



Woolenwick Infant and Nursery School Science Curriculum

<u>Nursery</u>	<p>Planting seeds and caring for growing plants.</p> <p>Understanding the key features of the life cycle of a plant and an animal.</p> <p>Beginning to understand the need to respect and care for the natural environment and all living things.</p> <p>Exploring and talking about different forces we can feel.</p> <p>Exploring how things work.</p>
<u>Reception</u>	<p>Exploring the natural world around us.</p> <p>Understanding the effect of changing seasons on the natural world around us.</p> <p>Exploring the natural world around us, making observations and drawing pictures of animals and plants.</p> <p>Talking about some similarities and differences between the natural world around me and contrasting environments, drawing on our experiences and what has been read in class.</p> <p>Understanding some important processes and changes in the natural world around, including the seasons and changing states of matter.</p>

	Plants	Animals including humans	Living things and their habitats	Materials	Working Scientifically
Year 1	<p>Making observations of plants, including flowers and vegetables we have planted.</p> <p>Identifying the leaf, root, stem and flower of a plant.</p> <p>Identifying the trunk, branch, roots and leaves of a tree.</p> <p>Knowing that plants produce seeds.</p> <p>Identifying differences between plants.</p> <p>Identifying and describing the basic structure of a variety of common flowering plants, including trees.</p> <p>Naming some common plants and some plants that live in the garden.</p> <p>Naming some plants that live in the wild.</p> <p>Naming some trees in the local environment.</p> <p>Recognising that different plants live in the local environment.</p> <p>Using simple identification guides to name plants in the local environment.</p>	<p>Identifying and naming a selection of animals.</p> <p>Identifying and sorting animals into different groups.</p> <p>Naming the different groups of animals.</p> <p>Identifying and naming a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Making observations of animals.</p> <p>Knowing that animals eat different types of food.</p> <p>Identifying the food of some common animals.</p> <p>Recalling and using the words: carnivore, herbivore and omnivore.</p> <p>Identifying and naming a variety of common animals that are carnivores, herbivores and omnivores.</p>	<p>Observing changes across the four seasons.</p> <p>Identifying what to observe.</p> <p>Using descriptive words, photos and pictures to record changes.</p> <p>Collecting evidence of changes (e.g. leaves, seeds, flowers).</p> <p>Naming the four seasons.</p> <p>Recalling simple changes associated with each season.</p> <p>Observing and naming types of weather (e.g. rain, sun, wind, clouds).</p> <p>Observing and describing weather associated with the seasons and how day length varies.</p> <p>Identifying what to measure about the weather.</p> <p>Using prepared tables and charts to record data.</p>	<p>Naming some common materials.</p> <p>Naming some common objects around the school and home.</p> <p>Distinguishing between an object and the material from which it is made.</p> <p>Naming materials which have lots of different uses (e.g. paper- wrapping paper, tissue paper, writing paper, birthday card)</p> <p>Identifying some naturally occurring materials: wood, rock, water.</p> <p>Identifying some man-made materials: glass, metal, plastic.</p> <p>Identifying and naming a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describing objects that are made from lots of different materials.</p>	<p>Asking simple questions and recognise that they can be answered in different ways.</p> <p>Recognising scientific and technical developments that help mankind.</p> <p>Performing simple tests or following teachers' instructions.</p> <p>With guidance, suggesting what we will do.</p> <p>With guidance, identifying things to measure or observe that are relevant to the question.</p> <p>Using resources provided or chosen from a limited range.</p> <p>Using simple measurements and equipment to gather data.</p> <p>Suggesting why a test is unfair.</p>

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	<p>Identifying and naming a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Comparing and contrasting different plants.</p> <p>Sequencing pictures of how plants change over time.</p> <p>Describing how deciduous trees change throughout the year.</p> <p>Explaining why some plants are only seen at certain times of the year.</p>	<p>Grouping animals that belong to carnivores, herbivores and omnivores.</p> <p>Observations to point out differences between humans and other animals and between animals and non-living things. Describing and comparing the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>Identifying and locating the sense organs.</p> <p>Using senses to describe textures, sounds and smells.</p> <p>Comparing differences in texture, sounds and smells.</p> <p>Naming and locating the basic parts of the human body.</p> <p>Drawing and labelling a simple body outline.</p>	<p>Using secondary data to describe weather in another setting.</p> <p>Explaining why animals are easier to spot at different times of year (e.g. migrating birds, hibernating animals).</p>	<p>Naming objects that are sometimes made from different materials (e.g. spoons- plastic, wooden, metal).</p> <p>Making observations of common objects and the different materials they are made of.</p> <p>Communicating these observations using descriptive words (e.g. bendy, rough, hard).</p> <p>Identifying some properties of materials (e.g. see through, waterproof, absorbent).</p> <p>Describing the simple physical properties of a variety of everyday materials.</p> <p>Making predictions about which materials will float and sink.</p>	<p>Observing closely (including changes over time), using simple equipment.</p> <p>Making measurements using non-standard units.</p> <p>Using simple secondary sources to find answers, e.g. books, videos, photographs or people.</p> <p>Gathering and recording simple data to help in answering questions.</p>

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		<p>Describing differences between the different animal groups (e.g. birds have feathers, but mammals have fur).</p> <p>Identifying animals which are more likely to be seen in different seasons.</p> <p>Explaining why some animals are only seen at night.</p>		<p>Comparing and grouping together a variety of everyday materials based on their simple physical properties (both visible and non-visible).</p> <p>Explaining why people started using plastic bags rather than paper bags.</p>	

