

Science Skills and Knowledge Coverage 2024-2025

Year 1/2
Autumn – Living Things and Their Habitats
Explore and compare the differences between things that are living, dead and things that have never been alive.
Gather and record data in order to help in answering questions.
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 (wilderness area).
Observe closely using simple equipment.
Gather and record data to help in answering questions.
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.
Spring – Uses of Everyday Materials
Identify the uses of a variety of everyday materials (wood, metal, plastic, glass, brick, rock, paper, cardboard)
Compare the uses of a variety of everyday materials.
Identify and classify the uses of different materials.
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
Gather and record data to help in answering questions.
Summer – Plants and Animals Including Humans
Observe and describe how seeds and bulbs grow into mature plants.
Ask simple questions and recognise that they can be answered in different way.
Perform a simple test (What does a plant need in order to grow healthily?).
Gather and record data to help in answering questions.
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Notice that animals, including humans, have offspring which grow into adults (egg, caterpillar, pupa, butterfly) (baby, toddler, child, teenager, adult).
Find out about and describe the basic needs of an animal, including humans, for survival (water, food, air).
Describe the importance for humans of exercise.
Describe the importance for humans of eating the right amounts of different types of food (<i>the children will not be taught the terms carbohydrates and proteins</i>)
Describe the importance for humans of hygiene.

Year 3/4
Autumn 1 - Light
• Recognise that they need light in order to see things and that dark is the absence of light.
• Notice that light is reflected from surfaces.
• Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
• Recognise that shadows are formed when the light from a light source is blocked by a solid object.
• Ask relevant questions and use different types of scientific enquiries to answer them (How can we make the shadow bigger?)
• Make systematic and careful observations and take accurate measurements using standard units using a range of equipment (rulers).
• Gather, record and present data in a way to help answer the question.
• Find patterns in the way that the size of shadows changes
Autumn 2 – Electricity
• Identify common appliances that run on electricity.
• Construct a simple series electrical circuit identifying and naming its basic parts (cells, wires, bulbs, switches and buzzers).
• Identify whether or not a lamp will light in simple series circuit based on whether or not the lamp is part of a complete loop with a battery.
• Recognise that a switch opens and closes a circuit and associate this whether or not a lamp lights in a simple series circuit.
• Ask relevant questions and use different types of scientific enquiries to answer them (Which materials can be used to connect a gap in a circuit?).
• Set up simple practical enquiries and fair tests.
• Report on findings from enquiries with written explanations and conclusions.
• Recognise some common conductors and insulators and associate metals with being good conductors.
• Use straightforward scientific evidence to answer questions.
Spring 1 – Sound
• Set up simple practical enquiries and fair tests.
• Take accurate measurements using standard units using dataloggers (Sound).
• Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.
• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
• Recognise that sound gets fainter as the distance from the sound source increases.
Spring 2 – Plants
• Identify and describe the functions of different parts of flowering plants (roots, stem/trunk, leaves and flowers)
• Investigate the way in which water is transported within plants.

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| <ul style="list-style-type: none">• Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow). |
| <ul style="list-style-type: none">• Explore how the requirements of plants for life and growth vary from plant to plant (the amount of light different plants need to grow) |
| <ul style="list-style-type: none">• Report on findings from enquiries using written explanation and conclusion. |
| <ul style="list-style-type: none">• Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. |

Summer 1 – Animals Including Humans
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| <ul style="list-style-type: none">• 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. (Carbohydrates, protein, milk and dairy, fruit and vegetables, fats and sugars). |
| <ul style="list-style-type: none">• Identify that humans and some animals have skeletons and muscles for support, protection and movement. |

Summer 2 – Rocks and Soil

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| <ul style="list-style-type: none">• To compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. |
| <ul style="list-style-type: none">• Describe in simple terms how fossils are formed when things that have lived together are trapped within a rock. |
| <ul style="list-style-type: none">• Recognise that soils are made from rocks and organic matter. |

Year 5/6
Autumn 1 – Earth and Space
Name the eight planets in the solar system (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune).
Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
Describe the movement of the Moon relative to the Earth.
Describe the Sun, Earth and Moon as approximately spherical bodies.
Autumn 2 – Earth and Space
Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.
Plan different types of scientific enquiries to answer questions including recognising and controlling variables where necessary (shadow clocks).
Take measurements with increasing accuracy, taking repeat findings where appropriate.
Record date and results of increasing complexity using scientific diagrams and labels and line graphs.
Identify scientific evidence that has been used to support or refute ideas or arguments.
Spring 1 – Living Things and Their Habitats
To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences (vertebrate, invertebrate, arachnid, mollusc).
To give reasons for classifying plants and animals based on specific characteristics.
Record data and results with increasing complexity using classification keys to identify animals.
Spring 2 – Evolution and Inheritance
To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago (development of a horse).
To recognise that living things produce offspring of the same kind but normally offspring vary and not identical to their parents (dog breeds).
To identify how animals are adapted to their environment in different ways and that adaptation may lead to evolution.
To plan different types of scientific enquiries to answer questions including recognising and controlling variables where necessary (Does blubber enable seals to survive these extreme temperatures in order to help scientists?)
Use test results to make predictions to set up further comparative and fair tests.
Summer Term – Consolidation of knowledge and Skills