



Ss Peter and Paul Catholic Primary School

Science Curriculum

We intend to deliver a curriculum diet of biology, chemistry and physics, which is age appropriate, in the primary classroom and builds on prior knowledge and understanding-often revisiting this to spiral “that which must be learned” across time. In this way the Schema is developed securely.

Intent

To enable our pupils to have a thirst for knowledge, a toolkit of skills which links all of the curriculum and an aspirational approach to the future, all of which are underpinned by Gospel Values.

‘The main purpose of the curriculum is to build up the content of long-term memory (the Schema) so that when students are asked to think, they are able to think in more powerful ways because what is in the long-term memories makes their short-term memories more powerful. That is why curriculum matters.’ William 2018.

The science in school follows a scheme created by the Bishop Chadwick Catholic Education Trust. This in no way is intended to limit what teachers can teach but acts as a guarantee for coverage across school.

In using the scheme as a base, staff can develop and extend ideas and lessons to ensure that children make clear progress, via small steps of understanding. We ensure contextual understanding of **why** we are doing **what** we are doing **at a particular point** so that teachers see the whole picture-yes the children may have worked on “plants” before beginning to name the basic parts, but not on formulating hypotheses, close observation and recording results of an experiment based on what plants need to grow well. Prior knowledge is built upon and that opportunity for revisitation is used (as required) to shore up any gaps or clear up any misconceptions.

Science in school is linked to mathematics, in that teachers look for opportunities to extend learning across and between the two subjects, allowing children to make links and demonstrate conceptual fluency.

Implementation

The Schemes of Work, children's books and teaching are all looked at to ensure:

- the curriculum is being delivered well
- prior knowledge is used to build greater understanding
- marking allows teacher and pupil to see how well a child has done
- learning is scaffolded to ensure progress for all
- metacognition is used (at an age appropriate level) as a tool for improvement

"What is the point of Science?" is addressed via introductory scientists (preferably women and people of colour) at the start of topics to show which jobs link to that particular area of science.

Links to other elements of science and other curriculum areas are explicit, and the need to use excellent maths and English is shared with the children as an expectation of their written and recorded work. Teacher modelling and the scaffold of subject specific vocabulary facilitates greater understanding, so that children can make good progress within topics.

Appropriate use of specialised equipment, including new and mobile technologies, is taught explicitly so that pupils can become independent in their scientific investigations and use these skills across all science.

We strive to enrich the curriculum with visits out, visitors in and have a celebration of all things scientific via an annual Science Week, with a theme which runs from Nursery to Year 6. Science as a job is made explicit to children at all stages.

Impact

Did we teach what we thought we were teaching; did they learn what we wanted them to learn?

Our Science curriculum will be successful if we have children who can:

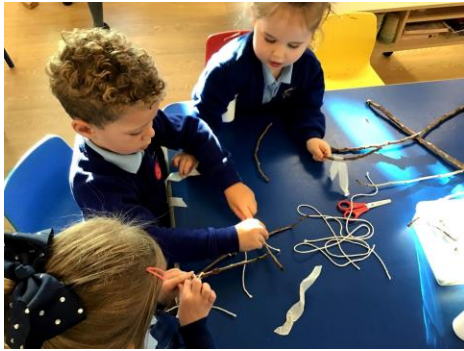
- make links in their learning,
- understand how to change and amend experiments to factor out variables,
- use equipment safely,
- use prior learning to make predictions, talk about scientific topics, explain the world around them,
- develop knowledge-make progress in knowing more, remembering more, making links and applying knowledge,
- understand how well they are doing and what they need to do to get better.

This is dependent upon staff who can:

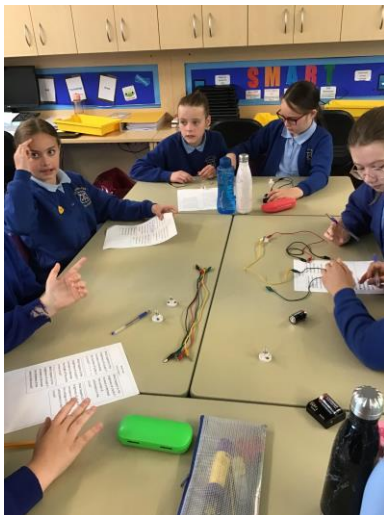
- ensure prior knowledge is built upon quickly, so time is not wasted,
- build revision of learning into every lesson,
- have the confidence to teach more, so that modelling is excellent and children are guided to become independent within a topic,
- facilitate opportunities to place science in “real life” contexts,
- work to ensure children can have aspirational life goals, linked to STEM by supporting a can-do attitude to science,
- plan enrichment opportunities to inspire and engage,
- assess pupils and track progress on Fisher Family Trust.



Our Science curriculum takes the pupils on a voyage of awe and wonder from their earliest experiences.



They build upon prior learning, as they move through the years, by spiralling back to topics and concepts.



By the time they are in Year 6, they have a clear understanding of key concepts.
Science Overview

EYFS	Children at the expected level of development will: - Explore the natural world around them, making observations and drawing pictures of animals and plants; - 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.										
	✓	✓	✓		✓		✓				
Area of Science	Biology				Chemistry	Physics					
Learning Focus: To Understand...	Plants	Living Things	Animals and Humans	Evolution and Inheritance	Materials	Movement, Forces and Magnets	Earth and Space	Rocks	Light and Seeing	Sound and Hearing	Electricity
Year One	Unit 1		Unit 1		Unit 1	Unit 1	Unit 1 (link also to Seasons)		Link to Animals and Humans: Unit 1 - senses)	Link to Animals and Humans: Unit 1 - senses)	
Year Two	Unit 2	Unit 1	Unit 2	Link to Animals and Humans: Unit 2 (humans resemble their parents in many features)	Unit 2						Unit 1
Year Three	Unit 3		Unit 3	Link to Materials: Unit 3 (Rocks and fossils)		Unit 2		Unit 1	Unit 1		
Year Four		Unit 2	Unit 4		Unit 3					Unit 1	Unit 2
Year Five		Unit 3	Unit 5		Unit 4	Unit 3	Unit 2			Unit 2	
Year Six		Unit 4	Unit 6	Evolution and Inheritance Unit					Unit 2		Unit 3

Policy Written September 2023
Date of Review: September 2024