St. Peter's Catholic Primary School, Gloucester

Science Curriculum IMPLEMENTATION Statement

At St. Peter's Catholic Primary School, the Early Years Foundation Stage (EYFS) Framework and the National Curriculum are used as the fundamental base to design an exciting and inspiring progressive Science curriculum that maps out the knowledge and skills that we want our children to learn and experience in Science.

The EYFS curriculum is the start of every child's journey to becoming a Scientist. There are seven areas of learning and development within the EYFS curriculum. All are important and inter-connected as they build a foundation for igniting children's curiosity and enthusiasm for learning, forming relationships and thriving. The key areas of learning that support their journey to becoming a Scientist include:

Communication and Language

- Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions;
- Make comments about what they have heard and ask questions to clarify their understanding;
- Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.
- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary;
- Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.

Personal, Social and Emotional Development

- Set and work towards simple goals, being able to wait for what they want.

Building Relationships

- Work cooperatively and take turns with others.

Literacy

- Use and understand recently introduced vocabulary during discussions.

Understanding the World

- Talk about the lives of the people around them and their roles in society;
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class;
- Describe their immediate environment using knowledge from observation, discussion and maps;
- Explore the natural world around them, making observations and drawing pictures of animals and plants;

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- 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;
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

From Y1, the children work progressively towards the National Curriculum for Science which aims to ensure that all pupils:

- 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Our Science curriculum is designed to:

- revisit and build upon prior learning within Science and to make links across all subjects. Retrieval opportunities, such as low stakes quizzes, are planned in Science and enable our children to recall prior learning and/or to make connections between current and prior learning thus embedding knowledge from their working memory to their long term memory.
- develop and enrich every child's cultural capital through access to high quality information, texts, resources and educational trips
- inspire every pupil to have a love for learning in Science.

In implementing the curriculum, we ensure that teaching in all subjects incorporates the key principles of high-quality teaching and mastery learning. At St. Peter's we believe teaching approaches that ensure **long-term retention of knowledge, fluency in key skills and confident use of metacognitive strategies are crucial**. These are fundamental to learning and are the 'bread and butter' of effective teaching:

- **cognitive strategies** include Science specific strategies or retrieval/memorisation techniques.
- **metacognitive strategies** are what we use to monitor or control our cognition, for example checking whether our approach to solving a Scientific investigation worked or considering which cognitive strategy is the best fit for a task.

In implementing the Science curriculum, teachers ensure that every opportunity is taken to remind the children of how 'what' they are learning is linked to our whole school curriculum intent and whole school vision:

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Curriculum INTENT Statement

At St. Peter's Catholic Primary School, our mission is to share the good news of Jesus Christ with all in our school family so that each child grows in the knowledge that they are formed in the image and likeness of God who calls them to love and be loved, and that they hear and respond to the call to "live wisely, love generously and learn to think deeply." (Pope Francis, Laudato Si, 2016).						
Following in Jesus' footsteps, we live, love and learn together as a school family, to build a better world.						
It is our intention that the St. Peter's Curriculum will:						
Nourish and nurture	**Empower our children with the knowledge and skills to:**			**augment remembering**	**Develop key attributes**	**Inspire**
	LIVE	**LOVE**	**LEARN**			
Talents – curriculum, enrichment and extra-curricular opportunities Faith RE curriculum Disadvantaged incl SEND and PP	Responsible citizens: Local, National International Fund raising Global challenges: Laudato Si & Fratelli Tutti	Inclusion: SEND Disadvantaged Other Cultures and beliefs Gospel message CST – social justice and help those in need	Think deeply: mastery and enquiry questions Successful learners: lifelong learners Aspirations Growth mindset RP Confident individuals: Self-regulation & Metacognitive strategies Role models	Retrieval Spiral curriculum – golden threads	Independence Resilience Perseverance Team players Effective communication skills Problem solvers Risk takers	Parental engagement Oracy and reading Cultural capital

The Science curriculum is taught weekly throughout KS1 and 2 and aims to develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics.

The Science curriculum is implemented following the Science coverage document and progression is detailed in the Science skills progression document.

Vocabulary development in Science is also important as pupils' acquisition and command of vocabulary are key to their learning and progress not just in Science but across the whole curriculum. Our Science vocabulary progression document shows how we actively develop vocabulary in Science

Finally, we use assessment to check pupils' understanding of what the Science curriculum intent says they should know, and to identify and correct misunderstanding and inform teaching.