

## Science Overview

	Autumn		Spring		Summer	
Year 1	PHYSICS + BIOLOGY	CHEMISTRY	BIOLOGY	PHYSICS + BIOLOGY	BIOLOGY	PHYSICS + BIOLOGY
	<p><b>Seasonal changes</b> Observe changes across the seasons, including weather and variation in day length</p> <p><b>Plants</b> Identify and name common wild and garden plants, including deciduous and evergreen trees; describe the basic structure of trees</p>	<p><b>Everyday materials</b> Distinguish between an object and its material; identify and name everyday materials; describe simple properties of materials and group objects according to these</p>	<p><b>Animals, including humans</b> Identify and name a variety of common animals and their structures: fish, amphibians, reptiles, birds and mammals, including pets;  identify and name carnivores, herbivores and omnivores</p>	<p><b>Seasonal changes</b> Observe changes across the seasons, including weather and variation in day length</p> <p>* Plants Identify and name common wild and garden plants, including deciduous and evergreen trees</p> <p>*Forces Notice and describe how things move. Noticing fast and slower.</p> <p>*Sound observe and name a variety of sources of sound.</p>	<p><b>Animals, including humans</b> 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><b>Seasonal changes</b> Observe changes across the seasons, including weather and variation in day length</p> <p><b>Plants</b> Identify and name common wild and garden plants, including deciduous and evergreen trees; describe the basic structure of a variety of common flowering plants</p>

	Autumn	Spring	Summer			
Year 2	CHEMISTRY	BIOLOGY	BIOLOGY	BIOLOGY	BIOLOGY	
	<p><b>Uses of everyday materials</b> Identify and compare the suitability of a variety of everyday materials for particular uses;</p> <p>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p><b>Plants</b> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy;</p> <p>observe and describe how seeds and bulbs grow into mature plants.</p>	<p><b>Plants</b> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy;</p> <p>observe and describe how seeds and bulbs grow into mature plants.</p> <p><b>*Electricity</b> Construct a simple circuit and identify things that run on electricity.</p>	<p><b>Living things and their habitats</b> Explore and compare the differences between things that are living, no longer alive, and that have never been alive;</p> <p>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;</p> <p>identify and name a variety of plants and animals in their habitats</p>	<p><b>Living things and their habitats</b> Identify and name a variety of plants and animals in their habitats, including micro-habitats;</p> <p>describe how animals obtain their food from plants and other animals using the idea of a simple food chain.</p>	<p><b>Animals, including humans</b> Notice that animals, including humans, have offspring which grow into adults;</p> <p>find out about and describe the basic needs of animals, including humans;</p> <p>describe the importance for humans of exercise, eating the right amounts of different foods.</p>

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<u>Year</u> <u>3</u>	PHYSICS	PHYSICS	CHEMISTRY	BIOLOGY	BIOLOGY
	<p><b>Light</b> Recognise that they need light in order to see things, and that dark is the absence of light;</p> <p>notice that light is reflected from surfaces;</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 an opaque object;</p> <p>find patterns in the way that the size of shadows change</p>	<p><b>Forces and Magnets</b> Compare how things move on different surfaces;</p> <p>notice that some forces need contact between two objects, but 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</p>	<p><b>Rocks and Soils</b> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties;</p> <p>describe in simple terms how fossils are formed when things that have lived are trapped within rock;</p> <p>recognise that soils are made from rocks and organic matter.</p>	<p><b>Flowering plants</b> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers; explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal;</p> <p>explore the requirements of plants for life and growth and how they vary from plant to plant;</p> <p>investigate the way in which water is</p>	<p><b>Animals, including humans</b> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food;</p> <p>they get nutrition from what they eat; identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>

		<p>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>			transported within plants.	
	<b>Autumn</b>		<b>Spring</b>		<b>Summer</b>	
<b>Year 4</b>	<b>BIOLOGY</b>	<b>BIOLOGY/ CHEMISTRY</b>	<b><u>CHEMISTRY</u></b>	<b>PHYSICS</b>	<b>PHYSICS</b>	<b>BIOLOGY</b>
	<p><b>Living things and their habitats</b></p> <p>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>	<p><b>Living things and their habitats ( 3 lesson)</b></p> <p>Recognise that living things can be grouped in a variety of ways;</p> <p>explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>; recognise that environments can change and that this</p>	<p><b>States of matter</b></p> <p>and group materials together, according to whether they are solids, liquids or gases</p> <p>; 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> <p>; identify the part played by evaporation and condensation in the water cycle associate the rate of</p>	<p><b>Electricity</b></p> <p>Identify common appliances that run on electricity;</p> <p>construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers;</p> <p>identify whether or not a lamp will light in a simple series circuit, based on</p>	<p><b>Sound</b></p> <p>Identify how sounds are made, associating some of them with something vibrating;</p> <p>recognise that vibrations from sounds travel through a medium to the ear;</p> <p>find patterns between the pitch of a sound and features of the object that produced it</p>	<p><b>Animals, including humans</b></p> <p>Describe the simple functions of the basic parts of the digestive system in humans;</p> <p>identify the different types of teeth in humans and their simple functions;</p> <p>construct and interpret a variety of food chains, identifying</p>

		<p>can sometimes pose dangers to living things</p> <p><b>States of matter (3 lesson)</b> Compare and group materials together, according to whether they are solids, liquids or gases;</p> <p>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> <p>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>evaporation with temperature.</p>	<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>producers, predators and prey.</p>
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Year 5	BIOLOGY	PHYSICS	CHEMISTRY	PHYSICS	BIOLOGY
	<p><b>Living things and their habitats</b> Describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird;</p> <p>describe the life process of reproduction in some plants and animals, including the comparison of those in the local environment with those in other parts of the world</p>	<p><b>Forces</b> Explain that unsupported objects fall towards the Earth because of 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><b>Properties and changes of materials</b> Compare and group together everyday materials on the basis of their properties;</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;</p> <p>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials;</p> <p>demonstrate that dissolving, mixing and changes of state are reversible changes;</p> <p>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.</p>	<p><b>Earth and Space</b> 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><b>Animals, including humans</b> Describe the changes as humans develop to old age, including changes at puberty</p>

	Autumn		Spring		Summer
Year 6	BIOLOGY	BIOLOGY	BIOLOGY	PHYSICS	PHYSICS
	<p><b>Evolution and Inheritance</b> 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><b>Animals, including humans</b> 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 bodies function;</p> <p>describe the ways in which nutrients and water are transported within animals, including humans</p>	<p><b>Living things and their habitats</b> 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</p> <p>give reasons for classifying plants and animals based on specific characteristics.</p>	<p><b>Light</b> 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</p>	<p><b>Electricity</b> 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>

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