Teacher: Rachel Anderson
Title: Phenomenal Phenomena
Topic: Phenomena across the curriculum
Grade Levels: PS-5

For my professional development (PD) event, I have chosen to explore the topic of anchoring phenomena with my colleagues who teach a variety of subjects in grades preschool through 5th grade. The majority of our classes are no larger than 25 students, most of them being even smaller than that. I am planning for my session to be about an hour long, and plan to advertise in our weekly newsletter emails. I also plan to talk it up with anyone who will listen!

I chose this topic because I have seen personally how much more engaging my teaching has become since I started teaching with phenomena, and want to share this with my colleagues. I also like this topic because it is universal across the grade levels, and really doesn't need to be specified for one grade level or curriculum area - it's integral to every level and area of learning!

I plan to introduce my colleagues to the 5-E lesson plan format, which I learned through Endeavor. I also plan to share resources with them that I learned about in Methods of STEM, such as the websites for NASA's Jet Propulsion Lab, NOAA, and the Exploratorium's "Science Snacks." The format of my entire PD event would look like this:

1. We would begin with a science demonstration that opens up into a definition of phenomena.
2. Using a slide presentation as a guide, we would discuss the definition of phenomena, and the importance of using it in our teaching - particularly in the realm of STEM, but also generally across the curriculum. We would discuss what STEM teaching is and isn't, what 5-E lesson plans are and how they can be used across the curriculum, and how to use anchoring phenomena across the curriculum. I would provide examples of phenomena being used in different grade levels (incorporating both my school's academic standards and the national ones like common core and NGSS - showing how they align and can be integrated), and different curricular areas, and then would release some activity to my participants.
3. After my presentation on STEM teaching and anchoring phenomena, I would have my participants group up based on grade or curricular area taught. I would then give each group a standard for their grade level/curricular area and ask them to come up with some ideas of phenomena that could be used to engage students in the unit of study - this could be books, songs, videos, and/or science explorations or demonstrations. The groups would then share their thinking with the whole group so that we could all hear the many different ways to approach teaching with phenomena in early childhood and elementary classrooms.
4. After the group work, I would ask my participants to each think of a unit of study they currently engage in throughout their year, and ask them to think of how they could improve that unit using anchoring phenomena. I will ask them to write it down as an "exit

ticket" that I can then use to create a summary of the event to share with everyone who participated.
5. After the PD event, I plan to send out a google form that is similar to the form I sent out before, to document how understanding of STEM has changed as a result of my event.
6. Additionally, I plan to interview a few different teachers in different grade levels/departments to see how they plan to use their new knowledge of STEM learning. I will then check-in with those teachers a few weeks later to see how they feel the event has changed their understanding.

For my pre-assessment, I plan to develop a Google form where I ask my participants what they know about STEM, KWL charts, phenomena, activating strategies, and 5-E lesson plans before my session. I will ask the same questions after the session to see what has changed and what my colleagues have learned. I also plan to open up a way for my colleagues to share how they use what they learn after the session. So, I will need to develop 2 Google forms and a list of interview questions for the post-assessment. I will also need to develop a tool for checking in with teachers a few weeks after to see what teachers have implemented.

I am hoping that my colleagues will leave my session with the joy for teaching and learning I have found during my time with Endeavor. I have seen how much more excited my students are when I start off units with phenomena (whether books, science demonstrations, or music!), and I hope to share that effectively with my colleagues in a way that allows them to incorporate more of these experiences in their own classrooms, too. I hope they learn how phenomena can be incorporated into more than just science class, and find ways to utilize the resources I provide right away, leading to a better chance of sustained growth.