

CORSHAM PRIMARY SCHOOL

Science Policy



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Policy Ratified by the LGC: July 2024

Next Review Date: May 2027

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Science Policy



At Corsham Primary our intent is to give all children a strong understanding of the world around them, whilst acquiring specific skills and knowledge to help them think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and implications of science - today and for the future.

We believe that science is central to many aspects of life and that all pupils should be encouraged to look at the world as scientists in order to provide them with the opportunity to explore scientific and STEM (Science, Technology, Engineering and Mathematics) opportunities in their future.

AIMS

The aims of teaching Science at Corsham Primary School are:

- To deliver activities that meet the requirements of the science curriculum in a way which is appropriate to the needs and interests of all pupils and which will challenge them to fulfil their potential.
- To provide appropriate, engaging and stimulating scientific and practical experiences, which encourage all pupils to work scientifically.
- To develop all pupils' scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- To develop understanding of the nature, processes and methods of science through different types of science enquiries that support pupils to answer scientific questions about the world around them.
- To ensure all pupils are equipped with the scientific knowledge to understand the uses and implications of science, today and for the future.

- To enrich all pupils' scientific vocabulary to allow them to use technical terminology accurately to rationally discuss, reason and explain scientific concepts precisely.
- To enable all pupils to apply their mathematical knowledge when collecting, presenting and analysing data in order to answer questions about the natural world.
- To use scientific contexts to develop and consolidate the basic cross-curricular skills of English, Maths and Computing, enabling them to see exploration as a lifelong process.

MEETING THE AIMS

We will:

- Provide a safe environment in which all pupils can explore scientific principles and the natural world.
- Provide a positive and encouraging environment in which effective learning for all pupils can take place.
- Ensure continuity and progression in science learning by facilitating the Science National Curriculum (2014) through the Curious-city enquiry-based learning approach, provided by Lighting up Learning.
- Provide necessary, good quality resources to enable all pupils to work scientifically and be taught effectively.
- Challenge gender stereotypes with regard to females and Science and equip them with the STEM skills to be inquisitive and problem-solving learners.
- Progressively develop pupils' ability to plan, carry out and evaluate simple scientific investigations and to understand the meaning of a 'fair test'.
- Develop pupils' basic practical skills and their ability to make accurate and appropriate measurements.
- Give pupils opportunities, within practical activities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skills in being able to read them.

LEARNING AND TEACHING

At Corsham Primary we believe that pupils learn most effectively through practical and meaningful experiences and we therefore teach this core subject through a series of enquiries, which incorporate all of the key objectives from the Science National Curriculum (2014), providing many opportunities for creative, curious and 'hands on' learning.

Pupils are taught a balance of scientific knowledge and essential skills as we encourage them to work scientifically throughout all of their science-based enquiry learning. This means that all pupils learn to use a variety of approaches to answer relevant scientific questions. Through working scientifically, all pupils are encouraged to: make observations over time; seek patterns; identify, classify and group; make

predictions, carry out comparative and fair tests (controlled investigations); and research using secondary sources.

Activities reflect the importance of spoken language in pupils' development. We aim to help pupils describe their learning in a common language, whilst helping them to become familiar with, and use, technical scientific terminology accurately and precisely with the aim of helping them to communicate their ideas to others clearly and confidently.

Furthermore, we aim to embed cross-curricular opportunities within our science curriculum. Through writing explanations, reports and instructions, pupils are building on the skills taught as part of the English curriculum. They are also encouraged to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. For example, they may present data in a variety of graphs and use their mathematical knowledge to make comparisons or find averages. Making these cross-curricular links allow pupils to contextualise their learning.

Whilst it is important that all pupils make progress in their understanding of working scientifically, it is also vitally important that they develop a secure understanding of each knowledge area mapped out within the Science National Curriculum. Through our Curious-city enquiry-based curriculum, we aim to ensure that all pupils develop key skills and have a solid understanding of the subject areas. Progression through the year group enquiries allows all pupils to build on skills and knowledge they have learned previously, allowing them to successfully deepen their understanding of the world around them as they move through Corsham Primary School. We aim for these life-long learning habits to potentially inspire our pupils to go on and become the scientists of the future!

CURRICULUM

In the Foundation Stage, scientific principles are taught through the 'Understanding the World' elements of the Early Years Foundation Stage Statutory Framework. These areas are taught through curriculum enquiries, where pupils begin to understand what it means to be a scientist.

Enquiry based learning continues through Key Stage 1 and 2, where science objectives are taught through answering a range of enquiry questions that use local links where relevant. These enquiries are year group specific, incorporating the key objectives from the Science National Curriculum (2014) for that year group, and are taught once on a yearly basis. This forms our long-term planning. The enquiries allow for natural progression through the year groups, building on scientific skills and knowledge learned previously. Key events in the scientific calendar are also incorporated when possible, including annual science weeks where STEM careers are celebrated. The curriculum is contextually relevant and it provides a framework for our children to be curious, ask questions and find solutions.

The planning for each enquiry is detailed within medium term Curious-city maps. Individual lessons are then planned into the Corsham Primary School enquiry planning format, where the Scientist State of Being is clearly indicated alongside the stage of the enquiry and key 'Know of' and 'Know how' objectives. Each enquiry starts with a question, children are then immersed in the learning and practice skills and develop their knowledge, before ending with a challenge and using their understanding to answer the enquiry question.

ASSESSMENT

The transfer of Science records and information between schools and class teachers is necessary to ensure continuity and progression through a child's school career.

Daily Assessments

- Teachers carry out on-going assessments referring to objectives taken from the Science National Curriculum (2014) and outlined within enquiry planning. These are also identified and accessible on 'Insights Tracking'. This information is then used to inform planning for future lessons.
- Marking learning and providing feedback to pupils.
- Pupils self-evaluate their learning at the end of every lesson, using the outlined 'Steps to Success'

Termly Assessments

- All learners' performance is tracked through enquiry evaluations and the Scientist Leads are responsible for tracking progress and identifying any groups/pupils who are vulnerable to under achieving and in turn, providing support the class teachers with interventions as appropriate.

Yearly Assessments

- EYFS Early Learning Goals- Understanding The World- The Natural World
- Year 6 SATS (Teacher Assessment)
- All other year groups complete Insight School Assessments to identify pupils' attainment at WTS, EXS or GDS.

HEALTH AND SAFETY

This policy should be read in conjunction with the school's policy on Health and Safety and Pickwick Academy Trust's Health and Safety Risk Assessment for the Teaching of Science.

SUCCESS CRITERIA

- Teachers' planning is in line with the Curriculum Framework; objectives are outlined within enquiry planning.

- Planning highlights the specific scientific skills to be taught as well as the knowledge (Scientist Leads to check these skills are being emphasised through learning walks and book monitoring).
- All pupils are given opportunities to carry out investigations.
- Pupils' learning shows a range of responses and investigative skills, recorded in a range of ways – drawings, tables, charts, words (Scientist Leads to monitor pupil's books).
- Teachers use 'Insight Tracking' to assess, track and record pupil progress.
- Pupil achievement in Science is at least in line with National Average (evidence from EYFS Early Learning Goals and SATs at Key Stage 2).

EQUAL OPPORTUNITIES

At Corsham Primary School we are committed to equal opportunities for all. We will ensure equal access to the Science curriculum and its associated practical activities by ensuring all pupils- irrespective of their learning ability, physical ability, gender, race and social or cultural background- have access to the whole curriculum and make the greatest possible progress. For further information please refer to the school Equal Opportunities policy.

Gender and cultural differences will be reflected positively in the teaching materials used. This will include learning about famous scientists who represent the different protected characteristics. In addition to this, enrichment activities and visitors who represent different occupations in the science field will support pupils in developing high aspirations for themselves, thus preparing them for their next stage in education.

When writing and reviewing this policy staff have completed an Equality and Diversity Impact Assessment in order to ensure it complies with equality obligations outlined in anti-discrimination legislation. We believe the policy positively reflects the aims and ambitions identified in Corsham Primary's Single Equality Scheme.