

**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)

District:	Hampstead School District	Date:	23 February 2011
Project Manager:	Lori Collins		
Position Title:	Technology Director		
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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:	Hampstead School District

Criteria	Applicants: 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.
Project Abstract (10 points) A clear and concise abstract (100-150 word limit) 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.	Climate companions! We will be using the iPod Touch Generation 4 to actively collaborate with a northern NH school, Josiah Bartlett, for comparative data gathered through observations of five phenophases of common and clonal lilac plants and bud bursts of sugar maple trees. Our second grade students will be mentored Bartlett's Middle School students. We will connect to science, geography, math, writing, and ICT standards in our two focus areas: 1) comparing clonal and common lilacs in southern and northern NH and 2) gathering bud burst data of maple sugar trees. Data will be reported to the National Phenology Network and The Globe Program.
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.	Can plants tell us our future? Can integrating the iPod Touch into the science curriculum elevate student scientific inquiry, critical thinking, and investigative skills? Does mobile computing and apps improve student achievement? Does mobile computing allow us to adapt instruction for individual learners?
Project Description (50 points) 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.	
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.	When reviewing the RFP for the mini-grants, we noticed that the Teacher Leadership Cohort members would receive an iPad or 3 iPods. We are selecting the iPods so our students can easily take the equipment outside to make observations, record data, and take images. We have spent many hours reviewing apps, reading reviews of equipment, and watching blogs as classrooms have been successfully implementing the iPods in their schools. When we had completed these reviews, we knew this equipment would work for us. Hampstead School District also has several teachers available to us who have used the equipment in their classrooms for over a year with great success. These teachers have already implemented a small math iPod touch pilot program with great success. We would have great difficulty getting our students into the natural environment without the iPod Touches.

	<p>Research supports our goal of purchasing the iPod Touch Generation 4's to gather and share our results. According to Carly Shuler, Ed.M. in the report, Using Mobile Technologies to Promote Children's Learning, 2009, 'mobile devices can help overcome many of the challenges associated with larger technologies, as they fit more naturally within various learning environments'. This ties directly into our project, as the iPod Touches can be taken into the field for observations, taking images and data logging activities.</p> <p>Grade 4's NECAPs have declined over the last two years. Students at the higher levels decreased and those at the lower levels increased. By instituting this science focus at a second grade level through the grant program, we will begin to elevate these scores by reinforcing inquiry skills at younger ages.</p> <p>GRADE 4 NECAP</p> <table border="0"> <tr> <td>2008-2009</td> <td>2009-2010</td> </tr> <tr> <td>L4 1.8%</td> <td>2.13</td> </tr> <tr> <td>L3 69.37%</td> <td>59.57</td> </tr> <tr> <td>L2 24.32%</td> <td>34.04</td> </tr> <tr> <td>L1 4.5%</td> <td>4.26</td> </tr> </table>	2008-2009	2009-2010	L4 1.8%	2.13	L3 69.37%	59.57	L2 24.32%	34.04	L1 4.5%	4.26
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<p>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.</p>	<p>To properly execute this grant, we will really be instituting a full program of curriculum. There are so many connections; we will be addressing several standards. The following will be referred to throughout this project:</p> <p>Science – As noted the project's main focus is science.</p> <ul style="list-style-type: none"> • Make and record observations of the lilac trees using all of their senses (S:SPS1:1:1.1, S:SPS1:2:1.2) • Ask questions about the events in their immediate environment (S:SPS1:2:1.3) • Predict how changing one variable of an exploration will affect the outcome (S:SPS1:2:2.3) • Represent and interpret information and observations in many ways (S:SPS1:2:4.1) • Identify and describe patterns and relationships in observed lilacs and events (weather) (S:SPS1:2:4.2) • Recognize that information can be obtained by careful observation (S:SPS2:2:1.1) • Compare and contrast lilacs, seasons and weather patterns between two regions in one state (S:SPS2:2:3.2 & 3.3) • Discover and understand patterns of change (S:SPS2:2:4.1, 4.2 & 4.3) • Collaborate in scientific endeavors (S:SPS3:2:1.1, 1.2 & 1.3) • Use observation skills to describe the area around them (home and school) (S:SPS3:2:2.1) • Have experiences with a variety of media sources, tools and technology (SPS4) • Communicate ideas and observations through a variety of tools and formats (SPS4) • Develop and discover communication skills while observing and telling ideas about real-life issues and happenings (SPS4) • Compile observations and look for evidence to support ideas and predictions (SPS4) <p>Mathematics – As data is correlated, math will play an important role.</p> <ul style="list-style-type: none"> • M:04:DSP:2. 2 (S). Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using more, less, or equal. <p>Social Studies- Learning more about our world.</p> <ul style="list-style-type: none"> • SS:GE:2:2. 1. Explore the physical and human characteristics of place, e.g., 										

