



Intent

At St. Bernadette we want our children to be naturally curious about the world around them. Our Science curriculum has been developed by staff to ensure full coverage of the National Curriculum and to foster a sense of wonder about natural phenomena. We are committed to providing a stimulating, engaging and challenging learning environment.

At St. Bernadette we follow the National Curriculum using the scheme Kapow Primary to deliver our Science teaching. As seen in the Curriculum Map below (Implementation) topics are taught from EYFS all the way through to Y6 as part of a spiral curriculum which we believe gives children the opportunity to constantly develop and build upon existing skills.

At its core we believe the teaching of Science is all about creativity. Children should not only enter into lessons feeling excited and engaged but should also leave these lessons and topics with a desire to know and learn more. By allowing every child freedom within a framework of science teaching, we are not only allowing them to take ownership of their learning but also the opportunity to be curious and extend their knowledge and understanding both personally as well as as a cohort.

Through our teaching we hope to instil a lifelong love and knowledge for Science. This is actively planned for and taught in every classroom throughout the School to support each child to make links and build upon the knowledge they already have.

Through our Science teaching we hope to achieve the following:

- Children are delivered high quality Science lessons regularly.
- Children know how to use a range of appropriate resources safely.
- Children are engaged in interactive Science lessons.
- Children are inspired through the scientific knowledge and experiences they gain.
- All children engage in practical investigations that develop Working Scientifically Skills
- Knowledge is not just gained but built upon.
- Teachers are confident and have good subject knowledge.
- Progression through the school is clear.
- The school's science assessment system supports progress.

Implementation

Science is taught consistently, once a week for up to two hours through the entire year, but is discretely taught in many different contexts throughout all areas of the curriculum. For example, through English, i.e. biography of a famous Scientist's life/ non-chronological reports on natural phenomena, plants or animals/ the classification of different climates and areas around the world.

Revise- FFB	Four From Before- Children complete this at the beginning of a lesson. FFB is four questions based on knowledge each child should have; from their current topic, previous topics in the academic year and the School years prior.
Teach	The teacher introduces new learning making links on a foundation of prior knowledge and vocabulary to support and teach all pupils.
Investigate/ Research	Children used new learned skills along with existing ones to explore and justify what they have learnt.
Demonstrate/ Apply	Children rationalise their new knowledge and learning by applying it either in their investigative or research based work or written activity.
Extend	Children are given the opportunity to extend and transfer their learning in the form of a green challenge.

Early Years Foundation Stage (EYFS)

In the EYFS, science is included within the Understanding the World area of learning. As with other learning in Reception, the children will mainly learn about science through games and play – which objects float and sink during water play, for example. Activities such as these will help children to develop important skills such as observation, prediction and critical thinking.

Key Stage 1 (Years 1 and 2) and Key Stage 2 (Years 3 to 6)

The content of science teaching and learning is set out in the National Curriculum for primary schools in England. Within this, certain topics and areas are repeated across year groups, meaning that children may revisit a particular topic in primary school but with increasing difficulty and with a different focus each time.

For example, the area of animals, including humans is examined in different year groups, with a very clear progression of knowledge and understanding over time.

St Bernadette Science Whole School Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery Understanding the World	My Community	Transportation	Animals	Nature	Once Upon a Time	Summer
Reception Understanding the World	I'm Amazing People Who Help Us	Animals and their habitats including lifecycle: birds	Animals and their habitats including lifecycles: crocodiles	Animals and their habitats: Worms	Growing	Changes Over Time
Year 1	Forces and Space: Seasonal Changes	Materials: Everyday Materials	Animals: Sensitive Bodies	Animals: Comparing Animals	Plants: Introduction to Plants	Making Connections: Investigating Science through Stories
Year 2	Living Things: Habitats	Living Things: Microhabitats	Materials: Uses of Everyday Materials	Animals, including humans: Life Cycles and Health	Plants: Plant Growth	Making Connections: Plant-based Materials
Year 3	Animals: Movement and Nutrition	Forces and Space: Forces and Magnets	Materials: Rocks and Soils	Energy: Light and Shadows	Plants: Plant Reproduction	Making Connections: Does hand span affect grip strength?
Year 4	Animals: including humans: Digestion and Food	Energy: Electricity and Circuits	Materials: States of Matter	Energy: Sound and Vibrations	Living Things: Classification and Changing Habitats	Making Connections: How does the flow of liquids compare?
Year 5	Materials: Mixtures and Separation	Materials: Properties and Changes	Forces and Space: Earth and Space	Living Things: Life Cycles and Reproduction	Forces and Space: Unbalanced Forces	Animals: Human timeline Making Connections: Does the size of an asteroid affect the diameter of its crater?
Year 6	Living Things: Classifying Big and Small	Energy: Light and Reflection	Living Things: Evolution and Inheritance	Energy: Circuits, Batteries and Switches	Animals, including Humans: Circulation and Health	Making Connections: Are some sunglasses safer than others?

Alongside these areas runs the Working Scientifically element. This focuses on the skills the children need to become accurate, careful and confident practical scientists. Children are expected to master certain skills in each year group and there is a very clear progression of these set out for each year group to refer to.

Impact

If asked, the children will tell you all about what they enjoy about Science using vocabulary relevant to their age and learning. The children at St Bernadette look forward to Science lessons and are engaged throughout; Teachers will confirm this.

At St Bernadette it is evident that children are given access to a rich and well balanced Science curriculum as they continue to progress through our School with curiosity and leave us with a holistic knowledge of all key Scientific areas to support them as they move into Secondary School. We have seen the curiosity and excitement that children have to learn more and put their learning into practice even after the books are closed and the classrooms are empty.

By ensuring that the key skills and vocabulary taught to our pupils in accordance with Kapow Primary, The National Curriculum and our own vocabulary maps, children are constantly using their prior knowledge from previous topics and year groups to support their learning in every Science lesson. Children partake in a range of experiments throughout their time at St Bernadette constantly exercising new skills whilst simultaneously drawing upon those that they have already secured.