St Paul's Catholic Primary School

Policy for Science

(September 2022 – 2025)

At St Paul's, we aim for excellent teaching and promote high expectations and a nurturing ethos, so that all our children are happy, independent and resilient, and have the skills, knowledge and self-belief to become confident, creative citizens who can make a difference to the world and keep themselves safe. We educate and celebrate the whole child as an individual, preparing them spiritually, morally, physically, socially, intellectually and emotionally for their future lives. We want to support everyone on their faith journey, allowing them to deepen their personal relationship with Jesus and to recognise the love of God in their lives.

Teaching and Learning at St Paul's

We want all children to make good progress through knowing more and remembering more. In all subjects, we ensure that pre-knowledge and skills are revised and links are made with current learning. Children are given the opportunity to overlearn key concepts through repetition, modelling and scaffolding of learning. Learning is progressive and sequential. Reading, vocabulary and oracy are emphasised in all subjects.

Vision Statement

Our vision is to inspire children to love learning, which enables EVERY child to do their very best and to build a deep friendship with Christ. The children understand this to mean, 'United through Jesus, in faith, love and learning.'

Intent of the Science Curriculum

At St Paul's, we want our pupils to enjoy Science, show inquisitiveness and enquire about the world around them; characteristics which are outlined in the features of DESIRE. It is our intention to enthuse children in Science and provide them with the passion, skills and knowledge in science to last beyond their time at St Paul's.

We foster a respect and love for science by highlighting the importance of science in society; understanding how scientific discoveries and significant individuals changed our lives and how science is vital today and for the world's future prosperity alongside links with CST and the importance of caring for God's creation. From reception to Year 6, we encourage children to ask questions and be curious about their surroundings, both within the contexts of science and as part of the wider curriculum. We praise Inquisitiveness and Enquiry regularly as feature of DESIRE. 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, as well as the application of scientific skills. We ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments and explaining concepts confidently. We assess prior learning and misconceptions to develop a secure understanding of the knowledge and concepts taught in each topic. Oracy is an important part of St Paul's and we encourage children to find their voice in science by developing

children's speaking skills and build up an extended specialist vocabulary. Children should confidently describe key concepts and knowledge taught in their own words, but also be familiar with, and use, technical terminology accurately and precisely. We aim to make science learning active and engaging with a variety of practical activities and opportunities to conduct investigations, both in and outside of the classroom, which deepen understanding of key concepts and develop children's scientific skills.

Implementation of the Science Curriculum

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Teachers ensure time is dedicated to regular teaching of Science which is appropriate to their key stage. Teachers make links to scientific discoveries and significant individuals who changed our lives and highlight how science is vital today and for the world's future prosperity.
- Teachers plan and teach lessons, which take into account the barriers some children may have (for example working below age related expectations in reading or writing) and adapting the lessons appropriately.
- Quality and presentation of work produced in science books is of a high standard and demonstrates children's respect for science and pride in the work they produce.
- Enquiry and Inquisitiveness is encouraged, not just in science, but in all areas of the curriculum and praised regularly both in class and as part of St Paul's people and qualities of DESIRE.
- Teachers are secure in their subject knowledge and demonstrate understanding confidently, modelling use of technical and scientific terminology and strongly encourage all pupils to use specific topic related vocabulary.
- Scientific vocabulary is displayed in the classroom. Opportunities for oracy are planned for within lessons and regularly encouraged.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and organising school trips.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.
- Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.

Assessment

At the start of each topic, children complete a Rising Star assessment and write a list of "what I know" and "what I want to find out" to give teachers an initial understanding of the children's prior knowledge and any misconceptions which need to be addressed. As well as this, teachers regularly assess children's understanding in lessons; using discussion to probe and remedy misconceptions. At the end of each topic children complete an assessment, which teachers use alongside teacher assessment to grade children on the topic in an assessment grid.

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Impact of the Science Curriculum

Science is a high profile subject throughout the school and children understand the importance of science in society. Children at St Paul's are inquisitive and enthusiastic learners who want to find out about the world around them. Through engaging lessons taught by confident teachers, children leave St Paul's with a love of science, alongside the science knowledge and skills needed to succeed in their further education.

Equal Opportunities

All pupils receive teaching in science with a view to meeting all children's needs regardless of gender, ability, ethnicity, language and special educational needs. Staff recognise that each child has their own range of skills and understanding. Adjustments are made, and extra support put in place as necessary, to help us to fulfil our ambition for all children to succeed.