

# Ouston Primary School

## Science Policy



Review Date: April 2026

Next Review date: April 2027

**Intent**

At Ouston Primary School, we believe that the learning of science promotes a wide range of fundamental educational, social and emotional skills. We value children's innate curiosity and wonder about the world around them and recognise that this is crucial in developing their knowledge, understanding and long-term interests.

We are committed to providing a high-quality, ambitious and inclusive science curriculum that inspires and motivates all pupils. We want our children to become confident and creative learners who are not afraid to challenge ideas, ask questions and think critically about the concepts they learn. We aim to equip pupils with a progressively developing scientific vocabulary so they are able to communicate processes, explanations and conclusions accurately and confidently, using subject-specific language.

Science at Ouston Primary School provides meaningful opportunities to reinforce and apply skills from across the curriculum, particularly in mathematics, English and computing, supporting pupils to see science as relevant and connected to everyday life.

In line with the National Curriculum, our science curriculum aims to ensure that all pupils:

- 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 scientific enquiry that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

## **Implementation**

Teaching staff at Ouston Primary School foster a positive attitude towards science, modelling curiosity, enthusiasm and resilience. High expectations are set for all pupils, and teachers ensure that children understand that they are capable of success in science regardless of starting point.

Our whole-school approach to science includes:

- A carefully planned EYFS curriculum with hands-on learning indoors and outdoors—investigating materials, observing living things, exploring cause and effect, and asking questions about how things work. Through Understanding the World our children begin building the foundations of science, exploring the natural world, noticing patterns, talking about what they see, and learning new scientific words. Staff support children to develop curiosity, confidence and early enquiry skills through high-quality interactions.
- Teaching the programmes of study for Key Stages 1 and 2 as outlined in the National Curriculum. Teachers follow the school's progression maps to ensure coverage, coherence and progression in both substantive knowledge and disciplinary skills. Science is taught weekly, with most enquiries taught over a half-term.
- During the final term of the academic year, staff work collaboratively to plan and deliver a Science Week aligned with the national Science Week theme. This week provides opportunities for high-quality, engaging and thought-provoking learning experiences that promote curiosity, enquiry and the development of scientific thinking skills across the school.
- The delivery of high-quality, engaging lessons that use a range of teaching strategies, practical opportunities and appropriate resources to promote deep understanding.
- A strong focus on working scientifically, where children learn to:
  - ask questions

- plan and conduct investigations
- make observations and measurements
- record data
- draw conclusions based on evidence
- Building progressively on prior learning, ensuring new knowledge and skills are explicitly linked to what pupils have previously learned. Teachers use:
  - recap questions
  - retrieval activities
  - discussion prompts
  - revisiting prior vocabulary and concepts at the start of each lesson and across a unit to support retention and deepen understanding.
- Children in KS1 and KS2 use the school's science investigation proforma, which provides a consistent structure for planning, carrying out and evaluating investigations. Working scientifically processes are displayed in classrooms to support independence.
- Opportunities for child-led and enquiry-based learning, enabling pupils to explore their own questions and lines of investigation safely and purposefully.

### **Adaptive Teaching**

Science teaching at Ouston Primary School is adaptive rather than differentiated by outcome, ensuring that all pupils access the same ambitious curriculum while receiving appropriate support or challenge.

Teachers adapt learning by:

- careful scaffolding of knowledge and vocabulary
- pre-teaching key concepts where necessary
- using models, visuals and practical demonstrations
- adjusting questioning to probe deeper thinking or support understanding
- providing targeted adult support or resources during lessons
- extending learning through deeper enquiry, reasoning and application tasks rather than acceleration

This approach ensures barriers to learning are reduced while maintaining high ambition for all pupils.

### **Assessment**

Assessment in science is purposeful and supports teaching and learning.

- Formative assessment takes place regularly through questioning, discussion, observation of practical work and review of pupils' responses. Misconceptions are identified and addressed promptly.
- Each pupil has an objective grid at the start of each science topic. Teachers assess pupils' understanding against the objectives throughout the unit.
- At the end of each topic, judgements are made against the objectives and recorded using the school's colour-coded system to indicate levels of understanding.
- Summative assessment judgments are made annually based on pupils' attainment and progress across the year.
- End-of-year attainment in science is reported to parents as part of the annual report.

Assessment information is used to inform future planning, support pupils who have gaps in understanding and ensure progression.

