

Fund Code 170

Technology Enhancement Competitive Grant Descriptions 2002-03

Abby Kelley Foster Charter (with Holliston) Project Title: *The Math/Composition Partnership*

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Curriculum Area: Math

Grade Level: K-8

Project Overview:

Through the use of CLEAR Math and portable writing labs, students in Abby Kelley Foster Charter School and Holliston Public Schools will develop math and English Language Arts skills while advancing their technology literacy skills. CLEAR Math will be used to collect and analyze student progress in math concepts to assist teachers in focusing instruction on problem areas. Technology professional development will be carried out through joint workshops with the participating schools and Edutron Corporation.

Amherst (with Amherst/Pelham and Pelham) Project Title: *Communication Skills for All Learners*

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Curriculum Area: All Subject Areas

Grade Level: PreK-12

Project Overview:

The Communication Skills for All Learners Project prepares the teachers of our three districts - Amherst Public Schools, Pelham Public Schools, and Amherst Pelham Regional Schools - to apply technology, including assistive technology, to help all students improve their communication skills as they demonstrate learning at academically challenging levels. Teachers will study and apply the principles of Understanding by Design, Universal Design and Differentiated Instruction as they re-design curriculum units. This enhanced curriculum will employ technology that allows diverse learners to improve their communication skills using the content in each curriculum area.

Boston Project Title: *SELECT (Supporting Engaged Learning by Enhancing Curriculum with Technology) Math*

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Curriculum Area: Math
Grade Level: Middle School
Project Overview:

The SELECT Math Project will provide professional development activities and materials to enable teachers to effectively integrate technology into mathematics teaching and learning in middle level classrooms throughout Boston. This professional development model will provide ongoing, embedded support to teachers through face-to-face workshops and courses, exchanges with colleagues, and mentoring through the use of the BPS Secondary Mathematics Department and Office of Instructional Technology staff. The project is designed to 1) develop and expand the participants' knowledge of sophisticated tools designed to deepen mathematical understanding (e.g., Geometer's Sketchpad, Tabletop, Fathom, MathLab, and applets such as those available from NCTM at <http://illuminations.nctm.org/pages/68.html>), 2) increase teachers' skills in integrating these technology tools into the existing curriculum, Connected Math Project, 3) deepen content knowledge in mathematics, and 4) enhance technology literacy skills within the context of the instructional process.

Community Day Charter School **Project Title:** *Using Technology for Assessment, Data Gathering, and Analysis*

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Curriculum Area: All Subject Areas
Grade Level: All Grade Levels
Project Overview:

Drawing upon the skills of its administrators and faculty, Community Day Charter School (CDCS) of Lawrence will provide professional development related to its data-driven curriculum development model to enhance teaching and learning. The data analysis model utilizes *Microsoft's Access* and *Excel* programs to facilitate the organization of the Massachusetts Curriculum Frameworks learning standards by subject area, as well as MCAS results pinpointing how individual students, classrooms, and grade levels perform in relation to the standards. By providing this information in a user-friendly format, we enable teachers to efficiently identify gaps in the curriculum and to develop interdisciplinary, thematic curriculum units that address the learning standards.

Falmouth **Project Title:** *Improving Student Literacy through Integrating Technology*

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Curriculum Area: English Language Arts

Grade Level: 5 and 6

Project Overview:

The goal of the project is to improve student achievement in literacy through the use of technology. A half time curriculum tech specialist will be hired to co-teach, model, coach, and provide professional development on using research-based best practices to integrate technology into the literacy curriculum. Mobile labs will be used to bring technology into classrooms every other day for the daily 90-minute literacy block. The curriculum technology specialist will work in classrooms alongside teachers during the literacy block and will provide workshops and consult with teachers during release time, staff development sessions, and faculty meetings. As project partner, Roger Williams University will provide professional development and consultant services on integrating best practices in literacy and technology.

Fitchburg

Project Title: Classroom Performance/School Performance: Insight into Advancing Teaching, Assessment and Learning with Technology

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

Our project, CP/SP, will focus on technology professional development and the use of technology for assessment and data collection and analysis to impact student achievement. Our technology professional development program will have specific interwoven components, which will address the needs of support staff, classroom teachers, and school-based and district level administrators. The assessment/data analysis component of our project will create a district-wide assessment, reporting, and analysis program which will foster teachers' use of data to inform instructional decision making. This program will also support building-level and district administrators, curriculum coordinators, and program directors in monitoring the status of individual student learning, cohorts of students' progress, building-based performance, and the efficacy of district-level curriculum initiatives.

