### 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:	Jaffrey-Rindge Cooperative SchooDistrict	Date:	2/28/2011
Project Manager:	Teresa Morris		<u> </u>
Position Title:	Coordinator of Gifted and Talented Instruction	1	
Mailing Address:	SAU #47, 81 Fitzgerald Drive, Unit 2	***************************************	
Email Address:	t.morris@sau47.org		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Phone:	603-532-8100 x 213		

### 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: Jaffrey-Rindge Cooperative School District

Criteria	<b>Applicants:</b> 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.	
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	This interdisciplinary project engages gifted students, grades 5 through 8, using hand-held devices to explore, "How does variation of a specific environmental factor impacts change in the ecosystem?"
as how it would advance the achievement of students.	Classroom and field activities extend existing environmental study units, through research, mapping, data collection, and reporting how seasonal variations of vernal pools impact plant and animal species. Students receive instruction regarding GPS devices and iPads. During
	fall and spring, GPS is used to map vernal pool locations and sizes. iPads serve to access information, compile data, and record notes and digital images. Information documenting vernal pools to be shared with Division of Fisheries and Wildlife.
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.	Implementation includes several partners. Pre-service, students at Keene State design field activities, integrating science skills, geography concepts, and use of hand-helds. Harris Conservation Center docents provide classroom and field instruction, focusing on scientific processes, inquiry and environmental content. SWnhESC will provide professional development for GPS and iPad.

# 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.

 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.

### PROJECT DESCRIPTION:

"Vernal Pools: A Fleeting Phenomena, with Lasting Impact", is an original, interdisciplinary project encompassing content and concepts in the areas of Science, Geography, Mathematics, and Written Communication. The primary focus will involve Environmental Sciences and Geography, through students' exploration of the significance of this unique feature of our ecosystem. These explorations will offer students, in three schools, spanning grades 5 through 8 the opportunity to use of several technology tools that are new to the elementary and middle school programs.

### **Basis for the Project:**

The catalyst for the project is based on two essential needs:

- The need to increase academic rigor, through hands-on experiences inside and outside the classroom, requiring students to use scientific process and problem-solving skills and actively engage in exploring environmental issues relevant at the local, national, and global levels.
- The need to engage students in the use of varied technology tools in a variety of applications across the curriculum.

Results from the 2008 through 2010 Science NECAP indicate a continuing trend in which student performance using scientific process and inquiry and critical thinking skills are lower than all other assessed domains. While the project supports a variety of skills assessed by the NECAP math and writing assessments, the project's major emphasis will be the Science Processes outlined in the New Hampshire Science Framework. The focus on Scientific Inquiry, Unifying Concepts, and Critical Thinking Skills, and Science Skills for Information and Media Literacy, includes the grade level expectations:

- S:SPS2:8:1.1 Describe how scientific investigations involve collection of relevant evidence, use of logical reasoning, and application of imagination in devising hypotheses and explanations of collected data.
- S:SPS3:8:1.1 Work effectively in a cooperative group setting accepting and executing assigned roles and responsibilities.
- S:SPS3:8:2.1 Locate and collect reliable information about the environment and environmental topics using varied methods and sources.
- S:SPS3:8:2.1 Evaluate whether information and data collected allows an evaluation of the scientific idea under evaluation.
- S:SPS4:8:1.1 Use a variety of information access tools to locate, gather, and organize sources of information to answer questions.

In addition, the results of NECAP Math assessment show performance in Data, Statistics, and Probability is generally lower than other domains. The project emphasizes:

 M:DSP:8.1 Interpreting given representation (i.e., lines graphs, histograms).

While the project's primary focus emphasizes scientific inquiry and process skills, the district continues to seek ways to expand students' exposure to new technologies and purposefully integrate technology across the core curriculum. During the implementation of a Digital Tools Project in 2009-10, the results of a survey to gather information on students' familiarity and proficiency with the use of varied technologies indicated that many students' use of technology was generally limited to the computer, with little exposure to hand-held tools.

