

Science

TM= Teaching Methodology

AO= Assessment Opportunity

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1		<p>Plants</p> <ul style="list-style-type: none"> ▪ Identify common and wild garden plant, including deciduous and evergreen. ▪ Basic structure of flowers and trees. <p>TM: Forest learning, group work</p> <p>AO: book look with attainment level stickers science book with samples of flora/fauna, garden project book</p>	<p>Plants</p> <ul style="list-style-type: none"> ▪ Life process of seeds and bulbs ▪ Conditions for growing plants <p>TM: forest learning, home growing project, group project: growing plants in different environments (e.g. cress)</p> <p>AO: photographs and stuck in books.</p>	<p>Forces and Magnets</p> <ul style="list-style-type: none"> ▪ Movement of objects on different surfaces ▪ Magnetic forces ▪ Attraction and repelling with magnet and other materials. <p>TM: practical lessons on different materials and impact of magnetic forces.</p> <p>AO: worksheet on different materials and identifying attraction and repelling.</p>	<p>States of Matter:</p> <ul style="list-style-type: none"> ▪ Solid, liquid, gas grouping ▪ Effect of temperature ▪ Water cycle: evaporation and condensation <p>TM: practical demonstration on temperature effect linking to water cycle: freezing, melting.</p> <p>AO: drawing and labelling water cycle. Worksheet grouping solids, liquids and gases – changes between these states: ie. Ice to water to water vapour</p>	<p>Living Things and Their Habitats:</p> <ul style="list-style-type: none"> ▪ Life cycles of different types of animals ▪ Life process of reproduction in plants and animals <p>TM: carousel on life cycles and which animal they belong to. Teacher presentation on reproduction in plants and animals.</p> <p>AO: worksheet matching life cycles, including reproduction, and animals.</p>	<p>Light</p> <ul style="list-style-type: none"> ▪ Light and relationship with eye ▪ Understand light travels in straight line <p>TM: worksheet on parts of eye and interaction with light in order to see.</p> <p>AO: labelling diagram on parts of an eye.</p>
Autumn 2		Animals and	Use of Everyday	Forces and Magnets	Living Things and	Earth & Space	Electricity

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		<p>Humans</p> <ul style="list-style-type: none"> Identify different types of animal: reptile, amphibian, fish, bird, mammals. <p>TM: forest learning, carousel of animals to be labelled and stuck in books</p> <p>AO: book look with attainment level stickers, animal project book</p>	<p>Materials</p> <ul style="list-style-type: none"> Identify different materials and their suitability for particular uses. Changing the shape of solid objects (twisting, bending etc.) <p>TM: carousel of different solid objects, some which can be changed, other which cannot.</p> <p>AO: worksheet as summative assessment at end</p>	<ul style="list-style-type: none"> Identifying and grouping everyday materials based on their attraction to magnets Magnetic poles <p>TM: practical activity investigating what is and isn't magnetic.</p> <p>AO: mix and match worksheet identifying magnetic materials</p>	<p>Their Habitats:</p> <ul style="list-style-type: none"> Grouping/classification of living things. Classification in local and wider environments Changes in environment and dangers posed. <p>TM: forest learning – trips to different types of local environment. Carousel – classification of living things.</p> <p>AO: worksheet on classification, labelling different groups.</p>	<ul style="list-style-type: none"> Movement of Earth and other planets in solar system Movement of moon Understanding reason behind night and day, as well as seasons. <p>TM: teacher presentation, sorting exercise with planets – putting them in order of solar system.</p> <p>AO: mix and match exercise with planets – labelling attributes and properties.</p>	<ul style="list-style-type: none"> Understanding circuits, voltage, amps. Recognising symbols used in a circuit diagram. <p>TM: pair work on making different types of circuits, with a voltmeter and other components.</p> <p>AO: mix and match worksheet linking symbols with component names. Testing whether pupil circuits work without teacher instruction.</p>
Spring 1		<p>Everyday Materials</p> <ul style="list-style-type: none"> Simple properties of 	<p>Animals and Humans</p> <ul style="list-style-type: none"> Basic needs of 	<p>Light</p> <ul style="list-style-type: none"> Effect of light and absence of 	<p>Animals and Humans</p> <ul style="list-style-type: none"> Basic parts of 	<p>States of Matter</p> <ul style="list-style-type: none"> Properties of materials 	<p>Evolution and inheritance</p> <ul style="list-style-type: none"> Animals/pl

