



Science LTM 2021-2022

(changes in light of COVID 19 closures)

Plants

Animals Including Humans

Materials

Seasonal Changes

Living Things and Their Habitats

Rocks

Light

Forces and Magnets

States of Matter

Sound

Electricity

Earth and Space

Evolution and Inheritance

Year group	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
R	<p>Across the whole year:</p> <ul style="list-style-type: none"> • know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. • know about similarities and differences between themselves and others • know about similarities and differences in relation to places, objects, materials and living things • talk about the features of their own immediate environment and how environments might vary from one another • make observations of animals and plants and explain why some things occur, and talk about changes 					
	<p>CC = Global dimension. 4 weeks. All about me. 5 weeks</p> <p>Name parts of the body</p> <p>Different seasons and some of the changes that occur during them</p> <p>The weather.</p>	<p>CC= All about me. 5 weeks</p>	<p>CC= Animals. 9 weeks</p> <p>Lifecycles of frogs, ducks, chickens and butterflies</p> <p>How other animals change from babies to adults, (matching the baby animals to the adults and challenging with the names of the animals e.g. Kitten / cat).</p> <p>Name and compare different animals and discuss where about they live and what they eat.</p>	<p>CC= Animals. 3 weeks</p>	<p>CC= Journeys. 6 weeks</p> <p>Sinking and floating</p> <p>Changes that happen when we bake gingerbread.</p>	<p>CC= Journeys. 6 weeks</p>

1	Working Scientifically over the whole year: <ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different way • Observe closely, using simple equipment • Perform simple tests • Identify and classify • Use observations and ideas to suggest answers to questions • Gather and record data to help answer questions 					
	CC = Global dimension. 4 weeks Why do we play with different toys? 5 weeks Identify, name, draw and label the basic parts of the human body and link parts to my senses	CC = Hello I'm new here. 5 weeks. Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers	CC = What can we learn about our world from stories? 9 weeks Identify and name a variety of everyday materials including; wood, plastic, glass, water and rock Compare and group together a variety of everyday materials on the basis of their simple physical properties Distinguish between an object and the material which it is made Describe some of the physical properties of everyday materials	CC = Starry night 3 weeks Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.	CC = Why is water so Precious? 6 weeks Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers. Name and identify common animals including fish, amphibians, reptiles, birds and mammals	CC = Where will we go for a great day out? 6 weeks Name and identify common animals including fish, amphibians, reptiles, birds and mammals Compare the structure of a variety of common animals including fish, amphibians, reptiles, birds, mammals and pets Name and identify carnivores, herbivores and omnivores

					<p>Compare the structure of a variety of common animals including fish, amphibians, reptiles, birds, mammals and pets</p> <p>Name and identify carnivores, herbivores and omnivores</p> <p>Identify, name, draw and label the basic parts of the human body and link parts to my senses</p>	
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2	Working Scientifically over the whole year (TAF statements): <ul style="list-style-type: none"> • Ask questions about what I notice • Use different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions <ul style="list-style-type: none"> - Observing changes over time - Noticing patterns - Grouping and classifying things - Carrying out simple comparative tests - Finding things out using secondary sources of information • Communicating ideas in a variety of ways 					
<p>CC =Global dimension. 4 weeks</p> <p>Can party food be healthy? 5 weeks</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Describe the importance for</p>	<p>CC = Pride in Place. 5 weeks</p> <p>Observe and describe how seeds and bulbs grow into mature plants</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>CC = Mrs Armitage’s Vehicle. 9 weeks</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	<p>CC = Where do Bong Trees Grow? 3 weeks</p> <p>Notice that animals, including humans have offspring which grow into adults</p> <p>Find out and describe the basic needs of animals including humans for survival</p>	<p>CC = What makes us like other animals? 6 weeks</p> <p>Explore and compare the differences between things that are living and dead and have never been alive</p> <p>Identify and describe different habitats and how they provide for the basic needs for different animals and plants and how they depend on each other</p> <p>Describe how animals obtain their food from other animals,</p>	<p>CC =How did families have fun in the past? 6 weeks</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	

	<p>humans of exercise, eating the right amounts of different types of food and hygiene</p>				<p>using the idea of a simple food chain</p> <p>Identify that most living things live in habitats that they are suited</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats</p> <p>Identify and name different sources of food using the idea of a simple food chain</p> <p>Year 1 Statements: Notice that animals, including humans have offspring which grow into adults</p> <p>Find out and describe the basic needs of animals including humans for survival</p> <p>Describe the importance for humans of exercise,</p>	
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					eating the right amounts of different types of food and hygiene	
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3

Working Scientifically over the whole year:

- Ask relevant questions and use different types of scientific enquiry to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations
- Take accurate measurements, where appropriate, using standard units
- Use a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answering questions
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support findings

