

Science Policy

'For the Lord gives wisdom, from his mouth come knowledge and understanding'

Proverbs 2:6



'Feeding Hearts and Minds'

The peace, joy and love of Christ is at the heart of all that we do in our school. Through religious education, school policy and, primarily, our culture of prayerfulness, charity and joy, we seek to share the Gospel with our families, our parish, our community and the wider world.

Using the example of Jesus Christ, we cultivate the skills of heart and mind that allow us to develop our talents and take a shared responsibility for ourselves, each other and the world He gave us. We profess our faith proudly and recognise that we are called to a loving relationship with God through the sacraments, scripture and prayer.

Our school is animated by love and our shared faith and clear values drive our behaviour and our relationships; we are tolerant and respectful of the unique value of each person. Our individual needs and talents are recognised and nurtured in a warm, inclusive environment where we are able to use our gifts for the glory of God and in loving service of others.

We have excellent role models who empower us to believe in ourselves and provide us with an outstanding education and a wide range of opportunities – our aspirations for the future are high and we believe that through God's grace we can grow, learn and realise our full potential.

This policy was developed as part of a consultation process involving pupils, staff, parents and Governors of The Blessed Sacrament Catholic Primary School, based on best practice advice from Lancashire County Council.

This policy should be read in conjunction with the following documents:

- Teaching and Learning Policy
- Marking and Feedback Policy
- Handwriting Policy (Appendix A)
- Assessment Policy
- Inclusion Policies
- Health and Safety Policy

SCIENCE STATEMENT OF INTENT

The Science curriculum at The Blessed Sacrament Catholic Primary School is designed to allow all pupils to deepen their understanding of the world around them through the scientific disciplines of biology, chemistry and physics. As a core subject, science is taught continuously throughout the year. Each unit allows pupils to increase their scientific knowledge as well as improving their working scientifically skills.

Through the application of science, we strive to develop essential learning values. We aim to create science lessons in which pupils are self-motivated, excited and engaged in their learning. By encouraging children to explore their own scientific questions and use practical methods to investigate answers, their thinking skills are enhanced. We recognise the importance of developing vocabulary in our pupils. As such, a broad range of scientific vocabulary is taught within science lessons which is subsequently revisited in other curriculum areas. Science and its real-life application gives opportunities for pupils to work together and take risks in order to solve problems.

TEACHING AND LEARNING IN SCIENCE

The school will teach science in accordance with the requirements of the National Curriculum 2014.

We recognise the importance of:

- The early learning goals at the 'foundation stage' of learning in nurturing understanding the world.
- The breadth of study requirements, which accompany each key stage particularly with regard to developing working scientifically skills.
- The need for Science to be taught weekly in every half term and given priority as a core subject.
- The need for children to undertake tasks that are challenging and stimulating with a wide variety of opportunities to develop their investigation skills and initiate their own learning.

At The Blessed Sacrament, staff and pupils think science looks good when:

- Children are excited and engaged in their learning.
- Children ask and explore their own questions.
- Children use practical methods to find the answers to their questions.
- Children know which scientific vocabulary and skills to choose and use.
- Children learn in a variety of settings.
- Children work together to take risks and solve problems.

SCIENCE IN EYFS

Science in EYFS is taught in line with the Understanding the world aspect of the statutory framework for EYFS. This involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. Pupils undertake a range of activities including continuous provision, outdoor adventures and investigative activities. Evidence of work is recorded in various ways including observations, oral and written responses, photographs, use of ICT.

SCIENCE IN KEY STAGE ONE

As a core subject, it is expected that science in Key Stage 1 should be taught weekly, or as often as possible, to ensure progression of skills and knowledge within units. 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. In key stage 1, 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. Teachers should ensure that 'working scientifically' skills are embedded within science lessons as well as knowledge-based learning and the use of age-appropriate scientific vocabulary. Whilst we encourage pupils to record work in their individual books, classes must ensure that when a lesson is not recorded in individual books then some other form of evidence is collected – this is through the use of a Science class journal which can be a physical book or stored electronically if preferred.

SCIENCE IN KEY STAGE TWO

As a core subject, it is expected that science in Key Stage 2 should be taught weekly, or as often as possible, to ensure progression of skills and knowledge within units. The principal focus of science in key stage 2 is to enable pupils to broaden their scientific view of the world around them and develop a deeper understanding of a wide range of scientific ideas. We provide pupils with first-hand practical experiences as well as using secondary sources to develop their knowledge and understanding of more abstract ideas. Teachers should ensure that 'working scientifically' skills are embedded within science lessons as well as knowledge-based learning and the use of age-appropriate scientific vocabulary. Whilst we encourage pupils to record work in their individual books, teachers must ensure that when a lesson is not recorded in individual books then some other form of evidence is collected – this is through the use of a Science class journal which can be a physical book or stored electronically if preferred.

PLANNING FOR SCIENCE

As a staff team we have developed a curriculum which meets the needs of our pupils. We follow the National Curriculum 2014 requirements to ensure coverage of all key areas of learning throughout Key Stage One and Key Stage Two. We use these as the basis for our half termly overview which is broken down further within our medium-term planning. The class teacher keeps these plans in their planning file.

We adapt and extend the curriculum to match the unique circumstances of our school. When planning for science, teachers are to take into consideration the lack of life experiences of some of our pupils and ensure that the lessons they plan are relevant to the lives and experiences of the pupils.

We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit, and we plan progression into the schemes of work, so that the children are increasingly challenged as they move through the school. It is expected that teaching in each unit will develop scientific skills as well as subject knowledge and understanding of age-appropriate scientific vocabulary

USE OF ICT

Teachers are to implement the use of ICT as appropriate within their lessons to enhance children's learning and recording skills (e.g. purple mash, photographs, videos).

