

## Progression of Skill & Knowledge in Science

### Biology:

	Animals, Including Humans	Evolution and Inheritance	Plants	Living Things and Their Habitats
Year 1	✓		✓	
Year 2	✓		✓	✓
Year 3	✓		✓	
Year 4	✓		Part Objective	✓
Year 5	✓		Part Objective	✓
Year 6	✓	✓		✓

### Chemistry:

	Materials	Rocks and Fossils	States of Matter
Year 1	✓		
Year 2	✓		
Year 3		✓	
Year 4			✓
Year 5	✓		
Year 6			

### Physics:

	Forces and Magnets	Sound	Light	Electricity	Space and Seasonal Variation
Year 1					✓
Year 2					
Year 3	✓		✓		
Year 4		✓		✓	
Year 5	✓				✓
Year 6			✓	✓	

## Progression in Biology

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Animals, Including Humans</b></p>	<p>Explore the natural world around them, making observations and drawing pictures of <b>animals</b> and plants.</p> <p>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.</p>	<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>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 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>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>Describe the changes as humans develop to old age (<b>Puberty – Links to SRE</b>)</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>

<b>Vocabulary</b>	Animal, pet, names of common farm animals, names of common pets, names of common zoo animals, Names of body parts (head, shoulders, knees, toes, leg, hand, foot etc.), food, drink, water	Mammal, fish, reptile, bird, amphibian, herbivore, carnivore, omnivore, nocturnal, human, pet, senses	Healthy, diet, exercise, nutrients, hygiene, vegetables, fruit, carbohydrates, meat, dairy, grow, sleep, offspring	Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, skull, ribs, spine, joints	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, pancreas, nutrients, large intestine, rectum, anus, prey, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, food chain, organ, consumer	Life-cycle, reproduce, sexual reproduction, sperm, egg, live young, puberty, adolescence, foetus, infant, child, adult	Heart, pulse (rate), pumps, blood, blood vessels, transported, lungs, oxygen, drugs, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise
<b>Evolution and Inheritance</b>							<ul style="list-style-type: none"> <li>• Recognise that living things have changed over time and that their 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 that the adaption may lead to evolution.</li> </ul>
<b>Vocabulary</b>							Evolution, offspring, sexual reproduction, variation, suited, adaptation, inheritance, environment, characteristics, species, habitat, fossils, natural selection, DNA, organism, climate

<p><b>Plants</b></p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and <b>plants</b>.</p> <p>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.</p>	<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>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>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>Explore the requirements of plant 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 role of flowers in the life-cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>	<ul style="list-style-type: none"> <li>Partially linked to 'Living things and Their Habitats' objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the life process of reproduction in some plants and animals. <i>(Linked to life-cycles in Living Things and Their Habitats)</i></li> </ul>	
<p><b>Vocabulary</b></p>	<p>Plant, names of some parts of plants (flower, leaf / leaves, stem, roots), names of common plants, vegetable names, fruit names, tree, trunk, branch, soil</p>	<p>Plant, deciduous, evergreen, trunk, root, branch, twig, stem, seed, blossom, wild plants, garden plants, weeds, flowers, fruit, bulb, leaf, leaves</p>	<p>Plant, roots, bulb, seeds, blossom, stem, trunk, leaves, woodland, deciduous, evergreen</p>	<p>Leaves, photosynthesis, deciduous, evergreen, seed, seedling, seasonal change, roots, pollen, pollination, seed formation, seed dispersal, germination, flowers</p>		<p>Life-cycle, reproduce, sexual reproduction, sperm, egg, fertilises, plantlets, runners, asexual reproduction, bulbs, cuttings, pollination</p>	
<p><b>Living Things and Their Habitats</b></p>	<p>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.</p>		<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</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</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</li> </ul>	<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-</li> </ul>

