Year 4 – Science Aut 1
Sound

Key Facts

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.

Sound travels to the ear.

Sound travels through the air in waves.
When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.

When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears. The hairs are connected to nerves under the skin.

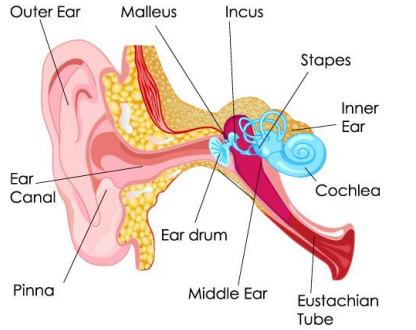
These nerves send messages to your brain to tell you that you heard a noise.

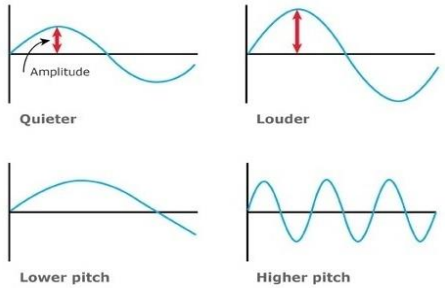
Volume of sound.

The volume of a sound is how loud or quiet it is.
Quieter sounds have a smaller amplitude and less energy (smaller vibrations) and louder sounds have a bigger amplitude and more energy.
The closer we are to a sound source the louder it will be.
The further away from a sound the fainter it will be.

Diagram/Investigations

Investigating Pitch - Find patterns between the pitch of a sound and features of the object that produced it (make musical instruments





Key Learning:

To identify how sounds are made, associating some of them with something vibrating

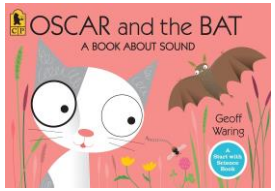
To recognise that vibrations from sounds travel through a medium to the ear

To find patterns between the pitch of a sound and features of the object that produced it

To find patterns between the volume of a sound and the strength of the vibrations that produced it

To recognise that sounds get fainter as the distance from the sound source increases

Books to support/ Enrichment Opportunities:



Make earmuffs from a variety of different materials.

Link with Music and create musical instruments with different pitches.

Subject Specific Vocabulary	
Key word	Definition
Amplitude	A measure of the strength of a soundwave
Decibel	A measure of how loud a sound is
Pitch	How high or low a sound is
Sound waves	Invisible waves that travel through air, water and solid objects as vibrations
Vibrations	Invisible waves that move quickly
Volume	How loud or quiet a sound is
Frequency	How many vibrations are made in one second
Medium	A material that allows the transfer of energy from one place to another, e.g. solids, liquids and gases
Sound source	Where sound comes from. A sound source will produce vibrations