	<p>roads, schools or mountains. (Themes: C: People, Places and Environment, E: Cultural Development, Interaction, and Change, G: Science, Technology, and Society)</p> <ul style="list-style-type: none"> ● SS:GE:2:2. 2. Recognize that areas of the Earth's surface share unifying geographic characteristics, e.g., towns, deserts or woodlands. (Themes: C: People, Places and Environment) ● SS:GE:2:2. 3. Observe the ways in which different people perceive places, e.g., personal drawings or book illustrations. (Themes: G: Science, Technology, and Society, J: Human Expression and Communication) ● W:OC:2:2 Oral communication strategies - in oral communication, students make oral presentations ● W:RC:2:1 Writing in response to literary or informational text - showing understanding of ideas in text ~ in response to literary or informational text, students show understanding of plot/ideas/concepts ● W:RC:2:2 Writing in response to literary or informational text – making analytical judgments about text - in response to literary or informational text, students make and support analytical judgments about text ● W:SL:2:1 structures of language – applying understanding of sentences, paragraphs, text structures (w-1)-students demonstrate command of the structures of sentences, paragraphs, and text <p>And our ICT standards – We could not do the project without the technology strand throughout. We will be teaching our students how to safely exist on the World Wide Web; the importance of communicating through the 'cloud'; ethically using others' works – copyright; directly connecting to core subjects through technology; and communicating through Skype, FaceTime and blogs.</p> <p>(1) Develop knowledge of ethical, responsible use of technology tools in a society that relies heavily on knowledge of information in its decision-making;</p> <p>(2) Become proficient in the use of 21st century tools to access, manage, integrate, evaluate, and create information within the context of the core subjects of:</p> <ol style="list-style-type: none"> a. Reading ; b. Mathematics; c. English and language arts; d. Science; e. Social studies, including civics, government, economics, history, and geography; f. Arts <p>(3) Use 21st century tools to develop cognitive proficiency in:</p> <ol style="list-style-type: none"> a. Literacy; b. Numeracy; c. Problem solving; d. Decision making; and e. Spatial / visual literacy; <p>(4) Use 21st century tools to develop technical proficiency at a foundational knowledge level in:</p> <ol style="list-style-type: none"> a. Hardware; b. Software applications; c. Networks; and d. Elements of digital technology; and <ol style="list-style-type: none"> 1. Basic operations and concepts; 2. Social, ethical, and human issues; 3. Technology productivity tools; 4. Technology communications tools; 5. Technology research tools; and 6. Technology problem solving and decision-making tools
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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.

Summary of our Project Based Constructivist Project:

- **Driving Question or Challenge: Can plants tell us our future?**
- **Creates a need to know essential content and skills.** Teachers will present students with knowledge and concepts about short and long-termed

observations of climate. Students will apply these concepts to the comparisons of the cloned and common lilacs along with the bud burst observations. All observations will be shared among the schools, the National Phenology Network and the Globe project. The information will be used real-time as part of a national effort to see how climate changes are happening across the globe. Students will feel the impact and know the importance of their work. Along with that, they will create a three-minute video of their experiences.

- **Requires inquiry to learn and/or create something new.** Students will be using inquiry skills throughout this project. They will be using entirely new tools to do the inquiries as well as reporting out. The tools will be the iPod, netbooks, and new iPod apps. They will report out through a blogging app on the iPod as well as through images - Flickr, and video - the 3-minute video for Celebration and sharing within the schools.
- **Requires critical thinking, problem solving, collaboration, and various forms of communication.** Our students will be in communication with each other via FaceTime and the blog. They will communicate their observations verbally and via photos and text.. They will be able to ask each other questions on a one to one basis using FaceTime. They also have to learn to work as a team and contribute to a group effort. They must listen to others and make their own ideas clear when speaking and be able to read a variety of material, write or otherwise express themselves in various modes, and make effective presentations. (http://www.bie.org/about/what_is_pbl/)
- **Allows some degree of student voice and choice.** The older students will have to take responsibility for teaching and guiding the younger students. They will have to assess the younger students' blogs and conference with them using the FaceTime application. The younger students will have to learn to work more independently using their iPod to upload their pictures of their plant observations.
- **Incorporates feedback and revision.** Students will talk with their teachers, amongst themselves, and with their 'buddies' throughout the project to discuss times when they meet challenges and success. When met with a challenge the students must determine how to face the problem and resolve it through teamwork. They must be able to appropriately receive critical feedback and make necessary changes. Revisions are critical to making the project successful.
- **Results in a publicly presented product or performance.** Information presented by the students will be public almost from the moment they begin. They will need to report out to the National Phenology Network, the Globe Project, their schools, and the Meredith Celebration. Along with that they will be sharing through Flickr, their own blog and snippets on the two schools' web pages.