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	<p>everyday objects</p> <ul style="list-style-type: none"> Group objects based on physical properties <p>TM: carousel of sample materials/resources to be labelled and stuck in books</p> <p>AO: book look with attainment level stickers</p>	<p>animals and humans.</p> <ul style="list-style-type: none"> Identifying offspring of humans and animals. <p>TM: whole group pair work, match up exercise</p> <p>AO: mix and match worksheet: pair up offspring to animal</p>	<p>light</p> <ul style="list-style-type: none"> Reflection of light Effect of sunlight Shadows <p>TM: practical learning – demonstrating how shadows work, teacher presentations on sunlight.</p> <p>AO: mix and match worksheet on different types of shadows</p>	<p>human digestive system</p> <ul style="list-style-type: none"> Human types of teeth and functions Food chains, identifying prey and predators. <p>TM: teacher presentations followed by worksheets labelling different parts of mouth and digestive track. Carousel activity based on more complex food chains and identifying different groups in food chains, i.e predator</p> <p>AO: writing a summary report on different functions of teeth and digestive system. Mix and match worksheet on complex food chains.</p>	<ul style="list-style-type: none"> Knowledge of solids, liquids, gases Uses of everyday materials <p>TM: carousel of different materials and their state.</p> <p>AO: worksheet identifying characteristics of everyday materials and their state.</p>	<p>ants and their adaptation to the environment.</p> <p>TM: carousel on linking different animals and different environments.</p> <p>AO: worksheet on which animals are best suited to an environment – labelling parts of body which have helped animal to adapt.</p>
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<p>Spring 2</p>		<p>Animals and Humans</p> <ul style="list-style-type: none"> Common types of animals: herbivores, carnivores, omnivores Structure of different types of animals <p>TM: carousel/grouping activity</p> <p>AO: book look with attainment level stickers</p>	<p>Animals and Humans</p> <p>Importance of exercise, diet and hygiene for humans.</p> <p>TM: link with PE and Food Technology. Cooking activity (emphasis on hygiene) and P.E lessons demonstrating effects of exercise.</p> <p>AO: photographs for food tech, teacher assessment of P.E and classes</p>	<p>Rocks</p> <ul style="list-style-type: none"> Grouping of rocks based on physical appearance and properties Formation of fossils Composition of soils <p>TM: carousel on grouping/identifying different types of rocks. Forest learning – identifying different types of soils.</p> <p>AO: worksheet on grouping rocks and soils together.</p>	<p>Electricity</p> <ul style="list-style-type: none"> Electrical appliances Simple series circuits – naming parts of a circuit Understanding relation of lamp in series circuits <p>TM: pair work – creating a simple series circuit changing order of components</p> <p>AO: worksheet on labelling different parts of a circuit. Practical test on whether they can make a lamp work in a simple series circuit.</p>	<p>States of Matter</p> <ul style="list-style-type: none"> Understand process of mixing, dissolving and other changes of states. <p>TM: link to cooking classes, which demonstrate states of changes.</p> <p>AO: photographs of cooking process, mix and match with definitions and scientific terms.</p>	<p>Living things and their habitats</p> <ul style="list-style-type: none"> Classification of animals and plants <p>TM: carousel on sorting animals and plants into categories.</p> <p>AO: worksheet on classification – sorting animals into categories and brief summaries on different categories.</p>
<p>Summer 1</p>		<p>Materials</p> <p>Distinguish between object and material it is made of.</p> <p>Identify everyday</p>	<p>Living things and their habitats</p> <p>Differences between living and dead things, and things that have</p>	<p>Plants</p> <ul style="list-style-type: none"> Functions of parts of a flower Requirements for plants to live and grow 	<p>Electricity</p> <ul style="list-style-type: none"> Understanding role of switches in a circuit Conductors and 	<p>Animals and Humans</p> <ul style="list-style-type: none"> Changes as humans develop to old age. <p>TM: sorting images of humans as they age in</p>	<ul style="list-style-type: none"> The circulatory system Healthy lifestyles: impact of diet,

