Date: _____ Name: _____

Straw Flute

This page was created by Zoe

In this activity you can play with the pitch of a sound by playing with frequency. Notice how when you cut chunks off the end of the straw, the pitch of the vibration gets higher? This is because when the straw gets shorter, so do the waves that are being produced. A shorter wavelength produces a higher frequency, and a higher frequency means a higher pitch.

MATERIALS

- Scissors
- A plastic straw (thinner ones tend to work better)
- Optional: a straw slightly larger than the first one

1. Flatten down about 1 ½ inches at one end of your straw.
2. Cut the flattened end of the straw at a diagonal on both sides of the end so it makes a point shape in the middle, as shown in the diagram:

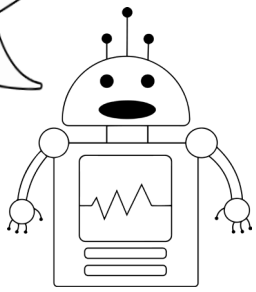
3. Put the pointed end of the straw into your mouth and blow. Make your mouth look like you have no lips by pulling back your lips, so they cover your teeth. This is important because if you blow on the straw making an "O" shape with your mouth, you won't get a vibration sound. Play around with how far you put the straw in your mouth. If you cannot hear the sound, either slowly move the point back and forth in and out of your mouth or change your lip shape until you hear it. This takes a bit of practice.

While blowing through your straw, get an adult to help you with cutting small chunks off the bottom end to see how the pitch changes.

OPTIONAL:

If you have another straw a bit larger than the one you made into a flute, you can cover the smaller straw with the larger one and slide the larger straw up and down as you blow to make a mini trombone!

When the straw is shorter, its shorter wavelength and higher pitch is like a specific **output** in code. Answer the question below to figure out what the output would be if the straw was longer.



What do you think would happen to the pitch of the sound if the straw got longer as you were blowing into it?