



Join the faith and learning journey



St Antony's RC Primary School

Science Policy

Mission Statement

St. Antony's School is part of the Roman Catholic community of the Holy Family, where Jesus Christ is our inspiration as we raise standards and aspirations for all of our children.

INCLUSION STATEMENT

In this school, we are educating our children to:

- know who they are - a special and unique gift from God
- know why they are here - we all have a purpose and responsibility to look after God's world
- work hard and aim high for their future- find and use their God given talents to be what God intended them to be.

We are a Catholic community, in a modern society, where everyone is equal. The most loving and merciful Jesus Christ is our role model, and He welcomed everyone. All children are welcome in our school, and they and their families become part of our St. Antony's family. We will love and nurture them, and do our best to help them, on their faith and learning journeys, to become what God wants them to be.

Adopted by Governors: *Father Barry*

Date: *January 2024*

Review date: *January 2026*

POLICY INTENT

The intent of our curriculum is to nurture and develop our pupils' interest in the subject, whilst also supporting them to fulfil their potential and develop a deep knowledge and understanding of the scientific skills. We want our pupils to discover their passion for Science through hands on experiences so they become equipped to ask and answer scientific questions about the world around them and so that they develop a greater understanding of the concepts and knowledge of Science. Working with parents, we intend that our pupils leave St Antony's with a general sense of enquiry, which encourages them to question and make suggestions throughout their life. We intend for our pupils to deepen their respect of the natural world through investigative science outdoors to enable them to develop a sense of awe of the world we live in. We aim to nourish an understanding of the working of God's world and our responsibilities in looking after it, not just locally, but worldwide. We endeavour to prepare our pupils for life in an increasingly scientific and technological world and ready them for the next stage of their educational journey where they will feel passionate about making positive changes for the greater good.

By faith we understand that the universe was created by the word of God, so that what is seen was not made out of things that are visible. Hebrews 11:3

OUR 8 KEY PRINCIPLES OF SCIENCE

Science is 'Good' when...

1. We carry out experiments or investigations to understand Science better.
2. We can be curious about Science and ask scientific questions.
3. We can use practical resources to support us with our learning.
4. We find out about the world around us using a range of resources.
5. We complete Science lessons outdoors.
6. We have Science visitors in school.
7. Our parents are engaged in our Science learning.
8. We use scientific vocabulary to explain and share our findings and evidence.

AIMS

We follow the aims of the statutory Early Years Foundation Framework and the KS1 and KS2 National Curriculum. These aims form the basis upon which our distinctive curriculum is built.

The National Curriculum for Science aims to ensure that all pupils:

- 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

- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

IMPLEMENTATION OF THIS POLICY

SUBJECT LEADER ROLE

The subject leader for Science is Miss Suzanne Thomas.

The subject leaders are responsible for the day to day management of resources, keeping up to date in curriculum innovation, sharing good practice with staff and ensuring that planning for the subject is progressive and in line with national expectations.

Subject leaders are the 'expert' in school and can offer support to other staff including signposting where necessary.

Together with the Headteacher and Governors, they are involved in the monitoring, review and evaluation of their subject both as a standalone and as part of the wider curriculum.

RESOURCES USED

'PLAN Planning for Assessment' knowledge matrices are used to support staff with the planning and teaching of engaging and hands-on lessons. 'TAPs' plans are used to support staff in assessing children's work and understanding against the National Curriculum skills and expectations. Explorify is also used as starter activities to develop scientific discussion amongst children.

CURRICULUM PROGRESSION THROUGH THE STAGES

In Nursery and Reception, Science lessons are very hands on where children explore the natural world through practical activities.

In KS1, children are provided with a deeper understanding of Science and scientific vocabulary is extended. Whole-class lessons are taught both inside and outside of the classroom where practical skills are developed. Children are provided with opportunities to develop their investigative skills where they are able to ask and answer questions. In LKS2, children consolidate Scientific concepts they have previously learned. They are introduced to fair testing and use questioning to plan fair tests. They are given opportunities to carry out experiments and record their results in a number of ways. In UKS2, children apply their Scientific knowledge and understanding to all lessons and formulate and hypothesise from results gained. Children are given the opportunities to record data and results with increasing complexity and then utilise their results to plan further comparative and fair tests.

Working scientifically skills are taught progressively across Years 1 to Years 6.

PLANNING AND SEQUENCING LEARNING

Science lessons are taught weekly in every class. Working scientifically skills are at the heart of Science planning. Teaching staff ensure that working scientifically skills are being naturally developed throughout lessons to enable children to develop these skills as well

as new vocabulary and challenging concepts. All Science lessons are planned using the National Curriculum skills and 'PLAN Planning for Assessment' knowledge matrices relevant to each year group. Planning involves teachers creating engaging lessons, often involving high-quality resources, to aid understanding of conceptual knowledge. Lessons are sequenced to ensure progression of skills throughout the year and across key stages. Teachers use specific scientific questioning in class to formatively assess conceptual knowledge and skills and identify children who require extra support to plug any gaps in learning. Teachers find opportunities to develop children's understanding and passion of their surroundings by accessing outdoor learning and workshops throughout the year.

