

Year group	Plants and Animals including humans	Evolution and Inheritance	Living things and their habitats	Earth and space/Seasons	Light and Sound	Forces and Magnets	Electricity	Properties and changes of materials	Working Scientifically
<p>1</p> <p>NB Y1 objectives are taught in cross curricular units -</p>	<p><b>Animals incl humans</b></p> <p>To identify, name, draw and label the basic parts of the human body.</p> <p>Name the basic parts of animals other than humans and explain that some animal parts have a different name from the equivalent human part.</p> <p>Name the five senses and Explain which part of my body is associated with each sense.</p>			<p>Seasonal Changes (cross curric w Geog)</p> <p>To describe changes across the four seasons.</p> <p>To order the 4 seasons.</p> <p>To observe weather across the 4 seasons and know what weather is associated with a season.</p> <p>To understand that day length varies in the different seasons.</p>				<p>(cross curric w Geography)</p> <p>To suggest how to test whether materials are waterproof and to perform a simple test to find a suitable material for Barnaby's umbrella.</p> <p>(cross curric w history)</p> <p>To describe and compare the simple physical properties of a variety of everyday materials.</p>	<p><b>Key Stage 1</b></p> <p>asking simple questions and recognising that they can be answered in different ways</p> <p>observing closely, using simple equipment</p> <p>performing simple tests</p> <p>identifying and classifying</p>

To gather and record data to answer the question of eye colour in our class.

To identify and name common pets and understand what pets need to be happy, safe & healthy.

To define the words carnivore, herbivore and omnivore and group animals by what they eat. Identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals.

Sort animals into the five groups: fish, amphibians, reptiles, birds and mammals.

To go on a classroom toy hunt to find a variety of everyday materials on the basis of their simple physical properties.

using their observations and ideas to suggest answers to questions

gathering and recording data to help in answering questions

	<p><b>Plants</b> To understand the difference between deciduous and evergreen.</p> <p>To go on a leaf walk and identify leaves from evergreen and deciduous trees.</p> <p>To identify and describe the basic structure of a variety of common flowering plants, including trees.</p>								
2	<p><b>Plants</b> Look at plants in the environment Observe and describe how seeds and bulbs grow into mature plants by planting seeds and bulbs.</p>		<p>Identify things that are living, dead or never alive Identify and name plants and animals living in local habitats Identify mini beasts living in microhabitats</p>					<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard</p>	

	<p>Understand the life cycle of plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p> <p>Compare the growth of seedlings under different conditions.</p> <p>Explain what conditions plants need to grow well.</p> <p>Compare the growth of seeds and bulbs.</p> <p><b>Humans</b> Notice that animals including humans have offspring that grow into adults and match adults to their babies</p>		<p>Identify that most living things live in habitats to which they are suited</p> <p>Describe how different habitats provide for the basic needs of different kinds of animals and plants</p> <p>Identify adaptations of animals, and how living things in a habitat depend on each other.</p> <p>Describe how animals obtain their food from plants and other animals</p> <p>Identify and name different sources of food by making a variety of food chains</p>					<p>Identify and classify the uses of everyday materials in the context of the local area.</p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses by exploring the purposes of different objects.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing,</p>	
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Learn how humans grow and change

Find out about and describe the basic needs of animals, including humans, for survival (water, food and air), by identifying the ways that different animals meet their basic needs.

Describe the importance for humans of eating the right amounts of different types of food, by exploring food groups.

Describe why exercise is important, looking at why humans need to exercise.

bending, twisting and stretching by changing the shape of objects.

Explore materials in context of recycling.

Find out about people who have developed useful new materials by learning about John McAdam

	Describe the importance for humans of hygiene, by learning about good hygiene habits.								
3	<p><b>Humans/Animals</b></p> <p>To know that humans and other animals cannot make their own food.</p> <p>To know that animals, including humans, need the right amounts and types of food.</p> <p>To be able to report on findings from enquiries.</p> <p>To understand and explore animal diets.</p> <p>To understand the definitions carnivore,</p>	<p><b>Rocks and soils</b></p> <p>Compare different kinds of rocks based on their appearance in the context of understanding the difference between natural and human-made rocks.</p> <p>Making systematic and careful observations by examining different types of rocks.</p>			<p>To recognise that we need light in order to see things and that dark is the absence of light</p> <p>To notice that light is reflected from surfaces</p> <p>To investigate which surfaces reflect light.</p> <p>To notice that light is reflected from surfaces</p>	<p>To notice that some forces need contact between two objects by identifying the different types of forces acting on objects.</p> <p>To compare how things move on different surfaces</p> <p>To notice that magnetic forces can act at a distance and attract some materials and not others by</p>			<p><b>Lower Key Stage 2</b></p> <p>asking relevant questions and using different types of scientific enquiries to answer them</p> <p>setting up simple practical enquiries, comparative and fair tests</p> <p>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including</p>

