Background:

Students are finishing up a unit on sound, and have learned about vibrations and what they do. Students know that to make a sound, you need a vibration. Without a vibration, there will be no sound. We have done different experiments to discover how sound is made, and what vibrations look like. Students have experiments to discover how sound is made, and what vibrations look like. Students have experimented with rice to see what sound does to something (make it move, i.e. make it vibrate) and made musical instruments to watch what happens when something vibrates. We have also used the hummingbird as our guiding animal, and students have discovered that the vibrating wings are making the sound.

Each lesson in this unit consists of an experiment, used to help us answer a guiding question. All of the learning is student led, and therefor much more authentic. I will begin by posing a guiding question, but not explain much more than that because I want students to experiment on their own, before we really talk about our findings. I believe this teaching style to be more meaningful, and while not always possible, has led to science and this unit being my student’s and my favorite thing to learn about.

Focus of the lesson:

For this lesson students will think about sound waves, and how sound travels. Students will think about how sound travels by using a paper cup telephone (two cups connected by string). Students will lean that vibrations travel from the bottom of the cup to the other person’s ear. They will also discover that sound travels better through a solid that in the air. I will model how to set up the experiment and then send students off to their seats with a partner. Students will each get a worksheet to complete as they work. They will then come back to the rug to reflect on their findings. Students will think about how sound travels, and if this was different from what they originally predicted. They will need to explain why.

Learning Centered Inquiry:

* Students will know what a solid is
* Students will know what air is
* Students will know that sound travels best through a solid
* Students will be able to replicate a modified scientific process

Practice Centered Inquiry

* I will model expectations and directions clearly
* I will create a safe and calm environment for students to do their experiments
* I will provide a meaningful lesson that allows for student led discoveries

Could my students use the worksheet to make predictions effectively? Could they go back at the end and reflect on their predictions?

Could my students do the experiment independently? Were they on task? Were they working well together? Could they conclude that sound travels best through a solid?

Round Centered Practice Inquiry:

Did I manage the class effectively? Was I consistent with my expectations? Were students following directions and being safe? If they were not, did I manage them effectively?

Did you feel like students participated in authentic learning? Did you find that the learning was student led? By this I mean, were students able to understand that sound travels best through solids through their own experimentation and activities, or did they need me to teach this explicitly.