	<i>(Looking at where creatures can be found – e.g. fish in water).</i>		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. <ul style="list-style-type: none"> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</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>		of living things in their local and wider environment. <ul style="list-style-type: none"> <li>Recognise that environments can change and that this can sometimes pose dangers to living things <a href="#">(Linked to Plants)</a>.</li> </ul>	some plants and animals <a href="#">(Linked to Plants)</a> .	organisms, plants and animals. <ul style="list-style-type: none"> <li>Give reasons for classifying plants and animals based on specific characteristics.</li> </ul>
<b>Vocabulary</b>	Home, food, living, animal, plant, drink, water, bug, spider, worm, fly, bee, wasp, names of common animals (e.g. squirrel)		Living, non-living, dead, animal, habitat, food chain, prey, predator, carnivore, herbivore, omnivore, human, micro-habitat		Classification key, leaf arrangement, leaf edge, simple leaves, compound leaves, leaf veins, environment, habitat, human impact, species, life process, seasonal change, hibernate, migration	Life-cycle, reproduce, sexual reproduction, sperm, egg, fertilises, live young, metamorphosis, plantlets, runners, asexual reproduction, bulbs, cuttings, pollination	Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, spiders (arachnids), insects, snails, worms, flowering plants, non-flowering plants, living things, environment, animals, classify / classification key, micro-organisms, species, fungi, monera, bacteria, Protista, plant
<b>Scientists</b>  <b>Biographical Studies</b>  <b>House Teams</b>		<b>Steve Irwin</b> (1962-2006) Australian television personality, environmentalist and wildlife expert nicknamed 'The Crocodile Hunter.'	<b>Joan Beauchamp Procter</b> (1897-1931) British zoologist who discovered new species of reptiles and designed the most	<b>Beatrix Potter</b> (1866-1943) English writer and natural scientist, known for writing Peter Rabbit, but also for her detailed work in mycology (fungi).	<b>David Attenborough</b> (1926-Present) English broadcaster and natural historian, known for his work within the BBC's Natural History Unit, fronting productions	<b>Maria Sibylla Merian</b> (1647-1717) German scientific illustrator and entomologist, who classified many new insect species and carefully illustrated the	<b>Charles Darwin</b> (1809-1882) English naturalist, geologist and scientist, who sailed to the Galapagos Islands on HMS Beagle. Whilst there, he developed

		<p><b>Steve Backshall</b> (1973-Present) English naturalist and television personality known for BBC's Deadly 60 series.</p>	<p>advanced reptile house of her time.</p>		<p>such as Planet Earth II and Blue Planet II.</p> <p><b>Marjory Stoneman Douglas</b> (1890-1998) American writer and conservationist whose work led to the creation of the Everglades National Park. She provided great insight into wetland ecosystems and was also involved in the women's rights (suffrage) movement.</p> <p><b>Mary Agnes-Chase</b> (1869-1963) American botanist and suffragist, who not only fought for women's rights, but became the world's greatest agrostologist (grass expert), identifying thousands of species around the world.</p>	<p>metamorphosis of the butterfly.</p>	<p>his theories of natural selection and evolution.</p> <p><b>Alfred Russel-Wallace</b> (1823-1913) British naturalist, explorer, anthropologist and biologist, who alongside Charles Darwin, independently conceived the theory of evolution.</p> <p><b>Rosalind Franklin</b> (1920-1958) English chemist and x-ray crystallographer whose work was central to understanding the structure of DNA.</p> <p><b>Carl Linnaeus</b> (1707-1778) Swedish biologist who created the binomial naming system for living things. His work began to link together the 'tree of life', showing how species are related to one another.</p> <p><b>Jane Goodall</b> (1934-Present) English primatologist, who is considered the world's greatest expert on Chimpanzee behaviour. She is highly active in conservation efforts.</p>
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## Progression in Chemistry

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Materials</b>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>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.</p> <p><i>(Exploring different objects and materials through play, building with them and manipulating them).</i></p>	<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 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>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>Compare and group together everyday materials based on evidence from comparative and fair tests, 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</li> </ul>	

