

# Science Year 1

1A Ourselves	1B Growing plants	1C Sorting and Using Materials	1D Light and Dark	1E Pushes and Pulls	1F Sound and hearing
<p>Animals look different to one another.</p> <p>Animals look different at different ages.</p> <p>Parts of the human body have names.</p> <p>Animals need to be treated with care and sensitivity.</p> <p>Humans have different eye/hair/skin colour and are different sizes.</p> <p>Humans have many similarities.</p> <p>Animals can be grouped.</p> <p>Animals have senses to be aware of the world around them.</p> <p>Humans have five senses.</p> <p>Humans have babies which grow into children then adults.</p> <p>Animals get bigger when they get older.</p> <p>Animals are alive and so move/feed/grow use senses and reproduce.</p>	<p>There are different sorts of plants.</p> <p>Many plants have roots, a stem, leaves and flowers.</p> <p>Living things can be grouped.</p> <p>Plants need water to grow.</p> <p>Plants need light to grow.</p> <p>Plants make seeds which grow into new plants.</p> <p>Roots anchor plants and flowers make seeds.</p> <p>Seeds spread using different methods.</p> <p>Water and warmth help seeds germinate.</p> <p>Water, taken in by the roots, goes up the stem to the leaves, flowers and fruit.</p> <p>Light, water and the correct temperature make plants grow well.</p> <p>Plants need nutrients to grow.</p>	<p>Materials can feel, look, taste, smell or sound different.</p> <p>Materials have names.</p> <p>Materials can be put into groups based on simple observations.</p> <p>Some materials can be found naturally; others have to be made.</p> <p>Properties of a material are used to identify it.</p> <p>Many materials are useful.</p> <p>Choose and use materials on the basis of their properties.</p>	<p>We see with our eyes.</p> <p>Light helps us see things.</p> <p>A variety of sources give out light.</p> <p>Light sources vary in colour and brightness.</p> <p>Without light it is dark.</p> <p>It is dangerous to look at the sun.</p> <p>The sun gives us daylight.</p>	<p>Pushing, pulling and twisting can make objects change shape.</p> <p>Pushes and pulls can make objects move.</p> <p>Pushes and pulls can make objects stop.</p> <p>Objects fall downwards.</p> <p>Pushes and pulls are forces.</p> <p>Pushes and pulls can make objects speed up, slow down or change direction.</p>	<p>Sounds can be nasty or nice.</p> <p>Sounds can be made in a variety of ways.</p> <p>Most objects can be made to make sounds.</p> <p>Sounds can be loud or soft.</p> <p>Sounds are heard when they enter our ears.</p> <p>Sounds can be used to indicate when something is happening or is going to happen.</p> <p>Different objects make different sounds.</p> <p>Sounds can be made by shaking, scraping, plucking, tapping and blowing.</p>

## Science Year 2

<b>2A Health and Growth</b>	<b>2B Plants and animals in the local environment</b>	<b>2C Variation (Environment)</b>	<b>2D Grouping and Changing Materials</b>	<b>2E Forces and Movement</b>	<b>2F Using Electricity</b>
<p>Food, water and exercise help to keep us healthy.</p> <p>Medicines can cure some illness.</p> <p>Eating the right amount of different foods is necessary to stay healthy.</p> <p>Exercise helps to make a healthy body</p> <p>All medicines are drugs, not all drugs are medicines.</p>	<p>Animals get bigger when they get older.</p> <p>Animals are alive and so move/feed/grow use senses and reproduce.</p> <p>There are different sorts of plants.</p> <p>Many plants have roots, a stem, leaves and flowers.</p> <p>Living things can be grouped.</p> <p>Plants need soil to grow.</p> <p>Plants need water to grow.</p> <p>Plants need light to grow.</p> <p>Plants make seeds which grow into new plants.</p>	<p>Living things and their environment need to be cared for.</p> <p>There are different kinds of plants and animals.</p> <p>Identify plants and animals by what they look like.</p> <p>There are different kinds of habitat nearby which need to be cared for.</p> <p>Different plants and animals live in different kinds of places.</p>	<p>Squashing, bending, twisting and stretching can change the shape of objects made from some materials.</p> <p>Some common materials change when they are heated.</p> <p>Heating makes some materials melt into a liquid.</p> <p>Cooling some hot materials reverses the change.</p> <p>Heating changes some material permanently.</p>	<p>Pushing, pulling and twisting can make objects change shape.</p> <p>Pushes and pulls can make objects move.</p> <p>Pushes and pulls can make objects stop.</p> <p>Objects fall downwards.</p> <p>Pushes and pulls are forces.</p> <p>Pushes and pulls can make objects speed up, slow down or change direction.</p>	<p>Many things work by using electricity.</p> <p>Electricity can be dangerous.</p> <p>Batteries produce electricity.</p> <p>Batteries can make bulbs, buzzers and motors work.</p> <p>Electricity travels through wires.</p> <p>A complete circuit allows electricity to flow.</p> <p>A bulb will not work if there is a break in the circuit.</p> <p>Switches can turn devices on and off.</p>

