Blanford Mere Nursery & Primary School



Science Policy

Date adopted by governors

9th April 2025

To be reviewed

April 2028

Article 13: You have the right to find out things and share what you think with others, by talking, drawing and writing or in any other way unless it harms or offends other people.

Article 17: You have the right to get information that is important to your well-being, from radio, newspaper, books, computers and other sources. Adults should make sure that the information you are getting is not harmful, and help you find and understand the information you need.

Article 24: You have the right to the best health care possible, safe water to drink, nutritious food, a clean and safe environment, and information to help you stay well.

Article 28: You have the right to a good quality education.

Article 29: Your education should help you use and develop your talents and abilities. It should also help you learn to live peacefully, protect the environment and respect other people.

Every Child Is Born a Scientist ... it's our duty to foster that wonder and enthusiasm so it remains with them.

OUR VISION FOR SCIENCE TEACHING AND LEARNING

Science at Blanford Mere is fun, engaging and builds on the children's natural curiosity. We want our children to develop a thirst for scientific knowledge and understanding to enable them to make sense of the world in which they live, where they will want to explore new things.

Science is all around us. It is of fundamental importance that children develop an enquiring and creative mind to be able to recognise how science has changed our lives and that it is vital to the World's future. By promoting and nurturing their inquisitive minds, we will encourage our children to build a positive attitude towards science. Through rich experiences, challenging questions and practical investigations, we will deepen their knowledge and strive to create scientists for the future.

The following Principles have been developed with contributions from our children, teachers and governors.

Principles of Good Science Teaching and Learning

At Blanford Mere, this is what our children, teachers and governors have agreed are the essential features of great science teaching and learning and will be included in our science lessons.

'Science teaching at our school is good when...'

The children are engaged and curious and say "Wow!"

Children have fun and tell you it was fun because the teacher is enthusiastic too.

Teachers ask challenging questions to deepen the children's knowledge and understanding.

A range of approaches and resources are used to engage learners.

Practical work is balanced with written work to show learning.

Children talk about their learning using scientific vocabulary to explain why something happens, not just what happens.

Teachers promote inquisitive thinking to encourage children to learn independently outside of school.

Science is linked with everyday life.

Children challenge their own learning.

AIMS FOR THE TEACHING OF SCIENCE

- Ensure that teachers meet their statutory obligations with regards to the teaching of science.
- To raise science standards by promoting a high standard of excellence and consistency of approach amongst all staff.
- Prepare our children for life in an increasingly scientific and technological world.
- Foster concern about, and active care for, our environment.
- Help our children acquire a growing understanding of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Develop our children's understanding of the collaborative nature of science.
- Developing links between what children learn in the classroom and the world outside the classroom.

Attitudes:

- Encourage the development of positive attitudes to science as an interesting and exciting part of the curriculum.
- Building on our children's natural curiosity, in finding out why things happen in the way they do and developing a scientific approach to problems.
- Encouraging open-mindedness, perseverance and responsibility.
- Building our children's self-confidence, sense of achievement and to enable them to work independently.
- Developing our children's social skills to work co-operatively 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.
- Appreciate the way science will affect their future on a personal, national, and global level.

Skills:

- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- ask and answer scientific questions;
- plan and carry out scientific investigations, using equipment correctly;
- Developing the skills of investigation including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating, presenting their conclusions clearly and accurately.
- Developing the use of scientific language, recording and techniques.
- Enabling our children to become effective communicators of scientific ideas, facts and data.

Knowledge and Understanding:

Children should:

- Be curious about things they observe, experience and explore the world about them with all of their senses.
- Use this experience to develop their understanding of key scientific ideas and make links between different phenomena and experiences.
- Begin to think about models to represent things they cannot directly experience.
- Try to make sense of phenomena, seeking explanations and thinking critically about claims and ideas.
- Know and understand: Animals including humans, Plants and Living things and their habitats
- Know and understand: Everyday materials and Uses of everyday materials
- Know and understand: Electricity, Forces and magnets, Forces, Light, Sound and Earth and space

Vocabulary:

• Teachers need to be aware and use the correct scientific vocabulary at all times. Children need to be encouraged to understand and use the appropriate terminology. Key vocabulary should be shared with children at the start of a new topic and used throughout.

TEACHING AND LEARNING

National Curriculum 2014 Science is discreetly taught from Year 1 to Year 6 weekly. In Foundation Stage, Science is taught through Knowledge and Understanding of the World which begins to develop children's awareness of scientific understanding and investigation.

As KS2 children are taught in mixed year groups, a 2-year rolling programme (Cycle A & Cycle B) is implemented in Key Stage 2. This allows progression and continuity, ensuring that new learning takes place and all programmes of study have been addressed by the time the children have reached the end of the Key Stage.