	<p>herbivore and omnivore.</p> <p>To know that humans and some animals have skeletons and muscles for support, protection and movement.</p> <p>To group animals with and without skeletons.</p> <p>Know that an animal without a skeleton is an invertebrate.</p> <p>To understand that the human skeleton is jointed to allow movement.</p> <p><b>Plants</b></p> <p>To identify and describe the functions of different parts</p>	<p>Group together different kinds of rocks on the basis of their simple physical properties .</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Explain the fossilisation process by comparing fossils to the animals they belong to.</p> <p>Recognise that soils are made from rocks and organic matter by explaining how soil is formed.</p> <p>Investigate the permeability of different soils.</p>			<p>To use a mirror to reflect light and explain how mirrors work.</p> <p>To recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>To investigate which materials block light to form shadows.</p> <p>To find patterns in the way that the size of shadows change .</p>	<p>sorting materials.</p> <p>To compare and group materials according to whether they are magnetic .</p> <p>To observe how magnets attract or repel each other and attract some materials and not others .</p> <p>To describe magnets as having two poles and to predict whether two magnets will attract or repel each other, depending on which poles are facing .</p>			<p>thermometers and data loggers</p> <p>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple</p>
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	<p>of flowering plants.</p> <p>To explore the requirements of plants for life and growth.</p> <p>To investigate the ways in which water is transported in plants.</p> <p>To explore the part that flowers play in the life cycle of flowering plants - fertilisation and pollination.</p> <p>To explore the part that flowers play in the life cycle of flowering plants - seed dispersal.</p>								<p>conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>using straightforward scientific evidence to answer questions or to support their findings.</p>
4	<p>Describe some of the ways food is digested in humans.</p> <p>Know humans have different types of teeth</p>				<p>Know how sounds are made</p> <p>How sound travels through air or water to</p>		<p>List a number of common objects that need electricity to function.</p>	<p>Describe the differences between solids, liquids and gases and use this to group materials.</p>	

	<p>and the job of each tooth type.</p> <p>Food chains and the role of the producer, predators and prey.</p> <p>Group living things in different ways</p> <p>Classification keys and how to use them to identify an animal</p> <p>Know an environment may change overtime and the impact this can have on the animals and plants.</p>				<p>reach the ear.</p> <p>Talk about the strength of the vibrations, size and shape and how this can impact the how loud a sound can be.</p> <p>Sound and insulation experiment.</p> <p>Discuss pitch and volume. Know that sounds get fainter as you move away from the source.</p>		<p>Build a series circuit, naming cells, wires, bulbs, switches and buzzers.</p> <p>Discuss conductors and insulators and name some.</p>	<p>Know that some materials change to a different state when they are heated and cooled.</p> <p>Talk about evaporation and condensation as parts of the Water Cycle.</p> <p>Know that water evaporates when the temperature is higher.</p>	
5	<p>Describe sexual reproduction in plants</p> <p>Describe asexual</p>			<p>Earth's position in relation to the sun and planets</p> <p>Describe Earth moon and sun</p>		<p>Identify forces acting on objects</p> <p>Investigating gravity and</p>		<p>Compare and group everyday materials on the basis of their properties.</p>	<p>Upper Key Stage 2</p> <p>planning different types of scientific enquiries to</p>

	<p>reproduction in plants</p> <p>Describe the lifecycle of a bird/ mammal/ insect and amphibian</p> <p>Compare the life cycles of amphibians and insects- including metamorphosis- and to mammals/ birds</p> <p>Describe changes as humans develop to old age- including development of babies, puberty and changes in old age.</p> <p>Investigate gestation periods for humans and animals.</p>			<p>as spherical bodies</p> <p>Relative sizes of sun, moon and Earth</p> <p>How the geocentric model gave way to the heliocentric</p> <p>Use the Earth's rotation to explain day and night Investigate sunrise/ sunset times</p> <p>Describe the movement of the moon and its phases.</p>		<p>Newton meters</p> <p>Effects of air resistance</p> <p>Effects of water resistance and upthrust</p> <p>Effects of friction Investigating mechanisms- levers, gears and pulleys</p>		<p>Materials that dissolve into solutions</p> <p>Separating mixtures through evaporation</p> <p>Separating mixtures through sieving</p> <p>Separating mixtures through filtering</p> <p>Irreversible change- burning</p> <p>Irreversible change- acid and bicarb of soda.</p>	<p>answer questions, including recognising and controlling variables where necessary</p> <p>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>using test results to make</p>
6	Identify and name the main parts of the human	Investigate what characteristics we've inherited from our parents	Classify vertebrates		Light travels from a source		Identify and use electricity		

	<p>circulatory system</p> <p>Describe the functions of the heart, blood vessels and blood</p> <p>Describe how nutrients and water are transported in animal and human bodies</p> <p>Exploring how to keep our bodies healthy through diet, exercise and lifestyle</p> <p>Exploring the harmful impact of drugs and alcohol on our bodies</p>	<p>Investigate crossbreeding</p> <p>Understand how plants and animals are adapted in different ways to suit their environment</p> <p>Find out about the main evolutionary theories (e.g. Darwin)</p> <p>Understand what fossils are &amp; Examine fossil evidence for evolution</p> <p>Understand how humans have evolved</p>	<p>Classify invertebrates</p> <p>Investigate microorganisms</p>		<p>Light travels in straight lines</p> <p>How humans see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p> <p>How light creates shadows that have the same shape as the object</p>		<p>symbols in diagrams</p> <p>Investigate the effect of changing the components of a circuit (e.g. how to make a bulb brighter or a buzzer louder)</p> <p>Explain the dangers of electricity</p> <p>How is electricity made and what is the impact on the environment (renewable and non-renewable sources from geography objectives)</p>		<p>predictions to set up further comparative and fair tests</p> <p>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>
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