



Unit Title: Sound

Year Group: 4

Academic Year: 2024-2025

Science Intent: A sound produces vibrations which travel through a medium from the source to our ears. Different mediums such as solids, liquids and gases can carry sound, but sound cannot travel through a vacuum (an area empty of matter). The vibrations cause parts of our body inside our ears to vibrate, allowing us to hear (sense) the sound.

The loudness (volume) of the sound depends on the strength (size) of vibrations which decreases as they travel through the medium. Therefore, sounds decrease in volume as you move away from the source. A sound insulator is a material which blocks sound effectively.

Pitch is the highness or lowness of a sound and is affected by features of objects producing the sounds. For example, smaller objects usually produce higher pitched sounds.

Prior Scientific Learning:	Literacy Links (including texts/media used):	Maths Links:
• Explore how things work. (Nursery – Sound) • Describe what they see, hear and feel whilst outside. (Reception – Sound) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans) •		
Scientific Knowledge	Scientific Enquiry Approaches:	Working Scientifically:
• 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.	• Pattern-seeking • Problem-solving	• 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.



Week 1:	Key Vocabulary:
Retrieve prior knowledge using KWL grid Activity: Children will be given a concept cartoon related to how we hear sound. This concept cartoon will be revisited at the end of the topic, giving children the opportunity to revise their answer using newly acquired knowledge.	
Week 2: stunning start	Key Vocabulary:
Find out how sounds are made Activity: Using various objects, children will test how sounds are made by observing visible vibrations, eg rice on a drum. They will demonstrate their knowledge in a table. All children will be able to verbally explain that sounds are made through vibrations. Most children will be able to record their findings in a table. Some children will be able to explain what happens when the object vibrates and what they heard / observed.	sound, source, vibrate, vibration, travel
Week 3:	Key Vocabulary:
Understand how sound travels Activity: Children will walk around the school testing how easily they can hear sounds through different materials, eg brick wall, wood, glass etc. Children will record their findings using a sound rating system in a table. All children will be able to recognise that sound travels through solids, liquids and gases. Most children will be able to explain that sound travels more easily through certain materials. Some children will be able to link this knowledge to their prior understanding of particles in states of matter. Pattern-seeking	sound, source, vibrate, vibration, travel
Week 4: marvellous middle	Key Vocabulary:
Understand how to change pitch of sound Activity: Children will learn what pitch is and how to change the pitch of a sound. They will create their own set of pan pipes using various recyclable materials to explore changing the pitch of a sound.	sound, source, vibrate, vibration, travel, pitch (high, low)



All children will be able to explain that pitch is how high or low a sound is. Most children will be able to explain how the pitch of a sound depends on the frequency of vibrations. Some children will be able to explain how to change the pitch of a sound. Pattern-seeking Problem-solving	
Week 5:	Key Vocabulary:
Investigate how to change the volume of sound Activity: Children will learn what volume is and how to change the volume of a sound. They will test this by putting rice on a drum and hitting the drum with different amounts of strength. They will observe how the rice moves more as the vibrations increase when the drum is hit harder. All children will be able to explain that volume is how loud or quiet a sound is. Most children will be able to explain that the volume of a sound depends on the size of vibrations. Pattern-seeking Problem-solving	sound, source, vibrate, vibration, travel, volume, faint, quiet, loud, insulation
Week 6:	Key Vocabulary:
Investigate the relationship between distance and volume of a sound. Activity: In the hall, the children will stand in a line, facing away from the teacher. The teacher will tap a triangle and the children will take a step further away from the teacher every time they can hear the sound. Children will record the decibels and distance and then mark a spot on the floor when they can no longer hear the sound. How far did they travel before they could no longer hear it? All children will be able to verbally explain that sounds get fainter when they are made further away. Most children will be able to record their findings in a graph. Some children will be able to explain why sounds get fainter as the distance from the sound source increases. Pattern-seeking	sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, quiet, loud, insulation



No Limits
To Learning!

Stunning Start/Marvellous Middle/Fabulous Finish:

Stunning Start – sound carousel

Marvellous middle - make a musical instrument

Fabulous Finish – make ear defenders

OAA/Trips/Visits/Visitors: