

Curriculum Intent for Science

EYFS

Area of Learning and Development: Understanding the World

ELG: The Natural World

Explore the natural world around them, making observations and drawing pictures of animals and plants.

Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.

ELG: Past & Present

Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
The Natural World	To ask questions about the natural environment To respect and care for the natural environments To begin to notice changes in the natural environment around us	To know about and recognise the signs of autumn To know about features of the world and Earth	To know about and recognise the signs of winter To know some important processes and changes in the natural world including states of matter (freezing), begin to investigate some of these changes	To know about and recognise the signs of spring To know about features of my own immediate environment and how they might vary from another To plant seeds To know the difference between herbivores and carnivores (linked to dinosaurs, spring animals)	To observe the growth of seeds and talk about changes To know how to care for growing plants To learn about lifecycles of plants and animals To know that some animals are nocturnal To know about different habitats	To know about and recognise the signs of summer To know that some things in the world are man-made and some things are natural To harvest grown fruit and vegetables To know some important processes and changes in the natural world including states of matter (melting, floating and sinking)

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Past and Present	To know about my own life story			Mary Anning Palaeontologist		

To know how I have changed over time					
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Year 1	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National Curriculum	Plants		Animals, including humans		Materials and their properties	Seasonal changes
Key Concept	Diversity		Diversity		Changes	Changes
Substantive knowledge	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>		<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>		<p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>
Disciplinary knowledge			<p>Use observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them.</p> <p>Group animals according to what they eat.</p> <p>Use senses to compare different textures, sounds and smells.</p>		<p>Use simple features to compare objects, materials and living things.</p>	<p>Make tables and charts about the weather.</p> <p>Make displays of what happens in the world around them,</p>

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	<p>Observe closely, perhaps using magnifying glasses, and compare and contrast familiar plants.</p> <p>Describe how to identify and group them.</p> <p>Draw diagrams showing the parts of different plants including trees.</p> <p>Pupils might keep records of how plants have changed over time, for example, the leaves falling off trees and buds opening.</p> <p>Compare and contrast what they have found out about different plants.</p> <p>Observe and record, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.</p> <p><i>Measure length in centimetres. Understand the word diagram.</i></p>		<p>Decide how to sort and classify objects into simple groups with some help.</p> <p>Record and communicate findings in a range of ways with support</p> <p><i>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables. Use beakers.</i></p>	<p>including day length, as the seasons change.</p> <p><i>Use weather thermometers and weather vanes.</i></p>
Suggested Debate	Do all animals look like smaller versions of their parents?		Are most everyday objects made of metal?	Is the length of the day always the same?

Key scientist	Angie Burnett https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3	Taneesha Aleen Zoologist https://pstt.org.uk/unique-resources/a-scientist-just-like-me/		Dr Raquel Pardo https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3		
Vocabulary	Diversity Deciduous Evergreen	Diversity Seed Fruit	Diversity Mammals Amphibians	Diversity Reptiles Carnivores	Changes Materials Metals	Changes Seasons Day length

Year 2	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National Curriculum	Plants	Animals, including humans	Materials and their properties		Living things and their habitats	
Key Concepts	Living things	Diversity	Changes		Living things	
Substantive knowledge	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		Explore and compare the differences between things that are living, dead, and things that have never been alive. 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. Identify and name a variety of plants and animals in their habitats, including micro-habitats. 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.	
Disciplinary knowledge	Observe and record, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb.	Observe, through video or first-hand observation and measurement, how different animals including humans, grow.	Perform simple tests to explore questions, for example: 'What is the best material for an umbrella? ... for lining a dog basket? ... for curtains? ... for a bookshelf? ... for a gymnast's leotard?'		Sort and classify things according to whether they are living, dead or were never alive, and recording their findings using charts.	

