



Science Intent, Implementation and Impact

<u>Intent</u>

At Smallthorne Primary Academy, it is our intention to recognise the importance of Science in every aspect of daily life. Our Science curriculum sets out to create a love and passion for science. We want our children to understand the world through scientific curiosity. To do this we will give the teaching and learning of Science the prominence it requires. Our curriculum will enable children to become enquiry-based learners collaborating through researching, investigating and evaluating experiences. We want our children to have a broad vocabulary. Scientific language is to be taught and built upon as topics are revisited in different year groups and across key stages. We study a varied curriculum which is carefully planned to build on knowledge year by year and covers the three scientific disciplines of Biology, Physics and Chemistry. Our curriculum will encourage respect for living organisms and for the physical environment and prepare our pupils for an ever-changing modern world. Our children will learn through exploration, enthusiasm and excitement. They will ask questions and be practical learners.

Implementation

- Our long term science curriculum is carefully planned using the National Curriculum 2014 and the Essentials Curriculum milestones to map content for each year group. This ensures coverage and progression throughout the school.
- Our long term curriculum builds successfully on from the previous year and all year groups teach the same strand of science at the same time to ensure coverage and cohesion.
- The 'BAD' levels within each milestone set out in the Essentials Curriculum ensure clear teaching expectations for each year group and highlight clearly the learning journey for all children.
- The 'BAD' levels within each milestone ensure that our children that are working at a greater depth in science are challenged appropriately.
- Teachers are expected to use the Essentials Curriculum to guide them into creating sequences of science lessons that are engaging, of a high quality and aid understanding of conceptual and disciplinary knowledge.
- Our long term science curriculum aims to create a positive attitude to the subject and reinforce and expectation that all children are capable of achieving high standards in science.
- Curriculum coverage is tracked by the science lead and all teachers are aware of prior learning and the next steps.
- Enquiry approach teaching and enquiry skills, including using scientific equipment, are explicitly planned for and taught in lessons with a clear understanding of progression throughout the school.
- Where applicable links to Science will be made to develop the children's topical learning.

Impact

We believe that Science is for all! We want our children to develop their science capital to become scientists of the future. Our approach to the teaching of Science will result in a fun, engaging, high quality science education, that provides children with the foundations for understanding the world that they can take with them once they complete their primary education.

In our scientists, we expect to see:

- We measure the impact of our science curriculum through the use of 'POP Tasks' set out in the Essentials Curriculum. These provide a guide for teachers to ensure that our children are making appropriate progress and that they know more and remember more within the subject of science.
- Our curriculum is set out to ensure that most children achieve the age related expectation in science at the end of each year.
- Our children will have the ability to think independently and raise questions about working scientifically and the knowledge and skills that is brings.
- Our children will be able to draw on prior knowledge and build on from previous learning.
- Our children will be confident and competent in the subject of science and will have the ability to plan and carry out scientific investigations.
- Our children will have excellent scientific knowledge and understanding which is demonstrated in their science books, learning journals and cross-curricular writing tasks.
- Children will retain knowledge that is pertinent to Science with a real-life context.
- Children will be able to question ideas and reflect on knowledge.
- Children will work collaboratively and practically to investigate and experiment.
- Children will be able to explain the process they have taken and be able to reason scientifically.

Our children will leave Smallthorne Primary Academy able to build, remember and connect together their knowledge and skills, resulting in motivated learners with a sound scientific understanding, who believe they are scientists and are proud of their achievements.