

**New Hampshire NCLB Title II-D  
Regular Funds for Round 9  
Competitive Grants – February 2011**

**Step 2: Application Narrative for Classroom Mini-Grants Program**

(Please be sure to complete Step 1 online at: [www.nheon.org/oet/nclb](http://www.nheon.org/oet/nclb))

District:	Haverhill Cooperative School District	Date:	2/14/2011
Project Manager:	Susan Lewis		
Position Title:	7 <sup>th</sup> Grade Science Teacher		
Mailing Address:	175 Morrill Drive North Haverhill, NH 03774		
Email Address:	<a href="mailto:slewis@sau23.org">slewis@sau23.org</a>		
Phone:	(603) 787-2100		

***BE SURE TO READ ALL OF THE FOLLOWING STATEMENTS.***

**ASSURANCES**

I hereby certify that:

1. To the best of my knowledge, the information contained in this application is correct, and the school board of the district named above has authorized me as its representative to submit this application.
2. The District has submitted to the New Hampshire Department of Education (NHDOE) a General Assurances signature page for the current year.
3. The District has consulted with the appropriate non-public schools during the design and development of this Ed Tech project prior to all decisions that affect the opportunities of private school children to participate in the program.
4. All funding for this project will be obligated and reported no later than the quarterly report ending **6/30/2012** and expended and reported no later than quarterly report ending **9/30/2012**.
5. The grant funds expended will supplement, not supplant, funds from non-federal sources.
6. The District will keep records and provide information to the NHDOE as may be required for program evaluation, consistent with responsibilities under NCLB Title II-D as outlined within the Grant Application Guidance (e.g., annual tech survey, case study report).
7. The schools to be funded by this program are compliant with the Children's Internet Protection Act (CIPA) because the district employs a filtering mechanism for student access or because Ed Tech funds referenced in this application will NOT be used to purchase computers used to access the Internet or pay for direct costs associated with accessing the Internet.

**Superintendents: When you submit your final grant application in the online grants management system, you will be certifying the above assurances.**

## Application Form for Classroom Tech Mini-Grant

Applicant: Haverhill Cooperative Middle School (HCMS)

<b>Criteria</b>	<b>Applicants:</b> <i>Criteria used to review each grant application are listed in the left column. Please do not delete the criteria column. By using this right column to describe how your project proposes to meet the criteria, you can increase the likelihood that you won't leave out important information. There is no page limit, but please be as clear and concise as possible.</i>
<b>Project Abstract (10 points)</b> A clear and concise abstract ( <b>100-150 word limit</b> ) outlines the mini grant project and overall goals, along with the process for implementing it in the classroom.	
1. Describes the project, including grade level(s) and content area(s), indicates how this project fits into school/district curriculum, indicates process for implementation and assessment, as well as how it would advance the achievement of students.	How can we trace mortality rate data gathered from area cemeteries to see how populations have changed over time? The Haverhill Cooperative Middle School's (HCMS) 7 <sup>th</sup> grade will visit area cemeteries and gather authentic data to determine what has affected the population and use it to create graphs and charts. This project integrates math and language arts into the science and social studies curricula. Students will work in groups of 2 or 3 and produce a multimedia project that will be available on the HCMS website.
2. Abstract includes an essential question, connected to the state frameworks, which probes for deeper meaning and broader understanding of the framework content addressed by this project, fostering the development of higher order thinking and problem solving.	Students involved in HCMS's Cemetery Project will answer an essential question, "How have populations changed over time?" Data will be collected through the use of the iPod touch camera and the GPS feature of the iPad. Students will use interactive whiteboards to manipulate the data. The whiteboards will also be used in the production of the multimedia project.
<b>Project Description (50 points)</b> Describes project in general terms and indicates whether it is a replicated project or an original project. Projects which can directly impact more than one classroom are preferred.  If project is replicated, proposal describes the intended changes to the project idea and how they will improve the project in order to be appropriate for the situation. Includes specific goals and objectives that relate to the essential question, and explains how those goals will be achieved by the project. Include a rationale for any changes made to the original project.  If your project is original, proposal describes how the project is appropriate for current situation. Includes specific goals and objectives that relate to the essential question, and explain how those goals will be achieved by the project.	

