



St. Joseph's Catholic Primary School Policy

Science Policy



Date: January 2023

Next Review: January 2024

Mission
<i>Together we love, learn, follow Jesus</i>
Vision
<i>At St Joseph's Catholic Primary School, through an open and generous heart, we learn together as a family in faith, following the gospel values of love.</i>
Values
<i>Hope Thankfulness Collaboration Compassion Friendship Resilience Empathy Creativity Justice Respect</i>

Our Curriculum Intent

At St. Joseph's, through the Science curriculum we aim to:

- Ensure that scientific enquiry is interwoven through our curriculum: observing over time, research, identifying and classifying, pattern seeking and fair testing to develop skills and ideas.
- Develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences and our children's prior knowledge.
- Encourage children to be curious about the things they observe, experience and explore, relating to the world around them.
- Ensure children use models to represent things that they cannot directly experience.
- Acquire and refine practical skills necessary to investigate ideas and questions safely.
- Ensure children make informed decisions based on evidence and their own experiences, and be able to apply scientific knowledge to new situations.



St. Joseph's Catholic Primary School Policy

Science Policy



Date: January 2023

Next Review: January 2024

- Ensure strong links to STEM are embedded in the teaching of science and children are applying their skills and knowledge.
- Ensure children develop effective ways of thinking, finding out about and communicating scientific ideas and information.
- Encourage children to think creatively about science and enjoy trying to make sense of phenomena.
- Ensure language skills develop through talking about their work and presenting their ideas using writing of different kinds.
- Develop their scientific vocabulary so that they can articulate scientific concepts clearly and precisely.
- Ensure children progressively use technical scientific and mathematical vocabulary and can draw diagrams and charts to communicate scientific ideas.
- Ensure children use a range of media including computing to extract scientific information.
- Explore values and attitudes through science by ensuring children can work with others, listening to their ideas and treating these with respect.
- Ensure children develop a respect for the environment and living things.
- Ensure children develop responsibility for their own health and safety and that of others when undertaking scientific activities.

Implementation

Science is a core subject of the National Curriculum. At St. Joseph's Catholic Primary School we teach science weekly in units of work which provide the foundations for understanding the world through the scientific disciplines of Biology, Chemistry and Physics.



St. Joseph's Catholic Primary School Policy



Science Policy

Date: January 2023

Next Review: January 2024

Teachers planning is supported by the Plan - Planning for Assessment documents which are in line with the National Curriculum.

The five areas of scientific enquiry are to be embedded in real life examples and investigations where possible and are identified within medium- and short-term plans for each unit. Each unit will be amended as required and the school's short-term planning structure will be used to indicate how lessons will be delivered. It has been agreed that all pupils should be involved in at least one child-led practical investigation activity each half term and that an ever-increasing level of independence should be the aim of our work in our teaching of Science. The application and development of mathematical and linguistic skills will inevitably be involved in the teaching and learning process.

There is an emphasis on ensuring that children are extended and challenged in their knowledge and when working scientifically. An example of this would be through questioning.

Children will be encouraged to present their work to a high standard making sure subject-specific vocabulary and year group spellings are correct.

EYFS

EYFS will follow and use The Early Learning Goals provided within the 'Curriculum Guidance for the Foundation Stage Document' to gain 'Understanding of the World'. In this area of learning children will develop the crucial knowledge, skills and understanding that help them to make sense of the world. Pupils in reception develop their knowledge, understanding and skills through play activities and direct teaching from which the pupils undertake planned tasks.

Pupils will be provided with:



St. Joseph's Catholic Primary School Policy



Science Policy

Date: January 2023

Next Review: January 2024

- Activities based on first hand experiences that encourage exploration, observation, problem solving, prediction, critical thinking, decision making and discussion.
- An environment with a wide range of activities indoors and outdoors that stimulate children's interest and curiosity.
- Opportunities that help children to become aware of, explore and question issues of differences.
- Adult support in helping children communicate and record orally, in pictures, short sentences and labels.

This forms the foundation for later work in Science.

KSI

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. Children will use tally charts and seasonal charts when working scientifically when observing over time or classifying. When planning experiments, the children will be exposed to the 'plan, do and review' approach. This continues into Key Stage 2 where scientific language, expectations, challenge, knowledge and skills are appropriate to the year group.

LKS2

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. Children will begin to use more graphs and bar charts when working scientifically.



St. Joseph's Catholic Primary School Policy



Science Policy

Date: January 2023

Next Review: January 2024

UKS2

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At this stage, children will be more confident and able to show more evidence in graphs and bar charts particularly when working scientifically such as when pattern seeking. Children should be able to say what line of scientific enquiry they are working on and plan experiments based on this.

All lessons have clear learning objectives which are shared and reviewed with the pupils effectively.

Safety

Being of a practical nature, it is important that safety is seen as an essential part of planning. It is important that all teachers are aware of the responsibility they have regarding health and safety both inside and outside the classroom. Teachers need to take account of both the children's and their own health and safety when involved in Science activities. Children should always be encouraged to consider safety for themselves, others, the environment and the resources they use, when undertaking scientific activities. Children are always shown how to use equipment safely, encouraged, where appropriate, to wash their hands and wear goggles where appropriate. Any investigations undertaken will be in line with our Health and Safety Policy.

Impact

The impact of our curriculum will result in our children to becoming reflective and inquisitive learners who are able to make



St. Joseph's Catholic Primary School Policy



Science Policy

Date: January 2023

Next Review: January 2024

links to learning across the whole of the curriculum and to everyday experiences.

- *Teachers' planning is consistent and shows a clear pathway of skills, knowledge and vocabulary.*
- *Evidence in children's Science books/learning journey shows a progression of knowledge and skills across year groups and assessment procedures verify this.*
- *Pupils show their enjoyment of science through pupil voice and understand how it helps them understand the world around them.*
- *Children are challenged and extended as they learn in both knowledge and scientific enquiry. As a result, they can apply their knowledge and skills confidently to everyday life.*
- *Children learn about the possibilities of careers in science.*
- *Children will become increasingly systematic and accurate in collecting, analysing and reporting evidence. They will increasingly build on scientific ideas in their predictions and explanations.*
- *Children will become confident in planning and leading scientific-based enquiries.*
- *Children will become confident in their own abilities and are able to work well with others.*