# Science Year 3

<b>3A Teeth and Eating</b>	<b>3B Helping plants grow</b>	<b>3C Characteristics of Materials.</b>	<b>3D Rocks and Soils.</b>	<b>3E Magnets and Springs</b>	<b>3F Light and Shadows.</b>
<p>Teeth help us to chew food.</p> <p>Teeth have to be cared for.</p> <p>Regular and varied exercise is beneficial to health.</p> <p>An adequate and varied diet is beneficial to health.</p>	<p>Plants need water to grow.</p> <p>Plants need light to grow.</p> <p>Plants make seeds which grow into new plants.</p> <p>Roots anchor plants and flowers make seeds.</p> <p>Seeds spread using different methods.</p> <p>Water and warmth help seeds germinate.</p> <p>Water, taken in by the roots, goes up the stem to the leaves, flowers and fruits.</p> <p>Light, water and the correct temperature make plants grow well.</p> <p>Plants need nutrients to grow well.</p>	<p>Properties of a material are used to identify it.</p> <p>Many materials are useful.</p> <p>Choose and use materials on the basis of their properties.</p> <p>Compare and measure hardness, flexibility or strengths of materials.</p> <p>Some materials keep heat in better than others.</p> <p>Some liquids can be boiled to make a gas.</p> <p>Freezing, melting and boiling changes can be reversed.</p> <p>Some materials dissolve in water; others do not.</p>	<p>Rocks and soils can feel and look different.</p> <p>Rocks and soils can be different in different places.</p> <p>Explore the properties of sand and soil and to make comparisons.</p> <p>Sieving helps us to find out more about the sizes of the particles in soil.</p> <p>Some rocks and soils let water through better than others.</p>	<p>Some forces, like magnetism, act at a distance.</p> <p>Magnets and magnetic materials attract each other.</p> <p>Magnets can repel each other.</p> <p>When pushing an object (e.g. bed spring) it pushes back.</p> <p>When pulling an object (e.g. elastic band) it pulls back.</p>	<p>Light cannot pass through some materials and this makes shadows.</p> <p>Recognise that shadows are similar in shape to the objects forming them.</p> <p>The sun appears to move and this causes the shadows to change over the course of a day.</p> <p>Make observations of changes in shadows.</p>

# Science Year 4

<b>4A Moving and Growing</b>	<b>4B Habitats</b>	<b>4C Keeping Warm</b>	<b>4D Solids, Liquids and how they can be separated.</b>	<b>4E Friction</b>	<b>4F Circuits and Conductors</b>
<p>Be able to feel bones.</p> <p>Know that there are bones inside their own body.</p> <p>Skeletons grow as we grow.</p> <p>Skeletons support and protect human's bodies (and some other animals).</p> <p>Muscles help move part of the body.</p> <p>Movement depends on both skeleton and muscle.</p>	<p>Different plants and animals live in different kinds of places.</p> <p>Plants make food; animals eat plants and other animals.</p> <p>The different living conditions found in different habitats suits some plants/animals more than others.</p> <p>Factors such as moisture, light level, soil type, temperature, shelter help to describe a habitat and affect what lives in it.</p> <p>Food chains describe what gets eaten in a habitat.</p> <p>Most food chains begin with a green plant.</p>	<p>Temperature is a measure of how hot or cold objects are and that something hot will cool down and something cold will warm up until it is the same temperature as its surroundings.</p> <p>Use a thermometer to make careful measurements of temperature using standard measures.</p> <p>Some materials keep heat in better than others. (Try these: bubble wrap, sponge sheeting, foil, polystyrene)</p> <p>Some materials keep cold objects cold. (Try these: bubble wrap, sponge sheeting, foil, polystyrene)</p>	<p>Solids have a fixed shape.</p> <p>Liquids take the shape of the container in which they are put in.</p> <p>Solids and liquids cannot be made smaller by squeezing.</p> <p>Filtering helps us separate insoluble materials from water.</p> <p>Evaporation happens when water seems to 'dry up'.</p> <p>Evaporation helps us separate soluble materials from water.</p>	<p>Friction is a force which slows down moving objects.</p> <p>Friction can prevent stationary objects from moving.</p> <p>Objects are pulled towards the centre of the earth by a force of attraction called gravity.</p> <p>Weight is the force due to gravity.</p> <p>Water resistance slows an object moving through water.</p> <p>Air resistance is a force that slows objects moving through the air.</p>	<p>Electricity travels through wires.</p> <p>A complete circuit allows electricity to flow.</p> <p>A bulb will not work if there is a break in the circuit.</p> <p>Switches can turn devices off and on.</p> <p>Drawings and diagrams are a useful way of representing circuits.</p> <p>Conductors let electricity go through them.</p> <p>Some materials are better conductors of electricity than others.</p> <p>Bulb brightness can be used to represent flow of electricity. (more bulbs less light)</p> <p>Changing the type of component can change the flow of electricity.</p> <p>Changing the size of the component can change the flow of electricity.</p>