<p>1. Proposal generally discusses how implementing this project will improve technology integration within classrooms and in the core content areas. Indicates the need for technology integration in school or district. Describes the determination of need for this project and includes one or more examples of data that support the rationale of need for the project, such as NECAP assessment or other data. This explains to the reviewer why the project is worthy of funding as it relates to student achievement.</p>	<p>This is an original project developed by the 7<sup>th</sup> grade teaching team. HCMS is a SINI school in the area of math. A high area of weakness is the data and probability strand with 57.81% of the students in grade 7 scoring partially proficient and substantially below proficient.</p> <p>This project will allow students to work with raw data and produce graphs to show trends. Once the students have compiled the data, they can research specific time periods to see what else was going on in the world that may have influenced the local population. Students currently study viruses and bacteria in science. The social studies curriculum includes the French and Indian War, the Revolutionary War and the Civil War. The effects of these curricular strands should be evident in the data collection. Students will also collect vocabulary data to track the changes in language through history. This connects with the students' language arts work in word origins.</p> <p>By using the current technology such as iPod touches and the iPad to collect data students become excited to learn. Many students have this technology already and don't realize the educational value of the devices. The iPod touches include camera/video technology that can be used for the multimedia portion of the project. We will use the iPad's GPS feature to gather that data. This project will inspire students to obtain a deeper knowledge of the content. Interactive whiteboards will enhance the students understanding of math concepts by allowing them to interact with the data organization and charting process.</p>
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2. Project is focused on one or more content areas, with the proposal indicating which content area and associated standards are the main focus. Proposal indicates how the project will address ICT literacy skills without focusing solely on the acquisition of ICT literacy skills devoid of core content learning.

Math:

M:DSP:7:1 Interprets a given representation(circle graphs,scatter plots that represent discrete linear relationships, or histograms) to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems. (IMPORTANT *Analyzes data consistent with concepts and skills in M:DSP:7:2.*)

M:DSP:7:2 Analyzes patterns, trends, or distributions in data in a variety of contexts by solving problems using measures of central tendency (mean, median, or mode), dispersion (range or variation), or outliers to analyze situations to determine their effect on mean, median, or mode; and evaluates the sample from which the statistics were developed (bias).

M:DSP:7:3 Organizes and displays data using tables, line graphs, scatter plots, and circle graphs to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.

M:DSP:7:3 Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M:DSP:7:1. (IMPORTANT *Analyzes data consistent with concepts and skills in M:DSP:6:2.*)

Reading:

R-7-2 Students identify the meaning of unfamiliar vocabulary by...

R-7-2.1 Using strategies to unlock meaning (e.g., knowledge of word structure, including prefixes/suffixes, base words, common roots, or word origins; or context clues; or other resources, such as, dictionaries, glossaries, thesauruses; or prior knowledge) (State) EXAMPLE (of common root): inspection (in-spec-tion)

Science:S:LS4:8:2.1 Recognize that disease in organisms can be caused by intrinsic failures of the system or infection from other organisms.

S:LS4:8:2.2 Describe how viruses, bacteria, fungi, and parasites may affect the human body and provide examples of how they can interfere with normal body function. S:LS4:8:2.4 Use data and observations to support the concept that environmental or biological factors affect human body systems (biotic and abiotic). [LS4(5-8)INQ-10]

S:LS5:8:1.1 Explain how technology has influenced the course of history, and provide examples such as those that relate to agriculture, sanitation and medicine.

S:LS5:8:2.1 Recognize and provide examples of how technology has enhanced the study of life sciences, as in the development of advanced diagnosing equipment improving medicine.

S:LS5:8:3.3 Describes ways biotechnology helps humans, including improved health and medicine.

