

St Anne's R.C.
Nursery and Primary School
Science Policy 2022-23

“To help every person here to **achieve** his or her best in **work** and in **play**. To **celebrate** whatever is **good** and to **follow** in the footsteps of **Jesus** by supporting and forgiving each other, For the honour and glory of God.”



This policy outlines the guiding principles by which this school will implement Science in the National Curriculum (2014).

Curriculum Statement

Intent

The 2014 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 skills required to understand the uses and implications of science, today and for the future.

We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this.

At St Anne's, we endeavour to encourage all of our children to become inquisitive, independent learners throughout their time at our school and beyond. Our Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living.

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. 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 our school through enquiry-led teaching so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions about their surroundings.

Our curriculum is based on a 'Mastery' approach and so aims for deep secure learning for all.

"Mastery learning is a specific approach in which learning is broken down into discrete units and presented in logical order. Pupils are required to demonstrate mastery of the learning from each unit before being allowed to move on to the next with the assumption that all pupils will achieve this level of mastery if they are appropriately supported. Some may take longer and need more help, but all will get there in the end." **DfE 2014.**

Implementation

Teachers create a positive attitude to science learning within their classrooms and throughout school, continuously reinforcing the expectation that all pupils will achieve mastery level in science. Our whole school approach to the teaching and learning of science involves the following:

- In Foundation Stage, science is explored throughout the 'Understand our World' learning goal and is supplemented by enquiry-led activities from Snap Science. This enables our early years practitioners to deliver a stimulating and challenging programme of science activities that lay the foundations for the science teaching and learning opportunities that children meet in KS1 and 2.
- In KS1/2 Science is delivered weekly (one afternoon a week) in planned and arranged topic blocks following the Snap Science programme of study.
- Snap Science has been newly implemented at St Anne's as its principles mirror and match our school intent closely and it has been awarded a 'green tick review' from the ASE. This programme of study promotes progression leading to big ideas in science, develops understanding through working scientifically, actively involves children in their own learning and there is a prominence of assessment for learning strategies. These high aims are embedded in all of our lessons, for example, each has a clear enquiry focus and in support of AfL, learning objectives are exemplified by 'I can' success criteria to support the teachers and children.

Each module begins with some background science for the teacher and common misconceptions to look out for. ASE approved vocabulary targets are included in every lesson and each lesson is based around a question and starts with 'Explore Activities', designed to catch attention, place the science in context, stimulate children's questions and provide an opportunity for the teacher to find out what the children already know about the topic. The main enquiry challenge is described in 3 levels of differentiated challenge and provides opportunities for practical exploration, data collection and analysis.

Self and peer assessment is highlighted in the plenary sections of our lessons, reinforcing the principle of supporting the children to be active in their own learning. The sequences of lessons include core lessons which are needed to cover all the objectives from the new English Programme of Study, and enrichment lessons which provide extra breadth and depth.

By presenting science in this consistent manner across all key stages we are able to bring enquiry, context and children's questions to the forefront of science learning and we are confident that knowledge and skill development will be built on as the children progress through the key stages.

- Regular events, such as Science Week or project days, allow all pupils to come off timetable, to provide broader provision and the acquisition and application of knowledge and skills. We hope that in the future these events will grow to involve families and the wider community.

Impact

We believe that at St Anne's, our consistent, school-wide, progressive, enquiry-led approach to teaching science results in a fun, engaging, high-quality science education that provides our children not only with the foundations and knowledge for understanding the world they are growing up in but also captures their curiosity and drives their want to learn more. Opportunities for learning outside the classroom are encouraged throughout our science curriculum. In KS2, children explore the possibilities for careers in science. Looking at a range of different scientists from various backgrounds, all children feel they are scientists and capable of achieving. Children at St Anne's overwhelmingly enjoy science and this results in motivated learners with sound scientific understanding.

Equal opportunities:

A broad balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Please refer to our Equal Opportunities Policy and Teaching and Learning Policy.

Health and Safety:

Staff refer to the 'Be Safe: Health and Safety in School Science and Technology for Teachers of 3–12-year-olds – 4th Edition to ensure that all of our experiments are risk assessed appropriately.

Policy reviewed: November 2022