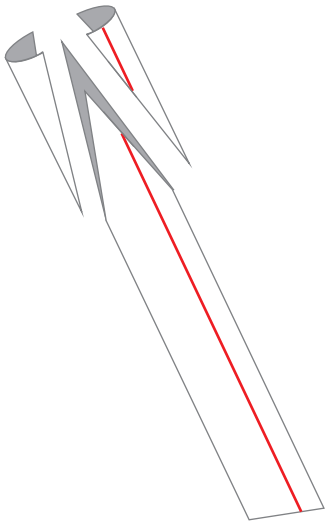
Straw Oboe

Reuse a common household object to make yourself a new musical instrument.

Collect

- Plastic straws (any size)
- Scissors



Make

1. Flatten one end of your straw using your teeth or fingers. You should flatten at least ½ inch of the straw.
2. From the flattened side of the straw, cut off one corner starting about ½ inch down the straw and ending just off center.
3. Repeat Step 2 on the opposite corner. Now you should have two flaps on the flattened end of your straw. This is your reed.
4. Put the cut end of the straw in your mouth and close your lips around it, making a seal. Very gently bite down on the flaps and blow into the straw. If you do not hear a buzzing sound, try varying how hard or soft you are blowing and the amount of pressure you are using to bite down until you can hear the straw "sing."

Orchestra time!

Experiment further by cutting finger holes into the length of the straw to make different notes like a recorder. Or you can add another slightly larger straw onto the end of your existing straw and move it up and down while you play, like a trombone. Try cutting your original straw shorter and shorter to see how the sound changes. There are so many ways to experiment with the sound and make your own straw orchestra.

How does it work?

When you blow into the reed and it starts vibrating, you are sending pulses of compressed air down the straw, causing the air in the tube to start vibrating. Affected by the length of the tube, this vibrating air in turn affects the reed's vibrations. When the reed vibrates at just the right frequency (speed of the vibrations), the air in the straw vibrates strongly, and you hear a loud, buzzing note.

The exact note that you hear when you play your straw oboe depends on the length of the straw. In a longer straw, the sound waves will be longer and the resulting note will be lower. The sound waves inside a short straw will be shorter, causing the pitch to be higher.