St. Bernard's Catholic Primary School's Subject Stories: Science.

Intent

St Bernard's Science curriculum aims to develop a sense of excitement and curiosity about natural phenomena and an understanding of how the scientific community contributes to our past, present and future. We want science to be relevant, for children to appreciate the importance of science to solve our global challenges and we want our pupils to see themselves as citizens of the world and problem solvers. The principals of Catholic Social Teaching can be seen in Science lessons where children can explain our Christian vocation to care for creation. This is also underpinned by a letter from Pope Francis, that we all have a responsibility to care for our common home. The scheme of work is inclusive and meaningful, so all pupils may experience the joy of science and make associations between their science learning and their lives outside the classroom.

Laudato Si

The national curriculum for Science requires 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

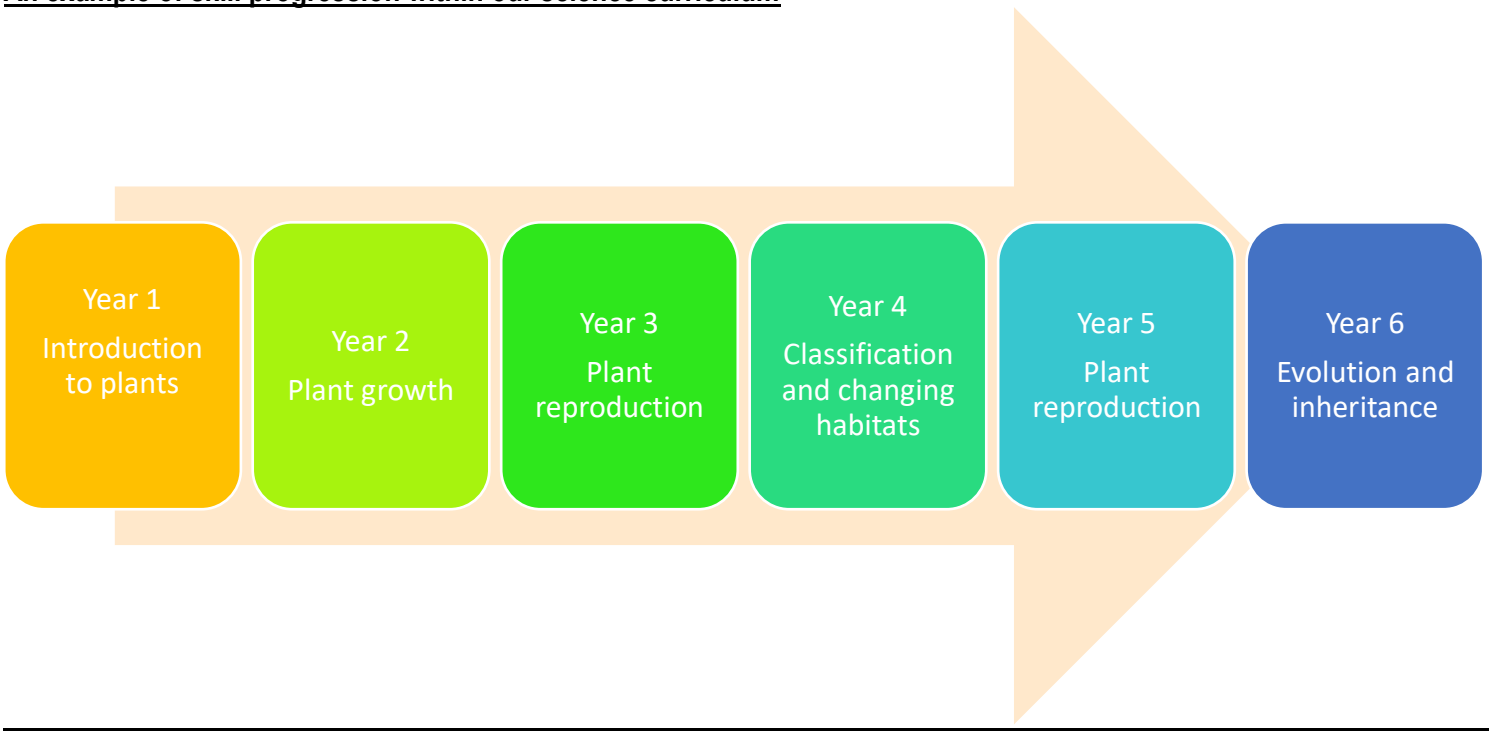
If you were to walk into a Science lesson at St. Bernard's, you will see:

- A wide range of scientific enquiry being used to engage children and provide greater understanding.
- A consistent approach to science teaching across the school.
- The use of key vocabulary throughout the school.
- The scientific enquiry cycle is displayed and refereed to by each teacher.
- WOW science days often involving children collaborating across year groups.
- Children can explain why science is important in the past, present and for the future.

Pupil Voice: Answers to the question "What word would you use to describe science?"