The more we researched our project the more excited we became to be a part of an important scientific investigation of our own state flower. We are planning a very hands-on (problem-based) project, as we observe, gather data, and compare the growth of four common lilacs and four cloned lilacs – two common and cloned in the northern part of the state and two common and cloned in the southern part of the state. Our goal is to observe five phenophases of common and clonal lilac plants: first leaf, full or 95% leafed, first bloom, full bloom and end of bloom. Inclusive in this observation will not only be the differences between plants growing in the northern and southern parts of the state, but also the differences and similarities in the growth of the common lilac and the cloned lilac. Other data collected will include: daily weather observations, soil temperature, air temperature, dew point, relative humidity, rainfall and wind speed.

This is an important project with real-world implications. According to the National Phenology Network, "Changes in phenological events like flowering and bird migrations are among the most sensitive biological responses to climate change. Across the world, many spring events are occurring earlier—and fall events are happening later—than they did in the past. However, not all species are changing at the same rate. The phenology of some species is changing quickly, while for others it is changing slowly or not at all. These different shifts in timing are shaking up ecosystems and altering interactions and processes that took place in the past." In

other words, a key indicator of climate change.

The Globe Program involves us in the second part of our project, as we not only focus on the lilacs but also the sugar maple trees. "There are two Special Measurement protocols available for schools to follow - [Budburst](#) and [Lilacs](#). In both, students observe plants (native tree species and common and clonal lilacs) and determine the dates when critical events in the plants annual growth cycle occur. This data will help researchers understand climate change. Analysis of satellite data indicates that the growing season in certain high latitude regions is getting longer. This could indicate that the planet is warming, but interpretation of this data could be wrong. Scientists need many ground-based observations of the timing of specific changes in plants, changes which cannot be seen from space." As our project will address both budburst and lilacs, we will be a part of an exciting science project that has implications on our students' future.

Students and teachers will take their observations using NPN and GLOBE protocols and send their observations to the USA National Phenology Network via "Nature's Notebook and GLOBE web site with a very prescribed set of guidelines.

We are lucky to have a scientist, John Kelly, NOAA Meteorologist and Coastal Modeler in the Center for Coastal and Ocean Mapping at the Chase Ocean Engineering Laboratory, who has committed to guide us along during this phase. This will bring validity and allow students to make connections from the science they learn in school to real-life situations.

So, what are the details of our plan? To begin, teachers in our collaborating school have had experience with iPod Touches throughout the past year. They will be able to mentor our teachers as preparations begin. First, the teachers will learn how to use the iPods, set them up and become comfortable in their use. Then we will explore the many applicable educational apps to find the ones that will best suit our project requirements. During this initial period, we will use a portion of our professional development funds for one day of job-embedded training for the next steps in hardware familiarization, designing unit plans, technology integration selections and learning how to use the chosen applications.

Now the excitement really begins as students join the teachers on this journey. One of the first lessons will be for the students to write a descriptive paragraph to introduce themselves to each other and of course include 'what they look like'. We plan on tying a writing element throughout the project as students share information through blogs, emails, and Google Docs. After the paragraphs are written, the students will meet each other over the 'FaceTime' app on the iPod allowing them to actually see each other. We believe this will be a very engaging moment!

In April 2011, the students will delve into the heart of the project as they plant their two cloned and two common lilacs. They will watch the lilac growth as well as making their sugar maple observations. Each school will be gathering data and taking pictures using the iPods and we will also do time-lapse photography to make comparisons throughout the project. Many of our students are involved in sugar mapping events each year. These 'experts' already keep data about the temperature and weather effects on the sugar maples. During sugaring season, students collect sap each day and bring it down to Stoney's Sugar Shack for subsequent processing. A culminating event is when they produce their maple syrup and then celebrate at a community pancake breakfast.

Students will share their information on our Climate Companions' blog for school members, the community, and parents. This allows students to safely share information over the Internet and opens the door to discussions about making safe choices while on the Internet. Fifth through seventh grade students will help second grade students with their posts by making grammatical corrections as observations are posted. In addition, we are hoping that Hampstead resident, Joshua Judge, WMUR meteorologist, will extend our audience by showcasing some of our observations on ULocal. And of course, our results will be posted to the National Phenology Network and The Globe Project.

