Sound

Key words	Definitions
Vibration	A back and forth motion that repeats.
Longitudinal wave	Where the direction of vibration is the same as that of the wave.
Volume	How loud or quiet a sound is, in decibels (dB).
Pitch	How low or high a sound is. A low (high) pitch sound has a low (high) frequency.
Amplitude	The maximum amount of vibration, measured from the middle position of the wave, in metres.
Wavelength	Distance between two corresponding points on a wave, in metres.
Frequency	The number of waves produced in one second, in hertz.
Vacuum	A space with no particles of matter in it.
Oscilloscope	Device able to view patterns of sound waves that have been turned into electrical signals.
Absorption	When energy is transferred from sound to a material.
Auditory range	The lowest and highest frequencies that a type of animal can hear.
Echo	Reflection of sound waves from a surface back to the listener.

Key knowledge

Sound consists of vibrations which travel as a longitudinal wave through substances

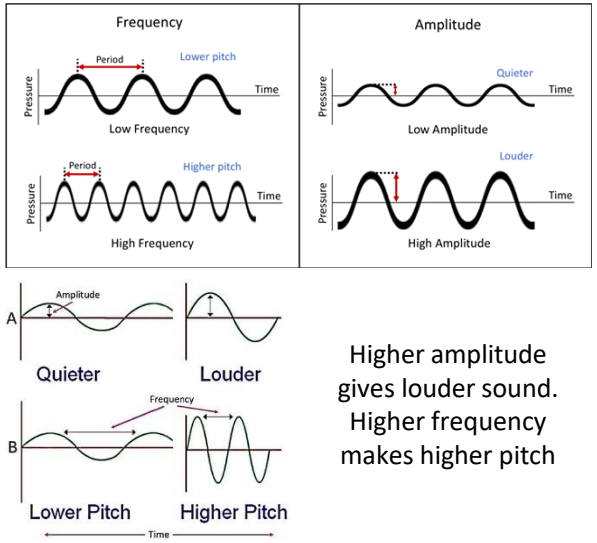
The denser the medium, the faster sound travels. The greater the amplitude of the waveform, the louder the sound

The greater the frequency (and therefore the shorter the wavelength), the higher the pitch

Sound does not travel through a vacuum.

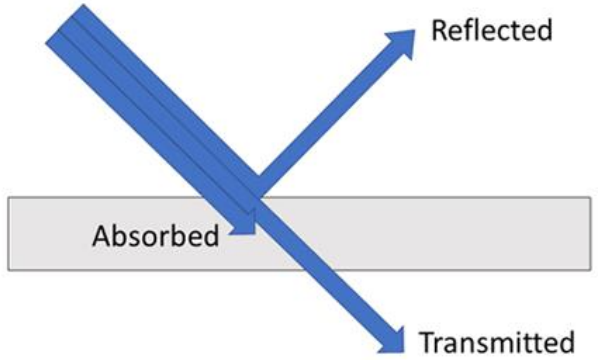
The speed of sound in air is 330 m/s, a million times slower than light.

Key diagram – Amplitude and frequency



Higher amplitude gives louder sound. Higher frequency makes higher pitch

Practical – Observing Sound



Sound can be reflected, transmitted or absorbed by different media.

Key process – How sound travels