ENGLISH MARTYRS

CATHOLIC PRIMARY SCHOOL

A VOLUNTARY ACADEMY

A MEMBER OF

THE BISHOP KONSTANT CATHOLIC ACADEMY TRUST

SCIENCE POLICY

Updated May 2025

Mission Statement

We at English Martyrs believe that the Catholic Faith is central to and permeates all aspects of school life.

Through the virtues of love, hope, temperance, practical wisdom, solidarity, patience and courage, faithfulness, justice, we aim to foster a caring environment where children and adults know the virtues in their heart and show them through their words and actions.

We positively encourage and enable the children to fulfil their own potential, building their self-confidence and self-esteem and equip them with the knowledge and skills that they will require in later life.

We recognise the importance of and aim to develop a working reciprocal partnership between home, school and parish.

'Walking with Jesus, God's Love in action.'

Aims and Objectives:

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We at English Martyrs Catholic Primary School believe that the teaching of science develops in children an interest and curiosity about the world in which they live and fosters in them a respect for the environment. Through delivering science through the National Curriculum, we aim to:

- Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world.
- Develop, through practical work, the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesising, and increased use of precise measurement skills and ICT.
- Encourage and enable pupils to offer their own suggestions, to be creative in their approach to science, and to gain enjoyment from their scientific work.

- Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms, which are relevant and meaningful to them.
- Teach the children how to work scientifically through contexts taken from the National Curriculum for science.
- Encourage children to collect relevant evidence, to question outcome, and to persevere.
- Encourage children to treat the living and non-living environment with respect and sensitivity.
- Stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.

The Philosophy and Ethos:

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Through the programmes of study in the National Curriculum Science document, children will acquire and develop these skills throughout their primary years with us.

We believe that science promotes communication in a specific and precise language involving mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving.

As their knowledge and understanding increases, and they become more proficient in selecting and using scientific equipment and collating and interpreting results, they will become increasingly confident in their growing ability to come to conclusions based on real evidence. Science fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living. It allows children to develop original ideas and a questioning attitude.

Planning & Teaching

Science is a National Curriculum core subject and it is taught in blocks as Biology, Physics or Chemistry. There is a strong focus each half term on the investigative element Working Scientifically following the requirements of the National Curriculum and all classes have the different investigation titles on display throughout the year.

At Foundation Level, specific science teaching and exploration is planned as part of the area of learning - 'Understanding of the World'. Here, pupils are developing the crucial knowledge, skills and understanding that help them to make sense of the world. This forms the foundation for later work in science, as well as other subjects such as Computing and Geography. The area of learning gives pupils opportunities to solve problems, make decisions, experiment, predict, plan and question in a variety of different contexts and to explore and find out about their environment that have significance in their lives.

In key stage one and two, it is expected that science will be taught weekly however, the time spent on science may vary from week to week and in each topic that is taught. The responsibility of ensuring adequate coverage of the National Curriculum for Science lies with the class teacher and is monitored by the subject leader.

Subject knowledge Organisers for each topic are stuck at the start of each topic. At the beginning of each topic, there is a focus on vocabulary, looking to pre-teach new vocabulary.

We are part of the Bishop Konstant Catholic Academy Trust Science planning, which is trust wide. This provides teachers with a long-term plan for science on the yearly overview and planning is provided for each topic of the science curriculum in each year group. Teachers adapt the plans to suit the cohort of their pupils. Working Scientifically is fully integrated into the topic being taught and opportunities are also given to 'teach' skills for Working Scientifically where needed. Where there is no fixed strand being taught. Teachers will spend the science time 'Working Scientifically' investigating the world around them and asking and answering questions and fulfilling the objectives for the year group. These are evaluated at the end of each half term and

monitored by the subject leader. All planning is stored electronically. We have recently started following Grammarsaurus for science, however teachers are still encouraged to use the BKCAT plans where necessary.

Marking and Feedback

Pupil's work should be marked in line with the Marking Policy and should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods. Future lessons should depend on class success, evaluated through marking and observations made during the lesson.

Monitoring:

Monitoring of children's progress begins with pupil progress meetings but continues with the subject leader evaluating further evidence to ensure children are making progress. This monitoring happens through examination of work in books, pupil interviews, analysis of assessment results and the assessments used. Following monitoring activities feedback is given to staff about how they can strengthen their practice and CPD (professional development) opportunities built in where it would be deemed valuable. These might take the shape of inputs during staff meetings or by a variety of other means. Where specific initiatives have been put in place through action planning for school development, these are monitored by the subject leader in order to evaluate their impact. Findings are reported to the Head Teacher and the Academy Council through use of the 'Subject Leader's Ongoing Report'.

Display and Resources

Scientific vocabulary will be displayed in the classroom, this will be large enough for the pupils to read and easily accessible so they can use this confidently in their work both verbally and in writing. Working scientifically skills will also be on display and made explicit to the pupils in teaching. A scientist of the topic will be displayed within the classroom and updated when the topic changes.

Roles and Responsibilities

Executive Head teacher and Head of School

Monitors the management of science across school, ensuring that the subject leader is provided with the following;

- Time to complete subject specific duties
- CPD based on the development needs of the leader and school wide priorities
- Guidance and support
- The SDP, class data and other data or documentation which the subject leader could need.