	<p>Images of observations will be uploaded to a Flickr group account to later be included on the shared blog, allowing us to speak with the students about copyright and public domain sites. Also the iPods will allow immediate posting if desired; students can take a picture and upload it directly to the blog!</p> <p>We will be afforded the opportunity to not only make lilac comparisons, but we can learn more about the geographic similarities and differences of our areas through the Google Earth application for the iPod. Students will begin with viewing the United States, then the state of New Hampshire with a stop at our capital, and then right into our two towns – one in the Lakes Region and one in the mountains. This should initiate some great conversations over the blog.</p> <p>As mentioned above, both schools will also take part in the The GLOBE Student Climate Research Campaign: Engaging Youth to Understand Climate which begins in September 2011 and will engage students from around the world in the process of investigating and researching their local climate and sharing their findings globally. SCRC is comprised of learning activities, events, and research investigations. “The SCRC will focus on improving students’ understanding of climate and how it differs from weather as well as guide them through the process of climate research using GLOBE materials and protocols. The SCRC will continue GLOBE’s tradition of inquiry-based, hands-on science and will promote international collaborations between students and with scientists. The SCRC officially launches in September 2011 and concludes in June 2013.” (http://globe.gov/scrc)</p> <p>Long after the grant ends, we will be collecting data as this is not just a school project, but a way for us to give back to our global community. As our ‘science team’ will consist of second grade students, not only will we be able to keep providing scientific data to national organizations, but also our students will be deeply immersed in science. As new students enter the second grade each year, they will begin their data gathering and sharing responsibilities. Along with this, we are signing an agreement for a five-year commitment to fulfill our obligation for the lilac and sugar maple projects.</p> <p>What starts as a collaboration between the grade levels in two schools will also lead to a collaborative effort <i>within</i> our own school, as well. Our new ‘iPod Touch Generation 4 experts’ will now teach their own buddies in our school. As projects begin ‘blooming’ throughout our school our mentors will help teach all their new ‘students’. The iPods will become available for others in the school to check-out and become a normal part of our day-to-day routine. We see the beginning of a long partnership between the iPods and Hampstead Central School.</p>
<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>	<p>The learning goals for our students are:</p> <ol style="list-style-type: none"> 1) Explore data and issues of data quality, 2) Experience the scientific method, 3) Design and implement their own investigations. (from GLOBE project) 4) Use appropriate tools to accurately collect and record both qualitative and quantitative data gathered through observations. 5) Describe how scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning and the application of imagination in devising hypotheses and explanations to make sense of the collected data. 6) Work effectively within a cooperative group setting, accepting and executing assigned roles and responsibilities. <p>In order for our students to meet their goals, we also need to meet the following goals as a professional learning community:</p> <ul style="list-style-type: none"> • Foster a deepening of subject-matter knowledge, a greater understanding of learning, and a greater appreciation of students’ needs. (We will be doing comparisons and observations of cloned and common lilacs, something we have never done before. Using a combination of self study,

	<p>readings and web research our teachers will increase their content knowledge. They will also be learning with the students, our science expert, the Globe Project, National Phenology Network, and by partnering teachers working together. We will definitely better understand our students' needs as we take this journey together.)</p> <ul style="list-style-type: none"> • Provide for three phases of the change process: initiation, implementation, and institutionalization. (At the initiation of the project, the southern school's teachers will share their expertise with the iPods with the northern schools who have not used the tools in their curriculum {through Skype and job-embedded professional development}. During the implementation phase, teachers will begin sharing their knowledge with their students and their experiences will be discussed amongst the learning group to share best practices. Once the program has completed its first year, these teachers will then share their expertise with the other teachers in their building so they too will be able to learn a new technology tool and how to successfully implement into their own curriculum.) • Provide a framework for integrating innovations, and relating those innovations to the mission of the organization. (In keeping in line with Hampstead School District's Strategic plan, teachers will attend iPod training at their local educational support center. Teachers will share their knowledge with their colleagues at staff meetings and after school sessions.) • Help teachers and other school staff meet the needs of students who learn in different ways and who come from diverse cultural, linguistic, and socioeconomic backgrounds. (As we will be delving deeply into data to determine groups and specific skills training students need, we will in essence be developing individual plans for our students. In addition, knowledge will be expanded by attending training of the use of mobile device with the special education population.)
<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>Letters of support have been obtained from: Superintendent Principal Student Our superintendent and principal have read the RFP, understand the requirements, and will allow our team to fulfill requirements, if we are awarded the grant. (All letters of support are attached.)</p>
<p>6. Proposal supports schools, teams, or districts that haven't participated in mini-grants previously or partners with such entities.</p>	<p>Our partnering school, Josiah Bartlett School, has participated in the mini-grant process before.</p>
<p>7. Proposal indicates partnerships which involve NH teacher preparation program faculty.</p>	<p>We will be connected to Great Bay Community College by way of an intern program. The intern working on this project is a videographer.</p>
<p>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.</p>	<p>We have been deeply involved in data-driven differentiation in our school. Our special education students who will be involved with the program will receive the appropriate additional help they need to succeed. The iPod Touch has many core curriculum apps for special education that help these students excel, become engaged and motivated in a digital environment that fosters learning.</p>
<p>9. Proposal indicates plans for dissemination of the project to other schools and districts throughout the state, including presentations at 2 or more venues.</p>	<p>We will present at the celebration in Meredith, we hope to be accepted to present at Christa McAuliffe Technology Conference and we will share our findings with the other elementary schools in our SAU as part of the opening day SAU kick off.</p>
<p>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.</p>	<p>We received extensive video production training on several occasions at our school, including as recently as this year as part of job-embedded professional development. We feel quite confident we will be able to create a very engaging video that will capture our audience's attention so they will learn of all the great things these two schools' students did. Throughout the project there is a requirement for images that will be used for the video. Along with that, we will be</p>

