, or year. Performance of services by staff already employed by the district must occur outside the contracted hours for the school district (e.g., after all teachers are released for the day/school year, before the time teachers are required to begin the day/school year, or during scheduled vacations).

The Mathematics/Science-METS organization (to be announced) will maintain attendance records for teachers participating in mathematics or science professional development sessions. Quarterly reports of teacher attendance will be provided to participating districts for calculation of teacher stipends. Stipends should be paid quarterly, based on actual attendance. Stipends should not be paid in lump sums prior to teachers' completion of the professional development program hours.

**BENEFITS (6200) – District match and must be obligated by May 1.**

The applicant district is expected to cover the benefits for stipends and substitute teacher salaries associated with teachers in professional development programs with approved providers.

**PURCHASED SERVICES (6300) – Must be obligated by May 1.**

Purchased services result when work for a district or building is completed by an individual not on the district's payroll or a service is purchased from a source outside the district.

Fees paid to approved professional development organizations and organizational fees are also considered purchased services. The applicant district is expected to cover any costs associated with the collection and analysis of school data needed to demonstrate achievement of goals or objectives outlined in the proposal narrative.

**MATERIALS AND SUPPLIES (6400) – Must be obligated by March 31**

Items that are consumed in use, have a reasonably short life, are more feasibly replaced than repaired, or cost \$999 or less per unit, and all software, regardless of price, are considered Materials and Supplies. Examples of allowable Materials and Supplies expenditures are listed below. Unless otherwise noted, expenditures are limited to classroom curriculum costs and may include:

- consumable student resource materials
- manipulatives used by students
- teacher resource kits
- science kits
- supplemental instructional software for teacher or student use
- science probes
- graphing calculators
- teacher assessment resource books

**CAPITAL OUTLAY (6500) – Must be obligated by March 31**

Items that are electrical or mechanical in nature have a useful life of at least one year or cost \$1000 or more per unit are considered Capital Outlay. The deciding factor is the unit cost. The following are examples of allowable Capital Outlay expenditures:

### **Unallowable Costs**

Grant funds may not be used to:

- purchase student response systems or classroom management software
- construct, remodel, or prepare the site including air conditioning,
- pay administrative or indirect costs,
- pay fees for college credit, or
- supplant existing positions, programs, or services.

### **Assurances and Submission Process**

To submit a grant application, a representative authorized by the local district/LEA must agree to program assurances for the school for which an application is submitted. The submission of the grant assures the Department that the board-authorized representative fully understands the assurances and the responsibility for compliance placed upon the applicant by the assurances. The applicant will refund directly to the Department the amount of any funds made available to the applicant, which may be determined, by the Department or an auditor representing the Department, to have been misspent or otherwise misapplied.

## **APPLICATION REVIEW AND APPROVAL PROCESS**

### **Review Criteria**

The Mathematics and Science - METS Grant applications are evaluated through a peer review of the project narratives, using the established criteria listed below.

## APPLICATION NARRATIVE SCORING CRITERIA

### *Introduction (10 points)*

- The introduction provides an easily understood, clear description of the proposed project.
- The introduction describes the target population, expected outcomes, and the process for achieving these outcomes.

### *Evidence of Need or Opportunity (15 points)*

- The educational need or opportunity is well documented with local data and evidence.
- The educational need or opportunity is significant for the school.

### *Focus on Mathematics/Science Curriculum and Capacity to Serve as Model School (15 points)*

- The narrative provides a clear description of the mathematics and/or science curriculum that is being implemented and/or will be implemented.
- The narrative indicates the specific grade(s), curricular content area, and explains how the curriculum meets the intent and purpose of the Mathematics and Science – METS Grant program.
- Prior experience in school's participation in state-wide or national mathematics or science curriculum initiatives (such as implementing NSF-funded or other research-based curriculum) is described in sufficient detail, indicating start date and how long implementation has been in place in the district, school, or grades.
- Applicant indicates willingness to serve as a model school, detailing appropriate teachers' credentials, prior experiences, or knowledge/skills related to content rigor, master teaching, and/or educational research.

### *Prior Planning and Local Commitment (15 points)*

- Direct involvement of proposed implementers, school personnel, and/or community personnel in the planning of the proposed program is documented.
- The planning reflects a systemic approach to directly address the stated educational need or opportunity.
- Letters of commitment indicate applicant administration's commitment to fulfill all project evaluation requirements at the conclusion of the two-year professional development and program implementation.

### *Goals and Objectives (20 points)*

- The goal(s) and objectives directly address the stated opportunity or educational need for the target population.
- The required number of objectives describes measurable, anticipated, and beneficial changes in an identified target population (teachers - required, students - required, and parents - optional).
- The proposed evaluation procedures use appropriate assessment measures that will provide objective data about the success of the project.

### *Activities (Including Dissemination) (15 points)*

- The planned activities include a description of the major learner activities and deadlines, and relate to the goals, objectives, and evaluation of the proposed project.
- The activities listed include a plan to disseminate information about the project to the local community, educators within the district and other educators.

### *Budget Explanation (10 points)*

- Budget items directly relate to the proposed project's identified target population(s) and stated need/opportunity, goals, objectives, and activities.
- The proposed project is based on a desire for instructional improvement rather than an "opportunistic" approach to securing equipment, materials, etc.

## ECONOMIC NEED SCORING CRITERIA

Department staff assign additional points, based on economic need, using data supplied by districts via the Department's core data collection system. Economic need scores (up to 10 points possible) are based on the applicant school building's rate of students eligible for the Free and Reduced Lunch program and assigned according to the following table.

