

### Science Curriculum Map with Key Knowledge

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	<p><b>'Animals including Humans'</b> <i>Humans only this half term.</i></p> <p>I can draw, name and label the parts of the human body that I can see. I can identify and describe the 5 human senses. I can link the 5 human senses to the main parts of the human body.</p>	<p><b>'Animals, including Humans'</b> <i>Humans only this half term.</i></p> <p>I can describe the importance for humans of eating the right amounts of different types of food, identifying healthy and unhealthy foods. I can describe the importance of exercise and good hygiene habits for humans. I can describe the life cycle of a human and say how humans grow and change as they get older.</p>	<p><b>'Animals, including Humans'</b></p> <p>I can explain the importance of a nutritionally balanced diet. I can identify that animals, including humans, cannot make their own food and get their nutrients from what they eat. I can identify and group animals with and without skeletons, observing and comparing their movement. I can describe the skeletal system of humans and explain it is used for support, protection and movement. I can describe the muscular system of some animals, including humans, and explain what muscles are used for.</p>	<p><b>'Living Things and Their Habitats'</b></p> <p>I recognise that living things can be grouped in a variety of ways. I can group living things onto a Venn/Carroll Diagram according to my own criteria. I can explore and use a classification key to group, identify and name a variety of living things (plants, vertebrates, invertebrates) in the local and wider environment. I can compare the classification of common plants and animals to living things found in other places (under the sea, prehistoric). I recognise that environments can change and this can sometimes pose a danger to living things.</p>	<p><b>'Forces'</b></p> <p>I can explain that unsupported objects fall towards the earth because of the force of gravity acting between the earth and the falling object. I can identify the effects of air resistance that acts between moving surfaces. I can identify the effects of water resistance that acts between moving surfaces. I can identify the effects of friction that acts between moving surfaces. I recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p><b>'Animals, including Humans'</b></p> <p>I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. I can recognise the impact of diet on the way my body functions. I can recognise the impact of exercise and lifestyle on the way my body functions. I recognise the impact of drugs on the way my body functions. I can describe the ways in which nutrients and water are transported within animals, including humans.</p>

Autumn 2	<p><b>Seasonal Changes 'Autumn and Winter'</b></p> <p>I can observe changes across autumn and winter. I can observe and describe weather associated with the seasons of autumn and winter and describe how day length varies from autumn to winter. I can observe how plants vary during autumn to winter.</p>	<p><b>'Animals, including Humans'</b> <i>Animals only this half term.</i></p> <p>I know that animals, including humans, have offspring which grow into adults. I can describe the life cycle of some animals (including fish, amphibians, reptiles, birds and mammals). I can describe the three basic needs animals have to survive (food, water and air).</p>	<p><b>'Plants'</b></p> <p>I can identify and describe the functions of different parts of flowering plants (including, roots, stem/trunk, leaves and flowers). I can explore and describe what plants need for life and growth (air, light, water, nutrients from soil, and room to grow). I can describe how seeds and bulbs grow into mature plants. I know how water is transported within plants. I can explain the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p><b>'Sound'</b></p> <p>I can identify how sounds are made, associating some of them with something vibrating. I recognise that vibrations from sounds travel through a medium to the ear. I can find patterns between the pitch of a sound and features of the object that produced it. I can find patterns between the volume of a sound and the strength of the vibrations that produced it. I recognise that sounds get fainter as the distance from the sound source increases.</p>	<p><b>'All Living Things and Their Habitats'</b></p> <p>I can describe the differences in the life cycles of a mammal, an amphibian, a fish, an insect and a bird. I can describe the life process of reproduction in common plants. I can describe the life process of reproduction in some animals. I can describe the work of well-known naturalists and animal behaviourists (David Attenborough and Jane Goodall). I can describe the reasons why some animals become extinct.</p>	<p><b>'Living Things and Their Habitats'</b></p> <p>I can 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. I can give reasons for classifying plants and animals based on specific characteristics. I can describe the work of the scientist Carl Linnaeus and his development of his classification system. I can classify living things using the Linnaean system. I can describe the useful and harmful effects of different microorganisms.</p>
Spring 1	<p><b>'Plants'</b></p> <p>I can identify and name a variety of common wild/garden plants and deciduous/ evergreen trees. I can name the main parts of a tree (including the trunk, branches and root).</p>	<p><b>'Uses of Everyday Materials'</b></p> <p>I can describe and compare the simple physical properties of a variety of everyday materials. I can compare the suitability of a variety</p>	<p><b>'Rocks'</b></p> <p>I can compare and group together different rocks on the basis of their appearance and simple physical properties.</p>	<p><b>'Electricity'</b></p> <p>I can identify common appliances that run on electricity. I can construct a simple series electric circuit and name parts (including: cells, wires,</p>	<p><b>"Earth and Space"</b></p> <p>I can identify and explain the movement of the Earth and other plants relative to the sun in the solar system. I can explain how seasons and the</p>	<p><b>'Evolution and Inheritance'</b></p> <p>I recognise that living things have changed over time and that fossils provide information about living things that inhabited</p>