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	Observe similar plants at different stages of growth; set up a comparative test to show that plants need light and water to stay healthy. <i>Measure in centimetres and metres. Use beakers.</i>	Asking questions about what things animals need for survival and what humans need to stay healthy. Suggest ways to find answers to their questions.	Compare the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs). Observe closely, identify and classify the uses of different materials, and record observations. <i>Use Venn diagrams and block graphs where appropriate. Use funnels.</i>	Describe how they decided where to place things, exploring questions like: 'Is a flame alive? Is a deciduous tree dead in winter?' and talk about ways of answering their questions. Construct a simple food chain that includes humans (eg. grass, cow, human). Grouping animals according to what they eat. Describe the conditions in different habitats and microhabitats.		
Suggested debates	Do all plants start as a seed?	If you drink enough water, you will be healthy.	Can you bend, twist, squash and stretch a solid object?	A kite does not need plants to survive.		
Key scientist		Kelly Blacklock https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=2	Pearl Agyakwa https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=5	Prem Sing Gill https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3		
Vocabulary	Living things Temperature Mature	Forest Reproduction Offspring	Changes Solid Suitability	Changes Plastic Glass	Living things Dead Non-living	Living things Habitats Food chain

Year 3	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National Curriculum	Rocks	Light	Plants		Forces and magnets	Animals, including humans
Key Concepts	Changes	Energy	Diversity		Forces	Diversity
Substantive knowledge	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	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.	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.		Compare how things move on different surfaces. Notice that some forces need contact between two objects, but	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.

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	<p>when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>	<p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of shadows change.</p>	<p>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>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 whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>Describe magnets as having two poles.</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>
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<p>Disciplinary knowledge</p>	<p>Observe rocks, including those used in buildings and gravestones, and explore how and why they might have changed over time.</p> <p><i>Use a hand lens or microscope to help them to identify and classify rocks according to whether they have grains or crystals, and whether they have fossils in them.</i></p> <p>Research and discuss the different kinds of living things whose fossils are found in sedimentary rock and explore how fossils are formed.</p> <p>Explore different soils and identify similarities and differences between them and investigate what happens when rocks are rubbed together or what changes occur when they are in water raise and answer questions about the way soils are formed.</p> <p><i>Use funnels, filter paper, beakers, sieves and measuring cylinders.</i></p>	<p>Look for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.</p> <p><i>Measure in cm and metres. Use mirrors.</i></p>	<p>Compare the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser.</p> <p>Discover how seeds are formed by observing the different stages of plant life cycles over a period of time.</p> <p>Look for patterns in the structure of fruits that relate to how the seeds are dispersed.</p> <p>Observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers.</p> <p><i>Measure in mm and cm. Use measuring cylinders.</i></p>	<p>Compare how different things move and group them.</p> <p>Raise questions and test to find out how far things move on different surfaces.</p> <p>Explore strengths of different magnets and find a fair way to compare them.</p> <p>Sort materials into those that are magnetic and those that are not.</p> <p>Look for patterns in the way that magnets behave in relation to each other for example, the strength of the magnet or which pole faces another.</p> <p>Identify how these properties make magnets useful in everyday items and suggesting uses for different magnets.</p>	<p>Compare and contrast the diets of different animals (including their pets) and decide ways of grouping them according to what they eat.</p> <p>Research different food groups and how they keep us healthy, and design meals based on what they find out.</p> <p>Identify and group animals with and without skeletons and observe and compare their movement; explore ideas about what would happen if humans did not have skeletons.</p> <p><i>Use Venn diagrams, tables and bar charts.</i></p>
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					Use Venn diagrams, tables and bar charts.	
Suggested debates	Soil isn't that important – it's just mud.	Without light, we couldn't live.	Without bees, there wouldn't be any plants.			Should unhealthy food cost more?
Key Scientist	Dr Emma Nicholls https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=4		Susanna Bourne-Worster https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=2			Dr Marie Goepf https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=5
Common misconceptions		Light https://pstt.org.uk/resources/common-misconceptions/				
Vocabulary	Changes Fossils Permeable	Energy Reflections Shadows	Diversity Nutrients Transport	Diversity Pollination Seed dispersal	Forces Magnetism Attract/repel	Diversity Nutrition Skeletons

Year 4	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National Curriculum	Electricity	Sound	Living things and their habitats	States of matter	Animals, including humans	
Key Concepts	Energy	Energy	Diversity	Changes	Diversity	
Substantive knowledge	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	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.	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	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	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.	