The project expands students' use of technology by introducing GPS and iPad devices at the elementary and middle levels. The use of hand-held devices will encourage students to actively engage in application, analysis, synthesis and creative use of knowledge and understandings.

The design of the project is intended to engage students in the use of scientific process and problem-solving skills and the purposeful integration of technology tools and resources by addressing several key questions:

- 1. What essential qualitative and quantitative questions need to be asked in planning the investigation of vernal pools?
- 2. What methods and tools will be useful in gathering reliable data?
- 3. What conclusions can be made regarding the impact vernal pools have on the surrounding ecosystem?
- 4. What information is the most important to share with local and state agencies to advocate for their identification and protection?

 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.

### **Integration of ITC Literacy Skills:**

The project will extend the focus on content, concepts, and process skills in the core areas of science and geography, to encompass 21<sup>st</sup> century tools for communicating, accessing, processing, and researching information. Students' technology, media literacy, communication and critical thinking skills in the areas of Science and Geography will be enriched by engaging students in:

- Using newly introduced information access tools (GPS and iPad) to locate, gather, and organize real-time observations and information and research electronic resources relating to key environmental questions;
- Using appropriate tools (graphs and tables) to analyze and synthesize information and compile quantitative data;
- Combining the use of several digital tools to compile and share information regarding the impact on plants and animals resulting from formation or loss of natural habitats;
- Creating a chronological representation (including graphs, sketches, digital images) depicting the interrelationships of elements in a specific ecosystem (vernal pools);
- Creating original data and maps regarding the location of vernal pools and plant and animal populations;

The project will also engage students in the application of 21<sup>st</sup> Century skills and concepts, Communication Arts, Mathematics, and Visual Arts through activities such as:

- Accessing information gathered through the use of GPS, Internet, and digital libraries and mathematical processes required to apply data to solve questions and problems generated during the learning project;
- Composing a letter / information packet to state officials documenting the importance of identifying and protecting vernal pools located within the community of Rindge;
- Organizing and analyzing data to formulate and answer questions about the physical environment and plant and animal species.

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.

### **Unit Content and Activities:**

<u>Higher Education Component</u>: Students enrolled in the GeoSpatial Course at the Keene State University, will develop unit lessons that integrate the use of hand-held devices (GPS / iPad). In addition to including the introduction of geospatial skills, university students will be expected to integrate content from the elementary and middle level ecology and environment units currently used in the school district.

<u>District Content Activities</u>: Through research accomplished in pairs, students will build upon the content and performance expectations contained in the district's units of study involving Ecology and Environment, focusing in detail on the habitats created by vernal pools and the species that generally thrive within these habitats. Direct instruction, independent research, and field study will emphasize the following:

- Students will identify factors (i.e., weather patterns, topography, human impact) that contribute to the formation or loss of vernal pools;
- Training in the use of the iPad and specific applications related to the project research and compilation of field data;
- Use of a variety of information (topographical maps, print / electronic information, aerial photos) to make predictions about the areas where vernal pools are most likely to form, within a specific area near Rindge Memorial School, as well as predicting the plant and animal species most likely to be found in the habitats surrounding vernal pools. Student teams will compile and compare information;
- Instruction in the use of the GPS for mapping functions and the identification different types of maps (i.e., GPS coordinate maps, survey maps);
- Use of the GPS to create maps of the location of vernal pools;
- Use of digital tools to record information gathered through observations during field experiences. Students will electronically record information (i.e., electronic notes on the iPad, digital photos);
- Use of several methods to compile and depict data regarding the frequency and variety of plant and animal species, by producing graphs, histograms;
- Analysis of predictions regarding the plant and animal species made prior to field observations with data gathered during the field experiences;
- Comparison of students' mapping of vernal pool locations with professionally produced maps;
- Using the results of mapping activities and observation data to develop a persuasive letter to New Hampshire Division of Fisheries and Wildlife, requesting that the vernal pools located during field experience be formally identified to support their protection.

