



## Skills and Knowledge Organiser

### Year 4 Summer Term Science – Sound

Key Knowledge and Skills	Working scientifically	Key Vocabulary	Key Questions
<p>To state that they hear sounds through their ears</p> <p>To recognise that when sounds are generated by objects, something moves or vibrates</p> <p>To identify how sounds are made, associating some of them with something vibrating</p> <p>To identify what is vibrating in a range of musical instruments</p> <p>To describe how sounds are generated by specific objects</p> <p>To recognise that vibrations from sounds travel through a medium to the ear</p> <p>To recognise that sounds travel through solids, water and air</p> <p>To explore how sound travels through a variety of materials</p> <p>To distinguish and describe the differences between pitch and volume (loudness)</p> <p>To find patterns between the pitch of a sound and features of the object that produced it</p> <p>To know that altering vibrations alters the pitch or volume</p> <p>To describe ways in which the pitch of a sound made by a particular instrument or vibrating object can be raised or lowered</p> <p>To explore how to vary the pitch and volume of sounds from a variety of objects or instruments</p> <p>To find patterns between the volume of a sound and the strength of the vibrations that produced it</p>	<p>asking relevant questions and using different types of scientific enquiries to answer them</p> <p>setting up simple practical enquiries, comparative and fair tests</p> <p>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units,</p> <p>using a range of equipment, including thermometers and data loggers</p> <p>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>recording findings using simple scientific language, drawings,</p>	<p>Sound- anything that people or animals can hear with their ears</p> <p>Pitch- The pitch of a sound is how high or low the sound is.</p> <p>Volume- the amount of sound and how loud it is.</p> <p>Vibrations- to cause to move back and forth very rapidly and steadily.</p> <p>Travel- to move from one place or position to another.</p> <p>Instrument- any of various devices for making music, such as a trumpet or piano.</p> <p>Echo- the repeating of a sound caused by the bouncing of sound waves from a surface.</p>	<p>How is sound made?</p> <p>How do we hear sounds?</p> <p>How are sounds produced?</p> <p>In which ways can we change the sound made by a musical instrument?</p> <p>How does sound travel?</p> <p>How can we measure sound?</p> <p>What is an echo and how is one created?</p>



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<p>To suggest how to change the loudness of the sounds produced by a range of musical instruments</p> <p>To recognise that sounds get fainter as the distance from the sound source increases</p> <p>To describe what they observe when they move further away from a source of sound</p> <p>To identify suitable materials to use for sound insulation</p> <p>To recognise that sound can be reflected from a surface which can cause an echo</p> <p>To describe how some animals use echo-location</p>	<p>labelled diagrams, keys, bar charts, and tables</p> <p>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>using straightforward scientific evidence to answer questions or to support their findings</p>		
<p style="text-align: center;"><b>Activities/Investigations</b></p> <p>Activities which show that sounds are made when objects vibrate and that sounds travel through solids, liquids and gases. They also look at the structure of the ear, how vibrations are heard as sounds and discuss echoes and how bats or dolphins use echolocation. Ideas are also provided for investigating how well sound travels through different materials, discovering how instruments make sounds and exploring how to change the pitch and loudness.</p> <p style="text-align: center;"><a href="https://www.stem.org.uk/resources/elibrary/resource/35351/sound-listen">https://www.stem.org.uk/resources/elibrary/resource/35351/sound-listen</a></p>			