

**ARRA/Title II, Part D: Enhancing Education Through Technology  
COMPETITIVE GRANT PROGRAM – 2009-10 SCHOOL YEAR**

**Technology for Mathematics OR Science Education**

**GENERAL INFORMATION:**

The purpose of the Title II, Part D (Enhancing Education Through Technology) competitive grant program is to provide modest financial assistance to schools with high poverty and the greatest need for technology support and/or schools identified for improvement.

The American Reinvestment and Recovery Act (ARRA) signed by President Obama in February of 2009 provides substantial assistance under the Enhancing Education Through Technology program for schools. This grant program is utilizing 100% ARRA funding and is to address one or more of the four assurances listed in Appendix B.

<b>TIMELINE FOR TECHNOLOGY FOR MATHEMATICS OR SCIENCE GRANT APPLICATION</b>	
<b>Application Release</b>	September 15, 2009
<b>Submission Deadline (Received in VT DOE)</b>	October 30, 2009 4:00 PM
<b>Award Announcements</b>	December 1, 2009
<b>Project Implementation</b>	January 1, 2010 through December 31, 2010

**BACKGROUND:**

Today model science and mathematics education programs are inquiry-based and emphasize development of knowledge, skills and attitudes to be successful in the 21<sup>st</sup> Century. To ensure high quality programming, assessment of student learning is required by the State Board of Education. Contemporary science and mathematics education also includes use of technological advancements to promote learning. Science and Mathematics educators now employ electronic probes, GPS, digital video cameras, handheld or mini (netbook) computers, electronic assessment data systems and other tools to teach and to assess learning. As Vermont schools move toward a transformed education system, technology can be applied to engage students in personalized learning and to advance the development of 21<sup>st</sup> century skills in mathematics and science.

**ELIGIBILITY:**

For purposes of this grant, applicants may be either high-need LEA’s or eligible local partnerships.

For purposes of this competition, a “high-need local educational agency” is an LEA that:

- Includes one or more schools with the highest numbers or percentages in the state of children from low-income families, and
- Serves one or more schools identified for improvement or corrective action under NCLB (§1116), or
- Has a substantial need for assistance in acquiring and using technology.

For more details on eligibility refer to Appendix A.

## GRANT PROGRAM AREA

**NOTE: APPLICATIONS MUST FOLLOW THE FORMAT AND CONTENT REQUIREMENTS AS FOUND ON PAGE FOUR (4).**

### SCOPE OF WORK:

#### A. Goal:

Science and Mathematics grantees will use technology to improve student STEM achievement of at least one (1) grade expectation cluster (science) or grade expectation (mathematics) ([http://education.vermont.gov/new/html/pgm\\_curriculum/science/gle.html](http://education.vermont.gov/new/html/pgm_curriculum/science/gle.html) or [http://education.vermont.gov/new/html/pgm\\_curriculum/mathematics/gle.html](http://education.vermont.gov/new/html/pgm_curriculum/mathematics/gle.html) ). Successful proposals will outline a clear implementation plan that includes instruction and assessment designed to document achievement of this goal. Applicants are encouraged to consult the Partnership for 21<sup>st</sup> Century Skills website for (<http://www.21stcenturyskills.org/> and <http://www.fas.org/sgp/crs/misc/RL33434.pdf> --a report on the level of current STEM preparation nation-wide.)

#### B. Requirements:

- a. 25% of the grant funds must be used for professional development purposes.
- b. A highly desired outcome of this work is **sustainability**. Successful proposals will provide plans for continued programming, maintenance and protection of equipment/software purchased so that the initiative will have long term success.
- c. Host at least one visit by the Vermont Department of Education Consultant to observe implementation of this program.
- d. Complete a final program evaluation report using forms provided by the Vermont Department of Education. The final report will include teacher feedback and student assessment results.
- e. A minimum of 10% of the grant funds must be devoted to evaluation of the program. Please include this figure in the budget. Details on page 4 and more about this requirement will be provided with grant award.

