

Science Knowledge and Skills Overview

Class 3

Year B

	Autumn 1 Plants – life cycles	Autumn 2 Rocks	Spring 1 Forces and Magnets	Spring 2 Sound	Summer 1 Electricity	Summer 2 Nature and the Environment
Knowledge	<ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</li> <li>Investigate the way in which water is transported within plants</li> <li>Explore the part that flowers play in the life cycle of flowering</li> </ul>	<ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>Recognise that soils are made from rocks and organic matter</li> </ul>	<ul style="list-style-type: none"> <li>Compare how things move on different surfaces</li> <li>Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</li> <li>Observe how magnets attract or repel each other and attract some materials and not others</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Identify how sounds are made, associating some of them with something vibrating</li> <li>Recognise that vibrations from sounds travel through a medium to the ear</li> <li>Find patterns between the pitch of a sound and features of the object that produced it</li> <li>Find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>Recognise that sounds get fainter as the distance from</li> </ul>	<ul style="list-style-type: none"> <li>Identify common appliances that run on electricity</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> <li>Recognise that a switch opens and closes a circuit and</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that living things can be grouped in a variety of ways</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> <li>Recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul>

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	plants, including pollination, seed formation and seed dispersal		<ul style="list-style-type: none"> <li>Describe magnets as having 2 poles</li> <li>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</li> </ul>	the sound source increases	associate this with whether or not a lamp lights in a simple series circuit <ul style="list-style-type: none"> <li>Recognise some common conductors and insulators, and associate metals with being good conductor</li> </ul>	
Skills	<ul style="list-style-type: none"> <li>Ask relevant questions and using different types of scientific enquiries to answer them</li> <li>Set up simple practical enquiries, comparative and fair tests</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Gather, record, classify and present data in a variety of ways to help in answering questions</li> <li>Record findings using simple scientific language, drawings, labelled diagrams, keys,</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant questions and using different types of scientific enquiries to answer them</li> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant questions and using different types of scientific enquiries to answer them</li> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers</li> </ul>

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		<p>bar charts, and tables</p> <ul style="list-style-type: none"><li>• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li></ul>	<p>and data loggers</p> <ul style="list-style-type: none"><li>• Gather, record, classify and present data in a variety of ways to help in answering questions</li><li>• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li><li>• Identify differences, similarities or changes related to simple scientific ideas and processes</li><li>• Use straightforward scientific evidence to answer questions or to</li></ul>	<p>of results and conclusions</p> <ul style="list-style-type: none"><li>• Identify differences, similarities or changes related to simple scientific ideas and processes</li><li>• Use straightforward scientific evidence to answer questions or to support their findings</li></ul>	<p>of results and conclusions</p> <ul style="list-style-type: none"><li>• Identify differences, similarities or changes related to simple scientific ideas and processes</li></ul>	<p>and data loggers</p> <ul style="list-style-type: none"><li>• Gather, record, classify and present data in a variety of ways to help in answering questions</li><li>• Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li><li>• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li><li>• Identify differences, similarities or changes related to simple</li></ul>
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			support their findings.			<p>scientific ideas and processes</p> <ul style="list-style-type: none"> <li>Use straightforward scientific evidence to answer questions or to support their findings</li> </ul>
Vocabulary	<p>Transpiration, Photosynthesis, Carbon Dioxide, Pollination, Dispersal, Xylem, Phloem, Glucose, Nutrients, Transport, Root, Petal, Anther, Filament, Stigma</p>	<p>Metamorphic, Igneous, Sedimentary, Soil, Weathering, Acid rain, Fossil, Mineral, Physical, Biological, Chemical, Tectonic plates, Mountain</p>	<p>Lodestone, Horseshoe, Bar, Attract, Repel, Compass, Magnetic needle, Pendulum, Aluminium, Copper,</p>	<p>Vibration, Speed of sound, Soundproof, Sound wave, Frequency, Decibel, Eardrum, Pitch, Hertz, Perforated, Noise</p>	<p>Series circuit, Circuit diagram, Parallel circuit, Conductor, Insulator, Loop, Switch, Resistance, Bulb, Cell, Renewable, Electricity, Solar, Power</p>	<p>Ecology, Interdependent, Ecosystem, Environment, Pollute, Chemical, Habitat, Emission, Manufacture, Hazardous, Waste, Radioactive, Renewable, Deforestation</p>

Key Vocabulary