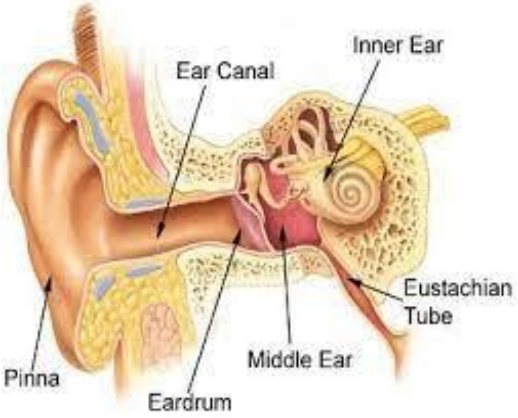
Castlefield School - Science

Topic: Sound	Year: Four	Theme: The World Around Us	Strand: Physics

Key Concepts

What is sound?

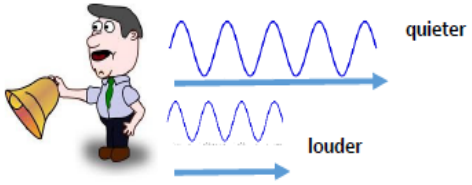
- A sound is a thing that can be heard.
- The object that makes the sound is called the source.
- When objects vibrate a sound is made.
- The vibration makes the air around the object vibrate and the air vibrations enter your ear. They are called **sound waves.** This then sends signals to your brain.



How do sounds change?

Pitch:

- High **pitch** sounds are created by short **sound waves**.
- Low **pitched** sounds are created by long **sound waves**.



Volume:

- The closer you are to the source of the sound the louder the sound will be.

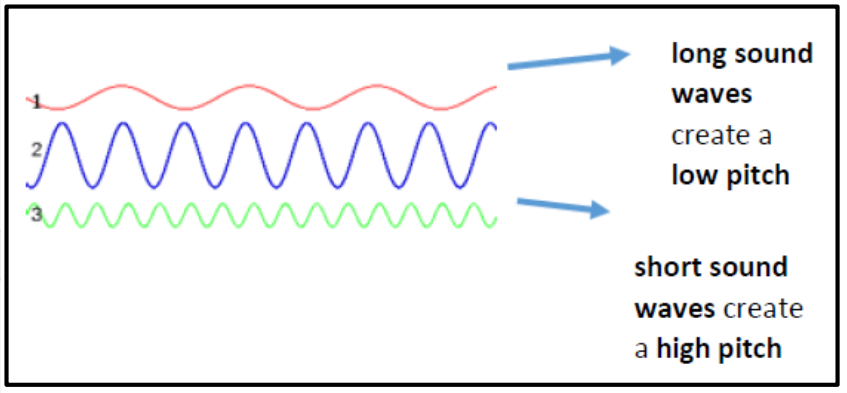
The further away you are from the **source** of the sounds, the quieter the sound will be.
A vibration with lots of energy makes a powerful sound wave and therefore a loud sound.
A powerful smashing tap of a hummer is used with lots of energy and so create a loud noise.

Working Scientifically Skills

	Asking relevant questions		Setting up fair tests (with help)
	Explaining results – drawing conclusions and using results. .		Choosing how to record information – tables, tally charts, Venn and Carroll diagrams and bar charts.
	Recognising when to use other sources of information to find answers		

Key Vocabulary

amplitude	A measure of the strength of a **sound wave**.
decibel	A measure of how loud a sound is.
frequency	A measure of how many times per second the **sound wave** cycles.
medium	Something that makes possible the transfer of sound from one location to another
pitch	How high or low a sound is.
sound waves	Invisible waves that travel through air, water and solid objects as **vibrations**.
transmit	When you pass something from one place or person to another
Travel	How something moves around.
vibrations	Invisible waves that move quickly
volume	How loud or quiet a sound is.



Famous Scientists

Heinrich Hertz (1857 -1894) The unit of frequency used for all kinds of waves and vibrations is named after him. One Hertz is equal to one vibration per second.