						<p>are reversible changes.</p> <ul style="list-style-type: none"> <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>	
<b>Vocabulary</b>	<p>Names of basic objects and some materials – e.g. rock, sand, soil.</p> <p>Descriptions of properties – hard, soft, squishy etc.</p>	<p>Rough, property, smooth, material, object, hard, soft, stretchy, shiny, dull, waterproof, absorbent, bendy, stiff</p>	<p>Material, properties, squashing, bending / flexible, twisting, stretching, hard, soft, rough, smooth, waterproof, absorbent, transparent, translucent, opaque.</p>			<p>Thermal conductor, thermal insulator, electrical conductor, electrical insulator, state of matter (solid, liquid, gas), object, material, property (hard / soft, transparent, translucent, opaque, permeable, impermeable, flexible, still, malleable, smooth, rough), mixture, dissolve, solution, filter, sieve, reversible change, irreversible change, burning, rusting, change of state, solubility</p>	
<b>Rocks and Fossils</b>	<p>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.</p> <p><i>(Exploring the outdoor areas – rocks, sand pits, soil for growing plants etc.)</i></p>			<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</li> </ul>			



				rocks and organic matter.			
<b>Vocabulary</b>	Rock, soil, brick			Rock / Stone, pebble, boulder, grain, crystals, layers, organic matter, permeable (absorbs water), impermeable (waterproof), soil, fossil, sedimentary rocks, metamorphic rocks, magma			
<b>States of Matter</b>	<p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p><i>(Everyday experiences – e.g. chocolate melting in hands, ice forming on cold days etc.)</i></p>				<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>		
<b>Vocabulary</b>	Water, air, hard, cold, hot, warm, snow, ice, sun.				Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, condensation, temperature, water cycle, water vapour, precipitation, surface run-off		

<p><b>Scientists</b></p> <p><b>Biographical Studies</b></p> <p><b>House Teams</b></p>			<p><b>John Dunlop</b> (1840-1921) Scottish inventor and veterinary surgeon who developed pneumatic rubber tyre for bicycles and cars.</p>	<p><b>Mary Anning</b> (1799-1847) English fossil collector and palaeontologist who showed fossils to be impressions of extinct creatures (usually dinosaurs). She found the first complete ichthyosaur skeleton.</p> <p><b>Katia Kraft</b> (1942-1991) French geologist and volcanologist whose work helped develop volcano evacuation procedures.</p>		<p><b>Marie Curie</b> (1867-1934) Polish (later French) physicist and chemist who conducted pioneering research into radiation, discovered two elements (Polonium and Radium) and created the first x-ray trucks during World War I.</p>	
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**Progression in Physics**

	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>Forces and Magnets</b>	<i>(Pushing and pulling objects through play on different surfaces)</i>			<ul style="list-style-type: none"> <li>• Compare how things move on different surfaces.</li> <li>• Notice that some forces need contact between two objects, but magnetic forces can act at a difference.</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 two poles.</li> <li>• Predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul>		<ul style="list-style-type: none"> <li>• Explain the unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</li> <li>• Identify the effect 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>	

<b>Vocabulary</b>				Forces, push, pull, contact force, non-contact force, magnet (bar, button, ring, horseshoe), attract, repel, magnetic, magnetic strength, pole, iron, surface, friction		Force, gravity, Earth, air resistance, water resistance, simple machines, friction, levers, pulleys, gears, gears, parachute	
<b>Sound</b>	<i>(Listening to different sounds and what they are like – e.g. bird song, car engine etc.)</i>				<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 strength of the vibrations that produced it.</li> <li>• Recognise that sounds get fainter as the distance from the sound source increases.</li> </ul>		
<b>Vocabulary</b>					Sound, source, vibrate / vibration, travel, pitch (high/low), volume, faint, loud, insulation, ear, sound wave, frequency		

<b>Light</b>	<i>(Observing turning on lights when it is dark, rainbows in the sky, longer/shorter daylight lengths, shadows on sunny days).</i>			<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 the 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>• 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>
<b>Vocabulary</b>				Light, light source, dark/darkness, transparent, translucent, opaque, shiny surface, matt surface, shadow, reflect, mirror, sunlight, dangerous			Visible light rays, primary light source, secondary light source, dark/darkness, transparent, translucent, opaque, shiny surface, matt surface, shadow, reflect, straight lines, sunlight, dangerous, filters