Free/Reduced Lunch Percentage Rate	Assigned Score
81.4% or higher	10
66.4 – 81.3%	9
59.1 – 66.3%	8
51.3 – 59.0%	7
45.1 – 51.2%	6
39.3 – 45.0%	5
33.7 – 39.2%	4
26.1 – 33.6%	3
17.7 – 26.0%	2
17.6% or lower	1

## FY09 MATHEMATICS or SCIENCE-METS SCHOOL GRANTS PROGRAM – GRANT WRITING GUIDING QUESTIONS

*Following are the narrative components of the Mathematics and Science-METS School Grants Program application, along with guiding questions to help grant writers align grant narratives with the scoring criteria.*

### **Brief Project Summary**

Begin the grant narrative with a brief (50 words or less) summary of the project, describing the target population, the expected outcomes, and how the outcomes will be accomplished.

### **Introduction** (10 points possible)

Provide a descriptive, yet concise, overview of the proposal. Describe the target population, the curriculum, expected outcomes, and the activities for accomplishing the outcomes. Include a brief description of the district and/or school community.

- Does the narrative describe the school community, target population, the major implementation strategies, and the expected outcomes of the proposed project?
  - *Did you provide district or school community demographics, such as location, rural/urban, enrollment, and other pertinent socio-economic characteristics?*
  - *Did you provide an overview of the proposed project in terms of the target population, major implementation strategies, and expected outcomes?*
  - *Did you describe the key stakeholders who will be directly and indirectly affected by the proposed project, such as teachers, students, parent, or others? Is it clear what teachers will participate in what mathematics or science professional development program, who they are, their curriculum focus area(s), and the numbers of students impacted?*
  - *What are your expected outcomes? What major strategies do you plan to implement to produce the outcomes?*

### **Evidence of Need or Opportunity** (15 points possible)

Describe the educational need and/or opportunity for the proposed project and implementation of the eMINTS instructional model. Provide relevant teaching and learning performance information and discussion of how the proposed project will meet the needs described.

- Does the narrative detail the educational need?
  - *What information or needs assessments were used in determining need for the proposed project? Do the need assessments address needs of all key stakeholders, such as principals, teachers, students, parents, or others?*
  - *What evidence and data have been analyzed to indicate an educational need for the proposed project? Are the kinds of data appropriate and useful in examining project needs in a comprehensive manner?*
- Does the narrative explain an opportunity for improvement?

- *Does the narrative describe unique resources/services that are available to the district, school, and/or teachers that likely could transform teaching and learning in the classroom?*

**Prior Mathematics/Science Curriculum and Capacity to Serve as Model** (15 points possible)

Indicate the mathematics and/or science curriculum that is being implemented (or will be implemented) and fully describe how it meets program requirements (developed or recognized by the NSF). Provide evidence of professional development, advanced study, or other credentials that detail the capacity of the school's teachers to serve as a model.

- Does the narrative detail the prior curriculum implementation?
  - *Does the narrative describe adequately the curriculum being used to address the primary focus areas? What are they and are they NSF-funded and/or standards based? How long have they been used in the school or district (if applicable)?*
- Does the narrative detail capacity of school personnel to serve as a model school?
  - *What credentials, knowledge, skills, and experiences does the school have to indicate capacity to serve as a model for the program?*

**Prior Planning and Local Commitment** (15 points possible)

Describe the process and information used to develop the proposed project and prepare the application. Include information pertaining to individual or group meetings with local educators and others pertinent to the planned project. Attach letters from the applicant teachers that indicate understanding of program requirements and commitment to successful project implementation.

- Does the narrative detail the planning process used to develop the application/proposed project?
  - *What methods and strategies did you use in determining the need for your proposed project and designing the project details? Did the school leadership help to arrange planning meetings, allow teachers and other personnel to visit other schools, and/or assist in the planning process?*
  - *Who was involved in the planning and design process? Were all the key stakeholders adequately represented? What roles and responsibilities did each plan in the planning and design process?*
- Does the narrative detail the school's understanding of and commitment to the proposed project?
  - *Do letters of the key stakeholders indicate understanding of the program components and commitment to successful implementation of the proposed project? Do they acknowledge and address the commitment of the school to complete the two-year projects (which extend beyond the one-year grant period)? Does the applicant explain how the necessary match requirements will be fulfilled and how the project will be supported and expanded in the future?*
  - *How do the letters indicate individual and/or collective commitment to completing the professional development sessions, implementing the instructional strategies, and fulfilling reporting and evaluation requirements?*

### **Goals and Objectives** (20 points possible)

Provide an overall project goal that relates directly to the target population and the stated need/opportunity. Provide a minimum of **two objectives (one objective each for students and teachers)** that detail expected learning outcomes for teachers and students at the conclusion of the one-year grant period AND at the conclusion of the two-year professional development period. Additional objectives (maximum of two) focused on others (such as parents or community members) may be provided but are not required. Objectives should be stated in measurable terms, indicating who will do what, how well, when, according to what measurement.

Does the narrative describe the overall goal of the proposed project?