taking time-lapse photography, and video as a part of the program. All of this will be included in the video – and we will be able to share with both schools as we share data during the entire project. Hampstead School District has a newly created television station which will broadcast the video to our community.

Capacity for Success (35 points)
 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.

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.

Our team is committed to the following scope of work and will follow-through:

14 March 2011	NHDOE OET announces mini-grant awards
16 March 2011	Request final quotes from vendors
21 March 2011	Order iPod Touch Generation 4's and supplies
April 2011	Begin planting and bud observations
12 April 2011	Teacher Workshop Day; Professional development activities and setup begin for iPods. Skype sessions between both schools and detailed plans developed. iPod FaceTime connections begin.
25 April 2011	Students begin writing descriptive paragraphs
2 May 2011	Students share paragraphs through Climate Companions blog and actually 'meet' their FaceTime big and little buddies.
May 2011	Measurements and observations continue. Job-embedded professional development.
18 May 2011	Continue detailed planning, report outs continue, blog writing continues...
July – August 2011	Teacher observations of lilacs continue
September 2011	Student observations and measurements continue. FaceTime discussions begin after summer break.
September – October 2011	Continued work on project. Fall foliage observations shared. Update to faculty members at staff meeting. Share with Timberlane School District.
End Nov 2011	Present at Christa McAuliffe conference if accepted
June 2012	Project period ends, but observations and reports continue.
2013 school year	Continue Globe and Phenology reports. Begin teaching younger students in school on iPod use. Five year commitment to Globe Project is required so project will continue.

	<p>Images will be taken during all phases of the project. We will present at the annual Mini-Grant Celebration Event at Church Landing in Meredith when a date has been determined (Video will be ready at that time).</p> <p>We will be prepared to submit our lesson plans, the assessment rubric and other documentation as needed. Drafts will be submitted to Matt Treamer when a designated date is determined.</p>
<p>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.</p>	<p>Our school has a technology committee that represents all the members of our school; it was an entire school decision to apply for this grant and pursue this project. It was with serious thought and deliberation; we decided to use this project to help us achieve our goal of an 80% Level 3 and 4 in our 4th Grade Science NECAP.</p> <p>We have a full time technology educator/technology coordinator (Education Technology Integrator) who will be able to provide job-embedded professional development with the equipment at a moment's notice (just-in-time training); an administrator who is willing to provide substitutes when teachers are involved in mini-grant activities and our technology support team is standing ready to provide an immediate response to technical, hardware and software problems. Also, involved in the logistical support are our outside technology representatives and custodial personnel. When we take on a project, the whole school becomes involved. Most importantly, a five year working relationship between both project managers.</p>
<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>Our administration has placed a strong emphasis on differentiating instruction guided by data for our students to be most successful. Our school has embraced this philosophy and we ignite our students by providing challenging, real-life, hands-on projects. We are deeply involved in RTI through universal screening and progress monitoring. We will be able to track the progress of the program and the data will show us where to make any necessary changes supported by the strength of strong indicators.</p> <p>We work hard to make our programs self sustaining by promoting our projects to our community. Our town strongly supports our school budget. This is evidenced by our "Laptops for Teachers" project was supported by town funding. Due to the success of this implementation, we provided funding through our school budget so now every teacher in our school has their own laptop!</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>We have a motivated group of teachers and an administrator that leads with vision and support. We work together, and celebrate our success together. As we hit obstacles we can be flexible and revise our plans to meet our goals. We believe in our students and staff and we know we can bring this project to successful fruition.</p> <p>We currently have a focused, expert technology committee and data committee in our school. Many of the members serve on both committees. These staff members are adept at incorporating data, developing and tracking surveys, and making sense of the flow of information we gather each year. They will have meetings throughout the process to work with the teachers involved in the training to get updates and see if there needs to be any changes made to the process. And finally, we will provide results to science experts/teachers and technology directors to review for final report. We feel there will be no gaps in this process.</p> <p>Kara Gordon, second grade teacher, will lead the team. Kara has been a technology leader in the school for the past year. She has done several trainings on document cameras that have been well attended.</p> <p>Mary Ann Lazzaro, second grade teacher, is a leader in curriculum and has the motivation to integrate technology into her classroom. She has spent the past year attending various PD sessions at the Seacoast Professional Development Center and continues to enhance her lessons using digital literacy.</p> <p>Dillard Collins, Principal, is a strong supporter of technology in his school. He has reallocated funds for the past year to enable his classes to have a minimum of three</p>

