SCIENCE

Rationale

Our science curriculum aims to prepare children for the wider world. We strive to ensure that the lessons we deliver achieve the three aims of the science national curriculum so that pupils understand the science and have the skills to engage with the knowledge and recognise where it fits in the wider world. We believe in the curious child and encourage our children to ponder, ask questions and find out answers to big questions for themselves, reflecting on that which they have discovered. The knowledge they acquire is deepened through the use of essential scientific enquiry skills. We believe that through working scientifically our children will have a greater depth of understanding of the knowledge and will be the scientifically literate adults of the future.

It is our aim that children will:

● develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
● develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
● be equipped with the scientific skills required to understand the uses and implications of science, today and for the future.

Knowledge Choice

Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group. The key knowledge identified by each year group is informed by the national curriculum and builds towards identified phase 'end points' in accordance with NC expectations. Key skills are also mapped for each year group and are progressive throughout the school. These too ensure systematic progression to identified skills end points which are in accordance with the Working Scientifically skills expectations of the national curriculum.

KS1	KS2
• **Everyday materials** **I**ncluding uses of everyday materials • **Animals including humans** Human sense organs (Y1) Animal offspring (Y2) • **Plants** Naming plants and trees (Y1) The need for water and light (Y2) • **Seasonal changes** • **Living things and habitats**	• **Animals including humans** Human nutrition (Y3) The digestive system (Y4) Changes in humans (Y5) The circulation system (Y6) • **Light** Reflections, shadows, seeing things(Y3) How we see (Y6) • **Rocks** • **Forces and magnets**

	Friction (Y3) Gravity (Y5) • **Plants** • **Living things and habitats** Grouping living things **(Y4)** Life cycles (Y5) Classification system (Y6) • **States of matter** • **Sound** • **Electricity** • **Properties and changes of materials** • **Earth in Space** • **Evolution**

Progression in science is ensured through the design of our curriculum where knowledge and skill builds year on year as children revisit prior learning and broaden and deepen their scientific knowledge. As the children's knowledge and understanding increases, they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.

Working Scientifically skills are embedded into lessons to ensure that skills are systematically developed throughout a child's science journey at St Peter's and new vocabulary and challenging concepts are introduced progressively through direct teaching.

As a scientist leaving St Peter's, every child will:

- Have a sense of awe, wonder and curiosity in the science in the world around them and have the skills to investigate, experiment and discover for themselves
- Be confident to ask their own questions and use their scientific skills to try to discover the answers
- Understand, and be inspired by the fact, that science is ever-changing and science changes our lives
- Have experienced a wide range of inspiring engagement and enrichment activities including educational visits and expert visitors
- Have a firm grounding in the disciplines of biology, chemistry and physics and a secure bank of knowledge and scientific skills which they can build on in the next stage of their science education.