

Gunthorpe Primary School – Knowledge Organiser

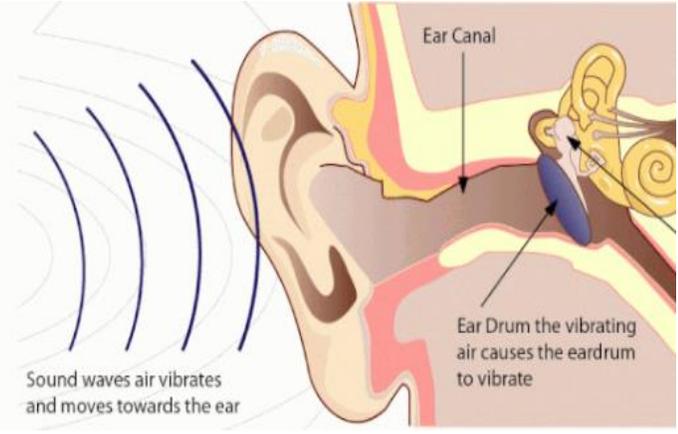
Focus:

Sound

Year 4:

Summer Term 1

Key Knowledge

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| What is a sound? | A sound is a noise that can be heard by someone. |
| How is a sound made? | <p>A sound is made when something vibrates.</p> <p><i>This can be obvious:</i> For example a drill repeatedly hitting the ground causing a loud noise.</p> <div style="display: flex; justify-content: space-around; align-items: center;">  </div> <p><i>This can be less obvious:</i> For example blowing across the top of a glass or bottle which causes the air inside the bottle to vibrate producing a noise.</p> <div style="display: flex; justify-content: space-around; align-items: center;">  </div> |
| How do sounds travel? | <p>There are two ways in which sounds travel:</p> <ol style="list-style-type: none"> 1) Through the air – for example sound from a TV speaker traveling through the air to your ear. 2) Through an object/material – for example sound travels through the floor when heavy furniture is moved. |
| How do we hear these vibrations? | <p>Vibrations in the air hit our ear drums making them vibrate. These vibrations are converted by our (very clever) brains into sounds we recognise.</p> <div style="text-align: center;">  <p>Sound waves air vibrates and moves towards the ear</p> <p>Ear Canal</p> <p>Ear Drum the vibrating air causes the eardrum to vibrate</p> </div> |

Volume

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| <ul style="list-style-type: none"> • The closer we are to the sound source, the louder the sound will be for us. • The further away we are from the sound source, the quieter the sound will be for us. | <ul style="list-style-type: none"> • The more energy in the initial vibration the louder the sound will be. • For example tapping a hammer on a table will create a quieter sound than smashing the hammer on the table. |
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Pitch

The pitch is how high or low the sound is.

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|  <p style="text-align: center;">A</p> | <p>Lowest pitched</p> |  | <p>The longer the vibrating object, the lower the pitch of the sound.</p> |
|  <p style="text-align: center;">B</p> | <p>Highest pitched</p> |  | <p>The shorter the vibrating object, the higher the pitch of the sound</p> |

Key Vocabulary

- Sound:** A noise that can be heard by someone.
- Source:** The origins of the sound. The source can be natural (such as wind, animals, volcanoes) or man-made (vehicles, home appliances, factories).
- Vibrate/vibration:** Move continuously very quickly.
- Travel:** Vibrations travel (move) through a medium (solid, liquid or gas) to your ear.
- Pitch:** How high or low the sound is.
- Volume:** How loud the sound is.
- Faint:** Low volume of sound. Caused by further distance from sound source or less energy in initial vibration.
- Loud:** High volume of sound. Caused by close proximity to sound source or more energy in initial vibration.
- Insulation:** A barrier. In this context a barrier to reduce sound volume. Depending on the material of the barrier, the insulation will be more or less effective.

This unit builds on:

Year 3: Forces and magnets

This unit leads to:

Year 4 Summer Term 2: Electricity