



Upper Beeding Primary School

Science Policy

May 2023

INTENT

Why do we teach science? Why do we teach it the way we do?

We aim to make our school a place where children can explore the world of science; a place where their excitement and curiosity can be let loose! We aim to teach topics in an interactive, fun and memorable way. Children are encouraged to enquire, think and work scientifically, which is a major part of the curriculum and is at the heart of every science topic. We see practical investigations as the driving force of science teaching and learning.

Science is embedded throughout the curriculum to ensure the children are taught the skills and knowledge they need for the future – to explain what is happening, predict how things will behave and analyse causes. We use pupil-friendly science characters to embed the children's understanding of the skills that they are implementing and developing.



**Commander
Classify**



**Polly the Pattern
Seeker**



**Oliver the
Observer**



**Fair-Testing
Freddy**



**Rachel
Researcher**

Specialist science vocabulary is taught within our topics and built upon as children move through the school. The pupils' own effective questioning is encouraged so that they can communicate ideas about the science they experience in their lives.

IMPLEMENTATION

What do we teach? What does this look like?

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science is taught in planned and arranged topic units by the subject leader and Year Group teams, to have a practical and enquiry-based approach. This is to enable the achievement of a greater depth of knowledge.
- Through our planning, we involve practical problem-solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and are given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves staff creating engaging lessons, using high-quality resources to aid understanding of

conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up.

- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- *Working Scientifically* skills, using science characters, are embedded into lessons to ensure these are being developed throughout the children's learning and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.
- Teachers demonstrate how to use scientific equipment, and the various *Working Scientifically* skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and attending workshops with experts.
- Children are offered a wide range of extra-curricular opportunities, such as visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.
- Our cross-curricular approach to planning allows all pupils to explore the wider world of science and its links with knowledge and skills from other subject areas.

IMPACT

What will this look like? What tools would we like our children to have when they leave our school?

Our approach to learning and teaching at Upper Beeding results in a fun, engaging, high-quality science education, that provides children with the foundations and knowledge for understanding the world.

Our engagement with practical experiments, exploration of pupils' own science enquiries and investigating the local environment ensures that children learn through varied and first-hand experiences of the world around them. Valuable opportunities for learning outside the classroom are embedded throughout the science curriculum.

Through various workshops, trips and visits children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn about the possibilities for careers in science, as a result of our community links and connection with national agencies such as the STEM association. This ensures that our pupils have access to positive role models within the field of science from the immediate and wider local community. Our approach to science learning instills within our children that they are all scientists and capable of achieving.

Children at Upper Beeding overwhelmingly enjoy science and this results in motivated learners with sound scientific understanding.

TEACHING AND LEARNING

Science is taught with an emphasis on the pupils engaging in practical enquiry to support/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 some of the children's ideas are used as a basis for enquiry.

EARLY YEARS

Science is taught in the EYFS according to the Statutory Framework for Early Years Foundation Stage. It is incorporated in one of the four specific areas within 'Understanding the World' in which pupils develop the crucial knowledge, skills and understanding that helps them make sense of their world.

Wherever possible the children are provided with activities based on first-hand experience that encourage exploration, observation, problem solving, prediction, critical thinking, decision making and discussion. We provide an environment with a wide range of indoor and outdoor experiences that stimulate their interest and curiosity.

KEY STAGES 1 and 2

In Key Stage 1 and Key Stage 2 science follows the National Curriculum guidelines and programmes of study. Science is taught as a discrete lesson and as part of cross-curricular themes when appropriate. Science has links with other areas of the curriculum including Geography, English, Maths, Art and Design Technology. The coverage and progression of science knowledge and understanding ensures that scientific skills are developed and applied through a wide range of opportunities. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each science unit and its relevant concepts in order to progress to the next.

ASSESSMENT

Assessment for learning is continuous throughout the planning, teaching and learning cycle. We focus on assessing pupils investigative skills in science alongside their acquisition of knowledge and understanding of specific science units. Assessments of children's work in science are made through observations of pupils during lessons, questioning, talking and listening to children, and reviewing their written work. We also make use of 'pre-topic and end of topic' assessments to support our judgements. Teachers make judgements of each pupil's attitudes, motivation, progress and attainment within science on their end of year report.

HEALTH AND SAFETY

At Upper Beeding Primary School all children are made explicitly aware of the relevance of health and safety issues when undertaking scientific work. Any potential dangers are highlighted when pupils are asked to carry out scientific investigations, with additional adults being used effectively to assist with the safe running of science lessons.

PLANNING AND RESOURCES

The Science Subject Leader will:

- Ensure the development of schemes of work for the science curriculum, liaising with Year Groups about provision.
- Promote the integration of science within appropriate teaching and learning activities.
- Manage the provision and deployment of resources and give guidance on classroom organisation support.
- Inspire colleagues to deliver high quality teaching and learning opportunities.
- Lead INSET within the school, and investigate suitable CPD courses available.
- Identify strengths and weaknesses in outcomes; assisting colleagues with planning for improvement accordingly.
- Write, monitor and evaluate an action plan for science and for the School Improvement Plan.
- Lead the evaluation and review of the school's science policy.
- Monitor and review the Science provision within the school.

ORGANISATION

Science is taught through planned units of work by the Year groups with an enquiry-based focus. Science teaching and learning is linked to the topic where appropriate but also discrete science units help to ensure that there is sufficient coverage of the skills, knowledge and understanding throughout the school.

EQUAL OPPORTUNITIES AND INCLUSION

All children have equal access to the science curriculum and its associated practical activities in line with the Upper Beeding Primary School Equal Opportunities Policy. All staff are responsible for ensuring that all children, irrespective of gender, learning ability, physical disability, ethnicity and social circumstances, have access to the whole curriculum and make the greatest possible progress. Where appropriate, work will be adapted to meet pupils' needs and, if appropriate, extra support given. More able pupils will be given suitably challenging activities and opportunities to extend their science learning further. Gender and cultural differences will be reflected positively in the teaching materials used.

ROLE OF THE SUBJECT LEADER

The Science subject leader is responsible for ensuring that the aims of the Science Policy are met. In addition to this, the Science subject leader should:-

- Be enthusiastic about Science and demonstrate good practice
- Review changes to the National Curriculum requirements and advise on their implementation.
- Encourage and support staff in the implementation of the curriculum and school approaches to Science teaching
- Collate and review evidence related to Science through the e-portfolio to ensure progression and development of skills throughout the school
- Monitor the teaching and learning of Science throughout the school
- Organise and review all science-based resources ensuring these are maintained and replaced where necessary
- Support staff by sharing ideas and initiatives and organising in-service training as appropriate

Reviewed, Adopted and Ratified by:

Staff: May 2023

Governing Body: May 2023

Date for Review: May 2026