

Science
Subject
Policy



2020-2021

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following.

Aims and objectives:

- To develop pupils' enjoyment and interest in Science and an appreciation of its contribution to aspects of everyday life.
- To use a range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of Science.
- To introduce pupils to the language and vocabulary of Science.
- To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements, predictions, planning, analysis and evaluation.
- To develop pupils' use of ICT in their Science studies e.g. data logging, research and secondary evidence.
- To encourage pupils to understand the importance of a 'fair test'.
- To develop the ability to record the results of findings in a variety of ways including tables, charts and diagrams.
- To understand the implications and applications of Science in everyday situations.
- To enable children to become effective communicators of scientific ideas through collaborative learning.

Teaching and Learning:

At St Anne's, we use a variety of teaching and learning styles in science lessons. Our main aim is to develop children's knowledge, skills, and understanding. Sometimes this is done through whole-class teaching, while at other times the children are engaged in an enquiry-based research activity. Children are encouraged to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They use ICT in science lessons where it enhances their learning. They take part in role-play and discussions and they present reports to the rest of the class. They engage in a wide variety of problem-solving activities. Wherever possible, the pupils are involved in 'real' scientific activities, for example, researching a local environmental problem or carrying out a practical experiment and analysing the results.

Children have many different scientific abilities in all classes and as teachers we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

This is achieved in a variety of ways by:

- Setting common tasks which are open-ended and can have a variety of responses.
- Setting tasks of increasing difficulty.
- Grouping children by ability in the room and setting different tasks for each ability group. Mixed ability groups are also set up in the classroom.
- Providing resources of different complexity, matched to the ability of the child.
- Using classroom assistants to support the work of individual children or groups of children.

Teaching Science to children with special needs:

Science is a practical subject which draws upon a child's knowledge and understanding of the world around him/her. The children are provided with learning opportunities to identify and solve problems and communicate through appropriate visual, verbal and numerical methods, at a level which is suited to the individual. We also provide a range of challenges, through the provision of different resources, for more able children.

Planning:

Curriculum planning in science is in three phases (long-term, medium-term and short-term).

The long-term plan maps the scientific units studied in each half term during the key stage. The coordinator works this out in conjunction with teaching colleagues in each year group. Where possible; teaching of Science is combined with Topic work, taught in 2, 3 or 4 week blocks. Otherwise Science is taught as a discrete subject when it cannot be combined.

The medium-term plans give the objectives in each unit of work. The subject lead is responsible for writing the detailed plans for each year group that map out each lesson and follows a logical order of teaching the concept and applying the concept into the children's work or investigation (where possible).

Topics are planned in science so that they build upon prior learning. Opportunities are given to all children to ensure that they all develop their skills and knowledge in each unit. Progression is built into the science scheme of work based on the National Curriculum objectives so that the children are increasingly challenged as they move from year group to year group.

The Foundation Stage:

Science teaching in the Foundation Stage is based on the Early Years Foundation Stage Curriculum. The Knowledge and Understanding of the World area of learning follows a set of objectives which are generally cross curricular and give the children the skills required to access Science when they come into the main school.

Progression:

Pupils' scientific skills and knowledge gained during the Foundation Stage and Key Stage 1 will be consolidated and developed during Key Stage 2. Pupils in Key Stage 1 will be introduced to Science through focused observations and explorations of the world around them. These will be further developed through supportive investigations into more independent work at Key Stage 2.

Assessment, recording and reporting:

At St Anne's Catholic Primary School we assess children's work in science by making informal judgements as we observe them during lessons. We use regular pre-and post assessments to assess the children's knowledge and understanding and regular retrieval tasks throughout the topic.

Teachers make formal assessments of the children's work in science at the end of Key Stage 1 and Key Stage 2. Parents are informed of their child's progress at parents' meetings and in their end of year report.

Health and Safety:

All staff must know how to use all resources correctly and safely and if unfamiliar, they must discuss these with the co-ordinator. It is the class teacher's responsibility to discuss concerns with the co-ordinator prior to teaching. Teachers should be aware of the potential risks of the resources in all the topics taught. During planning meetings, risks should be discussed, shared and recorded in planning.

It is the duty of all staff to take reasonable care for the health and safety of themselves and others who may be affected by their actions or omissions. The staff are able to refer to CLEAPSS (www.cleapss.org.uk) for the purpose of obtaining risk assessments and for general advice on health and safety matters in Science.

Role of the co-ordinator:

It is the responsibility of the science coordinator to monitor the standards of children's work and the quality of teaching in science. The science coordinator is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

Managing Resources:

The co-ordinator will make sure that there are sufficient resources and in good working condition to allow investigations, observations and measurements to be carried out in small groups. Resource boxes are labelled and stored in the Teaching Assistants room. All teachers

are responsible for keeping the equipment tidy and returning all resources to the Teaching Assistants room. ICT software is stored in the Meeting Room.

Name of coordinator: S.Dade

September 2020

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