



Science overview 2023 - 2024

EYFS - All year round through UTW & EAD areas

Nursery	Reception
<p>Topics covered: plants, animals and humans (themselves & family)- through observation, stories and discussion</p> <p>EYFS Coherence: Life; Material & Forces</p> <p>Age 3-4:</p> <ul style="list-style-type: none"> • Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary • Explore how things work • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. 	<p>Topics covered: plants, animals and humans (themselves & family)</p> <p>EYFS Coherence: Life & Material</p> <ul style="list-style-type: none"> • Explore the natural world around them • Recognise some environments that are different from the one in which they live. • Describe what they see, hear and feel whilst outside. • Understand the effect of changing seasons on the natural world around them. <p>ELG: The Natural World</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants; • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

	Autumn					Spring					Summer				
Year 1	Everyday materials					Plants					Animals including humans				
	Writing to inform: What are objects made from & why?					Fact file of plants and trees in the school grounds					Fact file of common animals including what they eat				
Scientific Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation
	Seasonal Changes														
	Non-fiction report to Reception: what happens in the world as the seasons change?														
Scientific Rigour	Observation			Identifying & classifying			Fair Test			Pattern Seeking			Research and Explanation		

Year 2	Everyday materials Writing to inform: what are different materials used for and why?					Plants and animals including humans Annotated diagram of how a young animal grows into a mature animal including what they need to grow. Annotated diagram of how seeds grow into mature plants including what they need to grow.					Living things and their habitats Fact file of an animal and its habitat				
Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation

Year 3	Forces & magnets Comparative test: are all magnets the same strength? (Including explanation of results)					Plants and animals including humans Writing to inform: which animals have skeletons and what are they for?					Rocks & light Comparative test: what happens to shadows when distance between the light source and the object change? Writing to inform: different types of rocks				
Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation

Year 4	Sound & electricity Comparative test: Which materials are the best sound insulators? (Including explanation of results) Writing to explain: how do switches work and what materials should they be made of?					Animals including humans & their habitats Make a simple key to identify local plants and animals Writing to explain: how does the digestive system work?					States of matter Comparative test: how long does it take for different solids to melt?				
Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation

Year 5	Earth, space & forces Non-fiction report to year 4 (Moon/planet/air resistance)					Animals including humans & their habitats Writing to inform: what happens as we age?					Properties & changes of materials Fair test: What happens to the amount of evaporation if we change a variable?				
Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation

Year 6	Light & electricity Writing to explain: How does a periscope work? Fair test: What will happen to the brightness of the bulb if we change the length of the wires?					Animals including humans & their habitats Research unfamiliar animals and plants from a broad range of other habitats and create a key showing where they belong in the classification system Writing to explain: how does the heart work?					Evolution & Inheritance Writing to explain: how has [insert animal] adapted to its environment?				
Rigour	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation	Observation	Identifying & classifying	Fair Test	Pattern Seeking	Research & Explanation

Observation	<p>By the end of KS1 Observe closely, using simple equipment and measurement Observe changes over time Gather and record information to help answer questions</p>	<p>By the end of LKS2 Make systematic and careful observations Take accurate measurements using standard units using a range of equipment Gather record, classify and 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</p>	<p>By the end of UKS2 Take measurements using a range of equipment with increasing precision, taking repeat readings</p>
Identifying and classifying	<p>By the end of KS1 Use simple features to compare objects, materials and living things With help, decide how to sort and group them</p>	<p>By the end of LKS2 Identify differences, similarities, or changes related to simple scientific ideas and processes Talk about criteria for grouping, sorting and classifying Use simple keys</p>	<p>By the end of UKS2 Record data and results using classification keys</p>
Fair test	<p>By the end of KS1 Ask simple questions and recognise that they can be answered in different ways Perform simple tests</p>	<p>By the end of LKS2 Ask questions and use different types of scientific enquiries to answer them Set up simple comparative tests Start to make own decisions about the most appropriate type of scientific enquiry Help to decide how to set up a simple fair test</p>	<p>By the end of UKS2 Select and plan different the most appropriate types of enquiries including recognising and controlling variables</p>
Pattern seeking	<p>By the end of KS1 Begin to notice patterns and relationships</p>	<p>By the end of LKS2 Look for naturally occurring patterns</p>	<p>By the end of UKS2 Explore and talk about their ideas, asking their own questions about scientific phenomena and analysing systematically Recognise that scientific ideas change and develop over time</p>
Research and explanation	<p>By the end of KS1 Use their observations to suggest answers to questions</p>	<p>By the end of LKS2 Report on findings including oral and written explanations, displays or presentations of results and conclusions Use results to draw simple conclusions, make predictions, suggest improvements and raise further questions Use straightforward scientific evidence to answer questions or to support findings</p>	<p>By the end of UKS2 Record data using diagrams, tables and graphs Use results to make predictions to set up further comparative / fair tests Report and present findings including conclusions, causal relationships and explanations of results in oral and written forms Identify evidence that has been used to support and refute ideas or arguments</p>