 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.

### **Professional Development Opportunities:**

During the implementation the project team of teachers will engage in professional development, focusing on the following:

Enriching teachers' understanding of the Geographical Inquiry
 Process and geospatial tools and strategies and how these can be linked to and enhance the existing science curricular content.

Training to use Global Positioning System in varied instructional settings, including web-based, field-based, and lab-based applications.

Faculty members of the Geography Department at Keene State University and trainers from SWnhESC will collaborate to plan and deliver the training at a two-day session to be offered during summer 2011. This training will be hosted by Winchester School District, funded by the Rural Effectiveness Collaborative Grant, with no cost to this project.

This two-day professional development will be provided to district teachers involved in the project, through participation in the GeoSpatial Technologies course offered at Keene State University during summer 2011. This training experience will be offered at no cost to teachers involved in the project by the university. Teachers will receive a stipend for their participation.

- Training in use of the iPad and applications that support the goals of the "Vernal Pools" project, as well as other applications that may be integrated into the study of ecosystems. This training will be provided with support from the SWnhESC and the Harris Conservation Center prior to students' initial field experience in Fall 2011.
- Training in the use of Movie Maker, necessary to produce the project video. Support for creating the video will combine assistance from district staff and consulting services from SWnhESC.
- Teachers of Science and ELA will collaborate on planning the instruction relating to the composing of the persuasive letters. These planning sessions will extend the training that has been provided for content area teachers in the use of the 6+1 Traits of Writing. Letters will be shared with state officials, urging the formal identification of the vernal pools located during the students' field exploration.
- 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.
- Proposal supports schools, teams, or districts that haven't participated in mini-grants previously or partners with such entities.

### **Evidence Of Administrative Support for the Project:**

The Superintendent of Schools and Principals endorse this project, as evidenced by the several letters of support included with this grant application. The Superintendent's letter of support acknowledges that he has read the RFP, understands the requirements, and will allow the applying team to fulfill the requirements, if they are awarded the grant.

This project is the first mini-grant proposal submitted by this team. The district has been involved with SWnhESC in the implementation of previous min-grant projects, however the services provided as part of these projects are not duplicated in this proposed project.

 Proposal indicates partnerships which involve NH teacher preparation program faculty.

### Partnership with Higher Education:

The planning discussions for the "Vernal Pools" project have involved members of faculty at Keene State University, including Dr. Lara Bryant, Assistant Professor in the Department of Geography and Coordinator for the New Hampshire Geographic Alliance.

During the summer 2011 term, pre-service teacher candidates enrolled in the GeoSpatial Technologies Course will design a series of age-appropriate lessons that integrate the use Global Positioning Systems. These lessons will require the introduction of new skills required to use the hand-held GPS, as well as integrate content supporting JRCSD school district curricula. These lessons must also be based the Geographic Inquiry Process and include the opportunity for student users to develop a hypothesis, gather and analyze data, and engage in solution of a problem. JRCSD teachers on the project team will participate in the course during the days when instruction on the use of the GPS takes place. These lessons will be made available for use during the classroom and field experiences.

 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.

### **Inclusive Practices:**

During the first year of implementation, the project will primarily involve students identified as academically gifted and talented student in grade 5 through 8. Included among this group of gifted and talented students are individuals identified with other exceptionalities, such as high-functioning Asperger's Disorder.

During subsequent years the project will be expanded to include all students in grades 5 through 8, encompassing students with learning disabilities.

 Proposal indicates plans for dissemination of the project to other schools and districts throughout the state, including presentations at 2 or more venues.

### **Dissemination of the Project:**

The initial implementation of the project will involve academically gifted and talented students, in grades 5 through 8. This group will be involved in piloting the project's classroom and field activities, with the intention of making the project's resources and findings available for replication in regular classrooms within the district, as well as by schools in other districts.

The project will also be shared at local venues, including presentations to the elementary and middle school faculties and the JRCSD School Board. Additional presentations outside the district may include Winchester School District, the annual conference hosted by the New England Association for Gifted Education and the project presentations at the statewide Celebration Day.