Social Studies:

SS:HI:8:2.2: Explain major United States efforts to remove European influence from the Western Hemisphere, e.g., the Monroe Doctrine or the Cuban Missile Crisis. (Themes: A: Conflict and Cooperation, E: Cultural Development, Interaction, and Change)

SS:HI:8:5.1: Analyze how societal changes have influenced the family, e.g., child labor or elderly care. (Themes: E: Cultural Development, Interaction, and Change, I: Patterns of Social and Political Interaction)

SS:WH:8:2.1: Analyze the demographic impact of diseases and their treatment, e.g., the bubonic plague, small pox in the Western Hemisphere, or AIDS. (Themes: F: Global Transformation)

ICT Literacy:

1. Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

2. Communication and Collaboration - Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

3. Research and Information Fluency - Students apply digital tools to gather, evaluate, and use information.

4. Critical Thinking, Problem Solving, and Decision Making - Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

5. Digital Citizenship - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

6. Technology Operations and Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.

This project will integrate math, social studies, science, language arts, and technology. Students will be using problem solving skills to complete this inquiry based data collection project. Data collection skills will be focused on during the initial phase of the project when students are actively collecting authentic data. Students will interact with the data using the electronic whiteboards to produce graphs and charts. The students will research how the local area has been affected by the French and Indian War, the Revolutionary War and the Civil War. Beginning in the early 1900's there were many medical advances against diseases that allowed populations to live longer. Students can explore these advances and make direct ties to the data they collect. Students will also explore how language has changed throughout history by studying the vocabulary on the headstones.

<p>3. Proposal describes in detail the project based learning unit(s) that will encompass the project, and project features support acquisition of digital and media literacy skills. Project based learning (or problem based learning) with a constructivist approach and essential questions are the heart of these projects. Team projects must show evidence that these pedagogies are clearly understood and applied.</p>	<p>The 7<sup>th</sup> grade teaching team has outlined the following schedule to implement this project. We have already begun our study of viruses and bacteria. We have talked about a few of the epidemics in history and how they have affected the general population. In the area of social studies, students have already studied the French and Indian War and are currently studying the Revolutionary War. Word origins are currently being studied in the language arts class. In the area of math students are periodically asked to organize data into spreadsheets and create graphs and charts. The iPad, iPod Touches and the interactive whiteboards will engage the learners and deepen their understanding of the curriculum. The following schedule is subject to change depending upon the arrival of the equipment.</p> <ul style="list-style-type: none"> <li>• Introduce the essential question: How have populations changed over time?</li> <li>• Make a project journal to include both written reflections and digital media.</li> <li>• Use a KWL chart to begin answering the essential question.</li> <li>• Using their information on the KWL chart, students will research the essential question using the internet and books from the library. Students will keep track of their sources using bibme.com. Students will have a choice of graphic organizers to keep track of their research.</li> <li>• The iPods and iPad will be utilized in the field when we begin the cemetery walks. They will be used to take digital photos and to take the GPS measurements of the headstones.</li> <li>• The interactive whiteboards will be used to compile the data. This will allow for the students to interact and to chart what they collected in the field.</li> <li>• Students will then look at the data they collected and conclude what was occurred that affected the population.</li> <li>• In May 2011 students will present their data to date to peers and parents at an evening open house.</li> <li>• In groups of 4 students will put together a final multimedia presentation that will be presented to peers and parents during an evening in April 2012.</li> </ul>
<p>4. Proposal identifies and explains at least three specific learning goals the team needs to address in its professional development activities and how the proposed professional development will address these.</p>	<ul style="list-style-type: none"> <li>• Teachers will learn how to effectively use the interactive whiteboards in the classroom. The proposed professional development will provide instruction as how to optimally utilize the interactive whiteboards as well as provide resources to help integrate the use of the boards into the classroom.</li> <li>• Teachers will learn how integrate iPods and iPads into the classroom. Taking and uploading digital media to the students computers will be addressed. Use of the GPS feature of the iPad instruction will also be provided.</li> <li>• Teachers will learn advanced video production skills. The teachers currently have a basic knowledge of Movie Maker.</li> </ul>
<p>5. Proposal indicates that support has been obtained from the superintendent AND the principal, preferably by attaching letters of support within the grant application pages (not as separate files). Such support acknowledges that he/she has read the RFP, understands the requirements, and will allow the applying team to fulfill the requirements, if they are awarded the grant.</p>	<p>The district and administration support the project and the professional development that will need to take place in order to successfully complete this project. The administration and teachers understand they will be required to attend mini-grant meetings and professional development opportunities. The 7<sup>th</sup> grade mini-grant team will attend the Educating 21<sup>st</sup> Century Learners Conference, the Christa McAuliffe Technology Conference and another conference during the 2011-2012 school year.</p>

