



Key Vocabulary

sound source	Where sound comes from. A sound source will produce vibrations
vibrations	invisible waves that move quickly
frequency	How many vibrations are made in one second
energy	Sound energy is a type of energy that we can hear
Sound waves	invisible waves that travel through air, water, and solid objects as vibrations
volume	how loud or quiet a sound is
transmit	to pass from one place or person to another.
pitch	how high or low a sound is
insulation	material that stops the travel of energy (including sound)
medium	something that makes it possible to transfer energy from one location to another.
amplitude	a measure of the strength of a sound wave
travel	how something moves around

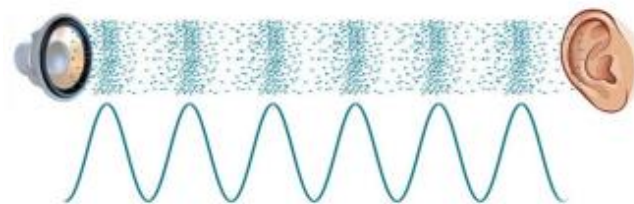
Focused Scientist – Alexander Graham Bell

Alexander Graham Bell was a Scottish scientist who invented the telephone in 1876. He formed the Bell Telephone Company in 1887.



How do we hear?

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

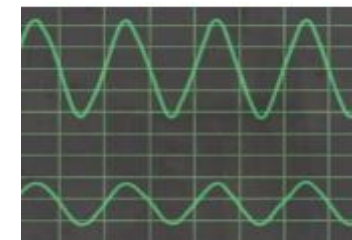
The pitch of a sound is how high or low it is. A squeak of mouse has a high pitch A roar of a lion has a low pitch.



A high pitch sound is made because it has a high frequency. The sound source vibrates many times a second.

Volume of a sound

The louder the sound, the bigger the vibration. The closer you are to the source of a sound, the louder the sound will be. The further away you are from the source of a sound, the quieter the sound will be. The size of the vibration is called the **amplitude**. Quieter sounds have a smaller amplitude, and louder sounds have a bigger amplitude.



How does sound travel ?

Sound can travel through **solids, liquids and gases**. Sound travels as a wave, vibrating the particles in the medium it is travelling in. Sound travels much slower than light, whether in air or in water. You often hear things after you see them, for example, you see the lightning before you hear the thunder.

Absorbing Sounds

If you lived near a noisy building site, you would not want to hear the sounds of the machines! You would need to find a way to absorb the sounds so your house remained quiet and peaceful. This is called **soundproofing, insulating** the sound