

MAKE A HARMONICA

MUSIC MAKERS CHALLENGE

Please note that the activities contained herein are intended for children aged seven and above. Adult supervision is recommended.

1. Pull an elastic band lengthways around the lollipop stick.
2. Cut two pieces of straw measuring 4cm each.
3. Place one piece of straw perpendicularly between the elastic band and the lollipop stick. Move the piece of straw so that it is 4cm from one end of the lollipop stick.
4. Hold another piece of straw perpendicularly on top of the elastic band and lollipop stick, 4cm from the other end of the stick.
5. Still holding this piece of straw in place, put the other lollipop stick on top to sandwich the straws between the two lollipop sticks.
6. Hold the structure to keep the straws in place. Secure both lollipop sticks together with an elastic band tightly wrapped around each end.
7. Blow through the harmonica to make a sound.

Materials

Two jumbo lollipop sticks

Three elastic bands

One drinking straw

Scissors (with adult supervision)

How does it work?

Blowing into the harmonica makes the elastic band particles vibrate. These vibrations form sound waves that travel to the ear drum. When particles near you vibrate, your eardrum also vibrates which is translated to your brain as an electrical signal - this is how you hear sound.

Did you know?

The elastic band particles vibrate according to the mass (weight and length) of the band, this is called the band's natural frequency and every object has one. By moving the straws further apart or closer together you will change the mass of the elastic band and the natural frequency. Changing the mass causes the particles to behave differently to create a higher or lower sound.



The closer the straws are together, the higher the pitch.



The further the straws are apart, the lower the pitch.