

## Curriculum statement for the teaching and learning of science

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| <b>Intent</b>         | At St Oswald's C of E Primary School our science provision aims to immerse our children in the knowledge and skills they require to be scientists of the future. It is our intention to encourage and enable children to ask questions about the world around them, as well as to develop the skills and confidence necessary to go about finding the answers to these questions. The science curriculum at St Oswald's is designed so that knowledge and skills are progressive and transferable to other curriculum areas. We believe that science can unlock ambition and drive in children to learn and succeed and we aim to inspire a belief that science is for everyone.                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Underpinned by</b> | <b>The teaching of skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>The application of skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Vocabulary</b>                                                                                                                                                                                                                                                                                                                                                                              |
|                       | The children at St Oswald's will be taught how to use a range of equipment and technology confidently and accurately. They will develop a range of working scientifically skills including questioning, making observations, planning and performing tests, recording and presenting results and examining evidence to make and justify scientific conclusions. The skills the pupils learn are transferrable and will support their learning in other subjects, thereby deepening their understanding of the world around them. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group. The key knowledge identified by each year group is informed by the national curriculum and builds towards identified phase 'end points' in accordance with NC expectations. | Throughout their time at St Oswald's, children will be given regular opportunities to practice and apply their working scientifically skills. They will experience a range of different enquiry types: asking questions, observing changes over time; grouping and classifying; noticing patterns; fair and comparative tests and researching of secondary sources. Cross-curricular links will allow skills to be transferrable and consolidated between curriculum subjects. They will also have opportunity to apply their growing knowledge of scientific vocabulary through practical, collaborative, presentation and written tasks. | The children at St Oswald's will understand and use a range of appropriate scientific vocabulary to discuss, communicate and justify their ideas. They will also understand the vocabulary relevant to the scientific method and associated with working scientifically. Key topic vocabulary will be displayed in the classroom or available to children in the form of knowledge organisers. |