	<p>netbooks in each room as well as a teacher laptop.</p> <p>Brooke Petrucelli, Technology Integrator, will provide job embedded training and support to the teachers as they proceed.</p> <p>They carry the motivation, expertise and background to make this project work. We are all excited to be involved in this entirely collaborative project. We have worked with a member of the Bartlett school and know that there will be a continuous flow of information and collaboration.</p>
<p>5. Proposal indicates team member and district/administrative support with respect to:</p> <ul style="list-style-type: none"> · implementing the project in classrooms, · supporting the professional development opportunities necessary to successfully participate in the Mini-Grant program, · participating in required mini-grant meetings, · producing the 3 minute documentary video for presentation, · preparing the lesson plans and materials necessary for sharing with other, · attending the Mini-Grant celebration day, · presenting the project within the district and at a regional or state venue, and · participating in post-project evaluations for program improvement. 	<p>As noted in our Scope of Work above, we are ready and prepared to meet all the requirements of this grant. All of our second grade teachers and technology integrator cannot wait to begin implementing the project into their classroom activities. . We have already had pre-meetings with everyone involved. So if the grant is approved, we can begin immediately.</p> <p>Professional Development has been thought through. When looking at professional development as a district, we want to stay aligned with our SAU Professional Development Master Plan. In keeping with this, we feel our grant expectations align with our Professional Development Plan.</p> <ul style="list-style-type: none"> · Foster a deepening of subject-matter knowledge, a greater understanding of learning, and a greater appreciation of students' needs. · Provide for three phases of the change process: initiation, implementation, and institutionalization. · Provide a framework for integrating innovations, and relating those innovations to the mission of the organization. · Help teachers and other school staff meet the needs of students who learn in different ways and who come from diverse cultural, linguistic, and socioeconomic backgrounds. <p>Also, research shows the importance of professional development's role in 21st Century skills development... "It is important that educators undergo sufficient practice in familiarizing themselves with 21st century skills in order to master the pedagogical strategies needed to impart learning in these subject areas to their students. Only after they can masterfully model those areas will they be able to translate those skills to the classroom." (<i>Route 21 website: Professional Development White Paper, How can district and state leaders implement 21st century skills professional development into their schools?</i>)</p> <p>Standards addressed in this project are:</p> <ul style="list-style-type: none"> - Organizes adults into learning communities outside their school boundaries whose goals are aligned with those of both the schools and districts. (We will be working with another school district throughout this project and will need to create a cooperative learning community of students, teachers and parents.) - Provides educators with the knowledge and skills to collaborate. (We will be using new mobile equipment that make a solid connection to our students' world. We need these skills to guide them in the future.) - Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (We will be collaborating with a scientist, WMUR, parents and families that will be involved with the social networking part of the project.) <p>Our administrator has agreed to provide substitutes for the required mini-grant meetings, to attend the Mini-Grant Celebration Day and to participate in post-project evaluations for program improvement.</p> <p>As our project involves a lot of digital imagery, we will have an abundance of material to choose from for the 3-minute documentary video.</p> <p>We will be developing lesson plans and materials through Skype and FaceTime collaboration with the teachers in Hampstead. When these lesson plans and resource</p>

