



Lovers' Lane Primary and Nursery School

Science Curriculum

Intent, Implementation, Impact Statement

Intent	Implementation	Impact
<p>At Lovers' Lane, it is our intention teach our children to think as scientists as well as to know and understand key concepts and remember key factual information.</p> <p>We want our children to be investigative and curious and to understand how they can test their ideas using scientific methods and approaches.</p> <p>At Lovers' Lane we aim to develop in our children a love of science and a deep understanding of the process of enquiry.</p> <p>We aim to develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.</p> <p>We aim to grow curiosity and enjoyment in science so that our</p>	<p>Our science curriculum is carefully planned and structured so that the Early Years Statutory Framework and National Curriculum Expectations guide the learning offer for our children at Lovers' Lane.</p> <p>A progression map is in place which gives clear expectation as to what will be taught in each year group from Early Years to Year 6. Half termly (Medium term) planning is in place for each year group to ensure that the expected progression in learning is delivered in a sequence which builds and revisits learning through the school. The science lead and senior leaders monitor and evaluate quality of education in science and ensure the curriculum is being delivered in a memorable way in line with expectations.</p> <p>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> <p>Early Years Foundation Stage</p> <ul style="list-style-type: none"> ▪ In the Foundation Stage, children are taught Science through the key areas of learning set out within the EYFS Statutory Framework. The area relating to science is 'The World'. ▪ Through a broad range of teacher-led, child-initiated and continuous learning opportunities, children will be taught to: ▪ Use their senses to investigate a range of objects and materials ▪ Find out about, identify and observe the different features of living things, objects and worldly events ▪ Look closely at similarities, differences, patterns and change ▪ Ask questions about why things happen and why things work 	<p>Children will enjoy science and scientific thinking, leading to high levels of motivation and interest in continued science education and potentially employment beyond the end of their primary education.</p> <p>Children will know and remember more from science learning lesson by lesson, term on term, year on year.</p> <p>Most children will achieve age-related expectations in Science at the end of their cohort year.</p> <p>Children will have a secure understanding of the discipline of science and will have a strong knowledge and understanding of all aspects of the national curriculum by the end of KS2.</p> <p>Children are able apply their learning in planning and conducting effective scientific investigation and a strong understanding of fair testing to test hypotheses.</p> <p>Children will articulate their knowledge and understanding in science with confidence.</p>

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<p>children have the foundations to build on in the future for further study, potential employment where they use scientific skills, knowledge and understanding and to live as informed citizens using science in daily situations to problem solve.</p> <p>To achieve this, our science offer is progressive and sequential, ensuring children the chance to learn, revisit and build on learning and develop deeper and more complex understanding as they move through on our school term by term and year by year.</p>	<ul style="list-style-type: none">▪ Develop their communication and co-operation skills▪ Talk about their findings, sometimes recording them▪ Identify and find out about features of the place they live and in the natural world around them <p><u>Key Stage 1 and 2</u></p> <p>In Key Stage 1 and 2, Science will be taught in planned and arranged topic blocks by the class teacher, these are, where appropriate linked to the Year group's overall Topic theme. This ensures that all topics are covered and enables progression through the year groups. Children have weekly Science lessons, with teachers following the scheme of work, but adapting lessons where necessary to suit the needs of their class.</p> <p>The following topics are covered throughout Key Stage 1:</p> <ul style="list-style-type: none">▪ Animals, including Humans▪ Everyday Materials▪ Plants▪ Seasonal Changes▪ Living Things & their Habitats <p>The following topics are covered throughout Key Stage 2:</p> <ul style="list-style-type: none">▪ Plants▪ Living Things & their Habitats▪ Animals, including Humans▪ Rocks▪ Light▪ Electricity▪ Sound▪ Properties and Changes of Materials▪ Earth & Space▪ Evolution & Inheritance▪ Forces & Magnets	<p>Children will be able to explain their choices, methods and findings using scientific knowledge, understanding and correct scientific vocabulary.</p>
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Existing knowledge is checked at the beginning of each unit of learning to inform next steps. In KS2 children use 'Knowledge organisers' to aid pre-learning and become familiar with the key vocabulary and concepts for that area of learning.

At the beginning of each lesson, teachers plan opportunities for pupils to recall prior learning. This enables pupils to consolidate their previous learning, while also preparing them for future learning in the sequence of lessons. This is particularly important for our EAL and SEND children, who may need more opportunities to retain and embed scientific vocabulary and concepts.

Through our planning, we involve problem-solving opportunities allowing children to apply their knowledge and find 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, using resources to aid understanding of conceptual knowledge. Teachers use questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning in need of additional support, adaptation or challenge. Tasks are selected and designed to provide appropriate challenge to all learners, in line with the school's commitment to inclusion.

Teachers teach and encourage the children to develop a growing scientific vocabulary. Time is spent during lessons introducing and reinforcing age-appropriate scientific vocabulary. Children are given opportunities to consolidate their use of scientific vocabulary as they move through the school. Children are encouraged to use scientific vocabulary, both written and verbal, to explain their ideas and make sense of their observations and findings.

Working Scientifically is a key element in developing knowledge and understanding for our children. Teachers plan lessons to ensure that skills are systematically 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 safely and in scientific enquiry. Planned opportunities are enriched through use of visitors, educational visits

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	<p>and through opportunities in our locality. Regular events, such as Science Week, allow pupils to relish longer projects and celebrate their knowledge, understanding and skills. These enrichment events often involve families and the wider community or working with pupils from other age groups.</p> <p>At the end of a unit of learning, teachers assess children's outcomes against expectations in the progression map.</p>	
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