Initial planning for the project has involved discussion facilitated by SWnhESC, to establish a partnership between Jaffrey-Rindge Cooperative School District and Winchester School District, to share the cost of training teachers in the use and application of the GPS and touch-pad technologies.

 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.

### **Video Production:**

The production of the required video will begin during Spring 2011, following training in the use of Movie Maker program. SWnhESC will provide the training as part of the projects professional development plan. The training will be scheduled in order to document the project activities in the GeoSpatial Course offered in June 2011 at Keene State University. The flexible schedule of the team leader will allow for recording the various activities occurring within the district. Preliminary plans outlining the filming of the video are as follows.

- April-May 2011 Training for Movie Maker
- June 2011 Filming of activities / training during the GeoSpatial Course at Keene State University and GPS training by SWnhESC at Winchester School District
- August 2011 iPad Training
- September/November 2011 Filming of classroom and field activities facilitated by Harris Conservation Center (as time and weather permit, additional filming of field activities will occur during Spring 2012.)

## Capacity for Success (35 points) Describes the capacity of each teammember 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.

- 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.
- 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.
- 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.
- 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.

### **Capacity for Success:**

As evidenced by the letter of support provided by the team leader, the team is committed to the implementation of the project. In addition to the team leader, several classroom teachers of science at the 5<sup>th</sup> and 7<sup>th</sup> grade levels have committed to including parts of the project that are appropriate for larger numbers of students. As Coordinator of the Gifted and Talented Program, the team leader has planned and implemented a variety of program initiatives (i.e., Jr. Great Books, Renzulli Learning Systems, Odyssey of the Mind, Accelerated Mathematics), involving planning of professional development, collegial support, and extending programs beyond the regular classroom.

The commitment by the team will be supported with technical expertise through collaboration with Keene State University and SWnhESC, and. The letter of support from Beverly Straneva, Director of SWnhESC indicates enthusiastic support for this project, continuing a history of successful collaboration between Jaffrey-Rindge Cooperative School District and the Center.

Providing the opportunity for a project will build upon classroom instruction through field experiences, providing enrichment in science, mathematics and geography/social studies, through extended learning opportunities that integrate and extend the core curriculum and through the use of GPS and touch-pad technologies.

While the GPS devices are new to the elementary and middle school levels, these technologies have been used for several years at Conant High School, in the Social Studies elective, "Lost and Found". The teacher of this elective offers a readily accessible in-district resource for support.

The district has an established Gifted and Talented Program that will serve as the focal point for establishing and sustaining the "Vernal Pools Project". The design of the project clearly supports primary purpose of the G&T Program, which is to extend and enrich the core program.

- Proposal indicates team member and district/administrative support with respect to:
  - 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.
- 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.
- 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.

### **Team and Administrative Support:**

As evidenced by the letters of support from the Superintendent of Schools, Principal of Jaffrey-Rindge Middle School, and Coordinator of the Gifted and Talented Program, the district is committed to facilitating the activities outlined in the proposal. This commitment will extend to providing for substitute coverage as needed for team members to participate in field activities, filming of the documentary video, and attending mini-grant meetings and the Mini-Grant Celebration and presenting the project in venues outside of the district.

This commitment by the administration is complimented by several additional factors that will support the success of the project, including:

- The design and curricular of the project will enable the Coordinator of the Gifted and Talented Program to build links with and extend the regular core curricula, through the ability to attend team / department planning discussions to share lesson plans and materials with other;
- The unique year-round nature of the Coordinator's position does not entail responsibility for a regular classroom, offering her scheduling flexibility. This flexibility will enable her to participate in trainings, required mini-grant meetings and the Mini-grant Celebration, as well as dedicate time to filming of the documentary video presentation.

