



Curriculum Policy

Science



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Science Policy

What is our vision?

The Science curriculum at Farington, aims to provide our pupils with the foundations they need to understand the world in which they live. Our lessons involve a combination of practical experiments and acquisition of key subject knowledge. Hands on activities encourage curiosity, with pupils working scientifically, asking questions and considering how they might solve them through investigation. Children build up a specialist vocabulary, which they use to explain their observations and conclusions.

Curriculum Aims and Impact:

- Children develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- They develop an understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- Children are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Farington pupils acquire the knowledge they need to enable them to understand the uses and importance of science in their lives. They develop an understanding of the key areas of science and can express this using relevant scientific vocabulary. Pupils use a Growth Mindset and display resilience when encountering problems. They are able to work as team to solve problems. Pupils ask questions and can suggest how to solve them. They recognise some real life scientists and how their work has shaped our lives. Our children are able to investigate, interpret results and draw conclusions based on real evidence.

How do we achieve this?

- Prior learning activities are planned for the beginning of each new topic to assess where the children are starting from and what new knowledge they need to learn
- Vocabulary is at the heart of our teaching of Science, with words relating to the topic displayed in the classroom and referred to throughout the unit of work. This vocabulary is on display knowledge organisers for each topic and revisited termly.
- Science lessons at Farington, incorporate a mixture of knowledge acquisition and practical experiments and is assessed through curriculum end points.
- Each year, classes learn about the impact of a real-life scientist, in relation to a topic they are studying.
- Learning is enhanced through visitors to school, including a Science Roadshow for the whole school and other providers.
- KS1 take advantage of our outdoor areas to observe changes in nature over time. Pupils classify, identify and observe closely.
- LKS2 record data and draw conclusions. Children set up simple practical activities and make comparative and fair tests.

- In UKS2, pupils talk about their ideas and ask questions, making suitable predictions. They are encouraged to draw conclusions based on their data and observations. They are expected to take accurate measurements and to record data.
- At Farington, we reinforce scientific knowledge over time, by revisiting previously taught key knowledge, on a termly basis.

Scheme of Work:

Farington Primary School broadly follows the Snap Science scheme of work to ensure the correct coverage of the National curriculum and ensure progression of skills across school. Teachers plan from ideas for given year group topics from Snap Science, choosing activities that cover the objectives in the Science Key Specification.

Resources:

Scientific resources are housed in the Science cupboard at the back of the Y6 classroom. If teachers require further resources such as consumables for Chemistry or seeds for plant study, an order can be raised.

Assessment – How do we assess skills and understanding?

Science topics begin with a prior learning task, which opens up a discussion with the pupils, allowing for an initial teacher assessment of their prior knowledge. Children are provided with a Knowledge Organiser, which summarises the unit objectives they are expected to achieve and the related vocabulary they will be expected to know, by the end of the unit.

Teachers assess the children based on their work in books, the answers and explanations they provide verbally and through observing their contributions to practical tasks. Children are informally assessed at the end of the unit, against the key skills identified on the Medium Term Planning Document and End Points doc. Teachers also consider each child's ability to use, and understand, the subject specific vocabulary related to that particular unit of work, set out in the Science Key Vocabulary Document.

Children across Key Stage 1 and 2 revisit prior learning on a termly basis, during Knowledge Review Week. Teachers use a range of diagnostic activities to assess the children and support their judgements. Gaps in learning are identified and additional learning is planned to meet the specific needs of the children.

Health and Safety

Children at Farington will always be taught and encouraged to consider their own safety and that of others. Teachers will provide a safe and secure environment in which children can learn safely. Children will be shown how to use equipment appropriately before starting practical experiments. Any Science trips will require a Risk Assessment to be undertaken. External visitors to school should provide their own Risk Assessment prior to the visit. Teachers and Teaching Assistants will check the condition of the equipment prior to the lesson.

Inclusion and Safeguarding Considerations

At Farington Primary School, we aim to provide an inclusive Science curriculum for all pupils, regardless of gender, race, class, physical or intellectual ability. We place great emphasis on the skills of independence and resilience, promoting the importance of applying a Growth Mindset, when solving scientific problems. Practical activities make it possible for each child to learn by discovery and we encourage pupils to ask questions, support and challenge each other through group tasks. Teacher assessments of scientific understanding, take into account verbal reasoning and explanations, rather than written outcomes. Our teaching staff value Science as a tool for acquiring vocabulary and developing language skills. We have the highest expectations of all pupils, whilst recognising that children develop and progress at different rates.

Other Points/Considerations:

Trips and visitors are actively encouraged, to enhance our teaching of the Science curriculum. Every child benefits from a session with the annual Science Roadshow and previous visitors have included the Bright Sparks Electricity programme. Trips may be planned into the year that are Science based e.g Y1 trip to Blackpool Zoo to enhance the learning around animal classification groups.

Monitoring and Review

The Science Coordinator will develop a yearly Subject Leader Action Plan, based on a review of the previous year's audit and evaluations. This will lead the long-term vision for the subject and identify areas of improvement and where staff CPD or resources need to be allocated. A Science audit may combine samples of children's work, a review of the learning environment and pupil interviews.