

St Joseph's Catholic Primary School

Inspiring everyone to **REACH** through Faith, Hope, Love

At St Joseph's, we strive for academic excellence through encouraging resilience, empathy, aspiration and challenge. We have high expectations for ALL so that we can be 'The best we can be.' With Faith, Hope and Love at the heart of our school family, our children feel safe, secure and supported.



Science Policy

Subject Leader:	Clare Howells
Link Governor:	TBA
Approved by FGB:	24th June 2020
Review Due:	23rd June 2023 (every 3 years)

Introduction

Science is a core subject within the National Curriculum. This policy outlines the purpose, nature and management of Science taught at Saint Joseph's Catholic Primary School. It reflects the consensus views of all the teaching staff, and they are responsible for its implementation.

This policy should be read in conjunction with the New Curriculum 2014 documentation which sets out in detail what pupils will be taught in different year groups as of September 2014.

Vision

Science at Saint Joseph's Primary School focuses on quality first-hand experiences with a broad, balanced and engaging curriculum. We foster children's natural curiosity through scientific enquiry and help them to make meaningful links across the curriculum. Our topic-based learning approach makes learning purposeful and children create, display and present the outcomes from their learning. As they move through the school, all children learn, develop and apply key science skills, knowledge, vocabulary and attitudes and they explicitly apply key Maths and English skills to support their science learning.

Aims and Objectives

A high-quality Science education provides foundations for understanding the world. Through building key knowledge and understanding of concepts, pupils should be encouraged to recognise the power of explanation and develop a sense of curiosity about natural phenomena.

We aim:

- to develop the natural curiosity of children about the world around them;
- to develop pupils' independent capability to plan, carry out and evaluate systematic and fair investigations;
- to develop questioning and enquiring minds through a range of enjoyable and interesting experiences;
- to provide opportunities for children to apply theoretical ideas to the solving of practical problems;
- to develop pupils' ability to make accurate and appropriate measurements;
- to provide a range of relevant experiences allowing pupils to acquire knowledge, skills and understanding in the key areas of Working Scientifically, Life Processes and Living Things, Materials and their Properties, and Physical Processes through a variety of teaching and learning strategies;
- to develop the accurate use of scientific vocabulary;
- to meet the needs of each child so that they will reach their full potential;
- to develop a sense of awe and wonder with Science.

How Science is structured through the school

To provide adequate time for developing scientific knowledge, skills, understanding and full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage, each teacher will provide weekly Science lessons. A flexible approach is used across the school when it comes to delivery; some units are delivered in a 'block' of learning whilst others are delivered as an integrated part of the topic for the term. These may vary in length based on the objectives being explored. Outdoor learning lessons form an integral part in regard to teaching the Science National Curriculum, whilst making it more practical. Throughout the year, all classes will have a minimum of four terms worth of access to our school's outdoor learning environment.

Teachers will base their sequential planning on the programmes of study for their relevant year groups and will identify the most appropriate teaching strategy to suit the purpose of each particular learning situation.

Our school aims to encourage learning through:

- re-visiting prior knowledge
- discussing and communicating, encouraging new and technical vocabulary
- asking simple questions and recognising that they can be answered in different ways
- investigation (both performing and observing), with an emphasis on first-hand experience
- research and discussion surrounding previous scientists and inventors
- evaluating and reflecting upon the progress of their learning
- whole class, group or individual learning
- practical, investigative tasks
- gathering information and recording in a range of ways, including scientific tables

Foundation Stage (Reception pupils)

Pupils explore Science topics through making predictions, using their senses and investigating materials and their properties. Science is taught through the strand of, 'Understanding the World'. Science teaching and learning is also linked to the other strands of the Earlier Years Foundation Stage (EYFS) framework for learning, 2014. Teachers and Teaching Assistants support pupils to develop a solid understanding of things occurring around them in their day-to-day lives. Children are encouraged to be creative and inquisitive as they participate in activities. Pupils are encouraged to make observations and use their natural inquisitiveness, while taking part in exploratory play in specific scientific areas as well as areas that link across the EYFS framework.

Key Stage One (Year One and Two)

During Key Stage One, pupils observe, explore and ask questions about Working Scientifically, Life Processes and Living Things, Materials and their Properties, and Physical Processes. They begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects, research using a variety of sources and carry out fair testing. Pupils use reference materials to find out more about scientific ideas. They share their ideas and communicate them using scientific language, drawings, charts and tables. They should also experience different types of scientific enquiries, including practical activities, and begin to recognise ways in which they might answer scientific questions. Science lessons in Key Stage One are either taught discretely or where possible connected to other curriculum areas. Pupils often use the outdoor areas in their Science learning.

Key Stage Two (Years Three – Six)

Children are encouraged to extend the scientific questions that they ask and answer about Working Scientifically, Life Processes and Living Things, Materials and their Properties, and Physical Processes. Pupils carry out a range of scientific enquiries including observations over time, decision making, pattern seeking, classifying, grouping and researching using other sources (including computing resources). By the time the children have reached Upper Key Stage Two, they should be able to select and plan the most appropriate type of scientific enquiry to use to answer scientific questions, also asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. Pupils in Key Stage two will also extend their scientific learning using the outdoor areas.

Assessment

It is the responsibility of the Class Teacher to maintain an overview of each child's progress in Science. This assessment may surround observations of the children, marking work and using questioning children to identify what they have understood. Children's progress is recorded on insight tracker. Recordings of significant progress or events can also be evidenced through work samples by the Class Teacher.

The Role of the Subject Leader

The Subject Leader should be responsible for improving the standards of teaching and learning in Science through:

- Monitoring and evaluating pupil progress;
- To work alongside colleagues offering support and advice where necessary;
- To identify areas of weakness within the subject and focus on improving this by providing support, training, etc.
- Taking the lead in policy development;
- Managing resources;
- Keeping up to dates with changes in the subject.

The subject leader is supported by the Science Governor.

Equal Opportunities

Saint Joseph's Catholic Primary School is committed to ensuring that every child should be given the opportunity to achieve their maximum potential, whatever their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. Science, alongside the RSHE curriculum, is a critical area for promoting equal opportunities and counteracting stereotypes. This will be achieved by ensuring that Scientific work is of an appropriate level and will be made available to children, without prejudice, whatever their age, ability, sex or ethnic origin.

Health and Safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. A school risks assessment has been carried out for all practical activities - any perceived hazards have been reported to the Head who will determine the appropriateness of the activities.

Resources

Resources specific to a year group are kept in the classroom and are the responsibility of the class teacher. Shared resources are kept in a Science cupboard. The Science Subject Leader carries out an annual audit of the resources and re-orders any consumables, after discussion with SLT, when necessary. New resources can be purchased through negotiation between Class Teacher and Subject Leader and SLT.

All staff members have a shared responsibility for collecting and returning necessary items to the correct place to ensure that resources are easy for all staff to access. Any breakages are to be reported to the subject leader.