**C. Collaborations:** Grant reviewers will look favorably upon proposals that employ local, collaborative relationships to achieve goals (e.g. An initiative might involve collaboration between math or science educators across the PK-12 curriculum. A proposal might include collaboration with experts in the field of study, such as the Jason-Project model, NCTM and NSTA Learning Centers, NOAA or NASA resources.)

#### D. The grant will support the following:

- i. Technology equipment, hardware, software;
- ii. Mileage, lodging, travel expenses, stipends, coordinator expenses for individuals or entities involved in the work;
- iii. Stipends, incentives and credit for participants in professional development activities;
- iv. Books, materials, other technology maintenance supplies.

**E. Grant Amount:** Grant award amounts are the decision of the applicant. Awards may range from \$2,000 up to \$6,500. The total amount of funds to be allocated is \$80,000. To address a wide range of grade levels grants will be awarded to elementary (PK-4), middle (grades 5-8), and high school (grades 9-12) proposals in either mathematics or science content areas. We hope to fund a total of at least twelve grants from these funds.

**F. Timeline:** Proposal to be submitted by Friday, October 30, 2009. Award announcements December 1, 2009. Funding available January 1, 2010.

**Please see the “Format and Content” section for information on how to structure the application starting on page four (4).**

## Application Format & Content

**Format:** Total application should be **NO MORE THAN FIVE (5) PAGES**, single-spaced, font sizes 10-12.

**1. Program Description** (no more than 2 pages): Detail how technology will be used to improve student STEM achievement of at least one (1) mathematics **OR** science grade expectation. **(50 Points)**

- Scope of Work – Provide a specific, bulleted list of the tasks to be performed and the products or outcomes of the project.
- Timeline - Include anticipated dates of completion for each task and who (describe roles, not individual names please) will be responsible for each task.
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**2. Capacity for Success** (no more than 1/2 page): **(20 Points)**

- Identify the structures and procedures proposed or already in place to support the project and/or enhance its sustainability.
- Provide evidence that the plan is realistic and that the grantee has the capacity to achieve the goal.
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**3. Evaluation** (no more than 1 paragraph): Describe how achievement of the program goal will be evaluated: **(10 Points)**

- Identify the specific measures of goal achievement. This should include student assessment results and any benchmarks or data that would be relevant to this purpose.

All ARRA grantees in this program will be required to participate in a statewide evaluation of their grant activities, setting aside 10% of the grant budget for this purpose. The exact evaluation plan will be developed collaboratively with grantees, with one lead district establishing a contract with an external evaluator on behalf of and with input from all grantees. *Districts interested in the possibility of leading the evaluation efforts (in consultation with the VTDOE) on behalf of multiple grantees may indicate their interest within their proposal.* Districts not assuming a lead district role in evaluation will still be asked to participate in decisions about the evaluation process and product, as well as in any local evaluation activities necessary to understand the impact at each grant site. This configuration is desired in order to maximize the potential for a larger and more meaningful evaluation across all projects and to acknowledge that one coordinated evaluation plan is less taxing on each individual grantee. *For purposes of this grant proposal, only address the bulleted point above.*

**4. Budget Narrative (no more than 1 page.): You must also complete the \*\*SEPARATE BUDGET PAGE\*\*.** The budget narrative should demonstrate a logical connection to the program goal, and should be specific enough to give reviewers an idea of the priorities and focus for funding. The narrative should: **(20 Points)**

- Provide justification, as related to the program goal, for the major expenditures proposed.
- Explain need for any items on the budget sheet that might not be completely clear to a reader.

## Submission Process

**All proposals must include one original plus TWO (2) copies (Faxed or e-mailed applications will NOT be accepted) that include:**

- Proposal Cover Page with superintendent's signature and DUNS#
- Content of Application as noted on page four (4)
- Budget page and accompanying narrative
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- **Application Deadline:** Original plus two (2) copies of proposals must be received by the Vermont Department of Education no later than **Friday, October 30<sup>th</sup> by 4:00 p.m.**
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- Mail to:

Gail Hall, Science Assessment Coordinator for Grades 5-12  
Title IID Program Grant - Technology for Mathematics OR Science  
Vermont State Department of Education  
120 State Street  
Montpelier, Vermont 05620-2501

Phone: (802) 828-0156

This grant program represents a cross-program collaboration at the Vermont Department of Education. Title IID funds are being used to support a variety of content programs that are supported through the Department of Education. For questions about the content area, refer to the content specialist indicated on this form. For questions about Title IID funding and technology, contact Peter Drescher, Education Technology Coordinator (802) 828-5149 [peter.drescher@state.vt.us](mailto:peter.drescher@state.vt.us).

**Electronic Submission:** After the application deadline, each applicant will be asked to provide an electronic version of their proposal. This request will signify receipt of the grant application. This submission should be in both .doc or Word format. Do not send the document without being requested to do so.

**Selection Process:** All proposals will be read and scored by an independent review panel. The review panel will:

- a) identify the applicant's eligibility based on criteria listed on page one (1), and
- b) rate the quality of the proposal based on the scoring guide on page six (6).

## Scoring Guide: Enhancing Education Through Technology

Criteria	Poor	Average	Excellent
<b>Format – (10 Points)</b> <ul style="list-style-type: none"> <li>• <i>Does the application adhere to the formatting requirements on page 4?</i></li> <li>• <i>Does the application include all four narrative sections and budget page?</i></li> </ul>	0 – 3	4 – 7	8 – 10
<b>Program Description – (50 Points)</b> <ul style="list-style-type: none"> <li>• <i>Is plan to achieve the grant goal clearly articulated?</i></li> <li>• <i>Is there a bulleted Scope of Work that supports the goal?</i></li> <li>• <i>Is a realistic timeline with person(s) responsible provided?</i></li> </ul>	0 – 17	18 – 35	36 – 50
<b>Capacity for Success - (20 Points)</b> <ul style="list-style-type: none"> <li>• <i>Are support structures and procedures identified?</i></li> <li>• <i>Is the plan realistic? Does capacity exist to achieve the goal?</i></li> </ul>	0 – 6	7 – 13	14 – 20
<b>Evaluation - (10 Points)</b> <ul style="list-style-type: none"> <li>• <i>Are clear measures of the goal identified?</i></li> </ul>	0 – 6	7 – 13	14 – 20
<b>Budget Narrative and Page – (10 Points)</b> <ul style="list-style-type: none"> <li>• <i>Is justification for major expenditures reasonable?</i></li> <li>• <i>Is need for the budget items explained?</i></li> </ul>	0 – 3	4 – 7	8 – 10
<b>TOTAL SCORE (MAX IS 100)</b>	_____		

## Budget Page

### Technology for Mathematics or Science

Budget (*Describe as appropriate)	TOTAL
Professional Development (25% minimum)	
Evaluation (10%)	
Hardware	
Software	
Travel	
Consultants & Contracts	
Teacher Stipends	
Equipment	
Other (equipment rental, printing)	
<b>TOTAL</b>	

\*Remember to include the Budget Narrative as describe on page four (4).

**ARRA/Title II, Part D: Enhancing Education Through Technology  
Competitive Grant Program – 2009-10**

**PROPOSAL COVER PAGE**

<b>School District or SU</b>			
<b>DUNS (Data Universal Numbering System) #</b>			
<b>Contact Person</b>			
<b>Phone</b>			
<b>Fax</b>			
<b>E-mail</b>			
<b>Grant Program Area</b>	<b>Technology for Mathematics OR Science</b>		
<b>List all schools for which this proposal applies</b>	<u><b>Schools</b></u>	<u><b>Grade Spans</b></u>	<u><b>Enrollment</b></u> (To be completed by VT DOE)
<b>Total Funds Requested</b>			
<b>Children’s Internet Protection Act (CIPA) Certification</b>	Superintendent has certified CIPA compliance (Check one or more): <input type="checkbox"/> on school technology plans <input type="checkbox"/> on last E-Rate application <input type="checkbox"/> on 2009 Consolidated E-Application		
<b>Superintendent’s Signature</b>			
<b>Date</b>			

## APPENDIX A

### Additional Details on Eligibility for Title IID

An “eligible local partnership” is a partnership that includes at least one high-need LEA *and* at least one of the following –

