



Science Subject Progression Map



Progression of Science in EYFS

EYFS Prior Knowledge before starting KS1:

- Plants – To know that plants are living things that grow.
- Materials – To be introduced to different materials.
- Animals – To name different animals and know where they live.
- Seasons – To know that the seasons change.
- Humans – To know some parts of the human body.
- Working Scientifically – To be curious about the world.

EYFS Skills before starting KS1: To group objects. Talk about photographs and make observations. To start using scientific equipment and to measure.

KS1 National Curriculum Strands				
KS1 Working Scientifically		Year 1		
	Animals, including Humans	Plants	Everyday materials	Seasonal Change
	Year 2			
	Animals, including Humans	All living things and their habitats	Plants	Everyday materials

Year 1

Autumn Term

Spring Term

Summer Term

Topic	Plants	Materials	Animals,	Seasons	Humans	Working Scientifically
Key Knowledge	<ul style="list-style-type: none"> Knows and can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Knows and can identify and describe the basic structure of a variety of common flowering plants, including trees. 	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Can 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 Know how the properties of a material can make it useful for a range of different purposes (for example, plastic is waterproof so it can be used to coat fabric for clothing but can also be used for outdoor play equipment) knows why and how the properties of materials make them particularly useful for specific purposes (for example, stone is a hard, heavy and durable material so is useful for construction of buildings). knows that different materials can share the same properties (for example glass and plastic can both be transparent). 	<ul style="list-style-type: none"> Knows and can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals e.g. cat, robin, adder, frog, salmon. Knows and can identify and name a variety of common animals that are carnivores, herbivores and omnivores. 	<ul style="list-style-type: none"> Knows when each of the four seasons occurs Knows what the features of autumn are and what happens to trees in this season Knows that days are longer in summer (sunshine hours) than in winter Observe changes across the four seasons 	<ul style="list-style-type: none"> Can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<ul style="list-style-type: none"> Asking simple questions using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions
SMART Days / Wow Moments	<ul style="list-style-type: none"> Visit to Daventry Country Park and/or Visit to local allotments Growing plants in school 	<ul style="list-style-type: none"> Recycling visitor to help sort materials and re use materials by junk modelling Three little pigs- blowing over houses we make 	<ul style="list-style-type: none"> Visit to Zoo/safari Park. ANIMAL SMART DAY Dave visit to bring in variety of animals to classify. 	<ul style="list-style-type: none"> Daily Weather Watcher responsibilities across the school. Seasonal Changes walks around the school grounds / visits to class trees 		'Mad Science' Visits
Key Skills	<ul style="list-style-type: none"> Can sort and group parts of plants using similarities and differences e.g. the shape of leaves, the colour of the flower/blossom. Can use simple charts and Venn diagrams etc. to identify and classify plants. Use photographs and their own observations to talk about how plants change over time (e.g. seed to sapling to tree) and over the year (deciduous and fruit bearing trees). * Plant seeds and observe how they grow and change by making simple observations. * Point to and name the parts of a plant, recognising that they are not always the same e.g. leaves and stems may not be green, the leaves are different shapes. 	<ul style="list-style-type: none"> Compare and group together a variety of everyday materials on the basis of their simple physical properties. Classify objects made of one material in different ways e.g. a group of objects made of metal. Classify one type of object made from a range of materials e.g. a collection of spoons made of different materials. Chosen an appropriate method for testing an object for a particular property. Use their test evidence to answer the questions about properties e.g. Which cloth is the most absorbent? Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters. 	<ul style="list-style-type: none"> Make first hand close observations of animals from each of the groups (cityfarm) Compare the structure of two animals from the same or different group e.g. wings, feathers, vertebrates/invertebrates. Classify animals using a range of features e.g. lay eggs/give birth to live young, herbivore, omnivore (these terms do not have to be explicitly taught). Identify animals by matching statements to named images. 	<ul style="list-style-type: none"> Gather and record data about weather conditions in autumn, drawing on observation and using simple equipment (such as a container to measure rainfall) *.* Use data to create a pictogram and use this to describe changes in day length over the seasons. Use their evidence to describe some other features of the weather, surroundings, themselves, animals, and plants found in autumn. Demonstrate their knowledge in different ways e.g. creating seasonal artwork, creating a pictogram (and use this to ask and answer related questions 	<ul style="list-style-type: none"> Take measurements of parts of the body and present results in a table to interpret. Conduct simple sense experiments. Which part of my body is good for feeling, which is not? Which food/flavours can I identify by taste? Which smells can I match? 	COMPLETE THIS

