



Buxworth Primary School Science/ STEM Policy

“Equipped with his 5 senses, man explores the universe around him and calls the adventure science!”

-Edwin Powell Hubble

Aims and objectives

At Buxworth Primary School we believe that developing and increasing pupils’ understanding and enjoyment of science is core to our curriculum. Science and STEM (through sciences influence on technology) has changed our lives significantly and we aim to stimulate a child’s curiosity in finding out why things happen in the way they do. This policy will put into place the provisions for science which are set out in the National Curriculum 2014. We will ensure that all pupils develop scientific knowledge, skills and understanding through the appropriate teaching of Engineering, technology, biology, chemistry, physics. Effective teaching and learning will help them develop an understanding of the nature, processes and methods of Science and technology. They will experience different types of research and experimentation, which will help them answer scientific questions about the world around them and appreciate the way science affects their life today and in the future, on a personal, national, and global level. This policy will ensure that high standards are achieved and that pupils make good progress at every stage.

Objectives – Intention

1. To promote and develop children’s enjoyment and enthusiasm for STEM and science through exciting, practical, first-hand learning and opportunities to experiment, build, explore and investigate.
2. To ensure that the statutory requirements of the National Curriculum (2014) for science are taught well and that where appropriate their scientific knowledge skills and understanding are applied across all subjects of the curriculum.
3. To help pupils to become scientists by developing their problem solving and reasoning skills so that they can apply their scientific thinking across the curriculum.
5. To ensure that from the EYFS onwards, pupils are confident in their understanding and application of their basic skills in science and that they build upon their prior learning at every stage.
6. To encourage children to use their increasing knowledge, skills and understanding of science to investigate, ask questions and solve challenging problems.
7. To develop pupils’ confidence and skill in scientific methods as they explore the areas of science and address increasingly complex problems.
8. To bring science to life and make it real so that children understand the importance of science in the world and in their everyday day lives.
9. To ensure that all children particularly those with special needs or disability are well supported.

10. To teach pupils to work with proper regard for their own safety and that of others, using safety equipment where necessary.

Strategies - Implementation

1. An appropriate range of teaching and learning strategies will be used in all science lessons to capture pupils' interest and to promote effective learning and progress. Teachers will make use of the immediate and wider environment to help pupils apply their scientific knowledge skills and understanding to see the relevance of science to their own lives. They will set challenging work, tasks and problems to increase children's' knowledge, skills and understanding, to extend their thinking and build their self-confidence.
2. Teachers will use the National Curriculum, supported by an appropriate range of teaching and learning resources, to plan, teach and develop the knowledge, skills and understanding of every child, ensuring that all pupils, including those with SEND, achieve high standards for their ability and make appropriate progress.
3. Children will be encouraged to; ask questions, solve problems, discover new information, apply and consolidate their knowledge, skills and understanding through first-hand experience, investigations and practical work.
4. Teachers will assess children's work in science through formative and summative judgements by; asking questions, observing learners during lessons, observing pupils solving practical problems and listening to pupils' discussions. Work will be marked regularly and frequently and pupils will be given appropriate, clear feedback which tells them how well they have done and what they need to do next to improve. End of unit test will be used and results added to assessment and monitoring sheets so that they can be analysed and inform future planning and lessons.
6. The science leader will support the teaching and learning of science by; providing strategic leadership and direction, monitoring progress and standards across the school, reviewing and revising the science policy, monitoring and supporting teachers in the teaching of science, keeping staff up to date on new developments in science, monitoring the effectiveness of the planning and development of science, auditing, monitoring the effective and appropriate use of resources and obtaining new resources.

Outcomes - Impact

This policy will ensure that all pupils become confident scientists. Effective teaching will ensure that they can solve problems by applying their knowledge, understanding and skills in science with increasing sophistication. This policy should be read in conjunction with other key policies including; assessment, teaching and learning, special needs and equal opportunities.

CROSS CURRICULAR LINKS

Teaching at Buxworth, through the cross curricular topic based approach, allows us to use Science and STEM to enrich learning in other subjects. It can provide a stimulus for expressive work in English, Art, Dance and Drama. It allows for the discussion of feelings in R.E. and P.S.H.E. and



enhances assemblies. Science does have particular links to other curriculum subjects such as Maths, Music and Design and Technology.

Science encourages the children to develop confidence and responsibility. Good relationships are developed through group and paired investigations. Respect for the differences between people comes through experiencing Science and scientific theory from different times and cultures.

Assessment and recording

At the end of a unit of work in science, teachers in KS2 assess children's work using the specific unit assessments tests from the website *Twinkl*. The results are then recorded on an assessment sheet and analysed. Teachers in KS1 use the assessment grids "must could should" descriptors as in other foundation subjects.

Teachers then use the levels that they record to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

We use our class Golden Books to showcase some of the childrens' best work in Science and STEM throughout the year and match this to our 10 Buxworth values across the school.

Resources

Our school has a wide range of resources to support the teaching of Science across the school. All scientific resources are stores in the STEM cupboard in the Redwoods Classroom or in the Stockroom. The equipment is accessible to children only under adult supervision.

Buxworth school also works closely with others schools in the PEGS groups sharing; ideas, resources, and monitoring ideas.

Health and safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for science and scientific experiment and in KS2 prepare them for high school science.

This policy was written: June 2020

Reviewed: July 2025

This policy will be reviewed: Every two years

Subject Lead: Miss R Kime