



Lowerhouse Junior School

Science Overview Sheet



Year 4 – Sound



Rationale: Teaching Sound in Year 4 Science is essential for understanding how vibrations create sound waves. It helps students explore concepts like pitch, volume, and how sound travels through different materials. This foundational knowledge enhances their scientific curiosity, critical thinking, and appreciation for the auditory world around them.

Substantive Knowledge:

- 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 source increases.

Disciplinary Knowledge:

- Classifying
- Comparative/Fair Testing
- Researching

Overview:

Lesson 1: How are sounds made?
Lesson 2: How does sound reach our ears?
Lesson 3: What patterns can we find between pitch and objects?
Lesson 4: What patterns can we find between volume and vibrations?
Lesson 5: How does sound change as the distance is changed?
Lesson 6: What have we learned about Sound?

Key Vocabulary:

Sound: Vibrations that travel through the air or another medium and can be heard when they reach a person's or animal's ear.
Source: The origin of the sound, where the vibrations are created.
Vibrate: To move rapidly back and forth, producing sound waves.
Vibration: The rapid back-and-forth movement of particles that creates sound.
Travel: The movement of sound waves through a medium, such as air, water, or solids.
Pitch (high, low): The perceived frequency of a sound; high pitch sounds have high frequencies, and low pitch sounds have low frequencies.
Volume: The loudness or intensity of a sound, determined by the amplitude of the sound waves.
Faint: A very low volume sound that is difficult to hear.
Quiet: A sound that is low in volume but still audible.
Loud: A sound that is high in volume and easily heard.
Insulation: Material used to reduce or prevent the transmission of sound, often used to block noise

Impact/Assessment

Most Children will be able to: • create a concept map, including arrows linking the key vocabulary • name properties of solids, liquids and gases • give everyday examples of melting and freezing • give everyday examples of evaporation and condensation • describe the water cycle • give reasons to justify why something is a solid liquid or gas • give examples of things that melt/freeze and how their melting points vary • From their observations, give the melting points of some materials • Using their data, explain what affects how quickly a solid melts • measure temperatures using a thermometer • explain why there is condensation on the inside the hot water cup but on the outside of the icy water cup • From their data, explain how to speed up or slow down evaporation • present their learning about the water cycle in a range of ways e.g. diagrams, explanation text, story of a water droplet