HRSE

We acknowledge that there are close links between the teaching of Science and H.R.S.E. It is the duty of staff to ensure that they cover through Science the appropriate units on health and human development identified in the H.R.S.E. curriculum and policy.

ASSESSMENT IN SCIENCE

At The Blessed Sacrament Catholic Primary School, assessment is an integral part of the teaching process. Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made. Teachers are expected to use oral responses, individual science books as well as whole class science journals to provide evidence for assessment of science.

After each unit has been taught, teachers complete an assessment document. This document requires teachers to assess both scientific knowledge and working scientifically skills. Teachers are responsible for ensuring this data is shared with the subject leader. This assessment document allows class teachers and subject leaders to track standards within Science and to direct any CPD and support where appropriate.

Where necessary, teachers will follow DfE guidelines for assessing and reporting science judgements.

RESOURCES

A range of school science resources are kept in a central store. In addition to these, classrooms may also have resources which are specific to a unit they teach. Class teachers are responsible for ensuring anything they access from the central store is replaced tidily and inform Science subject lead if anything needs replacing. Teachers are encouraged to use Lancashire Library loans to access books which will enhance their science teaching.

As a school, we have access to our school garden and large outdoor areas. A wide range of outdoor equipment is stored in the shed in the garden area.

PROFESSIONAL DEVELOPMENT AND TRAINING

The Science subject leader is responsible for ensuring that all staff are adequately trained so that they are able to deliver the curriculum effectively. This may include organising CPD, leading staff meetings/INSET, sharing resources for planning and teaching, supporting colleagues, attending internal and external moderation meetings.

Staff are encouraged to speak with the Science subject lead should they require any assistance or clarification in relation to their science teaching.

HEALTH AND SAFETY

All staff are expected to be aware of any risks involved in Science activities. Teachers should plan appropriately, adhering to school and Lancashire policies for health and safety when using equipment and carrying out practical science tasks.

In addition to Health and Safety policies, Teachers are to take guidance from the 'BE SAFE' handbook (see STEM faculty lead). All staff are made aware of hazardous substances through the Control of Harmful & Hazardous Substances Handbook (COHHS). Staff can refer to the documentation as needed and further advice can be found on the CLEAPSS website www.cleapss.org.uk (see Science subject lead/STEM faculty lead for login if needed)

Staff need to ensure all participants in the activity engage in the task safely. Children need to be consulted before and throughout lessons about the health and safety required to ensure they are becoming responsible scientists. Pupils are taught to care for and use science equipment correctly.

Any accidents or incidents should be reported promptly in line with school procedures.

ROLES AND RESPONSIBILITIES

CLASS TEACHER

- To plan engaging and inspiring science lessons in line with school policy.
- To be responsible for keeping assessment documents for their class up to date.
- To maintain a classroom Science display. The display should include: child initiated questions, relevant vocabulary, a working wall added to during topic and the whole school Principles poster.

SUBJECT LEADER

- Ensure curriculum progression through the school.
- Monitor and review the Science Curriculum, pupils` standards and teaching of the subject.
- Maintain resources, their storage and availability.
- Support and advise colleagues about science.
- Encourage and seek out staff development keeping staff informed of relevant courses and encouraging shared learning experiences.
- Facilitate and arrange any Science themed weeks / days.

HEADTEACHER

- Supporting members of the STEM faculty.
- Allocating the budget.

MONITORING AND EVALUATION

Science will be monitored predominantly by the Science subject leader or another member of the STEM faculty team however members of SLT may also undertake some monitoring as part of their role.

Monitoring may take many forms including:

- Learning walks - to look for science around our school.
- Book scrutiny
- Planning/Assessment overviews checked
- Pupil voice
- Lesson observation

Feedback and evaluation

- Key strengths will be identified along with issues for attention.
- Any additional actions to be taken are noted on the science action plan for that school year.
- Teaching of science will be kept under regular review, as part of our on-going school development plans and monitor the effectiveness of this policy.

INCLUSION

It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, including gifted pupils, ethnicity and social circumstance, have access to the curriculum and make the greatest progress possible.

SEND PUPILS

The School's Policy document for Special Educational Needs explains in full the procedures which are in place for providing for pupils with Special Educational Needs. Within Science, tasks are differentiated to ensure access to the National Curriculum and to offer activities which are relevant to the conceptual development of the child.

AGT PUPILS

Pupils with above average ability are to benefit from a curriculum which offers challenge and opportunities for investigation in order to extend their learning. We aim to give very able pupils the opportunity to extend their scientific thinking through extension activities. Teachers are encouraged to use the www.stem.org.uk and www.ase.org.uk for further guidance and support.

EAL PUPILS

Pupils with English as Additional Language may need support with scientific language and vocabulary to access the curriculum. They may will need flexibility in recording methods eg visual (pictures/photographs), access to translation sites, individual teaching of key vocabulary.

MOBILE PUPILS

The school has a number of children who enter at year groups other than Reception. These children are given full access to the Science curriculum and given the same opportunities as all. Teachers will need to be aware of ensuring any gaps in prior knowledge are identified and filled.

PPG PUPILS

Pupils from challenging home backgrounds may not have had the same life experiences as children from more financially secure backgrounds. These children may need additional opportunities so that they are not disadvantaged in their learning, such as:

- Opportunities to handle materials and equipment that they are less familiar with.
- Financial support may also need to be given to allow access to extra-curricular Science activities eg clubs/trips as appropriate.



Science Policy

April 2019

The implementation of this policy will be monitored by Science Subject leader in consultation with STEM faculty leader.

This policy will be reviewed as appropriate by the FCC committee on behalf of The Governing Body.

Intended Policy Review Date – July 2022

Approved by: _____ (Headteacher)

Date: _____

Approved by: _____ (Governor)

Date: _____