	<p>materials have been finalized, they will become available for others as required for dissemination to other districts or schools. We also hope to share our materials with other schools that request our people to come visit... or they are welcome to come to our school. If accepted, we will present at Christa McAuliffe and we would like to share our information at our faculty meeting and a school board meeting... to keep our community informed. Again, our project will be showcased on the HSD-TV to share with our community.</p> <p>Our teachers will Skype with our partnering school to assess the project at various points. We will alter the process if needed and an overall evaluation will be performed at the end to determine success and challenges so that others may learn from our experience.</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>We are planning on our two second grade teachers being the lead for the science portion of this project with sustained support from Dr. Frank Kelley who is readily available. Directly involved in the project is the computer integration teacher who will give hands on assistance in the classroom. Supporting the project is the technology director, principal, two classroom assistants and two special education teachers as well as our intern who will aide in the professional broadcast to our town.</p> <p>The project will impact 36 second grade students in our school, as they become buddies of the 36 middle schoolers in Bartlett. We are hopeful the Climate Companion project will extend long after the close of the grant period. Also, upon completion of that phase of the program, we will expand use to our entire student body of almost 300 students, through equipment checkout using a mobile 'lab'.</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>We are partnering with a school in the northern part of the state so our scientific comparisons will have merit. Working through various digital tools will allow us to do so smoothly. We plan on communicating through a blog, using FaceTime for one-to-one discussions, Skype for full classroom activities and for teachers to receive initial hardware and software training (Hampstead has experience with the tools so they will be teaching Bartlett), and hopefully an actual visit between the schools.</p>								
<p>Budget (5 points) 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>	<table border="1"> <thead> <tr> <th data-bbox="558 1314 1188 1373">Budget</th> <th data-bbox="1188 1314 1325 1373">Total</th> </tr> </thead> <tbody> <tr> <td data-bbox="558 1373 1188 1600"> <p>Hardware – 26 iPod Touch Gen4's x 229.00 plus shipping The iPod Touches are the heart of our project. They will be used to meet our learning goals as outlined in proposal as well as answer our essential questions. The iPods will be used to gather data, make observations and communicate throughout the project.</p> </td> <td data-bbox="1188 1373 1325 1600">5954.00</td> </tr> <tr> <td data-bbox="558 1600 1188 1797"> <p>Software – There are many free apps available for the iPods but there are some we may need to purchase to make our project more efficient, i.e. BlogPress. We plan on making a thorough review of apps before purchase and will be coordinated between our two schools.</p> </td> <td data-bbox="1188 1600 1325 1797">300.00</td> </tr> <tr> <td data-bbox="558 1797 1188 1864"> <p>Professional Development – We will use the funds from professional development to hire a</p> </td> <td data-bbox="1188 1797 1325 1864">2250.00</td> </tr> </tbody> </table>	Budget	Total	<p>Hardware – 26 iPod Touch Gen4's x 229.00 plus shipping The iPod Touches are the heart of our project. They will be used to meet our learning goals as outlined in proposal as well as answer our essential questions. The iPods will be used to gather data, make observations and communicate throughout the project.</p>	5954.00	<p>Software – There are many free apps available for the iPods but there are some we may need to purchase to make our project more efficient, i.e. BlogPress. We plan on making a thorough review of apps before purchase and will be coordinated between our two schools.</p>	300.00	<p>Professional Development – We will use the funds from professional development to hire a</p>	2250.00
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	<p>consultant for 1 day of job-embedded professional development (750) and send 4 teachers(1000) to a LESC workshop on iPod touch applications. Being involved in numerous professional development activities, we know this is the best learning environment for students and teachers alike and the most efficient use of our funds.</p> <p>Also included are the required funds for our attendees to attend the Mini-Grant Celebration in Meredith.</p>	
	<p>Other – 2 - 13 port charging docks (plus shipping) for our iPods. This will ensure the iPods are charged and ready to go at all times. Just go to the dock and pick them up – ready for the students' observations, data logging, and communications! Other necessary supplies</p>	438.00
	TOTAL	8942.00



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Timberlane Regional School District
Hampstead School District

Cathy Higgins, Ed.D.
State Educational Technology Director
Office of Educational Technology
New Hampshire Department of Education
101 Pleasant Street
Concord, NH 03301

February 17, 2011

Dear Dr. Higgins,

I am writing this letter to support Hampstead Central School's project "Climate Companions" aimed at our second grade students. I believe that this project will create some remarkable changes in instructional practices employed by our teachers. The mixture of skills and content together is leading us in a direction where students and teachers both are getting excited about what they are doing. The teacher's role is one of coach, facilitator, guide, advisor, or mentor; it is no longer primarily one of directing and managing all student work.

The "Climate Companions" project meets all goals of exemplary project-based learning. It addresses 21st Century learning skills by integrating technology as students demonstrate what they have learned in the curricular areas. The students will engage in investigation, research, problem solving, decision making, and higher level thinking skills while collaborating with another classroom. Assessment will be ongoing, frequent, and varied including teacher assessment, peer assessment, as well as self-assessment and reflection. The project will be showcased in a collaborative blog that will be assessed by the public, a scientist, the teachers and our partnering classroom.

