

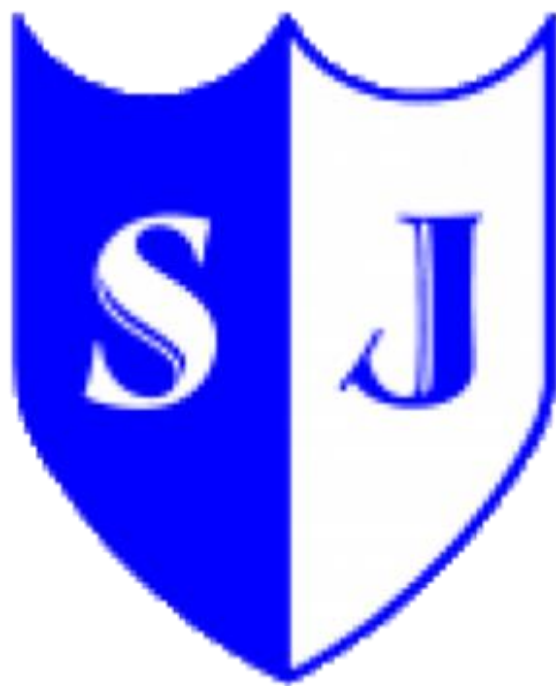
St Joseph's Catholic Primary School

Science Policy

Action Plan

Intent, Implementation, Impact

2020 - 2021



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Excellence

Intent

At St Joseph's Catholic Primary School, we recognise that a good understanding of scientific knowledge and conceptual understanding helps to support pupils work not only in science lessons, but also across the curriculum. We understand that all children deserve to have a high quality science education, through biology, physics and chemistry to provide their fundamental understandings of the world.

Our intent at St Joseph's Primary School is that all children are engaged and have a passion for science in school and in later life. All teachers at St Joseph's plan and engage with the children in high quality science lessons. They ensure that all children are exposed to good, quality teaching, a wide range of learning experiences, including trips, exploring their local and outdoor environment and participating in scientific enquiry and investigations. In each unit of work, children are expected to complete different scientific inquiries and experiments and also learn about famous scientists linked to their topic.

Through science, we aim to develop children's ideas further, getting the children to participate in experiments and apply different ways of thinking that enable them to question and make sense of the world we live in through theory, investigation, problem solving and application skills. All pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. We believe that science incorporates the acquisition of knowledge, skills and positive attitudes that children need. We ensure that the 'Working Scientifically' skills from the National Curriculum are developed throughout children's time at the school, so that they can apply their knowledge of science when using equipment or conducting experiments. Throughout the programmes of study, the children will develop the key learning that has been identified within each unit and build upon this across each year group, as well as the application of scientific skills. We intend to provide all children with a broad and balanced science curriculum throughout their years at St Joseph's Catholic school.

Implementation

To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. Teachers have been given progression documents and progressive vocabulary documents to aid planning. Teachers at St Joseph's create a positive attitude to science lessons in their classrooms and encourage all children to work hard and reinforce the expectation that all students can achieve high standards in science. Children are encouraged to enjoy their science lessons and ask questions and

develop their understanding further. More resources have been bought to enable the children to reach the full potential of their lessons and all units are planned with experiments for the children to investigate. To ensure and implement science across the whole school, our aims and approaches to the teaching and learning of science are:

- Science is to be taught at least one hour a week in each classroom
- In each science unit, there is chance for an experiment/ investigation and write up and a chance for the children to learn about a scientist linked to the subject being taught.
- Science lessons are planned with the subject leader and are planned from the 2014 National Curriculum. All lessons include an assessment question to begin the lesson and end with a scientific marking question to push the children's learning further. These will be well sequenced, will build on each lesson and will be taught with a systematic approach by the class teacher.
- Teachers will use the progression grids to ensure that learning is built on and as a tool to assess what the children already know and to recap previous learning.
- Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves through group work and class discussions.
- Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils are accessing the curriculum.
- We build upon the knowledge and skill development of previous years. Teachers will refer back to previous learning and start the science lesson by assessing what the children already know, as well as using KWL grids at the start of each new science unit. As the children's knowledge increases, they become increasingly confident in their growing ability in science lessons.
- Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum.
- Children participate in International Science Day and Science Week with a trip organised and a whole school focus based on this. These are purposeful and link with the knowledge being taught in class. Children produce work from this for a science portfolio.
- Regular events, such as Science Week or project days, such as International Science Day, allow all pupils to come off-timetable, to provide a broader curriculum and the application of knowledge and skills.

- Develop the use of scientific language through recording these in our magpie books, making links between scientific vocabulary and other subjects and exposing children to them at the start of the topic and having them visible on science boards.
- Encouraging children to participate in experiments and be able to write up their findings, understanding vocabulary through observing, predicting, experimenting, collaborating ideas, interpreting information and evaluating what they have found out.
- Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and linking trips with this. Teachers demonstrate how to use scientific equipment, use videos and other learning platforms to enhance science lessons.

Impact

By following this, the impact is that children at our school will have a thirst for knowledge when it comes to science, will revel in the lessons and will achieve well academically. The impact and measure of this is to ensure that not only do children achieve the appropriate age-related knowledge linked to the national curriculum, but also they will have skills which will aid them in everyday life and to create inquisitive, future scientists with a passion for learning.

The aim is that all children will have:

- A wider range of skills linked to scientific knowledge and understanding and also an increase in their inquisitive / scientific enquiry skills.
- A higher and richer vocabulary which is evident in their writing and will help them to articulate their understanding of taught concepts.
- From the exposure to a range of different scientists from various backgrounds, all children feel they are scientists and capable of achieving.
- Enjoy science and this results in motivated learners with sound scientific understanding.
- High aspirations in life, which will see them to further study and to look into science as a career.
- The understanding that science has changed our lives and that it is vital to the world's future prosperity.

2019 - 2020



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