Ormskirk West End

Primary School

Science Policy

Approved: Autumn 2025 Next Review Date: Autumn 2028

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Rationale

At Ormskirk West End, we believe that science is a core subject which stimulates and excites pupils' curiosity about phenomena and events in the world around them. Science provides the foundations for understanding the world through opportunities to explore, observe, ask questions, test ideas and draw evidence-based conclusions. We are committed to delivering a high-quality science education that inspires and equips pupils with the scientific knowledge, conceptual understanding and enquiry skills necessary for the next stage of their education and for life.

Aims

Our science curriculum aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics;
- acquire and develop scientific skills of enquiry, observation, prediction, testing, recording and evaluation;
- use scientific vocabulary to explain their thinking, present findings and reason scientifically;
- apply English and mathematics skills within a scientific context;
- develop positive attitudes to science, including curiosity, creativity and resilience;
- understand the importance of science in everyday life and possible careers in STEM.

Curriculum and Progression

Curriculum Design

Our science curriculum is based on the National Curriculum (England) and is carefully planned to ensure breadth and balance across key stages. Units are sequenced to build on prior knowledge and to secure progression in knowledge and skills. Lessons combine substantive scientific knowledge with enquiry approaches and practical experiences.

Key Stage Outcomes

We ensure that planning and assessment reflect the expectations in the National Curriculum for Key Stage 1 and Key Stage 2. Teachers use long-, medium- and short-term plans to map coverage of:

- Working scientifically (planning and carrying out investigations, asking questions, making observations, measuring and recording, interpreting results, using evidence to support conclusions);
- Biology (plants, animals, habitats, human biology);
- Chemistry (materials and their properties, changes of state, simple chemical reactions where age-appropriate);
- Physics (forces, magnetism, light, sound, electricity, Earth and space).

Progression grids are used to ensure skills and vocabulary develop steadily from Early Years Foundation Stage (EYFS) through to Year 6.

EYFS

In EYFS, science objectives are delivered through the Understanding the World strand. Practitioners provide first-hand experiences, supported play and opportunities for exploration, talk and vocabulary development.

Teaching and Learning

We teach science through a mixture of whole-class teaching, practical investigations, group work and focused teacher-led activities. Lessons are planned to be inclusive and adapted so all pupils can access the curriculum. High-quality questioning, modelling of scientific thinking, use of scientific apparatus and targeted feedback are core elements. Teachers regularly plan practical, enquiry-based tasks that enable pupils to:

- observe, measure, test and record;
- use scientific equipment safely and appropriately;
- collect and present data using tables, charts and labelled diagrams;
- draw conclusions supported by evidence and consider improvements or further questions.

Assessment and Record Keeping

Formative assessment is used continuously to adapt teaching and provide feedback. Teachers record pupil progress against objectives in medium-term plans or assessment trackers. Summative assessment occurs at the end of units to support teacher judgements about whether pupils are working towards, at, or beyond expected levels for their year group.

Assessment methods include:

- pupil practical outcomes and investigation write-ups;
- quizzes and low-stakes retrieval practice;
- annotated work in science books;
- teacher observations and discussion;
- end-of-unit assessments or tasks.

Assessment information is used to identify misconceptions, plan next steps and report to parents.

Inclusion, SEND & EAL

Science learning is planned to be accessible to all learners. Teachers apply high-quality differentiation by outcome and scaffold tasks with:

- adapted resources, prompts and sentence stems;
- practical support and adult guidance;
- use of visual aids, symbols and concrete materials;
- alternative recording methods (photographs, labelled diagrams, oral recordings);
- opportunities for accelerated learners to deepen their reasoning and design more complex investigations.

Where appropriate, individual education plans (IEPs) and provision maps identify how science is tailored to meet pupils' specific needs.

