INSTRUCTIONAL TECHNOLOGY GRANT PROPOSAL

Name of Applicant __Rebekah Yoder_____

District/School _____Gwinnett County/Alcova Elementary School_____

Date _July 19, 2016_____ **Total Cost of Project:** _$450_____

Title of Project: _Let's Go On An Expedition!_____

To what organization will you submit this grant application in the future?_____

_Innovation Grant (GaETC), Donors Choose, and/or Go Fund Me_____

I.   Why is this project important (In 2-3 paragraphs, describe the need for the project.)?
Virtual reality is a concept that is very familiar to students due to all of the video games and other technology they have access to at home. The possibility of bringing virtual reality into a classroom setting could be an absolute game-changer. Instead of teachers just talking to their students about the Amazon River or the moon or historic Philadelphia, they could actually take their students to see those places via a virtual field trip. This makes learning come alive! Virtual reality can be used for a wide variety of projects – it is not the type of thing designed for just one project and is then no longer needed. It can be used over and over again all year long, and since every "field trip" is different, students would not get tired of it.

According to the Virtual Reality Society, there are a lot of ways that virtual reality is beneficial to students. First, it allows them to actively experience something. With virtual reality, they are actually experiencing the content they are learning instead of just watching a video, reading a book, or reading about it online. Next, it provides a very engaging experience with little distractions. Students are so excited about what they are seeing that they have no time to be off task or disinterested in the subject matter. Also, since virtual reality takes a hands-on/discovery learning approach, students will be more likely to remember what they have learned (http://www.vrs.org.uk/virtual-reality-education/benefits.html).

Virtual reality can impact all students, but it will specifically help ESOL students learn. It is crucial to use lots of visuals when teaching this specific population, and virtual reality provides that. Instead of these students having to read about a place that they may have never heard of, they will instead be able to "visit" it and actually see what it is like. According to Unimersiv, "VR promotes the best and probably only strategy that allows students to learn from non-symbolic first-person experience. Since a great many students fail in school because they do not master the symbol systems of the disciplines they study, although they are perfectly capable of mastering the concepts that lie at the heart of the disciplines, it can be concluded that VR provides a route to success for children who might otherwise fail in our education system as it is currently construed." (https://unimersiv.com/vr-education-why-

). The same would apply to students receiving special education services. Many of these students need visuals to assist them in their learning, and virtual reality would provide just that.

II. What would you like to accomplish (In 2-3 paragraphs, describe the unit or lesson and list instructional objectives.)?

Since Google Expeditions has so many options of virtual field trips for students to go on, this equipment and app is not limited to just one unit or lesson. Instead, it can be used when teaching a wide variety of science and social studies lessons to students from kindergarten all the way through high school. With this understanding, I will give two example lessons that are perfect for integrating a Google Expedition.

A kindergarten social studies AKS is to "identify important American symbols and explain their meaning (KSS_J2008-40)." The symbols include the Lincoln Memorial, the Washington Monument, the White House, and Mt. Rushmore. When teachers teach this AKS, their instructional objectives are for their students to both identify these symbols and explain what they mean. What better way to do this than to actually visit these monuments? There is a Google Expedition titled "U.S. Monuments," and in this expedition, students are actually able to take a tour of the Lincoln Memorial, Washington Monument, and Mt. Rushmore. So not only do they learn about these monuments and understand their significance, they are also able to actually tour the monuments and develop a better understanding of what each one looks like and what each one represents.

A couple fifth grade science AKSs are to "identify and explain how surface features are caused by constructive processes such as depositions, earthquakes, volcanoes and faults (GPS)" and to "describe and illustrate surface features caused by destructive processes such as erosion, weathering, impact of organisms, earthquakes and volcanoes (GPS)." For this lesson, the focus will be on volcanoes, and as a result, the instructional objectives are for students to both identify and explain how surface features are caused by a volcano. The other objectives are for students to both describe and illustrate surface features caused by volcanoes. There is a Google Expedition titled "Volcanoes Around the World," and the purpose of this expedition is for students to get a close up look at a variety of different volcanoes. What better way for students to describe and illustrate surface features caused by volcanoes than to actually take a field trip to an actual volcano?

III. How will you complete the work? (In 1-2 paragraphs for each section, describe how the project will be completed.)

A. Describe how the instructional objectives will be met.

Again, the instructional objectives for the kindergarten lesson are to identify several U.S. symbols and explain what they mean. This Google Expedition will give kindergarteners a great view of each symbol, and as a result, once students complete the Expedition, they should be able to identify each symbol. In addition, as the teacher is giving the students the tour of each symbol, he/she will be able to explain what each symbol means while the

students are actually "there" looking at it. This will help the students gain an even greater understanding of each symbol. As a result, the teacher would be able to integrate the expedition right into their instruction so that both could happen at the exact same time.

