St Anne's Catholic Primary School

Science Policy

Mission Statement

At St. Anne's, together in faith, we passionately commit to:

Build a loving, vibrant community with Christ at the heart;

Celebrate the uniqueness of all and enable them to reach their potential:

Through our shared vision and values, nurture knowledge and skills for life-long learning and achievement;

Raising **self-esteem,** with **commitmen**t, **organisation** and **resilience**, we achieve **excellence** as together we…

"Learn to love, Love to learn in readiness for life."

Science Vision

The aim of Science education at St. Anne's is to encourage all children to explore, engage and experiment with the world around them. We give children with the knowledge and skills to discover the wonders of the natural world. Children hypothesise and through scientific enquiry and real life experiences, they make discoveries and apply knowledge to construct conclusions about the world, taking them beyond the experiences of their daily lives. Science raises children's aspirations and gives them an understanding of how to make healthy lifestyle choices for themselves and for the good of our environment. We aim to help all children to develop a love of learning in Science and equip them with the skills to become the scientists that improve our future.

Aims

Science at St. Anne's aims 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
- Ensure that children are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future
- Encourage the development of positive attitudes to science.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Provide our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

Our approach to science

The essential elements describing how science is taught in our school are described below.

- Planning is taken from Developing experts and knowledge organisers are adapted for the needs of our children,

- Teacher planning is adapted and differentiated for the needs of the children in their class and covers the objectives highlighted on the National Curriculum.
- The 5 types of working scientifically are embedded into our science curriculum and are present in each of our lessons. They types of scientific enquiry are:

- Observation
- Pattern seeking
- Fair test
- Research
- Classification

- We encourage children to ask and answer their own questions and make predictions.
- We use cross-curricular links within science, including writing, maths and computing.
- We enrich our science curriculum through school visits and whole school science events.
- We use ICT for enquiry work, including time-lapse images, data logging and photos for observational enquiry.

Curriculum

Early Years Foundation Stage

In early years children develop their Science skills through the "Knowledge and understanding of the world" strand. In EYFS Children begin to develop to develop scientific language and are introduced indirectly to enquiry skills through activities that encourage your child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them.

Key Stage One

In key stage one children cover the topic of plants, animals including humans, everyday materials and their uses, seasonal change and living things and their habitats. In key stage 1 pupils explore the natural and humanly-constructed world around them. They are encouraged ask questions begin to to develop their understanding of scientific ideas through scientific enquiry. Most of the learning is done through first-hand practical experiences and some secondary sources, such as books, photographs and videos. Pupils learn to read and spell new scientific vocabulary.

Key Stage Two

In Key Stage 2 children are enabled to develop a deeper understanding of a wide range of scientific ideas. They do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. Children are encouraged to select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

Assessment and Monitoring

- Teachers will assess whether children are working at/ above or below the expected standard for their age based on their understanding of the content of the National Curriculum 2014.
- Each piece of work is marked using the school's marking policy to provide children with feedback and support/extension.
- Children who are not succeeding, and children who demonstrate high ability in science, are identified and supported.
- The teaching staff assess children's level of attainment at the end of the each year programme of study. This teacher assessment is based on assessment records and work samples.
- Teachers use Target Tracker to follow children's progress and progression in science. The school science coordinator monitors progress through the school by sampling children's work as per the monitoring cycle and will assess data at the end of the year based on target tracker assessments from class teachers.
- Written reports to parents are made twice a year, interim and full, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of science.

Equal opportunities in science

Science is taught within the guidelines of the school's equal-opportunities policy.

- We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- We recognise the particular importance of first-hand experience for motivating all children, including those with learning difficulties.
- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

Health and Safety policy

See Science health and safety policy.

Review

This science policy will be reviewed by the science curriculum leader and the senior management team.