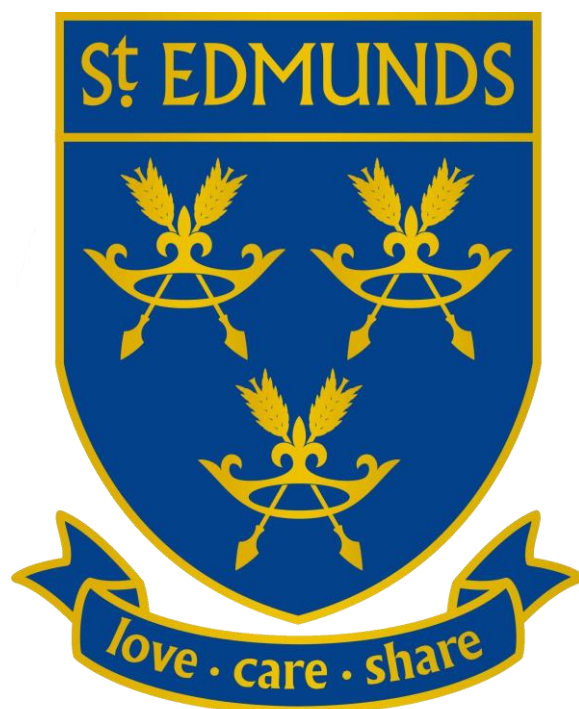


St Edmund's Catholic Primary School



Science Policy

March 2021

The policy below has been reviewed in light of the Covid-19 pandemic. Amendments will be numbered and listed at the bottom of the document.

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Introduction and aims

This policy aims to:

Highlight the ways in which St Edmund's Primary School engages our pupils in the teaching and learning of Science. How we as a school promote a love of science through the curriculum.

Legislative requirements and non-statutory guidance

This policy is written with reference to:

National Curriculum Primary programmes of Study for KS1 and KS2.

Roles and responsibilities

Subject Leader

It is the responsibility of the subject leader to:

- Monitor the standards of teaching and children's work throughout the school.
- Supporting colleagues in their teaching and understanding of the science curriculum.
- Commune with science leads in other local schools.
- Monitor the budget.
- Source resources, trips and workshops to support learning.
- Organising Science Week and STEAM days.

The Head teacher and Senior Leadership Team (SLT)

The Head teacher and SLT will review all curriculum policies every two years and through monitoring and assessment procedures will look at the strategic overview of how this policy is being implemented.

The governing board

Curriculum governors will review this science policy in conjunction with the Head teacher and monitor the policy's effectiveness.

Teachers

Teachers will ensure that their planning and teaching reflects the practice and procedures outlined within this policy, having regard also to the progression of skills map.

Curriculum planning

Early Years Foundation Stage

EYFS planning provides opportunity to learn through play. Through scaffolded environments children in EYFS are challenged, supported and encouraged to explore, develop and experiment as they play to develop an understanding of the world around them. The EYFS strand 'Understanding the World' leads directly to scientific elements of the curriculum and sets a firm foundation for formalised Science learning in KS1 and KS2.

Key Stage One and Key Stage Two

Planning in Key Stage 1 and 2 follows the LCP and Collins Connect Snap Science schemes of work for science to support curriculum planning. Our planning is formulated into three phases (long-term, medium-term and short term). The long-term plan maps highlights units studied in each term across Key Stage 1 and 2. In many areas' science is combined with other subject areas including STEAM projects, but it should also be taught as a discrete subject. Planning is the responsibility of the class teacher, and reference should be made in the first instance to the National Curriculum for Key Stages 1 and Key Stages 2.

Teaching and Learning

A principle aim of science within St Edmund's is to develop children's knowledge, skills and understanding. We approach this through a variety of teaching and learning styles within the science lessons. Whole class teaching and enquiry based research allows the children not only to ask questions but also to find out the answers to scientific questions. Various resources are available for the children to explore and manipulate such as graphs, pictures, photographs, models and equipment. Children are encouraged to take part in discussions based around their topic and present their ideas and findings to the rest of the class. In most cases the children take part in 'real' scientific activities which are relevant to their learning and experiences. Suitable learning opportunities are available to all children and we recognise in St Edmund's the different scientific abilities of all our pupils. We aim to be inclusive through matching the task to the child's ability:

- Tasks which are open ended and have many possible responses.
- Setting tasks with increasing levels of difficulty (children can work through these at a level which is appropriate to them).
- Providing resources to support and extend the children.
- Utilising teaching assistants to work with groups or individuals.