During the initial phase of implementation occurring within the actual grant period, the project will involve the team leader and three regular classroom teachers representing Jaffrey Grade School, Rindge Memorial School, and Jaffrey-Rindge Middle School. These regular classroom teachers include a grade five teacher from each elementary school and a seventh grade science teacher from the middle school in planning. Initially, the project will involve approximately twenty-five students in grades 5 through 8 that are identified as academically gifted or talented.

During the second year of implementation, it's anticipated that the components of the project will be adapted for use with larger groups of students and extended to include grades five and grade seven. This would involve six to seven teachers and approximately 110 to 115 grade five students, and one grade seven teacher and approximately 100 to 110 grade seven students.

In addition to disseminating information during the Mini-Grant Celebration Day and the case study to be posted on the NHEON site, the collaboration with the Winchester School District, SWnhESC, and Keene State University also offer the opportunity to share the project with a number of other school districts.

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.

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.

Budget Narrative			
Category	Total		
Equipment:	\$4,800.00		
Hand-held devices will be used in the mapping locations /sizes of vernal pools, download research information, and record observation data /photos during field experiences.			
<u>GPS Devices</u> - 16 devices @ \$150.00 each = \$2,400.00			
<u>iPads</u> (w/camera) - 4 iPads @ 600.00 each = \$2,400.00 <b>Total \$4,80.00</b>			
Professional Development:	\$4,290.00		
Contracted Services – Consulting fees for SWnhESC, two (2) days @ \$600.00 per day, to provide iPad training for project team members and to assist with the development of the documentary video. (Note: SWnhESC will also provide training on the GPS, covered by the Rural Effectiveness Collaboration Grant, at no cost to this grant)  Total \$1,200.00			
Docent fees for Harris Conservation Center instructors for two (2) half-days @ \$200.00 per day, to support field experiences. (Note: These fees are in addition to existing agreements regarding classroom instruction by instructors from the Harris Conservation Center.)  Total \$400.00			
Teacher Stipends – Stipends for teacher at the rate of approximately \$36.50 per hour (includes estimated salaries / benefits), to attend trainings on hand-held devices, summer course sessions at Keene State, and meetings outside the contractual day. Estimate total of 60 hours (15 hours for each of four (4) individuals) at \$36.50 per hour.  Total \$2,190.00			
Registration Fees – Registration fees @ \$100.00 each for five (5) individuals (4 teachers / one administrator) to attend the Mini-Grant Celebration.  Total \$500.00			
Transportation:	\$575.00		
Student Transportation – Community Transportation will be contracted to provide round-trip transport of students from the three participating schools. Two (2) field experiences are planned, with costs per trip estimated at \$150 per experience.  Total - \$300.00			
Mileage – Reimbursement to attend Mini-Grant Celebration in Merideth, NH. (Round trip mileage of 170 mi. @ .51 per mi. = \$86.70.) Anticipate need for two vehicles\$173.00			
Mileage reimbursement to attend summer hand-held device trainings and GeoSpatial course at Keene Stat. Estimated pool of 200 miles @ .51 per mile \$102.00  Total - \$275.00			
Indirect Costs	\$275.00		
GRANT TOTAL	\$9,940.0		

Keene State College, Southwestern NH Education Support Center 229 Main Street Keene NH 03435-3201

NH Dept of Education
Division of Instruction, Office of Educational Technology
101 Pleasant St.
Concord, NH 03301
February 16, 2011

Dear Cathy,

As the Director of the Southwestern NH Educational Support Center at Keene State College, I would like to express my enthusiastic support for the \_\_\_\_\_at Jaffrey Rindge School District.

As a regional professional development center located in a higher education institution, the SW Center is committed to working with the K-16 spectrum of learners. The grant offers the opportunity for collaboration between the KSC geography professors and their work with pre-service educators with the real world work of the classroom teachers.

The SW Center will work with Jaffrey Rindge to provide professional development onsite with the GPS and the iPad as the field data instruments.

Moving beyond this grant the SW Center will help facilitate this learning in Winchester School by utilizing our grant funded time there from the Rural School Effectiveness Grant.

