

Shannon Comer
STEM Leadership Practicum
Workshop/ Professional Development Proposal

Title: Engaging students with phenomena and real-world data in STEM

Option: I am choosing to do a presentation to a group of teachers to share what I've learned from my Endeavor courses. The reason I am choosing this option is because very few teachers at my school have a clear understanding of how phenomena can be used to motivate and engage students. I have learned that there are criteria to 'good phenomena' and have many resources to share with my colleagues on where and how to choose these. Additionally, from my previous and current courses I have been introduced to so many useful activities and websites where kids can access real-world data from various NASA websites.

Audience: I will present to the science and design teachers at my school. I work at a K-12 school and think I'll invite any and all teachers of science.

STEM Integration: My activity will begin by asking teachers to act as students as they explore phenomena and brainstorm ideas to explain it [engage]. They will then be provided with a data resource collected by NASA satellites [Tech] and the summative assessment will be for students to design a solution to address the phenomena [Engineering]. Obviously, the topic will be rooted in science and tie into several NGSS standards. Although I haven't pinned down an exact activity yet, I hope to incorporate data analysis to tie in Mathematics.

Outcomes/ Expectations: Teachers will have an understanding of good anchoring phenomena and access to resources to find ideas to develop their own. Teachers will be aware of the wide array of data available and citizen science projects through various NASA websites. Teachers will become familiar with various engineering/ design projects available to them on the NASA Jet Propulsion site.

Follow Up: I plan on creating a google quiz survey [or something similar] to determine if the workshop was useful and how they plan on implementing what they learned in the PD.