EQUALITY

All pupils at St Antony's will be protected against discrimination according to the protected characteristics of the Equality Act. We aim to serve our community as our pupils deserve the best learning experiences. All teaching staff express a positive attitude towards Science learning within and outside of the classroom and emphasise the expectation that all children are capable and can achieve their goals in this subject. With this in mind, lessons are planned and taught to support children with SEND where activities are differentiated and delivered to suit individual needs. Children who are not making expected progress in Science are monitored more closely and advice may be sought from the Science subject leader. They may then be involved in small Science intervention groups to support them in closing the gap.

Gender equality, race and religion are positively promoted throughout Science lessons across the school and different family groups are embraced. The resources used reflect different groups.

ENRICHMENT AND MASTERY

At St Antony's, we provide our pupils with opportunities to demonstrate mastery within Science in a variety of ways.

Science ambassadors play an important role in the development of Science across the school. These children meet often to discuss Science lessons, Science in the outdoor area, Science experiments, Science days and opportunities to develop Science further. They play an important role in delivering engaging workshops during 'British Science Week' and are trained and supported to carry out pupil questioning to identify strengths and areas for improvement within Science.

Children are provided with opportunities to visit the local high school, Our Lady's and St John's, to carry out Science days where they visit the labs and chemistry rooms.

EXPERIENCES THROUGH THE CURRICULUM

Texts shared in class are often Science linked allowing children to develop and utilise scientific vocabulary within other lessons. Science extends to the outdoor learning environment where children are provided with opportunities to; observe the world around them; identify mini-beasts within the school grounds; grow and nurture seeds into plants within the garden areas and carry out a variety of fun and engaging experiments. Although Science is taught as a separate subject, it is also taught in a cross curricular manner with many other subjects. For example;

Maths – recording data, classifying and sorting information, creating bar charts and tables, measuring.

English – Scientific vocabulary, Science based guided reading sessions, Scientific writing – explanation texts on circulatory system, healthy recipes and instructional writes, fantasy stories based on the digestive system.

Geography – learning about the world God has given us and about the human and physical features.

History – discussing how historical events have changed the world we live in today, discussing medicine over time and the realisation of cures and remedies.

PE – learning about the need to exercise to maintain a healthy body.

DT – cooking a range of healthy recipes, building bridges to investigate strength.

Music – learning about sound and vibrations, discussing pitch and how it is affected.

RE – developing a love and passion for the world God has created us – Laudato Si.

HOME SCHOOL LINKS

Topic homework is handed out to children at the beginning of each half term where a Science focus is given. Children are given the opportunities to complete a Science based activity with their family before presenting it to the rest of the class.

Parent workshops are planned and carried out throughout the school year, especially during British Science Week, where parents are invited to school to complete a Science workshop with their child/ren. A 'Super Scientist' homework task is given out every half term on DOJO for all children to access and participate in.

MEASURING THE IMPACT OF OUR POLICY

RECORD KEEPING AND ASSESSMENT

Class teachers are responsible for the day-to-day assessment of Science. Assessment of Science is formative using the Target Tracker steps and statements. Termly data on Science progress is analysed by the Science lead. Groups of children are monitored, e.g. gender, SEN and PPG. TAPs plans are used by teachers to support them in making teacher judgements.

MONITORING, REVIEW AND EVALUATION

Learning walks, lesson observation, pupil interviews and book scrutinies are carried out throughout the school year to review and evaluate Science and the progression of skills across the school.

STAFF DEVELOPMENT

Staff are regularly given CPD regarding Science. ECT's are supported by the Science lead where necessary and peer coaching provides a forum for discussion and development. SIG training and network meetings are consistent for the Science lead to develop and support all teaching staff across the school.

GOVERNORS INVOLVEMENT

Subject leaders prepare bids for the finance committee; these are linked to school priorities. Subject leaders are asked to present their work to governors. This may be

done in the form of a presentation to a committee or a professional dialogue with a link governor. Action plans are shared with Governors. There is a formal written report to governors annually. Link governors may come into school to watch lessons and take part in events or workshops. They may talk to pupils and look at written evidence.

CONCLUSION

We intend to provide children at St Antony's with engaging and motivating science lessons, both inside and outside of the classroom, which will enable them to nurture and develop their love for the subject and the world in which they live in. We aim to give St. Antony's children the best possible start to their school lives and beyond.

Reviewed by staff January 2024

This policy will be reviewed every two years.