



St Thomas of Canterbury

Catholic Primary School



Science Subject Statement

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes

DfE – National Curriculum 2014

INTENT

- 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

At St Thomas of Canterbury Catholic Primary School, we recognise how science impacts every aspect of daily life, and without science humankind would not have made progress throughout history. As one of the core subjects taught at primary level, we give the teaching and learning of science the prominence it deserves

Learning science is concerned with increasing pupils' knowledge of our world, and with developing skills associated with science as a process of enquiry. Our science curriculum develops the natural curiosity of each child no matter their demographic, encourages them to have respect for living organisms, and instil in pupils the importance of caring for the natural environment.



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Using the requirements of the Science National Curriculum as our guide, our Science lessons offer opportunities for children to:

- Develop scientific knowledge and conceptual understanding of the disciplines of Physics, Chemistry and Biology.
- Formulate their own questions about the world.
- Foster the confidence to 'be wrong' when it comes to making predictions and postulating their own theories.
- Promote an awareness of the importance of teamwork in scientific experimentation.
- Practically investigate their questions using various methods of enquiry.
- Gain competence in the science skills of planning scientific investigations, gathering and analysing data and critical evaluation of investigations across the disciplines.
- Use a range of methods to gather data from investigations and secondary sources including I.C.T., drawings, diagrams, videos and photographs.
- Present data in a variety of methods including tables, bar charts, line graphs, pictograms and pie charts.
- Produce comprehensive science reports that demonstrate their proficiency in the scientific method.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

Our teachers are encouraged to continually improve their knowledge and practical competence by:

- Having access to CPD videos that cover every area of the National Curriculum.
- Inclusion of science themed staff meetings.
- Inspection of pupil work via scrutiny of book work and learning walks.

At St Thomas of Canterbury Catholic Primary School children have weekly lessons in Science throughout the school, using various programmes of study and resources. In Early years, science is taught through the children learning through play, child initiated themes and adult directed tasks.



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We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

IMPLEMENTATION

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children can achieve high standards in science. Teaching is set out thus:

- Science will be taught as set out by the year group requirements of the National Curriculum. This is a strategy to enable the accumulation of knowledge and allows progress in repeated topics through the years.
- In order to promote staff confidence in the teaching and learning of Science, we are using the PZAZ (Primary Science Advisory Service) schemes of work as the framework to our studies. Staff adapt, amend and embellish this resource to support the different needs of our children across the school.
- Engaging lessons are created with each unit having both practical and knowledge elements. Teachers use precise questioning in class to test conceptual knowledge and skills and children are regularly assessed to identify those children with gaps in learning.
- Working Scientifically skills should be explicit in lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.

IMPACT

The successful approach at St Thomas of Canterbury Catholic Primary results in a fun, engaging science education, that provides children with the foundations for understanding the world around us. Our engagement with the local environment ensures that children learn through varied and first-hand experiences. Where appropriate, learning takes place outdoors so pupils can investigate their immediate environment. Pupil voice will be used to further develop the Science curriculum, through questioning of pupil's views and attitudes to Science to support the children's enjoyment of science and to motivate learners.



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Our school ethos, alongside the Acorn Project encourages all children to experience challenge and success in Science by developing a growth mindset.

The impact of our strategies will be evaluated through monitoring by the subject leader and the head of school to include learning walks, book looks, pupil conferencing and data analysis.