

Science	Nursery		Reception															
	EYFS -	Knowledge Outcome	Reception/ ELG -	Knowledge Outcome														
<table border="1"> <thead> <tr> <th colspan="2">Coverage Key</th> </tr> </thead> <tbody> <tr> <td>Aut 1</td> <td style="background-color: #4a7ebb;"></td> </tr> <tr> <td>Aut 2</td> <td style="background-color: #e69d00;"></td> </tr> <tr> <td>Spr 1</td> <td style="background-color: #70ad47;"></td> </tr> <tr> <td>Spr 2</td> <td style="background-color: #f1c232;"></td> </tr> <tr> <td>Sum 1</td> <td style="background-color: #c00000;"></td> </tr> <tr> <td>Sum 2</td> <td style="background-color: #800080;"></td> </tr> </tbody> </table>	Coverage Key		Aut 1		Aut 2		Spr 1		Spr 2		Sum 1		Sum 2		Use all their senses in hands-on exploration of natural materials.	Know basic body parts - head, arms, hand, legs, feet. Know they can see, hear, taste, touch, smell and which part of their body is used for this.	Explore the natural world around them.	Know and talk about changes in seasons. Know and talk about changes in weather linked to seasons.
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	Describe what they see, hear and feel whilst outside.		Know and talk about what they see, hear, and feel on season walks (autumn, winter, spring & summer).															
	Recognise some environments that are different to the one in which they live.	Explore collections of materials with similar and/or different properties.	Know and name different materials for building such as bricks, wood, plastic.	Know and recognise similarities and differences from the UK, Australia and Morocco.														
Understand the effect of changing seasons on the natural world around them.	Talk about what they see, using a wide vocabulary.	Know and name different common fruits and vegetables, and farm animals, using words such as roots, bean, seed, pips, stones, egg, hatched, duckling.	Know and talk about the effect of the changing seasons on class tree.															
Explore the natural world around them, making observations and drawing pictures of animals and plants.	Describe different textures in the environment. Observe how porridge oats change when liquid is added.		Know and draw changes to tree in all 4 seasons.															
	Plant seeds and care for growing plants.	Know and experience planting bulbs and waiting for them to grow.	Know what seeds (beans) need to grow - soil, light, water. Know, and record through observational drawing the growth of a bean.															
		Know and experience planting fruit and vegetable seeds and caring for plants.	Know what happens to ice/water when the temperature changes.															

				Know and name animals that live in 2 contrasting habitats (minibeasts / zoos?)
			Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class	Know, observe and talk about the life cycle of a caterpillar/butterfly.
	Understand the key features of the life cycle of a plant and an animal.	Know, observe and talk about changes in life cycle of a duckling. Know, observe and talk about the life cycle of fruits and vegetables from seeds to plants/fruits.		Know and recognise similarities and differences UK, Australia and Morocco.
	Begin to understand the need to respect and care for the natural environment and all living things.	Know how to look after plants and seeds in the Nursery garden.	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Know the there are 4 seasons and weather, environments, plants and trees change according to the season. Know the days are longer in summer and shorter in winter.
	Explore and talk about different forces they can feel.	Know that magnets attract to metal. Know magnets can cause movement through forces.		
	Talk about the differences between materials and changes they notice.	Know and talk about how bread changes when baked. Know and talk about how porridge changes when cooked.		
		Know that fruits and vegetables decay over time.		

Science	Year 1		Year 2															
	NC Objective	Knowledge Outcome	NC Objective	Knowledge Outcome														
WS - Working Scientifically <table border="1" data-bbox="114 403 416 746"> <tr><td colspan="2">Coverage Key</td></tr> <tr><td>Aut 1</td><td></td></tr> <tr><td>Aut 2</td><td></td></tr> <tr><td>Spr 1</td><td></td></tr> <tr><td>Spr 2</td><td></td></tr> <tr><td>Sum 1</td><td></td></tr> <tr><td>Sum 2</td><td></td></tr> </table> Plants	Coverage Key		Aut 1		Aut 2		Spr 1		Spr 2		Sum 1		Sum 2		Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	Know deciduous trees lose their leaves in autumn and change with the seasons. Know sycamore, beech, oak, willow and fruit trees are deciduous trees on school grounds. Know evergreen trees have green leaves all year round. Know pine and holly are evergreen trees on school grounds. Recognise and name common wild plants (e.g. dandelion, daisy, buttercup, foxglove)	Observe and describe how seeds and bulbs grow into mature plants.	Know conditions needed to grow a potato. Know how to observe and record growth of potatoes. Follow instructions to plant lettuce seeds and know what to do to help them grow into mature plants. Describe how bulbs grow into mature plants (hyacinth) WS Observe closely plants growing from seed using ruler for measurement.
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Identify and describe the basic structure of a variety of common flowering plants including trees.	Know the structure of a plant recognising, naming and labelling leaves, flowers, petals, fruit, roots, bulb seed, trunk, branches, stem.	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Know plants need water, light and a suitable temperature to grow and stay healthy. WS Set up comparative test to see effects of light and water on growth.															
Animals including humans	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.	Know that a mammal is an animal that feeds milk, has lungs to breathe air, a spine, live young & hair/fur on bodies. Know and name a fish as an animal that lives in water with gills to breathe underwater,	Notice that animals, including humans have offspring which grow into adults.	Know humans are animals that give birth to live offspring which grow into adults. Observe and describe how animals change as they grow into mature adults. Name and match other animals (polar bear, penguin,														

