

Science : Year 4

Working Scientifically

Through the year, the children will use the following practical scientific methods, processes and skills:

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

setting up simple practical enquiries, comparative and fair tests

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

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

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

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

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

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

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

Autumn Term – Looking at states

compare and group materials together, according to whether they are solids, liquids or gases

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)

identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Autumn Term – Power it up!

identify common appliances that run on electricity

construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers

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

recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
recognise some common conductors and insulators, and associate metals with being good conductors.

Spring Term - What's that sound?

identify how sounds are made, associating 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.

Spring Term – Teeth and eating

describe the simple functions of the basic parts of the digestive system in humans
identify the different types of teeth in humans and their simple functions
construct and interpret a variety of food chains, identifying producers, predators and prey.

Summer Term – Living Things

recognise that living things can be grouped in a variety of ways
explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
recognise that environments can change and that this can sometimes pose dangers to living things.

Summer Term – The big build

This final topic focuses on developing scientific skills within a practical context