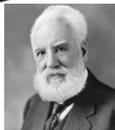


WHO?

Alexander Graham Bell



Year 1 - materials

Physics

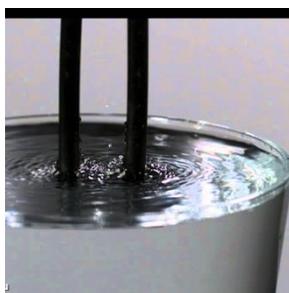


Vocabulary

vibration	A quick movement back and forth.	amplitude	The size of a vibration. A larger amplitude = a louder sound.
sound wave	Vibrations travelling from a sound source.	pitch	How low or high a sound is
volume	The loudness of a sound.	ear	An organ used for hearing.
absorb sound	To take in sound energy. Absorbent materials have the effect of muffling sound	soundproof	To prevent sound from passing through.

WHAT?

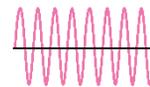
Sound is a type of energy. Sounds are created by vibrations. A vibration is a quick movement back and forth. If an object vibrates, the air particles (molecules) close to it vibrate. This makes the molecules next to them vibrate, and so on, forming a sound wave. If the sound wave reaches our ears and our brains, then we hear.



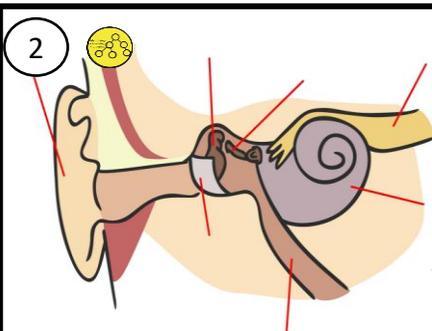
1



The pitch or the quality of a sound (high or low) is related to frequency. The frequency is the speed of the vibrations when a sound is played. If an object vibrates quickly, we hear a high-pitched sound and if an object vibrates slowly, we hear a low-pitched sound. High pitch is caused by short vibrations and a low pitch is caused by long vibrations.

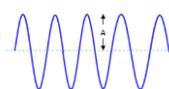


3



Inside your ear, the vibrations hit the eardrum and are then passed to the middle and then the inner ear. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound.

2



4



Amplitude is a measure of how loud or quiet a sound is. Rice on drums jumps higher when it is hit harder because this produces bigger vibrations. To make a louder sound, you need to hit the drum harder, which creates bigger vibrations.

Sounds get fainter as the distance from the sound source increases.



5



6



Workplaces have to provide hearing protection when sounds that workers are exposed to are over 85 decibels.