

**Science Topics KS1**

	Topic 1: Plants	Topic 2: Animals, including humans	Topic 3: Everyday materials	Topic 4: Seasonal changes	Topic 5: Living things and their habitats
<b>Mastery Skills Year 1</b>	<ul style="list-style-type: none"> <li>Identify and classify common wild and garden plants and trees.</li> <li>Ask simple questions about plants and trees.</li> <li>Make observations about parts of plants.</li> </ul>	<ul style="list-style-type: none"> <li>Classify animals by what they eat.</li> <li>Classify a variety of common animals. (Fish, amphibians, reptiles, birds and mammals)</li> <li>Observe and compare the structure of a variety of common animals.</li> </ul>	<ul style="list-style-type: none"> <li>Group together materials based on their physical properties.</li> <li>Compare materials based on their physical properties.</li> <li>Perform a simple test.</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the 4 seasons.</li> <li>Gather and record data.</li> </ul>	<ul style="list-style-type: none"> <li>Research about living things and their habitats.</li> <li>Present findings in a food chain.</li> </ul>
<b>Key Topic Knowledge</b>	<ul style="list-style-type: none"> <li>Identify and name a variety of common plants (garden plants, wild plants and trees)</li> <li>Classify trees as deciduous and evergreen</li> <li>Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</li> <li>Describe how seeds and bulbs grow into mature plants</li> <li>Describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<ul style="list-style-type: none"> <li>Identify, name, draw and label the basic parts of the human body and link parts to my senses</li> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>Understand the terms carnivore, herbivore and omnivore.</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>Notice that animals, including humans, have offspring which grow into adults</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made</li> <li>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>Describe the simple physical properties of a variety of everyday materials</li> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the 4 seasons</li> <li>Describe weather associated with the seasons and how day length varies.</li> <li>Know about the weather in each season.</li> <li>Name each season.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</li> <li>Identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>	<ul style="list-style-type: none"> <li>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> <li>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>	<ul style="list-style-type: none"> <li>distinguish between an object and the material from which it is made</li> <li>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>describe the simple physical properties of a variety of everyday materials</li> <li>compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul>	<ul style="list-style-type: none"> <li>observe changes across the 4 seasons</li> <li>observe and describe weather associated with the seasons and how day length varies</li> </ul>	
	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>asking simple questions and recognising that they can be answered in different ways</li> <li>observing closely, using simple equipment</li> <li>performing simple tests</li> <li>identifying and classifying</li> <li>using their observations and ideas to suggest answers to questions</li> <li>gathering and recording data to help in answering questions</li> </ul>				

	Topic 1: Plants	Topic 2: Animals, including humans	Topic 3: Everyday materials	Topic 4: Seasonal changes	Topic 5: Living things and their habitats
<b>Mastery Skills Year 2</b>	<ul style="list-style-type: none"> <li>Observe changes over time.</li> <li>Carry out a simple comparative test.</li> <li>Record my results in a simple table.</li> </ul>	<ul style="list-style-type: none"> <li>Research about the basic needs of animals, including humans.</li> <li>Ask questions about what I have found out.</li> <li>Explain the life cycle of an animal.</li> </ul>	<ul style="list-style-type: none"> <li>Carry out a simple test.</li> <li>Make careful observations about a variety of materials.</li> <li>Use my observations and ideas to suggest answers to questions.</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the 4 seasons.</li> <li>Gather and record data.</li> </ul>	<ul style="list-style-type: none"> <li>Research about living things and their habitats.</li> <li>Present findings in a food chain.</li> </ul>
<b>Key Topic Knowledge</b>	<ul style="list-style-type: none"> <li>Identify and name a variety of common plants (garden plants, wild plants and trees)</li> <li>Classify trees as deciduous and evergreen</li> <li>Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</li> <li>Describe how seeds and bulbs grow into mature plants</li> <li>Describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<ul style="list-style-type: none"> <li>Identify, name, draw and label the basic parts of the human body and link parts to my senses</li> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>Understand the terms carnivore, herbivore and omnivore.</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>Notice that animals, including humans, have offspring which grow into adults</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made</li> <li>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>Describe the simple physical properties of a variety of everyday materials</li> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the 4 seasons</li> <li>Describe weather associated with the seasons and how day length varies.</li> <li>Know about the weather in each season.</li> <li>Name each season.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</li> <li>Identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food</li> </ul>
<b>National Curriculum Objectives</b>	<ul style="list-style-type: none"> <li>observe and describe how seeds and bulbs grow into mature plants</li> <li>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<ul style="list-style-type: none"> <li>notice that animals, including humans, have offspring which grow into adults</li> <li>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>	<ul style="list-style-type: none"> <li>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</li> <li>identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food</li> </ul>
	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>asking simple questions and recognising that they can be answered in different ways</li> <li>observing closely, using simple equipment</li> <li>performing simple tests</li> <li>identifying and classifying</li> <li>using their observations and ideas to suggest answers to questions</li> <li>gathering and recording data to help in answering questions</li> </ul>				

