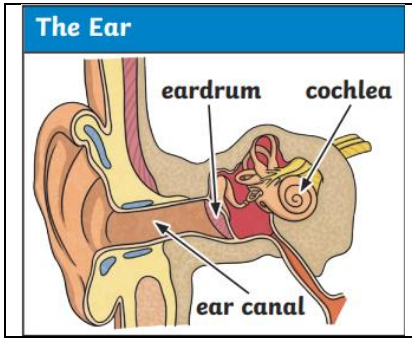
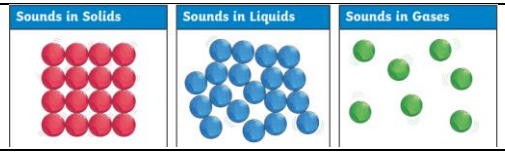
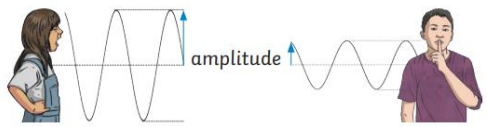
Sound







Key knowledge

Sound and Vibrations

All sounds are created by vibrations. You might not be able to see vibrations but when an object vibrates, the air around the object also vibrates. These vibrations travel through the air particles into our ears. When they reach the eardrum and inner ear, sounds can be heard. These vibrations are called sound waves and can travel through any medium, including solids, liquids and gases.

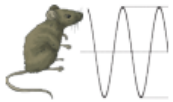
Volume

The volume of a sound is how loud or quiet it is. Loud sounds are made by bigger vibrations. Amplitude is a measure of how big a vibration is. Louder sounds have a larger amplitude. Quiet sounds have smaller vibrations and a smaller amplitude.

Key vocabulary	
ear	The organ that allows animals to hear.
ear drum	A piece of thin, stretched skin inside the ear that is moved by vibrations.
distance	A measure of the length between two points.
volume	The measure of how loud or quiet a sound is.
vibration	The quick, continuous movement.
particles	A piece of matter that is too small to be seen.
pitch	The measure of how high or low a sound is.
sound source	Where a sound starts (originates).
sound wave	The movement of energy created by the vibration of a sound source.
amplitude	The measure of the greatest distance that a vibration moves across, and the height of the sound wave it produces.
soundproof	Objects and materials that do not allow sound to pass into or through.
adsorb	To take in or keep inside.

Pitch is a measure of how high or low a sound is.

A squeak from a mouse is a high-pitched sound and this means it vibrates quickly.



The sound of a lion's roar has a lower pitch and vibrates slowly.



Absorbing Sound

When we don't want a sound to be heard, we can try to absorb the sound waves or vibrations. If the vibrations are absorbed, the sound is muffled. Different materials can be used to absorb sound and these materials can be used in ear defenders or ear plugs. It is even possible to soundproof a whole room, such as a music studio. Ear defenders can be used to reduce unwanted noise from reaching our ears. Some people find it difficult to hear loud noises, constant background noise or strange sounds so ear defenders help them.