



CURRICULUM STATEMENT FOR SCIENCE

AIMS

Under a considered Science Curriculum, built upon a clear progression of knowledge, understanding and scientific enquiry, we aim to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Are given regular opportunities to carry out practical investigations involving the six types of scientific enquiry, enabling them to develop a sound understanding of what they are investigating and why.

Scientific Enquiry Skills

1. Comparative/fair testing
 2. Research
 3. Observation over time
 4. Pattern seeking
 5. Identifying, grouping and classifying
 6. Problem solving
- Are taught the scientific vocabulary required to valuably and eloquently express their thoughts and ideas; enabling them to give reasoned and thoughtful explanations and respectfully challenge the ideas put forward by others.
 - Are taught to apply their scientific enquiry findings in order to answer questions about and make sense of the world around them.
 - Are equipped with the scientific knowledge required to understand the uses and implications of science - in their daily lives and within a wider world context - today and for the future.
 - Develop a Science Capital through regular opportunities to experience the Science and scientists that play a significant and often un-considered role in their daily lives.
 - Have their curiosity ignited and their thinking challenged through regular opportunities to 'think outside the box' – applying their scientific knowledge, understanding and vocabulary in order to justify 'What if...?' and 'Why...?'
 - Use and apply the skills and knowledge that they have developed in discrete Science lessons to further their understanding in other areas of the curriculum.

Our aims for Science are underpinned by our Christian Values: Service, Faith, Determination, Love, Honesty, Friendship, Thankfulness, Respect and Forgiveness.

The Science leader is Mrs Patterson.

Intent	At Lytham CE Primary School, we believe that teaching and learning in Science should excite and stimulate pupils' natural curiosity to enable them to make sense of the world in which they live. From Nursery through to Year 6, we encourage our pupils to ask questions and be led by their own individual interests. Through explicit teaching and modelling, pupils are supported in coming up with their
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	<p>own ways to answer scientific questions through an enquiry-based approach. The subject is taught discretely though, where appropriate, the teaching and learning of Science is valuably linked to other subjects in order to enhance the learning that takes place. This has the added value of challenging pupils to apply their scientific knowledge and understanding in a range of contexts.</p> <p>By the end of each phase, we expect pupils to have met the objectives set out by the Early Learning Goals (EYFS) or the National Curriculum (KS1 and KS2). We achieve this by ensuring that all scientific knowledge, understanding, vocabulary and enquiry is taught at an age-appropriate level. The subject leader works closely with teaching staff to ensure that children are given a range of teaching and learning opportunities to ensure that progress is being made and that school and national expectations are being met.</p>
Implementation	<p>The National Curriculum for Science aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • Develop scientific knowledge and conceptual understanding through a balance of practical activities and knowledge-based lessons. • Develop understanding of the nature, processes and methods of science different types of enquiries, helping them to answer scientific questions about the world around them. We use the six enquiry types from the Primary Science Teaching Trust: comparative/fair testing; research; observations over time; pattern seeking; identifying, grouping and classifying; problem solving. • Are prepared for life in an increasingly scientific and technological world, today and in the future. • Are equipped with scientific knowledge required to understand the uses and implication of science, today and for the future. • Are encouraged to be open-minded, to self-assess, to persevere and develop investigative skills including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating. • Have access to enrichment opportunities, including educational visits and visitors, Science clubs, and partaking in the national celebration of British Science Week – all contributing to the development of their Science Capital and with the aim of offering aspirational experiences. • Develop the use of computing in investigating and recording. • Make links between science and other subjects.
Impact	<ul style="list-style-type: none"> • Scientific vocabulary is confidently and appropriately used by all. • Pupils understand which element of scientific enquiry they are carrying out and its purpose. • All pupils feel valued in Science lessons and have the confidence to apply their knowledge and skills in order to deepen their own scientific understanding, as well as adding value to the learning of others. • Pupils are able to make links across a range of learning contexts and real-life situations.

	<ul style="list-style-type: none"> • Children to achieve well, produce a high standard of work and leave school ready for the next stage in their scientific education.
<p>Coverage and Progression</p>	<p>In the subject of Science, clear progression has been mapped-out by the Early Learning Goals (EYFS) and the National Curriculum (KS1 and KS2).</p> <p>In EYFS, coverage and progression in Science is linked to the following areas:</p> <ul style="list-style-type: none"> -Understanding the World (Natural World) -Personal, Social and Emotional Development (Managing Self) -Communication and Language (Listening, Attention and Understanding; Speaking) <p>In the National Curriculum, coverage and progression is broken down into clearly-defined Programmes of Study.</p> <p>At Lytham CE Primary School, we have clearly defined Progression of Knowledge and Understanding, which demonstrates coverage and progression across the school. Linked with this is a developing Progression of Enquiry Skills document, which is based upon our most up-to-date approach to teaching and modelling the Enquiry Skills set out by the Primary Science Teaching Trust.</p> <p>As we continue to develop our bespoke Science Curriculum, we ensure that coverage is tailored to our pupils' individual learning needs and interests, taking advantage of the many teaching and learning opportunities that our rich local environment has to offer.</p> <p>The subject leader keeps abreast of effective approaches to teaching and learning in Science through regular CPD and personal research. In consultation with the Senior Leadership Team, well-informed decisions are made and cascaded to staff through regular Inset.</p>
<p>Assessment</p>	<p>Pupils' attainment in Science is assessed continually, through teacher assessment and in-the-moment marking and feedback. Regular assessment opportunities are also provided through practical investigations. Teachers make use of PLAN Assessment to pre-empt possible misconceptions, design very specific intended learning outcomes and inform next-steps. PLAN Assessment is an effective, accredited tool for moderation, helping to ensure that teacher assessment is accurate.</p> <p>The subject leader undertakes regular book-looks and Pupil Voice interviews, as well as Science lesson drop-ins. The subject leader uses these observations to inform next-steps for the subject and to identify areas for support and guidance.</p> <p>Regular teacher assessment tracks progress against age-related expectations. Teachers use these assessments to inform next-steps in their Science planning.</p> <p>Statutory data for pupils' achievement is reported at the end of EYFS (EYFS Profile), KS1 and KS2.</p>