



Working Scientifically			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>Ask questions Demonstrate curiosity about the world around them.</p>	<p>Ask questions Ask simple questions stimulated by their exploration of their world.</p>	<p>Ask questions Ask simple questions about their experiences and observations and with support use these observations to suggest ways to discover an answer or solve a problem, recognising that some can be answered in a variety of ways.</p>	<p>SKILLS:</p> <p>With support:</p> <ul style="list-style-type: none"> • Ask their own questions and suggest ways to answer them. • Decide what to observe or measure. • Present data. • Explain why something has happened. <p>Independently:</p> <ul style="list-style-type: none"> • Make simple predictions. • Take measurements using non-standard and standard units. • Record data. • Talk about what has happened. • Use their results to answer questions.
<p>Make predictions With support or prompting, talk about what they think might happen based on their own experiences.</p>	<p>Make predictions Respond to suggestions to connect what has been observed with possible further actions or observations.</p>	<p>Make predictions Use their observations and ideas to make predictions. Use understanding of what has been observed or own experience to predict outcomes of further actions or observations.</p>	
<p>Decide how to carry out an enquiry Respond to prompts to say what happened to objects, living things or events.</p>	<p>Decide how to carry out an enquiry Perform simple tests to explore a question or idea suggested to them, with support.</p>	<p>Decide how to carry out an enquiry Identify things to measure or observe that are relevant to the questions or ideas they are investigating using a simple test. Suggest a practical way of how to find things out, or collect data to answer a question or idea they are investigating.</p>	
<p>Take measurements Use senses and simple equipment to explore the world around them, e.g. binoculars and magnifying glasses.</p>	<p>Take measurements Observe objects, living things, events and the world around them closely, using their senses and simple equipment. Make measurements using non-standard units of measure.</p>	<p>Take measurements Observe closely and use equipment provided for observation and measuring correctly. Make measurements using non-standard and standard units of measure.</p>	

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<p>Record data Talk to an adult about what has been found/found out.</p>	<p>Record data Present evidence they have collected in simple templates provided for them to help in answering questions. Draw or photograph evidence and label with support.</p>	<p>Record data Gather and record data in appropriate ways with increasing independence to help in answering questions.</p>	
<p>Present data Talk to an adult about what has been found/found out.</p>	<p>Present data Present findings in simple templates provided for them or orally. Draw or photograph evidence and label with support</p>	<p>Present data Report on and record findings as drawings, photographs, labelled diagrams, orally, as displays or in simple prepared tables or charts.</p>	
<p>Answer questions using data With support, explain why some things occur.</p>	<p>Answer questions using data Respond to suggestions to connect what has been observed with possible further actions or observations.</p>	<p>Answer questions using data Use understanding of what has been observed or own experience/ideas to answer questions.</p>	
<p>Draw conclusions With support, talk about what they have found out or what they think might happen next/ change based on their own experiences.</p>	<p>Draw conclusions Use their ideas to suggest answers to questions. Say what has changed when observing objects, living things or events.</p>	<p>Draw conclusions Respond to suggestions to identify some evidence needed to answer a question.</p>	

Living things and their habitats			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To name different habitats and some animals that might live there To discuss the similarities and difference between their immediate environment and some others around the world To remember key facts about lifecycles of an animal (e.g. tadpole or butterfly) To know the names of some baby animals To know some animals are nocturnal <p>VOCABULARY:</p> <ul style="list-style-type: none"> Habitats: woodland, desert, ocean, jungle, arctic, Micro-habitats: log, stone, tree, soil Seaside Environment, recycling, Playground Lifecycle 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> <i>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (Plants)</i> <i>Identify and describe the basic structure of a variety of common flowering plants, including trees. (Plants)</i> <i>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (Animals incl Humans)</i> <i>Identify and name a variety of common animals that are carnivores, herbivores and omnivores (Animals incl Humans)</i> <i>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) (Animals incl Humans)</i> <i>Observe changes across the four seasons (Seasonal Changes)</i> 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have 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 animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including micro-habitats 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. <i>Notice that animals, including humans, have offspring which grow into adults (Animals incl Humans)</i> <p>VOCABULARY:</p> <ul style="list-style-type: none"> Life processes, living, dead, never living Food chain, food sources, predator, prey Habitat, microhabitat, depend, survive Woodland, urban, coastal, rainforest, arctic, desert, ocean, river, mountain 	<p>KNOWLEDGE:</p> <p>The pupils can:</p> <ul style="list-style-type: none"> Describe the basic needs of animals for survival and the main changes as young animals, including humans, grow into adults. Identify whether things are alive, dead or have never lived group animals according to what they eat, describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships name different plants and animals and describe how they are suited to different habitats

Materials			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To know that some things in the world are man-made and some things are natural To know that ice can melt and water can be frozen To sort materials into two simple group categories that are given to them e.g. hard and soft <p>MATERIALS – VOCABULARY:</p> <ul style="list-style-type: none"> Object, material, suitable, recycling. Properties - Waterproof, strong/weak, hard/soft. Materials: bubble wrap, foil, plastic, fabric, paper, straw, sticks, bricks, metal, glass. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> 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 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. <p>VOCABULARY:</p> <ul style="list-style-type: none"> Object, material, properties Plastic, wood, metal, water, glass, paper, brick, fabric, stone Hard/soft, bendy/not bendy, shiny/dull, rough/bumpy/smooth, opaque/transparent, stretchy/stiff/rigid, waterproof/not waterproof, absorbent/not absorbent, strong, light/heavy 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p>VOCABULARY: Year 1 vocabulary as well as:</p> <ul style="list-style-type: none"> Cardboard, rubber Flexible, hard-wearing, elastic, translucent Squash, bend, twist, stretch 	<p>KNOWLEDGE</p> <p>The pupils can:</p> <ul style="list-style-type: none"> distinguish objects from materials, describe their properties, identify and group everyday materials and compare their suitability for different uses.