"My favourite lesson was the 'poo' lesson, we learnt that animals eat different foods, so poo is different. We also learnt how food moves through the oesophagus, large intestine and small intestine" – Year 4
"Science can be challenging, but I like it when you 'get' it" – Year 5

An example of skill progression within our science curriculum



Whole school Curriculum map

ST BERNARD'S CURRICULUM MAP SCIENCE						
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
TERM 1	Forces and space: Seasonal changes	Living things: Habitats	Animals including humans: Movement and nutrition	Animals- Digestion, Teeth Food chains	Materials: Mixing and separation	Living things: Classifying big and small
TERM 2	Keeping Health: Body and 5 senses	Living things: Microhabitats	Forces & space: Forces and magnets	Electricity	Materials: Properties of change	Energy: Light and reflection
TERM 3	Plants: Introduction to plants	Materials: Uses of everyday materials	Materials: Rocks and soil	States of matter Climate change Water cycle	Living things: Life cycles and reproduction	Living things: Evolution/ inheritance
TERM 4	Animals Inc. humans: Habitats	Animals Inc. humans: Life cycles and health	Energy: Light and shadows	Sound	Forces and Space: Imbalanced Forces	Energy: Circuits, batteries, switches
TERM 5	Materials: Everyday materials	Plants: Plant growth	Plants: Plant reproduction	Classification & habitats	Making connections	Animals: Circulation/ exercise
TERM 6		Making connections	Making connections	Human impact Making links	Forces: Earth & Space	Making connections

EYFS

The natural world

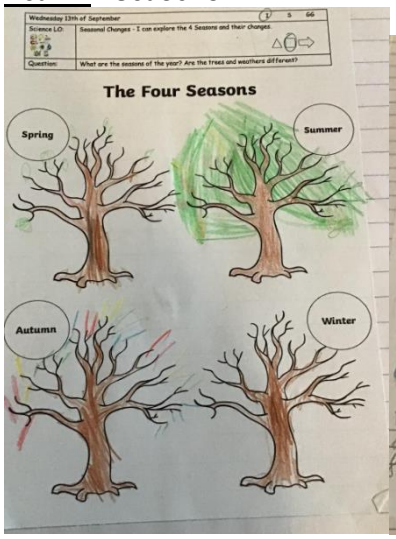
- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

In Friendship Class the children…….

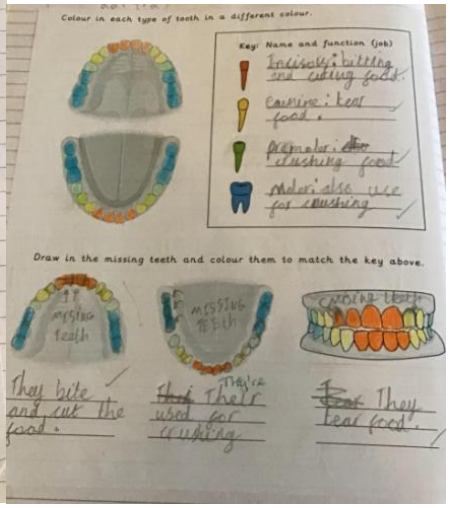
- Explore their own bodies and their senses
- Learn to name the parts of the body and what we use them for.
- Learn about animals and their homes, including pets, farm animals and wild animals.
- Observe changes such as chicks hatching/ caterpillars turning into butterflies, the seasons changing, plants and flowers growing. They are supported to notice and talk about what is happening and why.
- Learn about being healthy, including eating a range of foods and taking part in exercise.
- Develop a sense of curiosity and exploration through a range of resources relating to our topics, eg magnets, magnifying glasses, things to smell and taste etc, and through the continuous provision areas such as sand, water, small world, construction etc.

Outstanding examples of learning outcomes

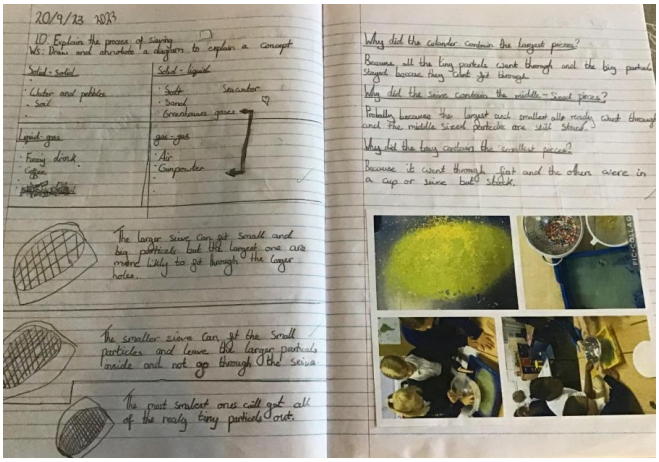
Year 1 – Seasons



Year 4 – Teeth



Year 5 – Mixtures and separation



Science day 2023
Working in House Teams to create the Clifton Suspension Bridge

Successes in 2022-23

- Introduced consistent displays across whole-school
- Science assessments at the end of each unit
- Joined local STEM Network Group

Priorities for 2023-24

- Planning is appropriate for the year group and offers progression, challenge, support and variation for children
- To have consistency in science across the school (planning, teaching, investigation process and expectations of books)
- Science assessment occurs across the school and from it teachers are confident in assessing where their children are and the success of the planned learning