

**Science – Sound**  
**Who could hear the sounds of battle? Thread: Physics**

**What I should already know:**

**Enquiry Questions**

- How are sounds made?
- How do sounds travel to our ears?
- What is sound insulation and how does it work?
- What is volume?
- What is pitch?
- What is the relationship between distance and volume?

**Key Vocabulary**

**Absorb** – Take in.  
**Amplitude** – The measurement of the height of a sound wave.  
**Decibel meter** – The equipment used to measure the loudness of sound.  
**Decibels** – The unit to measure the loudness of sound.  
**Defenders** – Things that protect from harm.  
**Ear** – The organ of hearing in people and some other animals.  
**Eardrum** – Part of the ear that receives sounds.  
**Echo** – A repeating sound.  
**Energy** – The power to make something work, move or grow.  
**Fade** – Become less and less.  
**Faint** – Weak or slight.  
**High pitch** – A high, sometimes squeaky sound.  
**Instruments** – Objects used to play music.  
**Insulate** – To cover or surround.  
**Insulation** – Material used to insulate; the act of insulating or the condition of being insulated.  
**Loud** – Having a large amount of sound; easily heard.  
**Low pitch** – A low sound.  
**Materials** – Anything used in making something or building.  
**Medium** – A substance such as air, water or solid.  
**Orchestra** – A collection of instruments that play together to create music.  
**Particles** – Tiny pieces that make up something larger.  
**Pitch** – How high or low a sound is.  
**Power** – Amount of energy.  
**Reflect** – Bounce back from a surface.  
**Signals** – Sound waves that are sent or received.  
**Sound** – Anything that people or animals can hear with their ears.  
**Sound source** – The object that started the sound.  
**Source** – The start of something.  
**Travel** – To move from one place to another.  
**Vacuum** – A space that does not contain air.  
**Vibration** – Particles moving very quickly.  
**Volume** – How loud or quiet a sound is.  
**Waves** – The form that energy takes when travelling.

**Working Scientifically Skills**

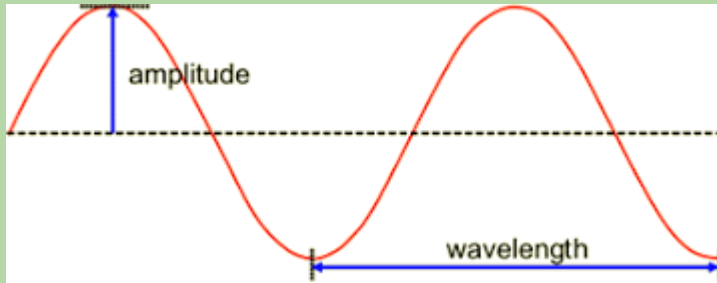
Pupils will:

- Identify how sounds are made, associating some of them with something vibrating.
- 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 increases.

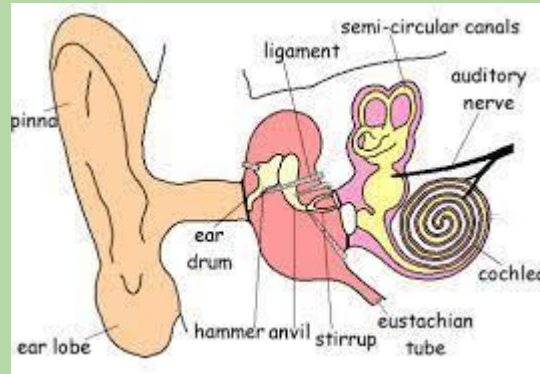
**Working Scientifically (Blue = Y5)**

- Ask relevant questions and use different types of scientific enquiries to answer them. / **Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.**
- Use straightforward scientific evidence to answer questions or to support them. / **Identify scientific evidence that has been used to support or refute ideas or arguments.**
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment. / **Take measurements using a range of scientific equipment with increasing accuracy and precision, taking repeat readings where necessary.**
- Identify differences, similarities or changes related to simple scientific ideas and processes.
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. / **Use test results to make predictions to set up further comparative and fair tests.**
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- Gather, record, classify and present data in a variety of ways to help answer questions.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. / **Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.**

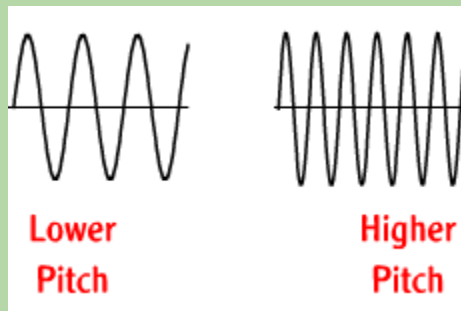
**Useful images**



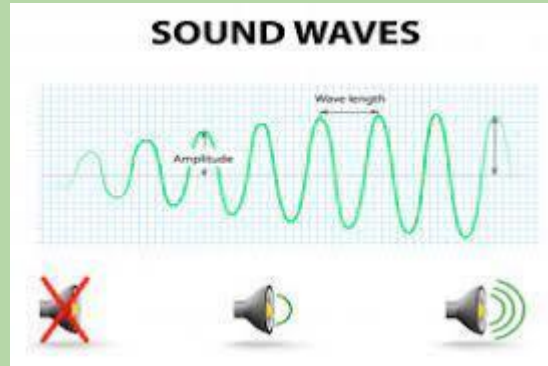
Labelled diagram of a sound wave.



Labelled diagram of the ear.



The different wave patterns between low and high pitch sounds.



Louder sounds are produced by waves with higher amplitude.

**Links to other curriculum areas:** History – The Battle of Hastings. Music – Pitch and volume and how they can be changed on different instruments.