

# SCIENCE

## at Roydon Primary School



### Objectives from the National Curriculum:

<p><b>EYFS</b> Early Learning Goals can be found by clicking <a href="#">here</a></p> <p>The technology <b>Early Learning Goal</b> is: Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p><b>Key Stage 1 and Key Stage 2:</b> National Curriculum objectives can be found by clicking <a href="#">here</a></p> <p>The overall aim at Roydon Primary School is to ensure that all pupils: maintain and develop their natural curiosity about the world around them. They have an enquiring mind and they ask questions.</p>
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### Progression of Skills:

Reception/Year 1	Year 1/Year 2	Year 3/Year 4	Year 5/Year 6
<b>Planning, Communication and Sources</b>			
<p>Talk about why things happen and how things work.</p> <p>Draw simple pictures.</p> <p>Talk about what they see and do.</p> <p>Use simple charts to communicate findings.</p> <p>Identify key features ask questions.</p>	<p>Draw simple pictures.</p> <p>Talk about what they see and do.</p> <p>Use simple charts to communicate findings.</p> <p>Identify key features ask questions.</p> <p>Describe their observations using some scientific vocabulary.</p> <p>Use a range of simple texts to find information.</p> <p>Suggest how to find things out.</p>	<p>Use pictures, writing, diagrams and tables as directed by their teacher.</p> <p>Use simple texts, directed by the teacher, to find information.</p> <p>Record their observations in written, pictorial and diagrammatic forms.</p> <p>Select the appropriate format to record their observations.</p> <p>Record observations, comparisons and measurements using tables and bar charts.</p> <p>Begin to plot points to form a simple graph.</p> <p>Use graphs to point out and interpret patterns in their data.</p> <p>Select information from a range of sources provided for them.</p>	<p>Record observations systematically.</p> <p>Use appropriate scientific language and conventions to communicate quantitative and qualitative data.</p> <p>Select a range of appropriate sources of information including books, internet and CD Rom.</p> <p>Choose scales for graphs that show data &amp; features effectively.</p> <p>Identify measurements and observations that do not fit into the main pattern.</p> <p>Begin to explain anomalous data.</p> <p>Use appropriate ways to communicate quantitative data using scientific language.</p>

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<b>Enquiring and Testing, Obtaining and Presenting Evidence</b>			
<p>Test ideas suggested to them. Say what they think will happen. Use first hand experiences to answer questions. Begin to compare some living things.</p>	<p>Test ideas suggested to them. Say what they think will happen. Use first hand experiences to answer questions. Use simple equipment provided to aid observation. Compare objects, living things or events. Begin to compare some living things. Make observations relevant to their task begin to recognise when a test or comparison is unfair.</p>	<p>Put forward own ideas about how to find the answers to questions. Recognise the need to collect data to answer questions. Carry out a fair test with support. With help, pupils begin to realise that scientific ideas are based on evidence. Show in the way they perform their tasks, how to vary one factor while keeping others the same. Recognise and explain why it is a fair test with help, pupils begin to realise that scientific ideas are based on evidence. Decide on an appropriate approach in their own investigations to answer questions. Describe factors they are varying, which will remain the same &amp; say why.</p>	<p>Use previous knowledge and experience combined with experimental evidence to provide scientific explanations. Recognise the key factors to be considered in carrying out a fair test. Describe evidence for a scientific idea. Use scientific knowledge to identify an approach for an investigation and explain how the interpretation leads to new ideas.</p>
<b>Observing and Recording</b>			
<p><b>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</b> Make observations using appropriate senses. Record observations. Communicate observations orally, in drawing, labelling, simple writing and using ICT.</p>	<p>Make observations using appropriate senses. Record observations. Communicate observations orally, in drawing, labelling, simple writing and using ICT. Respond to questions asked by the teacher. Ask questions collect and record data (supported by the teacher). Suggest how they could collect data to answer questions. Begin to select equipment from a limited range.</p>	<p>Make relevant observations. Measure using given equipment. Select equipment from a limited range. Carry out measurement accurately. Make a series of observations, comparisons and measurements. Select and use suitable equipment. Make a series of observations and measurements adequate for the task.</p>	<p>Make a series of observations, comparisons and measurements with increasing precision. Select apparatus for a range of tasks plan to use apparatus effectively. Begin to make repeat observations and measurements systematically. Measure quantities with precision using fine-scale divisions. Select and use information effectively. Make enough measurements or observations for the required task.</p>
<b>Considering Evidence and Evaluating</b>			
<p><b>Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.</b> Make simple comparisons and groupings. Say what has happened.</p>	<p>Make simple comparisons and groupings. Say what has happened. Say what their observations show and whether it was what they expected. Begin to draw simple conclusions and explain what they did.</p>	<p>Begin to offer explanations for what they see, and communicate in a scientific way what they have found out. Begin to identify patterns in recorded measurements. Suggest improvements in their work evaluate their finding.</p>	<p>Make predictions based on their scientific knowledge and understanding. Draw conclusions that are consistent with the evidence. Relate evidence to scientific knowledge and understanding.</p>

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Say what their observations show and whether it was what they expected.	Begin to suggest improvements in their work.	Predict outcomes using previous experience and knowledge, and compare with actual results. Begin to relate their conclusions to scientific knowledge and understanding. Suggest improvements in their work, giving reasons.	Offer simple explanations for differences in their results. Make practical suggestions about how their working methods could be improved. Make reasoned suggestions on how to improve working methods. Show how interpretation of evidence leads to new ideas. Explain conclusions, showing understanding of scientific ideas.
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### Science Overview

	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
<b>Infants (Reception, Years 1 &amp; 2)</b>	Animals, including Humans Materials Plants	Materials Animals, including Humans Living Things & their Habitats	Animals, including Humans Materials Plants	Materials Animals, including Humans Living Things & their Habitats
<b>Rabbits, Dragonflies &amp; Foxes (Year 3 &amp; 4)</b>	<u><b>Year 3</b></u> Forces and Magnets Rocks and fossils Plants Animals including humans <u><b>Year 4</b></u> Sound	<u><b>Year 3</b></u> Light <u><b>Year 4</b></u> Electricity States of Matter Animals including humans Living things and habitats	<u><b>Year 3</b></u> Forces and Magnets Rocks and fossils Plants Animals including humans <u><b>Year 4</b></u> Sound	<u><b>Year 3</b></u> Light <u><b>Year 4</b></u> Electricity States of Matter Animals including humans Living things and habitats
<b>Kingfishers, Otters &amp; Owls (Year 5 &amp; 6)</b>	<u><b>Year 5</b></u> Forces Earth and Space <u><b>Year 6</b></u> Living things and habitats Animals including humans Evolution and inheritance	<u><b>Year 5</b></u> Animals including humans Living things and habitats Properties and changes of materials <u><b>Year 6</b></u> Light & Electricity	<u><b>Year 5</b></u> Forces Earth and Space <u><b>Year 6</b></u> Living things and habitats Animals including humans Evolution and inheritance	<u><b>Year 5</b></u> Animals including humans Living things and habitats Properties and changes of materials <u><b>Year 6</b></u> Light & Electricity