

## Lower Key Stage 2 - Forest Academy Knowledge organiser - Sound

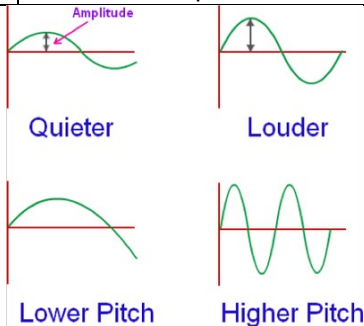
### Know how to...

- Identify how sounds are made
- Recognise that vibrations from sounds travel through a medium to the ear
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases.



### Key vocabulary

<b>amplitude</b>	A measure of the strength of a sound wave.
<b>faint</b>	If a sound is quiet, you might describe it as being faint. The further away from the source of the sound you are, the fainter the sound will be.
<b>insulation</b>	How loud a sound is can be reduced by using a sound insulating medium.
<b>loud</b>	The closer you are to the source of the sound, the louder the sound will be.
<b>pitch (high, low)</b>	How high or low a sound is.
<b>sound waves</b>	Invisible waves that travel through the air, water, and solid objects as vibrations.
<b>source</b>	Where something comes from.
<b>travel</b>	How something moves around.
<b>vibrate</b>	To move continuously and rapidly to and fro.
<b>vibration</b>	Invisible waves that move quickly.
<b>volume</b>	How loud or quiet a sound is.



### What is a sound?

- A sound is something that can be heard.
- The object that makes the sound is called the source.

### How is a sound made?

- 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 vibration, even if you cannot see the vibrations.



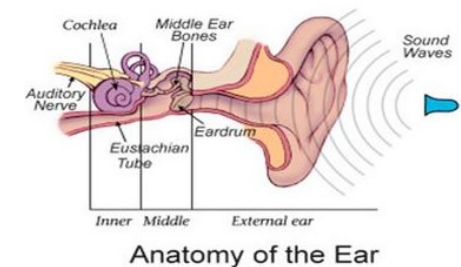
### How do sounds travel?

- Sound waves travel through a medium (such as air, water, glass, stone and brick).

### How do we hear sounds?

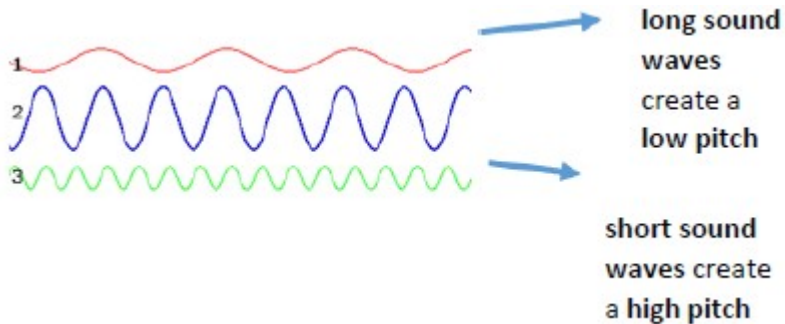
- When an object vibrates, the air around it vibrates too. This vibrating air can also be known as sound waves.
- The sound waves travel to the ear and make the eardrums vibrate.
- Messages are sent to the brain which recognises the vibrations as sounds.

### How do you Hear?



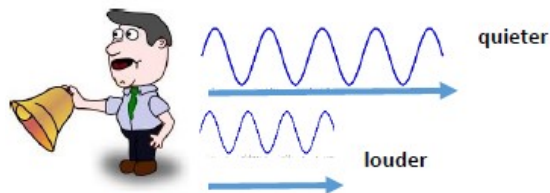
## Pitch

- The pitch of a sound is how high (e.g. the squeak of a mouse) or how low (e.g. the roar of a lion) it is.
- High pitch sounds are created by short sound waves.
- Low pitched sounds are created by long sound waves.

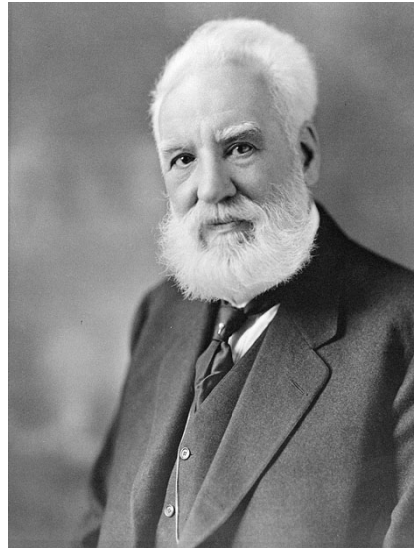


## Volume

- 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 e.g. the gentle tap of a hammer uses a small amount of energy and so creates a quiet sound.
- A vibration with lots of energy makes a powerful sound wave and therefore a loud sound e.g. a powerful, smashing tap of a hammer is used with lots of energy and so creates a loud noise.
- 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.

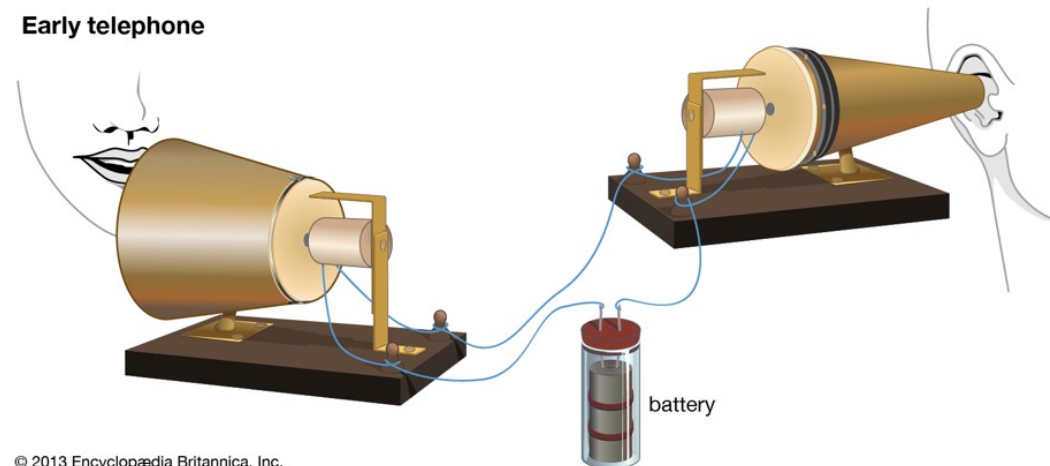


## Alexander Graham Bell



Alexander Graham Bell (1847–1922) was a Scottish-born US inventor who patented the first **telephone**. Born in Edinburgh, Scotland, Bell moved to Canada with his family at the age of 23, and later settled in Boston, Massachusetts. Bell gave music lessons and studied how vibrating objects make **sounds**. He invented a type of electric telegraph (messaging machine) that sent signals as musical notes. This led Bell to devise a way of sending and receiving the range of sounds in the human voice. The result was the telephone.

## Early telephone



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