- *Is there a statement of the overall purpose for the grant project and does it address the target focus areas, populations, major implementation strategies, and expected outcomes?*
- *Does the goal statement address program goals, relate to the stated need and/or opportunity statements for the proposed project, and can it be reasonably achieved by project completion?*
- Does the narrative detail appropriate objectives of the proposed project?
  - *Are there the required number of specific objectives that align with required and optional evaluative information?*
  - *Do the objectives detail the learners, what they will do or know, the instruments that will be used to assess progress, and when the assessments will occur? Do the measures align with need and project implementation? How well can the expected results be attributed to the project?*
  - *Do the objectives provide meaningful and useful data? Are they realistic and will they result in beneficial and significant change?*

### **Activities (Including Dissemination)** (15 points possible)

Describe the major teacher and student development activities, including a timeline or schedule of the planned implementation strategies. Describe how the applicant/school will disseminate project details within the school and district and for others outside the community.

- Does the narrative describe the major implementation strategies?
  - *What are your major strategies for addressing the need and realizing the intended outcomes? Do the planned activities address the target population and the goals and objectives of the proposed project?*
  - *Do the activities detail implementation plans? Is it clear who will do what, when? Did you include a timeline of when certain project elements will be implemented? Did you include benchmark events and dates, such as when to set baseline data, when to conduct periodic assessment or take stock of progress, and when to administer summative assessment and analyze the data?*
  - *Is it clear who has responsibility for assessing, reporting, and disseminating project information? When and how will that occur? Who are the intended audiences? How will dissemination activities help meet the program goal of creating model schools?*

**Budget Explanation** (10 points possible)

Itemize and describe estimated costs to complete the proposed activities. Provide specific information as needed or appropriate.

- Does the narrative describe the proposed budget in sufficient detail?
  - *Is there sufficient narrative to explain and justify expenses? Did you provide unit descriptions (district-approved rates for teacher stipends, substitute pay, and mileage, book titles, equipment/software titles and model numbers), unit costs, and numbers of units being purchased? Do proposed costs align with program requirements (technical specifications and in the proper ratio) and the proposed project's stated need and major activities?*
  - *Did you detail expenditures by appropriate budget code (salaries, benefits, purchased service, materials/supplies, and capital outlay) and function code (curriculum/instruction, professional development, and facilities)?*
  - *Does the budget itemize state and district match funds? Does the district match meet program guidelines in terms of allowable costs and percentage rate?*

# FY09 MATHEMATICS AND SCIENCE-METS SCHOOL GRANTS PROGRAM –

## FREQUENTLY ASKED QUESTIONS

### PROGRAM RULES AND GUIDELINES

**1. What is the Mathematics and Science-METS School Grants Program?**

Funded as part of Missouri's Mathematics, Engineering, Technology, and Science (METS) Initiative, the Mathematics and Science-METS School Grants Program is administered through the Department's Division of School Improvement, Department of Curriculum Services to create model schools across Missouri where classrooms focused on NSF research-based mathematics and/or science curricula are implemented to demonstrate "best practice" in METS education for other educators to observe and learn from.

The Mathematics and Science-METS School Grants Program solicits competitive applications from educators in Missouri public school districts (including charter LEAs) in grades K-12.

**2. What is the funding outlook of the Mathematics and Science-METS School Grants Program?**

The General Assembly determines the appropriation and the Department advises districts of the estimated appropriation and the purposes for which grants may be awarded.

**3. What is the funding period for the Mathematics and Science-METS School Grants Program?**

Grants are awarded for one year: July 1 through June 30. However, districts and teachers must commit to both years of the two-year professional development programs, program evaluation requirements, and successful adoption of the mathematics or science curricula selected by the district.

**4. How will the program funds be distributed?**

To ensure equitable participation, program funding will be allocated to four geographic regions (quadrants) of the state and to the three grant types (grade spans). Districts will be competing only with districts in their geographic areas in the content area (mathematics or science) they select. See program website for a state map and a listing of the districts residing within each quadrant.)

**5. How many grants will be awarded? Is there a maximum amount that may be awarded?**

The intent of the grant program is to create at least 12 Mathematics-METS schools and 12 Science-METS schools. The total number of grants awarded is dependent on the final appropriation and the budget amounts requested in applications. Awards will not exceed amounts listed in the table found in the Program Guidelines section.

**6. Who may apply Mathematics and Science-METS school grants?**

Eligible applicants include Missouri public school districts and charter LEAs. Applicant schools must be willing to commit to the two-year implementation process for a school-wide adoption of an NSF research-based mathematics or science curricula. Districts with partial curriculum adoptions are eligible to apply.

**7. When are the applications due?**

Applications are due March 31. An application with original signatures and two copies must be submitted. Applications must be postmarked no later than March 31 or hand-delivered to the Division of School Improvement (8th floor of the Jefferson Building, 205 Jefferson Street, Jefferson City) by 4:00 PM on March 31.

## 8. Is there a limit to how many applications may be submitted by a district?

While submitted at the district level, an application must have a singular, school-wide focus, addressing one of the following building/grade spans:

- Elementary – an elementary building serving grades K – 5 or 6
- Middle or Junior High – a middle or junior high school building serving grades 5, 6, 7 and/or 8
- High – a high school building serving grades 9, 10, 11 and/or 12

Note: In middle school or junior high classrooms, either mathematics or science should be the focus. In elementary school, mathematics or science may be the focus, since elementary teachers usually teach all subjects in self-contained classrooms. Departmentalized classrooms at the elementary grade span are also eligible provided the Comprehensive eMINTS implementation focuses on teachers in one of the two subject areas – mathematics or science.

## 9. What mathematics and science curriculum models are recommended?

Competitive priority will be given to applicants who will implement or are completing partial implementations of National Science Foundation (NSF) funded mathematics and/or science curriculum that is research-based and standards-based. Prior implementation is defined as a minimum of one school year, including the current school year.

