



# St. Mary's RC Primary School

## Science Policy

Date policy last reviewed: March 2022

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## **Our Mission**

We aim to provide a safe, caring, Catholic community where each member is valued and respected and enabled to achieve their potential through a broad and balanced curriculum. This is summed up neatly in our school motto: To learn and grow together in Christ.

## **INTENT**

At St. Mary's, we intend for our children to explore, broaden their scientific views and deepen their understanding of the world around them through science.

Through our science curriculum we aim to:

To provide interesting and practical lessons to create an enthusiasm towards science.

To provide the children with opportunities and experiences to help them understand the wider world.

To develop a natural curiosity about the world around them.

To encourage the children to ask questions and try to find answers.

To enable the children to understand the world through the scientific disciplines of Chemistry, Biology and Physics.

To promote and develop their scientific vocabulary.

To teach and develop scientific skills of enquiry through planning, implementing and evaluating their own practical investigations in a fun and meaningful way.

### **1. Aims and Objectives**

Science is a core subject in the national curriculum. This policy outlines the purpose, nature and management of the science taught in St. Mary's RC Primary School. The policy has been written to develop a shared understanding of how science is taught and learned at the school. The implementation of this policy is the responsibility of all teaching staff.

## **IMPLEMENTATION**

### **2. Statutory Requirements**

2.1 This policy reflects the requirements of the *National Curriculum Programmes of Study*, which all maintained schools in England must teach.

2.2 It also reflects requirements for inclusion and equality as set out in the *Special Educational Needs and Disability Code of Practice 2014* and *Equality Act 2010*, and refers to curriculum-related expectations of governing boards set out in the Department for Education's *Governance Handbook*.

2.3 In addition, this policy acknowledges the requirements for promoting the learning and development of children set out in the *Early Years Foundation Stage (EYFS) statutory framework*.

### **3. Subject Organisation**

### 3.1 Planning

- 3.1.1 In Early Years Foundation Stage (Reception), the children experience science through the teaching of the seven Early Learning Goals. Science makes a significant contribution to the objective in the Early Learning Goals of developing a child's knowledge and understanding of the world. The skills developed in the stage aim to give the children knowledge and skills to begin the national curriculum.
- 3.1.2 In Key Stages One and Two, Science is planned and taught weekly following the National Curriculum statutory requirements for each year group across the school. Each year group has specific topics to cover following a personalised lesson progression for the children at St. Mary's. This is supported by knowledge organisers highlighting key knowledge and vocabulary for each topic.
- 3.1.3 The statutory scientific skills required are embedded throughout the teaching of each science topic across all year groups. These skills are built upon in each year group, so that children are increasingly challenged and further develop their scientific skills.

### 3.2 Cross-curricular links

#### 3.2.1 English

There are opportunities in our curriculum where Science can contribute to the teaching of English through reading, writing, speaking and listening.

Children look at scientific texts and develop oral skills through discussions and sharing of knowledge. It also encourages children to come up with questions and try to answer them. Children can develop their writing skills through science in a variety of ways, not just in Science lessons but through extended writing and research.

#### Mathematics

Science shares strong links with mathematics through taking measurements (length, time, mass etc), data handling and presenting data in tables, graphs and pie charts. It also encourages children to predict and estimate through practical investigations.

#### Geography

Science and geography are closely linked with a focus on exploring the world around us including plants, animals and habitats and how to care for it.

#### Personal, Social and Health Education (PSHE) and Citizenship

Science makes a significant contribution to the teaching of Personal, Social and Health Education. Through the topics covered in Science, children look at the importance of a healthy lifestyle and looking after our teeth and hygiene. Through exploring habitats, children learn about the impact of humans and pollution on wildlife. Science also promotes discussion and debates on various topics.

#### ICT

Computing plays an important role in science and development of scientific skills. It gives children an opportunity to research, collect, analyse and present their scientific findings, as well as access a range of online investigations which wouldn't be possible to conduct in a school environment.

## **4. Equal Opportunities**

### 4.1 Protected Characteristics and Inclusion

- 4.1.1 All children in school have regular access to Science appropriate to their stage of development. Challenge for all is integral to our teaching and we aim to encourage all pupils to reach their full potential through the provision of varied opportunities. We

recognise that our Science planning must allow pupils to gain a progressively deeper understanding and competency as they move through our school.

4.1.2 Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teacher's planning will ensure that children who are more able or those with low prior attainment are catered for.

The Pupil Premium strategy outlines provision for pupils from disadvantaged backgrounds.

Teachers will plan lessons so that pupils with SEN and/or disabilities can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects.

Further information can be found in our statement of equality information and objectives, and in our SEN policy and information report.

4.1.3 The governing body have wider responsibilities under the Equalities Act 2010 and will ensure that our school strives to do the best for all of the pupils, irrespective of disability, educational needs, race, nationality, ethnic or national origin, pregnancy, maternity, sex, gender identity, religion or sexual orientation or whether they are looked-after children.

## **5. Spiritual, Moral, Social and Cultural Development**

5.1 Science in our curriculum gives children the opportunity to question and investigate many different processes that affect living things and the impact these have on God's World.

It gives children a chance to reflect on how we can care for God's World and those living in it, through looking at plants, animals and habitats and learning about their bodies and how to look after them.

It provides opportunities to understand and appreciate the wide range of cultural and scientific influences that have shaped our lives through learning about famous scientists and theories. It also presents opportunities to discuss moral and ethical issues that arise in the scientific world and understand various viewpoints.

## **6. Assessment and Reporting**

6.1 Teacher assessment is the basis for assessment in science. The teacher will assess children's knowledge through observations and discussion with the child and marking their written work. Formal assessment of key knowledge will take place at the end of a topic. Assessment sheets are completed by the class teacher based on the specific key learning targets for each science topic and includes the scientific skills for the age group

taken from the national curriculum. The children are assessed as working towards achieving the key learning, secure in the key learning or working at greater depth. The science subject leader is responsible for ensuring that teachers' assessments are accurate. They will keep a record of assessment data and create a portfolio of evidence for science being taught around the school.

## **7. Role of the Subject Leader**

### **7.1 Monitoring and Review**

The Science subject leader, SLT and class teachers are responsible for monitoring the standard of the children's work and the quality of teaching in Science. The Science subject leader is 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 school. The Science subject leader will report to the Governing Body annually.

### **7.2 Resources**

Resources are held in central stores within school and on the school's server. At present, science resources can be found in the main building. All resources are organised by topic and labelled.

## **8. Role of the Governing Body**

8.1 The governing body will monitor the effectiveness of this policy and hold the headteacher to account for its implementation.

8.2 The governing body will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets
- Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN)
- The school implements the relevant statutory assessment arrangements
- It participates actively in decision-making about the breadth and balance of the curriculum
- It fulfils its role in processes to disapply pupils from all or part of the National Curriculum, where appropriate, and in any subsequent appeals

## **9. Additional Subject Information**

### **9.1 Health and Safety**

Children will be taught how to use scientific equipment safely. Scientific investigations will be risk assessed (if necessary), modelled and led by teachers to ensure they are carried out safely.

## **10. Linked Policies**

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

- Marking and Feedback
- Special Educational Needs and Disabilities
- Assessment
- Behaviour
- Presentation
- Pupil Premium

## **11. Policy Review**

This policy will be reviewed March 2023