



Straw Kazoos

Kazoos make a crazy sound that can be really fun or really annoying (depending on if you're making the sound or listening to the kazoo). Design your own kazoo and discover the unique pitches you can create with just a few cuts.

TEKS:

SCI 2.6C: The student is expected to investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter.

SCI 5.2D: The student is expected to analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence.

Materials:

- Plastic straight straw
- Scissors

How To:

1. Make one end of the plastic straw flat by biting down on it. About 1 inch of one end of the straw needs to be flattened.
2. Make two cuts into the flattened end of the straw to make a V shape (you want the V to point towards you, not concave into the straw).
3. Open the flattened end of the straw a bit to separate the two straw layers.
4. Put the flattened end of the straw between your lips.
5. Blow into the straw and listen to the silly sounds! This may take a little practice to make consistent sounds.
6. Try this same process with straws of different lengths. You can even cut pieces off the end of your straw as you blow into it to really listen to how the sound changes!

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STEM Explanation:

All sounds are made by disturbances in air pressure. When an object vibrates, it makes the air around it vibrate, which can cause sounds that you can hear. The V portion of the straw vibrates as you blow into the straw. These vibrations travel in waves down through the straw, then through the air to your ears to be interpreted by your brain as sound. The pitch of a sound is determined by many things, but in this case, the length of the straw creates a unique wavelength for the vibration soundwaves. When the length of the straw changes, the wavelength and sound it creates changes too.

Career Connection:

Musical instrument designers create, build, fabricate, and repair musical instruments of all types. They can put their own creative touch into making the instrument unique and appealing to the customer.

Resource:

<https://www.pbslearningmedia.org/resource/phy03.sci.phys.howmove.zkazoo/pitch-straw-kazoo/>

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