CC =Global Dimension. 4 weeks

Bright Sparks

5 weeks

Year 4 Statements:

Identify common electrical appliances

Construct a simple electrical circuit, identifying its 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

CC = Who were the greatest builders in the world? 5 weeks

Compare how things move on different surfaces

Explore the requirements of plants for life and growth and how they vary from plant to plant

Recognise that soil is made from rocks and organic matter

Year 4 Statements:

Compare and group materials together, according to whether

CC = Lets go on an adventure. 9 weeks

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

CC = The games children play. 3 weeks

Identify that humans and some other animals have skeletons and muscles for support, protection and movement

CC = Are bugs important? 6 weeks

Identify and describe the functions of different parts of flowering plants

Explore the requirements of plants for life and growth and how they vary from plant to plant

Investigate the way in which water is transported within plants

Explore the parts that flowers play in the life

CC = How can we make living here better for everyone. 6 weeks

Compare and group together different types of rocks based on their appearance and physical simple properties

Describe in simple terms how fossils are formed when things that have lived are trapped within rock

Recognise that soil is made from rocks and organic matter

<p>complete loop with a battery</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some simple conductors and insulators</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>Compare and group together a variety of everyday materials on the basis of</p>	<p>they are solids, liquids or gases</p> <p>observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens</p>	<p>the basis of whether they are attracted to a magnet</p> <p>Identify some magnetic materials</p> <p>Describe that magnets have 2 poles</p> <p>Predict if 2 magnets will attract or repel by looking at the poles</p>		<p>cycle of flowering plants</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>Year 4 Statements:</p> <p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>
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	<p>whether they are attracted to a magnet</p> <p>Identify some magnetic materials</p> <p>Describe that magnets have 2 poles</p> <p>Predict if 2 magnets will attract or repel by looking at the poles</p>					
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4	<p>Working Scientifically over the whole year:</p> <ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiry to answer them • Set up simple practical enquiries, comparative and fair tests • Make systematic and careful observations • Take accurate measurements, where appropriate, using standard units • Use a range of equipment, including thermometers and data loggers • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Identify differences, similarities or changes related to simple scientific ideas and processes • Use straightforward scientific evidence to answer questions or to support findings. 					
	<p>CC = Global Dimension. 4 weeks How do I see How do I hear? 5 weeks</p> <p>Year 3 Statements: Recognise that we need light to see in order to see things and that darkness is the absence of light</p> <p>Notice that light is reflected from surfaces</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p>	<p>CC = Why do we speak English at school? 5 weeks</p> <p>Identify the effects of air resistance, water resistance and friction</p>	<p>CC = Should we stop eating chocolate? 9 weeks</p> <p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens</p> <p>Identify that animals, including humans, cannot make their</p>	<p>CC = From a Railway carriage. 3 weeks</p>	<p>CC = What happens inside us? 6 weeks</p> <p>Identify that animals including humans need the right types and amount of nutrition</p> <p>Describe the simple functions of the basic parts of the digestive system in humans</p> <p>Identify the different types of teeth in humans and their simple functions</p> <p>Year 5 Statements:</p>	<p>CC = European regional study. 6 weeks</p> <p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens</p> <p>Identify the part played by evaporation and</p>

	<p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>Find patterns in the way that the size of shadows change</p> <p>Year 4 Statements: Identify how sounds are made, associating some of them with something vibrating</p> <p>Recognise that vibrations from sounds travel through something to the ear</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Find patterns between the pitch of</p>		<p>own food, they get nutrition from what they eat</p> <p>Identify the different types of teeth in humans and their simple functions</p>		<p>Describe the changes as humans develop to old age</p> <p>Year 6 Statements: Identify the main parts of the human circulatory system and describe their functions</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on our bodies</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>	<p>condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>Compare and group together different types of rocks based on their appearance and physical simple properties</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rocks</p> <p>recognise that soil is made from rocks and organic matter</p>
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	<p>a sound and features of what produced it</p> <p>Recognise that sounds get fainter at the distance from the sound source increases</p>					
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5	<p>Working Scientifically over the whole year:</p> <ul style="list-style-type: none"> Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary Take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings appropriate Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs Use straightforward scientific evidence to answer questions or to support findings Identify differences, similarities or changes related to simple scientific ideas and processes Use test results to make predictions to set up further comparative and fair tests Report and present findings, including conclusions, causal relationships and explanations of results Report and present findings in oral and written forms such as display and other presentations. 				
<p>CC = Global Dimension. 4 weeks</p> <p>Mysterious materials. 5 weeks</p> <p>Compare and group together everyday materials on the basis on their properties, including their properties, including their hardness solubility, transparency, conductivity and response to magnet</p> <p>Recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance form a solution</p>	<p>CC = Castles 5 weeks</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>	<p>CC = Fairgrounds 9 weeks</p> <p>Explain that unsupported objects fall towards the Earth because of the force of gravity</p> <p>Identify the effects of air resistance, water resistance and friction</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>	<p>CC = The Highwayman. 3 weeks</p> <p>Identify that animals including humans need the right types and amount of nutrition</p> <p>Describe the simple functions of the basic parts of the digestive system in humans</p> <p>Identify the different types of teeth in humans and their simple functions</p>	<p>CC = Do we make the most of what is on our doorstep? 6 weeks</p> <p>Describe the differences in life cycles of mammals, amphibians, insects and birds</p> <p>Describe the life process of reproduction in some plants and animals</p> <p>Year 4 Statements: Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to</p>	<p>CC = Who are we why do we live here? 6 weeks</p> <p>Year 6 Statements: Identify the main parts of the human circulatory system and describe their functions</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on our bodies</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>