6. Proposal supports schools, teams, or districts that haven't participated in mini-grants previously or partners with such entities.	HCMS has never participated directly in a Title II-D grant before. We would like to work with other schools in the SAU to get a broader data set.
7. Proposal indicates partnerships which involve NH teacher preparation program faculty.	We have had guest speakers from Dartmouth College come to speak to our students about their scientific research. This relationship could be expanded to include their teaching program.
8. Proposal indicates thoughtful inclusion of students with special needs and uses appropriate technology to assist those learners in order to promote the achievement of all students.	All special needs students are mainstreamed in the content areas of science and social studies. The interactive whiteboards would be a tool that we could use to help them better understand the content. The iPods and iPad will allow all students to collect data.
9. Proposal indicates plans for dissemination of the project to other schools and districts throughout the state, including presentations at 2 or more venues.	Teachers will present the project to the SAU during an inservice day. The teachers will present the project at the Christa McAuliffe Technology Conference in 2011. Teachers will also present at another conference during the 2011-2012 school year.
10. Proposal indicates specific plans for video production training as needed and an outline for the promotional video that describes the various stages of design and implementation of the project.	A digital journal will be kept outlining the projects milestones. Professional development will be provided to teachers in order to create a digital diary. The final production will be available on HCMS's homepage.
<p><b>Capacity for Success (35 points)</b>  Describes the capacity of each team member to achieve meaningful success at achieving the goals of the Tech Mini-Grant Program in the school or district. Clearly articulates the program and policies in place that will support success in terms of professional development, technology leadership, and how this program would meet specific achievement needs of the students.</p>	
1. Proposal demonstrates capacity for success by providing strong evidence that school/district and the individual team members are willing and able to conduct the scope of work involved in implementing this project.	The 7 <sup>th</sup> grade teachers at HCMS share a common planning time during which they meet to collaborate and promote higher thinking skills. The 7 <sup>th</sup> grade team and some other staff are also involved in a critical friends group that meets monthly. The 7 <sup>th</sup> grade teaching team and administration would also be willing to open the school to the public a couple of evenings so the work the students can show their work. The 7 <sup>th</sup> grade team was part of the TPSE grant several years ago and would like to move forward in the use of technology in the classroom.
2. Proposal describes why participation in this effort is appropriate for district and the capacity the school or district has that will insure the success of the project.	Haverhill Cooperative Middle School was part of the TPSE initiative several years ago. The school district has since invested heavily in technology. Currently, there are laptop carts available for each grade and a wireless netbook for each student in 7 <sup>th</sup> and 8 <sup>th</sup> grade. All teachers have a laptop and access to Powerschool, an online gradebook. The district feels that integrating technology is vital for student success.

<p>3. Proposal describes any structures, policies, and/or procedures already in place in school or district that support the project and the project-based learning philosophy.</p>	<p>HCMS promotes project-based learning. There is an evening in April where the parents and public are invited to see a project-based learning experience. Each grade level teaching team is encouraged to develop a project that allows the students to use 21<sup>st</sup> century learning skills. Last year the 7<sup>th</sup> grade did an international night where groups of students had to produce a multimedia project based on research they did about a specific country.</p> <p>The 7<sup>th</sup> grade teaching team has a common daily planning time in which they can meet and discuss the project. The 7<sup>th</sup> grade team is willing to try new projects that will enhance student learning.</p>
<p>4. Proposal discusses the abilities and expertise of the individual team members with respect to their ability to collaborate, organize, schedule, and deliver a successful project to their students.</p>	<p>The team's background is extensive and will ensure the success of the project. Mary Burnham has been teaching at HCMS for 10 years. She was an active participant in the TPSE grant. She is a member of the Breadloaf School of English sponsored by Middlebury College. Jordan Burke is a 6<sup>th</sup> year social studies teacher who graduated from Colby College. She has since finished her Masters degree at Dartmouth College. Sally Mulcahy is currently in her 2<sup>nd</sup> year teaching math. She is a member of the school's improvement team. Susan Lewis has been teaching science at HCMS for 11 years. She completed her Masters in Literacy and Curriculum Development from Lesley College. She is also part of the school's data team and the district's technology committee.</p>

