



# Otley All Saints C.E Primary School

‘Learning, Love and Laughter Every Day’

## Science

Curriculum Statement: “A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world’s future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.”

<p><b>Intent</b></p>	<p>Science stimulates and excites pupils’ curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. At Otley All Saints C.E Primary School, we recognise the importance of science in our school curriculum. Science is vital for understanding the world around us and for ensuring its future, therefore we want our children to leave our school with a thorough base of knowledge and understanding to build upon as they continue their education. Using scientific methods ensures that children develop skills of enquiry and are able to investigate ideas, make predictions and analyse their findings. This methodical and rational way of thinking, where evidence is required to validate an idea, is an essential skill that can be applied throughout our pupils’ lives. Children are naturally excited and curious about how and why things happen. We aim to foster this by learning through first hand practical experience wherever possible so that all our children can consider themselves ‘scientists’. We want our children to have an understanding of the issues that the world faces and have a deep awareness and understanding of the sustainable global goals. Essentially, we want our children to be global citizens of the future. We know that education plays a central role in achieving the targets of the SDGs (Sustainable Global Goals). Reference to the SDGs, along with SMSC, are threaded in science lessons where appropriate to help children have an awareness of global connectedness in the world of science.</p>
<p><b>Implementation</b></p>	<p>Science is taught through different topics each half term in line with the National Curriculum. Although it is often taught as a discrete subject, cross curricular links are made wherever they are applicable for example with geography, maths and writing. Every year group builds upon the learning from prior year groups developing depth of understanding and progression of skills in line with this document. Scientific enquiry takes place in every lesson whether this is through testing, observing, classifying, pattern seeking or research. Children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings and they present these using science specific language, observations and diagrams. To support teaching, staff access a range of resources and planning from the Snap Science scheme of work where appropriate. Children have the opportunity to experience the natural world in our school grounds and wider locality including Otley Chevin and the River Wharfe. Science learning is further enriched through educational visits and events such as the Otley Science Festival and our LKS2 Science Club. Formative assessment is carried out by each teacher and tracked using our school system. Feedback is given to children both verbally and by marking of their written work and progress is reported to parents at consultation evenings and annual reports.</p>
<p><b>Impact</b></p>	<p>The impact of our science curriculum will lead to progress over time, across key stages, relative to a child’s individual starting point and their progression of skills. Children will therefore be expected to leave Otley All Saints reaching at least age related expectations for science. Through various workshops, trips and interactions with experts our science curriculum will lead pupils to be enthusiastic science learners and understand that science has changed our lives and that it is vital to the world’s future prosperity. Within science, children will also have a deeper understanding of sustainable development, will have explored global connectedness between local communities and the wider world, considered issues from different perspectives and reflect on their own values. They will also have the courage to take informed and reflect action linking to science, as responsible global citizens. We want to empower our children so they understand they have the capability to change the world. This is evidenced in a range of ways, including pupil voice, their work and their overwhelming enjoyment for science.</p>
<p><b>Inclusion &amp; Adaptation</b></p>	<p>An inclusive Science education curriculum should engage and inspire <i>all</i> learners to master the necessary knowledge and skills. To make it accessible for all our children, we make individualised and whole class adaptations to support their needs. We do this in a variety of ways, which includes some of the following:</p> <ul style="list-style-type: none"> <li>● Ensuring all lessons are well organised and laid out in a clear series of learning steps, starting with revisiting learning of prior knowledge.</li> <li>● Lessons include a mixture of experiences and different approaches to learning, including bringing abstract concepts to life through concrete resources and comparisons.</li> <li>● Children may be supported in written tasks through the use of word banks and different levels of scaffolding (for example ‘chunking’ information) are used for different groups of children where necessary. Tasks can also be adapted in length with the overall outcome of learning in science remaining the same.</li> <li>● Active breaks may be used to help children to retain focus and attention when accessing learning.</li> <li>● Key scientific vocabulary and language is displayed clearly in the classroom and referred to during lessons.</li> <li>● Key learning of scientific knowledge and skills is accessible and barriers removed where appropriate, for example a task that may involve writing could be modified by using pre-cut text.</li> <li>● We prioritise in-depth understanding and use routine, clarity and attention to detail.</li> <li>● Wide range of teaching styles to support and engage such learners visuals, videos or modelled examples.</li> <li>● Children have the opportunity to work as a class, in pairs or small groups and with additional adults to help support working memory and learning.</li> <li>● Science club and educational visits add to children’s cultural capital experience and encourage aspiration for all.</li> </ul> <p>Our <b>endpoints</b> are aspirational for all children but success may look different. For example, an end point might be to identify and describe what happens when dissolving occurs. For a child who needs support with processing and recording information, this might involve using digital recording technology or a writing frame to capture their understanding.</p>