Frontier (with Sunderland, Amherst, Pocumtuck, UMass Amherst)**Project Title:** *Teaching American History with Technology to All Children*

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Curriculum Area: History and Social Science**Grade Level:** K-12**Project Overview:**

This project will increase K-12 student technology literacy and academic achievement in American history, through the use of various technologies. The project will use the Pocumtuck Valley Memorial Association's nationally recognized education Web site *American Centuries...View from New England* www.americancenturies.mass.edu, as well as student- and teacher-developed Web sites and assistive technology. Instructional strategies will include using primary sources and inquiry-based learning. Teachers and school librarians will work together to integrate assistive technology into the Pocumtuck Valley Memorial Association's Teachers' Center for American History. The Pocumtuck Valley Memorial Association (PVMA) and Hampshire Educational Collaborative (HEC) will be major providers of professional development for teaching American history with technology and for assistive technology. UMASS School of Education preservice students will receive multifaceted instruction on teaching American history with technology and the use of assistive technology; there will also be student internships in Frontier Regional/Union 38 School Districts and Amherst's Wildwood Elementary School with a focus on these areas.

Holyoke**Project Title:** *Community of Educational Technology Leaders – The CETL**Project*

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Curriculum Area: All Subject Areas**Grade Level:** All Grade Levels**Project Summary:**

This project will focus on implementing a successful systemic professional development program preparing groups of teachers throughout each of the four middle schools to become effective technology leaders and mentors. These teachers will constructively integrate instructional technology into their curricula and across the curriculum. These teachers will also use technology as a means to perform their jobs. The schools, and in particular the Holyoke middle schools, are undergoing restructuring and reform. The project will teach educators how to improve classroom management and how to use technology to make a positive impact throughout the curriculum by planning units. Middle school principals, vice principals, and central team administrators will appropriately support the teaching staff through professional development opportunities, teacher sharing time, and appropriate technology hardware and software.

Medford (with Malden and Everett)**Project Title:** *iTeach*

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Curriculum Area: All Subject Areas**Grade Level:** All Grade Levels**Project Overview:**

Project iTEACH, in conjunction with Tufts University, will allow teachers experienced in project-based unit (PBU) development and implementation in Everett, Malden, and Medford to create detailed classroom PBU implementation guides for the fifty-four Web-based PBUs currently in the tri-city database (<http://europa.tcs.tufts.edu/teach21c>). Each PBU in the database contains (1) a student component exploring an essential question or problem through research guided by selected Web sites and culminating in a final student product; and (2) a teacher component that makes explicit the district curriculum and technology student outcomes upon which the PBU was designed and how those outcomes are aligned with the state curriculum frameworks. The PBU implementation tool will link to *PBU Builder*, the Web-based application that currently supports PBU development within the tri-cities. Project iTEACH will also support the creation of a series of training videos, produced by iTeach staff in consultation with WGBH, that will portray successful PBU classroom implementation.

Methuen**Project Title:** *Technology Integration and Student Achievement (TISA)*

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Curriculum Area: All Subject Areas**Grade Level:** All Grade Levels**Project Overview:**

The Technology Integration and Student Achievement (TISA) Project is a comprehensive program that aims to improve student achievement by engaging teachers in a process to create and publish model technology-enhanced lessons. TISA offers a multi-pronged approach to technology integration, including hardware, services, software, and professional development. At the core of TISA is a research-based program in which teachers work together in Design Teams to analyze, design, teach, and publish model technology-enhanced lessons and teaching strategies. The work of the Design Teams focuses on high-need curriculum areas as evidenced by MCAS analysis. Products published through this program can be easily accessed through various local- and state-supported portals, such as VES. There will also be a parallel project in order to enhance the District-wide technology leadership.

Mohawk Trail
*Mohawk Teachers***Project Title:** *MEETing the Professional Development Needs of*

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Curriculum Area: All Subject Areas**Grade Level:** Elementary

Project Overview:

Using the Project MEET model, we will assemble a team consisting of one teacher from each of the six elementary schools and one middle school. Mohawk's two Project MEET's Technology Professional Development (TPD) specialists will coordinate this system-wide professional development program. In the second year of the grant, we will form Project MEET teams in each elementary school under the leadership of the TPD staff trained during the first year.

Needham (with Boston)**Project Title:** *Technology in Music Education*

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Curriculum Area: Arts

Grade Level: 9-12

Project Overview:

Technology in Music Education offers students at Needham High School and West Roxbury High School opportunities to explore technology through the powerful and compelling activity of music making, including composing, arranging, editing, recording, and performing compositions. A two-year professional development track, open to all Boston and Needham teachers, as well as teachers from other districts, will provide comprehensive, sequential preparation for 24 teachers to maximize learning for students using these music labs. Berklee College of Music will support the placement of student teachers at Needham and West Roxbury High Schools, and will support the project with technical assistance.

