ST PETER'S
CE PRIMARY & NURSERY
SCHOOL WEM

'Underpinned by our Christian values, we create a happy, caring environment. This empowers each and every unique person to dream, believe, achieve and flourish.'

'In the same way, you should be a light for other people.
Live so that they will see the good things you do'

Matthew 5:16 (ICB)

# SCIENCE POLICY
# SPRING 2022

**Reviewed by: S Kynaston, Spring 2022**

**Date of next review: Spring 2024**

**The Importance of Science**

Science stimulates and excites children's curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. As science links direct practical experience with ideas, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to critical and creative thought. Through science, children understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving quality of life. Children recognise the cultural significance of science and trace its worldwide development. They learn to question and discuss science based issues that may affect their own lives, the direction of society and the future of the world.

**Aims**

At St. Peter's we aim to develop:

- A curious and questioning mind.
- An enjoyment and understanding of science throughout the school.
- A knowledge and understanding of science concepts linked to real life experiences.
- An ability to plan and steer our own learning to suit our needs. Building on pupil's natural curiosity.
- Develop the skills of investigations and practical activities through both independent and group work.
- An understanding of and ability to use scientific vocabulary.
- Self-assessment to monitor and review our learning.
- Children's ability to discuss, observe and investigate further scientific issues.
- Skills in order to collect, retrieve, present and communicate their findings to others in a variety of ways.
- ICT, Literacy and Numeracy skills through scientific investigation and questioning.
- Prepare our children for life in an increasingly scientific and technological world.

In order to achieve these aims we will:

- Provide a stimulating environment to promote effective learning in science.
- Ensure continuity and progression in science by liaising with colleagues on areas covered.
- Give children lots of opportunities to develop and apply investigative skills.
- Provide necessary resources for the children to be taught effectively.
- Provide a safe environment in which to explore science.

**Organisation**

Science is a core subject of the National Curriculum (for England, Wales and Northern Ireland). Depending upon how Science is taught by individual teachers, Science may be taught every week or blocked alongside topic sessions and linked to other aspects of the curriculum wherever possible. Teachers will encourage our children to have skills of observation, discussion, debate and research. In order to ensure the children receive a balanced science curriculum it is essential that elements from the National Curriculum are taught alongside the 'Working Scientifically' aspect. Through our science teaching we aim to develop a sense of awe and wonder about the world around us. Science is taught in units through a combination of whole class teaching, group and individual work.

<u>Foundation Stage</u>

Throughout nursery and reception classes, children have access to science skills and learning through both adult led activities and child initiated learning. Science is mainly covered through understanding of the world in early years planning although it features in most strands. It is mainly achieved through exploration and investigation of resources, real life experiences and questioning and investigation with teachers modelling the use of appropriate scientific vocabulary.

<u>Key Stage 1</u>

During KS1, children observe, explore and ask questions about living things, materials and phenomena. They begin to work together to collect evidence to help them answer questions and to link this to simple scientific ideas. They evaluate evidence and consider whether tests or comparisons are fair. They use reference materials to find out more about scientific ideas. They share their ideas and communicate them using scientific language, drawings, charts and tables.

Key Stage 2

During KS2, children learn about a wider range of living things, materials and phenomena. They begin to make links between ideas and to explain things using simple models and theories. They apply their knowledge and understanding of scientific ideas to familiar phenomena, everyday things and their personal health. They begin to think about the positive and negative effects of scientific and technological developments on the environment and in other contexts. They carry out more systematic investigations, working on their own and with others. They use a range of reference sources in their work. They talk about their work and its significance, and communicate ideas using a wide range of scientific language, conventional diagrams, charts and graphs.

**Scientific Language**

Children are taught to express themselves correctly and appropriately and to read accurately, with understanding. Through the wide range of experiences offered in science, children learn increasingly accurate scientific vocabulary. As their learning progresses they are encouraged to extend and refine the vocabulary they use. Teachers share, display and model appropriate scientific vocabulary on a regular basis.

**Health and safety**

Safe practice must be promoted at all times. When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, children are taught:

- about hazards, risks and risk control
- to manage their environment to ensure the healthy and safety of themselves and others
- to explain the steps they take to control risks

Teachers must take into account the school's Health and Safety policy. Particular attention must be given to avoiding the use of anything that aggravates individual pupil's allergies. Safety issues must be identified on planning or an appropriate risk assessment completed, when activities are identified that are unusual and beyond the scope of normal safety practice.

**Assessment and Recording**

Work is regularly recorded in children's books in a variety of ways and the children are encouraged to become increasingly independent in determining how they record work. Teachers also take photographic evidence of practical and cross curricular links where possible.

Science is assessed using knowledge tracking grids, allowing teachers to record if a child is working towards, at or exceeding age related expectations. Children complete a knowledge harvest at the start of a unit and a quiz at the end. Working Scientifically skills are recorded on an assessment sheet in the back of children's books which allows teachers to fill gaps in understanding.