# Science Year 5

<b>5A Keeping Healthy</b>	<b>5B Life Cycles</b>	<b>5C Gases around us</b>	<b>5D Changing state</b>	<b>5E Earth, Sun and Moon</b>	<b>5F Changing sounds.</b>
<p>An adequate and varied diet is beneficial to health.</p> <p>Regular and varied exercise is beneficial to our health.</p> <p>When we exercise harder our muscles work harder.</p> <p>The heart is protected by the ribs.</p> <p>The heart pumps blood around the body. (heart beat, pulse, pulse rate, artery, vein and muscle)</p> <p>All medicines are drugs but not all drugs are medicines.</p> <p>Tobacco, alcohol and other 'drugs' can be harmful.</p>	<p>Flowering plants reproduce fruits and seeds.</p> <p>Plants make seeds which grow into new plants.</p> <p>The life cycle of flowering plants including pollination, fertilisation, seed production, seed dispersal and germination. E.g. sunflower</p> <p>The life cycle of an animal, insect and humans. E.g. butterfly, ladybird, frog, chicken, pig and humans.</p>	<p>Evaporation happens when water seems to 'dry up'.</p> <p>Evaporation helps us separate soluble materials from water.</p> <p>There are many gases and many of these are important.</p> <p>Gases are formed when liquids evaporate.</p> <p>Gases are different from solids and liquids, they do not maintain their shape and volume.</p> <p>Liquids and gases can flow.</p> <p>Identify and describe differences between a solid, liquid and gas.</p>	<p>Evaporation is when a liquid turns to a gas.</p> <p>Explain 'disappearance' of water in a range of situations as evaporation.</p> <p>Liquids other than water evaporate.</p> <p>Condensation is when a gas turns to a liquid.</p> <p>Condensation is the reverse of evaporation.</p> <p>Melting, freezing, condensing and evaporating are all changes of state which can be reversed.</p> <p>To interpret the water cycle in terms of the processes involved.</p>	<p>The sun appears to move and this causes shadows to change.</p> <p>The sun, moon and earth are all spheres.</p> <p>The moon goes around the Earth in a month.</p> <p>The moon can be seen during the day because the sun's rays reflect off the moon.</p> <p>The Earth and moon go around the sun in one year.</p> <p>The earth spins around its own axis in 24 hours, giving day and night.</p> <p>The sun rises in the East and sets in the West.(Sunrise and Sunset)</p> <p>The earth's place in the solar system.</p> <p>Other planets differences and similarities.</p> <p>The solar system is made up of all the planets that orbit our sun.</p> <p>In addition to planets, the solar system also consists of moons, comets, asteroids, minor planets, dust and gas.</p>	<p>Different objects make different sounds.</p> <p>Sounds can be made by shaking, scraping, plucking, tapping and blowing.</p> <p>Sounds travel away from their source.</p> <p>Sounds get fainter as they get further from the source.</p> <p>The loudness of a sound can be varied.</p> <p>Sounds can be high or low (pitched)</p> <p>Sounds are made when objects vibrate.</p> <p>Understand that not all objects can be seen to vibrate.</p> <p>Vibrations can travel through different materials.</p> <p>Changing the material, tension, thickness or length (of vibrating objects) can alter pitch.</p> <p>The ear is an organ of the body.</p> <p>There are three parts to the ear (the outer, inner and middle)</p> <p>The outer ear is the part that sticks out.</p>