<p>5. Proposal indicates team member and district/administrative support with respect to:</p> <ul style="list-style-type: none"> <li>• implementing the project in classrooms,</li> <li>• supporting the professional development opportunities necessary to successfully participate in the Mini-Grant program,</li> <li>• participating in required mini-grant meetings,</li> <li>• producing the 3 minute documentary video for presentation,</li> <li>• preparing the lesson plans and materials necessary for sharing with other,</li> <li>• attending the Mini-Grant celebration day,</li> <li>• presenting the project within the district and at a regional or state venue, and</li> <li>• participating in post-project evaluations for program improvement.</li> </ul>	<p>With the support from the administration the teachers are excited for this opportunity. The teachers feel that the interactive whiteboards will enhance student achievement especially in the area of math.</p> <p>The district will provide substitutes for teachers to attend professional development opportunities during the school year as the professional development master plan supports this project. Teachers are excited to attend any professional development opportunities during the summer.</p> <p>The 7<sup>th</sup> grade teaching team has a daily common planning time that will allow for extensive collaboration not only with this project but with others that may come up. The whiteboards will be in two of the four 7<sup>th</sup> grade classrooms. The team will need to make arrangements to have the classes that don't have a whiteboard to take place in the classrooms that do when necessary. The team will also have access to lesson plans on the interactive whiteboard website that will inspire new plans that can be shared.</p> <p>The teaching team has plans for a digital journal that can be used to produce the three-minute documentary video. Professional development is scheduled in this area to increase all of the teachers' ability in video production.</p> <p>The team is excited to attend the Mini- Grant Celebration Day in April. We will have substitutes and transportation provided by the district.</p> <p>There are a number of venues at which the 7<sup>th</sup> grade team would like to present this project. The Christa McAuliffe Technology Conference and the LESCN Educating 21st Century Learners Conference are the two main conferences we will attend. Susan Lewis, the science teacher, will present at the fall 2011 NHSTA conference. The other teachers will make presentations at one other conference as well.</p> <p>The teaching team is committed to participating in any post-project evaluations that are required. The teachers would like to help improve this program for others who will be participating in future years.</p>
<p>6. Proposal discusses the Extent of Impact within the School - indicates the anticipated number of staff that will be directly and indirectly impacted by the project, as well as the number of students that will be directly and indirectly impacted, along with supporting explanations for each.</p>	<p>The number of staff directly impacted are four teachers. There are also 3 paraeducators who will be directly affected. These teachers will have immediate access to the iPods, iPad and interactive whiteboards for any of their lessons. The number of teachers could increase as the technology is explored and shared with others in the building. Other grades could schedule time in the classrooms with the whiteboards.</p> <p>The number of students directly impacted are 64 this year and approximately 65 students next year.</p>

