

<u>Strand</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<p>Animals including Humans and Evolution</p>	<p>Identify and describe simple features of human and other animal skeletons, and how muscles are used for support, protection and movement.</p> <p>Describe in simple terms the changes that take place as animals grow.</p> <p>Identify that animals including humans need the right types and amount of nutrition and that they cannot make their own food, that they need nutrition from what they eat.</p>	<p>Talk in simple terms about how animals grow & reproduce.</p> <p>Describe the simple functions of the human digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p> <p>Identify and discuss in simple terms things that can cause illness or decay.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and pre</p>	<p>Describe the changes that take place as humans develop from birth to old age. Learn about the changes that take place during puberty.</p> <p>Draw a timeline to indicate stages in the growth and development of humans.</p>	<p>Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the functions of the body</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not be identical to their parents.</p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth mil-</p>

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<p>Range of Materials</p>	<p>Compare and group different kinds of rocks based on appearance and simple physical properties.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within a rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>	<p>Use knowledge and understanding of materials to sort and group materials.</p> <p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Describe the difference between solids and liquids</p> <p>Observe that some materials change state when heated or cooled and that some can be reversed, e.g. freezing water and that some are irreversible, e.g. baking clay.</p> <p>Measure or research the temperature at which materials change state when heated or cooled.</p> <p>Recognise that some things dissolve</p> <p>Describe evaporation and condensation in the water cycle making the link between the rates of evaporation with temperature.</p>	<p>Compare and group everyday materials based on evidence from comparative and fair tests, based on hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>Identify and give reasons why materials are used for a specific task or purpose.</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, including through filtering, sieving and evaporating.</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, including changes associated with burning and the action of vinegar (acid) on bicarbonate of soda.</p>	

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All living things - animals and plants	<p>Describe differences and similarities between a range of living and non-living things</p> <p>Identify and describe the functions of different parts of flowering plants, including roots, stem/trunk, leaves and flowers.</p> <p>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how these vary from plant to plant and the way in which water is transported in plants.</p> <p>Describe how plants are used by animals (food chains).</p>	<p>Describe features of plants and animal and compare similarities and differences between sub-groups, recognising that all living things can be grouped in different ways.</p> <p>Explore and use classification keys to help to group, identify and name a variety of living things in the local and wider environment.</p> <p>Use a simple key to represent and identify animals and plants in local habitats.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Recognise that environments can change and that this can pose dangers to living things.</p>	<p>Describe and explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Use scientific vocabulary to describe life processes, e.g. pollination in flowering plants etc</p> <p>Describe using scientific vocabulary the key functions of a plant, including reproduction.</p> <p>Describe the features and function of the stigma, root and leaf.</p> <p>Describe the life process of reproduction in some plants and animals.</p> <p>Use keys based on external features to help identify and group living things systematically.</p>	<p>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> <p>Give reasons for classification of plants and animals based on specific characteristics.</p> <p>Describe the feeding relationships between plants and animals in a range of habitats.</p>
Forces and Magnets	<p>Compare how things move on different surfaces.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Describe magnets as having two poles.</p> <p>Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance.</p> <p>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.</p> <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</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>Recognise that weight is a force and is measured in Newton's.</p> <p>Use a Force meter accurately.</p> <p>Recognise that when an object is at rest the forces are balanced.</p> <p>Recognise that unsupported objects fall to Earth because of the force of gravity acting between the Earth and the falling object.</p>	

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Light	<p>Recognise that light is needed to see things and that dark is the absence of light.</p> <p>Recognise that shadows are formed when light from a light source is blocked by a solid object.</p> <p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun is dangerous and that there are ways to protect the eyes.</p> <p>Find patterns that determine the size of shadows.</p>			<p>Recognise and explain how light appears to travel in straight lines.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them. Use knowledge of how light travels to explain the formation of shadows.</p> <p>Use the idea that light travels in straight lines to explain that objects can be seen because they give out or reflect light into the eye.</p> <p>Explain that things are seen because light travels from light sources to the eye or from light sources to ob-</p>
Earth and Space			<p>Represent and describe feeding relationships as a food chain beginning with a green plant (consumer and producer)</p> <p>Draw a detailed food chain from a range of habitats</p> <p>Generate a key to identify the animals and plants in a range of habitats.</p> <p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</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>	

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Sound		<p>Describe in detail how sound travels and how it can be changed.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produce it.</p>		
Electricity		<p>Describe why a bulb won't light and identify the problem within the circuit.</p> <p>Construct and record a simple series circuit, and name its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Know that a bulb lights up when there is an effective conducting material in the circuit and is part of a complete circuit.</p> <p>Describe what happens when making and breaking a circuit, recognise that a switch opens and closes a circuit and link to the lighting of a bulb.</p> <p>Identify common appliances that run on electricity.</p> <p>Recognise common conductors and insulators and associate metals with being good conductors</p>		<p>Record and construct a parallel and series electrical circuit, identifying and naming its basic parts.</p> <p>Explain the link between the brightness of a bulb or 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 diagram.</p> <p>Identify whether or not a bulb will light in a simple parallel or series circuit based on whether or not the bulb is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and closes a circuit and the impact on a bulb within a series circuit.</p> <p>Use by knowledge of conductors &</p>