New Bedford**Project Title:** *New Bedford Online: Building Capacity for Integrating Technology with Online Learning*

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Curriculum Area: All Subject Areas**Grade Level:** All Grade Levels**Project Overview:**

This project will utilize online distance learning to provide ongoing and increased access to quality professional development. The New Bedford Online project will build capacity for integrating technology into the curriculum and for improving student and faculty technology literacy, by training faculty teams to be online professional development specialists, who can facilitate, design and deliver online, standards-based content courses for groups of teachers, administrators, and students. The courses will be aligned to the Massachusetts Curriculum Frameworks and the student improvement goals identified by the results of MCAS state assessments. The project will also incorporate specific training on the effective uses of assistive technology helping teachers understand how assistive technology tools can help meet the learning needs of all students. It will also enable the program of online courses developed and delivered through this project to be based on an understanding of the principles of the Universal Design for Learning.

North Shore RVS**Project Title:** *Itinerant (Wireless) Computer Laboratory and Video/Media Arts Laboratory*

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Curriculum Area: All Subject Areas**Grade Level:** 9-12**Project Overview:**

One purpose of the project is to bring the computers to the classroom, rather than displacing students and bringing them to computer labs. The itinerant lab will have up to 30 laptops able to access the Internet from any part of the school building. The laptops will be secured in the library, and teachers will sign them out as needed. The belief is that it is more cost- and space-effective to use wireless technology in the building rather than set up permanent computer labs. The itinerant computer laboratory will also work in conjunction with our ambitious professional development calendar. The school has offered an array of computer classes to teachers, but we have always been restricted to the computer labs that currently exist. The project's second purpose is to create a Video/Media Arts Lab, which will enable students to create digital movies, access on-line courses, and present studio-quality media presentations. The lab will be housed next to the library and will tie into the school's Web page and closed-circuit television system (Channel One).

Quincy**Project Title:** Technology Integration and Student Achievement (TISA)

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Curriculum Area: Math

Grade Level: All Grade Levels

Project Overview:

The Technology Integration and Student Achievement (TISA) Project is a comprehensive program that aims to improve student achievement in math by engaging teachers in the Take 5 process to create and publish model technology-enhanced lessons. TISA offers a multi-pronged approach to technology integration, including hardware, services, software, and professional development. At the core of TISA is a research-based program in which teachers work together in Design Teams with the assistance of model-trained facilitators to analyze, design, teach, re-assess and publish model technology-enhanced lessons and teaching strategies. The work of the Design Teams focuses on the high-need area of math as evidenced by Quincy's MCAS analysis. Products published through this program can be easily accessed through various local and state supported portals, such as VES.

Rockland Project Title: "Cell"ebrate Science with Technology

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Curriculum Area: Science and Technology/Engineering

Grade Level: 3-8

Project Overview:

This two-year proposal will begin by providing students in grades three through eight with hands-on, real life experiences in the areas of science and technology. Our goal is to help students realize that technology can enhance understanding of subject material. The project will enable students to gather information from FlexCams (cameras that capture microscopic images digitally), probes, CD-ROMs, Web sites, and WebQuests. Students will organize information in databases, spreadsheets, and graphic organizers and present their findings in slide shows or multimedia presentations. The use of study groups and mentoring will allow the staff to more fully understand technology integration, provide support for each other, share their knowledge, and become technology leaders. Our goal is to help teachers know how to use the hardware and software available and how to integrate its use into the curriculum with "real-life" activities. In the second year of this proposal, our new teacher technology leaders will train teachers in other subject areas to use technology and integrate it into their curriculum.

Rockport (with Salem) Project Title: *Raising Students' Academic Achievement through Technology and the North Shore Maritime Heritage (NSMH)*

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

Salem and Rockport have formed a partnership to execute the project, *Raising Students' Academic Achievement Through Technology and the North Shore Maritime Heritage* (NSMH). Its goal is to promote student mastery of key core-curriculum benchmarks and Standards K-12 by infusing novel learning experiences, using educational technology, and connecting with our maritime heritage. Teachers at several grade levels will choose one learning benchmark that represents either an opportunity for a technology/maritime project or a topic that is difficult for students to master using current methods. MIT will consult with teachers to develop each project. Then teachers and parents will receive training to support implementation of the project. Institutions such as Peabody-Essex Museum and the Gloucester Marine Heritage Center will provide materials for some projects. These projects will mostly involve hands-on discovery, so they will particularly encourage those students whose learning styles are not in the classical read/lecture/write space.

