

Year 4 Science Knowledge Organiser - Sound

Selected Vocabulary and Definitions

Oscilloscope	Scientific equipment which can be used to visually display sound waves.
Particles	Units of matter through which sound passes.
Pitch	Measure of how high or low a sound is. The faster the vibration, the higher the pitch.
Sound	Vibrations that travel through the air or another medium and can be heard when they reach a person's or animal's ear.
Sound proof	To use materials to stop sound.
Variable	Part of a scientific experiment that can be changed, or remain the same.
Vibration	To move back and forth. To vibrate.
Volume	Measure of how loud or quiet a sound is. The bigger the vibration, the louder the sound is.



Curriculum Objectives

- I can identify how sounds are made, associating some of them with something vibrating.
- I can recognise that vibrations from sounds travel through a medium to the ear.
- I can find patterns between the pitch of a sound and features of the object that produced it.
- I can find patterns between the volume of a sound and the strength of the vibrations that produced it.
- I can recognise that sounds get fainter as the distance from the sound source increases.

Key Questions

- How are sounds made?
- How does sound travel to your ear?
- What changes the pitch of a sound?
- How does the strength of vibrations affect the volume of a sound?
- Why does a sound become fainter as the distance from the sound source increases?

Key Knowledge

SOURCES OF SOUND

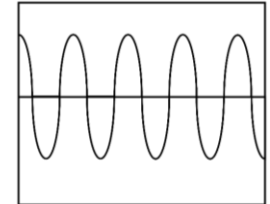
The drum skin vibrates and makes the air around the drum vibrate.

The vibrating air spreads away from the source - this is a sound wave.

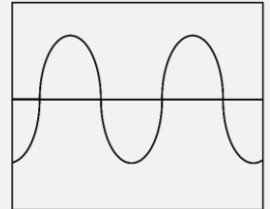
Finally, your ear picks up the sound wave and your brain translates the sound.

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The shorter, tighter or thinner the object is, the higher the pitch of the sound will be. The vibrations will be faster.

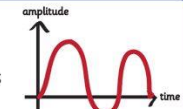


The longer, looser or thicker the object is, the lower the pitch of the sound will be. The vibrations will be slower.



LOUDNESS

The loudness of a sound depends on how big the vibrations are. Beating the drum harder causes larger vibrations and a louder sound.



The sound is louder closer to the sound source.

The sound is fainter further away from the sound source.

The amplitude of a sound wave tells us how big the vibration is.