Plants			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • To talk about what might come from a seed. • To know how to care of plants • To remember some key facts about the life cycle of a plants. • To discuss how some fruits and vegetables are grown. <p>VOCABULARY:</p> <ul style="list-style-type: none"> • Grow • Lifecycle: Roots, stem, leaves, flower • Water, light, soil • British Autumn fruits and vegetables (e.g. apples, pears, carrots, potatoes, sweetcorn, cauliflower) as well as other seasonal fruit and veg 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees. <p>VOCABULARY:</p> <ul style="list-style-type: none"> • Wild plants: dandelion, daisy, buttercup, nettles, ivy, dog rose, clover, brambles • Garden plants: fuchsia, pansy, sweet pea, sunflower, rose, lavender, iris • Trees: oak, horse chestnut, cedar, beech, ash • Weed, deciduous, evergreen • Roots, stem, leaves, flowers, petals, fruit, seed, bulb, trunk, branches, twigs, crown. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into mature plants • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>VOCABULARY:</p> <ul style="list-style-type: none"> • Sunlight, water, temperature, nutrition • Bulb, seeds • Germination, sprout, shoot, seed dispersal 	<p>KNOWLEDGE:</p> <p>The pupils can:</p> <ul style="list-style-type: none"> • describe the basic needs of plants for survival and the impact of changing these • describe the main changes as seeds and bulbs grow into mature plants. • identify whether things are alive, dead or have never lived • group animals according to what they eat. • describe how animals get their food from other animals and/or from plants. • use simple food chains to describe these relationships. • name different plants and animals and describe how they are suited to different habitats.

Animals, including Humans			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • To remember some key facts about different lifecycles of plants and animals • To know that some animals are nocturnal • To name the habitats of some well-known animals e.g. polar bears, camels, gorillas • To know the basic parts of a human body • To explain ways you can be healthy and look after your body e.g. exercise <p>VOCABULARY</p> <ul style="list-style-type: none"> • Predator, prey. • Nocturnal. Hibernate • Lifecycle 	<p>KNOWLEDGE</p> <ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common animals that are carnivores, herbivores and omnivores • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) • 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>VOCABULARY</p> <ul style="list-style-type: none"> • Amphibians: frog, toad, newt, salamander • Birds: penguin, chicken, seagull, robin • Fish: goldfish, tuna, shark, eel • Mammals: human, mouse, dog, cow • Reptiles: snake, tortoise, lizard, alligator • Carnivore, herbivore, omnivore. • Senses: sight, hearing, touch, taste, smell • Body parts: head, eye, ear, nose, mouth, teeth, shoulder, elbow, hand, fingers, thumb, leg, knee, foot, toes • Body parts: beak, wings, feathers, fins, gills, scales, fur 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults • Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>VOCABULARY:</p> <ul style="list-style-type: none"> • Survival, water, air, food • Reproduce, adult, develop, life cycle, offspring, young, live young • Dehydrate, diet, disease, energy, exercise, germs, heart rate, hygiene, nutrition, pulse, infection • Carbohydrates, proteins, dairy, fruit and vegetables, oils 	<p>KNOWLEDGE</p> <p>The pupils can:</p> <ul style="list-style-type: none"> • name and locate parts of the human body, including those related to the senses. • describe the importance of exercise, a balanced diet and hygiene for humans. • describe the basic needs of animals for survival. • the main changes as young animals, including humans, grow into adults • describe and compare the observable features of animals from a range of groups • group animals according to what they eat. • describe how animals get their food from other animals and/or from plants. • use simple food chains to describe these relationships.

Seasonal Changes			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To know the names of the four seasons: Autumn, Winter, Summer and Spring. To know the seasons can differ in weather and begin to describe these differences. <p>VOCABULARY:</p> <ul style="list-style-type: none"> Seasons: Spring, Summer, Autumn, Winter Weather: Sun, rain, wind, snow, frost, cold, warm/hot 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies. <p>VOCABULARY:</p> <ul style="list-style-type: none"> Seasons, weather, daylight Spring: March, April, May Summer: June, July, August Autumn: September, October, November Winter: December, January, February Sun, sunrise, day, light Moon, sunset, night, dark Weather, wind, rain, cloud, snow, sun 	N/A	<p>KNOWLEDGE:</p> <p>The pupils can:</p> <ul style="list-style-type: none"> Name the 4 seasons Describe seasonal changes

Scientists and Inventors			
Reception	Year 1	Year 2	Arriving in Year 3 ...
<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To <p>VOCABULARY:</p>	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To learn about famous scientists and inventors linking to the Year 1 Science curriculum <p>VOCABULARY:</p> <ul style="list-style-type: none"> Inventor, scientist, astronaut, biologist, veterinarian (vet) Sensory garden, rain gauge, ear muffs, Lego 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To learn about famous scientists and inventors linking to the Year 2 Science curriculum <p>VOCABULARY:</p> <ul style="list-style-type: none"> Inventor, scientist, chemist, engineer, botanist, doctor Biomes, Eden project, turbine, germs, waterproof, pollution 	<ul style="list-style-type: none">

The Environment			
Reception	Year 1	Year 2	Arriving in Year 3 ...
		<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Engage with environmental issues • Understand the simple changes we can make to live more sustainable lives. • Apply practical scientific methods and skills. <p>VOCABULARY:</p> <ul style="list-style-type: none"> • Energy, power, non-renewable, renewable, endangered, extinct • Environment, climate, climate change, atmosphere, greenhouse gas • Wind turbines, solar panels, geothermal energy, biomass • Flood, droughts, storms, melting sea ice 	•