<p>7. Proposal discusses the Extent of Impact to Other Schools - Describes how the project will involve or include outreach to multiple schools, or multiple districts, in order to increase the impact of the project.</p>	<p>The team will be presenting at the Christa McAuliffe Technology Conference in 2011. The team will also be available to present to the entire SAU 23 on inservice days. The team will also be presenting at one other conference during the 2011-2012 school year.</p> <p>With the interactive whiteboards the team would like to explore the possibility of interacting with other schools in the district who have similar technology. Students from other schools in the district could research cemeteries in their area and the data could be compared and analyzed.</p>	
<p><b>Budget (5 points)</b> Budget contains a narrative and justification of expenses regarding equipment, supplies, travel, and professional development expenses appropriate to carry out the proposed project. The total for professional development is at least 25% of the total budget requested. Include \$100 per team member for each teacher to attend the spring 2012 celebration event.</p>		
<p>Budget is formatted with the narrative in left column and total amounts in right column. Within the narrative, proposal describes a logical connection to district goals and shows how costs were calculated. Proposal includes \$100 per teacher for attendance at celebration event.</p>	<p><b>Narrative</b></p>	<p><b>Amounts</b></p>
	<p>Hardware- 4 iPod Touches, 1 iPad and case, 2 interactive white boards for the 7<sup>th</sup> grade.</p>	<p>\$7,454.00</p>
	<p>Software- included in interactive whiteboard purchase</p>	<p>\$0.00</p>
	<p>Professional Development Activities- Christa McAuliffe Technology Conference-one day for each teacher @ free for presenters</p>	<p>\$0.00</p>
	<p>Required Celebration Event- @ \$100 per teacher</p>	<p>\$400.00</p>
	<p>Interactive Whiteboard Trainings and Video Production Trainings iPad and iPod Touch Trainings</p>	<p>\$2,146.00</p>



## School Administrative Unit # 23

Bath ♦ Benton ♦ Haverhill Cooperative  
Piermont ♦ Warren

Bruce C. Labs  
Superintendent of Schools

Nancy Tuite  
Director of Special  
Education

February 25, 2011

NH Department of Education  
101 Pleasant Street  
Concord, NH 03301

Re: Title II Part D Application

To Whom It May Concern:

I am pleased to write this letter of support for the Title II Part D application of the Haverhill Cooperative Middle School. The Haverhill Cooperative Middle School has been deeply involved in technology education for their students for many years and continues to integrate the use of technology at all levels.

The proposed project would integrate math and language arts into the science and social studies curricula thus giving students the opportunity to see how all areas of their education are connected. The use of technology to help gather data and produce presentations showing the results of this data will be an invaluable tool in their education.

It is my sincere hope that the application for this project will be approved as I believe this is a very educational endeavor for the students of Haverhill Cooperative Middle School.

Sincerely,

Bruce C. Labs  
Superintendent of Schools

cc: A. Houghton

# Haverhill Cooperative Middle School

175 Morrill Drive

North Haverhill, NH 03774

Telephone (603) 787-2100

Fax (603) 787-6117

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BRENT L. WALKER, PRINCIPAL

MATHEW FOREST, ASSISTANT PRINCIPAL

JIM KINDER, GUIDANCE COUNSELOR

February 28, 2011

To Whom It May Concern:

Please accept this letter of support for the project being proposed by the HCMS 7<sup>th</sup> grade teaching team for this round of mini-grant funding.

I have read the RFP and the proposed project and plan to fully support the teachers in the completion of this project should it be chosen for funding. I understand that this support will, among other things, require providing release time for the teachers to attend trainings and make presentations.

Please contact me if you have any questions regarding this letter.

Sincerely,



Brent Walker, Principal



## School Administrative Unit # 23

Bath ♦ Benton ♦ Haverhill Cooperative  
Piermont ♦ Warren

Bruce C. Labs  
Superintendent of Schools

Nancy Tuite  
Director of Special Education

February 28, 2011

New Hampshire Department of Education  
101 Pleasant Street  
Concord, NH  
03301-3860

To Whom It May Concern:

Please accept this letter as an indication of my support for the classroom mini grant application being submitted by Susan Lewis and the grade seven team at Haverhill Cooperative Middle School. I believe that the project proposed exposes our students to the history in their own backyards and will help engage them better with the community around them. Our community has made significant investments in information technology for several years and the technology proposed for this project will serve to enhance our student's experience with information technology.

If you have any further questions regarding the positive impact this project will have on our district, please feel free to contact me.

Sincerely,

Electronically Signed

Adam Houghton  
Director of Technology  
School Administrative Unit 23