



Year 1 and 2
Disciplinary Knowledge

I can ask simple questions and recognising that they can be answered in different ways

- While exploring the world, the children develop their ability to ask questions (such as what something is, how things are similar and different, the ways things work, which alternative is better, how things change and how they happen). Where appropriate, they answer these questions.
- answer questions developed with the teacher often through a scenario.
- are involved in planning how to use resources provided to answer the questions using different types of enquiry, helping them to recognise that there are different ways in which questions can be answered.

I can observe closely, using simple equipment

- explore the world around them. They make careful observations to support identification, comparison and noticing change. They use appropriate senses, aided by equipment such as magnifying glasses or digital microscopes, to make their observations.
- begin to take measurements, initially by comparisons, then using non-standard units.

I can perform simple tests

- use practical resources provided to gather evidence to answer questions generated by themselves or the teacher. They carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time.

Identifying and classifying

- use their observations and testing to compare objects, materials and living things. They sort and group these things, identifying their own criteria for sorting.
- use simple secondary sources (such as identification sheets) to name living things. They describe the characteristics they used to identify a living thing.

Gathering and recording data to help in answering questions

- record their observations e.g. using photographs, videos, drawings, labelled diagrams or in writing.
- record their measurements e.g. using prepared tables, pictograms, tally charts and block graphs.
- classify using simple prepared tables and sorting rings.

Using their observations and ideas to suggest answers to questions

- use their experiences of the world around them to suggest appropriate answers to questions.
- supported to relate these to their evidence e.g. observations they have made, measurements they have taken or information they have gained from secondary sources.
- recognise 'biggest and smallest', 'best and worst' etc. from their data.

Key Stage 1 Disciplinary Knowledge Vocabulary

observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources

Year 1 Plants
Substantive Knowledge

- I can identify and name a variety of common wild and garden plants, including deciduous and evergreen.
- I can identify and describe the basic structure of a variety of common flowering plants, including trees.

Year 2 Plants
Substantive Knowledge

- I can observe and describe how seeds and bulbs grow into mature plants
- I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Year 1 Plants
Vocabulary

leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of trees in the local area, names of garden and wild flowering plants in the local area

Year 2 Plants
Vocabulary

light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling names of plants in local habitats and micro-habitats (Y2 - Living things and their habitats)

Year 1 Animals Including Humans
Substantive Knowledge

- I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- I can identify and name a variety of common animals that are carnivores, herbivores and omnivores
- I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
- I 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.

Year 2 Animals Including Humans
Substantive Knowledge

- I can notice that animals, including humans, have offspring which grow into adults
- I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Year 1 Animals Including Humans
Vocabulary

head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, names of animals experienced first-hand from each vertebrate group, parts of the human body including those within the school's RSE policy, senses, touch, see, smell, taste, hear, fingers, skin, eyes, nose, ears, tongue

Year 2 Animals Including Humans
Vocabulary

offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/chicken, kitten/cat, caterpillar/butterfly), survive, survival, water, food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy) living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival (Y2 - Living things and their habitats)

Year 1 Materials
Substantive Knowledge

- I can distinguish between an object and the material from which it is made
- I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- I can describe the simple physical properties of a variety of everyday materials.
- I can compare and group together a variety of everyday materials on the basis of their simple physical properties.

Year 2 Materials
Substantive Knowledge

- I 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.
- I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Year 1 Materials
Vocabulary

object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through

Year 2 Materials
Vocabulary

opaque, transparent, translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching

<p align="center"><u>Year 1 Seasonal Changes</u> <u>Substantive Knowledge</u></p>	
<ul style="list-style-type: none"> • I can observe changes across the four seasons. • I can observe and describe weather associated with the seasons and how day length varies. 	
<p align="center"><u>Year 1 Seasonal Changes</u> <u>Vocabulary</u></p>	
<p>weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length</p>	
	<p align="center"><u>Year 2 Living Things and their Habitats</u> <u>Substantive Knowledge</u></p>
	<ul style="list-style-type: none"> • I can explore and compare the differences between things that are living, dead, and things that have never been alive. • I 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 • I can identify and name a variety of plants and animals in their habitats, including micro-habitats. • I 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 align="center"><u>Year 2 Living Things and their Habitats</u> <u>Vocabulary</u></p>
	<p>living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats (e.g. pond, woodland etc.), names of micro-habitats (e.g. under logs, in bushes etc.), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and micro-habitats studied light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling (Y2 - Plants) offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/chicken, cat/kitten, caterpillar/butterfly) (Y2 - Animals, including humans)</p>

