



The Intent, Implementation and Impact of our Science Curriculum

School Mission Statement



St Michael's RC Primary School is a Catholic family of faith, following the teaching of Christ. We strive to create an environment where all members of our school community become caring, independent and resilient individuals who fulfil their potential.

"I came so that you may have life, life in all its fullness" John 10:10

Science curriculum aim for St Michael's

At St Michael's every child should be happy, enthusiastic and engaged learners of Science. We want all children to be eager to achieve their very best in order to fulfil their talents and be curious in exploring the world around them. In our school, we believe that the recipe for success is high quality teaching in Science, curious learners, and a positive attitude which is central to our school values.

Intent

At St. Michael's our aim is for children to have rich experiences in Science formed through interesting and exciting lessons. Children should have the opportunities to explore concepts and develop their Science capitals through the school. We aim for children to develop their independence in Science through questions, developing hypothesis' (predictions), testing through investigations and explaining their results.

Children should work towards and meet the National Curriculum expectations in Science while developing a deep understanding of the subject. All children will study Science for 1.5 hours per week and have opportunities to experience learning beyond the classroom during their time at St Michael's. At St Michael's, we will strive for opportunities to enrich Science knowledge outside the classroom through outdoor learning, Science trips and links to our local universities.

We want children to become confident in using their prior knowledge to solve problems and develop the Knowledge of Science. In Science, children will develop the skills to appropriately use and select research and sources. Children will develop a real understanding and appreciation of Science in the real world with examples, speakers, news and links to the wider community.

Implementation

In EYFS and KS1 children should begin to develop their Science capital with hands on experiences in exploring concepts around them in line with National Curriculum expectations. These environments should actively encourage children to ask questions to develop their understandings with staff fostering their curiosity. As children move onto KS2 they should develop their Science capital further through meeting working scientifically objectives. We want children to be able to create, lead and test their own questions within a topic and understand their investigations through results, variables and making comparisons to previous theories. Resources and outdoor learning opportunities are actively encouraged throughout the school to allow children to apply their knowledge and explore.

Carefully thought through plans of learning in Science ensure consistency and progress of all learners with support from the Science lead where necessary. Topics should start with mind maps of previous knowledge and questions for children to explore across the topic. Mind maps should be updated regularly to ensure knowledge is retained and added too. Science should be taught separately but have cross-curricular links where possible to allow children to access an enriched curriculum.

Teachers should have a good understanding of Science and provide high quality teaching to respond to the needs of children. They should include assessments through questioning, tasks and short quizzes at the end of a topic based on the children's learning journey.

Impact

At St Michael's we want the impact on our children to be clear: progress in knowledge and skills, sustained learning and transferrable skills (practical and academic). We want children to be happy and be able to work with others in investigations to help develop social and teamwork skills which are transferrable skills in other areas of the school curriculum.

We want to help children develop resilience when dealing with challenges, have a range of strategies to overcome them and be able to reflect on improvements which is key in investigations. Children of all abilities and backgrounds should all achieve success in Science, reflected in their progress that reveals a clear learning journey. We would like to encourage children to talk enthusiastically about their learning in Science and are eager to further their learning in the next stages of their education both in school and at home.

We hope that as children move on from us to further their education and learning that their creativity, passion for Science and high aspirations, which we have nurtured here at St. Michael's, travels with them and continues to grow and develop as they do. We want to

inspire children who have a huge enjoyment for Science to follow a pathway towards a scientific career.

Science non-negotiables

- Mind map at the start of every topic.
- Children to ask questions about their topic and write down what they would like to investigate in each topic.
- Mind maps to be updated regularly through the learning journey.
- Make cross-curricular links where possible (particularly Maths with measurement).
- All NC expectations for each topic to be covered.
- Move away from separate LA, MA and HA tasks with all children striving to meet the same L.O. with HA/GD learners being challenged with reasoning, key vocabulary and supporting statements with theory and knowledge.
- The needs to SEN to be planned for and adapted to meet the needs to the learning objective.
- Lightbulb question for all lessons.
- Children should have the opportunity to carry out investigations in topics.
- Resources to be utilised as much as possible.
- Children should meet all working scientifically criteria in KS1/KS2 every year.
- Key vocabulary to be used throughout planning and lessons.
- Short quiz at the end of a topic to assess retained information.
- Target tracker to be updated termly on Science criteria.