Some children will require closer supervision and more adult support to allow them to progress whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to

progress to a higher level of knowledge and understanding appropriate to their abilities.

To encourage a more child led approach to scientific enquiry, at the start of each topic the children should be given the opportunity to come up with their own questions. Teachers are then able to use this information to plan for investigations using the children's ideas.

Children should be given access to the following opportunities in their science learning:

Knowledge and Understanding:

Children should:

- be curious about the things they observe, experiencing and exploring the world around them with all their senses.
- use this experience to develop their understanding of key scientific ideas and make links between different phenomena and experiences.
- begin to think about models to represent things they cannot directly experience.
- try to make sense of phenomena, seeking explanations and thinking critically about claims and ideas.

Processes and Skills

Children should:

- acquire and refine practical skills needed to investigate questions safely
- develop skills of predicting, asking questions, hypothesising, planning, fair testing, observing, measuring, recording, evaluating results based on evidence and understanding, drawing conclusions and using these skills in investigative work
- practise mathematical skills in real life contexts
- learn why numerical skills and mathematical skills are useful and helpful in understanding

Values and Attitudes

Children should:

- work with others, listening to their ideas and treating these with respect
- develop respect for evidence and evaluate critically ideas which may or may not fit evidence available
- develop the ability to work in an increasingly independent way

develop a respect for the environment and living things and for their own health and safety.

Assessment

We assess children's work in science by making informal judgements as we observe them during lessons. These individual assessments of children are based on a combination of knowledge and skills. Once a piece of work is completed the teacher marks work and writes a comment where necessary. At the end of each unit the children complete the Rising Stars Test for that particular topic. This test will highlight

what progress the child has obtained for this particular topic and is recorded, as part of the teacher assessment, on Scholar Pack and in the science assessment folder. This allows the teacher to monitor the child's progress in science. Teachers make a judgement of the children's work in science at the end of Key Stage 1 and 2 according to the Government guidelines. The progress of the pupils in science is reported to the parents in the parent's consultations and also in the end of year report. Photographs are a useful way of recording some of the practical investigations.

Inclusion and Equal Opportunities

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

To ensure all children are supported in their learning and development, teachers at St Edmund's provide differentiated tasks and activities to allow equal opportunities for all abilities. This includes providing specific tasks and opportunities relating to the learning for SEND children to work scientifically, with support. Some children will require more supervision and adult support to allow them to progress through the curriculum. More able children should be given opportunities to further extend their knowledge and understanding through differentiated activities.

At St Edmund's we encourage a love of science. We have a virtual science club set up for children who enjoy science inside and outside of the classroom, through Google Classroom members of the science club are encouraged to share science at home.

Additional opportunities and Community Links

Each year group is given the opportunity to engage in whole school science activities and events. Some of these include:

- STEAM Days
- British Science Week
- Whole school science fayre
- KS1 Science book of the month.
- KS2 Science book of the month.

Additional external trips and visits from workshops children have the opportunity to participate in include:

- The Science Museum.
- Park trips to observe seasonal changes.
- STEM Ambassadors
- Incredible Eggs, hatching chick experience.

Achievable Experiments to do at home to be published in the half termly school newsletter.

Monitoring and Evaluation

The subject leader will take responsibility for monitoring the effectiveness of this policy in school practice on a day to day basis, taking part in monitoring of their subject through learning walks, book scrutinises, moderations and discussions with children and class teachers throughout the year.

They will assess school practice against the aims and objectives set out at the beginning of this policy and provide evidence of the policy in practice. This could take the form of:

- the assessment of pupils' work and their achievements.
- the analysis of teachers planning as seen in short term plans.
- discussion amongst groups of staff or the whole staff.
- classroom observation analysis of SAT results.
- analysis of summative assessments.

The Head teacher and SLT will meet with subject leaders [once a term?] to evaluate the impact of this policy and identifying actions to remedy any problems arising or address any changes in practice.

This policy is to be reviewed in September 2021

Covid-19 Amendments

Teachers should be aware of the requirements for cleaning and isolating equipment to reduce the potential spread of the virus.

Resources can be shared between bubbles. They must be cleaned thoroughly using disinfectant or using hot soapy water when available. Alternatively, equipment should be quarantined for 72 hours before sharing with another bubble. Items or equipment can be brought in from home but must be quarantined for 72 hours.

Due to Covid-19, the annual trip to The Science Museum for SEND Children has been cancelled.