



Curriculum Progression - Science

Plants

EYFS

Encourage focussed observation of the natural world

Listen to children describing and commenting on things they have seen whilst outside, including plants.

Name and describe some plants children are likely to see encouraging children to recognise familiar plants whilst outside.

| Year 1 | Year 2 | Year 3 |
|---|--|--|
| <p>Plants</p> <p>Identify and name a variety of common and wild garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> | <p>Plants</p> <p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>Identify and name a variety of plants.</p> <p>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 plants.</p> <p>Investigate and describe the impact of removing light, soil or water from a growing plant.</p> | <p>Plants</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>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 they explore the part that plants play in the life cycle of flowering plants including pollination, seed formation and seed dispersal?</p> |

| Year 4 | Year 5 | Year 6 |
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| | <p>Plants Describe the lifecycle of common plants</p> <p>Describe how living things are classified into broad groups according to common observable characteristics. Based on similarities and differences including plants</p> | <p>Evolution</p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> |

Materials

| EYFS Model the vocabulary needed to name specific features of the world, both natural and manmade. | | |
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| Year 1 | Year 2 | Year 3 |
| <p>Everyday Materials</p> <p>Distinguish between an object and the material it is made from.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the properties of everyday materials.</p> <p>Compare and group together materials based on their properties</p> | <p>Uses of everyday Materials</p> <p>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>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> | |

| Identify the suitable of materials for particular use. | | |
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| Year 4 | Year 5 | Year 6 |
| | <p>Properties and changes of materials</p> <p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p> | |

Electricity

| Year 4 | Year 5 | Year 6 |
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| <p>Electricity</p> <p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires and bulbs.</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p> | | <p>Electricity</p> <p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches</p> <p>Use recognised symbols when representing a simple circuit in a diagram</p> |

Sound

EYFS

Observe and interact with natural processes such as a sound causing a vibration.

Year 4

Year 5

Year 6

Sound

Identify a range of sounds and describe how they are made.

Associate some of them with something vibrating

Recognise that vibrations from sounds travel through a medium to the ear.

Find patterns between the pitch of a sound and features of the object that produced it

Find patterns between the volume of a sound and the strength of the vibrations that produced it

Recognise that sounds get fainter as the distance from the sound source increases.

Forces and magnets

| EYFS | | |
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| Observe and interact with natural processes such as a magnet attracting an object. | | |
| Year 1 | Year 2 | Year 3 |
| | | <p>Forces & Magnets</p> <p>Compare how things move on different surfaces</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</p> <p>Describe magnets as having two poles</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing</p> <p>Notice that some forces need contact between two objects but magnetic forces can act at a distance.</p> |
| Year 4 | Year 5 | Year 6 |
| | <p>Forces</p> <p>Identify the effects of air resistance that act between moving surfaces</p> <p>Identify the effects of friction that act between moving surfaces</p> <p>Identify the effects of water resistance that act between moving surfaces</p> | |

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| | <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p>Earth and space</p> <p>Describe the movement of the Earth and other planets relative to the sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Arrange the planets in order from the sun.</p> <p>Explore the difference in sizes between planets within our solar system.</p> <p>Understand the difference between Jovian and Terrestrial planets.</p> <p>Explain the phases of the moon.</p> | |
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Light

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| EYFS | | |
| Observe and interact with natural processes such as, light travelling through transparent material and an object casting a shadow. | | |
| Year 1 | Year 2 | Year 3 |
| | | <p>Light</p> <p>Recognise that they need light in order to see things and that dark is the absence of light</p> <p>Notice that light is reflected from surfaces</p> |

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| | | <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>Find patterns in the way that the size of shadows change</p> |
| Year 4 | Year 5 | Year 6 |
| | | <p>Light</p> <p>Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them.</p> |

Rocks

| Year 1 | Year 2 | Year 3 |
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| | | <p>Rocks</p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>3 main rock types (igneous, sedimentary and metamorphic) and how formed.</p> <p>Recognise that soils are made from rocks and organic matter</p> |

Living things and their habitat

EYFS

Encourage focussed observation of the natural world

Listen to children describing and commenting on things they have seen whilst outside, including animals.

Name and describe some animals children are likely to see encouraging children to recognise familiar animals whilst outside.

| Year 1 | Year 2 | Year 3 |
|--------|--|--------|
| | <p>Living things and their habitats</p> <p>Explore and compare the differences between things that are living, dead and things that have never been alive.</p> <p>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 how they depend on each other.</p> <p>Identify and name a variety of animals in their microhabitats.</p> | |

| Year 4 | Year 5 | Year 6 |
|--|---|--|
| <p>Living things and their habitats</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Recognise that living things can be grouped in a variety of ways.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> | <p>Living things and their habitats</p> <p>Explain the lifecycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the differences of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life processes of reproduction in some plants and animal</p> | <p>Adaptation</p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Evolution and Inheritance</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the world millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> |

Animals including humans

| EYFS | | |
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| Year 1 | Year 2 | Year 3 |
| <p>Animals including humans</p> <p>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>Animals including humans</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> | <p>Animals including humans</p> <p>Identify that animals, including humans, need the right types and amount of nutrition</p> |
| Year 4 | Year 5 | Year 6 |
| <p>Animals including humans</p> <p>Identify different types of teeth and their functions</p> <p>Know the functions of the different types of teeth in humans</p> <p>Compare the teeth of herbivores and carnivores</p> <p>Identify and name the different parts of the digestive system in humans</p> <p>Describe the functions of the body parts involved in the digestive processes</p> <p>Compare animal and human digestive systems</p> | <p>Puberty linked to PSHE</p> <p>Describe the life processes of reproduction in some plants and animal</p> | <p>Animals including humans</p> <p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p> |

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| | | <p>Recognise the impact of diet, exercise, drugs and lifestyle on the ways their bodies function.</p> <p>Describe the changes as humans develop to old age.</p> |
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Seasonal Changes

EYFS

Guide children's understanding and draw children's attention to the weather and seasonal features.

Provide opportunities for children to note and record the weather.

Look for children to incorporate their understanding of the seasons and weather in play.

Year 1

Year 2

Seasons

Observe changes across the four seasons

Name the four seasons in order

Observe and describe weather associated with the seasons

Observe and describe how day length varies