## **Impact**

As a result of our science curriculum, pupils at Ouston Primary School:

- build secure foundations in scientific knowledge and skills
- confidently use subject-specific vocabulary to hypothesise, explain and draw conclusions
- show curiosity, resilience and determination when investigating scientific questions
- understand that science is relevant to their lives and the wider world

Our Forest School ethos enables learning to take place outdoors, allowing pupils to experience science in real-life contexts. Enrichment opportunities such as visits, external experts, STEM projects and our annual Science Week enhance engagement and cultural capital. Pupils recognise that science is continually developing and plays a significant role in the future of society.

## **Equal Opportunities**

All pupils, regardless of ability, ethnicity, gender, sexual orientation, disability, age or social circumstances, have equal access to the science curriculum. Activities are carefully planned to meet a range of needs and comply with pupils' support plans where appropriate.

## **Inclusion**

We recognise that pupils have diverse scientific starting points and learning needs. Inclusion is achieved through:

- open-ended tasks with multiple entry points
- tasks of increasing challenge
- a range of appropriately matched resources
- effective deployment of teaching assistants
- flexible grouping, including mixed-ability work to promote collaboration and peer support

## **Resources**

- Science resources are centrally stored, organised and maintained to ensure they are accessible and fit for purpose.
- Teachers are responsible for requesting resources needed to support planned learning.
- Outdoor areas and Forest School are used where appropriate to enhance practical and experiential learning.
- Digital technology and online resources are used to support research, data handling and presentation skills.

## **Health and Safety**

Health and safety are integral to science teaching and learning.

- Risk assessments are carried out for all practical activities where appropriate.
- Teachers follow school policies and CLEAPSS guidance when planning and delivering practical work.
- Pupils are taught to use equipment safely and responsibly.
- Safety rules and procedures are reinforced regularly to ensure a safe learning environment.

## **Role of the Subject Leader**

The Science Subject Leader is responsible for:

- providing strategic leadership and direction for science
- monitoring the quality of teaching and learning
- supporting and advising colleagues
- keeping informed of current developments in science education
- managing the science budget and resources
- organising enrichment opportunities and Science Week
- facilitating staff training and professional development

Allocated leadership time is used for monitoring, planning and curriculum development.

## **Monitoring and Review**

The science curriculum is monitored to ensure it is ambitious, coherently planned and effectively implemented, in line with Ofsted's expectations.

Monitoring activities include:

- scrutiny of planning and pupils' work
- learning walks and lesson observations
- pupil voice to understand pupils' experiences and knowledge retention
- analysis of assessment information
- discussions with staff about curriculum intent, implementation and impact

Findings are used to:

- evaluate the effectiveness of the curriculum
- identify strengths and areas for development
- inform action planning and subject development
- ensure continuous improvement and high standards

This policy is reviewed regularly by the Science Subject Leader and senior leaders to ensure it remains current and effective.

## **STEM (Science, Technology, Engineering and Mathematics)**

At Ouston Primary School, STEM learning is embedded within our Science curriculum and across the wider curriculum to ensure pupils can apply knowledge and skills in meaningful, real-world contexts. STEM is not taught as a separate subject; instead, it strengthens pupils' understanding through purposeful cross-curricular links and problem-solving opportunities.

STEM learning supports pupils to:

- apply scientific knowledge to practical and real-life problems
- develop computational thinking, reasoning and design skills
- work collaboratively, think critically and show resilience

## **Cross-Curricular Links**

STEM is embedded through intentional links with:

- Science – investigative and enquiry-based learning, working scientifically, asking questions, testing hypotheses and evaluating evidence
- Mathematics – measuring, recording and interpreting data, using graphs, tables and scales, and applying number and reasoning skills (see *Mathematics Policy*)

- Design and Technology – designing, making, testing and evaluating products, understanding materials and structures, and solving design problems (see *DT Policy*)
- Computing – data handling, digital research, simulations, programming and technology to support scientific understanding (see *Computing Policy*)

### **Enrichment and Application**

STEM learning is enhanced through:

- Forest School experiences and outdoor investigations
- STEM projects and themed weeks (e.g. Science Week and Enterprise week)
- Visits, visitors and links with local secondary schools and external providers

Through this embedded approach, STEM learning strengthens curriculum coherence, increases engagement and helps pupils understand how science and related disciplines shape the world around them and their future opportunities.