*Mathematics* – Eligible mathematics curricula include the following. Those noted with an asterisk (\*) indicate professional development is readily available.

- Elementary Mathematics
  - \*Everyday Mathematics®
  - \*Investigations in Number, Data, and Space®
  - Math Trailblazers™
- Middle School (Junior High School) Mathematics
  - \*Connected Mathematics 2™
  - Mathematics in Context®
  - MathScape: Seeing and Thinking Mathematically™
  - MATH *Thematics*
- High School Mathematics
  - \*Contemporary Mathematics in Context© (also known as Core-Plus Mathematics)
  - Interactive Mathematics Program™
  - MATH *Connections*®: A Secondary Core Mathematics Curriculum
  - Mathematics: Modeling Our World
  - SIMMS: Integrated Mathematics

*Science* – Examples of eligible science curricula include (but are not limited to):

- EBS (Event Based Science) <http://www.ebsinstitute.com/>
- FOSS (Full Option Science System) <http://www.lawrencehallofscience.org/foss/>
- IMaST (Integrated Mathematics, Science, & Technology) <http://www.cemast.ilstu.edu/programs/imast/index.shtml>
- SEPUP (Science Ed. for Public Understanding Program) <http://www.lawrencehallofscience.org/sepup/>
- STC (Science & Technology for Children) [http://www.carolina.com/carolina\\_curriculum/stc/](http://www.carolina.com/carolina_curriculum/stc/)

- GEMS (Great Explorations in Math and Science) [http://www.carolina.com/carolina\\_curriculum/gems/](http://www.carolina.com/carolina_curriculum/gems/)
- GLOBE Program [http://www.globe.gov/globe\\_flash.html](http://www.globe.gov/globe_flash.html)
- CPO (Physics First) [http://www.cpo.com/tp\\_pfc\\_entry.shtml](http://www.cpo.com/tp_pfc_entry.shtml)
- Chemistry in the Community (ChemCom) <http://www.whfreeman.com/Chemcom/>
- BSCS Science Programs <http://www.bsos.org/page.asp?pageid=31>
- Active Physics – Active Chemistry <http://www.its-about-time.com/htmls/ac/ac.html>

**10. Why does the program promote implementation of NSF-funded, research-based mathematics and science curricula?**

The METS Coalition spent significant time studying curriculum issues with input from nationally recognized experts. The METS Coalition supports opportunities for teachers and schools to obtain high-quality, research-based curriculum materials and the professional development needed by teachers to effectively use the materials.

**11. Are schools that currently have partial adoptions of the curricula eligible to apply?**

Yes. Schools that currently have partial adoptions of the curricula required in the grant application are eligible to apply.

**12. How may grant funding be used? Does it cost a district to participate in the program?**

Full implementation of the NSF research-based mathematics or science curricula requires sets of teacher and student consumable resources, manipulatives, other curriculum materials, and teacher completion of a two-year professional development program. Successful implementation of the Mathematics and Science-METS Grant Program requires a combination of Department grant funds and district match funds as outlined in the Program Guidelines.

Grant funds may only be used to purchase curriculum materials and resources needed for a school-wide adoption of an NSF research-based mathematics or science curriculum. Technology and other supplemental resources may be purchased only after all required curriculum components have been purchased.

Organization fees charged to participating districts will cover program-level evaluation. Districts are responsible for costs associated with local data collection and analysis needed to demonstrate achievement of goals or objectives outlined in the proposal narrative.

**13. What is the district match required by the program?**

Yes, district match funds are required estimated at thirty percent of the overall costs associated with the two-year mathematics or science professional development program. As a guiding rule, a district providing a match of around 15 percent in year one, plus all the necessary costs associated with the second year of professional development, should meet the overall 30 percent match requirement.

- Teacher professional development programs:
  - stipends and any associated benefits (at district-approved rate) for 75 hours of professional development in Year 1 and 50 hours in Year 2
  - substitute teacher pay and any associated benefits (district rate) for two (2) days of teacher release each in Year 1 and Year 2
  - mileage (district rate) for 20 round trips of approximately 100 miles each for Year 1 and 12 round trips of approximately 100 miles each for Year 2

- Project orientation and leadership meetings:
  - mileage (district rate) for a one-day Orientation meeting in summer 2008 for building principal(s), appropriate curriculum staff, and two or three representative teachers, and for a one-day Leadership Institute for the same group in fall 2008 – location TBA for a round trip of approximately 150 miles.

**14. What must be included in the application? What type of school is most competitive?**

Applications for the Mathematics and Science-METS School Grants Program include the application cover with participant details and project assurances (form provided), project narrative, letter of commitment, budget explanation, and budget grid (form provided). (See the administrative manual for complete directions for completing the application.)

The application narrative should detail what learner needs are present as well as the capacity the applicant school has to serve as a model Mathematics or Science-METS school. The narrative should provide an introduction that details the school, community, and district along with the student population(s) served. The current mathematics and/or science curriculum implementation details should be described, including any teacher professional development and advanced study preparation in mathematics and/or science. Also, the narrative should include a complete description of the school's capacity to serve as model and experience of any master teachers or model classrooms including the professional development opportunities the teachers are willing to provide to other educators in the area. The narrative should reflect the participating teachers' willingness to participate in required evaluation activities (lesson plan and electronic portfolio) and the district's willingness to provide student roster information to assist in the Mathematics and Science-METS program's MAP analysis.