<b>Electricity</b>	<i>(Knowing that some things need batteries or need to be plugged into the mains in order for them to work).</i>				<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>• 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>
<b>Vocabulary</b>					Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell/battery, positive/negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, conductor, insulator, symbol		Electricity, series circuit, complete circuit, cell/battery, circuit diagram, volts/voltage, bulb, switch, buzzer, motor, electrical symbols, electrical conductor, electrical insulator, socket, plug, fuses, component

<b>Space &amp; Seasonal Change</b>	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	<ul style="list-style-type: none"> <li>• Observe changes across the four seasons.</li> <li>• Observe and describe weather associated with the seasons and how day length varies.</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>	
<b>Vocabulary</b>	Season, spring, summer, autumn, winter, hot, cold, snow, sunny, ice, leaves, rain, wind	Season, spring, summer, autumn, winter, day, night, cold, sleet, hail, snow, weather, weather forecast, weather symbols				Phases, rotation, orbit, planets, seasons, star, hemisphere, moon, poles, space, reflect, solar system	
<b>Scientists</b>  <small>Biographical Studies</small>  <small>House Teams</small>		<b>Robert Fitzroy</b> (1805-1865) English captain of HMS Beagle, the ship on which Charles Darwin travelled to the Galapagos Islands. He was a meteorologist, using his knowledge of weather helped him to establish the Met Office.		<b>Michael Faraday</b> (1791-1867) English scientist who studied electromagnetism and electrochemistry.	<b>Hertha Ayrton</b> (1854-1923) British engineer, mathematician and inventor who developed the electric arc, establishing a better understanding of electrical currents and improved street lighting. She was the first woman to be accepted into the Institution of Electrical Engineers.	<b>Galileo Galilei</b> (1564-1642) Italian astronomer, physicist and engineer. Proved the heliocentric model of the solar system, mapped the Moon, discovered the four largest (Galilean) moons of Jupiter and observed Saturn's rings after perfecting the modern telescope.  <b>Katherine Johnson</b>	<b>Isaac Newton</b> (1642-1726) English mathematician, physicist and astronomer, known for developing his laws of motion, the theory of gravity and creating the calculus branch of mathematics. He also worked with light, using prisms to split white light into the visible spectrum (rainbow).

					<p><b>Benjamin Franklin</b> (1706-1790) American founding father (politician), scientist and inventor, who worked on electricity, identifying positive and negative charges using lightning rods.</p>	<p>(1918-2020) African-American former teacher, mathematician and physicist, whose calculations guided the NASA Mercury and later Apollo Moon missions. Her work broke down both gender and race barriers.</p> <p><b>Nicholas Copernicus</b> (1473-1543) Polish mathematician and astronomer who developed the heliocentric model (Sun-centred) of the solar system.</p> <p><b>Valentina Tereshkova</b> (1937-Present) Russian cosmonaut, engineer and politician, famous for being the first woman in space.</p> <p><b>Neil Armstrong</b> (1930-2012) American astronaut, test pilot and aeronautical engineer who was the first human to set foot upon the surface of the Moon as part of NASA's Apollo 11 programme.</p>	
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## Progression in Working Scientifically

