

St Oswald's Catholic Primary School

CURRICULUM OVERVIEW



Science



'Living, Learning and Loving Together with Christ'

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Deputy Lead: Jen Gray



Overview

At St Oswald's, we strive to promote a love of learning Science and for children to understand and be curious about the Science within their everyday lives. We continuously demonstrate the importance of an investigative approach through regular 'hands on' experiences wherever possible.



Intent



It is our intention that by the end of each Key Stage, every child will have an understanding of a variety of scientific concepts and be able to confidently discuss them. We aim for all children to work scientifically during lessons and work collaboratively investigating different concepts and ideas.

At St Oswald's, we believe that a high-quality Science education will provide children with the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.

'The important thing is to never stop questioning.'

-Albert Einstein

We aim to ensure that all children:

- 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 knowledge required to understand the uses and implications of Science, today and for the future.



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Implementation

In order to allow children to reach their full potential, we cover the objectives set out in the Programmes of Study from the National Curriculum. We mix the content knowledge and investigation skills needed to solve scientific problems and make decisions and predictions based on what they have learned. Our lessons also allow the children to practise their Maths, English and Geography as well as developing their reasoning and problem solving skills. In Key Stage 1 and 2, content is delivered to each year group appropriately and every child is given the chance to answer questions posed verbally and when responding to feedback in marking from previous lessons, particularly in Key Stage 2.



In EYFS, children begin to develop an understanding of Science through the broad area 'Understanding the World'. Children explore and find out about the world around them and begin to ask questions about it. As children progress through the school, they are given a wide range of scientific experiences as they are introduced to more complex scientific ideas. Children learn to ask scientific questions and begin to appreciate the way Science is an integral part of our everyday modern life and will affect the present and the future on a personal, national and global level.

The curriculum develops scientific knowledge and conceptual understanding through a range of topics from the disciplines of biology, chemistry and physics. Children work scientifically and develop their understanding of scientific enquiry by establishing and evaluating explanations through experimental evidence and modelling. Children apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.



*'Science, my lad, is made up of mistakes
but they are mistakes which it is useful to make,
because they lead little by little to the truth.'*

-Jules Verne



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Implementation

To ensure children make the necessary progress and are challenged appropriately, teachers plan enjoyable, engaging and inspiring practical activities that mean the children are working hands-on; these lessons link Science concepts to everyday life so that the children can understand the world around them in a scientific way. The units covered within the subject are chosen to show on-going progress and understanding as they move through the school. Our lessons aim to develop a child's social skills by working in groups which encourages resilience, determination, perseverance, communication, collaboration, questioning and problem-solving.

Key Stage 1 coverage:

- The human body
- Animals
- Everyday materials
- Growing plants
- Healthy living
- Seasonal changes



Key Stage 2 coverage:

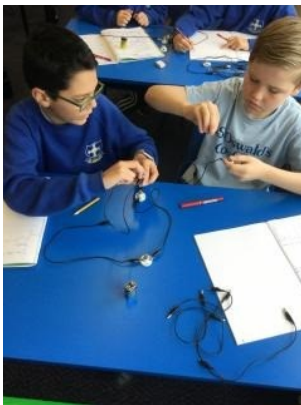
- Animals
- States of matter
- Light
- Properties and changing materials
- Rocks and soils
- Electricity
- Forces and magnets
- Living things and habitats
- Earth and space
- Evolution
- Sound



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Impact

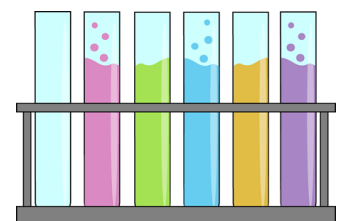
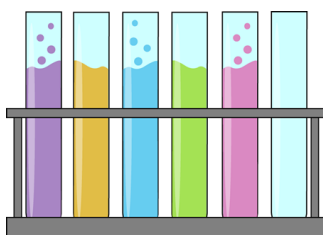


Through the consistent use of our subject and year group skill set plans and age related expectations documents, staff are able to assess children during lessons and at the end of a unit. At St Oswald's, we are always looking to provide the children with hands on investigations and encourage them to think and work scientifically so that they are able to make predictions; observe closely using simple equipment; answer questions and ask simple questions; record and gather data; and carry out a fair test.



'Science is simply the word we use to describe a method of organising our curiosity.'

-Tim Minchin



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