

Changes to EYFS framework in science

Reception	Communication and Language	<ul style="list-style-type: none">• Learn new vocabulary.• Ask questions to find out more and to check what has been said to them.• Articulate their ideas and thoughts in well-formed sentences.• Describe events in some detail.• Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.• Use new vocabulary in different contexts.
	Personal, Social and Emotional Development	<ul style="list-style-type: none">• Know and talk about the different factors that support their overall health and wellbeing:<ul style="list-style-type: none">- regular physical activity- healthy eating – tooth brushing- sensible amounts of ‘screen time’- having a good sleep routine- being a safe pedestrian
	Understanding the World	<p>Explore the natural world around them.</p> <ul style="list-style-type: none">• Describe what they see, hear and feel while they are 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.

KS1 Science- year 1

In year 1 the children will continue to learn about the similarities and differences between objects, materials and living things to deepen their understanding. They will be encouraged to ask questions and try to find the answers out for themselves through their own enquiries.



Year 1 programme of study

Plants	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <ul style="list-style-type: none">· Identify and describe the basic structure of a variety of common flowering plants, including trees.
Animals, including humans	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <ul style="list-style-type: none">· 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.
Everyday Materials	<ul style="list-style-type: none">· 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.
Seasonal Changes	<ul style="list-style-type: none">· Observe changes across the four seasons· Observe and describe weather associated with the seasons and how day length varies

Year 1 science overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Learning journey	Healthy animals	Describing materials	Animal survival	Plants	Habitats	Plants
Big question	Why is exercise important to humans?	How can we describe materials?	How do animals survive?	How do plants grow?	What is a habitat?	How do plants survive?
Knowledge block	<p>Substantive Knowledge (key ideas) There are four seasons, Spring, summer, autumn and winter. Animals and plants have adapted ways of surviving the changing seasons.</p> <p>Identify, name, draw and label the basic parts of the human body and say which parts of the body is associated with which sense</p> <p>Describe why exercise is important</p> <p>Seasonal change</p> <p>Introduce long term study observing seasonal change within the school grounds.</p>	<p>The big idea about materials</p> <p>Substantive Knowledge (key ideas) There are many different materials that have different observable properties. Materials that have similar properties are grouped into metals, rocks, fabrics, wood, plastic and ceramics (including glass). The properties of a material determine whether they are suitable for a purpose.</p> <p>To include whether the properties of a material determine whether they are suitable for a purpose ie. hard, soft, bendy.</p>	<p>Feeding for survival</p> <p>Substantive Knowledge Animals are groups of organisms that need to consume food to survive. Food provides energy and the building blocks of growth. There are many different groups of animals including fish, amphibians, reptiles, birds and mammals. They have different structures, and they eat different types of foods. Mammals give birth to live young, fish can breathe underwater using gills, birds have wings and beaks, reptiles cannot breathe underwater, and amphibians live on land and in water. Some eat other animals (carnivores), and others only eat vegetables (herbivores), and some like to eat both plants and meat (omnivores)</p>	<p>Substantive Knowledge (key ideas) A seed contains a miniature plant that can develop into a fully grown plant. A bulb has underground vertical shoots which already has modified leaves Seeds and bulbs need water to grow but most do not need light (germination) Seeds and bulbs have food stores inside them to help the plant start to grow All flowering plants make seeds that can grow into new plants 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</p>	<p>Adapted to survive Substantive knowledge: All animals are adapted to eat and survive (they are adapted to survive as predators and prey). Animals have adapted many different ways to survive as predators or prey.</p> <p>Substantive Knowledge (key ideas) There is variation in all living things Animals and plants live in a variety of different places called habitats Animals and plants have adapted to survive in different habitats Wild plants such as ferns, daisies, nettles and dandelions grow randomly. Garden plants such as roses, tulips, poppies, daffodils are planted intentionally</p>	<p>Plant adaptations for survival</p> <p>Substantive Knowledge (key ideas) Plants have specific adaptations for survival. To survive they need to get water, light, and avoid being eaten <u>Plant survival.</u> All plants need water, light and to avoid being eaten to survive.</p> <p><u>How plants get what they need to survive.</u> A seed produces roots to allow water to get into the plant and shoots to produce leaves to collect the sunlight, warmth to grow and survive.</p>

KS1 science- year 2

In year 2 the children will further build on the foundations of Year R and Year 1, deepening their understanding by use of key vocabulary and developing their substantive and disciplinary knowledge to track key scientific skills.



Year 2 curriculum expectations

Living things and their habitats	<ul style="list-style-type: none">· 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.
Plants	<ul style="list-style-type: none">· 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.
describing	<ul style="list-style-type: none">.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
Animals, including humans	<ul style="list-style-type: none">· 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.

Year 2 science overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Learning journey	Animal life cycles	Animal life cycles	Changing materials	Pushes and pulls	New plants	New plants
Big question	What is the life cycle of an animal?	How do animals get their food?	Why do we choose materials to do certain jobs?	Why and how do objects move	How are plants made?	How are plants made?
Knowledge block	<p>Animal timelines</p> <p>Substantive Knowledge (key ideas) Animals grow until they reach maturity and then don't grow any larger Animals reproduce when they reach maturity. All animals eventually, die Different animals live to different ages Different animals reach different sizes before they are able to reproduce Different animals reproduce at different ages Animals, including humans, have offspring which grow into adults</p>	<p>Substantive Knowledge (key ideas) Animals live in habitats in which they are suited. Different kinds of animals and plants depend on each other within habitat. Animals get their food from plants and other animals. This can be shown in a food chain. A food chain begins with a producer. This is often a green plant because plants can make their own food. A living thing that eats other plants is called a consumer.</p>	<p>The big idea about materials</p> <p>Substantive Knowledge (key ideas) Materials can be changed by physical force (twisting, bending, squashing and stretching).</p>	<p>How things move</p> <p>Substantive Knowledge (key ideas) Objects can move (be in Motion) in various ways-roll, slide and bounce Forces change how objects move Substantive Knowledge (key ideas)The pushing or pulling of an object can affect its motion.</p> <p>Pushing or pulling can do three things, slow down, speed up or change the direction of an object</p> <p>Pushing and pulling can change their shape.</p>	<p>What are plants for?</p> <p>Substantive Knowledge (key ideas) All flowering plants make seeds (reproduction) that can grow (germinate) into new plants Plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>What happens after a plant has produced seeds?</p> <p>Substantive knowledge Some plants die after it has produced its seed and sometimes the plant lives for many generations producing seeds each year</p>

KS1 science - Learning journeys

Learning journey

Animal life cycles

How animals survive

Plants

Materials, their properties and why we choose materials to do jobs

Pushes and pulls

biology

physics

chemistry