I strongly support this cross-district, cross institution grant and will help facilitate the professional development needs of the participants.

Sincerely

Beverly Straneva



### JAFFREY-RINDGE MIDDLE SCHOOL

1 Conant Way Jaffrey, NH 03452

Phone: 603-532-8122 Fax: 603-532-8124 www.sau47.k12.nh.us

Principal: Mr. Ryan Earley Assistant Principal: Mr. Robert Clark

February 23, 2011

### To Whom It May Concern:

The Jaffrey- Rindge Middle School is pleased to support this grant application that seeks to authentically engage gifted and talented students in a study of the environment around them. I feel that a student who understands the world directly around them will be more likely to be aware of issues and events that will impact others and that is a goal for all students. The Jaffrey- Rindge Middle Schools seeks to promote the extension of the classroom and this possibility suits our mission perfectly. To be able to connect local intricacies of geography and science with technology and monitoring while getting their hands dirty in active learning is a viable and vital avenue of education that I not only support but wholeheartedly promote.

The Jaffrey- Rindge Middle School is committed to this program in its' entirety. It is clearly a priority for us, and our students/workers/community will be well served.

In closing, I would like to say that I'm proud that Jaffrey-Rindge Middle School has embraced this project.

Sincerely,

Mr. Ryan Earley Principal Jaffrey- Rindge Middle School

### OFFICE OF THE SUPERINTENDENT

SCHOOL ADMINISTRATIVE UNIT #47 81 FITZGERALD DRIVE, UNIT 2 JAFFREY, NEW HAMPSHIRE 03452

PHONE: 603-532-8100

FAX: 603-532-8165

February 23, 2011

NH Dept. of Education Attn: Cathy Higgins 101 Pleasant Street Concord, NH 03301-3860

Dear Ms. Higgins,

This letter is to confirm that I have read and support the RFP for the Title II D Grant and understand the requirements, and will allow the applying team to fulfill the requirements, if they are awarded the grant.

If you have any questions, or need any further information, please call me at 603 532-8100 x211 or email me at J.Oneill@sau47.org. Thank you.

Sincerely,

James O'Neill

Superintendent of Schools



### OFFICE OF THE SUPERINTENDENT

SCHOOL ADMINISTRATIVE UNIT #47 81 FITZGERALD DRIVE, UNIT 2 JAFFREY, NEW HAMPSHIRE 03452

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Sincerely,

James O'Neill

Superintendent of Schools

### To Whom It May Concern:

This is a letter of support for the "Using GPS Technology to Map Vernal Pools," project. I was very excited when I was asked if I would be willing to plan an activity with my 5<sup>th</sup> grade enrichment students that would connect with their Science Unit on Ecosystems. I have always been interested in bringing the excitement and highly engaging technology of GPS devices into our elementary and middle schools. This seemed like a perfect opportunity.

The 5<sup>th</sup> grade teachers, with the support of an Educational Resource teacher from the Harris Center for Conservation, have been teaching the students about vernal pools. They have identified one on the school grounds at one of our elementary schools. I will be working with smaller groups of students (approximately 10 students in the G&T program) from both elementary schools. The students will be trained in how to use the GPS devices to map out the location of the vernal pool. If time allows, we may try and map out additional vernal pools that are located in the Jaffrey Rindge Cooperative School District. Once we have created our "maps," our plan is to share our information with the New Hampshire Department of Wildlife and Fisheries with the goal of getting our vernal pools certified with the state so they can be protected.

I have also been approached by a science teacher at the Middle School who is interested in having students use GPS equipment to make "species estimates," and to also map habitats. I see this as a further way to extend and connect the educational learning opportunities for our students. Our elementary students can share their findings with the middle school.

I know that "authentic" learning is one of the most successful ways to engage students. I believe that this project teaches students how technology is used in a real life setting—one that is outdoors! I see many more ways to create "authentic," learning experiences across the curriculum once our students and staff received the appropriate training and have the tools to work with.

Sincerely,

Teresa Morris, G&T Coordinator