The instructional objectives for the 5th grade lesson are to identify, explain, describe, and illustrate how surface features are caused by volcanoes. The volcanoes expedition that students will take will allow them to actually see a variety of volcanoes up close. Most students have never seen a volcano before and therefore have no frame of reference when learning about them in school. Seeing these volcanoes "in person" will help the students better understand surface features that result from them. Teachers can also be teaching while the expedition is going on so they can point out new vocabulary words while the students are right there to visually see each new word/concept.

B. Describe the time involved (project length including amount of time each day/week). Ideally each expedition would take three or four days to complete. Teachers would integrate the expedition right into their instructional mini-lesson, and mini-lessons usually take no more than 20 – 30 minutes. If teachers need more space to do an activity like this, they could bring their students to a computer lab or to an area outside the building as long as it was close enough to pick up the internet.

C. Describe the people involved (grade level/subject & # of students, teachers and/or staff). For these example lessons, kindergarten and fifth grade classes are involved. There are 9 kindergarten classes with approximately eighteen students in each class. Each teacher would do this activity with his/her own class and then pass the materials on to the next teacher. There are 9 5th grade classes with approximately twenty-seven students in each class. Once again, each teacher would do this activity with his/her own class and then pass the materials on to the next teacher. The Local School Technology Coordinator and Media Specialist will be available to assist if any technical problems arise.

D. Describe the materials needed for the project.
   -Teacher iPad for teacher control of the expedition app (Alcova already has several iPads for teacher use)
   -Cardboard (glasses) – each student in the class will need one so they are able to go on the expedition. ($15 per cardboard)
   -Smartphones/chargers – each student will have their own since Alcova is a BYOD school
   -Google Expedition app (free)
   -Internet access (Alcova already has very good internet access)

IV. What is the timeline for assessing accomplishments and objectives (In 1-2 paragraphs, describe program evaluation procedure.)?
Students will be given a pretest at the beginning of the unit to determine any prior or background knowledge they may have about the topic they are about to study. For younger grade levels, this pretest will be administered one-on-one with the teacher as opposed to a written test. For example, as a pretest, the kindergarten teacher could hold up a picture of each monument and see if the student recognizes any of the pictures. Fifth graders could take a quick assessment via a Google Form or some other online platform so that the teacher has a quick picture of what they already know about volcanoes and their effects.

At the end of the unit, students will be given a posttest to determine how much learning occurred. In kindergarten the posttest will be a little bit more extensive than the pretest. The teacher would hold the picture of the monument up, and the student will have to both identify it and explain what it means. In 5th grade, the posttest will either be written or electronic, and it will cover the learning objectives in the unit to see if the students mastered the content.

V. How will the students be assessed (In 2-3 paragraphs, include details regarding how student progress will be assessed and reported to students, parents, teachers, and others.)?
The difference between the pretest and the posttest (described above) will be used to determine the student growth at the end of the unit. Students will record their data in their data notebooks, and teachers will go over the data with parents during parent/teacher conferences.

In addition, teachers will conduct student surveys to determine how the students feel like they benefited from the Google Expeditions. The survey will be done via a Google Form for 5th graders and verbally for kindergarteners. Students will be asked what they liked about the expeditions and if they felt it helped them learn. In addition, teachers will also be surveyed by administration and LSTC to determine how they felt the expedition enhanced their teaching and their students' learning.

VI. What is the proposed budget? Include information on the following:
   A. Materials/supplies – N/A
   B. Equipment – Google Cardboard "glasses" - $450
   (https://store.google.com/product/google_cardboard?utm_source=google-cardboard&utm_medium=MS&utm_campaign=Google_Cardboard).
               -- Smartphones for each student – Alcova is a BYOD school, so students will use their own smartphones for these activities
   C. Total Cost of Proposed Project - $450
   D. Additional Funding Sources
      -Donors' Choose
      -Go Fund Me
      -Innovation Grant (GaETC)
      -Money from Alcova's Title I budget

VII.   List your supporting references.
       http://www.vrs.org.uk/virtual-reality-education/benefits.html
       https://unimersiv.com/vr-education-why-should-we-employ-virtual-reality-in-education/

INSTRUCTIONAL TECHNOLOGY GRANT PROPOSAL
EVALUATION FORM/SCORING RUBRIC

Total Points (out of 200): _____

1. Impacts a variety of skill levels and/or learning styles or impacts an important target population.

    Possible number of points: 40 _____

2. Clearly identifies standards and learning objectives being addressed.

    Possible number of points: 40 _____

3. Pedagogically sound, based on research and/or best practices.

    Possible number of points: 40 _____

4. Clear plan for assessment of project and goals with examples of implementation methods.

    Possible number of points: 40 _____

5. Impacts large number of students and/or can be recycled/reused.

    Possible number of points: 40 _____

General Comments:

Adapted from: The Education Foundation of Oconee County, Inc.