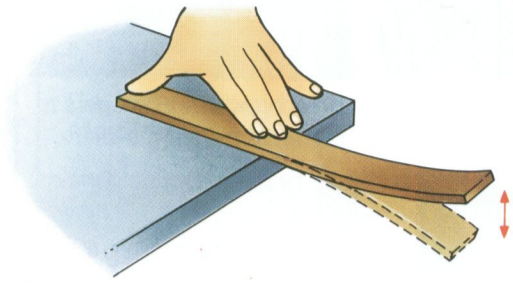


What is sound caused by?

Experiment 29.1

Hold down one end of a ruler firmly to the bench. Flick the other end to make a sound.



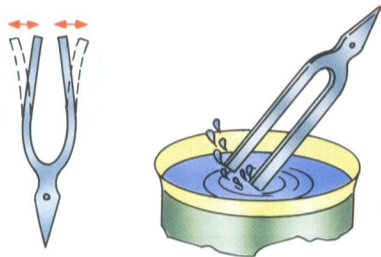
Look at the end of the ruler. What is it doing? Does it make any sound when it has stopped vibrating?

Experiment 29.2

Place your fingertips against the front of your throat. What can you feel when you make a noise?

Experiment 29.3

Get a tuning fork and bang it on a cork to make it vibrate (it vibrates like two rulers fastened together). What can you hear?



Can you see that the ends are vibrating? If not, touch the ends to the surface of some water in a beaker. What do you see?

These experiments show that **sound is caused by vibrations** and is a form of kinetic energy (see page 108).

How are these vibrations caused in

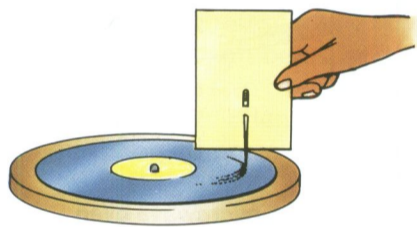
- a) a drum? b) a guitar?

How are the vibrations caused by a gramophone record?

Experiment 29.4

Look at an old gramophone record through a magnifying glass. Can you see the wobbly grooves?

Push a needle through a piece of card and then put the point of the needle on to the record as it revolves on a turntable.



What can you hear?

What are the wobbly grooves doing to the needle and card?