Summary:

During the month of January, Carla Billups and Michelle Knapik, two fifth grade teachers at Jonathan Valley, will be spending five days in the snow-covered majesty of Yellowstone National Park. They were chosen as two of the ten teachers who will participate in the Yellowstone in Winter Teacher Trek sponsored by the North Carolina Museum of Natural Sciences. During this trip, they will be exploring the geology, landscapes, wildlife, and history of the park in order to help students make connections to the natural wonders here in North Carolina.

While in Yellowstone, Ms. Billups and Ms. Knapik will have video conferences and maintain a daily blog page to share this wonderful experience with their students. The page will provide a daily journal of their activities, and it will also furnish an interactive map in which students can track their teachers’ movements and encounters in the park. Students will be able to post grade level specific research questions on the page for the teachers to answer. There will be an updated Animoto presentation which will allow others to view pictures from each day’s adventures. They will be also podcasting about specific topics for kindergarten through fifth grade that will have activities posted to correlate with their podcasts. This blog page will be accessible through Haywood County’s main webpage and will be open to anyone who wishes to use the information in their own classrooms. They encourage all Haywood County teachers and other teachers in the area to have students view the page, so they too can share in this unique ecological opportunity.
# Budget

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<th>Item</th>
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<tr>
<td>iPad 32gb</td>
<td>$500</td>
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<td>usb adaptor</td>
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<tr>
<td>Flip HD camera</td>
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<td>time lapse photo tool</td>
<td>60</td>
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<td>Lavalier omnidirectional headset 2@20</td>
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**Total $ 780**
Big Kats Go to Yellowstone

My teaching partner and I will be going to Yellowstone National Park in January. I teach fifth grade math and science and Ms. Knapik teaches social studies and language arts. We share the technology curriculum for our students. We will be traveling with the North Carolina Museum of Natural Sciences on their Yellowstone in Winter teacher trek. We were selected for this program through a written application process where only ten teachers we selected. We both have been on their Summer Institute to Yellowstone and both know the park very well and the opportunities this will afford our students while we are there this coming January. Our goal is to connect our students to Yellowstone while we are there so they have a deeper understanding of this amazing place and make connections between Yellowstone National Park and the Great Smoky Mountains.

Prior to our trip to Yellowstone, our students will be studying the Western/Mountain region of the United States as well as Westward Expansion for Social Studies. We will also begin to integrate this region with our science content of weather and ecosystems. While we are in Yellowstone we our plan is to continue these areas of study through the internet. We have already met with our technology people for Haywood County Schools and mapped out what we would like to do. We will set up a webpage using our county internet site that our students or other teachers and their classrooms can access from home or school. Our district is very supportive of our plan and are already advertising it on the district website. Our idea is to set up daily blogs, podcasts, maps and photographs for our students based on different goals for each day, which will be based on where we will be in the park. We are asking for input from teachers at our school and teachers from the rest of our school district on ideas for podcasts and such. We are hoping that this website will be something that can be used by ourselves and other teachers over the course of the year and in years to come.
For ease of presenting what we would like to do, the plans for what we will be doing are listed with a description below:

**Blogging:** Each of us will blog based on our content. For example, when in the Mammoth area of Yellowstone, Ms. Knapik will blog about the harsh condition that settlers and explorers to the area had to face during the winter. I will blog about the weather conditions while taking readings that the students can compare to their daily readings at school. Students will track both of sets of weather data and graph the data to make comparisons to discuss how the conditions for settlers in the Smoky Mountains may or may have not been the same as the settlers in Yellowstone. We'll also blog about our observations for the day in terms of what we see and experience.

**Q and A:** We will have a section where students throughout our district and region can email us questions. We plan to select a few questions each day and answer them to the best of our abilities using the resources we have.

**Interactive map:** We plan to have an interactive map using a mapping website www.mapalive.com. We will use animal pictures of the animals we see and plot them in the general location we saw them on a map of Yellowstone. Students will click on the animal photo and it will link to a website that will give them more information about that particular animal and how they have adapted to live in the Yellowstone winter.

We also will post a map of our travels within the park each day with interactive photographs of the historical, geographic or ecological features we encounter. Again, we will have links to each photograph with more information.