Year 2

KS1		Year 2				
Topic	Autumn Term		Spring Term		Summer Term	
	Plants	Use of everyday materials	Animals	Living Things and their habitats	Animals including humans	Working Scientifically
Key Knowledge	<ul style="list-style-type: none"> Knows that plants may grow from either seeds or bulbs. knows that seeds and bulbs can germinate and then grow into seedlings and then continue to grow into mature plants. Knows that mature plants may have flowers which then develop into seeds, berries and fruits etc. knows that seeds and bulbs need to be planted at particular times of the year and will germinate and grow at different rates. knows that some plants are better suited to growing in full sun and some grow better in partial and full shade. Knows that plants need water, light and a suitable temperature to grow and stay healthy 	<ul style="list-style-type: none"> Knows and can explain why some materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard are particularly suited to specific purposes Knows how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching Knows the difference between materials that are transparent, translucent and opaque. 	<ul style="list-style-type: none"> Is Can describe how animals including humans have offspring which grow into adults, using the appropriate names for the stages Knows that to survive animals need sunlight, water, air, food and a suitable habitat (including shelter for protection from predators and the environment. 	<ul style="list-style-type: none"> Knows and can explain the differences between things that are living, dead, and things that have never been alive Knows that most living things live in habitats to which they are suited Knows and can describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Knows and can name a variety of plants and animals in their habitats, including micro-habitats Knows and can describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and make the different sources of food. 	<ul style="list-style-type: none"> Knows that exercise is important to humans and can explain why. Knows the different food groups and the benefits of each as part of a healthy, balanced diet Knows which food groups common foods belong to. Knows about general hygiene and its importance and can state examples of hygienic practice. 	<ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions using simple equipment performing simple tests identifying and classifying
SMART Days / Wow Moments						
Key Skills	<ul style="list-style-type: none"> Make close observations of seeds and bulbs Classify seeds and bulbs Research and plan when and how to plant a range of seeds and bulbs Look after the plants as they grow – weeding, thinning, watering etc. Make close observations and measurements of their plants growing from seeds and bulbs Make comparisons between plants as they grow Can spot similarities and difference between bulbs and seeds 	<ul style="list-style-type: none"> Classify and sort materials by their properties e.g. manmade, natural Investigate and observe what happens to different materials during testing and use this to inform explanation of their properties Investigate which materials are fit for a purpose e.g. What is the best material for an umbrella? Explain from their observations how materials change when a force is exerted on them by squashing, bending, twisting and stretching. Investigate the transparency of objects, recording class data in a table and drawing simple conclusions from the findings. Ask and answer questions about everyday materials 	<ul style="list-style-type: none"> Ask questions and use secondary sources to find out about the life cycles of some animals Observe animals growing over a period of time e.g. chicks, caterpillars, a baby Ask questions of a parent about how they look after their baby Ask pet owners questions about how they look after their pet 	<ul style="list-style-type: none"> Explore the outside environment regularly to find objects that are living, dead and have never lived Classify objects found in the local environment Observe animals and plants carefully, drawing and labelling diagrams Create simple food chains for a familiar local habitat from first hand observation and research Create simple food chains from information given e.g. in picture books (Gruffalo etc.) Can sort into living, dead and never lived Can give key features that mean the animal or plant is suited to its micro-habitat Using a food chain can explain what animals eat Can explain in simple terms why an animal or plant is suited to a habitat 	<ul style="list-style-type: none"> Investigate the effect of exercise on their bodies Classify food in a range of ways, including using the Eatwell guide Investigate washing hands, using glitter gel Describe, using diagrams, the life cycle of some animals, including humans, and their growth to adults e.g. by creating a life cycle book for a younger child Measure/observe how animals, including humans, grow. Collate what they know about looking after a baby/animal by creating a parenting/pet owners' guide Explain how development and health might be affected by differing conditions and needs being met/not met 	COMPLETE THIS

Autumn

Outside and inside
Waste Warriors

Spring

Globetrotters
Nature Lovers

Summer

Health Heroes 9
Water Wizards

Materials
Plants

Animals/ Habitats
Seasons

Human/healthy
Working scientifically

← Working scientifically →

- Has experienced and observed phenomena, having looked more closely at the natural and humanly-constructed world around them.
- Shows curiosity, asking questions about what they have noticed.
- Has developed understanding of scientific ideas through the use of different types of scientific enquiry to answer own questions, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information.
- Is beginning to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.

• TWEAK WORKING SCIENTIFICALLY OBJECTIVES AND SKILLS *