# ST PHILOMENA'S PRIMARY SCHOOL
# SCIENCE MEDIUM TERM PLANNING YEAR 4
# 2026 - 2027

| AUTUMN 1 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | LIVING THINGS AND THEIR HABITATS | | | | | |
| LESSON OUTLINE | Grouping Living Things | Classifying Vertebrates | Invertebrate Hunt | Classification Keys | Local Habitat Study | Environmental Changes |
| LEARNING OBJECTIVE | To sort living things into groups using observable features and justify choices. | To identify and classify vertebrates using shared characteristics. | To find, observe and classify invertebrates in the local environment. | To follow and construct classification keys to identify living things. | To survey a local habitat and record plants and animals systematically. | To explain how changes to environments may endanger living things. |
| CURRICULUM LINKS | NC: living things can be grouped in different ways.<br>WS: compare, observe and classify. | NC: group and identify living things.<br>WS: select relevant identifying features. | NC: identify local living things.<br>WS: observe, record and classify. | NC: explore and use classification keys.<br>WS: develop and check a key. | NC: identify living things in local habitats.<br>WS: field observations, tables and tallies. | NC: recognise environmental changes and dangers.<br>WS: use evidence to draw conclusions. |
| KEY KNOWLEDGE | • Living things may be sorted by observable characteristics.<br>• Vertebrates have a backbone; invertebrates do not.<br>• Classification keys use a sequence of choices to identify living things.<br>• Habitats can change through natural events and human activities, affecting survival. | | | | | |

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| AUTUMN 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | ANIMALS, INCLUDING HUMANS | | | | | |
| LESSON OUTLINE | The Digestive System | The Digestive Process | Human Teeth | Types of Teeth | Animal Teeth and Food Chains | How Humans Affect Food Chains |
| LEARNING OBJECTIVE | To name the main parts of the human digestive system and describe their functions. | To explain the journey of food through the digestive system. | To describe the purpose of teeth and how to care for them. | To identify incisors, canines, premolars and molars and explain their jobs. | To compare animal teeth and construct and interpret food chains. | To explain how human activity can alter food chains and affect organisms. |
| CURRICULUM LINKS | NC: digestive system and basic functions.<br>WS: labelled diagrams and explanations. | NC: simple functions of digestion.<br>WS: use models and scientific vocabulary. | NC: identify types of teeth and functions.<br>WS: observe and record findings. | NC: types of human teeth and their roles.<br>WS: classify and compare. | NC: construct food chains; producer, predator, prey.<br>WS: identify patterns. | NC: interpret food chains; changing habitats.<br>WS: explain using evidence. |
| KEY KNOWLEDGE | • Food passes through the mouth, oesophagus, stomach and intestines; each has a function.<br>• Incisors cut, canines tear, while premolars and molars crush and grind food.<br>• Food chains show who eats whom; arrows point towards the consumer.<br>• Producers provide food for consumers; changes to one population affect others. | | | | | |

# ST PHILOMENA'S PRIMARY SCHOOL
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| SPRING 1 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | ELECTRICITY | | | | | |
| LESSON OUTLINE | What Is Electricity? | Electrical Components | Complete and Incomplete Circuits | Electrical Conductors and Insulators | Switches | Making Electrical Devices |
| LEARNING OBJECTIVE | To identify everyday electrical appliances and recognise safe use of electricity. | To name and connect basic electrical components in a simple series circuit. | To predict and test when a bulb will light in a complete circuit. | To investigate materials that conduct or insulate electricity. | To explain and test how a switch opens and closes an electrical circuit. | To plan, build and evaluate a simple electrical device with a working circuit. |
| CURRICULUM LINKS | NC: common electricity-powered appliances.<br>WS: group, compare and explain. | NC: series circuits - cells, wires, bulbs, buzzers.<br>WS: construct and observe. | NC: lamp lights in a complete loop with a cell.<br>WS: predict and test. | NC: common conductors and insulators; metals.<br>WS: comparative tests. | NC: switches open and close a circuit.<br>WS: investigate and record. | NC: construct a simple series circuit.<br>WS: plan, test and improve. |
| KEY KNOWLEDGE | • Electrical appliances require an energy source; electricity must be used safely.<br>• A simple series circuit needs a complete loop for a bulb or buzzer to work.<br>• Conductors allow electricity to pass; insulators resist its passage.<br>• A switch makes or breaks the circuit and controls whether a component operates. | | | | | |

