



COULSDON C OF E PRIMARY SCHOOL

Bradmore Green, Old Coulsdon, Surrey, CR5 1ED



Science Whole School Science Skills Overview (Years R-6)

<u>Key Stage</u>	<u>Knowledge Focus</u>	<u>Skills Development</u>	<u>Fieldwork & Enquiry Progression</u>
<u>EYFS</u>	Autumn term <ul style="list-style-type: none">• What makes me, me? Spring term <ul style="list-style-type: none">• Seasonal changes and weather Summer term <ul style="list-style-type: none">• Plants - changing over time	<ul style="list-style-type: none">• Begin to show curiosity by engaging in open ended activities	Hands-on discovery and using the five senses. <ul style="list-style-type: none">• Skill: Asking "Why?" and "How?".• Activity: Exploring natural materials, planting seeds, and noticing how things change (like ice melting).• Recording: Talking about what they see and drawing simple pictures.

<p><u>KS1 (Years 1-2)</u></p>	<p>Year 1 Autumn Term</p> <ul style="list-style-type: none"> • Human senses • Materials <p>Spring Term</p> <ul style="list-style-type: none"> • Seasonal changes <p>Summer term</p> <ul style="list-style-type: none"> • Animals and humans - sorting and classifying • Plants - sorting and classifying <p>Year 2 Autumn Term</p> <ul style="list-style-type: none"> • Habitats • Life cycles and the basic needs of animals, including humans <p>Spring Term</p> <ul style="list-style-type: none"> • Materials <p>Summer Term</p> <ul style="list-style-type: none"> • Plants - what do plants need to grow? 	<ul style="list-style-type: none"> • Continue to show curiosity by asking questions and using equipment to carry out simple investigations. • Begin to collect and record data 	<p>Observing & Testing - Children begin to follow simple instructions to find answers to their own questions.</p> <ul style="list-style-type: none"> • Skill: Asking simple questions and performing "simple tests". • Activity: Sorting leaves into groups (identifying and classifying) or watching a bean grow over time (observing over time). • Recording: Using tally charts or simple tables with help.
<p><u>Lower KS2 (Years 3-4)</u></p>	<p>Year 3 Autumn term</p> <ul style="list-style-type: none"> • Animal and human nutrition • Skeletons and muscles <p>Spring Term</p> <ul style="list-style-type: none"> • Plants - parts of a plant and seed dispersal <p>Summer term</p> <ul style="list-style-type: none"> • Forces and magnets • Light 	<ul style="list-style-type: none"> • Continue to ask questions, using a variety of scientific enquiries to find answers. • Set up simple practical enquiries, comparative and fair tests, making observations and taking measurements using a range of equipment. • Continue to collect and record data in a variety of ways, 	<p>Investigating & Measuring - "fair" and "comparative" testing using scientific equipment.</p> <ul style="list-style-type: none"> • Skill: Setting up practical enquiries and making "systematic and careful observations". • Activity: Using a thermometer to measure temperature or using a data logger to track sound levels.

	<p>Year 4</p> <p>Autumn term</p> <ul style="list-style-type: none"> • Digestive system • Teeth • Food chains • Sound <p>Spring term</p> <ul style="list-style-type: none"> • Living things and their habitats <p>Summer term</p> <ul style="list-style-type: none"> • Electricity • States of matter 	<p>using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <ul style="list-style-type: none"> • Begin to draw conclusions, observing differences, similarities or changes related to simple scientific ideas and processes. 	<ul style="list-style-type: none"> • Recording: Creating bar charts and labelled diagrams to show what they found.
<p><u>Upper KS2 (Years 5-6)</u></p>	<p>Year 5</p> <p>Autumn term</p> <ul style="list-style-type: none"> • Earth and Space • Forces <p>Spring term</p> <ul style="list-style-type: none"> • Human life cycle <p>Summer term</p> <ul style="list-style-type: none"> • Living things and their habitat- how do living things reproduce? • Properties of materials <p>Year 6</p> <p>Autumn term</p> <ul style="list-style-type: none"> • Circulatory system • Respiratory system <p>Spring term</p> <ul style="list-style-type: none"> • Living things and their habitat - classification <p>Summer term</p> <p>Evolution and Electricity</p>	<ul style="list-style-type: none"> • Plan different types of scientific enquiry to answer questions, including recognising and controlling variables where necessary. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Continue to record data and results with increasing complexity, using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Continue to draw conclusions, demonstrating the ability to talk about and present findings; discuss how reliable 	<p>Planning & Evaluating - pupils become independent scientists who decide how to conduct their own experiments.</p> <ul style="list-style-type: none"> • Skill: Planning different types of enquiries and controlling variables (making sure a test is fair). • Activity: Taking repeat readings to check for accuracy and using secondary sources (books/internet) to research complex ideas like evolution. • Recording: Using line graphs, scatter graphs, and scientific keys to present complex data.

