

Science Knowledge Organiser—How Can We Change A Sound?

Subject Specific Vocabulary	
amplitude	A measure of the strength of a sound wave.
decibel	A measure of how loud a sound is.
Frequency	A measure of how many times per second the sound wave cycles.
Medium	Something that makes possible the transfer of energy from one location to another .
pitch	How high or low a sound is.
sound	A thing that can be heard. The object that makes the sound is called the source.
Sound waves	Invisible waves that travel through air, water, and solid objects as vibrations.
source	Where the sound comes from .
vibration	Invisible waves that move quickly.
Volume	How loud or quiet a sound is

Sticky Knowledge

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

Sound waves travel through a medium (such as air, water, glass, stone, and brick). □ For example, if somebody is playing music in the room next door, the sound travels through the wall.

□ When an object vibrates, the air around it vibrates too. This vibrating air can also be known as sound waves. □ 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. Volume: □ The volume of a sound is how loud or quiet it is. □ When a sound is created by a little amount of energy, a weak sound wave is created which doesn't travel far. This makes a quiet sound. □ A small tap of a hammer is used with small amounts of energy and so creates a quiet noise. □ A vibration with lots of energy makes a powerful sound wave and therefore a loud sound.

How do we measure sound?
Amplitude measures how strong a sound wave is. □ Decibels is the unit of measure of how loud a sound is. □

Diagrams

Pitch:

- High pitch sounds are created by short sound waves.
- Low pitched sounds are created by long sound waves.

Volume:

- The closer you are to the **source** of the sound, the **louder** the sound will be.
- The further away you are from the **source** of the sound, the **quieter** the sound will be.