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		<p>materials</p> <p>TM: blindfolded sensory carousel</p> <p>AO: book look with attainment level stickers, mix and match worksheet in books</p>	<p>never been alive.</p> <p>Different types of habitats</p> <p>TM: forest learning,</p> <p>AO: mix and match worksheet – identify suitable habitats for different animals, humans, things</p>	<ul style="list-style-type: none"> ▪ Transportation of water in plants ▪ Life cycle of plants and role in pollination. <p>TM: forest learning – looking at structure of a flower. Teacher presentation on life cycle. Group project on different conditions and effect on plants.</p> <p>AO: small report on effects on different conditions for plants. Worksheet labelling parts of a flower.</p>	<p>insulators</p> <p>TM: pair work incorporating switches into a circuit. Carousel on grouping conductors and insulators.</p> <p>AO: mix and match worksheet identifying conductors and insulators.</p>	<p>the life cycle.</p> <p>AO: write a short summary on life cycle of a human.</p>	<p>exercise, drugs.</p> <p>TM: link with PE classes. Effect of exercise on breathing. Food technology lessons on healthy eating. Resource lessons with “fake” drug kit.</p> <p>AO: pupils write a report on best healthy living lifestyle, teacher assessment for PE and food tech classes.</p>
<p>Summer 2</p>		<p>Animals and Humans</p> <p>Identify, name, draw and label parts</p>	<p>Living Things and their Habitats</p> <p>Microhabitats</p> <p>Identify plants and</p>	<p>Animals and Humans</p> <p>Importance of nutrition and right</p>	<p>Sound</p> <ul style="list-style-type: none"> ▪ Vibrations and reception by ear ▪ Patterns in pitch of a sound 	<p>Forces</p> <ul style="list-style-type: none"> ▪ Gravity and its impact ▪ Effects of water/air resistance and 	<p>Working scientifically</p>

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	<p>of body and senses.</p> <p>TM: worksheet to be labelled and written up.</p> <p>AO: book look with attainment level stickers</p>	<p>animals suited to certain types of habitats</p> <p>Simple food chain – identify food sources</p> <p>TM: link to art classes – constructing a simple food chain and more complex food chains</p> <p>AO: cut out and arrange food chains in workbook.</p>	<p>type of nutrition.</p> <p>TM: link to food technology classes. Cooking practice and lessons on different food groups.</p> <p>AO: food group wheel – identifying and sorting different foods into their respective food groups.</p>	<ul style="list-style-type: none"> ▪ Relationship of volume and distance on sound and vibrations. <p>TM: link with music classes. Using different types of instrument to hear pitch.</p> <p>AO: worksheet on parts of an ear, labelling and identifying.</p>	<p>friction.</p> <ul style="list-style-type: none"> ▪ Forces exerted in mechanisms and pulleys. <p>TM: practical demonstration with how different objects are affected by gravity (i.e balloon, pencil, ball etc) use of newton metres to demonstrate forces. Link with PE classes about push and pull.</p> <p>AO: teacher assessment of PE classes, ranking the speed of different falling objects.</p>	
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Working Scientifically :

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ning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
ing measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
rding data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
g test results to make predictions to set up further comparative and fair tests
orting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and
ten forms such as displays and other presentations

identifying scientific evidence that has been used to support or refute ideas or arguments