

Science - progression of skills map

Early Years	Early Learning Goals: <ul style="list-style-type: none"> • To explore creatures, people, plants and objects in their natural environments. • To observe and manipulate objects and materials to identify differences and similarities. Areas include: Knowledge and Understanding of the World Mini beasts (insects) Animals Plants Ourselves Water Seasons and weather (see Progression of skills table)			
	Year 1		Year 2	
Curriculum area:	Curriculum statement:	Progression:	Curriculum statement:	Progression:
Plants	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Use the local environment to explore and answer questions about plants growing in their habitat. <ul style="list-style-type: none"> • Observe the growth of flowers and vegetables that they have planted. • Become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, and stem). 	<ul style="list-style-type: none"> • To observe and describe how seeds and bulbs grow into mature plants • To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 	<ul style="list-style-type: none"> • Use the local environment to observe how plants grow. <ul style="list-style-type: none"> • Understand the requirements of plants for germination, growth and survival and the processes of reproduction and growth in plants. • Know that seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.

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	<p>Working scientifically: Use magnifying glasses,</p> <ul style="list-style-type: none"> • Draw diagrams • Keep records 		<p>Working scientifically:</p> <ul style="list-style-type: none"> • Observe and record, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb • Observe similar plants at different stages of growth; Set up a comparative test to show that plants need light and water to stay healthy 	
Animals including humans	<ul style="list-style-type: none"> • To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • To identify and name a variety of common animals that are carnivores, herbivores and omnivores. • To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). • To 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"> • Use the local environment to explore and answer questions about animals in their habitat. Understand how to take care of animals taken from their local environment and the need to return them safely after study. • Become familiar with the common names of some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets. • Learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through 	<ul style="list-style-type: none"> • To notice that animals, including humans, have offspring which grow into adults. • To find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene 	<ul style="list-style-type: none"> • Understand the basic needs of animals for survival, as well as the importance of exercise and nutrition for humans • Introduced to the processes of reproduction and growth in animals • Focus on questions that help pupils to recognise growth; they should not be expected to understand how reproduction occurs. • E.g. egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. Growing into adults can include

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		games, actions, songs and rhymes.		reference to baby, toddler, child, teenager, and adult.
	Working scientifically: <ul style="list-style-type: none"> • Compare using videos and photographs • Group animals according to what they eat • Use their senses to compare different textures, sounds and smells. 		Working scientifically: <ul style="list-style-type: none"> • Observe through video or first-hand how different animals, including humans, grow • Ask questions about what things animals need for survival and what humans need to stay healthy • Suggest ways to find answers to their questions 	
Everyday materials	<ul style="list-style-type: none"> • To distinguish between an object and the material from which it is made • To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • To describe the simple physical properties of a variety of everyday materials • To compare and group together a variety of everyday materials on the basis of their simple physical properties 	<ul style="list-style-type: none"> • Explore, name, discuss and raise and answer questions about everyday materials • Become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent • Explore and experiment with a wide variety of materials including for example: brick, paper, fabrics, elastic, and foil. 	<ul style="list-style-type: none"> • 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 • To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<ul style="list-style-type: none"> • Identify and discuss the uses of different everyday materials and become familiar with how some materials are used for more than one thing (metal can be used for coins, cans, cars and table legs; wood can be used for matches, floors, and telegraph poles) or different materials are used for the same thing (spoons can be made from plastic, wood, metal, but not normally from glass)

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				<ul style="list-style-type: none"> • Understand the properties of materials that make them suitable or unsuitable for particular purposes. • Think about unusual and creative uses for everyday materials. • Research people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam
	Working scientifically: <ul style="list-style-type: none"> • Perform simple tests to explore questions, for example: 'What is the best material for an umbrella? ... for lining a dog basket? ... for curtains? ... for a bookshelf? ... for a gymnast's leotard?' 		Working scientifically: <ul style="list-style-type: none"> • Compare the uses of everyday materials in and around the school with materials found in other places • Observe closely, to identify and classify the uses of different materials, and record their observations. 	
Seasonal changes	<ul style="list-style-type: none"> • To observe changes across the 4 seasons • To observe and describe weather associated with the seasons and how day length varies 	<ul style="list-style-type: none"> • Observe and talk about changes in the weather and the seasons. • Be aware that it is not safe to look directly at the sun, even when wearing dark glasses. 	<ul style="list-style-type: none"> • To observe and discuss changes across the 4 seasons • To observe and describe weather associated with the seasons and how day length varies. To be introduced to the relationship between day length and Earth's orbit. 	

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	Working scientifically: <ul style="list-style-type: none"> • Make tables and charts about the weather • Make displays of what happens in the world around them, including day length, as the seasons change 		Working scientifically:	
Living things and their habitats			<ul style="list-style-type: none"> • To explore and compare the differences between things that are living, dead, and things that have never been alive. • 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. • To identify and name a variety of plants and animals in their habitats, including microhabitats. • 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. 	<ul style="list-style-type: none"> • Understand that all living things have certain characteristics that are essential for keeping them alive and healthy • Raise and answer questions that help them to become familiar with the life processes that are common to all living things. • Pupils should be introduced to the terms 'habitat' (a natural environment or home of a variety of plants and animals) and 'microhabitat' (a very small habitat e.g. for woodlice under stones, logs or leaf litter).

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				<ul style="list-style-type: none"> • Raise and answer questions about the local environment. • Identify and study a variety of plants and animals within their habitat and observe how living things depend on each other e.g. plants serving as a source of food and shelter for animals.
	Working scientifically:		Working scientifically: <ul style="list-style-type: none"> • Sort and classify things according to whether they are living, dead or were never alive • Record their findings using charts • Describe how they decided where to place things <p>Explore questions like: 'Is a flame alive? Is a deciduous tree dead in winter?'</p> <ul style="list-style-type: none"> • Talk about ways of answering their questions • Construct a simple food chain that includes humans (e.g., grass, cow, human) • Describe the conditions in different habitats and microhabitats (under log, on stony path, under bushes) <p>Find out how the conditions affect the number and type(s) of plants and animals that live there.</p>	