



Science Implementation

Science is taught as an area of learning in its own right, as well as integrated with other curriculum areas where appropriate. Currently, History and

In Year 4 Science is taught in the following sequence:				
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
Electricity	Sound	Animals including humans	States of Matter	Living things and their habitats

Year 4 Science Implementation - Topic Specific Vocabulary				
Electricity Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators	Sound Volume, Vibration, Wave, Pitch, Tone, Speaker	Animals including humans Mouth, Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine, Herbivore, Carnivore, Omnivore Canine, Incisor, Molar	States of Matter Solid, Liquid, Gas, Evaporation, Condensation, Particles, Temperature, Freezing, Heating	Living things and their habitats Vertebrates, Fish, Amphibians, Reptiles, Birds, Mammals, Invertebrates, Snails, Slugs, Worms, Spiders, Insects, Environment, Habitats



Science Impact

At the end of each topic teachers will evaluate what knowledge and skills pupils have gained against expectations.

WHINSTONE SCIENCE ASSESSMENT YEAR 4				
	<u>Working Scientifically Y3 & Y4</u>	Grade 1=WTS	Date	Grade
		2=EXS	Date	Grade
	• 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.			
<p><i>Exceeding & Excelling 100%</i> N.B. Exceeding and Excelling are given as guidance examples only. TA should be used and judgments made based on achievements over and above the statutory requirements for each year group. Taken from Y4, Y5 & Y6</p>				
<u>3. Animals Including Humans (BIOLOGY) (Spring)</u>				
	• describes the simple functions of the basic parts of the digestive system in humans*			
	• identifies the different types of teeth in humans and their simple functions			
	• constructs and interprets a variety of food chains, identifying producers, predators and prey			
	<i>Exceeding - describe the ways in which nutrients and water are transported within animals, including humans.</i>			
	<i>Excelling - Understand and explain content of a healthy human diet and the role of the major organs.</i>			
<u>5. Living Things and Their Habitats (BIOLOGY) (Summer)</u>				
	• recognises that living things can be grouped in a variety of ways			
	• explores and uses classification keys to help group, identifies and name a variety of living things in their local and wider environment*			
	• recognises that environments can change and that this can sometimes pose dangers to living things			
	<i>Exceeding - describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences.</i>			
	<i>Excelling - explain and give reasons for classifying plants and animals based on specific characteristics.</i>			
<u>4. States of Matter (CHEMISTRY) (Spring)</u>				
	• compares and groups materials together, according to whether they are solids, liquids or gases			
	• observes that some materials change state when they are heated or cooled, and measures or researches the temperature at which this happens in degrees Celsius (°C)*			
	• identifies the part played by evaporation and condensation in the water cycle and associates the rate of evaporation with temperature			
	<i>Exceeding - Understand and explain reversible and irreversible change</i>			
	<i>Excelling - Build a deeper understanding of materials by exploring and comparing the properties of a broad range of materials.</i>			
<u>2. Sound (PHYSICS) (Autumn)</u>				
	• identifies how sounds are made, associating some of them with something vibrating*			
	• recognises that vibrations from sounds travel through a medium to the ear*			
	• finds patterns between the pitch of a sound and features of the object that produced it			
	• finds patterns between the volume of a sound and the strength of the vibrations that produced it			
	• recognises that sounds get fainter as the distance from the sound source increases*			
	<i>Exceeding - Build a deeper understanding sound produced by vibrations of objects and relate to the ear drum.</i>			
	<i>Excelling - Understand and explain that sound waves needs a medium to travel through.</i>			



Whinstone Primary School Year 4 Science

1. Electricity (PHYSICS) (Autumn)

• identifies common appliances that run on electricity				
• constructs a simple series electrical circuit, identifies and names its basic parts, including cells, wires, bulbs, switches and buzzers				
• identifies 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				
• recognises that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit				
• recognises some common conductors and insulators, and associate metals with being good conductors.				
<i>Exceeding - use recognised symbols when representing a simple circuit in a diagram</i>				
<i>Excelling - associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</i>				