

## Science Progression Grid Class 4- 5

### Cycle 2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Electricity (4)</b>  Focusing on electrical circuits.	<b>States of Matter (4)</b>  Focusing on how the water cycle works.	<b>Animals including Humans</b>  Focusing on digestion.	<b>Earth and Space (5)</b>  Focusing on seasons as well as day and night.	<b>Properties of materials (5)</b>  Focusing on experimenting with different liquids and solids.	<b>Living things and their habitats (5)</b>  Focusing on life processes.
<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• identify common appliances that run on electricity;</li> <li>• describe the differences between mains and battery power.</li> <li>• construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers;</li> <li>• 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;</li> </ul> <p><b>FOCUS</b></p>	<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• compare and group materials together, according to whether they are solids, liquids or gases;</li> <li>• 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);</li> </ul> <p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>• identify the part played by <b>evaporation and condensation in the water cycle</b> and associate the rate of evaporation with <b>temperature</b>.</li> </ul>	<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• Identify the different types of teeth in humans and their simple functions.</li> <li>• To understand how to keep teeth healthy.</li> <li>• Construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul> <p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>• demonstrate and explain the <b>process of digestion</b>.</li> <li>• describe the simple <b>functions of the basic parts of the digestive system in humans</b></li> </ul>	<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• name the planets in order.</li> <li>• describe the movement of the Earth and other planets relative to the Sun in the solar system;</li> <li>• describe the movement of the Moon relative to the Earth;</li> </ul> <p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>• describe the Sun, Earth and Moon as approximately <b>spherical bodies;(orbit, rotates, axis)</b></li> <li>• use the idea of the Earth’s <b>rotation</b> to explain day and night and the apparent movement of the sun across the sky.</li> </ul>	<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets;</li> <li>• give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic;</li> <li>• explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</li> </ul>	<p>What do we want children to know and remember? (Knowledge, skills and vocab – vocabulary is shown in bold, minimum learning highlighted in yellow)</p> <p><b>RECAP</b></p> <ul style="list-style-type: none"> <li>• to describe the life cycle of different mammals</li> <li>• describe the differences in the life cycles of a mammal and a bird (hatch, eggs, nest, frogspawn)</li> </ul> <p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>• describe the differences in the life <b>cycles</b> of an <b>amphibian</b> and an insect by exploring complete and incomplete <b>metamorphosis</b>.</li> <li>• describe the life process of <b>reproduction in some plants and animals</b>.</li> </ul>

<ul style="list-style-type: none"> <li>• recognise that a <b>switch</b> opens and closes a circuit and associate this with whether or not a lamp lights in a simple series <b>circuit</b>;</li> <li>• recognise some common <b>conductors</b> and <b>insulators</b>, and associate metals with being good conductors.</li> </ul>				<p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>• know that some materials will <b>dissolve</b> in liquid to form a solution, and describe how to recover a substance from a <b>solution</b>;</li> <li>• use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through <b>filtering, sieving</b> and <b>evaporating</b>;</li> <li>• demonstrate that dissolving, mixing and changes of state are <b>reversible</b> changes; (irreversible, permanent)</li> </ul>	
<p>Last lesson of each half term is about the Scientist named below, children to investigate the scientist and why they are famous. Children to know how scientists work by making observations, asking questions and carrying out experiments.</p>					
<p><b>Scientist focus:</b> <b>Benjamin Franklin</b></p>	<p><b>Scientist focus:</b> <b>John Dalton</b></p>	<p><b>Scientist focus:</b> <b>William Beaumont</b></p>	<p><b>Scientist focus:</b> <b>Nicolaus Copernicus</b></p>	<p><b>Scientist focus:</b> <b>Albert Einstein</b></p>	<p><b>Scientist focus:</b> <b>Louis Pasteur</b></p>