



Science Progression of Knowledge

EYFS			
Knowledge and Understanding of the world	<p>Know about the similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>		
Animals including Humans	KS1	LKS2	UKS2
	<p>Cycle A:</p> <ul style="list-style-type: none"> Identify, name, draw and label parts of the body and say which part of the body is associated with each sense. Identify and name common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. Identify and name a variety of common animals that are herbivores, carnivores and omnivores. Describe and compare the structure of a variety of common pets and woodland animals. Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including animals, for survival. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Cycle B:</p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<p>Cycle A:</p> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types of nutrition, and that they cannot make their own food; they get nutrition to what they eat. Identify the different types of teeth in humans and their simple functions. Describe how to maintain healthy teeth. <p>Cycle B:</p> <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Revisit types and functions of teeth. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<p>Cycle A:</p> <ul style="list-style-type: none"> Describe the changes in humans to old age. Discuss changes linked to puberty with a link to reproduction. Describe how oxygen travels around the body. <p>Cycle B:</p> <ul style="list-style-type: none"> Describe the basic features that a human needs to keep healthy (diet, exercise, drugs) Explore the transportation of water and nutrients around the body

	<ul style="list-style-type: none"> • Notice that humans and pets have offspring, which grow into adults. • Find out about the basic needs of pets and humans for survival. • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 		
<p>Living things and their habitats</p>	<p>Cycle A: Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <ul style="list-style-type: none"> • Identify that animals live in a habitat to which they are suited and describe how the plants and animals depend on each other. • Identify and name a variety of plants and animals within a woodland habitat, including micro-habitat. • Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food. • Cycle B: • Identify that living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of 	<p>Cycle A:</p> <ul style="list-style-type: none"> • Recognise that living things can be grouped in a variety of ways. • Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. • Revisit nutrition, teeth and features on classification keys. <p>Cycle B:</p> <ul style="list-style-type: none"> • Recognise that environments can change and that this can sometimes pose dangers to living things. 	<p>Cycle A:</p> <ul style="list-style-type: none"> • Pupils group animals into common groups based on characteristics, similarities and differences. Can explain how they have used observable characteristics to group animals. • The life cycle and reproduction in plants compare back to the reproductive cycle of humans. • Explore differences in lifecycles of humans and warm-blooded animals <p>Cycle B:</p> <ul style="list-style-type: none"> • Explore differences in lifecycles of humans and cold-blooded animals. • Pupils group plants into common groups based on characteristics, similarities and differences. Can explain how they have used observable characteristics to group animals. • Explore the features and characteristics of microorganism • Children use characteristics, similarities and differences to sort,

	<p>animals and plants and how they depend on each other.</p> <ul style="list-style-type: none"> • Identify and name a variety of plants and animals in their habitats, including microhabitats. • Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain • Explore and compare the differences between things that are living, dead and things that have never been alive. 		<p>classify and order animals, plants and microorganism into broad groups.</p>
Plants	<p>Cycle A:</p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants. • Identify and describe the basic structure of a variety of common flowering plants, including deciduous and evergreen trees. • Observe and describe how seeds and bulbs grow into mature plants. • Find out and describe how plants need water, light and suitable temperature to grow and to stay healthy. <p>Cycle B:</p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, focusing on seasonal plants. • Revisit deciduous and evergreen trees. • Identify and describe the basic structure of a variety of common flowering plants, including trees. 	<p>Cycle A:</p> <ul style="list-style-type: none"> • Explore the part that flowers play in the life cycle of flowering plants. • Compare the effect of natural, artificial and no light on flowering plants. • Identify the dangers to plants in the environment. <p>Cycle B:</p> <ul style="list-style-type: none"> • Identify and describe the functions of different parts of flowering plants: roots, stem, trunk, leaves and flowers. • Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant. • Investigate the way in which water is transported within plants. 	<p>Cycle A:</p> <ul style="list-style-type: none"> • The life cycle and reproduction in plants