# Science Year 6

<b>6A Interdependence and Adaptation</b>	<b>6B Micro – organisms (<u>short unit</u>)</b>	<b>6C More about dissolving</b>	<b>6D Reversible and Irreversible changes(<u>short unit</u>)</b>	<b>6E Balanced and Unbalanced Forces</b>	<b>6F How we see things. (<u>short unit</u>)</b>
<p>Light, water and the correct temperature make plants grow well.</p> <p>Plants need nutrients to grow well – plant food.</p> <p>Different plants and animals live in different kinds of places.</p> <p>Rocks and soils can be different in different places.</p> <p>Rocks and soils can feel different.</p> <p>Plants make food: animals eat plants and other animals.</p> <p>Different habitats have different living conditions which need protection.</p> <p>Sieving helps us find out more about the sizes of the particles in soil.</p> <p>Some rocks and soils let water through better than others.</p> <p>The different living conditions found in different habitats suits some plants/animals more than others.</p> <p>Factors such as moisture, light level, soil type, temperature, shelter help to describe a habitat and affect what live in it.</p> <p>Food chains describe what gets eaten in a habitat</p> <p>Most food chains begin with a green plant.</p>	<p>Dead things rot when tiny living organisms called microbes eat them.</p> <p>Some microbes are useful: some are dangerous.</p> <p>Microbes need warmth and moisture to grow.</p> <p>Micro-organisms are often too small to be seen.</p> <p>Make suggestions about observing food, bearing in mind the need for safety.</p> <p>Micro-organisms can cause food to decay.</p> <p>Food need to be handled and stored with care.</p> <p>Micro-organisms bring about decay</p> <p>Decay can be beneficial</p> <p>Micro-organisms which cause decay are living organisms.</p> <p>Micro-organisms feed and grow.</p> <p>Make suggestions about what yeast needs to grow.</p> <p>Make careful observations and compare these in order to draw conclusions about the effect of yeast on dough.</p> <p>Micro-organisms are useful in food production.</p>	<p>Solids which do not dissolve in water can be separated by filtering which is similar to sieving.</p> <p>When solids are dissolved a clear solution is formed (which may be coloured), the solid cannot be separated by filtering.</p> <p>When the liquid evaporates from a solution the solid is left behind.</p> <p>How can we help solids dissolve more quickly?</p> <p>When a solid is added to a liquid eventually no more will dissolve.</p> <p>Different masses of different solids can dissolve in the same volume of water.</p> <p>To present results in a block graph.</p>	<p>That mixing materials can cause them to change.</p> <p>Filtering helps us separate insoluble materials from water.</p> <p>Solids that have been dissolved can be recovered by evaporating the liquid from the solution.</p> <p>Some changes that occur when materials are mixed cannot easily be reversed.</p> <p>Heating some materials can cause them to change.</p> <p>Cooling some materials can cause them change.</p> <p>Non-reversible changes result in the formation of new materials.</p> <p>Non-reversible changes produce useful materials.</p> <p>When materials are burned new materials are formed.</p> <p>To recognise the hazards and risks in burning materials.</p>	<p>The earth and objects are pulled towards each other; this gravitational attraction causes objects to have weight.</p> <p>Weight is a force and it is measured in Newton's.</p> <p>How far an elastic band is stretched depends on the force acting on it.</p> <p>When an object is submerged in water, the water provides an upward force (up thrust) on it.</p> <p>When an object floats, its weight acting downwards is balanced by the up thrust from the water.</p> <p>Unbalanced forces change the speed or direction of movement of an object.</p> <p>Air resistance is a force that slows objects moving through the air.</p> <p>When an object falls, air resistance acts in the opposite direction to the weight.</p>	<p>Light travels from a source.</p> <p>We can see light sources because the light from the source enters our eyes.</p> <p>A light from an object can be reflected by a mirror, the reflected light enters our eyes and we see the object.</p> <p>When a beam of light is reflected from a surface, its direction changes.</p> <p>Shiny surfaces reflect light better than dull surfaces.</p> <p>Identify factors which might affect the size and position of the shadow of an object.</p> <p>Recognise differences between shadows and 'reflections'.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>6G Changing circuits.</b></p> <p>That the brightness of bulbs or speed of _____ in a circuit can be changed. E.g. (by changing the voltage of the battery)</p> <p>Care needs to be taken when components in a circuit are changed to ensure bulbs/ _____ do not burn out.</p> <p>There are conventional symbols for components in circuits and these can be used to draw diagrams of circuits.</p> <p>The brightness of bulbs in a circuit can be changed by changing wires in a circuit.</p> </div>