

Science Progression of Skills Year 4

YEAR 4

National Curriculum objectives:

Working Scientifically

I can **ask** relevant questions and use different types of scientific enquiries to answer them.

I can set up practical enquiries, comparative and fair tests.

I can **make systematic and careful observations**, and **take accurate measurements** using standard units, using a range of equipment, including thermometers and data loggers.

I can **gather, record, classify and present** data in a variety of ways to help with answering questions.

I can **record findings** using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.

I can **report on findings** from enquiries, including spoken and written explanations, displays or presentations of results and conclusions.

I can use results to draw simple conclusions, **make predictions** for new values, suggest improvements and raise further questions.

I can **identify** differences, similarities or changes related to scientific ideas and processes.

I can use scientific evidence to answer questions or to support my findings.

Animals Including Humans

I can **explain** some parts of the digestive system in humans.

I can **explain** the different types of teeth in humans and what they do.

I can **describe and explain** a variety of food chains, naming producers, predators and prey.

Electricity

I can talk about common appliances that run on electricity.

I can **construct and draw** with labels a simple series electrical circuit which includes cells, wires, bulbs, switches and buzzers.

I can **predict** if a lamp will light or not in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.

I can **explain** that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

I can show that some materials are conductors and some are insulators, and can **explain** that metals are good conductors.

Sound

I can **explain** how sounds are made, and show that some of them are linked to vibrations.

I can **explain** that vibrations from sounds travel through a medium to the ear.

I can find patterns between the pitch of a sound and features of the object that produced it.

I can show that there is a pattern between the volume of a sound and the strength of the vibrations that produced it.

I can show that sounds get fainter as the distance from the sound source increases.

States of Matter

I can **group** materials together, according to whether they are solids, liquids or gases, including tricky ones like gels, foams, mists and pastes.

I can **demonstrate and explain** that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius.

I can correctly talk about the part played by evaporation and condensation in the water cycle, and can show a link between the rate of evaporation and temperature.

Living Things and Their Habitats

I can show that living things can be grouped together in various ways.

I can **explore and use** classification keys to help group, identify and name a variety of living things.

I can **explain** that environments can change and that this sometimes means that living things are put in danger.