		<p>data is; make predictions for further testing.</p> <ul style="list-style-type: none">• Use scientific evidence to support or refute ideas or arguments.	
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Geography Skills Progression Overview KS2 (Years 3-6)

<u>Strand</u>	<u>Lower KS2 (Years 3-4)</u>	<u>Upper KS2 (Years 5-6)</u>
<u>Locational Knowledge</u>	<ul style="list-style-type: none">• Locate countries and describe features using maps, atlases, globes and digital mapping tools.• Identify capital cities and significant geographical features within continents.• Locate European countries and major cities (including Russia).• Use lines of latitude and longitude to locate places globally.• Identify the position of the Tropics, Arctic and Antarctic Circles, and key physical features such as rivers and mountains.	<ul style="list-style-type: none">• Describe relative location and distance between UK and world features.• Locate and explain the position of significant industrial, farming and exporting regions around the world.• Identify the position and significance of latitude, longitude, equator, Northern/Southern Hemispheres, Tropics of Cancer and Capricorn, Arctic and Antarctic Circles, and the Prime Meridian.• Use time zones (including day and night).
<u>Place Knowledge</u>	<ul style="list-style-type: none">• Describe and compare features of UK counties and major cities.	<ul style="list-style-type: none">• Compare and contrast different regions of the world (e.g. polar

	<ul style="list-style-type: none"> • Recognise how land use varies across the UK. • Identify types of settlements and their characteristics. • Explain how weather and physical geography affect human activity. 	<p>regions, Greece, farming regions).</p> <ul style="list-style-type: none"> • Describe patterns of settlement, population and land use in the UK and globally. • Explain how natural and human processes create diversity within and between places.
<u>Human and Physical Geography</u>	<ul style="list-style-type: none"> • Name and describe the Earth's layers and plate tectonics. • Identify and describe physical processes such as erosion, deposition and transportation. • Identify and describe climate zones and physical features (mountains, rivers, coasts). • Explain the water cycle and flooding causes. • Explain how human activities (energy use, carbon footprint) affect the environment. 	<ul style="list-style-type: none"> • Explain the distribution of natural resources, including energy, food, minerals and water. • Explain how trade is linked to geography and geology. • Describe the impact of climate change and extreme weather on people and environments. • Identify and describe world biomes, vegetation belts and climatic zones. • Evaluate how human activity affects physical environments (tourism, farming, industry).
<u>Geographical Skills and Fieldwork</u>	<ul style="list-style-type: none"> • Use four- and six-figure grid references, symbols and keys. • Use the eight points of a compass accurately. • Conduct fieldwork (e.g. land use, weather, transport). • Gather and analyse primary data to identify patterns. • Use contour lines and topographical maps to describe elevation and landscape. 	<ul style="list-style-type: none"> • Use compasses, grid references, scale and aerial photographs to interpret and analyse maps (including Ordnance Survey maps). • Measure and analyse distances using map scales. • Collect, analyse and present increasingly complex data from multiple sources. • Conduct independent fieldwork to test geographical hypotheses.

Environmental Understanding

- Describe how natural resources can be harnessed sustainably.
 - Explain the role of renewable energy.
 - Investigate how human actions affect the environment.
 - Develop and test simple geographical hypotheses using fieldwork evidence.
- Evaluate human-environment relationships and their impact on sustainability.
 - Assess natural resource management strategies.
 - Explain how humans adapt to extreme environments (e.g. Arctic communities).
 - Present findings and conclusions from geographical enquiries with reasoned arguments.