<p>Seasonal Changes</p>	<p>Cycle A:</p> <ul style="list-style-type: none"> • Observe changes across all seasons. • Observe and describe the weather associated with each season and how day length varies. <p>Cycle B:</p> <ul style="list-style-type: none"> • Observe changes from autumn to winter. • Observe and describe weather associated with the seasons and how day length varies. 		
<p>Everyday materials (Y1)</p> <p>Uses of everyday materials (Y2)</p> <p>States of matter (Y4)</p> <p>Properties and changes of materials (Y5)</p>	<ul style="list-style-type: none"> • <u>Cycle A:</u> • Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials. • Describe the simple physical properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. • Identify and compare the suitability of a variety of everyday materials for particular uses. (Link to English units) • Find out how the shapes of solid objects can be changed by squashing, twisting, bending and stretching. <ul style="list-style-type: none"> • <u>Cycle B:</u> • Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials including wood, plastic, glass, metal, water and rock. 	<p>Cycle A:</p> <ul style="list-style-type: none"> • Compare and group materials together, according to whether they are solids, liquids or gases. • Observe that some materials change state when they are heated and cooled, and measure or research the temperature at which this happens in degrees Celsius. • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<p>Cycle B</p> <ul style="list-style-type: none"> • Compare and group everyday materials on the basis of their properties • Particular focus on transparency to link back to light and reflection.

	<ul style="list-style-type: none"> Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. Identify and compare the suitability of a variety of everyday materials for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 		
Rocks		<p><u>Cycle B:</u></p> <ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter. 	
Light and Sound (Y4)	<p><u>Cycle B:</u></p> <ul style="list-style-type: none"> Observe and name a variety of sources of light, including electric lights (Christmas), flames and the Sun. Associate shadows with a light source being blocked by something. 	<p><u>Cycle A:</u></p> <p><u>Sound</u></p> <ul style="list-style-type: none"> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. 	<p><u>Cycle A:</u></p> <ul style="list-style-type: none"> Explore sources of light including earth, sun and moon (link with space topic) Explore how light travels in straight lines Explore why we see things – link to animals including humans and the importance of the organs.

		<ul style="list-style-type: none"> Recognise that sounds get fainter as the distance from the sound source increases. Link to electrical devices that create sounds. <p><u>Cycle B:</u></p> <p><u>Light:</u></p> <ul style="list-style-type: none"> Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that they size of shadows change. Investigate how to make different light sources using simple circuits 	
<p>Forces and magnets (Y3)</p> <p>Forces (Y5)</p>		<ul style="list-style-type: none"> Cycle A: Compare how things move on different surfaces Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a 	<p><u>Cycle A:</u></p> <ul style="list-style-type: none"> Explore the pulleys and levers and how they allow a smaller force to have a greater effect Introduce forces of gravity, friction of water and conduct investigations into these

		<p>magnet, and identify some magnetic materials.</p> <ul style="list-style-type: none"> • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing 	
Electricity		<ul style="list-style-type: none"> • Cycle B: • Identify common appliances that run on electricity. • Construct a simple series electrical circuit, identifying and naming its basic parts including cells, wires, bulbs, switches and buzzers. <p>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 battery.</p> <ul style="list-style-type: none"> • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. 	<p><u>Cycle A:</u></p> <ul style="list-style-type: none"> • Explore circuits – simple circuits and explore the scientific symbols for the key components • Explore how changing key components can affect the brightness of a bulb • Explore conductors and insulators with a focus on sorting material to link and recap materials objectives
Earth and Space			<p><u>Cycle A:</u></p> <ul style="list-style-type: none"> • Explore sources of light including earth, sun and moon (link with space topic) <p>Cycle B:</p> <ul style="list-style-type: none"> • Explore gravity and its impact on the earth's movement • Discuss the movement of the earth relevant to the sun and moon

<p>Evolution and Inheritance (note for Year 6 – see Plants; Animals, including humans; Living things and their habitats; and Rocks for how some of these aspects have been covered lower down the school)</p>			<p>Cycle B:</p> <ul style="list-style-type: none">• Discuss reproduction and how offspring can be like their parents – inheritance.• Remind children of adaptation and habitats• Discuss fossils which can tell us information about previous living things• Explore how adaptation can lead to evolution• Link back to sorting and classifying
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