

Science Curriculum Overview

Year 1 Science				
	Plants	Animals including humans	Everyday materials	Seasonal changes
Topic included in	Enchanted Woodland	Paws, Claws and Whiskers	Moon Zoom	Enchanted Woodland
Investigation links	Are leaves all the same? Do pine cones know it's raining?	Can you leap like a frog?	What keeps us dry? How does it feel?	Are leaves all the same? Do pine cones know it's raining?
Links to other year groups	Y3 Tribal Tails Y5 Eat the Seasons	Y3 Predators Y4 Burps, Bottoms and Bile Y5 Pharaohs Y6 Blood Heart	Y2 Land Ahoy Y2 Towers, Tunnels and Turrets Y3 Mighty Metals Y5 Fallen Fields	Y5 Stargazers Y5 Eat the Seasons
National Curriculum statement	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. identify and name a variety of common wild and garden plants, including deciduous and evergreen trees 2. identify and describe the basic structure of a variety of common flowering plants, including trees. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. 2. identify and name a variety of common animals that are carnivores, herbivores and omnivores. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. distinguish between an object and the material from which it is made. 2. identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 3. describe the simple physical properties of a variety of everyday materials. 4. compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. observe changes across the four seasons. 2. observe changes and describe weather associated with the seasons and how day length varies.

Year 2 Science

	Living things and their habitats	Plants	Animals including humans	Uses of everyday materials
Topic included in	Wriggle and crawl	Street Detectives	Bounce	Land Ahoy
Investigation links	Do insects have a favourite colour? Do snails have noses? What is the lifecycle of a lady bird? Where do snails live?	How do plants grow in winter?	How do germs spread? Why should I exercise?	
Links to other year groups	Y4 Blue Abyss Y5 Eat the Seasons Y6 Darwin's Delights	Y3 Tribal Tales Y5 Eat the Seasons	Y1 Paws, Claws and Whiskers Y3 Predators Y4 Burps, Bottoms and Bile Y5 Pharaohs Y6 Blood Heart	Y1 Moon Zoom
National Curriculum statement	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. explore and compare the differences between things that are living, dead, and things that have never been alive. 2. 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. 3. identify and name a variety of plants and animals in their 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. observe and describe how seeds and bulbs grow into mature plants. 2. find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. notice that animals, including humans, have offspring which grow into adults. 2. find out about and describe the basic needs of animals, including humans, for survival (water, food and air). 3. describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1. identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. 2. find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

	habitats, including microhabitats.			
	4. 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.			

Year 3 Science					
	Plants	Animals including humans	Rocks	Light	Forces and magnets
Topic included in	Tribal Tales	Predators	Ammonite	Gods and Mortals	Mighty Metals
Investigation links	Do plants have legs? What are flowers for?	What are our joints? Why are trees tall? What do owls eat? How do worms move?	How do fossils form? What is sand? What is soil?	What are sunglasses for? Why do shadows change?	Can you block magnetism? How mighty are magnets? Why do magnets attract and repel? What does friction do?
Links to other year groups	Y5 Eat the Seasons	Y4 Burps, Bottoms and Bile	Y6 Darwin's Delight	Y6 Hola Mexico	Y5 Scream Machines
National Curriculum statement	Pupils should be taught to: 1. identify and describe the functions of different parts of flowering plants: roots,	Pupils should be taught to: 1. identify that animals, including humans, need the right types and amount of nutrition, and that they cannot	Pupils should be taught to: 1. compare and group together different kinds of rocks on the basis of their appearance and	Pupils should be taught to: 1. recognise that they need light in order to see things and that dark is the absence of light.	Pupils should be taught to: 1. compare how things move on different surfaces.

