

The softer the material, the more sound will be absorbed by it.

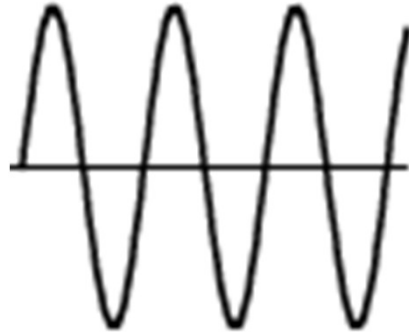
Knowledge Organiser Year 4 Unit: Sound

Sound waves can travel through solids, liquids and gases, but will sound differently depending on what they are travelling through.

KEY VOCABULARY

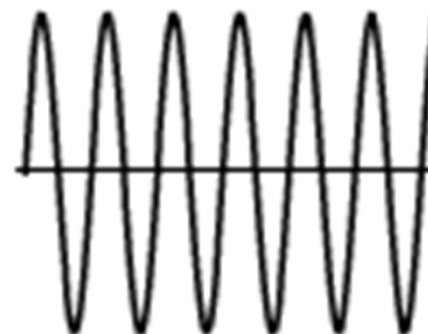
Key Word	Definition
vibration	A movement back and forth to create a sound.
speed of sound	The distance travelled per unit volume by a sound wave.
soundproof	Something such a material that prevents the passage of sound through it.
sound wave	A form that sound takes as it moves through air, water etc. Recorded on a graph.
frequency	The number of cycles per second that a sound oscillates, recorded in Hertz (hz).
decibel	A unit measurement given to the loudness or intensity of a sound.
eardrum	The part of the ear that vibrates when receiving sounds.
pitch	The quality related who whether sounds are 'high' or 'low.'

low pitch sound



- The sound waves are wider apart.
- Has a lower frequency in hertz (Hz)
- The sound wave moves slower.
- On a musical instrument, a thicker string will produce a lower sound.

high pitch sound



- The sound waves are closer together.
- Has a higher frequency in hertz (Hz)
- The sound wave moves quicker.
- On a musical instrument, a thinner string will produce a higher sound.

Lesson Sequence

- 1 • To find out that sounds are made when objects materials vibrate
- 2 • To investigate whether sounds can travel through different materials
- 3 • To explore the relationship between distance and volume
- 4 • To find out that some materials are effective in preventing vibrations from sounds
- 5 • To investigate how sound can be different pitches and volume
- 6 • To find out how the length and thickness affects pitch
- 7 • To find out how sounds can be made by air vibrating

Protecting your ears

- If a sound reaches 85 decibels (dB) or stronger, it can permanently damage your hearing.
- Your ear drum can get perforated, or burst, if you don't protect your ears.
- Ear defenders are used by workmen and those who work in noisy environments to protect their ears from the sound.



human ear

