



What I should already know

- Sound is a sense associated with the ears.
- Sound is a noise
- Pitch and volume (Music)
- Solids, liquids and gases

Working Scientifically

- find patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses.
- make earmuffs from a variety of different materials to investigate which provides the best insulation against sound.
- make and play their own instruments by using what they have found out about pitch and volume.

Sticky Knowledge

- Identify how sounds are made, associating some of them with something vibrating
- Sound is a type of energy created by vibrations.
- Recognise that vibrations from sounds travel through a medium to the ear
- Different mediums such as solids, liquids and gases can carry sound, but sound cannot travel through a vacuum (an area empty of matter).
- Pitch is a measure of how high or low a sound is.
- The size of a vibration is called the amplitude. Louder sounds have a larger amplitude.
- The loudness (volume) of the sound depends on the strength (size) of vibrations which decreases as they travel through the medium. Therefore, sounds decrease in volume as you move away from the source.

hammer	The ear has little bones called ossicles that help you hear. They are called the hammer (malleus), anvil (incus), and stirrup (stapes). They amplify the sound
vacuum	A space where there is nothing. There are no particles in a vacuum.

Vocabulary

vibrating	Sound is caused by the vibration of a medium (usually air) and it travels in waves.
vibration	A movement backwards and forwards.
pitch	A high sound has a high pitch and a low sound has a low pitch.
sound-wave	Vibrations travelling from a sound source.
volume	The loudness of a sound.
insulation	Protecting something by surrounding it with material that reduces or prevents the transmission of sound.
outer, middle and inner ear	The ear is made up of three different sections: the outer ear, the middle ear, and the inner ear. These parts all work together so you can hear and process sounds.
eardrum	Part of the ear which is a thin, tough layer of tissue stretched out like a drum skin. It separates the outer ear from the middle and inner ear. Sound waves make the eardrum vibrate.
cochlea	The cochlea looks like a spiral-shaped snail shell deep in your ear. It plays an important part in helping you hear.
amplitude	The size of a vibration. Larger amplitude = larger sound
frequency	Frequency is measured as the number of wave cycles