

Science Year Planner Year 4

Term	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
Topic or Stand-Alone?	Stand-Alone <i>(Links to Music)</i>	Topic: Titanic <i>(Links to History - Morse Code)</i> 2 x SLDs	Stand-Alone	Stand-Alone 2 x SLDs	Topic: The Amazon
Enquiry Questions:	<i>How are sounds made?</i>	<i>How can you make a light bulb light up?</i>	<i>Why do we eat? How long is the digestive system?</i>	<i>Does temperature affect the rate of evaporation?</i>	<i>How are living things classified? What is the impact of deforestation?</i>
Science Knowledge NC Focus	Sound Unit	Electricity Unit	Animals Inc. Humans Unit	States of Matter Unit	Living Things and Habitats Unit
Working Scientifically NC Focus:	<ul style="list-style-type: none"> making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, identifying differences, similarities or changes related to simple scientific ideas and processes. 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them. setting up simple practical enquiries, comparative and fair tests. gathering, recording, and presenting data in a variety of ways to help in answering questions. 	<ul style="list-style-type: none"> making systematic and careful observations recording findings using simple scientific language, labelled diagrams, setting up simple practical enquiries, 	<ul style="list-style-type: none"> setting up simple practical enquiries, comparative and fair tests. making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. gathering, recording, and presenting data in a variety of ways to 	<ul style="list-style-type: none"> classifying and presenting data to help in answering questions. recording findings using simple scientific language, keys, reporting on findings from enquiries, written explanations, displays of results and conclusions.

		<ul style="list-style-type: none"> recording findings using simple scientific language, labelled diagrams, and tables. using results to draw simple conclusions, 		<p>help in answering questions.</p> <ul style="list-style-type: none"> recording findings using simple scientific language, drawings, bar charts, and tables. using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. identifying differences, similarities or changes related to simple scientific ideas and processes. using straightforward scientific evidence to answer questions or to support their findings. 	
Sequence of Lessons	<p><i>This is learnt through an additional non-fiction Shared Reading approach. Once the chn have covered a theme, they then carry it out practically in their Music lesson.</i></p> <p>L1 = How a sound is made. What a</p>	<p>Through 2 x SLD:</p> <p>1 = How do you make a light bulb light up? Investigate using electrical equipment.</p> <p>2 = Predict what this is? Give the chn a buzzer to add to their circuit.</p>	<p>L1 = Name and label the types of teeth in humans.</p> <p>L2 = Understand the simple functions of the different types of human teeth.</p> <p>L3 = Oral hygiene.</p>	<p>Through 2 x SLD:</p> <p>1 = Revisit: Definition of a material. Which of these are not materials?</p> <p>2 = Heating and cooling demonstrations.</p> <p>3 = Practical Investigation: What is the best temperature for melting</p>	<p>L1 = How are living things classified? Recognise that living things can be grouped in a variety of ways.</p> <p>L2 = Explore and use classification keys to help group, identify and name a variety of living</p>

	<p>vibration is and what sound waves are.</p> <p>L2 = How we hear. The journey of a sound wave into our ear. Learn scientific body parts within the ear. Touch on being deaf / Evelyn Glennie.</p> <p>L3 = Pitch – Low/High frequency</p> <p>L4 = Volume – How louder sounds carry more energy. Introduction to decibels for how we measure sounds.</p> <p>L5 = How distance can affect how we hear sounds.</p>	<p>3 = How does a switch work?</p> <p>4 = Identify common appliances that run on electricity. Why do we have switches? How can we save electricity? How does this help the environment?</p> <p>5 = Common conductors and insulators investigation. Do all materials conduct electricity?</p>	<p>L4 = Name and label the basic parts of the digestive system in humans. How long is the digestive system? Can they link in teeth knowledge from last week?</p> <p>L5 = Understand the functions of the basic parts of the digestive system.</p>	<p>chocolate? (Skill = Using a thermometer)</p> <p>4 = Theory based learning on States of Matter: Solids, Liquids + Gases. Draw on knowledge from parts 1-3 too.</p> <p>5 = Shared Reading Text – The Rhythm of the Rain to recap the Water Cycle. How does it link to States of Matter?</p> <p>6 = Evaporation – Practical experiments.</p> <p>7 = Condensation – Practical demonstrations.</p> <p>8 = Make their own mini water cycles to see the parts in action.</p> <p>9 = Practical Investigation: Does temperature affect the rate of evaporation? (Link in data loggers and statistics.)</p>	<p>things in our school meadow. (Record findings) and then in the classroom compare for the wider environment.</p> <p>L3 = What is the impact of deforestation? Recognise that environments can change and that this can sometimes pose dangers to living things. Link in with English Unit on Persuasive Letter Writing. (Display!)</p>
Vocabulary:	<p>sound vibrate/vibration sound waves ear hear / deaf volume – loud/soft</p>	<p>appliances electricity insulators conductors electrical circuit cell</p>	<p>canine molar pre-molar wisdom teeth incisor dental hygiene</p>	<p>material solid/solidify ice melt freeze liquid evaporate / evaporation condense / condensation</p>	<p>deforestation development population dangers environment</p>

	<p>faint/fainter loud/louder pitch – low/high energy insulate tuning fork pinna ear canal eardrum ossicles cochlear nerves brain</p> <p>observation measurement accurate scientific idea scientific process similarity differences</p>	<p>wire bulb buzzer switch danger Morse code</p> <p>question practical enquiry fair test comparative test gather record present data scientific language labelled diagram results table conclusion</p>	<p>plaque decay digestion tongue salvia oesophagus stomach small intestine large intestine rectum anus</p> <p>systematic observations scientific language labelled diagram practical enquiry demonstration</p>	<p>water cycle gas container changing state heated cooled water vapour</p> <p>syringe data logger standard unit of measure degrees Celsius °C thermometer systematic/careful observations practical enquiry fair test comparative test gather record present data tables bar charts conclusion prediction scientific idea scientific process differences similarities</p>	<p>flowering/ non- flowering mosses ferns grasses vertebrate invertebrate fish amphibians reptiles birds mammals</p> <p>classification key group present data results conclusions written explanation</p>
--	--	--	--	---	---

**Additional
Non-Fiction
Reading:**