**Photographs:** Our plan is to post an Animoto video each day using our photographs. We might just add onto one video each day, it depends on the time to do this.
Podcasting: Our goal is to post at least one or two podcasts each day about what we see in the park. We have asked our teachers to come up with some topics that they want podcasted. We hope to have at least one podcast for each grade level, specific to content for that grade level. Along with our podcasts, we'll also be posting activities for each grade level that will correlate to the podcast. These activities will be in place BEFORE we go to Yellowstone. We know one will be about Shadow's Shadow. Our school mascot, a panther named Shadow is going to travel with us in two forms. One is a Shadow on a stick. We hope to plant Shadow on his stick somewhere and use time lapse photography to see how Shadow's shadow changes each day. The museum people are working to connect us with a ranger or other park employee to help us. If they can mark the shadow length each hour, we'll have measurements we can take. Third grade students at our will also have a Shadow on a stick and will be doing the same activity so they can compare the shadows. With fourth grade, I'm working on a bison activity that they can do using photographs of bison that we see on our trip. We plan to have an activity for each grade level that will match a podcast.

As for our connection to Western Carolina University, my students and I are currently part of an iPad project with Dr. Bricker who is the liaison with the engineering department and some of the senior engineering students. They are in the process of developing some sensors for iPads that fifth grade students can use. My students, both this year and last have suggested sensors and the engineering students are working to develop these sensors. We are hoping that one or two of these sensors will be ready to at least pilot while we are on the trip. We will make sure that the engineering students and professors associated with this project are aware of our website and can see some of the things that we would do based on what we are doing with our students. I have also contacted Dr. Houghton about what we are going to do and he has agreed to help us with different programs and has already advised that we double check the types of cell phone and internet connections that
will be available to us in Yellowstone. Through our museum contacts we know that we will have internet access via our cell phone hotspots in Mammoth and at Old Faithful.

Just as Dr. Bricker and Dr. Houghton are helping us with our project, I am hoping that our website will be something they both can refer their students to as a way of showing pre-service teachers what is available to them in the future as teachers and their future students. In the past I have come to some of Dr. Bricker's science methods classes and talked with students about the different types of resources and programs available to them. I am sure this will be another opportunity where I can share teacher travel as a workshop experience and how it ties directly back to their students as a learning opportunity for all. Finally, we have a student intern from Western this year and she is designing her teacher work sample to correlate with the trip and our project. She is carefully planning her lessons around Yellowstone in the content areas of reading, science, social studies, and technology. She will be our main "go to person" in working with our students while we are in Yellowstone.

We will evaluate the impact of our project by a few different factors. We will work hard to get our website out to other teachers, not only in our school district but across the region and state. We will make sure if students search Yellowstone, our website will come up and be part of what students can use as information about the park and/or the ecosystems. To keep track of the hits on the website there will be a counter place onto the site. This is a minor detail, but we are hoping that word gets out about our project.

For our fifth grade students at Jonathan Valley, we will be having a "wolf debate" when we return. Students will use some of the information they learn through our blogs and podcasts about the wolves in Yellowstone. They will learn about the impact of the wolves from a social and ecological standpoint and have a simulation debate taking on various roles of the people impacted by the wolves being removed from the Endangered Species list. Hopefully through this project, they
will have a better understanding of how important the Yellowstone ecosystem is and how the wolves are a part of this in terms of how Yellowstone has changed since the near extinction of the wolves and the return of the wolves. Students will also be able to tie what they learn about food chains, animal adaptations, interactions, and weather from Yellowstone and apply it to other ecosystems.

While we are going on this adventure with our without the SUTEP grant, the grant will make the project easier for us to do with some update technology and funding for some technology that we currently do not have. We need some portable devices for editing on the road (we will spend a lot of time in vans), capturing video and audio, doing time lapse photography and accessing the internet whenever possible. We do have to pay for the trip out of our own pockets, so having extra funding for technology and books to use with our students would be very helpful and make it much easier to do our project.
November 1, 2011

Dear SUTEP Grant Committee,

Over the past month Ms. Carla Billups and I have been discussing her upcoming participation in the North Carolina Museum of Natural Sciences’ Yellowstone in Winter Teacher Trek. She is committed to meaningful integration of her experience into her own fifth grade classroom as well as other classrooms in Haywood County and beyond.

I am pleased to support this work and would like to highlight aspects that make this project especially worthwhile:

- This project is focused on integrated curriculum and creative use of 21st century technology.
- Ms. Billups and her teaching partner Ms. Michelle Knapiik currently serve as a cooperating teacher for an elementary education intern who will be a fulltime intern and primary classroom contact person during this experience.
- There is potential to connect additional WCU preservice teachers with this project. This would help them see a cutting edge project taking place in a local school as well as ways career teachers continue to develop and be inspired.

I have had the opportunity to collaborate with Ms. Carla Billups on a wide range of projects for almost 10 years now. She is a role model for our students and for teachers in the region.

Sincerely,

Patricia Bricker

Patricia Bricker