	<b>EYFS</b>	<b>Year 1 (ECM KS1 Intermediate)</b>	<b>Year 2 (NC KS1)</b>	<b>Year 3 (ECM LKS2 Intermediate)</b>	<b>Year 4 (NC LKS2)</b>	<b>Year 5 (ECM UKS2 Intermediate)</b>	<b>Year 6 (NC UKS2)</b>
<b>Enquire</b>	<i>(Asking simple questions about their everyday experiences).</i>	Asking simple questions and with help, find out answers to them.	Asking simple questions and recognising that they can be answered in different ways.	Be guided to ask more relevant questions and become aware of different types of scientific enquiries to answer them.  Engage in simple practical enquiries, comparative and fair tests they have had some help with setting up.	Ask relevant question and use different types of scientific enquiries to answer them.  Set up simple practical enquiries, comparative and fair tests.	Plan with support different types of scientific enquiries to answer questions, begin to recognise variables and where necessary, how to control these.  Use test results to make predictions for other comparative and fair tests.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.  Use test results to make predictions to set up further comparisons and fair tests.
<b>Explore</b>	Explore the natural world around them, making observations.	Observe, using simple equipment.  Perform simple tests with help.  Can identify and classify with support.	Observe closely, using simple tests.  Identify and classify.	Make careful observations and begin to realise the need for more accurate measurements – example: mm instead of cm using standard units, using a range of equipment including thermometers and data loggers.	Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment including thermometers and data loggers.	Take measurements, using a range of scientific equipment, with increasing accuracy.  Become aware of precision and the need to obtain similar results, taking repeat readings when appropriate.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
<b>Record</b>	Drawing pictures of animals and plants.	Know that gathering and recording data can help in answering questions; with support, gather and record data.	Gather and record data to help in answering questions.	Gather and record data in different ways to help in answering questions.  Record findings using simple scientific language, drawings, labelled diagrams and tables; develop use of bar charts and keys with appropriate support.	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.	Record data and results using scientific diagrams and labels, classification keys and bar graphs.  Become familiar with and begin to develop use of scatter graphs and line graphs.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar charts and line graphs.

<p><b>Explain</b></p>	<p>Know the similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</p> <p>Understanding some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Use their observations to try to answer their questions.</p>	<p>Use their observations and ideas to suggest answers to questions.</p>	<p>Report on findings from enquiries, including oral and written explanations, displays or presentations.</p> <p>Use results to draw simple conclusions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas.</p> <p>Use straightforward scientific evidence to answer questions.</p>	<p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use results to draw simple conclusions,, make predications for new values, suggest improvements and raise further questions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use straightforward scientific evidence to answer questions or support their findings.</p>	<p>Report and present findings from enquiries, including conclusions and explanations of results in oral and written forms such as displays and other presentations.</p> <p>Identify scientific evidence that supports their ideas.</p> <p>Become aware of simple causal relationships and be able to explain some.</p> <p>Begin to develop understanding that not all results can be trusted.</p>	<p>Report ad present findings from enquiries, including conclusions, causal relationships or, and degree of trust in, results in oral and written forms such as displays and other presentations.</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p>
<p><b>Vocabulary</b></p>	<p>Look, watch, listen, hear, smell, taste, feel, touch, see, draw, say, tell</p>	<p><b><u>KS1 (Y1-2)</u></b></p> <p>Question, Answer, Observe, Observing, Equipment, Identify, Classify, Sort, Group, Record (Diagram / Chart), Map, Data, Compare, Contrast, Describe, Biology, Chemistry, Physics</p>		<p><b><u>LKS2 (Y3-4)</u></b></p> <p>Research (relevant questions, scientific enquiry), Comparative Test, Fair Test, Systematic Observation, Careful Observation, Accurate Measurements, Equipment (Thermometer, Data Logger), Date (Gather, Record), Classify, Present, Record (Drawings, Labelled Diagrams, Keys, Bar Charts, Tables), Explanations (Oral and Written), Conclusion, Prediction, Differences, Similarities, Changes, Evidence, Improve, Secondary Source, Guides, Construct, Interpret</p>		<p><b><u>UKS2 (Y5-6)</u></b></p> <p>Plan, Variables, Measurements, Accuracy, Precision, Repeat Readings, Record Data (Scientific Diagrams, Labels, Classification Keys, Tables, Scatter Graphs, Bar Graph, Line Graph), Predictions, Comparative Test, Fair Test, Report and Present (Conclusions, Causal Relationships, Explanations, Degree of Trust, Oral and Written), Display, Presentation, Evidence (Support, Refute, Ideas, Arguments), Identify, Classify, Describe, Patterns, Systematic, Quantitative Measurements</p>	

<b>EYFS Understanding the World – The Natural World (2020 Curriculum)</b>
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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.
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