		<p>and that most fish lay eggs and have scales.</p> <p>Know and name a reptile is an animal with dry, scaly skin and is cold blooded.</p> <p>Know and name an amphibian as an animal that lives on land and water, lays eggs, have gills but develop lungs, smooth skin and cold blooded.</p> <p>Know and name a bird as an animal that lays eggs, has a beak and wings /feathers but can't always fly.</p>		<p>frog) that have offspring which grow into adults.</p>
	<p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p>	<p>Know that a herbivore is an animal that eats plants.</p> <p>Know that hippopotamus, giraffe and zebras are herbivores.</p> <p>Know a carnivore is an animal that eats animals.</p> <p>Know that lions, cheetahs and leopards are carnivores.</p> <p>Know that an omnivore is something that eats both plants and animals.</p> <p>Know that gorillas, humans and baboons are omnivores.</p>	<p>Find out about and describe the basic needs of animals including humans for survival (water, food, air).</p>	<p>Know animals (including humans) need water, food and air for survival.</p> <p>WS Ask questions about what different animals need to survive (polar bear, penguin, sloth, frog).</p>
	<p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p>	<p>Know and compare features of 2 or more common animals describing at least 2 characteristics of each.</p>	<p>Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.</p>	<p>Know and describe why exercise is important for humans, and how different exercises affect different parts of the body.</p> <p>Know and describe some different types of food groups and why it is important to eat these.</p>

				<p>Know and describe the importance of good hygiene in keeping safe. Know that germs travel and that washing hands reduces this.</p> <p>WS Record observations of different exercises and the impact on the body. Link results of guided tests (modelling spread of germs) to the idea of sneezes and germs.</p>
	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Know and name the 5 senses and the body part used. Know and label basic body parts (head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth)		
	Distinguish between an object and the material from which it is made.	Know the name of an object & the material it is made from are different.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	<p>Identify and name <i>wood, metal, plastic, glass, brick, rock, paper and cardboard</i> as types of material. Know the properties of materials and use this knowledge to compare their suitability for a specific purpose. Design and make an 'egg helmet' using suitable materials. WS identify and classify materials and record their observations.</p>

				Make and test helmet, linking to use of materials in their results.
	Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.	Identify and name wood, plastic, glass, metal, water and rock as types of materials.	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Know shapes of some solid objects made from some materials (e.g. rubber, plastic, fabric etc.) can be changed by squashing, bending, twisting and stretching. Design and make a 'flying mouse', explaining that the bottle is squashed, then the air and this makes the 'mouse' fly. WS Test objects as to whether they can bend, squash etc. Sort objects into different sets, recording their results Test ideas and measure distance using standard measurements, recording results in a table.
	Describe the simple physical properties of a variety of everyday materials.	Know and describe materials by their properties using vocabulary such as hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy/not-bendy, waterproof/not waterproof, absorbent/not absorbent, opaque/transparent.		
	Compare and group together a variety of everyday materials on the basis of their simple physical properties.	Know how to sort materials using at least one property to categorise into groups.		

	Observe changes across the four seasons.	Know the order of the seasons. Knows that weather changes in each season. Knows that deciduous trees change in each season.		
	Observe and describe weather associated with the seasons and how day length varies.	Know in autumn the weather begins to get colder and days get shorter. Know in winter the weather is coldest and days are shortest. Know in spring the weather begins to get warmer and days get longer. Know in summer the weather is warmest and days are longest.		
Living things and their habitats			Explore and compare the differences between things that are living, dead and things that have never been alive.	Know and name 2 things that are living, dead and that have never lived. Know and state 2 differences between living, dead and things that have never been alive. WS Sort and classify things that are living, dead and never been alive.
			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	Know a habitat is a place an animal or plant lives. Know and describe features of 2 different global habitats and how they provide for the basic needs of animals plants living in it.

			animals and plants and how they depend on each other.	Know and describe features of 2 different micro habitats and how they provide for the basic needs of animals plants living in it.
			Identify and name a variety of plants and animals in their habitats, including micro-habitats.	Know and name common plants and animals in the school grounds, including different micro-habits WS Make detailed observations of plants and insects found in the school grounds using simple equipment (e.g. magnifying glasses, rulers ect.) Gather and record observations using e.g. a tally chart.
			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.	Know and describe the food chain of a polar bear and a sloth.
Working Scientifically	See WS on knowledge outcomes Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. (WS) Identifying and classifying. Using their observations and ideas to suggest answers to questions.	Know how to perform a simple and fair test. Know how to gather data and use this to answer a question. Know why they have made a specific choice and make scientific statements justifying their decision.	See WS on knowledge outcomes Observing closely, using simple equipment. Asking simple questions and recognising that they can be answered in different ways. Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions.	Observe closely using simple equipment such as magnifying glasses, Know how to perform a simple, fair test. Know how to identify and classify materials.

	Gather and recording data to help in answering questions.		Gather and recording data to help in answering questions.	Know how to use collected data to answer questions and make scientific statements from outcomes.
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