

BREDHURST CHURCH OF ENGLAND (VC) PRIMARY SCHOOL

SCIENCE POLICY

March 2024

(Review Date: March 2026)



BREDHURST VISION

To learn and grow through the guidance and love of God

OUR MISSION STATEMENT

At Bredhurst CE Primary we value diversity and promote equality of opportunity for all.

Religious education should enable every child to flourish and live life in all its fullness. (John 10:10)

It will help educate for dignity and respect, encouraging all to live well together.

OUR VISION

Our Vision is inspired by Matthew 13 : 31-32, The Parable of the Mustard Seed

Jesus said, "What shall we say the kingdom of God is like, or what parable shall we use to describe it? 31 - It is like a mustard seed, which is the smallest of all seeds on earth. 32 - Yet when planted, it grows and becomes the largest of all garden plants, with such big branches that the birds can perch in its shade."

The theology behind this parable is embedded across all our learning

OUR ETHOS

At Bredhurst, we aim to be proactive in helping each child to achieve the key elements to well-being in childhood and later life. These are:

- be healthy
- stay safe
- enjoy and achieve
- make a positive contribution
- achieve economic well being

OUR CORE VALUES

The 'Spirit of Bredhurst' encompasses our core Christian values

- Self control
- Perseverance
- Inclusion
- Respect
- Inspiration
- Trust

These are displayed in each classroom, the entrance, the hall and the playground and are referred to regularly in Worship and in class lessons.

This school is committed to safeguarding and promoting the welfare of children and young people and expects all staff and volunteers to share this commitment.

SCIENCE POLICY

STATEMENT OF INTENT

The National Curriculum 2014 states that 'high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science.'

At Bredhurst CE Primary School, staff recognise that by developing scientific knowledge and concepts, pupils will understand how to explain key phenomena and develop a 'sense of excitement and curiosity about the natural world.' They will be encouraged to 'understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.'

AIMS

Through our science teaching we aim to

- develop scientific knowledge and conceptual understanding through the specific teaching of biology – plants, animals including humans and the environment, chemistry – materials and their properties and physics – Earth in Space, forces, light and sound
- develop an understanding of the nature, processes and methods of science through different types of science enquiries that help children to answer scientific questions about the world around them
- equip our children with the scientific knowledge required to understand the uses and implications of science, today and for the future.

PRINCIPLES OF PEDAGOGY

- To ensure that children learn through a range of **engaging activities**; including a variety of practical approaches and drama.
- To encourage **collaborative learning** amongst the children.
- To encourage **independent learning**. Children will be encouraged to explore, perform investigative practical work and solve problems.
- Careful **planning and assessment** will enable children to progress **without repetition** of activities or content.
- **Differentiation**, where appropriate, will allow all children to progress in their learning.
- Children will be encouraged to **record** in a range of ways and will record independently when appropriate.

ORGANISATION AND LEADERSHIP

Reflecting the leadership structure across the rest of the curriculum, Science is led by Miss Rebecca Meade.

COVERAGE OF THE NATIONAL CURRICULUM FOR SCIENCE

- Each year group will cover units of work as shown in our Science Long Term Plan. In Key Stage 1, teachers match science teaching and learning to the most appropriate termly topic thus showing how science links with other learning. In Key Stage 2, teachers organise the topics to be taught at the most appropriate times of the year e.g. plant and animals taught during the summer terms and with regard to how the unit can link to other curriculum learning. Hurstwood and Kemsley class will follow a 2 year programme for the topics in year 3, 4 and 5.
- Medium term planning for each of these units will cover the Programmes of Study laid out in the National Curriculum and our science curriculum.
- Lesson planning will follow the programmes of study in the Bredhurst Scheme of Work with activity ideas coming from PLAN knowledge matrices.
- Within Key Stage 2, there will be opportunities to study scientists/ naturalists linked to different units of work. This helps to show children that scientific ideas have developed across time and that there is still much to be discovered by scientists today.

MONITORING CHILDREN'S ACHIEVEMENTS AND ATTAINMENTS

- Teachers will collect evidence relating to children's achievements which may include: work completed in individual science books, work produced by groups, photographs, floor books, notes and assessment sheets used by the teacher, and electronic examples of children's learning (e.g. use of ICT - graphs, etc).
- All classes will have a lab coat on display to show key vocabulary that the children have learned. This will be referred to frequently, to ensure all children have an understanding of the vocabulary.
- At the beginning of each topic, the children will work together to produce a mind map to show what the class already know about a topic. These will be referred to during a sequence of lessons
- At the end of the topic each child will produce a piece of work that shows the knowledge they have learned and will be kept in their individual learning journey book. These can be referred to in future years to remind children about their prior learning.
- At the end of the year, teachers will use their evidence to make a judgement about how the children are progressing towards the Age Related Expectations. Teachers will use evidence collected to make a best fit judgement about the children's progress.
- The science leader will be able to monitor children's progress during the year. Children who appear not be making the expected progress will be identified as needing additional support for science, and actions will be taken to support them.
- The science leader will analyse end of Key Stage data, and will use this to monitor how children in the school are progressing between key stages.

INCLUSION AND EQUAL OPPORTUNITIES

All children at Bredhurst CE Primary have the opportunity to access science at a level appropriate to their ability. Children will be given additional support, if required, to carry out investigations and to record their findings. Programs like Clicker 8 are used for recording information. Staff support children by recording their questions and comments directly into their books. Writing support in the form of word banks, writing frames and key vocabulary are available for all children to use.

MONITORING PROVISION FOR SCIENCE IN THE SCHOOL

- The science leader will observe science lessons being taught across the school. These observations will be used to identify areas of strength and where learning can be better developed in the future.
- Each year the science leader will check that every class has covered the aspects of science as indicated in the long term plan through scrutinising books and planning.
- Pupil conferencing will be used to find out the children's views and understanding about science and to identify any areas for development.
- The science leader will monitor the use of science resources throughout the year.
- The science leader will maintain a record of wider opportunities that have been provided for the children.

SUPPORTING THE DEVELOPMENT OF THE LEARNING AND TEACHING OF SCIENCE

- The science leader will support aspects of teachers' practice that require developing.
- The science leader, with support from all other staff, will ensure that there are adequate amounts of resources, and that all of these are stored in a manner that makes them easily accessible to all.
- The science leader will support colleagues with identifying ways to enrich the coverage of the science learning. This could include visits, visitors and competitions.

HEALTH AND SAFETY

- The safe use of equipment, materials, places and spaces is promoted at all times. The Association for Science Education (ASE) document 'Be Safe' has been adopted by the school as a guide to health and safety in science.
- All offsite activities will require the class teacher to perform a risk assessment.
- CLEAPSS will be contacted by teachers should they have a query concerning health and safety.