

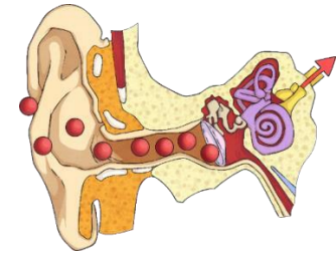
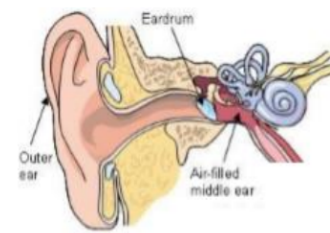
Year 4 Term 1 – Sound

Key vocabulary

Ear	An organ used for hearing.
Particles	Solids, liquids and gases are made of particles . They are so small we are unable to see them.
Distance	A measurement of length between two points.
Soundproof	To prevent sound from passing through.
Absorb sound	To take in sound energy. Absorbent materials have the effect of muffling sound.
Vacuum	A space where there is nothing. There are no particles in a vacuum.
Eardrum	A large part of the ear which is a thin, tough layer of tissue that stretches out like a drum skin. It separates the outer ear from the middle and inner ear . Sound waves make the eardrum vibrate .
Vibration	A quick movement back and forth.
Soundwave	Vibrations travelling from a sound source through solid, liquid or gas.
Volume	How loud or quiet a sound is.
Amplitude	The size of a vibration . A larger amplitude = a louder sound.
Pitch	How low or high a sound is.

What is sound?

Sound is a kind of energy that creates vibrations. When objects vibrate, the air around them also vibrates and when this vibrating air enters the ear it hits the eardrum and is turned into sound by the brain. The bigger the vibration, the louder the sound that we hear.



Soundwaves...

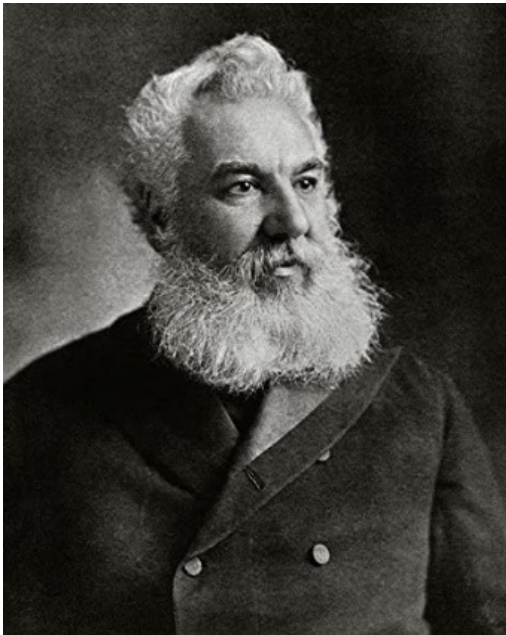
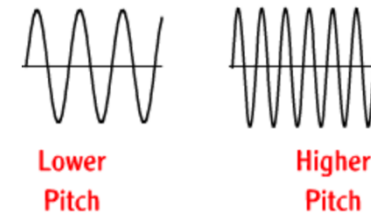
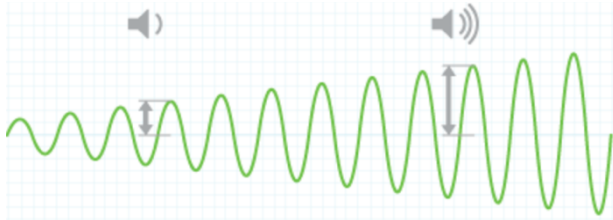
Sound travels through the air in waves so when you kick a ball the air around your foot shakes back and forth. These are the air molecules vibrating. Although, the molecules are so small that they cannot be seen. Sound can travel in waves through solids, liquids and gases, but pass easier through solids as the vibrating particles are closer together.



Volume and pitch...

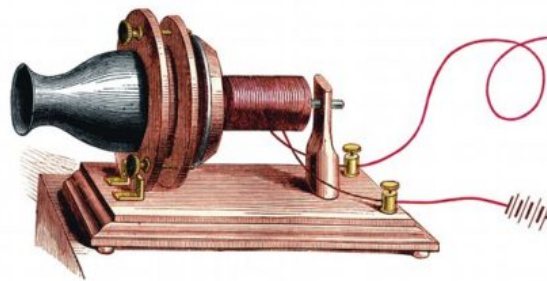
The volume of sound all depends on how close you are to it. If you are stood right next to someone banging a drum the sound will be louder. However, if you are stood further away the sound will be much quieter. The size of the vibration is called the **amplitude**. Quiet sounds have small amplitudes and louder sounds have bigger amplitudes.

The **pitch** of a sound is how high or low it sounds. If an object is longer it will have a lower pitch and if it is shorter it will have a higher pitch. A long guitar string will have a low pitch, but whistles have a higher pitch.



Alexander Graham Bell – 1847 – 1922

The first telephone was created by Scottish born Alexander Graham Bell in 1876 after he spent many years experimenting with sound. The telephones worked by sending sound waves through wires. Alexander's company was called the Bell Telephone Company.



Soundproof...

Sound is kept in (or out) when sound energy is absorbed. A house can be insulated to absorb sound and keep the sound of noisy traffic out. Sound is absorbed when musicians record music in soundproof rooms so they can keep the sound in.