

## Y3/4 Science Cycle A

### Scientific Enquiry

SE1: Raise their own relevant questions about the world around them.

SE2: Should be given a range of scientific experiences including different types of science enquires to answer questions.

SE3: Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions.

SE4: Set up simple practical enquires, comparative and fair tests

SE5: Recognise when a simple fair test is necessary and help to decide how to set it up.

SE6: Talk about criteria for grouping, sorting and classifying; and use simple keys.

SE7: Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.

SE8: Make systematic and careful observations

SE9: Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.

SE10: Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.

SE11: Take accurate measurements using standard units

SE12: Learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately.

SE13: Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data.

SE14: With help, pupils should look for changes, patterns, similarities, and differences in their data in order to draw simple conclusions and answer questions.

SE15: Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations or results and conclusions.

SE16: With support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.

Physics	<p><b>Light</b>  P1: Recognise that they need light in order to see things and that dark is the absence of light.  P2: Notice that light is reflected from surfaces.  P3: Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.  P4: Recognise that shadows are formed when the light from a light source is blocked by a solid object.  P5: Find patterns in the way that the size of shadows change.</p> <p><b>Electricity</b>  P6: Identify common appliances that run on electricity.  P7: Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.  P8: Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.  P9: Recognise some common conductors and insulators, and associate metals with being good conductors.  P10: Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p>
Chemistry	<p><b>States of matter</b>  C1: Compare and group materials together, according to whether they are solids, liquids or gases.  C2: Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).  C3: Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>
Biology	<p><b>Plants</b>  P1: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.  P2: Investigate the way in which water is transported within plants.  P3: Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p><b>Animals Including Humans</b>  P4: Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.  P5: Identify that humans and some other animals have skeletons and muscles for support, protection and movement.  P6: Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p><b>Living Things and their habitats</b>  P7: Recognise that living things can be grouped in a variety of ways.</p>