

Preston Primary School Knowledge Organiser

Topic: Science- Sound

Term: Spring 1

Year: Unit 3

Duration: 6 Weeks

The Powerful Knowledge we will take away from this Learning Enquiry
(what children will be learning):

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|   | <ul style="list-style-type: none"> I know that sound is a vibration. I can identify how sounds are made, associating some of them with something vibrating. I can recognise that vibrations from a sound travel through a medium to the ear. There are patterns between the pitch of a sound and features of the object that produced it. Children will explore these through experiments. Find patterns between the volume of a sound and the strength of the vibrations that produced it. I recognise that sounds get fainter as the distance from the sound source increases. |
|  | <ul style="list-style-type: none"> I can pose questions and then design and conduct experiments to find the answers. I can record answers scientifically in graphs and tables. I can report and present findings from enquires, including conclusions, causal relationships and explanations of results (in oral and written forms). |

Our Key Vocabulary:

Word **Meaning**

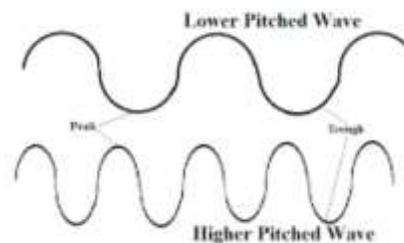
| | |
|--------------------------|--|
| Pitch | How high or low a sound is. The pitch is due to the frequency of the vibrations. The more frequent the vibrations, the higher the pitch. Less frequent vibrations result |
| Volume | How loud a sound is. Sound can be quiet or loud. Comparative words can be used to describe volume: quiet, quieter, quietest, loud, louder, loudest. |
| Vibrations | The movement of air that creates a sound. |
| Frequency | The number of vibrations per second. |
| Source | The origin of the sound. This is where the sound originates from. |
| Bang, pluck, blow, shake | These describe some movements made by humans to make sound. |
| Sound wave | The vibrating object pushes the air out in waves. The horizontal way in which the air moves is called a sound wave. |
| Decibels | The way in which volume is measured. |

| Steps in learning | |
|---|--|
|  | <p>I know that sound is a form of energy. To understand that sounds are made when an object vibrates and are made by the vibrating object pushing air out in horizontal waves.</p> <p>To understand that we hear this sound because the vibrations reach our ears.</p> |
|   | <p>To plan and conduct an experiment into the patterns between the pitch of a sound and features of the object that produced it.</p> |
|   | <p>To plan and conduct an experiment to find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>To recognise that sounds get fainter as the distance from the sound source increases through this experiment.</p> |

What I already know:

In Foundation Stage, children learnt to recognise the sounds they can hear and observe what may have made these sounds.

In Unit 2, children have carried out scientific enquiries on different topics, looking at the results they have gathered and recording these. As children move towards Year 6, they are expected to draw conclusions from this data.



These show the difference in the way that high- and low-pitched sounds travel. You can see that if there are more vibrations, the sound is higher pitched. The lower pitched sounds are made of fewer vibrations.



Tuning forks are made of metal. When you hit them on a surface, they vibrate and make a sound. The sounds are different pitches depending on the size and density of the fork you use. Some will make a higher pitched sound and some will make a lower pitched sound.

Website links:

[Year 4 Science - BBC Bitesize](#)

There are some informative videos on this link.