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Year 2	<p>Knowing that flowering plants produce seeds which grow into new plants.</p> <p>Knowing that some plants have bulbs from which they grow.</p> <p>Making observations of plants over time.</p> <p>Exploring how plants from seeds and bulbs grow.</p> <p>Describing what happens to bulbs during the plant cycle as they grow.</p> <p>Describing what happens to a seed as it grows and develops.</p> <p>Describing what we observe as new plants grow.</p> <p>Observing and describing how seeds and bulbs grow into mature plants.</p> <p>Comparing the plant cycle for a plant from a seed with that from a bulb.</p> <p>Suggesting how to find out about what plants need in order to grow well.</p> <p>Recognising that plants are living and need water, light and warmth to grow.</p>	<p>Recognising that animals produce young.</p> <p>Noticing that animals, including humans, have offspring which grow into adults.</p> <p>Recognising changes that take place as animals get older.</p> <p>Explaining that adult animals no longer grow.</p> <p>Describing some differences they observe between babies and toddler.</p> <p>Making comparisons of the differences we observe between babies and toddlers.</p> <p>Identifying the offspring of a selection of different animals.</p> <p>Using evidence to show that adult animals no longer grow.</p> <p>Using evidence to show that children of the same age are not all the same size.</p> <p>Using evidence to show that older children are generally taller than younger children.</p>	<p>Using keys to identify some animals and plants.</p> <p>Recognising that different plants live in the local environment.</p> <p>Identifying some local habitats.</p> <p>Describing the simple features of habitats.</p> <p>Recognising a microhabitat as a small habitat (e.g. leaf litter, woodlice under stones).</p> <p>Describing some microhabitats.</p> <p>Identify and naming a variety of plants and animals in their habitats, including micro-habitats</p> <p>Recognising similarities and differences between plants and animals.</p> <p>Exploring and comparing the differences between things that are living, dead, and things that have never been alive.</p>	<p>Identifying uses of some common materials.</p> <p>Giving reason why a material is suitable for its job.</p> <p>Recognising that some materials will have more than one property which increases its suitability for its purpose (e.g. glass is transparent, rigid and weatherproof).</p> <p>Identifying and comparing the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Suggesting several reasons why a material may or may not be suitable for a particular purpose.</p> <p>Explaining why one material may be more suitable for a purpose than another by discussing properties.</p>	<p>Supporting, preparing simple tables to record data.</p> <p>Helping, recording my findings in a range of ways, e.g. simple tables, diagrams, pictograms, sorting circles, bar charts and templates.</p> <p>Talking about our findings using everyday terms, text scaffolds or simple scientific language.</p> <p>Using simple observable features to compare objects, materials and living things.</p> <p>Identifying and classifying (deciding how to sort and group objects).</p> <p>With guidance, beginning to notice changes (i.e. cause and effect), patterns and relationships (i.e. how one variable affects another).</p>

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	<p>Describing differences between plants grown in the light and in the dark.</p> <p>Finding out and describing how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>Explaining how to look after a variety of plants.</p> <p>Knowing that a seed and bulb both contain everything a plant needs to grow.</p> <p>Explaining that seeds and bulbs do not need light to germinate and identify how this is different to the needs of a plant.</p> <p>Explaining how plants in the desert survive with little water and plants in the rainforest survive with little light.</p>	<p>Finding out about and describing the basic needs of animals, including humans, for survival (water, food and air).</p> <p>Explaining how to look after a pet describing what it needs to survive.</p> <p>Describing the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p>Recognising that exercise is important.</p> <p>Naming some types of food.</p> <p>Identifying some types of food that make up our diet and name some examples of each.</p> <p>Recognising that an adequate diet and exercise are necessary for them to grow and stay healthy.</p> <p>Describing some of the types of food that we eat.</p>	<p>Explaining differences between living and non-living things in terms of characteristics such as movement and growth.</p> <p>Using our observations to point out differences between animals, plants and non-living things.</p> <p>Recognising that plants provide food for humans and other animals within an environment.</p> <p>Constructing a simple food chain (e.g. grass, cow, human).</p> <p>Describing 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>Naming a few of the organisms that live in a particular habitat.</p> <p>Suggesting reasons why different plants and animals are found in the different environments.</p>	<p>Explaining why plastics cause problems in the oceans.</p> <p>Explaining the importance of reusing and recycling plastic.</p> <p>Describing how swimsuits have changed over time and how the fabric is now more suitable.</p> <p>Describing how scientists have invented new materials (e.g. Macintosh, Dunlop).</p> <p>Identifying materials that can be easily changed with force.</p> <p>Identifying materials that cannot be easily changed with force.</p> <p>Describing pushes and pulls needed to change a material as big or small.</p> <p>Finding out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>Talking about what we have found out and how we found it out.</p> <p>Using our observations and ideas to suggest answers to questions.</p> <p>Using comparative language to describe changes, patterns and relationships.</p> <p>With support, suggesting whether or not what happened was what we expected.</p> <p>With support, suggesting different ways we could have done things.</p>

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			<p>Identifying 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>Comparing animals found in familiar habitats with unfamiliar habitats.</p> <p>Comparing plants found in familiar habitats with unfamiliar habitats.</p> <p>Using different factors to compare a range of habitats (e.g. water, light, temperature).</p>	<p>Describing changes in shapes as a result of the action of pushes, pulls and twists,</p> <p>Explaining why some materials change shape when a force acts (i.e. push, pull, twist, stretch) as a result of their properties.</p>	