

Overview with curriculum Links

Cycle A	Coverage	Main NC Links	Why?
LKS2			
Autumn Term	Term 1 – Animals including humans	<ul style="list-style-type: none"> ♣ 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 ♣ Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<p>Year one – children looked at how to group animals including based on their diet.</p> <p>Year two – Children studied animals and their offspring and the basic needs that animals need to survive.</p> <p>Future learning –</p> <p>Upper key stage 2 - recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function and describe the ways in which nutrients and water are transported within animals, including humans. Describe the changes as humans develop to old age.</p>
	Term 2 - Light	<ul style="list-style-type: none"> ♣ Recognise that they need light in order to see things and that dark is the absence of light ♣ Notice that light is reflected from surfaces ♣ Recognise that light from the sun can be dangerous and that there are ways to protect their eyes ♣ Recognise that shadows are formed when the light from a light source is blocked by an opaque object ♣ Find patterns in the way that the size of shadows change. 	<p>Year one – children describe simple physical properties of a variety of everyday materials</p> <p>Year two – children identify and compare the suitability of everyday materials and find out how the shapes of solid objects can be changed by squashing, bending etc.</p> <p>Future learning -</p> <p>Upper key stage 2 - recognise that light appears to travel in straight lines and use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p>
Spring Term	Term 3 – Plants	<ul style="list-style-type: none"> ♣ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers ♣ 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 ♣ Investigate the way in which water is transported within plants 	<p>Year one – children identify and name common wild and garden plants and can describe the basic structure of common flowering plants.</p> <p>Year two – children observe and describe how seeds and bulbs grow into mature plants and find out what plants need to grow to stay healthy.</p>

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		<ul style="list-style-type: none"> ♣ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 	<p>Future learning – Upper key stage 2 - Give reasons for classifying plants and animals based on specific characteristics and describe the life process of reproduction in some plants and animals.</p>
	Term 4 – Rocks	<ul style="list-style-type: none"> ♣ Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties ♣ Describe in simple terms how fossils are formed when things that have lived are trapped within rock ♣ Recognise that soils are made from rocks and organic matter. 	<p>Year one – children distinguish between objects that are man – made and describe simple properties of everyday materials. Year two – children identify and compare the suitability of a variety of everyday materials for particular uses. Future learning – Upper key stage 2 - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p>
Summer Term	Term 5 and 6 – Forces and magnets	<ul style="list-style-type: none"> ♣ Compare how things move on different surfaces ♣ 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>Year one – children describe the simple physical properties of a variety of everyday materials and compare and group together materials based on their physical properties. Year two – children identify and compare the suitability of a variety of everyday materials and how some materials can be changed for example bending, squashing etc. Future learning – Upper key stage 2 - explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object and identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p>
UKS2			
Autumn Term	Term 1 and 2 – Evolution and inheritance	<ul style="list-style-type: none"> ♣ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago 	<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</p>

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		<ul style="list-style-type: none"> ♣ Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents ♣ Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	<p>nutrition from what they eat and identify that humans and some other animals have skeletons and muscles for support, protection and movement. Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Lower key stage 2 (cycle B) - recognise that environments can change and that this can sometimes pose dangers to living things.</p>
Spring Term	Term 3 – Living things and their habitats	<ul style="list-style-type: none"> ♣ 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 ♣ Give reasons for classifying plants and animals based on specific characteristics. 	<p>Lower key stage 2 (cycle A) – identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers and explore the requirements of plants for life and growth</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>
	Term 4 – Animals including humans	<ul style="list-style-type: none"> ♣ Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ♣ Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function ♣ Describe the ways in which nutrients and water are transported within animals, including humans. 	<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 and identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Lower key stage 2 (cycle B) - describe the simple functions of the basic parts of the digestive system in humans and identify the different types of teeth in humans and their simple functions</p>
Summer Term	Term 5 – Light	<ul style="list-style-type: none"> ♣ Recognise that light appears to travel in straight lines ♣ Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye 	<p>Lower key stage 2 (cycle A) – recognise that they need light in order to see things and that dark is the absence of light and notice that light is reflected from surfaces.</p>

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		<ul style="list-style-type: none"> ♣ Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes ♣ Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	
	Term 6 – Electricity	<ul style="list-style-type: none"> ♣ 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. 	Lower key stage 2 (cycle B) - 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 and 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

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.