

SKILLS PROGRESSION: Science



Strand	EYFS	YEAR 1	YEAR 2	YEAR 3
Plants	<p>Use all their senses in hands on exploration of natural materials.(3-4 Natural World).</p> <p>Talk about what they see, using a wide vocabulary. (3-4 Natural World).</p> <p>Plant seeds and care for plants (3-4 Natural World).</p> <p>Understand the key features of the life cycle of a plant (3-4 Natural World).</p> <p>Begin to understand the need to respect and care for the natural environment and all living things (3-4 Natural World).</p> <p>Elements of working scientifically Observations, comparisons, classification, identification, questioning and finding patterns will occur naturally through free flow and guided work.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Key vocabulary: Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, Names of trees in the local area Names of garden and wild flowering plants in the local area.</p> <p>Elements of Working Scientifically: Observe, compare, classify, make observations over time.</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>Key Vocabulary: As year 1 + light, shade, sun, warm, cool, water, grow, healthy</p> <p>Elements of Working Scientifically: Observe, compare, classify, complete simple tests to make observations over time that involve measurements.</p>	<p>Identify and describe the functions of different parts of flowering plants: roots,stem/trunk, leaves and flowers</p> <p>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</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>
Animals, including humans. [Link to PE and PSHE]	<p>Understand the key features of an animal(3-5 Natural World).</p> <p>Describe what they see, hear and feel whilst outside. (The Natural World)</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Group animals according to what they eat.</p>	<p>Understand that animals, including humans have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including</p>	<p>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>Know and talk about the different factors that support their overall health and wellbeing: regular physical activity, healthy eating, toothbrushing, having a good sleep routine (Gross Motor Skills)</p> <p>Further develop the skills they need to manage the school day successfully: personal hygiene. (Gross Motor Skills)</p> <p>Elements of working scientifically Observations, comparisons, classification, identification, questioning and finding patterns will occur naturally through free flow and guided work.</p>	<p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals).</p> <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.</p> <p>Key vocabulary: Head, body, ears, eyes, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves. Names of animals featured first hand from each vertebrate group Senses – touch, smell, see, taste, hear, fingers (skin), eyes, nose, ear and tongue.</p> <p>Elements of Working Scientifically: Ask simple questions, observe closely, identify, compare, look for patterns.</p>	<p>humans, (pets) for survival (water, food, air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygien</p> <p>Key vocabulary: Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types.</p> <p>Elements of Working Scientifically: Ask simple questions, recognise patterns, record findings, draw conclusions.</p>	<p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>
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<p>Living things and habitats</p>	<p>Talk about what they see, using a wide vocabulary. (3-4 Natural World).</p> <p>Explore the natural world around them. (The Natural World)</p> <p>Recognise some environments that are different to the one in which they live. (The Natural World)</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants (ELG). (The Natural World)</p> <p>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 (ELG).</p> <p>Elements of working scientifically Observations, comparisons, classification, identification, questioning and finding patterns will occur naturally through free flow and guided work.</p>	<p>{Cross reference work on plants}</p>	<p>To explore and compare the differences between things that are living, dead and things that have never been alive.</p> <p>To 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. (study of rainforest habitat)</p> <p>To identify and name a variety of plants and animals in their habitats, including micro –habitats.</p> <p>To 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>• Key vocabulary:</p> <p>Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed Names of local habitats e.g. pond, woodland etc. Names of micro-habitats e.g. under logs, in bushes etc. Charles Darwin</p> <p>Elements of Working Scientifically: Observe, classify, pattern seeking, record findings</p>	<p>In Year 4 pupils will be taught to:</p> <p>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 Recognise that environments can change and that this can sometimes pose dangers to living things</p>
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<p>Everyday Materials/ Uses of everyday materials</p>	<p>Use all their senses in hands on exploration of natural materials.(3-4 Natural World).</p> <p>Explore collections of materials with similar and/or different properties. (3-4 Natural World).</p> <p>Talk about the differences between materials and changes they notice (3-4 Natural World).</p> <p>Elements of working scientifically Observations, comparisons, classification, identification, questioning and finding patterns will occur naturally through free flow and guided work.</p>	<p>To distinguish between an object and the material from which it is made.</p> <p>To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>To describe the simple physical properties of a variety of everyday materials.</p> <p>To compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>Key Vocabulary: Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, rubber, card/cardboard, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through</p> <p>Elements of Working Scientifically: Observe, classify, simple tests.</p>	<p>To 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>To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>Key Vocabulary: Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard</p> <p>Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid</p> <p>Shape, push/pushing, pull/puling, twist/twisting, squash/squashing, bend/bending, stretch/stretching</p> <p>Elements of Working Scientifically: Classify, predict, simple tests, devise own test, draw conclusions.</p>	<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>
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<p>Seasonal Changes</p>	<p>Understand the effect of changing seasons on the natural world around them. (The Natural World)</p> <p>Explore and talk about different forces they can feel (3-4 Natural World).</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter (ELG). (The Natural World)</p> <p>Elements of working scientifically Observations, comparisons, classification, identification, questioning and finding patterns will occur naturally through free flow and guided work.</p>	<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies</p> <p>Key Vocabulary: Weather (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn) Sun, sunrise, sunset, day length</p> <p>Elements of Working Scientifically: Observe, compare, record.</p>	<p>{Link to Geography and mathematics}</p> <p>Compare temperatures and seasons around the World. Record the weather using standard measures and compare over time.</p> <p>Key Vocabulary: Celsius, thermometer, North Pole, South Pole, Equator.</p> <p>Elements of Working Scientifically: Observe, gather and record data, draw conclusions,</p>	<p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Light)</p>
<p>Working Scientifically</p>	<p>Explore and talk about different forces they can feel (3-5 Natural World).</p> <p>Understanding 'why' questions (3-4 Listening attention and understanding)</p> <p>Ask questions to clarify understanding (ELG Listening attention and understanding) Offer explanations as to why things happen (Speaking ELG)</p>	<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Use simple equipment to observe closely.</p> <p>Carry out pre-planned simple tests with support.</p>	<p>Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the National Curriculum.</p> <p>Use simple equipment to observe closely including changes over time.</p> <p>Suggest how to test ideas and discuss what might happen. Begin to carry out own simple comparative tests.</p>	<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: Asking relevant questions and using different types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard</p>

		<p>Identify and classify to begin to notice patterns and relationships. Use observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>	<p>Identify, group and classify using observations and give ideas to suggest answers to questions.</p> <p>Gather and record data in a variety of ways including from secondary sources and present in tables, graphs etc.</p> <p>Say whether what happened was what was expected and draw simple conclusions.</p>	<p>units, using a range of equipment, including thermometers and data loggers. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Identifying differences, similarities or changes related to simple scientific ideas and processes. Using straightforward scientific evidence to answer questions or to support their findings.</p>
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