

Science Knowledge Progression – Biology/Chemistry

EYFS/Key Stage 1 (Y3/4 shown for next steps)



The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin 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. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

EYFS	Year 1	Year 2	Year 3	Year 4
<p>Early Learning Goal</p> <p>Children know about similarities and differences in relation to places, objects, materials and living things.</p> <p>They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>Plants</p> <p>Can identify and name a variety of common wild and garden plants, including deciduous and evergreen.</p> <p>Can identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>Plants</p> <p>Can observe and describe how seeds and bulbs grow into mature plants.</p> <p>Can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Plants</p> <p>Can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Can explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</p> <p>Can investigate the way in which water is transported within plants.</p> <p>Can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	

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<p>Children know about similarities and differences in relation to places, objects, materials and living things.</p> <p>They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p><u>Animals, including Humans</u></p> <p>Can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Can identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>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.</p>	<p><u>Animals, including Humans</u></p> <p>Notice that animals, including humans, have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p><u>Animals including humans</u></p> <p>Can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p>Can identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p><u>Animals including humans</u></p> <p>Can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Can identify the different types of teeth in humans and their simple functions.</p> <p>Can construct and interpret a variety of food chains, identifying producers, predators and prey.</p>

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<p>Children know about similarities and differences in relation to places, objects, materials and living things.</p> <p>They make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>They talk about the features of their own immediate environment and how environments might vary from one another.</p>	<p><u>Seasonal Changes</u></p> <p>Can observe changes across the four seasons.</p> <p>Can observe and describe weather associated with the seasons and how day length varies.</p>	<p><u>Living Things and their Habitats</u></p> <p>Can explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Can 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.</p> <p>Can identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>Can 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.</p>		<p><u>Living things and their habitats</u></p> <p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers and have an impact on living things</p>

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Children know about similarities and differences in relation to places, objects, materials and living things.	<p><u>Everyday Materials</u></p> <p>Can distinguish between an object and the material from which it is made.</p> <p>Can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Can describe the simple physical properties of a variety of everyday materials.</p> <p>Can compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p><u>Uses of Everyday Materials</u></p> <p>Can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>		<p><u>States of matter</u></p> <p>Can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).</p> <p>Can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>