St. Peter's Church of England Primary School
SCIENCE CURRICULUM STATEMENT

Introduction

At St. Peter's, Science forms part of our core curriculum and, as such, holds a prominent place within our weekly timetable benefitting from subject specific teaching across key stage 1 and 2.

Through studying Science, we **open doors to understanding the world around us.** We ask big questions and use scientific tests and research to find the answers for ourselves, making connections and developing our understanding of scientific concepts and phenomenon.

Curriculum Vision

A St. Peter's scientist is unashamedly curious; they are in awe of the world around them and are keen to find out how things work and why things happen and in doing so, develop life-long **respect** for living and non-living things. A St. Peter's scientist asks big questions to support them in experiencing **'life in all its fullness' (John 10:10).** They are proactive in planning experiments to find the answers to their questions, working safely and collaboratively. They have a thirst for new knowledge and seek answers beyond their learning in lessons.

A St. Peter's scientist has a well-developed knowledge of scientific concepts and successfully connects new learning with their prior knowledge, using both effectively to make well-reasoned and informed predictions. They are able to confidently and enthusiastically discuss their thinking using precise scientific vocabulary. They enjoy working with others, they listening carefully to deepen their own learning and are open to new ideas which challenge their preconceptions.

A St. Peter's scientist directs their learning, deciding what they want to find out and how they want to discover this. They are confident when taking risks, showing **perseverance and courage** in the face of uncertainty and have the ability and knowledge to pursue independent and collaborative lines of inquiry. They are able to transfer their skills into everyday life and are excited to share their knowledge with the wider world, often seeking opportunities outside of school to contribute towards their life-long learning journey.

Provision, Planning and Delivery

Our Provision

We enact our vision for Science through:

- Teaching science for an extended time each week (1.5 – 2 hours) to allow for learning at depth;
- Organising scientific knowledge within a cumulative curriculum, which exposes learners to all 10 primary scientific concepts every year from Year 1-Year 6 to ensure knowledge is well-developed and regularly revisited.
- Including wow moments within each unit providing opportunities for learners to marvel at the world around them;
- Building strong foundations in mastering scientific concepts in Early Years and Key Stage 1;
- Modelling and expecting learners to use appropriate scientific vocabulary to articulate their thinking;
- Encouraging learners to ask big questions and challenge their own and others thinking;
- Exploring a range of different ways to investigate the answer to a question;
- Allowing learners to make decisions within experiments, make mistakes and value these as part of the learning process;
- Modelling the process of making connections between new and pre-existing knowledge.
- Planning opportunities for learners to learn independently, in pairs and in small groups;
- Providing adequate discussion time and prompts to encourage challenging discussions about new scientific concepts;

- Giving learners opportunities to grapple with complex scientific concepts and work collaboratively to explore scientific phenomenon beyond their immediate grasp;
- Signposting learners to more information to extend their learning beyond the classroom;
- Helping learners to reflect upon their learning journey and how far they have come.

Planning

The seven year long term Science plan ensures that all learners access broad and balanced Science learning adventure throughout their time at St. Peter's. Completion of this journey progressively deepens pupil's understanding of the knowledge and skills keys to Science (see key progression) across the full range of scientific concepts studied.

In each year learners encounter 10 Science teaching sequences which explore the above knowledge progressions, these are delivered twice during each age phase to ensure essential knowledge is secured before moving on. Medium term plans are provided for each unit which details the prior knowledge the unit is built upon, the essential new knowledge to be developed, a list of scientific vocabulary to be explicitly taught and modelled, as well as a list of appropriate assessment tasks to demonstrate learning at the end of each unit.

Delivery

The Science curriculum in Key Stage 1 and 2 is delivered two weekly in lessons of 45 mins – 1 hour. Where possible, one lesson focuses on practical investigation and exploration developing the skills of working scientifically and one lesson focusses on learning and building upon essential knowledge. A minimum of 53 hours are dedicated to the study of Science each year.

Progression

To ensure progression in Science, our curriculum is organised to progressively deepen learners understanding of the **keys** to scientific skills and knowledge these are:

Key Skills Progression:
- Working Scientifically

Key Knowledge Progression:
- Plants
- Humans and Other Animals
- Living Things
- Evolution and Inheritance
- Properties of Materials
- Forces
- Light and Sight
- Sound and Hearing
- Electricity
- Earth and Space

The whole-school progression map outlines, for each unit of learning, essential knowledge and how learning builds cumulatively upon prior learning from the previous year group.

Through each of the concepts studied in depth, the key skill of working scientifically is embedded and taught at an appropriate complexity. See Science Key Progression on our school website for more information.

Assessment, Recording and Reporting

Assessment

Teachers assess children's knowledge, understanding and skills in Science by making observations within lessons and by reviewing written evidence (where appropriate) at the end of each lesson. Outcomes from this assessment are then used to formatively re-shape the learning journey for individuals and whole classes as necessary. From this ongoing assessment, teachers make decisions to re-teach, consolidate or extend learning in the subsequent session.

Assessment tasks are planned into each unit to draw together essential learning from across each unit and allow for summative judgements to be made against published exemplification materials.

The school reports an assessment judgement against the end of key stage expectations published within the Statutory Assessment Tests (SATs) using the Science Teacher Assessment Framework (TAF) at the end of Year 2 and Year 6 to the Department for Education and Local Authority for the purpose of comparing school performance locally and nationally. Pupils in Year 6 may also sit a Science sampling assessment test, when requested to do so by the Standards and Testing Agency.

Recording

Learning in Science is recorded in pupil's individual Science books and learning episodes are captured in a way which best meets the learning objective. Some of the evidence may include child-produced written work or diagrams, whereas others may involve photographs or teacher notes from discussions or practical activities.

Reporting

Children's achievements in Science are formally shared with parents and carers annually, as part of their end of year report and informally through termly open door events and parent consultation appointments.

Policy into Practice

The following serves as a list of supporting documents and resources, which support the implementation of this policy into practice:

- Science Long Term Plan
- Science Medium Term Planning
- Science Key Progression
- Year 2 and Year 6 Science Teacher Assessment Frameworks
- POP Tasks and Exemplification Materials (Chris Quigley)