Ludgershall Castle Primary School

Science Policy

2024

Vision

Ludgershall Castle Primary School values Science because it makes an increasing contribution to all aspects of everyday life. All children are naturally curious about their environment and Science is a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. The main aspects of science to be studied will e determined by the programmes of study of the National Curriculum 2014.

Our Intent

➢ Preparing our children for life in an increasingly scientific and technological world today and in the future.

➢ Helping our children acquire a growing understanding of the nature, processes and methods of scientific ideas.

➢ Helping develop and extend our children's scientific concept of the world.

➢ Building on our children's natural curiosity and developing a scientific approach to problems.

➢ Encouraging open-mindedness, self-assessment, perseverance and developing the skills of investigation – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.

➢ Developing the use of scientific language, recording and techniques.

➢ Developing the use of computing in investigating and recording.

➢ Making links between Science and other subjects.

https://www.gov.uk/government/publications/national-curriculum-in-england-scienceprogrammes-of-study/national-curriculum-in-england-science-programmes-of-study

Our Implementation

Foundation Stage

Pupils in the Early Years investigate science as part of Understanding of the World. Children are encouraged to investigate through practical experience; teachers guide the children and plan opportunities that allow the children to 3 experience and learn whilst experimenting for themselves. They work scientifically by;

➢ asking questions and recognising they can be answered in different ways.

➢ investigating a wide variety of objects and materials in the natural and made world using all senses as appropriate.

➢ learning about themselves and living things

➢ looking closely at similarities and differences, patterns and change.

➢ talking about their observations and sometimes recording them.

Key Stage 1

The main focus of science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information.

They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.

Most of the learning about Science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos. Pupils should read and spell scientific vocabulary at a level consistent with their reading and spelling knowledge at Key Stage 1.

Lower Key Stage 2 – Years 3 and 4

The main focus of Science teaching in Lower Key Stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the

relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions.

They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

'Working scientifically' must always be taught through and clearly related to substantive Science content in the programme of study. Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing reading and spelling knowledge.

Upper Key Stage 2 – Years 5-6

The main focus of Science teaching in Upper Key Stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.

At Upper Key Stage 2, they should encounter more abstract ideas and begin to recognize how these ideas help them to understand and predict how the world operates. They should also begin to recognize that scientific ideas change and develop over time. They should select the most appropriate ways to answer Science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out fair tests and finding things out using a wide range of secondary sources of information.

Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. Pupils should read, spell and pronounce scientific vocabulary correctly.

'Working and thinking scientifically' must always be taught through and clearly related to substantive Science content in the programme of study.

Scheme/Programmes of Learning

We are following the Switched on Science Scheme of work.

Cross Curricular Links

Science pervades as a driver subject in many topics within our curriculum at Ludgershall Castle Primary School. We know that it is part of every aspect of our lives and we will relate it to all areas of the curriculum. We will also ensure that pupils realise the positive contribution of both men and women to science and the contribution from those of other cultures. We will not only emphasise

the positive effects of science on the world but also include problems, which some human activities can produce.

Resources

Many of the resources needed are provided within our Scheme of Learning – Switched on Science. However, some resources are sourced within the school, or sourced by each class teacher. Each class also has their own resources which are relevant to their year group. A resources audit will take place during the academic year 2020-2021

Assessment and Recording

Much of the work done in science lessons is of a practical or oral nature and, as such, recording will take many varied forms thus making marking different. It is, however, important that written work is annotated regularly and clearly, as an aid to progression and to celebrate achievement. Practical Science and investigative work may be evidenced through the use of photos with annotations in books. Guidance and exemplification materials to enable teachers to have a clearer understanding of National Curriculum expectations for meeting the expected standards can be found in the Association for Science Education Website (ase.org.uk/plan) Please also see the Assessment Policy for further information on quality feedback and assessment.

Impact

Science enables children to develop an understanding of the world around them. We encourage children to discuss and share their own thoughts, opinions and ideas in a safe environment, knowing and understanding that their views may be different from others and that this is okay. We aim to provide children with an understanding of how to develop their skills further, should they go on to develop an interest within the scientific profession during their lifetime.

Management and Responsibility

The delivery of the Science Curriculum will be overseen by the subject leader whose main roles and responsibilities include:

- Contributing to any requirements of the school improvement plan which are linked to Science;
- Monitoring the delivery of Science throughout the school and advising on any action or development needed;
- Identifying appropriate training and publishing any CPD opportunities to staff;
- Supporting colleagues in their planning, implementation and assessment;

- Keeping up to date and being informed about any developments within the subject;
- Creating and maintaining an up to date Subject Leaders Folder;
- Creating links within the cluster and wider community;
- Promoting enthusiasm for the subject of Science and to demonstrate good practice;
- Supporting and guiding staff by encouraging the sharing of ideas, successes and achievements;
- Keeping under review the written policy document for Science;
- Providing opportunities for fieldwork experiences;
- Collecting videos and photographic evidence from Science Learning Walks around the school;
- Being aware of national and local developments in Science through reading relevant materials and attending courses.

Policy reviewed : February 2024

Agreed by Governors: