Cindy Phillips
Scavenger Hunt

I don't have access to this right now but essentially it is a set of lessons on the period, frequency, and amplitude of sinusoidal functions for my Algebra2/Trig course.

I absolutely love trigonometry, and unfortunately most of it has been moved from what was called "algebra2/trig" to precalculus, a course I don't teach anymore. But even when I did teach it (I have no idea if I will get to teach it again, due to the fact that I have taken a year off and I doubt I am going to get assigned the courses I really enjoy teaching) there just wasn't enough time to connect it to the physics of music.

So much of the material in the Algebra 2 course is not very relevant to other disciplines or practical usage, but trigonometry is! Music, sound, medicine… It's so practical and useful!

When I taught a course many, many years ago on trig applications (there were no standardized exam requirements to this course) I used a program called "Audacity" to show waves and to talk about how the human voice, how instruments move air in an oscillating pattern to create sound. But that was a long time ago.

Through another Endeavor course, I discovered that Audacity is still available and still free to use. Unrelated, I was on a long bus ride and found a concert online where Nils Frahm (a modern classical/electronic German composer) was playing an instrument that I didn't recognize, and I was instantly inspired to discover what it was and how it worked.

It is called a glass harmonica, and it produces very close to pure tones in a way similar to when you are "playing" glasses filled with water.

I am not much of a classical music OR electronic music fan (I usually listen to energetic latin music) but Nils Frahm was introduced to me by someone, and the second I heard the song "Fundamental Values," I stopped dead in my tracks walking down the street and started crying. It was a visceral, powerful, very intense connection to that song, and it is not often that a song impacts me that way. I remember exactly where I was and what I was doing and what my ental state was at that moment. Two years later, whenever I have trouble focusing doing my work, or whenever I need to feel calm, I turn to that song and it does the trick.

Nothing makes people feel that way outside of art.

I would like for my arts project to further explore how I can use Nils Frahm's instrument to inspire students to listen to classical music and to enrich my lessons on trigonometry… whether I ever get to teach it again or not.