

Science at Sky Primary & Eden Project Nursery

What are the aims?

INTENT

Science

It is important to view knowledge as sort of a semantic tree - make sure you understand the fundamental principles, i.e. the trunk and big branches, before you get into the leaves/details or there is nothing for them to hang on to.

Elon Musk



Our vision for science at Sky Primary and Eden Project Nursery focuses on the core foundation of curiosity for the world around us. We want our children to be excited and naturally curious about the world around them and to foster a sense of awe and wonder. – this connects to our planet, people, place and sustainable living, our global links all based on nature inspired learning. We aim to build upon all pupils' natural inquisitiveness, instilling a life-long love of science and a high regard for its purpose in the world.

We intend to achieve this by providing all children with a carefully designed coherent curriculum, from their first to final year, aimed at developing the knowledge, scientific skills, scientific enquiry, vocabulary and cultural capital that will help them to succeed in future learning and in life.

We believe our unique curriculum, partnership with Eden Project, ethos and school values, will provide all children, regardless of background, the learning behaviours and key skills needed to access the full potential of our science curriculum and help continue to excite and inspire them, to become global citizens for our future.

At Sky Primary and Eden Project Nursery, we intend to implement the national curriculum for science 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*

(National Curriculum 2014)

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What does it look like?

Implementation

Our school curriculum is developed from the National Curriculum 2014 programmes of study for Key Stage 1, 2 and the EYFS Framework in the Foundation Stage.

Children in the Foundation Stage work towards achieving the Early Learning Goals in 'understanding the world'. Teachers plan specific topics and build upon and develop children's own interests and curiosity about the world they live in. Science in Early Years is taught alongside other areas of learning.

In KS1, teachers plan lessons that are based on Enquiries of Learning and objectives which encourage cross curricular links where possible, including extended writing opportunities. Where some learning does not fit into this, it is taught discretely alongside a topic to ensure coverage.

Opportunities for working scientifically are identified and planned for to ensure a progression of skills implemented through both practical science and key questioning. Knowledge Organisers are used to ensure that children are building on previous knowledge when revisiting topics as well as setting out the fundamental knowledge and vocabulary for the unit ahead.

Teachers find opportunities to develop and nurture children's curiosity about the world around them by accessing outdoor learning, school visits and workshops with experts, e.g. Marine Conservation Team and links with Eden Project, outside agencies. We always draw on our nature inspired and learning beyond the classroom curriculum to develop our children's ability to work scientifically and to inspire wonder, respect and connection to our natural environment.

To enable children to gain the investigative skills that develop their ability to work scientifically, our science curriculum will apply and develop key literacy, mathematical and computing skills. By promoting our school values (inspiring, connected, active, curious, nurturing, creative) during the teaching of science, we will help children develop the appropriate learning behaviours to develop these key skills. Our ways of being learning behaviours enable children to use their knowledge in context throughout life, helping to influence their individuality and enable them to become responsible global citizens – our Harmony Approach and interweaving of the Harmony Principles supports our vision to engage children in sustainability, understanding of our world, prepare a positive future and excite and inspire.

All children will learn about significant individuals who have played an important role in scientific discoveries, making links to our wider curriculum, school values and drivers; helping to raise their aspirations. They will have rich experiences both in and out of school, playing active roles in local and global projects that will provide them with a vast insight into various future careers accessible through science and giving them life skills to achieve their best.

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What are the outcomes?

IMPACT

Through our Sky curriculum and the development of scientific skills based on the milestones, children will know more, understand more and remember more about their Science learning. Pupil voice is used to further develop the Science curriculum through questioning of pupil's views and attitudes towards Science to support enjoyment and motivates learners.

Our engagement with the local environment, together with interactions with experts and local charities will ensure that our children learn through first hand experiences of the world around them and develop an understanding that Science has, and will continue to, change our lives.

By teaching science through predominately real life and relevant practical-based activities, children will experience the scientific phenomena for themselves and use this experience to raise their own questions, develop their problem-solving skills and consequently maintain curiosity.

Our children will be curious about the world around them and understand their responsibility for it. They will understand how science has the power to change things for the better and its role in helping to solve the current environmental issues. Our children are critical thinkers who enjoy the challenge of posing and answering questions. They will be able to draw on a wide range of skills in maths, computing and English to help solve problems and communicate their thinking. Through collaborative work they will learn to be an active listener and participant and to show respect for others' ideas. They will have the resilience to be challenged and the confidence and personal skills to challenge others respectfully. Through scientific enquiry and investigation our children will develop the tenacity to keep going and the flexibility to try different ways of working.