All proposed activities and expenditures must relate to implementation of an NSF research-based mathematics or science curriculum from the list provided.

**15. Who should be involved in writing the Mathematics and Science-METS School Grants Program application?**

The key stakeholders who will be directly responsible for the curriculum adoption and program implementation should be involved in writing the grant application. A team approach that includes the building principal, curriculum personnel, teachers, parents and students will likely produce a more competitive application than one written by an individual.

The application requires designation of a contact person, someone familiar with the project and able to make decisions about the project. Ideally, the contact should be a building principal or central office administrator (such as a coordinator of curriculum or instruction or elementary education). This person must be available to contact throughout the summer months.

**16. What professional development services are available? Who must participate and what are the expectations?**

Professional development services provided during the program will be delivered by commercial vendors supplying the curriculum materials and approved in-state providers (generally recipients of NSF or Title II.A Mathematics and Science Partnership Grants). A determination of how professional development services will be delivered and by whom will be finalized upon grant award and is subject to final negotiation.

**17. What are the costs for mathematics or science professional development?**

Costs for fees to receive mathematics or science professional development from approved in-state providers are estimated at \$2,500 per teacher for Year 1 and \$1500 for Year 2. Professional development provided by commercial vendors is generally included in the price of the curriculum materials.

**18. Are meetings required of staff from grant-recipient districts, other than the applicants?**

Principals, curriculum coordinators, and representative teachers awarded grant funds under the Mathematics and Science-METS School Grants Program will be required to attend a one-day summer Orientation program. [Location of the meeting is TBA.] The same team will also be required to attend a one-day Leadership Institute and follow-up e-conference sessions in Year 1 and Year 2 of the program implementation.

**19. What other costs are allowable under the grant program?**

Only costs associated with providing classroom curriculum resources needed to adopt a mathematics or science curriculum on the list in the Program Guidelines will be approved. Costs will vary depending on class size, materials already available, and the type of curriculum selected. Grant funds may not be used to purchase technology unless all other required curriculum elements have been purchased.

**20. May curriculum-related technology and equipment be purchased, such as graphing calculators and probes?**

Supplemental items such as graphing calculators and probes may be purchased if funds are available after all required curriculum materials and resources have been purchased. Districts may also purchase subject-specific technology items using other funds, or use in-kind donations, to procure supplemental technology.

**21. What are the evaluation requirements for the program?**

Local Grant Evaluation Requirement – Each applicant district is expected to provide evaluation data specific to the proposal goals and objectives as outlined in the proposal narrative. These activities are designed and managed by the applicant district. Costs related to evaluation activities specific to the proposal goals and objectives are the district's responsibilities.

Program Evaluation Requirement – Each participating teacher and district is also expected to participate in the statewide Mathematics and Science-METS program evaluation requirements including:

- provision of a lesson plan and permission to publish the lesson plan at the end of Year 1;
- production of an electronic unit plan (at least 3 related lessons) of Year 2 of the mathematics or science professional development program;
- provision of student rosters for MAP analysis) at the conclusion of Year 2 of the mathematics or science professional development program.

Note that the Department is in the process of identifying an organization to design and manage the Mathematics and Science-METS program evaluation activities. Organization fees charged to participating districts will cover program-level evaluation. Districts are responsible for costs associated with local data collection and analysis needed to demonstrate achievement of goals or objectives outlined in the proposal narrative.

## APPLICATION APPROVAL PROCESS

**22. What criteria will be used to award grants?**

Grant applications are reviewed using scoring criteria totaling up to 100 points. A panel of readers reads and evaluates the application narratives, in mid-June. (See the administrative manual for a complete listing of the criteria.)

**23. Is it possible to get a copy of a successful or model Mathematics and Science-METS School Grants Program application?**

No. FY09 marks the first year Mathematics and Science-METS School Grants will be awarded.

**24. What additional information or technical assistance is available for teachers and districts interested in applying for a METS school grant?**

Copies of the application forms, administrative manual, FAQ, and related correspondence can be downloaded from the METS School Grants Program website at <http://dese.mo.gov/divimprove/index.html>.

A program information workshop, co-hosted by Instructional Technology and eMINTS, will be offered on February 7, 2008, in the Truman Hotel, 1510 Jefferson Street, Jefferson City, Missouri. Look for workshop details to be posted on the Program website.

Grant writing technical assistance is available by request. Contact Curriculum Services staff by telephone at 573-751-4445 (Science) or 573-751-1395 (Mathematics).

**25. When will the METS School Grants Program awards be announced?**

The Department expects to announce applicants receiving tentative approval by mid-May. In late June, following notification of tentative grant awards, Department staff will review the applications and work with districts to finalize curriculum materials purchase plans and to ensure all required matching costs have been budgeted. In late June-early July, Curriculum Services staff will conduct a final review of grant applications and determine the final approved grant amount based on the state funding available.

