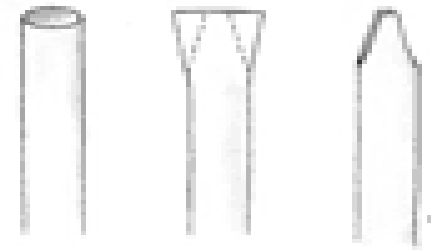
Good vibrations

Background knowledge
When you blow over the neck of a bottle, the air inside vibrates and makes a sound. The more air there is in the bottle, the slower it vibrates and the lower the pitch of the sound. Adding water to the bottle reduces the amount of air and raises the pitch. The pitch is also higher if you use a smaller bottle, which holds less air. All wind instruments work by making the air inside of them vibrate.

Science activity
Sean made a wind instrument from a drinking straw. He flattened one end of the straw and cut both sides so that it formed a V-shape. When he blew into the cut end of the straw, it vibrated. The vibrations caused the air inside the straw to vibrate and make a sound.



What do you think happened to the pitch of the sound when Sean cut the straw in half?

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Science investigation

! Take extra care - ask an adult to supervise you.
Design and conduct an experiment to see if you can play a tune on bottles filled with water. Add a different amount of water to a number of identical bottles. Each bottle should make a sound of a different pitch when you blow over the neck. Adjust the water levels in the bottles until you get sounds you like. If you have any respiratory problems, ask for help from an adult.