	<p>Use knowledge of solids, liquids, and gases to decide how mixtures might be separated through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible</p> <p><i>Revisit:</i> <i>Compare how things move on different surfaces</i></p>		<p>Associate the outcome of a circuit with a number and voltage of the cells used</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, loudness of buzzers and the on/off positions of switches</p> <p>Use recognised symbols when representing a simple circuit in a diagram</p>		<p>help, group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and this can sometimes pose dangers to living things</p>	
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<p><i>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</i></p> <p><i>Observe how magnets attract or repel each other and attract some materials and not others</i></p> <p><i>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet</i></p> <p><i>Identify some magnetic materials</i></p> <p><i>Describe that magnets have 2 poles</i></p> <p><i>Predict if 2 magnets will attract or repel by looking at the poles</i></p> <p><i>Compare and group materials together, according to whether they are solids, liquids or gases</i></p>					
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	<p><i>Observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens</i></p> <p><i>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</i></p>					
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6	<p>Working Scientifically over the whole year (TAF statements):</p> <ul style="list-style-type: none"> describe and evaluate my own and others' scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions, recognising and controlling variables where necessary (i.e. observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests, and finding things out using a wide range of secondary sources) use a range of scientific equipment to take accurate and precise measurements or readings, with repeat readings where appropriate record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways raise further questions that could be investigated, based on their data and observations. 				
<p>CC = Global dimension. 4 weeks What's Out There. 5 weeks</p> <p>Recognise that light appears to travel in straight lines</p> <p>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>	<p>CC = Has there ever been a better time to live here? 5 weeks</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on our bodies</p> <p>Identify the main parts of the human circulatory system and describe their functions</p> <p>Describe the ways in which nutrients and water are</p>	<p>CC = Why do some animals no longer exist? 9 weeks</p> <p>Recognise that living things have changed over time and that fossils provide information about things that lived on the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are</p>	<p>CC = The Lady of Shallott. 3 weeks</p> <p><i>Opportunity to revisit any area of Science that has not been securely learned over the Key Stage</i></p> <p>Year 6 Statements: Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to</p>	<p>CC = The Great Geographical challenge. 6 weeks</p> <p><i>Opportunity to revisit any area of Science that has not been securely learned over the Key Stage</i></p> <p>Year 4 Statements: Identify the part played by evaporation and condensation in the water cycle and associate the rate of</p>	<p>CC= Mini enterprise. 6 weeks</p> <p><i>Opportunity to revisit any area of Science that has not been securely learned over the Key Stage</i></p> <p>Year 4 Statements: Describe the simple functions of the basic parts of the digestive system in humans</p>

	<p>Explain that we see things because of the way light travels</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> <p>Describe the movement of the Earth and other planets in our solar system relative to the Sun</p> <p>Describe how the moon moves in relation to the earth</p> <p>Describe the Sun, Earth and Moon as approximately spherical</p> <p>Talk about Earth's rotation to explain day and night and the apparent movement</p>	<p>transported within animals, including humans</p>	<p>not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p>Year 5 Statements: Describe the differences in life cycles of mammals, amphibians, insects and birds</p> <p>Describe the life process of reproduction in some plants and animals</p> <p>Year 6 Statements: Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-</p>	<p>explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because of the way light travels</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> <p>Year 4 Statements: Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>evaporation with temperature.</p>	<p>Identify the different types of teeth in humans and their simple functions</p> <p>Year 5 Statements: Describe the changes as humans develop to old age</p>
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	<p>of the Sun across the sky</p> <p>Explain that unsupported objects fall towards the Earth because of the force of gravity</p>		<p>organisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p> <p><i>Opportunity to revisit: Rocks and soils Y3 Living Things and Their Habitats Y4, Y5</i></p>			
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