



**Old Buckenham
Primary School**

Science Policy

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Review Body	Teaching staff
Approved	By the Governing Body
Next Review Due	Biannually – November 2020

Policy Consultation & Review

This policy is available on our school website and is available on request from the school office.

This policy will be reviewed in full by the Governing Body on a biannual basis.

Signature _____
Julia Humphrey, Headteacher Date:

Signature _____
Tom North, Chair of Governors Date:

Science Policy

This policy reflects the values and philosophy of Old Buckenham Primary School in relation to the teaching and learning of Science. It gives a framework within which teaching and support staff work and it gives guidance in planning, teaching and assessment.

Our Vision and Aims

At Old Buckenham Primary School every child counts. We believe in developing a child's intellectual, creative, emotional, physical, spiritual and moral aspects of their personality. This takes place in a caring and supportive school that has strong links with the local community.

We want our children to be confident and healthy individuals, successful learners and responsible citizens. In Science we actively seek to promote children's thinking skills by:

- Encouraging our children to be thinking people with inquiring minds.
- Developing knowledge and understanding of scientific concepts, processes and skills and enabling children to relate these to everyday experiences.
- Teaching our children how to think scientifically and communicate scientific ideas by placing **Working Scientifically** at the heart of every science lesson.
- Engendering positive attitudes towards Science.
- Developing an understanding of the changing world.

Objectives

We seek to meet our aims by:

- Providing a stimulating environment where children are encouraged to ask questions about the world around them, thus developing inquiring minds.
- Providing a range of activities which will help children to develop the skills of scientific enquiry.
- Providing a wide range of learning opportunities and resources to develop knowledge and understanding about Science.
- Using the school and wider environment to extend the children's opportunity to relate their scientific understanding to the everyday world.
- Encouraging the children to record their work in a variety of formats; by using a range of methods for recording, mind mapping models and through the use of ICT.
- Encouraging links with outside agencies in order to foster a positive view of Science related careers and to promote the relevance of science to the wider world.
- Encouraging and developing the correct use of scientific terminology to communicate and record in a systematic manner.

Spiritual, Moral, Social and Cultural development through Science

Science provides opportunities to promote:

- **Spiritual development** – through pupils sensing the natural, material, physical world they live in, reflecting on their part in it, exploring questions such as where does life start and where does life come from?
- **Moral development** – through helping pupils see the need to draw conclusions using observations and evidence rather than preconception or prejudice, and discussion of the implications of the uses of scientific knowledge, including the recognition that such uses can have both beneficial and harmful effects.
- **Social development** – through helping pupils recognise how the formation of opinion and the justification of decisions can be informed by experimental evidence and drawing attention to how different interpretations of scientific evidence can be used in discussing social issues.
- **Cultural development** – through helping pupils recognise how scientific discoveries and ideas have affected the way people think, feel, create, behave and live, and drawing attention to how cultural differences can influence the extent to which scientific ideas are accepted, used and valued.

Curriculum and Time Allocation

Science is a core subject. In order that children are able to develop good scientific enquiry skills, Science should be taught as a separate timetabled subject, except in EYFS where it is taught as part of the broader aspects of 'Understanding the World'.

In Key Stage 1, 1 hour of teaching time within a week is allocated to Science.

In Key Stage 2, 2 hours of teaching time within a week is allocated to Science.

Teachers have the flexibility to teach Science and other curriculum subjects in blocks, where this happens the correct number of hours should be allocated to ensure Science is taught well.

In addition, we are committed to linking our learning in Science to other curriculum areas as appropriate. Science based texts are sometimes used in Literacy lessons and during guided reading sessions. Speaking and Listening is actively promoted during scientific investigations. The children may develop their writing skills by writing reports in Science. Mathematical skills such as measuring and data handling are an important part of Science lessons.

Each lesson needs to have two key elements - a scientific concept & a science enquiry skill (known in the National Curriculum as working scientifically).

THE KNOWLEDGE ELEMENT - the scientific concept / context for the enquiry.

THE WORKING SCIENTIFICALLY ELEMENT - the skills they need to develop in order to answer their enquiry question.

There are five main types of science enquiry

- Identifying and classifying
- Pattern Seeking
- Research from secondary sources
- Observations over time
- Fair or comparative testing.

In order to promote the use of correct scientific vocabulary, each lesson should refer to key words for science enquiry and the science topic in shared success criteria. Pupils should be encouraged to use these both orally and in writing when explaining their understanding.

Science Books

We use response marking in science books; we make sure the children have enough time to respond to feedback. Science books are our main form of evidence. Photos alone are not enough and should always be dated with a Learning Objective and may be annotated to show learning. We use post-it notes to capture dialogue where possible. Marking is carried out in accordance with the Schools current Marking Policy.

Moderation

We will look to hold regular moderation to develop our skills in AFL, to ensure progression in science, to check that our judgements are fair and to talk about what we are aiming for in science.

Assessment

Initial assessment of a curriculum area should be made at the start and end of the topic by use of 'KWL' grids. Where appropriate, these may be completed by an adult as a result of discussions with an individual or group of children. Assessment of each learner's progress is based on each Class Teacher's professional judgement. Reference materials which may be used to support this include the assessment resources included for each topic on the Twinkl <https://www.twinkl.co.uk/> website used by some teachers within the school and the TAPS (Teacher Assessment in Primary Science) Pyramid 'Pupil Layer' and 'Teacher Layer' <https://pstt.org.uk/application/files/6314/5761/9877/taps-pyramid-final.pdf> . The ASE (Association of Science Education) also has some free to access resources to assist teachers <https://www.ase.org.uk/resources> .

Resources

Science resources are currently stored in the cupboards in the Hall, we all have a responsibility to ensure they are kept as we would like to find them. Children are not permitted to return resources, only adults. Resources are replaced and purchased by the Co-ordinator following the general school ordering procedures. Staff are asked to submit to the Science Co-ordinator lists of any resources they require to be added to the existing stock. Staff are also asked to report any resources that are damaged or need replacing.

Safety

Science is a practical subject and can, therefore, pose a number of potential dangers. It is essential that teaching staff follow the School's Code of Conduct with regard to safety. Copies of the Health and Safety Code of Practice document, and example risk assessments are held within the office (green folder). This has been written by the SET and is based on the ASE guidance and provides advice with regard to potential risks, Teachers are also advised to

check the ASE website: <http://www.ase.org.uk/resources/health-and-safety-resources/> for guidance and to risk assess any activity that they feel may pose a danger to either themselves or their pupils. The School's specific Risk Assessment for safety should be followed when working within the pond area. Children should be shown the correct and safe use of all equipment at their disposal.

Links to other policies

- Curriculum
- Assessment
- PSHE
- Health and Safety
- Equal Opportunities
- Special Educational Needs
- Gifted and Talented