In God's love we believe and achieve

St. Michael's

Catholic Primary School

Science Policy

St Michael's - Science Policy

Introduction

This policy outlines the teaching, organisation and management of science taught and learnt at St Michael's Catholic Primary School. The school's policy for science is based on the 2014 Curriculum for Key Stages 1 and 2 and the 2020 Development Matters document for EYFS. The policy has been drawn up to reflect the whole school approach to science and has been discussed with staff.

The implementation of this policy is the responsibility of teaching staff. Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level.

The aims of science are to enable children to:

- Ask and answer scientific questions;
- Plan and carry out scientific investigations, using equipment, including computers, correctly;
- Know and understand the life processes of living things;
- Know and understand the physical processes of materials, electricity, light, sound and natural forces;
- Know about the nature of the solar system, including the earth;
- Evaluate evidence and present their conclusions clearly and accurately.

Teaching and learning style

We use a variety of teaching and learning styles in science lessons. Our principal aim is to develop children's knowledge, skills and understanding with the aim to develop resilient life-long learners. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children 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 also use ICT in science lessons where appropriate. Wherever possible, we involve the pupils in 'real'

scientific activities, for example, researching a local environmental problem or carrying out a practical experiment and analysing and presenting results. We recognise that there are children of widely different scientific abilities in all classes and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child and adapting learning as and when needed.

We aim to develop the aspirations of our pupils at St Michael's and do this by teaching the children about local scientists and increasing their science capital.

Science Curriculum Planning

St Michael's follows the programme of study outlined in the Curriculum 2014 and the 2020 Development Matters documentation. We ha personalised our curriculum to allow opportunities for knowledge and skills to be built upon.

Our long-term plans give details of each unit of work for each term and shows ways learning can be embedded through applying knowledge in different subject areas. These plans list the specific learning objectives, activities and outcomes for each lesson. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit and we also build progression into the science scheme of work, so that the children are increasingly challenged as they move up through the school.

Early Years Foundation Stage

We teach scientific skills in EYFS as in integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in the Development Matters document.

In Nursey children are given opportunity to:

Use all their senses in hands on exploration of natural materials, explore collections of materials with similar and/or different properties, talk about what they see, using a wide vocabulary, plant seeds and care for growing plants, understand the key features of the life cycle of a plant and an animal, begin to understand the need to respect and care for the natural environment and all living things, know that there are different countries in the world and talk about the differences they have experienced or seen in photos, explore how

things work, explore and talk about different forces they can feel and talk about the differences between materials and changes they notice.

In Reception children are given opportunity to:

Explore the natural world around them, describe what they see, hear and feel whilst outside recognise some environments that are different to the one in which they live, understand the effect of changing seasons on the natural world around them, know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class and understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Teaching children with special educational needs and gifted and talented pupils

We teach science to all children, whatever their ability. Science forms part of the school's curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities matched to the needs of children with learning difficulties and we take into account the targets set for individual children in their Support Plans Appropriate extension activities and challenges will be provided for those children who are considered to be gifted in this area of the curriculum.

Assessment and recording

We assess children's work in science by making informal judgments as we observe them during each science lesson. We assess against the skills and knowledge taught using the whole school progression document. We use this to inform future planning and we pass this information on to the next teacher at the end of the year. Teachers use the judgments made at the end of each unit to make an assessment of the children's work in science at the end of each Key Stage. At the end of each Key Stage children use the Interim Framework to make a judgement.

Resources

We constantly review that there are sufficient resources for all science teaching units in the school. We keep these resources in a central store. The

library contains a supply of topic books to support children's individual research, whilst the ICT suite and class devices allow children to carry out research online.

Monitoring and review

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

Health and Safety

As CLEAPS members St Michael's consider and act upon any guidance provided by the employer or CLEAPSS. It is the responsibility of teaching and non-teaching staff and other adults to:

- Take reasonable care for their own health and safety and that of others who may be affected by their acts or omissions
- Implement the provisions of this policy
- Cooperate with the employer and other colleagues in promoting health and safety

Risk Assessment

The school has adopted 'model' or 'general' risk assessments published by CLEAPSS which each member of staff adapts to:

- local circumstances
- the activity
- resources
- the needs of individual pupils

When planning activities from the long term overview, if the proposed activities or equipment are not covered by a model risk assessment in relevant CLEAPSS guides, a Special Risk Assessment must be obtained by contacting CLEAPSS.

Supervision

This school's interpretation of group sizes and supervision for Science activities are based on CLEAPSS advice as follows

Very close supervision *Needed when there are significant risks of accident and injury*	Two or three pupils to one adult
Close supervision *Needed when there are risks of accident and injury, but these are predictable and considered unlikely.*	Small group (up to 6) pupils to one adult
Moderate supervision *Needed when risks of accident and injury are well controlled and unlikely.*	10-15 pupils to one adult

Resources

All staff must be aware of their individual responsibility to ensure that equipment and materials are fit for purpose, safe to use, safely stored and appropriate for pupils to use every time a Science activity is carried out.

Procedures

All staff are responsible for ensuring that the necessary procedures to safely carry out Science activities are implemented, including:

- Personal protection such as tying back hair, tucking in loose clothing, and removing jewellery
- Reducing workplace hazards such as not using water near an electrical point or appliance

This policy will be reviewed every 2 years and signed by The Chair of Governors on behalf of the Governing body.

Signed by Mike Volynchook,Chair of Governors on behalf of the Governing body.
Signed Copy available from school office.