

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, including thermometers and data loggers. identifying differences, similarities or changes related to simple scientific 	<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, classifying and presenting data in a variety of ways to help in answering questions. recording findings 	<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, including thermometers and data loggers. recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. 	<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, classifying and presenting data in a 	<ul style="list-style-type: none"> gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. reporting on findings from enquiries, including oral and written explanations,

	ideas and processes.	<p>using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <ul style="list-style-type: none"> using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions 	<ul style="list-style-type: none"> setting up simple practical enquiries, comparative and fair tests. 	<p>variety of ways to help in answering questions.</p> <ul style="list-style-type: none"> recording findings using simple scientific language, drawings, labelled diagrams, keys, 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. 	displays er presentations of results and conclusions.
Sequence of Lessons	<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>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</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>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>L1 = How a sound is made. What a 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>add to their circuit.</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>L3 = Oral hygiene.</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>3 = Practical Investigation: What is the best temperature for melting 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>	
Vocabulary:	<p>sound</p> <p>vibrate/vibration</p> <p>sound waves</p>	<p>appliances</p> <p>electricity</p> <p>insulators</p>	<p>canine</p> <p>molar</p> <p>pre-molar</p>	<p>material</p> <p>solid/solidify</p> <p>ice melt freeze</p>	<p>deforestation</p> <p>development</p> <p>population</p>

	<p>ear hear / deaf volume – loud/soft 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>conductors electrical circuit cell 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>wisdom teeth incisor dental hygiene 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>liquid evaporate / evaporation condense / condensation 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>dangers environment 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>
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**Additional
Non-Fiction
Reading:**