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MISSOURI DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION  
 DIVISION OF SCHOOL IMPROVEMENT  
 P.O. BOX 480, JEFFERSON CITY, MISSOURI 65102-0480

**APPLICATION for STATE ASSISTANCE under the FY09 METS SCHOOL GRANTS PROGRAM**

CHECK GRANT TYPE:  eMINTS  Mathematics  Science DUE: MARCH 31

For Department Use			
DATE PROJECT APPROVED	AMOUNT APPROVED	SIGNATURE	
District Information			
SCHOOL DISTRICT NAME	COUNTY-DISTRICT CODE	GEOGRAPHIC QUADRANT <input type="checkbox"/> Northeast <input type="checkbox"/> Southeast <input type="checkbox"/> Northwest <input type="checkbox"/> Southwest	
CONTACT PERSON NAME AND TITLE	WORK PHONE	PAGER / CELL NUMBER	
EMAIL ADDRESS	SUMMER PHONE	FAX NUMBER	
School Information			
SCHOOL NAME AND ADDRESS			
PRINCIPAL NAME	SIGNATURE OF PRINCIPAL	DATE	
GRADE LEVEL(S) SERVED: <input type="checkbox"/> K <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12			
Project Information			
PROJECT TOTAL (FOR 2 YEARS)	AMOUNT REQUESTED	NUMBER OF TEACHERS	NUMBER OF STUDENTS
PRIMARY CURRICULAR FOCUS (CHECK ONE): <input type="checkbox"/> Mathematics <input type="checkbox"/> Science		COMPLEMENTARY CURRICULUM FOCUS AREA ((CHECK ONE – FOR eMINTS GRANTS ONLY): <input type="checkbox"/> Communication/Language Arts <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Social Studies	
Project Narrative, Proposed Budget, and Letters of Commitment			
<p>Attach proposed project narrative, budget explanation, budget form, and appropriate letters of commitment. Refer to the manual for directions.</p> <p>The project narrative (generated by the applicant using a word processing program) details what will occur if the proposed project is funded, addressing the applicant community, target population, major implementation strategies, and expected outcomes of the project.</p>			
Project Assurances and DESE Title IX Assurances			
NOTE: AN AUTHORIZED BOARD REPRESENTATIVE MUST SIGN THE FOLLOWING ASSURANCES STATEMENT.			
<p>The school district or charter school/LEA hereby assures the Department of Elementary and Secondary Education that:</p> <ul style="list-style-type: none"> <li>• it will keep such records, and provide such information as may be necessary for fiscal and program auditing and for program evaluation, and it will provide DESE any information it may need to carry out its responsibilities under the grant program.</li> <li>• it will comply with all provisions of the grant program and its administrative guidelines.</li> <li>• it will receive and expend funds in a manner consistent with the intent of the approved application.</li> <li>• it will fulfill all program professional development, implementation, and evaluation activities and requirements.</li> </ul> <p>The district certifies to the best of its knowledge and belief that its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transaction by any Federal department or agency. The governing board, through its authorized representative, fully understands the Assurances and the responsibility for compliance placed upon local education agencies (LEAs) by the Assurances.</p> <p>The LEA will refund directly to DESE, or hereby authorizes DESE to withhold from the LEA's payments under the State Foundation program, the amount of any funds made available to the LEA which may be determined by DESE or an auditor representing DESE to have been misspent or otherwise misapplied.</p> <p><b>The Department of Elementary and Secondary Education does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. Inquiries related to DESE programs may be directed to the Title IX Coordinator, Jefferson State Office Building, 5<sup>th</sup> floor, 205 Jefferson Street, Jefferson City, MO 65102-0480; telephone number 573-751-4212.</b></p>			
Signature			
SIGNATURE OF AUTHORIZED REPRESENTATIVE		PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	DATE



MISSOURI DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION  
 DIVISION OF SCHOOL IMPROVEMENT  
 P.O. BOX 480, JEFFERSON CITY, MISSOURI 65102-0480

**PROPOSED BUDGET for FY09 METS SCHOOL GRANTS PROGRAM**

CHECK GRANT TYPE:  eMINTS  Mathematics  Science

**For Department Use**

DATE BUDGET FINAL APPROVED	SIGNATURE
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**District Information**

SCHOOL DISTRICT NAME	COUNTY-DISTRICT CODE
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**Project Information**

CONTACT PERSON NAME	WORK PHONE	PAGER / CELL NUMBER
EMAIL ADDRESS	SUMMER PHONE	FAX NUMBER

**Project Financial Data – Year 1 Budget**

	6100		6200	6300	6400	6500	TOTAL
	Salaries – Certificated	Salaries – Non- certificated	Employee Benefits	Purchased Services	Materials & Supplies	Capital Outlay	
Curriculum / Instruction							
Professional Development							
Facilities							
State Total							STATE REQUEST \$
District Funds							MATCH AMOUNT \$
Total (State Total + Match)							YEAR 1 TOTAL \$

**Project Financial Data – Year 2 Budget**

	6100		6200	6300	6400	6500	TOTAL
	Salaries – Certificated	Salaries – Non- certificated	Employee Benefits	Purchased Services	Materials & Supplies	Capital Outlay	
District Funds							YEAR 2 MATCH \$

**Project Financial Data – Total Project Budget**

	6100		6200	6300	6400	6500	TOTAL
	Salaries – Certificated	Salaries – Non- certificated	Employee Benefits	Purchased Services	Materials & Supplies	Capital Outlay	
State Funds (Year 1 Grant totals)							STATE REQUEST \$
District Funds** (Year 1 + Year 2) **30% requirement							TOTAL MATCH ** \$ **30% requirement
<b>TOTAL</b>							PROJECT TOTAL \$

COMMENTS

## PROJECT NARRATIVE for FY09 eMINTS-METS SCHOOL GRANTS PROGRAM

*This is NOT a form! The narrative (to be created by the applicant) should address the following narrative elements. The section point values and descriptors indicate how the narratives will be evaluated. See the administrative manual for more detailed directions and formatting and page length details.*

### **Brief Project Summary**

Provide a 50-words or less summary of the project, indicating the target population, expected outcomes, and the methods and activities for achieving the outcomes.

