SCIENCE

KS1

Sc2/1 Working Scientifically

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

Sc2/1.1 asking simple questions and recognising that they can be answered in different ways

Sc2/1.2 observing closely, using simple equipment

Sc2/1.3 performing simple tests

Sc2/1.4 identifying and classifying

Sc2/1.5 using their observations and ideas to suggest answers to questions

Sc2/1.6 gathering and recording data to help in answering questions.

Sc2/2.1 Living things and their habitats

Sc2/2.1a explore and compare the differences between things that are living, dead, and things that have never been alive

Sc2/2.1b 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

Sc2/2.1c identify and name a variety of plants and animals in their habitats, including microhabitats

Sc2/2.1d 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.

Sc2/2.2 Plants

Sc2/2.2a observe and describe how seeds and bulbs grow into mature plants

Sc2/2.2b find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Sc2/2.3 Animals including humans

Sc2/2.3a notice that animals, including humans, have offspring which grow into adults

Sc2/2.3b find out about and describe the basic needs of animals, including humans, for survival (water, food and air)

Sc2/2.3c describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Sc2/3.1 Uses of everyday materials

Sc2/3.1a identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses

Sc2/3.1b compare how things move on different surfaces.
Sc2/3.1c find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

KS2

Sc3/1 Working Scientifically

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

Sc4/1.1 asking relevant questions and using different types of scientific enquiries to answer them

Sc4/1.2 setting up simple practical enquiries, comparative and fair tests

Sc4/1.3 making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers

Sc4/1.4 gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

Sc4/1.5 recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Sc4/1.6 reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions

Sc4/1.7 using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

Sc4/1.8 identifying differences, similarities or changes related to simple scientific ideas and processes

Sc4/1.9 using straightforward scientific evidence to answer questions or to support their findings.

Sc3/2.1 Plants

Sc3/2.1a identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers

Sc3/2.1b 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

Sc3/2.1c investigate the way in which water is transported within plants

Sc3/2.1d explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Sc3/2.2 Animals including humans

Sc3/2.2a 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

Sc3/2.2b identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Sc3/3.1 Rocks

Sc3/3.1a compare and group together different kinds of rocks on the basis of their appearance and simple physical properties

Sc3/3.1b describe in simple terms how fossils are formed when things that have lived are trapped within rock

Sc3/3.1c recognise that soils are made from rocks and organic matter.

Sc3/4.1 Light

Sc3/4.1a recognise that they need light in order to see things and that dark is the absence of light

Sc3/4.1b notice that light is reflected from surfaces

Sc3/4.1c recognise that light from the sun can be dangerous and that there are ways to protect their eyes

Sc3/4.1d recognise that shadows are formed when the light from a light source is blocked by a solid object

Sc3/4.1e find patterns in the way that the size of shadows change.

Sc3/4.2 Forces and Magnets

Sc3/4.2a compare how things move on different surfaces

Sc3/4.2b notice that some forces need contact between 2 objects, but magnetic forces can act at a distance

Sc3/4.2c observe how magnets attract or repel each other and attract some materials and not others

Sc3/4.2d 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

Sc3/4.2e describe magnets as having 2 poles

Sc3/4.2f predict whether 2 magnets will attract or repel each other, depending on which poles are facing.