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	<p>whether or not the lamp is part of a 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 common conductors and insulators, and associate metals with being good conductors.</p>	<p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>this happens in degrees Celsius ($^{\circ}\text{C}$).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Food chains are contained within this topic, however it would fit in well when learning about living things and their habitats.</p>
Disciplinary knowledge	<p>Know that bulbs get brighter if more cells are added.</p> <p>Know that metals tend to be conductors of electricity.</p> <p>Know that some materials can and some cannot be used to connect across a gap in a circuit.</p> <p><i>Use circuit diagram symbols for a battery, wire, bulb and a switch.</i></p>	<p>Find patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses.</p> <p>Make earmuffs from a variety of different materials to investigate which provides the best insulation against sound.</p> <p>Make and play their own instruments by using what they have found out about pitch and volume.</p> <p><i>Use Logi boxes. Use tables, bar graphs and line graphs.</i></p>	<p>Use and make simple guides or keys to explore and identify local plants and animals.</p> <p>Make a guide to local living things.</p> <p>Raise and answer questions based on their observations of animals and other animals that they have researched.</p> <p><i>Use tables, bar graphs and line graphs. Use quadrants.</i></p>	<p>Group and classify a variety of different materials.</p> <p>Explore the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice cream for a party).</p> <p>Research the temperature at which materials change state e.g. when iron melts or when water condenses into a liquid.</p> <p>Observe and record evaporation over time, (a puddle in the playground) and investigate the effect of temperature on washing drying or snow melting.</p>	<p>Compare the teeth of carnivores and herbivores, and suggest reasons for differences.</p> <p>Find out what damages teeth and how to look after them.</p> <p>Draw/discuss their ideas about the digestive system and compare them with models or images.</p> <p><i>Use quadrants if appropriate.</i></p>

				Know how to use a thermometer with accuracy. Use petri dishes, thermometers, beakers and measuring cylinders.	
Suggested Debate	Everyone in the world should have electricity.	Loud music damages your ears.	Is it ok to kill animals and eat them?	It is possible to enable everyone in the world to have clean drinking water.	Children should not be allowed to eat junk food.
Key Scientist		Professor Colin Webb https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=5	Dawood Qureshi https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=5	James Mortimer https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3	
Misconceptions	Electricity https://pstt.org.uk/resources/common-misconceptions/	Sound https://pstt.org.uk/resources/common-misconceptions/		States of matter https://pstt.org.uk/resources/common-misconceptions/	
Vocabulary	Energy Circuit Cells	Energy Vibration Pitch Volume	Diversity Environment Classification	Changes Evaporation Condensation	Diversity Digestion Predator Prey Diversity Producers Consumers

Year 5	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
National Curriculum	Living things and their habitats	Forces	Animals, including humans	Earth and space	Materials and their properties	
Key Concept	Diversity	Forces	Diversity	Earth and Universe	Changes	
Substantive knowledge	Describe the differences in the life cycles of a mammal,	Explain that unsupported objects fall towards the Earth because of	Describe the changes as			

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	<p>an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animal.</p>	<p>the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p>humans develop to old age.</p> <p>As this topic looks at stages in the lifecycle of a human, it could be taught together with the topic <u>Year 5: Living things and their habitats</u> which looks at lifecycles and reproduction.</p>	<p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	<p>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.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including 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 mixing, dissolving & changes of state are all reversible reactions.</p> <p>Explain that some changes result in the formation of new materials, & that this kind of change is not usually reversible including changes associated with burning & the action of acid on bicarbonate of soda.</p>
Disciplinary knowledge	<p>Observe and compare the life cycles of plants and animals in their local environment with other plants and animals (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences.</p> <p>Try to grow new plants from different parts of the parent plant, for example,</p>	<p>Explore falling paper cones or cupcake cases.</p> <p>Design and make a variety of parachutes and carrying out fair tests to determine which designs are the most effective.</p> <p>Explore resistance in water by making and testing boats of different shapes.</p> <p>Design and make products that use levers, pulleys, gears and/or springs.</p>	<p>Research the gestation periods of other animals and comparing them with humans.</p> <p>Find out and record the length and mass of a baby as it grows.</p> <p><i>Choose the most appropriate way to record results (bar</i></p>	<p>Compare the time of day at different places on the Earth through internet links and direct communication.</p> <p>Create simple models of the solar system; construct simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day.</p>	<p>Carry out tests to answer questions, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?'</p> <p>Compare materials to make a switch in a circuit.</p> <p>Observe and compare the changes that take place, for example, when burning different materials or baking bread.</p> <p>Research and discuss how chemical changes have an impact on our lives, for example, in</p>

