

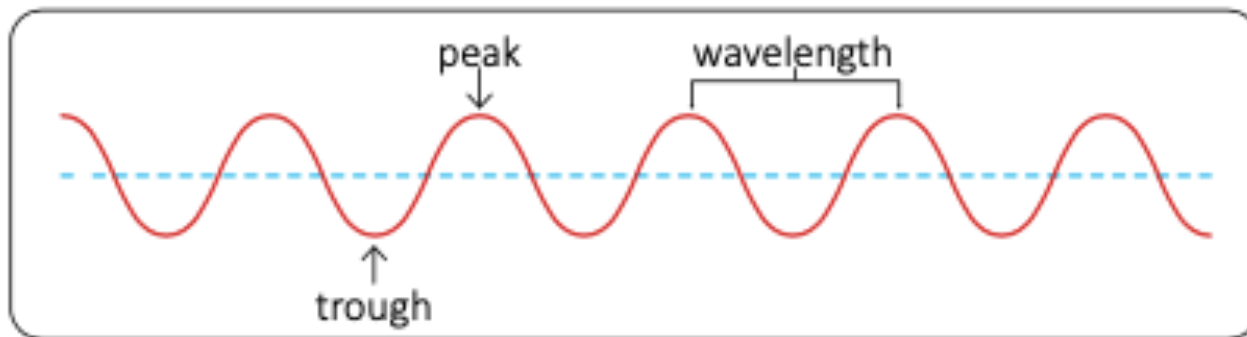
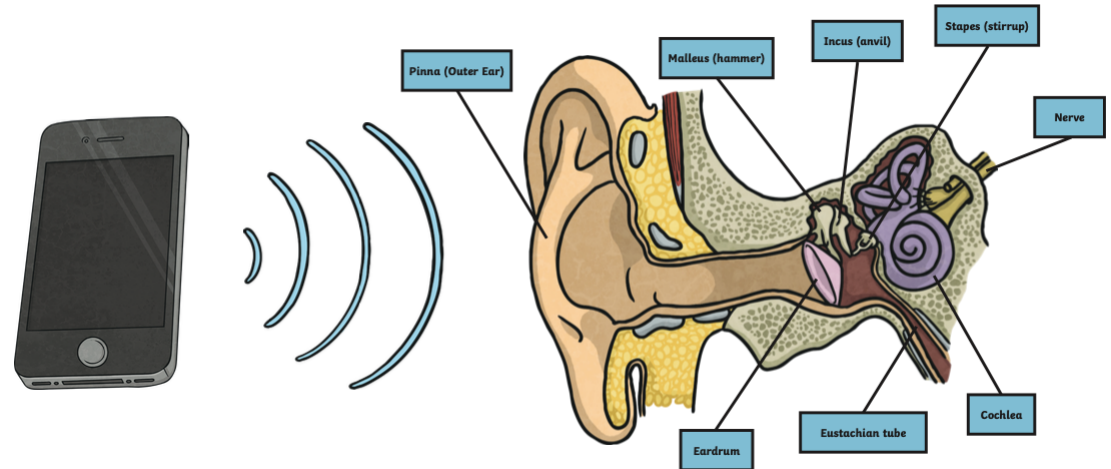


Science – Advent 2

Sound

What is sound?

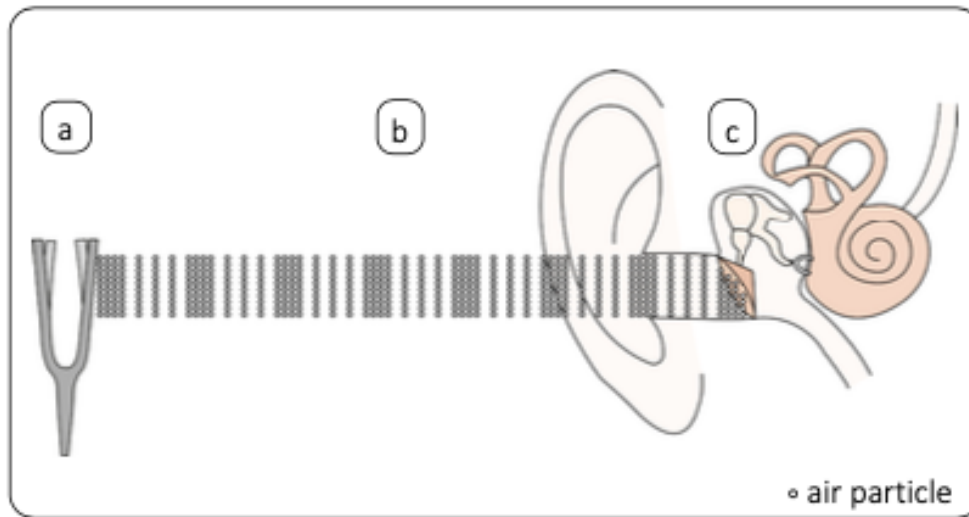
Sound is energy produced by vibrations from a sound source. Sound travels in waves through a medium, such as a solid, liquid or gas, to our ears. Most of the sound waves we hear travel through air, which is a gas. Where there is no medium for sound waves to travel through, such as in space, there is no sound.



Sound waves can be represented by a wavy line in a sound wave diagram.

Volume is represented by the size of the peaks and troughs; large peaks and troughs represent a loud volume and small peaks and troughs represent a quiet volume.

Pitch is represented by the distance between each peak, called the wavelength. A long wavelength represents a low-pitched sound, and a short wavelength represents a high-pitched sound.



How do we hear sound?

- a. When energy is put into a sound source, it starts to vibrate, quickly moving back and forth repeatedly in a regular pattern.
- b. These vibrations disturb the tiny particles of the medium that is close by, such as air, and they start to vibrate. They collide with the air particles next to them and pass the vibration energy along in sound waves.
- c. When the sound waves enter the ear, they make the eardrum vibrate. These vibrations pass through small bones called ossicles and are turned into electrical signals in the spiral-shaped cochlea. These signals travel through the cochlear nerve to the brain and are interpreted as sounds.

Glossary

Cochlea

The spiral-shaped part inside the inner ear that turns vibrations into electrical signals.

Eardrum

A thin layer of tissue inside the ear through which vibrations pass.

Medium

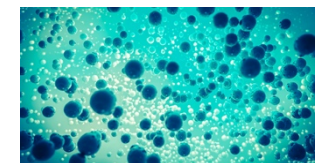
A material, such as a solid, liquid or gas, that transfers energy from one place to another.

Ossicles

Three tiny, linked bones inside the ear through which vibrations pass.

Particle

A single piece of matter that is too small to be seen.



Vibrate

To quickly move back and forth repeatedly.