

Year 4 Science Knowledge Organiser Autumn Term




Knowledge Organiser: year 4 - Sound


Careers connected to sound:
audiologist, sound engineer



Lesson Sequence



1. Identify how sound is made



2. Explore how vibrations from sounds travel through a medium to the ear



3. Explore sound insulation



4. Explore volume



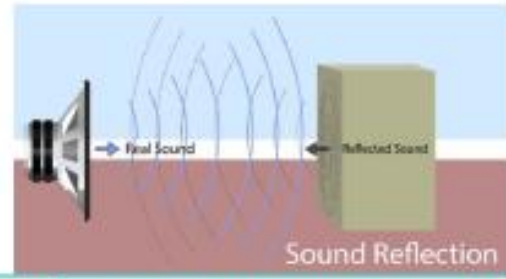
5. Explore pitch



6. Explore sounds

How sounds are made and travel

When objects vibrate, a sound is made. The vibration makes the air around the object vibrate and the air vibrations enter your ear. These are called sound waves. If an object is making a sound, a part of it is vibrating, even if you cannot see the vibrations. Sound waves travel through a medium (such as air, water, glass, stone, and brick).



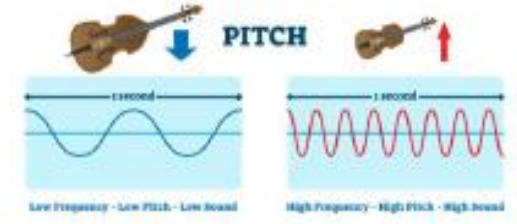
How do we hear?

The sound waves travel to the ear and make the eardrums vibrate. Messages are sent to the brain which recognises the vibrations as sounds.



Pitch

The pitch of a sound is how high or low it is. A squeak of mouse has a high pitch. A roar of a lion has a low pitch.



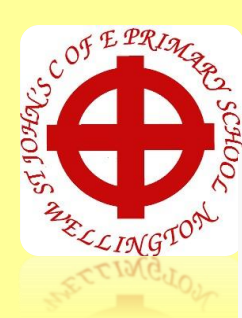
A high pitch sound is made because it has a high frequency. The sound source vibrates many times a second.

Volume

The volume of a sound is how loud or quiet it is. Quieter sounds have a smaller amplitude and less energy (smaller vibrations) and louder sounds have a bigger amplitude and more energy. The closer we are to a 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.










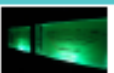




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Unit Rocket Words: Year 4 - Sound



Rocket Words

	Vibration	Particles moving very quickly
	Medium	A substance such as air, water or a solid
	Source	The start of something
	Energy	The power to make something work, move or grow
	Materials	Anything used in making something or building
	Reflect	Bounce back from a surface
	Volume	How loud or quiet a sound is
	Decibels	The unit to measure loudness
	Pitch	How high or low a sound is
	Instruments	Objects used to play music
	Particles	Tiny pieces that make up something larger
	Sound source	The object that started the sound