

Overview with curriculum Links

Cycle B	Coverage	Main NC Links	Why?
LKS2			
Autumn Term	Term 1 – Electricity	<ul style="list-style-type: none"> ♣ Identify common appliances that run on electricity ♣ Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers ♣ 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 ♣ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit ♣ Recognise some common conductors and insulators, and associate metals with being good conductors. 	<p>Electricity is not a specific topic in KS1 but in the toys topic children may have looked at what items use electricity.</p> <p>Future learning – Upper key stage 2 - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.</p>
	Term 2 – Living things and their habitats	<ul style="list-style-type: none"> ♣ 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>Year one – children identify and describe the structure of common flowering plants.</p> <p>Year two – children explore and compare the differences between things that are living, dead and things that have never been alive and describe how living things depend on their habitats to survive.</p> <p>Future learning – Upper key stage 2 - Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird and describe the life process of reproduction in some plants and animals and describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.</p>
Spring Term	Term 3 – States of matter	<ul style="list-style-type: none"> ♣ Compare and group materials together, according to whether they are solids, liquids or gases ♣ 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) ♣ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<p>Year one – children distinguish between an object and the material from which it is made and describe some physical properties of some simple everyday materials.</p> <p>Year two – children find out how materials can be changed by squashing, bending, twisting etc and compare the suitability of everyday materials for particular uses.</p>

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			<p>Future learning – Upper key stage 2 - Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution and demonstrate that dissolving, mixing and changes of state are reversible changes</p>
	Term 4 – Sound	<ul style="list-style-type: none"> ♣ Identify how sounds are made, associating some of them with something vibrating ♣ Recognise that vibrations from sounds travel through a medium to the ear ♣ 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 ♣ Recognise that sounds get fainter as the distance from the sound source increases. 	<p>Sound is not a specific topic in KS1 but in Music, children will have listened to different types of Music and create their own sounds.</p> <p>Future learning – Upper key stage 2 – sound is done again through Music lessons.</p>
Summer Term	Term 5 and 6 – Animals including humans	<ul style="list-style-type: none"> ♣ 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 ♣ Construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Year one – children identify and name common animals and identify and name basic parts of the human body and say which part of the body is associated with which sense.</p> <p>Year two – children learn about the basic needs of animals, including humans and describe the importance of humans having the right amount of food and exercise.</p> <p>Future learning – Upper key stage 2 - describe the changes as humans develop to old age. Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood and recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p>
UKS2			
Autumn Term	Term 1 and 2 – Earth and Space	<ul style="list-style-type: none"> ♣ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system ♣ Describe the movement of the Moon relative to the Earth ♣ Describe the Sun, Earth and Moon as approximately spherical bodies 	<p>Lower key stage 2 (cycle A) - Notice that light is reflected from surfaces, recognise that shadows are formed when the light from a light source is blocked by an opaque object and find patterns in the way that the size of shadows change.</p>

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		<ul style="list-style-type: none"> ♣ Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	
Spring Term	Term 3 – Properties and changes of materials	<ul style="list-style-type: none"> ♣ 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 ♣ Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution ♣ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating ♣ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic ♣ Demonstrate that dissolving, mixing and changes of state are reversible changes ♣ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including 	<p>Lower key stage 2 (cycle B) - compare and group materials together, according to whether they are solids, liquids or gases and 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).</p>
	Term 4 – Living things and their habitats	<ul style="list-style-type: none"> ♣ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird ♣ Describe the life process of reproduction in some plants and animals. 	<p>Lower key stage 2 (cycle A) - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>Lower key stage 2 (cycle B) - recognise that living things can be grouped in a variety of ways and explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p>
Summer Term	Term 5 – Animals including humans	<ul style="list-style-type: none"> ♣ describe the changes as humans develop to old age. 	<p>Lower key stage 2 (cycle A) - 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.</p> <p>Lower key stage 2 (cycle B) - recognise that living things can be grouped in a variety of ways and construct and interpret a variety of food chains, identifying producers, predators and prey.</p>

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	Term 6 – Forces	<ul style="list-style-type: none"> ♣ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object ♣ Identify the effects of air resistance, water resistance and friction, that act between moving surfaces ♣ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<p>Lower key stage 2 (cycle A) - compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance and observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Lower key stage 2 (cycle B) - compare and group materials together, according to whether they are solids, liquids or gases.</p>
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During **years 3 and 4**, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- ♣ Asking relevant questions and using different types of scientific enquiries to answer them
- ♣ Setting up simple practical enquiries, comparative and fair tests
- ♣ Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- ♣ Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- ♣ Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- ♣ Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- ♣ Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- ♣ Identifying differences, similarities or changes related to simple scientific ideas and processes
- ♣ Using straightforward scientific evidence to answer questions or to support their findings.

During **years 5 and 6**, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- ♣ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- ♣ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- ♣ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- ♣ Using test results to make predictions to set up further comparative and fair tests
- ♣ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- ♣ Identifying scientific evidence that has been used to support or refute ideas or arguments.