Science Y4 Overview

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:

- I can ask relevant questions and using different types of scientific enquiries to answer them.
- I can set up simple practical enquiries, comparative and fair tests.
- I can make systematic and careful observations and, where appropriate, 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 in answering questions.
- I can record findings use simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- I can report on findings from enquiries, including oral 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 simple scientific ideas and processes.
- I can use straightforward scientific evidence to answer questions or to support findings.

Autumn 1: Teeth and Eating (Animals including Humans)

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

Autumn 2: Looking at States (States of Matter)

- I can compare and group materials together, according to whether they are solids, liquids or gases.
- I can 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).

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

Spring 1: Power it Up! (Electricity)

- I can identify common appliances that run on electricity.
- I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- I can 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.
- I can recognise 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 recognise some common conductors and insulators, and associate metals with being good conductors.

Spring 2: What's that Sound?

- I can identify how sounds are made, associating some of them with something vibrating.
- I can recognise 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 find patterns between the volume of a sound and the strength of the vibrations that produced it.
- I can recognise that sounds get fainter as the distance from the sound source increases.

Summer 1: Living Things

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

Summer 2: The big build

Practical investigations that incorporate the working scientifically skills.