

Science - Curriculum Overview

	EYFS	Year 1	Year 2	Year 3	Year 4
Autumn	<p>Title and Objectives</p> <p>Children make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>Children safely use and explore a variety of materials, tools and techniques, experimenting with design, texture, form and function,</p> <p>Children know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Children make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p><u>All about me</u></p> <p>I can identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense.</p> <p><u>Materials</u></p> <p>I can distinguish between an object and the material from which it was made.</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</p> <p>I can describe the simple physical properties of a variety of everyday materials.</p> <p>I can compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p><i>I can ask simple questions and recognise that they can be answered in different ways.</i></p> <p><i>I can observe closely using simple equipment.</i></p> <p><i>I can perform simple tests.</i></p> <p><i>I can identify and classify using my observations and ideas to suggest answers to questions.</i></p> <p><i>I can gather and record data to help in answering</i></p>	<p><u>Animals including humans</u></p> <p>I can notice that animals, including humans, have offspring which grow into adults?</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene?</p> <p><u>Working scientifically</u></p> <p>I can observe closely, using simple equipment?</p> <p>I can perform simple tests?</p> <p>I can gather and record data to help in answering questions?</p>	<p><u>Forces and magnets</u></p> <p>Can I compare how things move on different surfaces?</p> <p>Can I notice that some forces need contact between two objects, but magnetic forces can act at a distance?</p> <p><u>Working scientifically</u> <u>*Throughout Autumn/spring/summer*</u></p> <p>I can ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make systematic and careful observations, and where appropriate, taking accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>I can report on findings from enquiries including oral and written explanations, displays or presentations of</p>	<p><u>States of Matter.</u></p> <p>I can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>I can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius.</p> <p>I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p><u>Working Scientifically</u> <u>*Throughout Autumn/Spring/Summer*</u></p> <p>I can ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make systematic and careful observations, and where appropriate, taking accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can record findings using</p>

			<p><i>questions.</i></p> <p>Autumn</p> <p>I can observe the changes across the four seasons. I can observe and describe weather associated with the seasons and how day length varies.</p>		<p>results and conclusions.</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward evidence to answer questions or to support my findings.</p>	<p>simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p>I can report on findings from enquiries including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward evidence to answer questions or to support my findings.</p>
Vocabulary	Material, hard/soft, rough/smooth, light/heavy, twist, slot, size, push/pull, sort, order, tactile, match, magnetism, body parts, exercise, ability, healthy, fit, bones, muscle, blood, skin, animal, reptile, mini-beasts, life cycle, dinosaur names, features, carnivore, herbivore, omnivore, outdoors, planting, parts of a plant, change, season, weather, senses, habitat, natural, nature, re-cycle, environment, atmosphere, temperature, world, space, planets.		<p>Materials, object, man made, natural, wood, plastic, glass, metal, water, rock, investigate, record, predict, autumn.</p> <p>Human, body, parts, arm, leg, hip, knee, chest, head, ear, lips, nose, face, elbow, shoulder, feet, tose, hands, fingers.</p>	Offspring, mammals, amphibians, reptiles, fish, birds, humans, give birth, eggs, new born, baby, toddler, child, teenager, adult, elderly, healthy diet, balanced diet, hygiene, exercise.	<p>Forces, magnets, push, pull, north, south, attract, repel, magnetic poles, surface, magnetic, magnetic field.</p> <p>Bar magnet, stick magnet, ring magnet, button magnet, horseshoe magnet, cylindrical magnet, arc magnet.</p>	<p>Materials, solids, liquids, gases, state, heated, cooled, measure, temperature, degrees Celsius, evaporation, condensation, water cycle.</p> <p>Enquiries, experiments, thermometers, data loggers, bar charts, keys, conclusions, predictions, ,</p>
Key Facts			<p>The weather gets colder in autumn, leaves fall of the trees and days get shorter.</p> <p>Identifying materials within everyday objects.</p>	<p>To understand the different groups of animals. To understand the growth cycle of the different groups.</p> <p>To understand the importance of living a</p>	<p>To identify what materials are magnetic and understand that not all metals are magnetic.</p>	<p>The water cycle, the process of states of change, the temperature at which water, heats, freezes and cools.</p>

					healthy life style.		
Spring	Title and Objectives			<p><u>Animals (Farm to Fork)</u></p> <p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>I can describe and compare the structure of a variety of common animals.</p> <p>I can identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense. (Review)</p> <p><i>I can ask simple questions and recognise that they can be answered in different ways.</i></p> <p><i>I can observe closely using simple equipment.</i></p> <p><i>I can perform simple tests.</i></p> <p><i>I can identify and classify using my observations and ideas to suggest answers to questions.</i></p> <p><i>I can gather and record data to help in answering questions.</i></p> <p><u>Winter and Spring</u></p> <p>I can observe the changes across the four seasons. I can observe and describe weather associated with the seasons and how day length varies.</p>	<p><u>Everyday Materials</u></p> <p>I can 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> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching?</p> <p>I can ask simple questions and recognising that they can be answered in different ways?</p> <p>I can observe closely, using simple equipment?</p> <p>I can perform simple tests?</p> <p>I can identify and classify using my observations and ideas to suggest answers to questions?</p> <p>I can gather and record data to help in answering questions?</p>	<p><u>Light</u></p> <p>Can I recognise that I need light in order to see things and that dark is the absence of Light?</p> <p>Can I notice that light is reflected from surfaces?</p> <p>Can I recognise that light from the sun can be dangerous and that there are ways to protect my eyes?</p> <p>Can I recognise that shadows are formed when the light from a light source is blocked by a solid object?</p> <p>Can I find patterns in the way that the size of shadows change?</p> <p><u>Rocks</u></p> <p>Can I compare and group together different kinds of rocks on the basis of their appearance and simple physical properties?</p> <p>Can I describe in simple terms how fossils are formed when things that have lived are trapped within rock?</p> <p>Can I recognise that soils are made from rocks and organic matter?</p>	<p><u>Electricity</u></p> <p>I can identify common appliances that run on electricity.</p> <p>I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>I can 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 a battery.</p> <p>I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>I can recognise some common conductors and insulators, and associate metals with being good conductors.</p> <p><u>Sound</u></p> <p>I can identify how sounds are made, associating some of them with something vibrating.</p> <p>I can recognise that vibrations from the sound travel through a medium to the ear.</p> <p>I can find patterns between the pitch of a sound and features of the object that produced it.</p> <p>I can find patterns between the volume of a sound and</p>

							<p>the strength of the vibrations that produced it.</p> <p>I can recognise that sounds get fainter as the distance from the sound source increases.</p>
	Vocabulary			<p>Human, body, parts, arm, leg, hip, knee, chest, head, ear, lips, nose, face, elbow, shoulder, feet, tose, hands, fingers, bones, skeleton, heart, lungs.</p> <p>Animals, fish, amphibians, reptiles, birds, mammals, carnivores, herbivores, omnivores.</p>			
	Key Facts						
Summer	Title and Objectives			<p>Plants</p> <p>I can identify and name a variety of common garden plants and wild plants.</p> <p>I can identify deciduous and evergreen trees.</p> <p>I can identify and describe the basic structure of a variety of common flowering plants including trees.</p> <p><i>I can ask simple questions and recognise that they can be answered in different ways.</i></p> <p><i>I can observe closely using simple equipment.</i></p> <p><i>I can perform simple tests.</i></p> <p><i>I can identify and classify using my observations and ideas to suggest answers to</i></p>	<p>Animals including humans</p> <p>I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air)?</p> <p>I can explore and compare the differences between things that are living, dead and things that have never been alive?</p> <p>I can 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?</p> <p>I can identify and name a variety of plants and animals in their habitats,</p>	<p>Animals including humans</p> <p>Can I identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat?</p> <p>Can I identify that humans and some other animals have skeletons and muscles for support, protection and movement?</p> <p>Plants</p> <p>Can I identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers?</p> <p>Can I explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how</p>	<p>Animals, inc humans.</p> <p>I can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>I can identify the different types of teeth in humans and their simple functions.</p> <p>I can construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Living things and their habitats</p> <p>I can recognise that living things can be grouped in a variety of ways.</p> <p>I can explore and use classification keys to help group, identify and name a variety of living things in my</p>

				<p><i>questions.</i></p> <p><i>I can gather and record data to help in answering questions.</i></p> <p><u>Summer</u></p> <p>I can observe the changes across the four seasons. I can observe and describe weather associated with the seasons and how day length varies.</p>	<p>including micro-habitats?</p> <p>I can 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?</p>	<p>they vary from plant to plant?</p> <p>Can I investigate the way in which water is transported within plants?</p> <p>Can I explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal?</p>	<p>local and wider environment.</p> <p>I can recognise that environments can change and that this can sometimes pose dangers to living things.</p>
	Vocabulary			<p>Summer, plants, tree, evergreen. Deciduous, flowering, leaves, stem, petals, roots, soil, water.</p>			
	Key Facts						