



BUTTSBURY
JUNIOR SCHOOL

AN ACADEMY SCHOOL

Science Policy

Maximum Effort for Maximum Achievement

Aims

- To develop pupils' enjoyment and interest in science.
- To develop pupils' understanding of key scientific concepts and scientific skills.
- To enable pupils to effectively communicate scientific ideas by using scientific vocabulary.
- To develop positive attitudes which encourage collaborative learning and perseverance.
- To develop pupils' awareness of how science influences and affects our everyday lives.
- To prepare pupils for life in an increasingly scientific and technological world, both today and in the future.

Attitudes

- Encouraging the development of positive attitudes to science.
- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.
- Providing opportunities for pupils to think deeper into the subject and use what has been learnt in a new situation.

Statutory Requirements

Statutory requirements for the teaching and learning of Science are laid out in The National Curriculum in England Framework Document, September 2013.

Intention, Implementation and Impact

Intention

At Buttsbury Junior School the **intent** of our Science curriculum is to encourage children to ask questions through a variety of task that include practical scientific enquiry, make and record observations, apply their learning to the 'real world', form reasonable conclusions based on observations and results (both orally and in written form) and build upon their previous learning. This is conducted with consideration to keeping safe in Science.

Implementation

Units of learning are blocked, well sequenced and build on previous learning both with in KS2 and KS1. Lessons ensure that progress is achieved through small steps, allowing children to develop their subject knowledge, consolidate skills and apply their learning. Strands in Science include: Working Scientifically, Animals Including Humans, Rocks, Light, Forces and Magnets/Forces, Living things and their habitats, States of Matter/Properties and changes of materials, Sound, Electricity, Earth and Space and Evolution and Inheritance.

Impact

Our curriculum encourages children to be inquisitive and enthusiastic about the world around them. By learning about the wider world, children will have a greater scientific understanding of the world they live in. As a result of our Science curriculum, children are equipped with the necessary knowledge and skills for the next stage of their education at secondary school.

Scientific Enquiry

Science is taught with an emphasis on the pupils engaging in practical enquiry to support and develop their understanding of scientific concepts and skills. Teachers use a range of strategies including:

exploration, investigative enquiry and illustrative enquiry. Teachers try to ensure that the children's ideas are used as a basis for enquiry.

Children are encouraged to record their investigations using the relevant process skills which are introduced in Year 3, further developed in Year 4 and fully utilised in Years 5 & 6. This is essential if children are to be enabled to show their knowledge and understanding of a scientific concept, using the correct scientific vocabulary.

Equal Opportunities in Science

- Science is taught within the guidelines of the school's equal-opportunities policy.
- We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- In our teaching, science is linked with literacy, computing and mathematics.
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties.
- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them through differentiated work.

Assessment and Recording in Science

- We use assessment to inform and develop our teaching.
- Areas commonly begin with an assessment of what children already know.
- We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- We mark work positively, making it clear where work is good by using ticks and smiley faces, in line with the school's marking policy.
- We track the children's progress and work is monitored at regular intervals.
- All children's needs are met through appropriate differentiation (including extension materials where appropriate).
- Informal assessment is continuous and used to inform teaching throughout the school.
- Reports to parents are made verbally, and written once a year, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of science.
- Where appropriate, Science tests, which are summative, are used throughout the school and children are tested at the end of a unit of work. These tests are used to guide and support the teacher assessment of each child's level or attainment within his/her year group.

Mastery

Effective mastery in Science encourages all pupils to think about the world around them and explain how and why things work, regardless of their ability.

Through higher order questioning in lessons and Bloom's questions in teacher feedback, this ensures that pupils are thinking and applying their understanding to new and increasingly more complex situations.

Pupils are given opportunities to apply their understanding of Science in practical activities in which they investigate an open-ended question. They will generate data and try to explain what it means and compare their data with others. Pupils who demonstrate Mastery, will be able to develop a question and consider ways in which it could be investigated.

In conclusions, pupils give well thought out reasons based on their results and consideration is given to how accurate and reliable the results are. The use of other curriculum areas will be used to develop ideas (e.g. mathematics is used to compare data or present the data as a graph when appropriate).

As a result of this, pupils have developed a deep understanding of the concepts covered including the social, moral, spiritual and cultural aspects as appropriate to the topic. Additionally, pupil will develop a resilient attitude towards Science and apply their understanding to new and different situations.

Monitoring and review

Policy Date: Summer 2022

Review Date: Summer 2025