

Science Curriculum Objectives - Year 4

The objectives below are from the National Curriculum. They are grouped into science units that coincide with our planning scheme Science Bug.

Electricity	<ul style="list-style-type: none"> • (K) Identify common appliances that run on electricity • (K) Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers • (K) 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 • (K) Recognise some common conductors and insulators, and associate metals with being good conductors. • (K) Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit • (WS) Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • (WS) Using straightforward scientific evidence to answer questions or to support their findings. • (WS) Asking relevant questions and using different types of scientific enquiries to answer them • (WS) Identifying differences, similarities or changes related to simple scientific ideas and processes
Dangers to Living Things	<ul style="list-style-type: none"> • (K) Recognise that environments can change and that this can sometimes pose dangers to living things. • (K) Construct and interpret a variety of food chains, identifying producers, predators and prey. • (WS) Asking relevant questions and using different types of scientific enquiries to answer them • (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • (WS) Setting up simple practical enquiries, comparative and fair tests • (WS) Using straightforward scientific evidence to answer questions or to support their findings.
Human Nutrition	<ul style="list-style-type: none"> • (K) Describe the simple functions of the basic parts of the digestive system in humans • (K) Identify the different types of teeth in humans and their simple functions • (WS) Asking relevant questions and using different types of scientific enquiries to answer them • (WS) Setting up simple practical enquiries, comparative and fair tests • (WS) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
Sound	<ul style="list-style-type: none"> • (K) Identify how sounds are made, associating some of them with something vibrating • (K) Recognise that vibrations from sounds travel through a medium to the ear • (K) Find patterns between the pitch of a sound and features of the object that produced it • (K) Find patterns between the volume of a sound and the strength of the vibrations that produced it • (K) Recognise that sounds get fainter as the distance from the sound source increases. • (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • (WS) Setting up simple practical enquiries, comparative and fair tests • (WS) Identifying differences, similarities or changes related to simple scientific ideas and processes
Grouping Living Things	<ul style="list-style-type: none"> • (K) Recognise that living things can be grouped in a variety of ways • (K) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • (WS) Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

	<ul style="list-style-type: none"> • (WS) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • (WS) Using straightforward scientific evidence to answer questions or to support their findings.
Changes of State	<ul style="list-style-type: none"> • (K) Compare and group materials together, according to whether they are solids, liquids or gases • (K) 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) • (K) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. • (WS) Identifying differences, similarities or changes related to simple scientific ideas and processes • (WS) Setting up simple practical enquiries, comparative and fair tests • (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • (WS) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions