

Straw Oboes

Explore sound by making an instrument out of a household item.



What you need:

- straws (any kind will do)
- scissors (be careful you don't cut yourself)



What to do:

1. Flatten approximately 2cm of straw from one end.
2. Cut this end into a long point. Bend the point a little to make it easy to vibrate.
3. Put the point into your mouth and blow hard. It should make a buzzing sound.
4. Carefully cut the straw while you blow. As the straw gets shorter, the pitch of the straw oboe will change.

What is happening?



The point of the straw acts like the reed in most wind instruments. Blowing causes the straw to vibrate. A standing wave pattern is created along the length of the straw, which we hear as sound. When you shorten the straw you shorten the wavelength of the standing wave pattern and increase the pitch of the note (ie. The note gets higher). Similarly to tuning forks, longer straw = lower note = slower vibrations = lower frequency .

Tips:

It helps to hold the straw partly closed with your lips or teeth and blow. It might take a bit of practice.

Cut one (or more) hole(s) in the straw (about half-way down) to make a warbling noise. Or get a slightly bigger straw and make a slide-oboe (slide the bigger straw over the smaller one to change the overall length)