

# Sound

Vocabulary	Definition
Vibration	A quick movement back and forth.
Sound wave	Vibrations travelling from a sound source.
Volume	The loudness of a sound
Insulation	is a type of material or technique used to block or reduce the amount of sound that travels from one place to another.
Amplitude	The size of a vibration. A larger amplitude = a louder sound.
pitch	How low or high a sound is
Sound proof	To prevent sound from passing through.
Eardrum	A part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin. It separates the outer ear from the middle and inner ear. Sound waves make the eardrum vibrate.
vacuum	A space where there is nothing. There are no particles in a vacuum.
Absorb sound	To take in sound energy. Absorbent materials have the effect of muffling sound.
Distance	A measurement of length between two points
Particles	Solids, liquids and gases are made of particles. They are so small we are unable to see them.

## How does sound travel ?

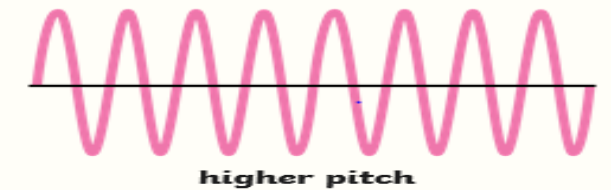
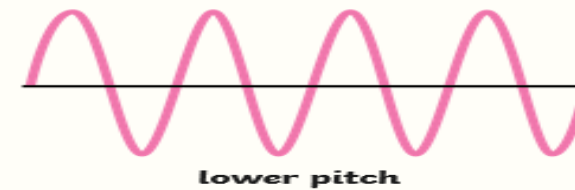
Sound can travel through solids, liquids and gases. Sound travels as a wave, vibrating the particles in the medium it is travelling in. For example when you hit a drum, the drum skin vibrates. This made the air particles closest to the drum start to vibrate as well. The vibrations then passed to the next air particle, then the next, then the next. This carried on until the air particles closest to your ear vibrated, passing the vibrations into your ear.



## Pitch

High pitched sounds are created by short sound waves.

Low pitched sounds are created by long sound waves. High and low are words to describe the pitch of a sound. The pitch of a sound is different to the amplitude.

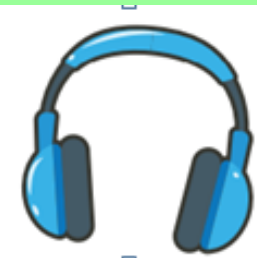


## How do we hear ?

Once in your ear, the vibrations travel into the ear canal until they reach the eardrum. The eardrum passes the vibrations through the middle ear bones (the hammer, the anvil and the stirrup) into the inner ear. The inner ear is shaped like a snail and is called the cochlea. Inside the cochlea, there are thousands of tiny hair cells. Hair cells change the vibrations into electrical signals that are sent to the brain through the hearing nerve. The brain tells you that you are hearing a sound and what that sound is.

## How to protect our ears

Loud noises can damage our ears and result in hearing loss after a long time. There are different ways of protecting our ears



## What is sound and how is it made ?

Sound is a type of energy that can be heard. The object that makes the sound is called the source. It is important we protect our ears particularly when there are loud sounds. When an object vibrates a sound is made. The vibration around the object vibrates and the air vibrations enter your ear. These are called sound waves. If an object is making a sound, a part is vibrating even if you can't see the vibrations.

