



Year 4 Knowledge Organiser - Sound



Key Questions

How is sound made?

Sound is made when something vibrates.

How do vibrations travel?

Vibrations, called **sound waves**, travel through a **medium**, such as air, water or a wall.

How do we hear sounds?

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

What is pitch and how does it relate to the object that produced it?

When objects **vibrate**, they create either a high **pitched** sound or a low pitched sound. We can observe patterns in the types of sounds made by different objects. High pitched sound waves are close together, while low pitch sound waves are further apart.

How is volume and vibration linked?

The louder a sound is, the bigger the **vibrations**. The quieter a sound is, the smaller the **vibrations**.

How does distance affect volume?

Distance is linked to the **volume** of a sound. The closer we are to something making a sound, the louder it is. The further away we are from something making a sound, the quieter it is.

Tier 3 Vocabulary

Decibel - a measure of how loud a sound is

Distance - the measure of space between things

Ear - the organ that turns vibrations into sound signals

Medium - something that makes the transfer of energy from one location to another possible. A medium can be a solid, liquid or a gas.

Particles - the smallest amount of matter.

Pitch - the quality of sound, how high or low a sound is. A high pitched sound is high and squeaky, like a whistle, while a low pitched sound is deep, like a bass drum.

Sound - a sound is something that can be heard. It is made by vibrations that travel through a solid, liquid or gas and can be heard when they reach a person's or animal's ear.

Sound wave - invisible waves that travel through gases, liquids, and solid objects as vibrations.

Source - where something (the sound) comes from.

Transmit - to send or carry from one thing to another.

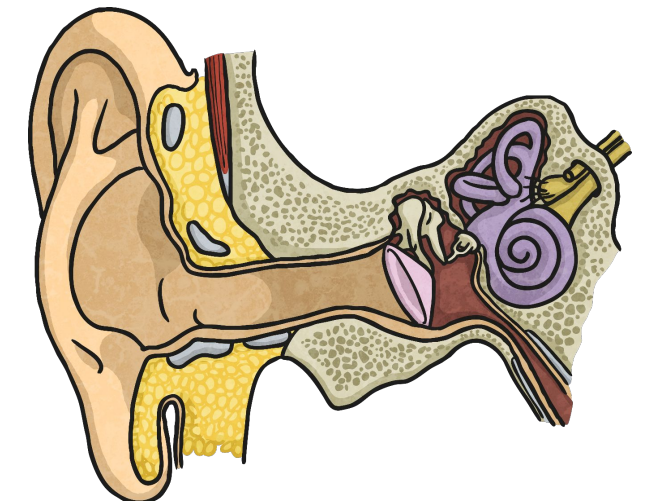
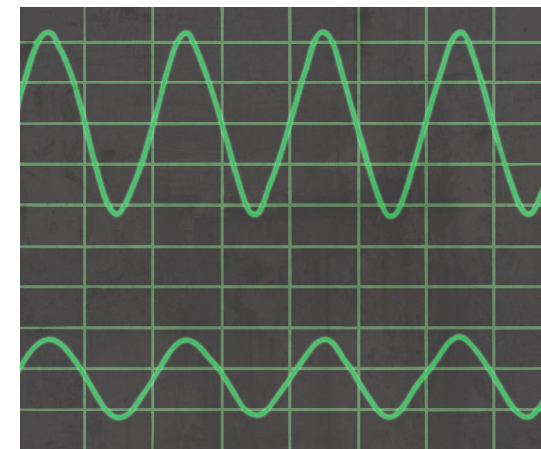
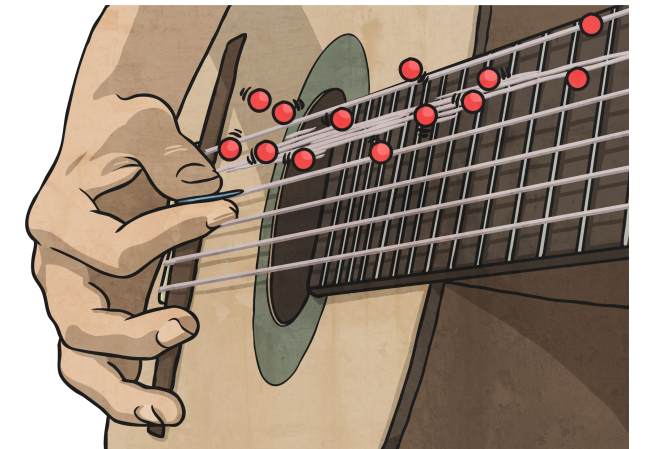
Travel - to move, usually constantly and consistently.

Vibration - to move back and forth very rapidly, to shake.

Volume - the amount of power of a sound, how loud or quiet a sound is.

Key objectives

- To identify how sounds are made, associating some of them with something vibrating,
- To find patterns between the volume of a sound and the strength of the vibrations that produced it,
- To recognise that vibrations from sounds travel through a medium to the ear.
- To find patterns between the pitch of a sound and features of the object that produced it.
- To recognise that sounds get fainter as the distance from the sound source increases.



Websites for further research

<https://www.bbc.com/bitesize/topics/zgffr82>

<https://www.bbc.com/teach/class-clips-video/music--science-ks2-what-is-sound/zbnmhbk>