



Milestone 2b & 3

Science – Upper School (Cycle C)

	Basic:	Expected:	Deep:
Working scientifically (Y4)			
Ask relevant questions.			
Set up simple, practical enquiries, comparative and fair tests.			
Make systematic and careful observations.			
Take accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.			
Gather data in a variety of ways to help answer questions.			
Record data in a variety of ways to help answer questions.			
Classify data in a variety of ways to help answer questions.			
Present data in a variety of ways to help answer questions.			
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.			
Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.			
Use results to draw simple conclusions.			
Use results to make predictions for new values.			
Use results to suggest improvements.			
Use results to raise further questions.			
Identify differences, similarities or changes related to simple, scientific ideas and processes.			
Use straightforward, scientific evidence to answer questions or to support their findings.			
Working scientifically (Y5 & Y6)			
Plan enquiries, including recognising and controlling variables where necessary.			
Take measurements, using a range of scientific equipment, with increasing accuracy and precision.			
Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, and models.			
Report findings from enquiries, including conclusions, causal relationships, and explanations of and degree of trust in results, in oral and written forms.			
Present findings in written form, displays and other presentations.			
Use test results to make predictions to set up further comparative and fair tests.			
Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.			



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	Basic:	Expected:	Deep:
Animals, including humans: Digestion			
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 a variety of food chains, identifying producers, predators and prey.			
Interpret a variety of food chains, identifying producers, predators and prey.			
Electricity			
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.			
Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.			
Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.			
Use recognised symbols when representing a simple circuit in a diagram.			
Properties and changes of materials: Reversible & Irreversible changes			
Demonstrate that dissolving, mixing and changes of state are reversible changes.			
Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning, oxidisation and the action of acid on bicarbonate of soda.			
Plants: Reproduction			
Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Describe the life process of reproduction in some plants.			
Animals, including humans: Organs of the human body			
Investigate the functions of the main organs of the body, including the eye, heart, lungs, liver, stomach, pancreas.			
Describe the roles of the main organs of the body, including the eye, heart, lungs, liver, stomach, pancreas.			



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	Basic:	Expected:	Deep:
Living things and their habitats: Woodlands			
Recognise that living things, including plants, micro-organisms and animals can be grouped in a variety of ways			
Explore classification keys to help group, identify and name a variety of living things (according to common observable characteristics and based on similarities and differences) in their local and wider environment.			
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.			
Recognise that a change in environment can sometimes pose dangers to living things.			