Salem (with Beverly and Wakefield)

Project Title: *Linking Curriculum Standards and Technology for Student Success: A Salem, Beverly, Wakefield Partnership*

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

This project aims to improve student achievement by having teachers analyze MCAS data and then create and publish model technology-enhanced lessons based on the analysis. The Salem, Beverly, Wakefield Partnership was formed to address the collective need to improve student achievement based on respective MCAS data. LCST offers a multi-pronged approach to technology integration, including hardware, services, software, and professional development. At the core of LCST is a research-based program in which teachers work together in Design Teams using the Take 5 approach to focus, design, revise/analyze, teach/implement, and publish model technology-enhanced lessons and teaching strategies. The work of the Design Teams focuses on high-need classrooms and curriculum areas as evidenced by MCAS analysis. Products published through this program can be easily accessed through various local and state supported portals, such as VES.

South Middlesex RVS (with Waltham, Framingham, Lexington, Carroll School)

Project Title: *Leadership Initiatives for Teaching and Technology*

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Curriculum Area: Math/Science/Technology/Engineering

Grade Level: Middle and High School

Project Overview:

Leadership Initiatives for Teaching and Technology (LIFT²) enables teams of middle and high school teachers of math, science, technology/engineering to more effectively use technology to teach the content of their curriculum and implement the curriculum frameworks. District administrators and teachers collaborate to implement new instructional practices to integrate technology, project-based learning, and 21st Century skills. Aligned with the Massachusetts Curriculum Frameworks, this two-year leadership professional development program includes industry workplace experiences, a graduate course, and ongoing support and collaboration from faculty, business mentors, and colleagues. LIFT² is designed to build capacity for ongoing improvement by establishing a learning community of educators and administrators working with business and industry to prepare students for higher education and careers in the 21st Century.

Springfield

Project Title: *Springfield Educators and Administrators Online in Support of Student Achievement*

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

This project will use online learning to continue building the capacity of the Springfield Public Schools to provide quality professional development for administrators and teachers, enabling them to integrate technology and assistive technologies into the PreK-12 curriculum and improve student achievement and technology literacy. Administrator and teacher teams will be trained to design and facilitate online courses; they will then develop and implement a rigorous program of standards-based, technology-enhanced online courses to administrators, teachers, and students. The project will also build the capacity of its team to use a broad spectrum of assistive technologies. Additionally, the team will be trained to measure the impact of the professional development courses using online tools and handheld technologies (PDAs).

Taunton (with Bridgewater/Raynham Regional)

Project Title: Connecting the Dots: Integration of Technology into Current District Curriculum Initiatives

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Curriculum Area: All Subject Areas

Grade Level: K-12

Project Overview:

Taunton's middle school staff and administration have worked with consultants from Mass Insight for three years to develop their own set of strategies for teaching in a standards-based environment. This past year many staff members have extended the process of standards-based teaching through the development of standards-based units. Bridgewater State College's Instructional Technology Program (BSC IT program) will provide some of the professional development programs. This year the staff completed year one of a new standards-based elementary (K-4) math curriculum, *Everyday Mathematics*. The district will align Math Corner (NCS Pearson) activities to the new math curriculum. This grant will provide Taunton with the opportunity to continue to strengthen the curriculum initiatives by ensuring that technology becomes an integral part of its curriculum.

Westfield

Project Title: *Aligning Standards and Practice, ASAP*

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

The Westfield School District has adopted an inclusion model of instruction, particularly in our middle level. After examining the Educator's Manual for Alternative Assessment, the Director of Curriculum and Instruction and the Director of Special Education adapted the model and designed a framework for differentiated instruction with four entry points for instruction: basic, moderate, mastery, and advanced. Combining this model with training on curriculum implementation, standards-based lesson planning, assistive technology, and technology integration, teachers will be given the tools necessary to deliver a rigorous curriculum to all students.

Worcester

Project Title: *Teaching and Learning in WORC: Worcester's Online Resource Community*

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Curriculum Area: All Subject Areas

Grade Level: All Grade Levels

Project Overview:

Project focuses on the use of e-learning and distance learning to build the capacity of the Worcester Public Schools to provide quality professional development so that teachers will learn to integrate technology into the K-12 curriculum, improve student technology literacy at all grade levels, and introduce Universal Design district-wide. Faculty teams will be trained to be designers and facilitators of online curriculum. They will facilitate, design and deliver standards-based technology enhanced online courses to faculty and students. This program will also be made available to teachers and students in other high need districts in the state via the Virtual Education Space (VES). Teachers will use online assessment techniques to measure the impact of the online courses on student achievement.