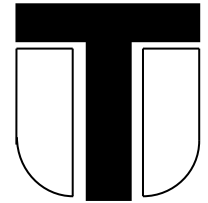


Subject: Science

Theale CE Primary School Subject Overview Planning



Year	Term	Topic
FS2	Autumn	Humans and other animals – body parts; similarities and differences; recognising animals; animal homes. Seasons – changes within the seasons.
	Spring	Materials – names and properties of materials.
	Summer	Plants – parts of plants; parts of trees; parts of plants that we eat; exploring plants in the local environment.
Key Stage 1		
Year 1	Autumn	Animals including humans – identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals; identify carnivores, herbivores and omnivores; animal structures; parts of the body. Seasonal changes – observe changes across the four seasons; observe and describe weather associated with the seasons and how day length varies.
	Spring	Everyday materials – distinguish between an object and the material from which it is made; identify and name everyday materials, including wood, plastic, glass, metal, water, and rock; describe simple physical properties of everyday materials; compare and group materials on the basis of their properties.
	Summer	Plants – identify and name a variety of common wild and garden plants, including deciduous and evergreen trees; identify and describe the basic structure of a variety of common flowering plants, including trees. Plant seeds and observe plants growing.
Year 2	Autumn	Living things and their habitats – what makes something living, dead or never alive? What is a habitat? What does a good habitat provide? How do animals and habitats depend on each other? Identify and name plants and animal in their habitats. How do animals get their food? Food chains and food sources.
	Spring	Uses of everyday materials – identifying and comparing the suitability of materials for particular uses; changing the shape of solid materials by squashing, bending, twisting and stretching.
	Spring	Animals including humans – lifecycles, reproduction and growth; what do animals, including humans, need to survive? The importance of exercise, healthy diets and hygiene for humans.
	Summer	Plants – observe and describe how seeds and bulbs grow into mature plants; Find out what plants need to grow and stay healthy (water, light and a suitable temperature).

Lower Key Stage 2

Year 3	Autumn	<p>Animals including humans – food and nutrition; what constitutes a balanced diet; where our food comes from; skeletons and muscles for support, protection and movement.</p> <p>Light and shadows – light is needed in order to see; dark is the absence of light; what constitutes an opaque material; how shadows are formed and how they change; understanding that light from the Sun is dangerous and how to protect our eyes.</p>
	Spring	<p>Rocks – different types of rock and their properties; how fossils are formed from living things; the composition of soil.</p> <p>Forces and magnets – what forces are; contact and non-contact forces; friction and movement on different surfaces; magnetism and magnetic materials.</p>
	Summer	<p>Plants – the functions of each part of a flowering plant; what is needed for life and healthy growth; transportation of water; the life cycle of flowering plants, including the role of the flower, pollination and seed dispersal.</p>
Year 4	Autumn	<p>Animals including humans – the digestive system; teeth and their function; food chains.</p> <p>Sound – how sounds are made; how sounds travel to our ears; how sounds travel through different media; changing pitch; changing volume; how sounds get fainter further from the source.</p>
	Spring	<p>States of matter – the three common states of matter: recognising solids, liquids and gases; particle models; changing states; the roles of evaporation and condensation in the water cycle; factors affecting the rate of evaporation.</p> <p>Living things and their habitats – classification; using keys to group, identify and name living things; understanding the changes within environments and their effects on living things</p>
	Summer	<p>Electricity – appliances that use electricity; simple circuits and their components; complete and incomplete circuits; switches; conductors and insulators.</p>

Upper Key Stage 2

Year 5	Autumn	<p>Animals including humans – the circulatory system; transportation of nutrients and water; impact of diet, exercise and drugs.</p> <p>Earth and Space – the size, shape and relative positions of the Earth, Sun and Moon; movement of the Earth and other planets relative to the Sun; movement of the Moon relative to the Earth; explanation of day and night and why the sun appears to move across the sky.</p>
	Spring	<p>Properties and changes of materials – grouping of materials according to their properties; uses of materials according to their properties; dissolving solids to form solutions; recovery of substances from solution; separation of mixtures; reversible and irreversible changes.</p> <p>Forces – gravity and its effect; the effects of air and water resistance and friction; levers, pulleys and gears.</p>
	Summer	<p>Living things and their habitats – how plants reproduce; flowers and fertilisation; similarities and differences in life cycles of mammals, amphibians, insects and birds; the work of naturalists David Attenborough and Jane Goodall.</p> <p>Animals including humans – describe the changes as humans develop to old age (sex education).</p>
Year 6	Autumn	<p>Living things and their habitats – Carl Linnaeus and the development of taxonomy; classifying microorganisms; classifying plants and animals based on specific characteristics; using classification keys.</p>
	Spring	<p>Light – light sources and reflectors of light; how we see; how light travels; drawing ray diagrams; explaining shadows; reflection, mirrors and periscopes.</p> <p>Evolution and inheritance – variation and diversity; inherited and acquired traits; adaptation; changes over time; Charles Darwin; natural selection and evolution; fossil evidence for evolution.</p>
	Summer	<p>Electricity – contributions to the development and widespread use of electricity; use of symbols in circuit diagrams; variations in component function; effect of changing number of bulbs / other components in a circuit; effects of varying voltage.</p> <p>Working scientifically – further development of investigative skills</p>

Working scientifically is taught throughout each topic all through the year. Specific working scientifically objectives are given in medium term plans and relate to the investigations included on knowledge organisers. The table lists the National Curriculum objectives.

Year	Working scientifically objectives
KS1	<p>Asking simple questions and recognising that they can be answered in different ways.</p> <p>Observing closely, using simple equipment.</p> <p>Performing simple tests.</p> <p>Identifying and classifying.</p> <p>Using their observations and ideas to suggest answers to questions.</p> <p>Gathering and recording data to help in answering questions.</p>
Lower KS2 (Years 3 & 4)	<p>Asking relevant questions and using different types of scientific enquiries to answer them.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>
Upper KS2 (Years 5 & 6)	<p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Using test results to make predictions to set up further comparative and fair tests.</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>