



Catholic School

“Learning Together, Loving God”

Science Policy

September 2022 - to be reviewed September 2023

INTENT

Our mission statement 'Learning together, loving God' encapsulates the balance between learning about ourselves, others and knowledge of our world, with the aim of converting this knowledge into understanding and skills that combine to serve our community as a whole.

At Notre Dame we believe that teaching and learning in science should stimulate and excite children's curiosity about the world around them, providing a sound base from which they can become responsible citizens within their communities. It provides first-hand experience and support for children to develop enquiring minds, learning how to question and discuss through collaboration, enabling them to become effective contributors within their future settings. A range of practical experiences set in meaningful contexts helps to develop a range of investigative skills and allows children to take risks and learn from their mistakes, developing them into successful learners and confident individuals.

Our intent is to cover the breadth of the Bailiwick Curriculum augmented with powerful knowledge carefully selected to build upon our pupils' starting points of cultural capital.

To this end, we use the CUSP model curriculum. This is a knowledge-engaged progress model which clearly outlines the key knowledge and vocabulary for each stage of learning in sequence. It has been deliberately adapted in order for pupils to see themselves in the curriculum and prepare them for life in the 21st century.

IMPLEMENTATION

The implementation of our curriculum ensures balanced coverage of the main themes outlined in the Bailiwick Curriculum: posing questions and planning a valid investigation, conducting an investigation and gathering data, presenting, processing and evaluating data and using scientific knowledge to explain observations and theories. The children will have experiences of these areas, but the subject knowledge imparted becomes increasingly specific and in-depth, with more complex skills being taught, thus ensuring that learning is built upon and that **all** pupils have access to the Core Entitlements set out in the Bailiwick Science Core Entitlement document.

We teach a knowledge rich curriculum through; focussing on direct instruction, retrieval and spaced practice. Investigative skills are taught and extended inline with the New Bailiwick Curriculum (2017) from Year 1 to Year 6 within the Notre Dame planning units Science in the Foundation Stage is taught in-line with the Early Years Foundation Stage Profile & Development Matters 2012.

Investigative skill development

Science is, by nature, an investigative subject, which develops an understanding of concepts, knowledge and skills. We are therefore passionate about

implementing our curriculum through an explorative, outdoor learning approach. We want our children to learn through hands-on experiences and investigations, while embedding key substantive knowledge. We deliberately plan investigative skill development opportunities to consolidate and extend previously taught substantive knowledge.

Vocabulary

Vocabulary forms a key part of our curriculum. Therefore, subject specific Tier 2 and Tier 3 words are identified in each module. Supporting pupils in the acquisition of knowledge, through the use of key concepts, terms, and vocabulary, provides opportunities to build a shared and consistent understanding. Knowledge organisers, glossaries and displays, along with regular recall and revision, will be used to support this approach.

Knowledge organisers

Accompanying each module is a Knowledge Organiser which contains key vocabulary, information and concepts which all pupils are expected to understand and retain. Knowledge notes are the elaboration and detail to help pupils acquire the content of each module. They support vocabulary and concept acquisition through a well-structured sequence that is cumulative. Each Knowledge Note begins with a learning question which focuses on the key content to be learnt and understood. Knowledge Organisers and Knowledge Notes are dual coded to provide pupils with visual calls to aid understanding and recall.

IMPACT

Feedback, quizzes, thinking tasks and end of units tasks all contribute towards the bigger picture of how well pupils retain and remember the content. Outcomes in topic and literacy books, evidence a broad and balanced scientific curriculum and demonstrate children's acquisition of identified key knowledge. As children progress throughout the school, they develop a deep knowledge, understanding and appreciation of scientific concepts and skills within a broad range of biology, physics and chemistry based contexts.

READING AS A SCIENTIST

Across the school, pupils are exposed to a range of high quality literacy texts to support scientific understanding and knowledge development: Talk for Writing literacy units, Guided Reading texts, book corner books and book club themes.

<https://drive.google.com/drive/folders/1L-x3zT1ekWxaXF2eiwxh70qtcDlyZwiB?usp=sharing>

Curriculum Map

Unit coverage 2022-2023. Cycle A for KS2

[Knowledge Tracker](#)

[Skills Tracker](#)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Push, pull Changes in living and non-living things - leaves, weather, seasons etc. Melting & freezing		Minibeasts and wriggly creatures - worms, tadpoles/frogs. Floating & sinking Chicken life cycle		Melting & Freezing Heating & cooling Caterpillar life cycle	
Year 1	Seasons & weather Properties of materials	Materials and Magnets	Animals including humans	Animals including humans Sound	Plants	Plants, materials & animals revisit
Year 2	Living things & their habitats Everyday materials & their properties	Revisit living things and habitats / materials	No science being taught	Electricity Light	Animals including humans	Revisit electricity & light
LKS2 (Year 3)	Rocks	Animals Inc Humans: Nutrition Skeletons & Muscles Respiration & Lungs	Plants (Y2 Unity) Introduce Forces & Magnets	Build on Forces & Magnets	No science being taught.	Plants (Y3 Unity)
UKS2 (Year 5)	Living Things and Their Habitats - Life Cycles	Earth and Space	Forces	Life Cycles and Reproduction	Properties and Changes of Materials	Animals Including Humans

Cycle B: Year 4 and Year 6 curriculum not being taught 2022-2023 due to a 2 year rolling cycle.