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# 2026 - 2027

| SPRING 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | STATES OF MATTER | | | | | |
| LESSON OUTLINE | The State of Things | I'm Melting | Melting Chocolate Investigation | Melting Metals | Rates of Evaporation | The Water Cycle |
| LEARNING OBJECTIVE | To compare and classify materials as solids, liquids or gases. | To describe how heating and cooling can cause materials to change state. | To investigate how temperature affects the melting of chocolate. | To research and compare the melting temperatures of different metals. | To investigate how temperature affects the rate of evaporation. | To explain evaporation and condensation within the water cycle. |
| CURRICULUM LINKS | NC: group materials as solids, liquids or gases.<br>WS: compare and classify. | NC: observe changes of state when heated or cooled.<br>WS: measure in °C. | NC: temperature and changes of state.<br>WS: comparative test; record °C. | NC: research temperatures at which state changes.<br>WS: use secondary sources. | NC: evaporation rate linked to temperature.<br>WS: fair test, measure and graph. | NC: evaporation and condensation in water cycle.<br>WS: models and explanations. |
| KEY KNOWLEDGE | • Solids keep their shape; liquids flow and take a container's shape; gases spread to fill space.<br>• Heating and cooling may cause melting, freezing, evaporation or condensation.<br>• Different substances change state at different temperatures, measured in °C.<br>• Evaporation and condensation form important stages of the water cycle. | | | | | |

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| SUMMER 1 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | SOUND | | | | | |
| LESSON OUTLINE | How Are Sounds Made? | Sound in Solids, Liquids and Gases | Volume, Vibrations and Sound Waves | Changing Pitch | Sound Over Distance | Sound Insulation |
| LEARNING OBJECTIVE | To identify vibrating objects as the source of different sounds. | To explain how sound vibrations travel through solids, liquids and gases. | To investigate the relationship between vibration strength and volume. | To find patterns in pitch when features of a sound source are changed. | To investigate how sound becomes fainter as distance increases. | To compare materials for reducing sound and explain test results. |
| CURRICULUM LINKS | NC: sound is linked to vibration.<br>WS: observe and explain. | NC: vibrations travel through a medium to the ear.<br>WS: compare and model. | NC: link volume to strength of vibrations.<br>WS: investigate patterns. | NC: pitch depends on features of the source.<br>WS: test and record patterns. | NC: sound gets fainter with greater distance.<br>WS: measure and graph. | NC: vibration and sound transmission (apply).<br>WS: comparative fair test. |
| KEY KNOWLEDGE | • Sound is produced by vibrations and reaches the ear through a medium.<br>• Stronger vibrations usually produce louder sounds; pitch is different from volume.<br>• Pitch is related to features of a sound source, such as length or tension.<br>• Sound becomes quieter farther from its source; some materials reduce transmission. | | | | | |

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| SUMMER 2 | WEEK 1 | WEEK 2 | WEEK 3 | WEEK 4 | WEEK 5 | WEEK 6 |
|---|---|---|---|---|---|---|
| UNIT | REDUCE, REUSE, RECYCLE · ENRICHMENT | | | | | |
| LESSON OUTLINE | Waste and the 3Rs | The Atmosphere, Waste and Pollution | Sustainable Plant Pots | Water Waste | Recycling Waste | Sustainability Outdoors |
| LEARNING OBJECTIVE | To describe types of waste and explain the benefits of reducing, reusing and recycling. | To explain how pollution and waste may damage air, water and habitats. | To compare materials and design a reusable or biodegradable plant pot. | To investigate where water is wasted and propose ways to conserve it. | To investigate how different materials can be sorted and recycled. | To complete a local environmental enquiry and present evidence-based actions. |
| CURRICULUM LINKS | NC link: environmental change and living things.<br>WS: classify waste. | NC link: human impacts on environments.<br>WS: research and explain. | NC link: materials and habitats.<br>WS: compare, test and record. | NC link: environmental responsibility.<br>WS: collect and interpret data. | NC link: properties of materials (recap).<br>WS: classify and test. | NC link: environmental change and local habitats.<br>WS: observe, report, conclude. |
| KEY KNOWLEDGE | • Reducing, reusing and recycling can help conserve resources and reduce waste.<br>• Pollution and habitat changes can put living things at risk.<br>• Materials have different properties and can be reused or recycled in different ways.<br>• Scientific evidence can help us propose practical action to protect our environment. | | | | | |