



Year 4 Science Knowledge Organiser Topic- Sound Unit- Physics

Key Vocabulary

sound	Something you can hear or that can be heard. We hear sound with our ears.
sound source	A source is producing sound when some part of it is vibrating.
vibrations	Sounds are made when something vibrates. This means it moves quickly backwards and forwards
pitch	How high or low a sound is
volume	How loud or quiet a sound is
amplitude	The size of a vibration. The larger the amplitude= a louder sound
soundproof	A material which blocks sound effectively.
vacuum	A space where there is nothing. There are no particles in a vacuum
eardrum	Apart of the ear which is a thin tough layer of tissue that is stretched out like a drum> it separates the outer ear from the middle and inner ear. Sound waves make the eardrum vibrate.

As well as travelling through air (gas), sound can travel through solids and liquids:



Pitch



How do we hear sound?



Significant scientist

Christian Doppler
(1803-1853)



Christian Doppler was an Austrian mathematician and physicist. He is celebrated for his principle known as the Doppler effect. This describes how noises sound different as you move toward or away from a noisy object.

Volume

The volume (loudness) of a sound depends on the size of the vibrations.



If we blow an instrument harder, we make a louder sound.

The closer we are to the sound source the louder it will be.



A train arriving at a station sounds loud.

The further away from a sound the fainter it will be.



A train in the distance sounds quieter.

Insulating sound



We can wear ear defenders to protect our ears from very loud sounds.