2a) The innovation represented by my computational artifact is this new product called Zungle. Zungle is a pair of fashionable pair of sunglasses that doubles as headphones. Using a smartphone with bluetooth capability you can pair the glasses and stream music to them. The glasses have vibrators at each end and through bone conduction technology, the vibrations are sent to your eardrum. The vibrations are from behind your ear instead of directly in your ear like other headphones. My artifact shows how the music goes from your phone to your ears. On the bottom it shows two graphs one being the growth in bluetooth and the other being the growth in music listeners.

2b) Using google drawings I was able to create my artifact. I was originally somewhat familiar with the basics of this program, but it really expanded my knowledge of it. Instead of having the background as a solid color I found how to make a gradient. On multiple individual images I figured out how to alter the color to maintain the sleek and professional look. I also implemented gifs into my artifact which allowed the viewer to move their eyes across the screen without it being overbearing. Behind each image is a cast shadow that allows the prices to pop out at you but keep the look.

2c) This product has many valuable uses. For the everyday user, you are immersed into the world of music while being able to hear the world around you. Say you're going for a walk or you want to ride your skateboard down the street, not only are you able to hear your surroundings in case a car is going at high speeds you can also listen to your favorite artist on the way. It is also not as disrespectful to listen to your music whilst something important. While using a regular pair of earbuds it is more obvious and in some cases is shunned upon. On the other hand, these glasses might not be very practical for some people. If you happened to be indoors it's polite to have headphones if you wanted to listen to music because not everyone might have the same taste in music as you. You won't be wearing any sunglasses inside because there is no reason too. In the workplace you wouldn't be able to use these glasses because it wont keep up with a professional standard. If it were dark out, and you wanted to go for a run, you wouldn't be able to listen to the music with these glasses because not only will the obstruct your view they might hurt your eyes.You can't expect too much from thee music wise because they're not directly in your ear. You are not able to get as crisp as a sound when the vibrations are behind your ear.

2d) The data used by Zungle headphones is bone conduction. Starting with your smartphone you connect to the glasses. Via bluetooth you can seamlessly send music or any kind of audio that you wish streamed straight to the glasses. As the glasses sit behind the ear the vibrators and the end of the glasses send music to your brain through bone conduction technology. Bone conduction technology works in a unique way. Usually with a normal pair of headphones we are able to hear the sounds vibrations that are in the ear directly into the eardrum. We are able to turn these sound waves into sounds. With bone conduction technology, the headphones are doing the eardrums works for us. They decode the sound waves and convert them to vibrations that can be passed through bones and skin then straight to the Cochlea then it is sent to the brain. Never once does it touch the eardrum. This allows for awareness to be heard from your

eardrum while listening to your music. These headphones do not store information, all it is doing is sending the phone's audio to the device. Although this does not store data it is sending a mass amount of information at once. If the headphones could not handle it they would not be able to function. These also send information back to the phone. When you answer a call the built in microphone sends your voice to the phone then from the phone for the user on the other side to hear.

2e)

1)http://goldendance.co.jp/English/boneconduct/01.html, “Bone Conduction: How it Works”, source: Golden Dance, date viewed: 12/13/17

2)https://www.zungleinc.com/, “Zungle Wear the Beats”, source: Zungle, date viewed: 12/13/17

3)https://www.innerfidelity.com/content/headphone-news-august-2016, “Headphone News August 2016”, source: inner fidelity, date viewed: 12/13/17