- An LEA that can demonstrate that teachers in its schools are effectively integrating technology and proven teaching practices into instruction, based on a review of relevant research, and that the integration results in improvement in classroom instruction and in helping students meet challenging academic standards.
- An institution of higher education that is in full compliance with the reporting requirements of section 207(f) of the Higher Education Act of 1965, as amended, and that has not been identified by the State as low-performing under that act.
- A for-profit business or organization that develops, designs, manufactures, or produces technology products or services or has substantial expertise in the application of technology in instruction.
- A public or private nonprofit organization with demonstrated expertise in the application of educational technology in instruction.
- An individual with demonstrated expertise and capacity to lead the initiative and address expectations listed below.

**REQUIREMENTS:** For an LEA to receive funding under this program:

- All schools in the LEA *must* have a current “Educational Technology Plan” approved by the Department of Education through June 30, 2012.
- Must participate in the annual “Technology Indicators Data Collection” conducted by the Department of Education.
- Must certify that all “high-needs” schools in the LEA meet requirements under the Children’s Internet Protection Act.
- Must use a minimum of twenty-five percent (25%) of these funds for ongoing, sustained, intensive, high-quality professional development in integrating and using advanced technologies in instruction and in new learning environments to:
  - i. Educate regional groups on current theories and practices in education technology.
  - ii. Build capacity in regions around current best practices in skill sets required of students in 21<sup>st</sup> Century schools.
  - iii. Lead to better awareness and practice on said methods of instruction.
- Private School Participation - LEAs or partnerships must engage private school officials with whom they consult for Title I purposes during the development and implementation of competitive Title II-D programs. If this grant application is applicable to these circumstances, be prepared to supply documentation.
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- For any clarification on eligibility of your school or district for Title IID please contact Peter Drescher at 802-828-5149 or peter.drescher@state.vt.us
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- APPENDIX B
- American Reinvestment and Recovery Act---4 Assurances
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One of the guiding principles behind the American Recovery and Reinvestment Act is, “improve student achievement through school improvement and reform” and addresses the four specific assurances included in ARRA requiring states to certify progress in these areas as a condition for receiving ARRA funding. These assurances were authorized under bipartisan education legislation – the Elementary and Secondary Education Act and the America Competes Act of 2007:

1. Making progress toward rigorous college- and career-ready standards and high-quality assessments that are valid and reliable for all students, including English language learners and students with disabilities;
2. Establishing pre-K-to college and career data systems that track progress and foster continuous improvement;
3. Making improvements in teacher effectiveness and in the equitable distribution of qualified teachers for all students, particularly students who are most in need;
4. Providing intensive support and effective interventions for the lowest-performing schools.

- Evaluation and Reporting Requirements

Federal guidelines require that districts have a means of evaluating the extent to which Title II-D activities are effective in (1) integrating technology into curricula and instruction; (2) increasing the ability of teachers to teach; and (3) enabling students to meet challenging state standards.

Because the Title II-D program is a state-administered program, the Vermont Department of Education is responsible for ensuring that districts comply with statutory requirements. Therefore, districts are required to submit updated budgets, data for performance reports, and other reasonable data to the Department of Education.

While details of the statewide evaluation plan will ultimately be worked out after grants are awarded, the following data reports are anticipated requirements for all grantees receiving Title II-D ARRA funds:

- SETDA Collaborative - Grantees will be asked to participate in the SETDA Collaborative Survey, which was established for the purpose of understanding the broader impact of ARRA funds across multiple states. Visit [www.setda.org](http://www.setda.org).
- Administrator, Teacher, and Student Surveys – Grantees will come to consensus to finalize these instruments for use as pre and post surveys.
- Survey tools to be devised to answer the questions required of our regular Title IID reporting activities. These questions include:
  - The percentage of districts receiving Ed Tech funds that have effectively and fully integrated technology.
  - The percentage of classrooms with Internet access in high and low-poverty schools.
  - The percentage of teachers who meet their State technology standards.

- The percentage of students who meet State technology standards by the end of the eighth grade.