

## Y3/4 Science Cycle B

### 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>Forces &amp; magnets</b>  Compare how things move on different surfaces (i.e. friction).  Notice that some forces need contact between two objects, but magnetic forces can act at a distance.  Observe how magnets attract or repel each other and attract some materials and not others.  Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.  Describe magnets as having two poles.  Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> <p><b>Sound</b>  Identify how sounds are made, (i.e. sound sources) associating some of them with something vibrating.  Recognise that vibrations from sounds travel through a medium to the ear.  Recognise that sounds get fainter as the distance from the sound source increases.  Find patterns between the pitch of a sound and features of the object that produced it.  Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p>
Chemistry	<p><b>Rocks</b>  Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.  Recognise that soils are made from rocks and organic matter.  Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p>
Biology	<p><b>Plants</b>  Explore the requirements of plants for life and growth (<b>air, light, water, nutrients from soil, and room to grow</b>) and how they vary from plant to plant.</p> <p><b>Living Things and their Habitats</b>  Recognise that living things can be grouped in a variety of ways  Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.  Recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p><b>Animals and including Humans</b>  Describe the simple functions of the basic parts of the digestive system in humans.  Identify the different types of teeth in humans and their simple functions.</p>