Subject Leader

Required to ensure that science teaching and learning is good across school by conducting the following duties;

- Monitor teaching and learning via;
    - Observations
    - Book scrutiny
    - earning Walks
    - Pupil, Staff and Parent Questionnaires

- Write, review and update the policies linked to science based on school, academy, curriculum and/or government wide changes.
- Evaluate teaching and learning (post monitoring) to identify successes and next steps, which will then feed into the SDP, maths action plan, identify CPD needs and training, delivered in staff meetings or through INSETs.

- Audit resources to ensure that both the children and the teachers have what they need to learn and to teach.
- Analyse school data against previous cohorts, local and national statistics. Use this analysis to identify any actions.
- Train teaching and support staff where CPD has been identified.
- Reporting to parents, the Senior Leadership Team and the Academy Council on the progress and developments in science.

English Co-ordinator

The English co-ordinator should work closely with the Science Co-ordinator on matters relating to the;

- Promotion of literacy skills in science lessons
- marking and feedback policy
- analysis of data (how do the subjects compare and does this affect the SDP)
- ways that working together will increase efficiency and consistency in the subject leadership of these two core subjects.

Maths Co-ordinator

The Maths Co-ordinator should work closely with the Science Co-ordinator on matters relating to the;

- Promotion of applying math skills in science lessons
- marking and feedback policy
- analysis of data (how do the subjects compare and does this affect the SDP)
- other ways that working together will increase efficiency and consistency in the subject leadership of these two core subjects.

Classroom Teachers/HLTAs

It is fundamentally important that the class teachers read and contribute to the drafting of this policy because they will be implementing, 'good practise' set out within this document on a daily basis, by;

- Adhering to this policy and linked policies, but also bringing to the attention of the subject leaders, anything which is not working in practise, so that it can be discussed further.
- Routinely assessing the children against the year group expectations to plan and deliver a curriculum that revolves around their next steps.
- Use assessments to target children, during pupil progress meetings, which require additional support and intervention to help them achieve end of year expectations.
- Liaising with parents in any way which might help them to support their children's learning at home.
- Planning annually, termly and weekly to ensure coverage of the curriculum.
- Marking in a timely fashion according to the marking and feedback policy.
- Ensuring support assistants are used effectively as part of classroom practise.

Support Staff

Under the direction of the teacher, support staff are the school's most valuable resource towards helping children achieve the best possible outcomes. They are expected;

- To keep subject knowledge up to date, especially reviewing when moving into a new year group. If in doubt, support staff should liaise with the subject leaders to arrange appropriate training or CPD.
- Read and follow the teachers planning.
- Use initiative and speak to the teacher if a group they are working with has unexpectedly achieved the lesson aims earlier than expected or that they are finding the work too difficult.
- To support and encourage the children through excellent questioning skills (see blooms taxonomy).
- Ensure class science resources and clearly labelled to allow for easy access.
- When working with individuals and/or groups, feedback to the teacher in whichever method has been agreed by the teacher and the support staff member.

Parents

Parents are their children's first teachers and this role is continued throughout their lives. With the support of parents, the children are far more likely to achieve end of year age related expectations. Parents could support their child's mathematical development by;

- Having and sharing a positive attitude towards science.
- Supporting the children to complete any science homework on time.
- Contacting the class teacher if you have any questions.
- Helping your child to use the skills they have learned in school by helping them to see science in action in their everyday lives. For example, when baking can they see the changing of states? When a kettle is boiling, do they know that condensation and evaporation is taking place?

Pupils

Everyone else's role is to help this group achieve their best! Which is why we expect the following from our pupils, at English Martyrs;

- Have a can do attitude,
- Try your best,
- Ask for help when you need it but also develop skills to help yourself become unstuck,
- If there is a time that you have finished your work, use your initiative and ask for something else to do,
- Be kind and supportive towards your friends,
- Keep your work neat and tidy,
- Hand your homework in on time.

Academy Council

The Academy Council members are accountable for ensuring that the schools is working towards achieving the high wellbeing, safety and achievement of the students attending English Martyrs. They will;

- Attend curriculum meetings hosted by the science co-ordinators and question the leaders on their knowledge of the curriculum area and developments across school.

Inclusion and equal opportunities:

At English Martyrs Catholic Primary School, we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class. In school, we aim to meet the needs of all our children by differentiation in our science planning and in providing a variety of approaches and tasks appropriate to ability levels. By delivering enhanced and enriched activities, more-able children will be able to progress developing a depth of skill and understanding appropriate to their abilities.

Assessment and Record Keeping:

Assessment for learning is continuous throughout the planning, teaching and learning cycle. However children are more formally assessed at the end of each unit in KS1 and KS2 using a variety of methods:-

- At the end of the unit, children complete the Grammarsaurus assessment – this is then used to inform future flashback questions to ensure gaps in knowledge are taught.
- Science achievement and progression is tracked on the school assessment system Insight.
- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work/materials/investigations produced by children together with discussion about this with them.

Health & Safety:

At English Martyrs, the pupil's safety is paramount to us. When experiments and investigations are being done that carry with them any element of risk, risk assessments will be carried out before the investigation according to school policy. All staff are aware of the Be Safe document from ASE and it is their responsibility to make reference to it & use it when planning potentially hazardous activities or for general H&S advice. This needs to be clear at the planning stage.

Confidentiality:

Please refer to the school confidentiality policy to ensure the welfare of both our children and our staff is safeguarded.

Review of policy

The policy will be reviewed annually by the subject leader and it will then be shared and consulted with the rest of the teaching staff and Academy Council.

Other policies/documents to be read in conjunction with the Science Policy:

Calculation policy
National Curriculum 2014
Marking Policy
SEN Policy
English Policy