



Intent, Implementation and Impact Statement

Science

Intent

At Rotherhithe Primary School, we recognise the importance of Science in every aspect of daily life. As one of the core subjects taught in Primary School, we give the teaching and learning of Science the prominence that reflects its importance in every day life.

The Scientific area of learning is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry. It will develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence. At Rotherhithe Primary School, in conjunction with the aims of the National Curriculum, our Science teaching offers opportunities for children to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics;
- develop understanding of the nature, processes and methods of Science through different types of Science enquiries that help them to answer scientific questions about the world around them;
- be equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future.
- develop essential scientific enquiry skills to deepen their scientific knowledge.
- Use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including Computing, diagrams, graphs and charts.
- Develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

The National Curriculum will provide a structure and skill development for the Science curriculum being taught throughout the school, which is now linked, where possible, to the theme topics to provide a creative scheme of work, which reflects a balanced program of study. This year, we have introduced the Developing Experts scheme of work to enable children to access high-quality STEM education which provides children with the opportunity to explore real-world career pathways.

At Rotherhithe Primary School, children have weekly 1-hour lessons in Science throughout Key Stage 1 and 2-hour lessons in Key Stage 2, using various programs of study and resources. Within the Early years – specifically 'Understanding of the World' children are taught to start to make sense of their



Intent, Implementation and Impact Statement

Science

environment. They are encouraged to notice and explore the natural world around them, for example, trees, habitats, insects, weather etc.

Additional enrichment opportunities are provided in Science, such as the British Science Week for children, Science fairs in school and educational visits linked to the Science curriculum, such as visits to Creekside Discovery Centre, Science Museum and Southwark Park.

We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

Implementation

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;

- Science will be taught in planned and arranged topic blocks by the class teacher. This is a strategy to enable the achievement of a greater depth of knowledge.
- Through our planning, we involve problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills and assess children regularly to identify those children with gaps in learning.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases and they become more proficient in selecting, using scientific equipment, collating and interpreting results; they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- 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.
- 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 workshops with experts.



Intent, Implementation and Impact Statement

Science

Impact

Our successful approach at Rotherhithe Primary results in a fun, engaging, high-quality Science education that provides children with the foundations for understanding the world. Our engagement with the local environment ensures that children learn through varied and first-hand experiences of the world around them. So much of Science lends itself to outdoor learning and so we provide children with opportunities to experience this. Through various workshops, trips and interactions with experts and local charities, children have the understanding that Science has changed our lives and that it is vital to the world's future prosperity.

Impact is measured through daily formative assessment that informs weekly planning and summative termly Science assessments which gauge how children have independently applied the Science skills taught. Teachers upload this assessment data onto Target Tracker and monitor progress towards National curriculum objectives. Throughout the term, the Senior Leadership Team carry out learning walks, discussions with children, book looks and pupil progress meetings to monitor the quality of teaching and learning across the school. The outcome of these reviews is reflected in actions set out in teachers' appraisals, the Science Action Plan and as whole school targets shared with staff.

Pupil voice (led by Science ambassadors) is used to further develop the Science curriculum through questioning of pupil's views and attitudes towards the subject. This motivates the children and supports their enjoyment of Science. Children learn the possibilities for careers in Science as a result of our community links, Developing Experts scheme and connection with national agencies such as the STEM association.