



St. Edmund's Catholic Primary School

'Together we learn and grow through worship and celebration'

Science Policy

Committee responsible for policy	Curriculum and Achievement
Coordinator	Alison Gannon
Statutory/Non-statutory	STATUTORY
Frequency of Review	Free to determine – every 3 years or earlier if required
Date of last review Approved by Staff/ SLT/Committee/FGB	September 2019
Date of next review	September 2022
Purpose of policy	To outline the requirements of the curriculum subject
Consultation	Staff
Links to other policies	All other subject policies Marking, Planning and Assessment

This policy reflects the school's values and philosophy in relation to the teaching and learning of Science. It sets out a framework within which staff can operate and gives guidance on planning, teaching and assessment.

Science is a core subject within the National Curriculum. The subject consists of Programmes of Study which are divided into EYFS, Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2. This policy should be read in conjunction with the Programmes of Study, which set out in detail what pupils will be taught.

Aims

For young children, Science is an introduction to the world of nature, processes and methods. It is largely a practical subject, which develops a spirit of enquiry through encouraging children to become curious about the world around them. Children will be actively involved in investigations and

experiments thereby developing their questioning, reasoning and understanding of scientific concepts.

Pupils will work at the levels appropriate to their ability.

The teaching of Science aims to:

1. Develop a curiosity about the world in which we live.
2. Develop questioning skills through practical approaches to investigative work.
3. Develop and use scientific methods when carrying out investigations.
4. Draw conclusions from their work and evaluate the evidence gathered.
5. Record their findings as accurately as possible in appropriate ways for their age and ability.
6. Work co-operatively with others, valuing and respecting their opinions.
7. Develop an understanding and appreciation of all living things.
8. Develop an understanding of scientific vocabulary

The teaching of Science will develop the key scientific skills of:

- Planning and carrying out investigations
- Hypothesising and predicting
- Observing and measuring
- Obtaining and considering evidence
- Presenting results by appropriate means including use of ICT.
- Evaluating results and drawing conclusions.

These aims and objectives are consistent with our school philosophy.

Planning and Organisation

In order to achieve these aims, Science is organised into a scheme of work based on the current programmes of study. In the Foundation Stage, topics are arranged to ensure coverage in all areas of learning and development, whilst KS1 and KS2 follow the programmes of study appropriate to each specific year group. Organising the teaching of Science topics in this way ensures continuity and progression throughout the school and enables children to build upon existing knowledge.

The teaching of science is linked to the current class theme and where not, should encourage the development of skills to be able to work scientifically. It is expected that Science will be the subject driver of up to two themes per year for each Year Group. Within the themes, teachers will look to link Science with other subject areas to provide cross-curricular links including: English, Maths, Computing and, Art, Design and Technology, Music, PE and Humanities – Geography and History.

All class teachers are responsible for the teaching of Science. Topics are taught through a variety of methods: practical investigative work, exploration, demonstration and research. Teachers need to use their flair, enthusiasm, professional knowledge and judgment, to identify the most suitable, enjoyable and safest methods appropriate for the work being conducted.

Planning is used to:

- Set clear, learning objectives and achievable goals
- Ensure work is matched to pupils' abilities, experience and interests.
- Ensure continuity, progression and subject coverage throughout the school.
- Evaluate and assess pupil progress.
- Inform future planning and provide criteria for the evaluation of teaching and learning

Planning is the responsibility of teachers and the co-ordinator. Plans are available for the Head Teacher, curriculum co-ordinators and other teachers.

Time allocation

Subject teaching is planned so that each year group allocates the equivalent of two hours per week over the course of an academic year.

Class Organisation and Teaching Style

Within classes, pupils are taught in a combination of ways, i.e. individually, collaboratively in groups (ability and mixed ability) or in classes according to the learning task. The organisation will vary greatly depending on a number of factors:

- Space available
- Type of activity
- Safety and the degree of supervision needed
- The children's experience and ability
- Use of time and additional help available

Children will be encouraged to use a variety of means for communicating and recording their work. They will be provided with opportunities for evaluating the activities they have carried out and be given discussion time to articulate scientific concepts, use scientific vocabulary, and interpret and consider the results they have observed.

Equal Opportunities

All children have equal access to the Science curriculum and resources, regardless of gender, race, ethnicity, religion or ability. Displays and references to Science in society show positive role models of gender, race, ethnicity and disabilities.

Where appropriate, teachers are reminded to provide children with information relating to important scientific figures for example: Charles Darwin, Marie Curie, Edward Jenner, Louis Pasteur, Helen Sharman. They will also ensure that there is a balance of emphasis given to Women in Science in order to dispel stereotypes where they might occur.

Assessment, Record Keeping, and Reporting

In all classes, teachers use their professional judgement and information from children's ongoing work to assess how they are progressing in Science at the end of each academic year. Teachers use observations and performance in class to assign a National Curriculum level to each child (from Years 1-6). This is recorded on the Class Profile which is stored in Integris (Years 2 and 6) and other year

groups stored on the server. By the end of each keystage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programmes of study.

Teachers in Key Stage 2 may use questions selected from Testbase (an on-line catalogue of all past SATs questions for Year 2 and Year 6), plus Mini-SATs, which are tests linked to each unit of work, in order to support them make judgements as to whether the child/ren are working towards, at or exceeding national expectations.

At the end of each year, this judgement is reported to the parents.

Spiritual, Moral, Social and Cultural

Teachers look for opportunities to develop a sense of wonder in Science.

Resources

General science resources & equipment are kept in the Science cupboards in the Y5 corridor. For each theme studied there is relevant science equipment in each theme box. Children will not be asked to collect or return resources to this area without supervision from a member of staff or other significant adult.

The science co-ordinator is responsible for the overall maintenance of the resources. Additional resources in the form of books, posters & training materials are also kept in the cupboard.

Health and Safety

At all times SAFE use of equipment will be emphasised. Where appropriate, lessons will begin with a reminder for the children of safe and sensible ways of handling equipment and resources.

Where animals, mini-beasts, and flora are being used, children will be reminded to treat all living creatures sensitively and with respect in order that they may be returned to their natural environment.

If chemicals such as household substances are to be used, children will be reminded about handling these sensibly, avoiding touching their eyes or mouths until they have washed their hands thoroughly using soap. During investigations where substances maybe mixed together or where fumes maybe given off, children will be reminded not to deliberately inhale large quantities of fumes and staff will ensure that classrooms are well ventilated.

Where heating materials may be necessary, it is suggested that staff demonstrate these activities. Where appropriate, only upper school pupils will carry out such investigations and then only with strict supervision. Any activity where heating is involved will be carried out using candles, which will be placed in a holder to prevent it from falling; this in turn will be placed on a large metal tray filled with sand. A fire extinguisher will be readily available and children with long hair will be instructed to tie it back securely.

Science is and should be a fun and enjoyable activity just as long as basic safety checks are carried out and children are made aware of any potential hazards.

Monitoring and Evaluation

The purpose of monitoring and evaluation activities is to raise the overall quality of teaching and levels of pupil attainment.

The Science co-ordinator monitors planning, children's work and teaching on a regular basis in line with the school's monitoring cycle. The Senior Leadership Team oversee the work of the coordinator and may carry out monitoring activities in line with the school's policy for monitoring.

Science is also monitored by the Governing Body through the work of the Curriculum and Achievement Committee.

Review of Policy

The head teacher & Science co-ordinator are responsible for ensuring that staff and governors are provided with the opportunity to review this policy on a regular basis.