OUR LADY'S CATHOLIC PRIMARY SCHOOL

We ASPIRE that through the love of Jesus everyone should
"have life and have it to the full".
John 10:10

# Science at Our Lady's

'have life and have it to the full'

At Our Lady's Catholic Primary School, science is taught to inspire curiosity, awe and respect for God's creation. Rooted in our Catholic ethos, we encourage pupils to explore the natural world with care, responsibility and wonder. Our curriculum is fully aligned with the National Curriculum for Science and is designed to ensure that all pupils:

- develop secure knowledge in biology, chemistry and physics
- understand the processes and methods of science through enquiry
- recognise the relevance of science in the world today and their role as stewards of creation

We are ambitious for all pupils. We aim for pupils to know more, remember more and do more, building progressively on prior learning. As such, Science is taught as both:

- substantive knowledge (key scientific concepts)
- disciplinary knowledge (working scientifically and enquiry skills)

## Curriculum Design and Progression

The science curriculum is coherently sequenced to build knowledge over time using

- clearly mapped progression from EYFS to Year 6
- deliberate revisiting of key concepts to strengthen retention
- explicit links between prior and new learning

"Working scientifically" is embedded across all units, ensuring pupils develop enquiry skills alongside knowledge, in line with National Curriculum expectations.

## Enquiry and Practical Science

Science is taught through regular, purposeful practical enquiry. Pupils experience a full range of enquiry types:

- observing over time
- pattern seeking
- identifying, classifying and grouping
- comparative and fair testing
- research using secondary sources

Practical work is carefully planned to:

- deepen conceptual understanding
- address misconceptions
- develop independence and resilience

Hands-on science is prioritised to ensure high engagement and accessibility for all learners.

Teaching Approaches (EEF-Informed)

Teaching is underpinned by evidence-informed practice, including guidance from the Education Endowment Foundation:

- Explicit instruction of key concepts and vocabulary
- Retrieval practice to support long-term memory
- Scaffolding to support all learners, gradually removed over time
- High-quality questioning to probe and extend understanding
- Structured talk to develop reasoning and language

Misconceptions are identified and addressed through responsive teaching.

Subject-Specific Vocabulary

The explicit teaching of scientific vocabulary is central to our approach.

We ensure that:

- key vocabulary is identified, taught and revisited
- pupils are expected to use accurate terminology in speaking and writing
- vocabulary is supported through displays, modelling and discussion

This strengthens both conceptual understanding and communication.

Inclusion and Adaptive Teaching

We are committed to ensuring all pupils access a broad and ambitious science curriculum.

Adaptive teaching includes:

- use of visual supports, models and practical resources

- pre-teaching and reinforcement of vocabulary
- chunked instructions and structured support
- flexible grouping and targeted adult intervention

Practical science is a key driver of inclusion, enabling all pupils to access learning regardless of literacy level. As a result, expectations remain high for all learners, including those with SEND.

Assessment

Assessment is integral to teaching and learning:

- formative assessment through questioning, observation and discussion
- retrieval activities to check retention
- assessment of both knowledge and enquiry skills

Assessment information is used to:

- identify gaps and misconceptions
- inform future teaching in conjunction with the curriculum lead
- ensure progression across year groups

Outcomes

The impact of our science curriculum is evidenced through:

- pupils' ability to recall and apply scientific knowledge
- confident use of subject-specific vocabulary
- strong enquiry skills and understanding of scientific processes
- high levels of engagement and curiosity
- clear progression across year groups

By the end of Key Stage 2, pupils:

- achieve in line with or above national expectations
- are well-prepared for secondary science
- understand the importance of science in the wider world

- demonstrate respect and responsibility for God's creation

Monitoring and Evaluation

The quality of science education is monitored through:

- lesson observations and learning walks
- book scrutiny and pupil voice
- assessment analysis (Insight platform)
- curriculum review by subject leaders and senior leaders

Findings are used to drive continuous improvement and ongoing action plans are reflected upon and adapted, where necessary.