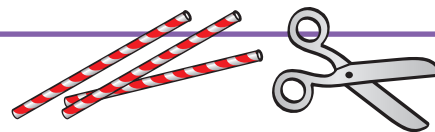


## What you need:

- 3 Straws
- Scissors



## What you do:

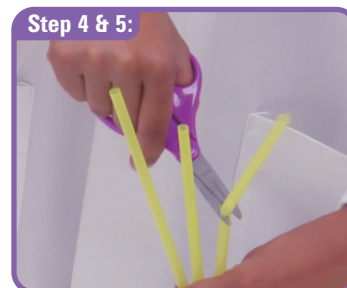
**Step 1:** Flatten one end of a straw by biting down on the straw and pulling it out of your mouth while keeping your mouth closed. This is your mouthpiece.

**Step 2:** Diagonally cut out the corners of the flattened mouthpiece. This makes a V shape at the end of the straw.

**Step 3:** Place your lips slightly beyond the slit portions of the V and blow. What happens?

**Step 4:** Repeat steps 1-2 with two more straws.

**Step 5:** Cut the ends of the two straws so they are different lengths from your first straw. Blow through the mouthpiece of each straw. What happens to the sound?



## What's going on:

Sound travels in waves of vibrating atoms. The time it takes for a sound wave to travel to the end of the straw and back to the mouthpiece is its frequency. We call the sound of a frequency its pitch. Longer frequencies have a lower pitch, like a dog's growl. Shorter frequencies have higher pitches, like a bird song. Changing the lengths of the straws changes the pitch of the instrument. The longer the straw, the lower the pitch will be. The shorter the straw, the higher the pitch will be. This gives you different pitched instruments to make a band with!

## Now try this:

What other objects can you use to make instruments? Try making a guitar out of an empty tissue box and some rubber bands. Test out different ideas and make a musical band with your experiments!