### **Introduction** (10 points)

Provide a descriptive overview of the proposal, illustrating applicants' understanding of the purpose of the eMINTS-METS program. Fully describe the population to be served, expected outcomes, and how outcomes will be accomplished. Lists teachers by name and, for each, indicate the curriculum focus area(s), grade level(s), number of students (and largest class size in departmentalized classrooms), and specific eMINTS professional development program.

### **Evidence of Need or Opportunity** (15 points)

Describe the educational need and/or opportunity for implementing a school-wide eMINTS-METS project. Document the need/opportunity with specific sources of information and local data and data sources.

### **Focus on eMINTS, Mathematics/Science Curriculum, and Capacity to Serve as Model eMINTS-METS School** (15 points)

Provide descriptions of current eMINTS implementations and/or the NSF mathematics or science curriculum that has been implemented that focus on high quality instruction. Provide dates of implementation and any evidence of how eMINTS and/or the research-based curriculum contribute to high quality instruction. Describe teachers' professional development and advanced study preparation in their subject areas and other experiences that would contribute to the overall model school implementation.

### **Prior Planning and Local Commitment** (15 points)

Provide a description of the process used to prepare the grant application, gather pertinent information, and solicit input from key stakeholders. Provide a chronology and descriptions of major planning events, such as meetings pertaining to individual or group meetings with local educators and others pertinent to the planned eMINTS school-wide implementation plan. Attach letters indicating each teacher's commitment to successful implementation of the proposed project.

### **Goals and Objectives** (20 points)

Provide a goal(s) statement which relates directly to the stated need/opportunity and includes the expected overall result of implementing Comprehensive eMINTS and eMINTS4All classrooms. **Provide a minimum of two objectives** (one objective for teachers and one objective for students) that detail expected outcomes for teachers and students at the conclusion of the one-year grant program AND at the conclusion of the two-year professional development period. Additional objectives (maximum of two) focused on others (such as parents or community members) may also be included. Objectives should be stated in measurable terms, indicating who will do what, how well, when, according to what measurement.

### **Activities (Including Dissemination)** (15 points)

Provide a description of the major learner activities of the proposed eMINTS-METS school project and explain how these relate to the stated need/opportunity, goals, and objectives. Include a schedule showing dates of major activities. Describe how the planned materials and procedures that are part of the mathematics and/or science curriculum will be used with the eMINTS technology and instructional strategies. Describe how the applicant teachers, building, and district will disseminate program information and serve as a model for other educators.

### **Budget Explanation** (10 points)

Provide a description and itemization of estimated costs of each proposed budget activity and expenditure (including state and district dollars) necessary to complete the proposed two-year professional development programs. Round budget amounts to whole dollars. Calculate the district's match percentages to ensure match falls within guidelines for each year of the project and overall project.

## PROJECT NARRATIVE for FY09 MATHEMATICS AND SCIENCE-METS SCHOOL GRANTS PROGRAM

*This is NOT a form! The narrative (to be created by the applicant) should address the following narrative elements. The section point values and descriptors indicate how the narratives will be evaluated. See the administrative manual for more detailed directions and formatting and page length details.*

### **Brief Project Summary**

Provide a 50-words or less summary of the project, indicating the target population, expected outcomes, and the methods and activities for achieving the outcomes.

### **Introduction** (10 points)

Provide a brief descriptive summary of the proposal, illustrating applicant's understanding of the purpose of the Mathematics and Science -METS program. Fully describe the population to be served, expected outcomes, and how outcomes will be accomplished.

### **Evidence of Need or Opportunity** (15 points)

Describe the opportunity or educational need for implementing a school-wide Mathematics or Science-METS program. Document the opportunity/need with specific sources of information and local data and data sources.

### **Prior Mathematics or Science Curriculum Implementation and Capacity to Serve as a Model School** (15 points)

Provide a description of current NSF mathematics and/or science curriculum that has been implemented (or will be implemented), indicating the grade(s) in which the curriculum is implemented. Describe prior experience in implementing research-based curriculum, detailing the curriculum was first introduced in the district or school, and how long the implementation has been in place.

### **Prior Planning and Local Commitment** (15 points)

Provide a description of the process used to prepare the grant application, gather pertinent information, and solicit input from key stakeholders. Describe meetings applicant attended with grant program staff, local educators, and others pertinent to the planned Mathematics and Science-METS school-wide implementation. Attach letters of understanding and commitment to participating in the grant program and completing mathematics or science professional development.

### **Goals and Objectives** (20 points)

Provide a goal(s) statement which relates directly to the stated opportunity/need and includes the expected overall result of implementing the proposed Mathematics or Science-METS grant project. Provide a **minimum of two objectives** (one objective each for students and teachers) that detail expected learning outcomes for teachers and students at the conclusion of the one-year grant period AND at the conclusion of the two-year professional development period. Additional objectives (maximum of two) focused on others (such as parents or community members) may be provided but are not required. Objectives should be stated in measurable terms, indicating who will do what, how well, when, according to what measurement.

### **Activities (Including Dissemination)** (15 points)

Provide a description of the major learner activities of the proposed Mathematics and Science-METS program and explain how these relate to the stated opportunity/need, goals, and objectives. Describe how the applicant teachers, building, and district will disseminate program information and serve as a model for other educators.

### **Budget Explanation** (10 points)

Provide a description of the estimated costs to implement the proposed Mathematics and Science-METS project. Itemize costs by activity, detailing and justifying the purpose and the amount for each activity. Detail total project costs, indicating proposed activities and expenditures to be covered by the grant funds and district matching funds.