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| Implementation | <p><b>Curriculum Approach</b></p> <p>Children engage with science weekly and are guided, supported and stretched through the science topics which build upon prior knowledge and working scientifically skills. Our science long term plan maps out our rolling program for each class. Planning is carefully differentiated by class teachers to enable SEND children to access the science curriculum whilst also enabling opportunities for pupils working at greater depth to broaden and apply their knowledge, skills and scientific vocabulary.</p>                                                                                       | <p><b>External Stimuli</b></p> <p>Pupils are taught about how the world has influenced scientists throughout history, including Sir Isaac Newton, Thomas Edison, Mary Anning, Charles Darwin, Linda Brown Buck, Charles Mackintosh, Alexander Graham Bell amongst others. Where possible, teaching is made relevant to children's everyday experiences and pupils are encouraged to question the structure and behaviour of the physical and natural world around them. Children are exposed to as many real life experiences and opportunities as possible. Classes 1 and 2 have weekly sessions in the school grounds to observe the changes throughout the year and to deliver a wide section of the science curriculum. All year groups are involved extensively in National Science Week.</p> | <p><b>Spiritual, Moral, Social and Cultural</b></p> <p>At the heart of science lessons are collaborative practical tasks that require respect and co-operation for shared decision making amongst children. Through discussing past and present scientists and their discoveries, children gain an understanding of the role and impact science and innovation have in society. In addition, this enables children to learn about other times and cultures, and the imagination, creativity, self-belief and perseverance necessary for these inspiring scientists to succeed. Some science topics require pupils to appreciate different viewpoints e.g. the theory of Evolution and creationism. Children are also encouraged to develop the working scientifically skill of using evidence to support or refute their ideas and thus to offer reasoned points of view. Throughout St Oswald's children learn about the importance of making the right choices with regards to a healthy lifestyle, including diet, exercise and drug safety.</p> |
|                | <p><b>Sharing work</b></p> <p>Children's science work is recorded in individual books and is shared between pupils and staff. In class, children also share their learning in a variety of ways: discussion, presentations, drawings and posters, information booklets. There are frequent opportunities to celebrate children's science work and show the process of their learning via display boards in school. Occasionally, science work is shown in assemblies alongside other curriculum subjects. Children's work is also responsibly shared online with parents using our school Facebook and Instagram pages and Google Classroom.</p> | <p><b>Thoughtful Questioning</b></p> <p>Questioning is a fundamental aspect of science; it is integral to all types of science enquiry and is developed through every science topic. Pupils often ask questions at the beginning of a science topic to focus their learning as they progress through the unit. In lessons, some questions may be closed, requiring a specific answer based on scientific knowledge. More often, questions are child-centred and open, allowing for a range of answers from children of all abilities and life experiences and science investigations. Children are encouraged to understand that some questions may have more than one answer, which may be neither right nor wrong, and to consider what evidence is needed to support or refute an idea.</p>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|        | <b>Resources</b><br>Children at St Oswald’s have access to a wide variety of practical science resources to support learning. Children are taught to name and use a range of scientific equipment correctly, so that they may select equipment appropriate to its purpose. Opportunities are given for children to practise using these pieces of equipment to develop competency and precision. As they progress through school, children are supported to use science resources with increasing independence, accuracy and critical judgement. Resources such as Explorify is used to elicit dynamic scientific discussion and to encourage children to think like scientists. | <b>Local context</b><br>Situating on the edge of the Lake District National Park, Burneside and Kendal provide a rich local context for science learning. Children are surrounded by rivers, woodlands and fells, offering opportunities to explore living things and their habitats first-hand. The River Kent, which flows through both communities, provides a valuable resource for studying rivers, water cycles and environmental change, while nearby farmland allows children to observe seasonal patterns, food production and the interdependence of plants and animals. The area’s industrial heritage, including Burneside’s paper mill and Kendal’s market town history, also supports learning about materials, forces and the impact of human activity on the environment. Our science curriculum also draws inspiration from notable figures with local links, such as Dr Thomas Gough, a Kendal-born physician and educator; Professor Adam Sedgwick, a pioneering geologist from Dent; John Ruthven, the Kendal naturalist who contributed to the understanding of local wildlife; and Dr John Dalton of Eaglesfield, renowned as the father of modern atomic theory. By connecting pupils’ learning to both the natural environment and the achievements of local scientists, we foster curiosity, pride and a deeper understanding of science in its local and global contexts. |                                                                                                                                                                                                                                                                                                                                              | <b>Wider Opportunities</b><br>Children take part Science Week activities across the school.                                                                                                                                                                                                                                     |
|        | By the end of the key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the subject of computing programme of study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                 |
| Impact | <b>Pupil Voice</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Evidence in Knowledge</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Evidence in Skills</b>                                                                                                                                                                                                                                                                                                                    | <b>Breadth and Depth</b>                                                                                                                                                                                                                                                                                                        |
|        | Through pupil voice, children at our school share their enthusiasm for science and articulate the importance of the subject in helping them to understand the world around them. They talk confidently about their investigations, the skills they are developing and how their learning links to real-life experiences in                                                                                                                                                                                                                                                                                                                                                       | Evidence in pupils’ knowledge is seen through their ability to recall key scientific concepts and vocabulary with increasing confidence and accuracy as they move through the school. Children can explain processes such as the water cycle, plant growth and forces, and make connections between different areas of learning, for example                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Evidence of pupils’ scientific skills is seen in the way they plan and carry out investigations, make careful observations, and record results systematically using tables, charts and diagrams. As children progress through the school, they develop increasing independence in selecting equipment, choosing methods to answer scientific | The breadth and depth of pupils’ learning in science is evident in the wide range of topics studied and the opportunities provided to explore these in meaningful contexts. Children encounter all areas of the primary science curriculum, from plants, animals and materials in the early years to more complex concepts such |

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|  | <p>Burneside, Kendal and beyond. Pupils say that science makes them curious, encourages them to ask questions and gives them opportunities to work practically and collaboratively. They value the chance to explore, test ideas and learn from mistakes, and many express aspirations to use science in their future careers. The feedback gathered shows that children feel motivated, challenged and proud of their scientific achievements, reflecting the positive impact of our curriculum on their confidence and enjoyment.</p> | <p>linking their understanding of habitats to local environments such as the River Kent and surrounding fells. They demonstrate secure knowledge by applying it in practical investigations, predicting outcomes and explaining results using appropriate scientific language. Regular retrieval activities, discussions and assessments show that pupils are retaining knowledge over time, building a strong foundation for future scientific learning.</p> | <p>questions, and evaluating the reliability of their findings. Pupils demonstrate enquiry skills such as predicting, testing, measuring and drawing conclusions, and they are able to work collaboratively as well as individually to solve problems. Their ability to communicate findings clearly, using both scientific language and practical evidence, shows that they are becoming confident young scientists equipped with transferable skills for future learning.</p> | <p>as electricity, evolution and forces in Key Stage 2. Learning is enriched through cross-curricular links, outdoor exploration of the local environment in Burneside and Kendal, and engagement with wider scientific ideas and role models. Pupils are encouraged to pursue their curiosity beyond the expected outcomes, asking their own questions, designing investigations and researching topics of personal interest. This ensures that children not only gain secure coverage of the curriculum but also develop a deeper understanding and appreciation of how science relates to both their local community and the wider world.</p> |
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