

Science Curriculum

CURRENT CURRICULUM PROVISION

Curriculum vision and rationale	<p>At St Ignatius, we encourage children to be inquisitive throughout their time at the school and beyond. The Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions and be curious about their surroundings.</p>
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CURRICULUM DEVELOPMENT

Intent	<p>At St Ignatius', our intent is to:</p> <ul style="list-style-type: none">● 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 skills required to understand the uses and implications of science, today and for the future. <p>We understand that it is important for lessons to have a skills-based focus and believe that the knowledge can be taught through this approach.</p>
Implementation	<p>Successful teaching and learning in Science happen when teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following:</p>

CURRICULUM DEVELOPMENT

	<ul style="list-style-type: none"> ● Science is taught in planned and arranged topic blocks by the class teacher, to have a project-based approach wherever possible. This is a strategy to enable the achievement of a greater depth of knowledge. ● Through our planning, we involve problem solving opportunities that allow children to apply their knowledge and find out answers for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. 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 conceptual knowledge and skills and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up. ● We build upon the knowledge and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence. ● Working Scientifically skills are embedded into 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. This is developed through the years, in-keeping with the topics. ● 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. ● Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class. Examples would include Lancashire Science Festival, Manchester Museum of Science and Industry, links with local high schools for events. The Science clubs for both KS1 and KS2 are constantly oversubscribed. ● Regular events, such as British Science Week allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. These events involve families and the wider community.
Impact	<p>The successful approach at St Ignatius' results in a fun, engaging, high-quality science education, that provides children with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that children learn through varied and first-hand experiences of the world around them. Frequent, continuous, and progressive learning outside the</p>

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classroom is embedded throughout the science curriculum, particularly in EYFS. This approach will this year also be used in Y1. Children at St Ignatius' overwhelmingly enjoy science, and this results in motivated learners with increasingly sound scientific understanding. In the pupil interviews conducted by me last academic year, children expressed a genuine love of science and the only criticism was that we do not have a lab and the Science club is not open to everyone who wants to be on it all year round!