**Science Topics LKS2**

	Topic 1: Plants	Topic 2: Animals including humans	Topic 3: Rocks	Topic 4: Light	Topic 5: Forces and magnets
<b>Mastery Skills Year 3/4</b>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests.</li> <li>Ask relevant scientific questions.</li> <li>Use observations and knowledge to answer scientific questions.</li> </ul>	<ul style="list-style-type: none"> <li>Research about different animals skeletons.</li> <li>Report on findings including oral and written explanations, displays or presentations.</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes.</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant questions and use different types of scientific enquiry to answer them</li> <li>Gather, record, classify and present data in a variety of ways to help in answering questions</li> <li>Record my findings using simple scientific language, drawings, labelled diagrams and tables</li> </ul>	<ul style="list-style-type: none"> <li>Take accurate measurements, where appropriate, using standard units</li> <li>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>Use straightforward scientific evidence to answer questions or to support their findings.</li> </ul>	<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>Set up simple practical enquiries, comparative and fair tests</li> <li>Record my findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> </ul>
<b>Key Topic Knowledge</b>	<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 plants, including pollination, seed formation and seed dispersal</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</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>Recognise that they need light in order to see things and that dark is the absence of light</li> <li>Notice that light is reflected from surfaces</li> <li>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>Find patterns in the way that the size of shadows change</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> <li>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</li> </ul>
<b>National Curriculum Objectives</b>	<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 plants, including pollination, seed formation and seed dispersal</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>identify that humans and some other animals have skeletons and muscles for support, protection and movement</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>recognise that they need light in order to see things and that dark is the absence of light</li> <li>notice that light is reflected from surfaces</li> <li>recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>find patterns in the way that the size of shadows change</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> <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>
	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>asking relevant questions and using different types of scientific enquiries to answer them</li> <li>setting up simple practical enquiries, comparative and fair tests</li> <li>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>using straightforward scientific evidence to answer questions or to support their findings.</li> </ul>				

	Topic 6: Sound	Topic 7: Electricity	Topic 8: Living things and their habitats	Topic 9: Animals, including humans	Topic 10: States of matter
Mastery Skills Year 3/4	<ul style="list-style-type: none"> <li>Find patterns between the pitch of a sound and features of the object that produced it.</li> <li>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Ask relevant questions and use different types of scientific enquiry to answer them</li> <li>Record my findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> </ul>	<ul style="list-style-type: none"> <li>Classify living things using classification keys.</li> <li>Carry out research about living things and their habitat.</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes</li> </ul>	<ul style="list-style-type: none"> <li>Record my findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</li> <li>Ask relevant questions and use different types of scientific enquiry to answer them</li> <li>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> </ul>	<ul style="list-style-type: none"> <li>Set up simple practical enquiries, comparative and fair tests</li> <li>Take accurate measurements, where appropriate, using standard units</li> <li>Use a range of equipment, including thermometers</li> </ul>
Key Topic Knowledge	<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>Recognise that sounds get fainter as the distance from the sound source increases</li> </ul>	<ul style="list-style-type: none"> <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 associate this with whether or not a lamp lights in a simple series circuit</li> <li>Recognise some common conductors and insulators, and associate metals with being good conductors</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>	<ul style="list-style-type: none"> <li>Describe the simple functions of the basic parts of the digestive system in humans</li> <li>Identify the different types of teeth in humans and their simple functions</li> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>	<ul style="list-style-type: none"> <li>Compare and group materials together, according to whether they are solids, liquids or gases</li> <li>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)</li> <li>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>
National Curriculum Objectives	<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 the sound source increases</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 associate this with whether or not a lamp lights in a simple series circuit</li> <li>recognise some common conductors and insulators, and associate metals with being good conductors</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>	<ul style="list-style-type: none"> <li>describe the simple functions of the basic parts of the digestive system in humans</li> <li>identify the different types of teeth in humans and their simple functions</li> <li>construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>	<ul style="list-style-type: none"> <li>compare and group materials together, according to whether they are solids, liquids or gases</li> <li>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)</li> <li>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>
	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>asking relevant questions and using different types of scientific enquiries to answer them</li> <li>setting up simple practical enquiries, comparative and fair tests</li> <li>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>using straightforward scientific evidence to answer questions or to support their findings.</li> </ul>				



