

PHIA Science Curriculum Overview

	Year R – AS PART OF UW	Year 1	Year 2	Year 3
<p>Working scientifically – these skills thread through into every science lesson so are not split into different terms.</p>	<p>Explore practically. Making observations. Know and talk about differences and similarities. Understand what the natural world is. Recall information from books read in class and based on own experiences and observations. Draw pictures to share understanding.</p>	<p>Asking simple questions and recognising that they can be answered in different ways with adult support. Using books and direct experiences to answer questions. Questions are often generated through class discussion and sharing ideas rather than individually.</p> <p>Observing closely, using simple equipment such as rulers and magnifying glasses.</p> <p>Performing simple tests as a whole class to collaboratively make predictions, collecting data and drawing conclusions.</p> <p>Identifying and classifying largely based on animal grouping and names of different plants.</p> <p>Using their observations and ideas to suggest answers to questions.</p> <p>Gathering and recording data to help in answering questions. The data is usually done through observations, what did they see happening?</p>	<p>Asking simple questions and recognising that they can be answered in different ways. Children use a variety of sources of information to answer questions such as internet research, independent reading, own experiences and prior learning. Questions are generated with increasing independence.</p> <p>Observing closely, using simple equipment such as timers and scales.</p> <p>Performing simple tests with increasing independence to think about making predictions, collecting data and drawing own conclusions. Children are also supported to begin to think about fair testing.</p> <p>Identifying and classifying especially when looking at alive, never alive and dead.</p> <p>Using their observations and ideas to suggest answers to questions.</p> <p>Gathering and recording data to help in answering questions using developing maths skills based on measures and data handling.</p>	<p>Asking relevant questions & 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 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 question. 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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<p>Materials</p>	<p>TERM 2 – HUMPTY DUMPTY AND JACK AND JILL TERM 3 – SUPERTATO LINK Understand some important processes and changes in the natural world around them, including changing states of matter.</p>	<p>TERM 1 YEAR 1 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>	<p>TERM 2 YEAR 2 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>	<p>N/A</p>
<p>Seasonal changes</p>	<p>ONGOING THROUGHOUT THE YEAR AS THE SEASONS CHANGE Understand some important processes and changes in the natural world around them, including the seasons.</p>	<p>TERM 2 and term 4 YEAR 1 Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p>		<p>N/A</p>

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<p>Animals/ Living things including humans.</p>	<p>TERMS 5 & 6 LINK TO UNDER THE SEA Explore the natural world around them, making observations and drawing pictures of animals.</p>	<p>TERMS 3 & 4 YEAR 1 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>	<p>Animals needs for survival TERM 1 year 2 Habitats term3 and 4 YEAR 2 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. 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>	<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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>
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Plants	TERMS 5 & 6 RECEPTION Explore the natural world around them, making observations and drawing pictures of plants.	TERMS 6 YEAR 1 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.	TERMS 6 YEAR 2 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.	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. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
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<p>Key vocabulary</p>	<p>Materials: hard, soft, waterproof, names of familiar materials such as plastic and wood, ice/water, warm/cold/freeze, melt, change</p> <p>Seasonal changes: winter, spring, summer, autumn, seasons, changes, weather and names of types of weather such as rain, hot, cloudy, wind, hot/cold/warm.</p> <p>Plants: plant, leaf/stem/petals/root, water and sunlight</p>	<p>Materials: wood, fabric, metal, glass, plastic, rock, hard, soft, flexible, stiff, bend, fold, twist, opaque, transparent, translucent, heavy, light.</p> <p>Seasonal changes: spring, summer, autumn, winter, year, month, months of the year names, cold, hot, rain, snow, warm, cool, trees, blossom, evergreen and deciduous</p> <p>Animals: animal names, amphibian, reptile, fish, bird, mammal, sight, hearing, touch, smell, taste, body parts, carnivore, omnivore, herbivore, diet, habitat, sort</p> <p>Plants: plant names (trees, bushes, flowers, weeds), deciduous and evergreen, root, flower, stem, leaves, bark, trunk, branch, bud, pollen, seed, soil, water, sunlight, blossom, petals, fruit, bulb, seed.</p>	<p>Materials: bend, flexible, rigid, rigidity, solid, change, squash, press, stretch, twist, material names, line of enquiry, hypothesis, fair test, suitability</p> <p>Animals: dead/was alive/was living, alive/living, never alive, habitat, microhabitat, suitability, animal names, habitat names, food chain, predator, apex predator, top or bottom of food chain, prey, herbivore, omnivore, carnivore, survive, thrive.</p> <p>Animals including humans: baby, offspring, growth, change, develop, healthy, unhealthy, sugar/fat/salt, vitamins/minerals/protein/carbohydrates, choice, heart health, heart beat, heart rate, strength, lifestyle</p> <p>Plants: seed, disperse, wind, pollination, dandelion, bulb, growth, sunlight, water, soil</p>	
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