

# Science Overview

Working Scientifically	Energy Transfer Model	Particle Model	Force Arrow Model	Big Picture Model
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	Autumn	Spring			Summer	
EYFS	<b>Understanding the World (The Natural World)</b>					
	<b>All About Me!</b>	<b>Environment/ Seasons</b>	<b>Animals and their habitats</b>	<b>Materials</b>	<b>Plants</b>	<b>Animals &amp; Plants</b>
	<ul style="list-style-type: none"> <li>Explore the world around me</li> <li>Begin to understand their own growth</li> <li>Identify different senses</li> <li>Knows good hygiene and health</li> </ul>	<ul style="list-style-type: none"> <li>Show care and concern for the environment.</li> <li>Begin to understand the natural world.</li> <li>Know important processes, patterns and changes in the natural world including seasons and changes of matter.</li> </ul>	<ul style="list-style-type: none"> <li>Understand growth, change and importance of health.</li> <li>Polar animals and their habitats.</li> <li>Arctic/Antarctic animals.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and classify similarities and differences of materials.</li> </ul>	<ul style="list-style-type: none"> <li>Explore the natural world.</li> <li>Make observations of plants.</li> <li>Draw pictures of plants.</li> </ul>	<i>Revisit &amp; revise key elements of the previous two areas</i>
Year 1	<b>Plants</b>	<b>Seasons</b>	<b>Plants &amp; Seasons</b>	<b>Everyday Materials</b>	<b>Animals Including Humans</b>	<b>Animals Inc Humans &amp; Everyday Materials</b>
	Parts of plants and trees & identifying wild & common plants.	Seasons, weather & day to night.	Revisit & revise key elements of previous two areas	Types of materials, what things are made of & simple properties.	Grouping & comparing animals, their diets & exploring senses.	Revisit & revise key elements of previous two areas
	Classification & Identification	Observation Over Time		Fair Testing	Classification & Identification	
	Identify & classify wild & garden plants & trees	Observe & collect data about weather		Properties of materials	Identify, group, compare & contrast animals.	
Year 2	<b>Living Things &amp; Their Habitats</b>	<b>Animals Including Humans</b>	<b>Living Things &amp; Their Habitats &amp; Animals Inc Humans</b>	<b>Everyday Materials</b>	<b>Plants</b>	<b>Plants &amp; Everyday Materials</b>
	Living & non-living, location & connection of living things.	How humans & animals change & mature and what they need to survive and stay healthy.	Revisit & revise key elements of previous two areas	Categorise & compare materials. Manipulation, purpose & suitability of materials.	Grow healthy plants from seeds and bulbs.	Revisit & revise key elements of previous two areas
	Classification & Identification	Observation Over Time		Fair Testing	Fair Testing	
	Sorting & classifying living, dead or never alive.	Observe & measure growth of animals.		Suitable materials for given situations.	What plants need to grow.	
Year 3 / 4 Year A	<b>Electricity (Year 4)</b>	<b>Animals Including Humans (Year 3)</b>	<b>Sound (Year 4)</b>	<b>Plants (Year 3)</b>	<b>Light (Year 3)</b>	<b>Revisit &amp; Revise</b>
	Sources of electricity, components & effects of	Effects of diet & function of skeletons & muscles.	Properties, movement, pitch and volume of sound	Structure of flowering plants, food & survival, flower function	How light allows us to see & how shadows can be formed and changed.	Revisit & revise key elements of previous areas

	changing these in simple series circuit.					
	Pattern Seeking	Classification & Identification	Pattern seeking	Observation Over Time	Classification & Identification	Observation Over Time
	Building and observing circuits.	Identify & compare skeletons.	Finding patterns in pitch and volume	Water transportation in plants	Dissection of a plant.	Water transportation in plants
<b>Year 3 /4 Year B</b>	<b>Animals Including Humans (Year 4)</b>	<b>States of Matter (Year 4)</b>	<b>Electricity Forces and Magnets (year 3)</b>	<b>Living Things &amp; Their Habitats (Year 4)</b>	<b>Rocks (Year 3)</b>	<b>Revisit &amp; Revise</b>
	Teeth & eating, the digestive system & food chains	Solids, liquids & gases, melting, evaporating and condensing.	Contact and non-contact forces, effect of friction and magnetic forces.	Characteristics of living things, vertebrates & invertebrates, plants, classification keys, environmental changes.	Formation & types of rocks & classification of rocks. Soil composition & fossil formation.	Revisit & revise key elements of previous areas
	Fair Testing	Observation Over Time	Fair Testing	Classification & Identification	Classification & Identification	
	Identify substances that damage teeth.	Evaporation of puddles	Friction / magnetic strength	Using a classification key	Identifying & classifying rocks & soil.	
<b>Year 5/6 Year A</b>	<b>Living Things &amp; Their Habitats (Year 5)</b>	<b>Inheritance &amp; Evolution (Year 6)</b>	<b>Forces (Year 5)</b>	<b>Light (Year 6)</b>	<b>Animals Including Humans (Year 5)</b>	<b>Revisit &amp; Revise</b>
	Life cycles & reproduction of animals (mammals, amphibians, insects, birds) & plants.	Change over time, biological change and theories of Evolution.	Non-contact & contact forces, air & water resistance, levers, pulleys & gears	How light travels, reflection, colour and fraction.	Life, growth & comparing human & animal lifespan.	Revisit & revise key elements of previous areas
	Classification & Identification	Research	Fair Testing	Pattern Seeking	Observation Over Time	
	Compare how animals & plant grow & reproduce.	Animals evolution	Investigations linked to air resistance, water resistance & the effects of levers and pulleys.	How light travels and the light spectrum.	Gestation periods of animals.	
<b>Year 5/6 Year B</b>	<b>Animals Including Humans (Year 6)</b>	<b>Living Things &amp; Their Habitats (Year 6)</b>	<b>Earth &amp; Space (Year 5)</b>	<b>Electricity (year 6)</b>	<b>Properties &amp; Changes in Materials (Year 5)</b>	<b>Revisit &amp; Revise</b>
	Blood & blood vessels, functions of the heart & the effects of drugs, exercise & lifestyle	Pioneering scientists, classification of vertebrates & invertebrates including micro-organisms & applying classification knowledge.	Position, relationship & movement of planets. The effect of the Earth's rotation, tilt & orbit on day, night & seasons.	Effects & consequences of changing voltage and components in a series circuit.	Properties, mixtures & solutions, separation of materials, & reversible & irreversible changes.	Revisit & revise key elements of previous areas
	Research	Classification & Identification	Observation Over Time	Fair Testing	Fair Testing	
	Explore scientific research about diet, exercise, drugs, lifestyle & health.	Creating classification keys	Shadow changes throughout the day and year.	Effects of changing components and voltage in circuits.	Reversible & irreversible changes.	

## Scientific Skills

KS1

Ask simple questions & recognise that they can be answered in different ways.	Observe closely, using simple equipment.	Perform simple test.	Identify & classify	Use observations & ideas to suggest answers to questions	Gather & record data to help answer questions.
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KS2

Ask relevant questions	Set up simple, practical enquiries & comparative & fair tests.	Make accurate measurements using standard units, using a range of equipment.	Gather, record, classify & present data in a variety of ways to help in answering questions.	Record findings using simple scientific language, drawings, labelled diagrams, bar charts & tables	Report of findings from enquiries, including oral & written explanations, displays or presentations of results & conclusions.	Use results to draw simple conclusions & suggest improvements, new questions & predictions for setting up further tests.	Identify differences, similarities or changes related to simple, scientific ideas & processes.
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