

Overview of Science Curriculum

	AUTUMN TERM		SPRING TERM		SUMMER TERM	
Nursery		<p>To have a sense of own immediate family and relations.</p> <p>To notice detailed features of objects in their environment.</p> <p>To operate mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car.</p> <p>Ourselves</p>	<p>To show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</p> <p>To know how to operate simple equipment, e.g. turns on CD player and uses remote control.</p> <p>Light and Dark Sound and Hearing</p>	<p>To show interest in different occupations and ways of life.</p> <p>To show interest in the lives of people who are familiar to them.</p> <p>To know that information can be retrieved from computers</p> <p>Pushes and Pulls</p>	<p>To develop an understanding of growth, decay and changes overtime.</p> <p>To comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.</p> <p>Growing Plants</p>	<p>To remember and talk about significant events in their own experiences.</p> <p>To recognise and describe special times or events for family or friends.</p> <p>To show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</p> <p>Sorting Materials</p>
Rec./Yr1	Science - Animals including humans Seasons and Weather		Science - Seasonal Change	Science - Seasons and Weather	Science - Everyday Materials	Science - Plants - seasonal change
	At the end of Autumn term a Y1 Scientist can...		At the end of Spring term a Y1 Scientist can...		At the end of Summer term a Y1 Scientist can...	
Y1	Biology Animals including humans /Seasonal Changes <ul style="list-style-type: none"> • Identify & compare common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common 		Physics Everyday Materials/Seasonal changes <ul style="list-style-type: none"> • Observe changes across the 4 seasons • Observe weather associated with changes of season/length of day Chemistry		Biology Plants/Seasonal changes <ul style="list-style-type: none"> • Identify and name a variety of common and wild and garden plants including deciduous and evergreen trees 	

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	<p>animals that are carnivore, herbivore and omnivore</p> <ul style="list-style-type: none"> Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) Identify & name and label basic body parts and say which part is associated with each sense. 	<ul style="list-style-type: none"> Distinguish between objects & the material from which it is made Identify & name common materials. E.g. wood, plastic, glass, metal. Water and rock Describe simple properties of some materials. Compare & classify materials and their properties 	<ul style="list-style-type: none"> Identify basic plant/trees parts (roots, leaves, flowers etc.) 	
	At the end of Autumn term a Y2 Scientist can...	At the end of Spring term a Y2 Scientist can...	At the end of Summer term a Y2 Scientist can...	
Y2	<p>Chemistry Uses of everyday materials</p> <ul style="list-style-type: none"> Identify and compare uses of different materials e.g. wood, metal, plastic, glass, brick, rock, paper and cardboard <p>Find out how the shapes of solid objects made from different materials can be changed by squashing, bending, twisting and stretching</p>	<p>Biology Living things and their habitats</p> <ul style="list-style-type: none"> Describe how animals obtain their food from plants and other animals, using the idea of simple food chains, and identify and name the different sources of food Identify and name a variety of plants and animals in their habitats, including micro-habitats 	<p>Biology Plants</p> <ul style="list-style-type: none"> Differentiate living, dead and non-living Observe and describe how seeds and bulbs grow into mature plants. Growing plants (water, light, warmth). 	<p>Biology Animals including humans</p> <ul style="list-style-type: none"> Basic needs of animals & offspring. Describe the importance for humans of exercise, right food and hygiene

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	At the end of Autumn term a Y3 Scientist can...		At the end of Spring term term a Y3 Scientist can...		At the end of Summer term a Y3 Scientist can...
Y3	<p>Biology Animals including Humans 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</p>	<p>Physics Magnets and Springs</p> <ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need contact between two objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as 	<p>Physics Sound</p> <ul style="list-style-type: none"> • 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 • find patterns between the volume of a sound and the strength of the vibrations that produced it • recognise that sounds get fainter as the distance from the sound source increases. 	<p>Biology Helping plants to grow well 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 ☐☐ investigate the way in which water is transported within plants ☐☐ explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>Physics Light</p> <ul style="list-style-type: none"> • 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 • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked by a solid object • find patterns in the way that the size of shadows change.

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		having two poles				
	At the end of Autumn term a Y4 Scientist can...		At the end of Spring term term a Y4 Scientist can...		At the end of Summer term a Y24 Scientist can...	
Y4*	<p>Biology Animals including Humans</p> <ul style="list-style-type: none"> 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 identify that humans and some other animals have skeletons and muscles for support, protection and movement. construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Chemistry Rocks, Soils & Fossils</p> <ul style="list-style-type: none"> 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 when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter. 	<p>Biology Living Things and their Habitats</p> <ul style="list-style-type: none"> 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 environment recognise that environments can change and that this can sometimes pose dangers to living things. 	<p>Chemistry states of matter</p> <ul style="list-style-type: none"> 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 this happens in degrees Celsius (°C) 	<p>Chemistry States of Matter</p> <ul style="list-style-type: none"> identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<p>Physics Electricity</p> <ul style="list-style-type: none"> 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 whether or not the lamp is part of a complete loop with a battery 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>recognise some</p>

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						common conductors and insulators, and associate metals with being good conductors.
	At the end of Autumn term a Y5 Scientist can...		At the end of Spring term a Y5 Scientist can...		At the end of Summer term a Y5 Scientist can...	
Y5	Biology Living Things and their habitats <ul style="list-style-type: none"> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals. identify how animals and plants are adapted to suit their habitats. 	Physics Forces <ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	Biology Living Things and their habitats <p style="text-align: center;">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> <ul style="list-style-type: none"> give reasons for classifying plants and animals based on specific characteristics 	Biology Evolution and Inheritance <ul style="list-style-type: none"> recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents 	Biology Animals including Humans <ul style="list-style-type: none"> describe the changes as humans develop to old age. identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood 	Biology Animals including Humans <ul style="list-style-type: none"> recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function describe the ways in which nutrients and water are transported within animals, including humans.

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	At the end of Autumn term a Y6 Scientist can...		At the end of Spring term term a Y6 Scientist can...		At the end of Summer term a Y6 Scientist can...	
Y6*	<p>Physics Earth and Space</p> <ul style="list-style-type: none"> Describe the movement of the earth and other planets relative to the sun and solar system. Describe the movement of the earth relative to the moon. Use the idea of the earth's rotation to explain day and night and the apparent movement of the sun. 	<p>Physics Light</p> <ul style="list-style-type: none"> Light; recognise that light appears to travel in straight lines 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 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 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	<p>Chemistry Properties and Changes of Materials</p> <ul style="list-style-type: none"> 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 this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 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 know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and 	<p>Physics Electricity</p> <ul style="list-style-type: none"> 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 whether or not the lamp is part of a complete loop with a battery recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit recognise some common conductors and insulators, and associate metals with being good conductors. 		

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			<p>changes of state are reversible changes</p> <ul style="list-style-type: none">• 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.	
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NB Year 3 and Year 4* are following the Year 3 Science curriculum. The mixed classes are now on a 2 year cycle to ensure that they will receive the entire curriculum.

Year 5 and Year 6* are following the Year 5 Science curriculum. The mixed classes are now on a 2 year cycle to ensure that they will receive the entire curriculum.