	<p>I can name the main parts of a plant (including roots, stem, leaves, flowers, petals, bulb, seeds).</p>	<p>of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, cardboard for particular uses. I can explain how the shapes of solid objects can be changed (squashing, bending, twisting, stretching).</p>	<p>I can explain how different rocks can be useful to us. I can explain the differences between sedimentary and igneous rocks, considering the way they are formed. I can describe how fossils are formed when things that have lived are trapped within rock. I know that soils are made from rocks and organic matter.</p>	<p>bulbs, switches and buzzers). I can 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. I know that a switch opens and closes a circuit. I can recognise some common conductors and insulators and associate metals with being good conductors.</p>	<p>associated weather is created. I can describe and explain the movement of the Moon relative to the Earth. I can describe the sun, earth and moon as approximately spherical bodies. I can 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>the earth millions of years ago. I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. I can give reasons why offspring are not identical to each other or to their parents. I can explain the process of evolution and describe the evidence for this. I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>
Spring 2	<p><b>'Everyday Materials'</b> I can name everyday materials e.g. wood, plastic, metal, glass and rock and describe the properties of each material. I can explain which material different objects are made from. I can sort everyday materials into groups on the basis of their physical properties.</p>	<p><b>'Plants'</b> I can observe and describe how seeds and bulbs grow into mature plants. I can find out &amp; describe how plants need water, light and a suitable temperature to grow and stay healthy. I can describe the stages in the life cycle of a plant.</p>	No topic this half term	No topic this half term	<p><b>Properties and Changes of Materials'</b> I can compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. I can explain how some materials dissolve in liquid to form a solution</p>	<p><b>'Light'</b> I know that light appears to travel in straight lines. I can explain that objects are seen because they give out or reflect light into the eye. I can explain that we see things because light travels from light sources to our eyes or from light sources to</p>

					<p>and describe how to recover a substance from a solution.</p> <p>I can decide how mixtures might be separated, including through filtering, sieving, evaporating.</p> <p>I can demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>I can explain that some changes are irreversible and result in the formation of new materials, including changes associated with burning and the action of acid on bicarbonate of soda.</p>	<p>objects and then to our eyes.</p> <p>I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p>I can explain how and why the length of a shadow can be changed.</p>
<p>Summer 1</p>	<p><b>'Spring and Summer' Seasonal Changes</b></p> <p>I can observe changes across spring and summer, including how plants vary.</p> <p>I can observe and describe weather associated with the seasons of spring and summer and describe how day length varies from spring to summer.</p> <p>I can name the four seasons in order and</p>	<p><b>'Living Things and Their Habitats'</b></p> <p>I can describe some of the 7 life processes common to plants and animals, including humans.</p> <p>I can explain the differences between living, non-living and dead things.</p> <p>I can describe a range of different habitats and explain how they provide the basic needs</p>	<p><b>'Light'</b></p> <p>I can recognise that humans need light in order to see things.</p> <p>I can recognise that dark is the absence of light.</p> <p>I can notice that light is reflected from surfaces.</p> <p>I know that light from the sun can be dangerous and that there are ways to protect their eyes.</p>	<p><b>'States of Matter'</b></p> <p>I can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>I can explain what happens to materials when they are heated or cooled.</p> <p>I can measure or research the temperature at which different materials</p>	<p><b>'Animals Including Humans'</b></p> <p>I can describe the changes as humans develop to old age.</p> <p>I can research gestation periods of other animals.</p> <p>I can compare gestation periods of other animals to humans.</p> <p>I understand how my emotions may change as I approach and move through puberty.</p>	<p><b>No topic this half term</b></p>

	observe changes across all four seasons.	for the things living there.	I can recognise that shadows are formed when the light from a light source is blocked by a solid object.	change state in degrees Celsius. I can use measurements to explain changes to the state of water. I can identify the part that evaporation and condensation have in the water cycle and associate the rate of evaporation with temperature.	I understand how my body may change as I approach and move through puberty.	
Summer 2	<p><b>'Animals including Humans'</b></p> <p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).</p>	<p><b>'Living Things and Their Habitats' continued</b></p> <p>I can describe how animals obtain their food from plants and other animals, using the idea of a simple food chain.</p> <p>I can identify and name different sources of food by making a variety of simple food chains.</p> <p>I can describe how plants and animals are suited to their habitat.</p>	<p><b>'Forces and Magnets'</b></p> <p>I can describe magnets as having two poles and explain the effect these have.</p> <p>I can predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>I know things move differently across different surfaces.</p>	<p><b>Animals including Humans</b></p> <p>I can identify and name the basic parts of the digestive system in humans.</p> <p>I can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>I can identify the simple function of different types of teeth in humans.</p> <p>I can compare the teeth of herbivores and carnivores.</p> <p>I can explain what a simple food chain shows and construct a variety of food chains, identifying producers, predators and prey.</p>	No topic this half term	<p><b>'Electricity'</b></p> <p>I can identify and name the basic parts of a simple electric series circuit (cells, wires, bulbs, switches, buzzers)</p> <p>I can associate the brightness of bulbs or loudness of buzzers with the number and voltage of cells used in the circuit.</p> <p>I can 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>I can use recognised symbols when</p>

						representing a simple circuit in a diagram. I can identify if a circuit will work or not and give reasons why.
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