### Science Topics UKS2

	Topic 1: Living things and their habitats	Topic 2: Animals including humans	Topic 3: Properties and changes of materials	Topic 4: Earth and Space	Topic 5: Forces
Mastery Skills Year 5/6	<ul style="list-style-type: none"> <li>Identify differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Carry out research on the life process of reproduction in some plants and animals.</li> <li>Report and present findings in oral and written forms such as displays and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>Ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions</li> <li>Use straightforward scientific evidence to answer questions or to support their findings.</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary</li> <li>Take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings where appropriate</li> <li>Use straightforward scientific evidence to answer questions or to support their findings.</li> </ul>	<ul style="list-style-type: none"> <li>Ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments</li> <li>Report and present findings in oral and written forms such as displays and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary</li> <li>Use test results to make predictions to set up further comparative and fair tests</li> <li>Report and present findings, including conclusions, causal relationships and explanations of results</li> </ul>
Key Topic Knowledge	<ul style="list-style-type: none"> <li>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>Describe the life process of reproduction in some plants and animals</li> </ul>	<ul style="list-style-type: none"> <li>Describe the changes as humans develop to old age</li> <li>Describe the different stages of growth in humans.</li> </ul>	<ul style="list-style-type: none"> <li>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>Demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the movement of the Earth and other planets relative to the sun in the solar system</li> <li>Describe the movement of the moon relative to the Earth</li> <li>Describe the sun, Earth and moon as approximately spherical bodies</li> <li>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul>	<ul style="list-style-type: none"> <li>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> </ul>
	<ul style="list-style-type: none"> <li>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>describe the life process of reproduction in some plants and animals</li> </ul>	<ul style="list-style-type: none"> <li>describe the changes as humans develop to old age</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li> </ul>	<ul style="list-style-type: none"> <li>describe the movement of the Earth and other planets relative to the sun in the solar system</li> <li>describe the movement of the moon relative to the Earth</li> <li>describe the sun, Earth and moon as approximately spherical bodies</li> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul>	<ul style="list-style-type: none"> <li>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</li> </ul>
	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>				

	Topic 6: Living things and their habitats	Topic 7: Animals, including humans	Topic 8: Evolution and inheritance	Topic 9: Light	Topic 10: Electricity
Mastery Skills Year 5/6	<ul style="list-style-type: none"> <li>Describe and evaluate my own and others' scientific ideas related to topics in the national curriculum, using evidence from a range of sources</li> <li>Ask my own questions about the scientific phenomena that I am studying</li> <li>Record data and results using scientific diagrams and labels and classification keys</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary</li> <li>Record data and results using scientific diagrams and labels, tables, scatter graphs, bar and line graphs</li> <li>Draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways</li> </ul>	<ul style="list-style-type: none"> <li>Describe and evaluate my own and others' scientific ideas related to topics in the national curriculum, using evidence from a range of sources</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments</li> <li>Report and present findings in oral and written forms such as displays and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary</li> <li>Record data and results using scientific diagrams and labels</li> <li>Use straightforward scientific evidence to answer questions or to support their findings.</li> </ul>	<ul style="list-style-type: none"> <li>Plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary</li> <li>Identify differences, similarities or changes related to simple scientific ideas and processes</li> <li>Report and present findings, including conclusions, causal relationships and explanations of results</li> </ul>
Key Topic Knowledge	<ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</li> <li>Give reasons for classifying plants and animals based on specific characteristics</li> </ul>	<ul style="list-style-type: none"> <li>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>Describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that light appears to travel in straight lines</li> <li>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</li> <li>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</li> <li>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>	<ul style="list-style-type: none"> <li>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>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</li> <li>Use recognised symbols when representing a simple circuit in a diagram</li> </ul>
National Curriculum Objectives	<ul style="list-style-type: none"> <li>describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</li> <li>give reasons for classifying plants and animals based on specific characteristics</li> </ul>	<ul style="list-style-type: none"> <li>identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> <li>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>	<ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>	<ul style="list-style-type: none"> <li>recognise that light appears to travel in straight lines</li> <li>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</li> <li>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</li> <li>use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>	<ul style="list-style-type: none"> <li>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>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</li> <li>use recognised symbols when representing a simple circuit in a diagram</li> </ul>
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