The involvement of Dr. Frank Kelley of the National Oceanic and Atmospheric Administration (NOAA), provides a way for a scientist and our educators to engage in an ongoing discussion with the goal of sharing ideas, growing professionally and improving the teaching of science. Our partner, Josiah Bartlett School, is especially interested in sharing this valuable resource. We will utilize our experts on the front end of the project by having students contact him for support in building background knowledge. Dr. Kelley has also helped us design the project assisting the teachers to ensure the data obtained is scientifically accurate.

I offer my support to this project as the assistant superintendent of the Hampstead School District. Please feel free to email me if you have any questions.

Sincerely,

Winfried Feneberg
Assistant Superintendent, SAU 55
Hampstead School District
Winfried.Feneberg@timberlane.net

From the Principal Mr. Collins

To: Dr. Higgins
Re: Climate Companions project
Date: 2/18/2010



HAMPSTEAD CENTRAL SCHOOL

21 Emerson Avenue
Hampstead, NH 03841

Dillard E. Collins, Principal
329-6326 x103
collinsd@hampstead.k12.nh.us

It is with great pleasure that I write this letter of support for the proposed Climate Companions project.

As a school administrator, I support this collaborative effort between teachers, students and noted meteorologist. We look forward to progress students make as they explore climate changes right in their own school yard.

- It is an exciting project that will be lead by two second grade teachers, Kara Gordon and Mary-Anne Lazzaro, and the technology coordinator, Lori Collins, from Hampstead Central School.
- Students at Hampstead Central School will gain valuable knowledge as they explore climate changes through careful observation of maple and lilac trees in their own environment. Students will work in collaboration with partnering eighth grade students at Josiah Bartlett School, in Bartlett, NH.
- This project will involve a Hampstead parent, a noted meteorologist/scientist, Dr. Frank Kelley of NOAA (National Oceanic and Atmospheric Administration). He has been involved with many school and town projects. For this project he will guide the teachers and offer his expertise in the area of climate observations and data collection.

This project will integrate science, math, and language arts as students study the climate in their local region and compare it to the region of their partnering students in Bartlett, NH. The use of hand held iPod touches will allow students at both schools to communicate with each other and discuss the similarities and differences between their observations of the trees. The students from both schools will observe the trees from bud growth this spring to leaf foliage this fall. Students will continue to make observations through the winter and into the next spring. This year long observation of the trees will allow students to gather and compare data and to make predictions about the climate in both regions. The hand held iPod touches will allow students the ability to go into the field for observation, photographing changes and data collection. Students will also use the iPod touches to post on the collaborative blog site where information, data and photos will be available to students, teachers, administrators, scientists, and parents alike. Students will utilize the Face Time application on the iPod touch to communicate live with partnering students and will receive instant feedback from each other.

The Climate Companions project is exciting not only for this current year, but for the future opportunities that will be available for students and staff through the use of this new technology, our environment, the current HCS weather station, and the collaboration with our partner school. These teachers are excited to share their technology project with colleagues both in district as well as across the state.

I support the ideas and direction that this project is sure to bring our students, teachers, and school by integrating the components of project-based learning and technology into the science curriculum. Students and teachers will gain experience in becoming technologically literate in the 21st century. This project will put technology right in the hands of students, allowing them to use the iPod technology for an exciting real-world application that will have a positive environmental impact.

The teachers involved with this grant are highly regarded classroom teachers that have taken the initiative to work with our District Tech staff to take this leap into a new phase of tech integration. The fact that these two teachers (two of our best) are excited about this opportunity speaks to their continual pursuit of opportunities for child learning. I also see this as an opportunity for two excellent teachers to find new ways to improve their skills. They look forward to sharing these learning opportunities with the rest of the staff at Central School.

As a building principal and a strong proponent of technology integration into all phases of learning, I see this grant as another step moving forward into 21st century learning in our 20th century school building. In 2009, the United States Department of Education said it is the responsibility of educators to ensure that today's students are ready to live, learn, work and thrive in this high-tech, global, high participator world. We hope to bring HCS more in sync with the culture of today's society. This grant is one means (with many others) to bring HCS a bit closer to the world these students will lead in a few years.

Thank you for your support. If you have any questions, feel free to contact me.

Dear Dr. Higgins,

I think this project will tell us a lot, and be a lot of fun. I am excited to work with other kids. The I pod touches will help us communicate with our climate companions and help us learn about the trees and weather.

Thank you,

Rylie