Working Scientifically is an integral part of the science Curriculum in both key stages This is taught through the Science N.C. topics and known as 'Science Enquiry Types'. It incorporates: classification; observing over time; pattern seeking; fair tests; research.

Recording of work:

Science work is largely recorded in designated exercise books and on Tapestry in Reception. Children have opportunities to present information in a variety of ways including drawings, diagrams, tables and charts, in speech and writing. They will be able to use standard units of measure including graphs to record and present information. Investigations are recorded using our *'Science Investigation Report'* formats, which are progressive from Year 1 to Year 6.

Adaptive Teaching:

Science is taught in accordance with the topic studied. In planning Science, teachers are mindful of the ways in which pupils learn. The teaching of Science reflects different teaching and learning styles to ensure inclusion such as whole-class lessons, group, paired and individual work. Tasks are adapted to be support individual needs.

RESOURCES

Science equipment is stored centrally in the Maths & Science Room and should be returned there when not in use. New stocks of consumables are re-ordered by the Science Lead.

Children are taught to work with due care and attention, learning to use and look after equipment safely and effectively. Any losses or damaged equipment should be reported to the Science Lead

ROLE OF THE SCIENCE LEAD

The Science lead monitors the standard of the children's work and the quality of Science teaching. They are responsible for supporting colleagues in their implementation of the National curriculum, assisting with subject knowledge, being informed with subject developments and for providing a strategic lead and direction for the subject in the school. Planning is monitored, and book trawls and pupil interviews are carried out. Also, they take responsibility for the purchase and organisation of central resources.

ASSESSMENT

Assessment of a child's progress and understanding takes place in a number of ways.

- End of Unit Tests are completed by the children. Teachers mark and grade them in-line with our DIG assessment system. Scores are uploaded to the Data Log.
- Investigation work gives an opportunity for the teacher to assess achievement in an informal way.
- We use teacher assessments to assess the progress of the child, and to pass information on to the next teacher at the end of the year.
- Feedback to pupils about the progress in Science is achieved through verbal feedback and marking each piece of work using the marking policy.
- Children are chosen as 'Science Star of the Week', presented with a certificate and their achievements are celebrated in Science Newsletters.

EQUAL OPPORTUNITIES AND INCLUSION

Science is a right for all children. No child is discriminated against based on race, gender, religion or disability. We ensure that science learning is accessible, engaging and supportive of individual needs.

HEALTHY AND SAFETY

It is important that care should be taken at all times when carrying out investigations. The classroom should be well organised and children should be guided to work safely. Reference should be made to http://www.ase.org.uk/resources/health-and-safety-resources/health-and-safety-primary-science/ if advice is needed.

CONTRIBUTION OF SCIENCE IN OTHER CURRICULUM AREAS

<u>English</u>

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. The children develop oral skills in Science lessons through discussions and recounting scientific observations. Writing skills are developed through writing investigation reports and recording information; presentation features of bullet points and diagrams are used as they would with explanation texts.

Mathematics

Measure, data, mass and capacity skills are used to reinforce the children's knowledge. During investigations, children reinforce estimation and prediction. They develop the skills of accurate observation and recording of events, as is Knowledge of Number when recording results.

Computing

Children use computers in Science to enhance their skills in data handling and in presenting written work and research. They research information through the Internet. We also offer children the opportunity to use iPads to record and photograph.

Personal, social and health education (PSHE) and Rights Respecting Schools (RRSA)

Science makes a significant contribution to the teaching of personal, social and health education. This is mainly in two areas. Firstly, the subject matter lends itself to raising matters of citizenship and social welfare. For example, children study the way people recycle material and how environments are changed for better or worse. In addition, children benefit from the nature of the subject in that it provides opportunities to take part in discussions. Science promotes the concept of positive citizenship. Moral and social values are taught throughout Science, relating to every day experiences giving the work a true context. Children are encouraged to respect opinions and values of others, as well as contributing themselves, in order to carry on this good practice into adulthood.

Spiritual, moral, social and cultural development

Our school offers children many opportunities through Science to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Teaching Science programmes of study provides children with the opportunity to discuss, for example, the effects of smoking and the moral questions involved in this issue. We provide opportunities to reflect on the way people care for the planet and how Science can contribute to the way we manage Earth's resources. Furthermore, Science teaches children reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

REMOTE LEARNING

Remote learning for Science will be shared with families if a child is unable to attend school due to a local or national lockdown.

EVALUATION

The Science Policy of the school is reflected in our practice. This is monitored by the Science Lead and is reviewed by the Staff, the Head teacher, Governors and the Science Lead.