



## Science Policy

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## Intent

### Intent vision statement

At Swavesey Primary School we aim to provide a broad, balanced and challenging curriculum which delivers varied and exciting learning opportunities. This enables us to motivate all pupils to 'leap into their learning' and make progress not only academically but to also grow a thirst for knowledge, instill a love of learning and become proficient independent learners throughout life. Science is a core subject of the National Curriculum and thus is given the prominence it deserves. Through our science teaching we aim to develop resilience, resourcefulness and a reflective approach to learning through investigative work and critical thinking activities. We embed science learning in real life contexts in order that we create responsible global citizens with the confidence to be 'agents of change' for their future world.

### ***School Aims and Aspirations for pupils:***

- To become curious about changes and events in the world.
- Be engaged as learners who can link ideas with practical experience.
- Have opportunities to question and discuss scientific issues that may affect their lives.
- To develop, model and evaluate explanations through scientific methods of collecting evidence using critical and creative thought.
- Realise how major scientific ideas contribute to technological change and how this impacts on improving the quality of our everyday lives.
- Foster a respect for living organisms and the physical environment.
- Be surrounded by a team of staff with up to date scientific knowledge.
  - Staff will be supported by leadership if there are gaps in knowledge.
- Experience a curriculum that builds on prior learning from EYFS to end of KS2 ensuring consistency and progression across the whole school.
- To be provided with a science curriculum that gives children the confidence and motivation to continue to further develop skills into the next stages of their education and life experiences.

## Implementation

The school's overview Long Term Plan (LTP) and detailed LTP (see separate excel document) tracks the knowledge and skills taught across each year group including Early Years. This document ensures coverage of all skills in the Science assessment criteria. Where changes are required or desired in individual phases, teachers work alongside the subject leader to ensure that coverage of the key knowledge and skills is maintained.

### **Overview of content**

The Science Curriculum at Swavesey Primary School follows the progression of skills and knowledge set out in the National Curriculum.

- We strive to make this accessible to all pupils and adapt teaching for the needs of our pupils.
- We believe that evidence of learning does not only need to be written evidence.
- We aim to provide plentiful opportunities for children to express their understanding of scientific concepts in a variety of ways; verbally, in group discussions, through practical work and critical thinking tasks (such as concept cartoons).

The Curriculum is delivered by:

- Science lessons in KS1 and KS2.
- In Early Years Science is taught through Understanding the World and on-going play-based activities to promote curiosity and investigation.
- Ensuring full coverage
  - Each phase creates long and medium term planning across topic cycles to structure the curriculum as an overview to support weekly planning.
- Planning and teaching creative and engaging lessons
- Linking learning, where possible, to the termly topic to enhance engagement and deepen learning.

- Using regular, formative assessment to check for and address misconceptions in each lesson before moving learning on and adapting future lessons on this basis.
- Planning that builds on prior learning and ensures that this knowledge is secure before moving on e.g. mini quizzes at the beginning of a lesson to check recall of knowledge
- Working Scientifically objectives are embedded across the curriculum and assessed termly alongside substantive knowledge
- Planning that reflects the importance of spoken language in pupils' development across the science curriculum.
- Using Working Walls to support consolidation of learning.
  - Particularly through the display of specialist vocabulary.
  - Vocabulary is explicitly taught and expected to be used when describing processes and key characteristics.
- Providing experiences of different enquiry-based learning to develop and embed the thinking and working scientifically criteria set out in the National Curriculum, whilst building on the skills learnt in previous years.
- Planning visitors and trips to enhance learning opportunities and give pupils an idea of real-life application of the skills and knowledge they are learning.
- Ensuring considerations for safety are made when using equipment or materials that could be hazardous. Appropriate risk assessments will be made including COSHH if relevant.

Class teachers, with support from the subject leader, are responsible for planning and delivering effective lessons, in line with the national curriculum and the aims outlined in this policy. Our school has a science lead, who is responsible for ensuring the implementation of this policy across the school.

### Enrichment and the wider community

We aim to provide more than classroom-based science lessons to engage our pupils in their excitement for science learning.

Currently, we:

- Offer science clubs; including a gardening club which is supported by members of the community.
- Have created an 'Eco Committee' for pupils who are passionate about protecting the environment.
- Have an annual celebration of science by participating in British National Science Week which involves an extended whole-school project celebrating and exploring a scientific topic.
- Welcome speakers from the local community and interact with local businesses.
- Regularly utilise the wealth of resources for scientific exploration provided by Fen Drayton Lakes thus enabling us to discover science in our local context.

### Impact

Assessment is an integral part of our teaching and learning cycle. Formative and summative assessment is used to track pupils' progress and direct our teaching.

Formative assessment is used at the end of each lesson to enable the use of Assessment for Learning strategies. This identifies those needing extra support with a concept before moving on. Science learning builds on previously acquired knowledge and skills and the consideration of the retention of prior learning is essential. To assess pupils' learning a traffic light system is used, in discussion with the child, to enable them to also reflect on their progress. Each piece of work or lesson completed will have a relevant WALT or LO which directly links to the National Curriculum. Some learning objectives may be broken down into specific success criteria which allows for focused intervention of a particular skill or aspect of knowledge. Teaching staff will mark against the WALT or LO for each piece of work to show the progress a child has made during the lesson.

- Pink tick if the pupil has met the objective
- Dashed pink tick if the pupil is on the way to meeting the objective
- Orange if they have shown evidence of meeting the objective verbally
- Green if they have not met the objective and require additional support before moving on.

Using this process, the teacher and child can quickly assess their work and see where there are areas of learning which require additional attention and provide an incentive to ensure this is done. Areas of learning requiring additional attention should feed into the next lesson in the sequence. This may be in the form of addressing misconceptions at the beginning of a lesson using a 'mini quiz' to recall prior knowledge or may be through adaptations being made to future lessons to prevent gaps in learning.

Summative assessments are completed at the end of a unit of learning. Teachers are required to make a Below/Towards/At/Greater Depth judgement against each assessment criteria. At the end of the year a judgement is made based on all work covered and this is passed on to the following year's teacher and shared with parents.

Regular assessments are carried out against the EYFS framework, including Understanding the World. On entering reception, the Reception Baseline Assessment is carried out which assesses children's language, communication and literacy; and mathematics. In the summer term teachers make a judgement against all the Early Learning Goals (ELG) which determines whether a child has met the Good Level of Development (GLD). Summative assessments made at the end of every half term to monitor children's progress throughout the year.

**Subject leaders are expected to:**

- Offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of science.
- Maintain resources and advise staff on their use.
- In conversation with the school business manager and Head teacher, manage their curriculum budget.
- Lead staff training on new initiatives.
- Attend appropriate in-service training and keep staff up to date with relevant information and developments.
- Help staff to use assessment to inform future planning.
- Track teacher assessment and discuss how judgements were made

The subject leader completes book looks, moderations, blinks and pupil voice to monitor and evaluate the procedures in place are positively impacting outcomes for all children.

This policy should be read alongside:

SEND policy

Equality and Diversity Policy

Homework policy

Early Years Policy

Marking and Feedback policy

Health and Safety policy