**FY09 METS SCHOOL GRANTS PROGRAM –  
APPLICATION PRE-SUBMISSION CHECKLIST**

*This is NOT a form! Review the checklist before submitting the grant application.  
If “NO” can be answered to any of the following items, the application is in jeopardy of not qualifying!*

1. Do you have the correct application forms?
2. Have you responded to all items on the forms?
3. Did both the building principal and the superintendent (or board representative) sign the application?
4. Is the grant application on your board of education's agenda (e.g., February or March meeting for March 31 application deadline date) for approval, if necessary?
5. Does the narrative include a brief summary of the proposed project?
6. Does the introduction describe the target population, intended outcomes, and the implementation strategies (curriculum, instruction, assessment, professional development) for accomplishing the outcomes?
7. Is your evidence of need/opportunity documented and significant for your community?
8. Does the application show how the curriculum requirements have been met, as well as the applicant school's preparation and capacity to serve as a model?
9. Does the application indicate who was involved in the planning the proposed project (such as pertinent school personnel, parent and community members), and does the planning reflect a systematic way to address your need/opportunity?
10. Do your goal and objectives address your need/opportunity? Are they realistic? Can they be measured?
11. Are your planned learner activities tied to your needs/objectives, and do they reflect what the teacher and students will do?
12. Did you connect your budget request to your purpose? Did you provide adequate details? Are your rates (mileage, salary) at the district-approved level?
13. Is your district match calculated correctly and does it include all of the required items? Is the grant total within the category guidelines?
14. Have you checked whether any other school in the district has submitted a METS grant application?
15. Have you proofread your application?
16. Have you attached appropriate letters of commitment and understanding?
17. Does the application meet the 25-page maximum and follow format rules? Have you omitted covers, binders, artwork, etc.?
18. Are you submitting an original application (with signatures) and two copies?
19. Are you submitting the application by the deadline date?

## FY09 MISSOURI METS SCHOOL GRANTS PROGRAM –

### GEOGRAPHIC QUADRANTS

Following is a listing of the counties representing each quadrant. Note that the quadrants split Jackson and St. Louis counties.

Northwest (NW)	Southwest (SW)	Northeast (NE)	Southeast (SE)
Counties:	Counties:	Counties:	Counties:
002 Andrew	005 Barry	001 Adair	009 Bollinger
003 Atchison	006 Barton	004 Audrain	012 Butler
011 Buchanan	007 Bates	010 Boone	016 Cape Girardeau
013 Caldwell	008 Benton	014 Callaway	018 Carter
017 Carroll	015 Camden	023 Clark	028 Crawford
021 Chariton	019 Cass	052 Knox	033 Dent
024 Clay	020 Cedar	056 Lewis	035 Dunklin
025 Clinton	022 Christian	057 Lincoln	036 Franklin
031 Daviess	026 Cole	061 Macon	037 Gasconade
032 DeKalb	027 Cooper	064 Marion	046 Howell
038 Genry	029 Dade	069 Monroe	047 Iron
040 Grundy	030 Dallas	070 Montgomery	050 Jefferson
041 Harrison	034 Douglas	082 Pike	062 Madison
044 Holt	039 Greene	087 Ralls	063 Maries
045 Howard	042 Henry	088 Randolph	067 Mississippi
048 Jackson	043 Hickory	092 St. Charles	072 New Madrid
054 Lafayette	048 Jackson	096 St. Louis Co.*	075 Oregon
058 Linn	049 Jasper	098 Schuyler	076 Osage
059 Livingston	051 Johnson	099 Scotland	078 Pemiscot
065 Mercer	053 Laclede	102 Shelby	079 Perry
074 Nodaway	055 Lawrence	109 Warren	081 Phelps
083 Platte	060 McDonald	115 City of St. Louis	090 Reynolds
086 Putnam	066 Miller		091 Ripley
089 Ray	068 Moniteau	*096- St. Louis Co.	094 St. Francois
097 Saline	071 Morgan	Districts:	095 Ste. Genevieve
105 Sullivan	073 Newton		096 St. Louis Co.*
113 Worth	077 Ozark	88 Hazelwood	100 Scott
	080 Pettis	89 Ferguson-	101 Shannon
*048- Jackson County	084 Polk	Florissant	103 Stoddard
Districts:	085 Pulaski	90 Pattonville	107 Texas
	093 St. Clair	95 Parkway	110 Washington
66 Fort Osage	104 Stone	102 Clayton	111 Wayne
68 Blue Springs	106 Taney	104 Jennings	
69 Grain Valley	108 Vernon	106 Ladue	*096- St. Louis Co.
70 Oak Grove	112 Webster	109 Normandy	Districts:
73 Raytown	114 Wright	110 Ritenour	
77 Independence		111 Riverview	91 Rockwood
78 Kansas City	*048- Jackson County	Gardens	92 Kirkwood
	Districts:	112 University City	93 Lindbergh
All Kansas City Charter		115 Wellston	94 Mehlville
LEAs	71 Lee's Summit		98 Affton
	72 Hickman Mill	All St. Louis Charter	99 Bayless
	74 Grandview	LEAS	101 Brentwood
	75 Lone Jack		103 Hancock Place
	80 Center		107 Maplewood
			113 Valley Park
			114 Webster Groves
			119 Special

FY09 MISSOURI METS SCHOOL GRANTS PROGRAM –

QUADRANT MAP