	<p>stem/trunk, leaves and flowers.</p> <p>2. 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.</p> <p>3. investigate the way in which water is transported within plants.</p> <p>4. explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>make their own food; they get nutrition from what they eat.</p> <p>2. identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p>simple physical properties.</p> <p>2. describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>3. recognise that soils are made from rocks and organic matter.</p>	<p>2. notice that light is reflected from surfaces.</p> <p>3. recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>4. recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>5. find patterns in the way that the size of shadows change.</p>	<p>2. notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>3. observe how magnets attract or repel each other and attract some materials and not others.</p> <p>4. 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>5. describe magnets as having two poles</p> <p>6. predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>
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Year 4 Science

	Living things and their habitats	Animals including humans	States of matter	Sound	Electricity
Topic included in	Blue Abyss	Burps, Bottoms and Bile	Traders and Raiders	I am warrior	Vista
Investigation links	How does pollution affect habitats? Are all sea creatures the same?	How does toothpaste protect teeth? What is spit for?	How did Vikings dye their clothes? Are all liquids runny?	How can we change sound? How far can sound travel? Can we block sound?	How does a plug work? Can you make a circuit from play dough? What conducts electricity?
Links to other year groups	Y3 Predators Y6 Darwin's Delight	Y3 Predators Y6 Blood Heart	Y5 Fallen Fields		Y6 A child's war
National Curriculum statement	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Recognise that living things can be grouped in a variety of ways. 2) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. 3) Recognise that environments can change and that this can sometimes pose dangers to living things. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Describe the simple functions of the basic parts of the digestive system in humans. 2) Identify the different types of teeth in humans and their simple functions. 3) Construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Compare and group materials together, according to whether they are solids, liquids or gases. 2) 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). 3) Identify the part played by evaporation and condensation in the 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Identify how sounds are made, associating some of them with something vibrating. 2) Recognise that vibrations from sounds travel through a medium to the ear. 3) Find patterns between the pitch of a sound and features of the object that produced it. 4) Find patterns between the volume of 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Identify common appliances that run on electricity. 2) Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. 3) 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.

			water cycle and associate the rate of evaporation with temperature.	a sound and the strength of the vibrations that produced it. 5) Recognise that sounds get fainter as the distance from the sound source increases.	4) Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. 5) Recognise some common conductors and insulators, and associate metals with being good conductors.
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Year 5 Science					
	Living things and their habitats	Animals including humans	Properties and changes of materials	Earth and space	Forces
Topic included in	Eat the Seasons	Pharaohs	Fallen Fields	Stargazers	Scream Machine
Investigation links	How many potatoes can you grow? Do dock leaves cure a sting? How do worms reproduce?	Do we slow down as we get older?	Do all solids dissolve? Which materials conduct heat?	How do we know the Earth is round? Can we track the Sun? How do rockets lift off? Why do planets have craters? How does the Moon move?	How do levers help us? Why are zip-wires so fast? What do pulleys do?
Links to other year groups	Y4 Blue Abyss Y6 Darwin's Delight	Y3 Predators Y4 Burps, Bottoms and Bile Y6 Blood Heart	Y4 Traders and Raiders	Y1 Moon Zoom	Y3 Mighty Metals

<p>National Curriculum statement</p>	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. 2) Describe the life process of reproduction in some plants and animals. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Describe the changes as humans develop to old age. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) 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. 2) Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. 3) Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. 4) Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. 2) Describe the movement of the Moon relative to the Earth. 3) Describe the Sun, Earth and Moon as approximately spherical bodies. 4) Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. 2) Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. 3) Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
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			<p>metals, wood and plastic.</p> <p>5) Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>6) 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.</p>		
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Year 6 Science					
	Living things and their habitats	Animals including humans	Evolution and inheritance	Light	Electricity
Topic included in	Darwin's Delights	Blood Heart	Darwin's Delights	Hola Mexico	A child's war
Investigation links	Where do wild plants grow best? How many worms are underground?	How does blood flow? What's in blood? What can your heart rate tell you?	How have eyes evolved? How does inheritance work?	Can you turn a light down? How does light travel? Can fruit light a bulb? Can you see through it?	Can you send a coded message?
Links to other year groups	Y4 Blue Abyss Y5 Eat the Seasons	Y3 Predators Y5 Pharaohs		Y3 Gods and Mortals	Y4 Vista

<p>National Curriculum statement</p>	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. 2) Give reasons for classifying plants and animals based on specific characteristics. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. 2) Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. 3) Describe the ways in which nutrients and water are transported within animals, including humans. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. 2) Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. 3) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Recognise that light appears to travel in straight lines. 2) 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. 3) 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. 4) Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	<p>Pupils should be taught to:</p> <ol style="list-style-type: none"> 1) Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. 2) 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. 3) Use recognised symbols when representing a simple circuit in a diagram.
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