Health and Safety

Practical work is central to effective science teaching. Staff must ensure that:

- all activities are safe, well planned and risk-assessed where necessary;
- CLEAPSS guidance (or local equivalent) and DfE guidance are followed for potentially hazardous activities;
- appropriate Personal Protective Equipment (PPE) is used and provided (e.g. safety goggles/aprons);
- equipment is checked before use and faulty items reported;
- storage of chemicals, living materials and apparatus follows school procedures;
- pupils are taught safety rules, including safe handling of equipment and living things.

Teachers complete a brief, written risk assessment for any activity outside routine, classroom-based investigations (e.g. pond dipping, use of open flames, heat sources). In off-site contexts, staff follow Ormskirk West End's Educational Visits policy and obtain the necessary permissions.

Resources and Environment

Ormskirk West End maintains a central science resource area with equipment for investigations, consumables and reference materials. Classrooms are equipped with basic apparatus (meter rules, thermometers, magnets, batteries, bulbs, simple circuits, magnifiers). Resources are audited annually by the Science Subject Lead and budgeted for through Ormskirk West End's finance plan.

The learning environment is used to promote science: displays of working walls, vocabulary, enquiry prompts, pupil outcomes and question boards encourage scientific thinking.

Outdoor Learning and Community Links

Pupils are encouraged to learn science outdoors — using Ormskirk West End's grounds, our beautiful woodland Forest School, local parks, nature reserves and community resources to study habitats, plants, seasonal change and fieldwork skills. Ormskirk West End seeks to collaborate with local secondary schools, universities, businesses and STEM organisations to enhance provision and motivate pupils through real-world contexts.

Supporting Literacy and Numeracy in Science

Science lessons provide meaningful contexts for developing reading, writing, speaking and mathematics. Teachers embed subject-specific vocabulary, modelling of scientific writing (reports, conclusions) and opportunities for data handling: measuring, recording, drawing graphs and interpreting results.

Science Subject Leadership

The Science Subject Lead (Mrs Sarah Currie) is responsible for:

- leading the development and review of the science curriculum;
- monitoring teaching and learning through lesson visits, book looks and pupil voice;
- maintaining the resource inventory;
- auditing staff training needs and organising CPD;
- supporting staff with planning and assessment;
- reporting to the Senior Leadership Team (SLT) and governors on standards and developments.

The Subject Lead is allocated time for leadership activities and attends relevant training and networks to keep practice current.

Continuing Professional Development (CPD)

Staff are supported to access CPD relevant to primary science pedagogy, assessment, practical skills and safety. CPD is delivered through staff meetings, external courses, peer observations and shared planning.

Partnership with the Ogden Trust

Our school is proud to lead a partnership of 21 other schools across West Lancashire as part of the Ogden Trust Physics initiative. Through this role, we promote collaboration, innovation, and high-quality science education within our local community.

By coordinating the partnership, we:

- Support the teaching and learning of physics and wider science across all partner schools.
- Facilitate shared professional development opportunities for teachers, including training, workshops, and joint projects.
- Provide access to resources and enrichment activities that inspire curiosity and a love of science among children from an early age.
- Strengthen links between schools, higher education, and the wider community to raise the profile of science.
- Ensure that children in West Lancashire, regardless of background, have equitable opportunities to engage with science and to see themselves as future scientists.

This leadership role reflects our commitment to ensuring that science learning is engaging, inclusive, and aspirational. It enhances our own provision while contributing to a broader culture of scientific enquiry and excellence across the region.

Monitoring, Evaluation and Review

The quality of science provision is monitored through:

- analysis of assessment data;

- learning walks and lesson observations;
- scrutiny of science books and pupils' practical records;
- pupil voice and questionnaires;
- resource audits.

Outcomes of monitoring inform Ormskirk West End's development plan and subject action plan. This policy will be reviewed at least every two years or sooner if statutory guidance changes.

Parental Engagement

We encourage parents to support their children's scientific learning by:

- sharing and discussing scientific discoveries and media;
- supporting home learning projects and practical tasks;
- attending school science events, exhibitions and open afternoons.

Reports and parent consultations include information on pupil progress in science and how parents can support learning at home.