	<p>seeds, stem/root cuttings, tubers, and bulbs.</p> <p>Observe changes in an animal over a period of time (by hatching and rearing chicks), compare how different animals reproduce and grow.</p> <p>Choose the most appropriate way to record results (bar charts, line graphs, scatter graphs).</p>	<p>Use force meters. Measure in Newtons.</p>	<p>charts, line graphs, scatter graphs).</p>	<p>Find out why some people think that structures such as Stonehenge might have been used as astronomical clocks.</p> <p>Use an array.</p>	<p>cooking, the creative use of new materials such as polymers, super-sticky and super-thin materials.</p>	
Suggested Debate	<p>Is it ok to keep animals in zoos?</p> <p>Do you agree that animals should be used to develop new medicines?</p>	<p>Robots will soon take over the jobs of machines.</p>		<p>Is it important to explore outer space? Is it right to spend all that money when people are struggling to buy food?</p>	<p>We should ban/get rid of all plastics. No more plastic should be made.</p>	
Key Scientist	<p>Letizia Delle Vedove https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=4</p>		<p>Ruth Sutton https://pstt.org.uk/unique-resources/a-scientist-just-like-me/</p>	<p>Dr Sheila Kannani MBE https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3</p>	<p>Edward Thompson https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=2</p>	
Common misconceptions		<p>https://pstt.org.uk/resources/common-misconceptions/ Levers</p>			<p>States of Matter https://pstt.org.uk/resources/common-misconceptions/</p>	
Vocabulary	<p>Diversity Sexual reproduction Fertilisation Vertebrates Invertebrates</p>	<p>Forces Gravity Friction</p>	<p>Diversity Life cycles Metamorphosis</p>	<p>Earth and Space Solar system Orbit</p>	<p>Changes Chemical property Physical property</p>	<p>Changes Reversible Irreversible</p>

Year 6	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
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National Curriculum	Evolution and inheritance	Light	Electricity	Animals including humans	Living things and their habitats
Key Concepts	Changes	Energy	Energy	Diversity	Diversity
Year 6 Substantive knowledge	<p>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> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are 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>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>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> <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>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>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.</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their body functions.</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p>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.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>
Disciplinary knowledge	Explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.	Decide where to place rear-view mirrors on cars.	Systematically identify the effect of changing one component at a time in a circuit.	Explore the work of scientists and scientific research about the relationship	Use classification systems and keys to identify some animals and plants in the immediate environment.

	<p>Observe and raise questions about local animals and how they are adapted to their environment.</p> <p>Compare how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on 2 feet rather than 4, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.</p> <p><i>Choose the most appropriate way to record results (bar charts, line graphs, scatter graphs).</i></p>	<p>Design and make a periscope and use the idea that light appears to travel in straight lines to explain how it works.</p> <p>Investigate the relationship between light sources, objects and shadows by using shadow puppets.</p> <p>Look at a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters.</p> <p><i>Use/make a light box. Use a glass prism.</i></p>	<p>Design and make a set of traffic lights, a burglar alarm or some other useful circuit.</p> <p><i>Use circuit diagram symbols independently.</i></p>	<p>between diet, exercise, drugs, lifestyle and health.</p> <p><i>Choose the most appropriate way to record results (bar charts, line graphs, scatter graphs).</i></p>	<p>Research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system.</p>
Suggested Debate	<p>Do you think it's possible for two people to be exactly the same?</p> <p>Do you think all genetic diseases should be genetically engineered so that they become obsolete?</p>			Is it our job to look after the environment?	
Key Scientist	<p>Emma Dunne https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=4</p>		<p>Nicole Melzack https://pstt.org.uk/unique-resources/a-scientist-just-like-me/</p>	<p>Michelle Williams and Tessa Nash https://pstt.org.uk/unique-resources/a-scientist-just-like-me/?sf_paged=3</p>	
Misconceptions	<p>Evolution https://pstt.org.uk/resources/common-misconceptions/</p>		<p>Electricity https://pstt.org.uk/resources/common-misconceptions/</p>		
Vocabulary	<p>Evolution/changes Genetics</p>	<p>Energy Spectrum</p>	<p>Energy Voltage</p>	<p>Diversity Circulation</p>	<p>Diversity Micro-organisms</p>

	Adaptations Evolution	Light rays	Resistance	Arteries Veins Capillaries	Organic matter
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