

# Science Long Term Plan (Year B)

	<b>Autumn</b> Our Amazing Bodies	<b>Spring</b> Great Structures of the World		<b>Summer</b> Journeys		
	<b>Digging for Treasure</b>	<b>Crackers and Construction</b>		<b>Stories around the world</b>		
<b>KS1</b>	<p><b>How to stay healthy?</b></p> <p><i>To understand animals and humans by</i> Identify basic parts of the human body and say which part of the body is associated with each sense.</p> <ul style="list-style-type: none"> <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> <li>• Notice that animals, including humans, have offspring which grow into adults.</li> <li>• Investigate and describe the basic needs of animals, including humans, for</li> </ul>	<p><b>What did the dinosaurs eat?</b></p> <p><i>To understand living things by looking at the</i> differences between things that are living, that are dead and that have never been alive.</p> <ul style="list-style-type: none"> <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>	<p><b>What am I made of?</b></p> <p><i>To identify, name, describe and classify materials for</i> a variety of everyday materials,</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 a variety of everyday materials.</li> </ul>	<p><b>How does a switch work?</b></p> <p><i>To understand electrical circuits</i></p> <ul style="list-style-type: none"> <li>• Identify common appliances that run on electricity.</li> <li>• Construct a simple series electrical circuit..</li> </ul> <p><b>Outdoor learning- What are the signs of spring?</b></p> <p><i>To understand Earth's movements by looking at the signs of spring and looking at the life cycle of frogs and birds. To enjoy bird watching.</i></p>	<p><b>Which family do you belong to?</b></p> <p><i>To understand animals by identifying and naming</i> a variety of common animals</p> <ul style="list-style-type: none"> <li>• Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.</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</li> </ul>	<p><b>Why do octopus live in the sea?</b></p> <p><i>To understand animals by identifying and naming</i> a variety of plants and animals in their habitats.</p> <ul style="list-style-type: none"> <li>• 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 and how they depend on each other.</li> <li>• Identify and name a variety of plants and animals in their habitats,</li> </ul>

	<p>survival (water, food and air).</p> <ul style="list-style-type: none"> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.</li> </ul> <p><i>Observe and name a variety of sources of sound, noticing that we hear with our ears.</i></p>		<ul style="list-style-type: none"> <li>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses.</li> </ul>		<p>(birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).</p>	<p>including micro-habitats.</p>
	<b>Going for Goals</b>		<b>What did the Romans ever do for us?</b>		<b>Invaders</b>	
<b>LKS2</b>	<p><b>How does the digestive system work?</b></p>	<p><b>How are shadows formed?</b></p> <ul style="list-style-type: none"> <li>Recognise that they need light in order to</li> </ul>	<p><b>What are solids, liquids and gases?</b></p> <ul style="list-style-type: none"> <li>Compare and group materials together, according to whether</li> </ul>	<p><b>How are rocks and soil formed?</b></p> <ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of</li> </ul>	<p><b>How do circuits work?</b></p>	<p><b>How do we hear sounds?</b></p> <ul style="list-style-type: none"> <li>Identify how sounds are made, associating</li> </ul>

	<ul style="list-style-type: none"> <li>Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat.</li> <li>Identify that humans and some animals have skeletons and muscles for support, protection and movement.</li> <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> </ul>	<p>see things and that dark is the absence of light.</p> <ul style="list-style-type: none"> <li>Notice that 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 a solid object.</li> <li>Find patterns in the way that the size of shadows change.</li> </ul>	<p>they are solids, liquids or gases.</p> <ul style="list-style-type: none"> <li>Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics.</li> <li>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul>	<p>their simple, physical properties.</p> <ul style="list-style-type: none"> <li>Relate the simple physical properties of some rocks to their formation (igneous or sedimentary).</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.</li> <li>Recognise that soils are made from rocks and organic matter.</li> </ul>	<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> </ul>	<p>some of them with something vibrating.</p> <ul style="list-style-type: none"> <li>Recognise that vibrations from sounds travel through a medium to the ear.</li> </ul>
	<b>Blood, Boils and Bile</b>		<b>Ancient Egyptians</b>		<b>Trade and Transport</b>	
<b>UKS2</b>	<p><b>How do we look after our human body functions?</b></p> <ul style="list-style-type: none"> <li>Describe the changes as humans develop to old age.</li> </ul>	<p><b>How does light travel?</b></p> <ul style="list-style-type: none"> <li>Understand that light appears to travel in straight lines.</li> <li>Use the idea that light travels in straight lines to explain that objects are</li> </ul>	<p><b>How can we group materials based on their properties?</b></p> <ul style="list-style-type: none"> <li>Compare and group together everyday materials based on evidence</li> </ul>	<p><b>How can we make bulb brighter?</b></p> <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> </ul>	<p><b>Magnets and Forces</b></p> <p><b>Magnets</b></p> <ul style="list-style-type: none"> <li>Describe magnets as having two poles.</li> </ul>	<p><b>Evolution</b></p> <ul style="list-style-type: none"> <li>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</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 importance of diet, exercise, drugs and lifestyle on the way the human body functions.</li> <li>• Describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>	<p>seen because they give out or reflect light into the eyes.</p> <ul style="list-style-type: none"> <li>• Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes.</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> </ul>	<p>from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets.</p> <ul style="list-style-type: none"> <li>• Understand how 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 are reversible changes.</li> </ul>	<ul style="list-style-type: none"> <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> <li>• Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>	<ul style="list-style-type: none"> <li>• Predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul> <p><b>Forces</b></p> <ul style="list-style-type: none"> <li>• Explain that 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 drag forces, such as air resistance, water resistance and friction that act between moving surfaces.</li> <li>• <i>Describe, in terms of drag forces, why moving objects that are not driven tend to slow down.</i></li> <li>• <i>Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs.</i></li> <li>• Understand that some mechanisms including levers, pulleys and gears,</li> </ul>	<ul style="list-style-type: none"> <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 and that adaptation may lead to evolution.</li> </ul>
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