

Science Curriculum and Skills Progression Overview

Nursery	Knowledge	• Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the difference between materials and changes they notice.
	Working Scientifically	• Beginning to understand 'why' and 'how' questions. • Beginning to use more complex sentences to link thoughts using 'and' and because. • Questions why things happen and give explanations. Asks who, what, when, how. • Builds up vocabulary that reflects the breadth of their experiences. • Children to start to classify • Use secondary resources.
Reception	Knowledge	• Explore the natural world around them • Describe what they see, hear and feel whilst outside • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world around them.
	Working Scientifically	• Links statements and sticks to a main theme or intention • Uses talk to clarify thinking. • They answer 'how' and 'why' questions about their experiences and in response to ... events. • They develop their own explanations by connecting ideas or events. • They can talk about the features of my own immediate environment and how environments might vary from on another. • Use secondary resources. • Start to pattern seek.

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Year 1				
	Autumn	Spring	Summer	Throughout the year
Curriculum Theme	Animals and Living things	Every day materials	Plants	Seasons
Knowledge (NC)	- identify and name a selection of animals - identify and sort animals into different groups - name the different groups of animals identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals - make observations of animals - know that animals eat different types of food - identify the food of some common animals - recall and use the words: carnivore, herbivore and omnivore identify and name a variety of common animals that are carnivores, herbivores and omnivores - group animals that belong to: carnivores, herbivores and omnivores - use their observations to point out differences between humans and other animals and between animals and non-living things describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) - identify and locate the sense organs - use senses to describe textures, sounds and smells	- name some common materials - name some common objects around the school and home distinguish between an object and the material from which it is made <i>name materials which have lots of different uses (e.g. paper-wrapping paper, tissue paper, writing paper, birthday card)</i> - identify some naturally occurring materials: wood, rock, water - identify some man-made materials: glass, metal, plastic identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock <i>describe objects that are made from lots of different materials</i> <i>names objects that are sometimes made from different materials (e.g. spoons- plastic, wooden, metal)</i> - make observations of common objects and the different materials they are made of - communicate these observations using descriptive words (e.g. <i>bendy, rough, hard</i>) - identify some properties of materials (e.g. see through, waterproof, absorbent) describe the simple physical properties of a variety of everyday materials <i>make predictions about which materials will float and sink</i>	- name some plants that live in the wild - name some trees in the local environment - recognise that different plants live in the local environment - use simple identification guides to name plants in the local environment - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees - make observations of plants, including flowers and vegetables they have planted - identify the leaf, root, stem and flower of a plant - identify the trunk, branch, roots and leaves of a tree - know that plants produce seeds - identify differences between plants - identify and describe the basic structure of a variety of common flowering plants, including trees - name some common plants - name some plants that live in the garden - name some plants that live in the wild - name some trees in the local environment - recognise that different plants live in the local environment	observe changes across the four seasons - identify what to observe - use descriptive words, photos and pictures to record changes - collect evidence of changes (e.g. leaves, seeds, flowers) - name the four seasons - recall simple changes associated with each season - observe and name types of weather (e.g. rain, sun, wind, clouds) observe and describe weather associated with the seasons and how day length varies - identify what to measure about the weather - use prepared tables and charts to record data <i>use secondary data to describe weather in another setting</i>

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	- compare differences in texture, sounds and smells - name and locate the basic parts of the human body draw and label a simple body outline.	compare and group together a variety of everyday materials on the basis of their simple physical properties (both visible and non-visible)	- use simple identification guides to name plants in the local environment - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	
Working Scientifically	- Ask simple questions and recognise that they can be answered in different ways - Use simple equipment to observe closely. - Identify and classify. - Use his/her observations and ideas to suggest answers to questions.	- Ask simple questions and recognise that they can be answered in different ways. - Identify and classify. - Use his/her observations and ideas to suggest	- Ask simple questions and recognise that they can be answered in different ways. - Use simple equipment to observe closely. - Perform simple tests. - Identify and classify. - Use his/her observations and ideas to suggest answers to questions. - Gather and record data to help in answering questions.	- Ask simple questions and recognise that they can be answered in different ways. - Use simple equipment to observe closely. - Perform simple tests. - Identify and classify. - Use his/her observations and ideas to suggest answers to questions. - Gather and record data to help in answering questions.

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Year 2				
	Autumn	Spring 1	Spring 2 Summer 1	Summer 2
Curriculum Theme	Habitats	Every day materials	Growing Plants	Animals including humans.
Knowledge (NC)	- with help, use keys to identify some animals and plants - recognise that different plants live in the local environment - identify some local habitats - describe the simple features of habitats - recognise a microhabitat as a small habitat (e.g. leaf litter, woodlice under stones) - describe some microhabitats identify and name a variety of plants and animals in their habitats, including micro-habitats - recognise similarities and differences between plants and animals explore and compare the differences between things that are living, dead, and things that have never been alive - explain differences between living and non-living things in terms of characteristics such as movement and growth - use their observations to point out differences between animals, plants and non-living things - recognise that plants provide food for humans and other animals within an environment - construct a simple food chain (e.g. grass, cow, human) describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and	- identify uses of some common materials - give a reason why a material is suitable for its job - recognise that some materials will have more than one property which increases its suitability for its purpose (e.g. glass is transparent, rigid and weatherproof) identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. - suggest several reasons why a material may or may not be suitable for a particular purpose - identify materials that can be easily changed with force - identify materials that cannot be easily changed with force - describe pushes and pulls needed to change a material as big or small find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	- know that flowering plants produce seeds which grow into new plants - know that some plants have bulbs from which they grow - make observations of plants over time - explore how plants from seeds and bulbs grow - describe what happens to bulbs during the plant cycle as they grow - describe what happens to a seed as it grows and develops - describe what they observe as new plants grow observe and describe how seeds and bulbs grow into mature plants <i>compare the plant cycle for a plant from a seed with that from a bulb</i> - suggest how to find out about what plants need in order to grow well - recognise that plants are living and need water, light and warmth to grow - describe differences between plants grown in the light and in the dark find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	- recognise that animals produce young notice that animals, including humans, have offspring which grow into adults - recognise changes that take place as animals get older - explain that adult animals no longer grow - describe some differences they observe between babies and toddler - make comparisons of the differences they observe between babies and toddlers - identify the offspring of a selection of different animals find out about and describe the basic needs of animals, including humans, for survival (water, food and air) <i>explain how to look after a pet describing what it needs to survive</i> describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene - recognise that exercise is important - name some types of food - identify some types of food that make up their diet and name some examples of each - recognise that an adequate diet and exercise are necessary for them to grow and stay healthy - describe some of the types of food that they eat

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	identify and name different sources of food - name a few of the organisms that live in a particular habitat - suggest reasons why different plants and animals are found in the different environments 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.			
Working Scientifically	- Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum. - Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns	- Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum. - Use simple equipment to observe closely including changes over time. - Perform simple comparative tests. - Identify, group and classify. - Gather and record data to help in answering questions including from secondary sources of information.	- Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum. - Use simple equipment to observe closely including changes over time. - Perform simple comparative tests. - Identify, group and classify. - Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns. Gather and record data to help in answering questions including from secondary sources of information.	- Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum. - Use simple equipment to observe closely including changes over time. - Perform simple comparative tests. - Identify, group and classify. - Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns. - Gather and record data to help in answering questions including from secondary sources of information.