

Science



Intent

At the Queenswell schools, we believe that a high-quality Science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. We aim to provide the children with the essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the importance of rational explanation and develop a sense of excitement and curiosity about natural phenomena. Additionally, the children are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying their learnt skills. Staff ensure that all children are exposed to high quality teaching and learning experiences thus developing their scientific enquiry and investigative skills. They are immersed in scientific vocabulary, which aids their knowledge and understanding not only of the topic they study, but of the world around them.

Implementation

At the Queenswell schools we ensure high standards of teaching and learning in Science, we implement a curriculum that is progressive throughout the whole school. Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of 'The National Curriculum programmes of study for Science 2014' and 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at The Queenswell Schools, involves adapting and extending the curriculum to match all pupils' needs. A variety of resources are used to support teachers in their planning and implementation of the science curriculum for their year group. Teachers plan so that they engage their children's interests, use support staff effectively and to their strengths and include current events where appropriate. Science is taught as discrete units and lessons where needed to ensure coverage.

Links to EYFS

Understanding the World

Intent

It is important to us that all children have the opportunity to make sense of the world around them through first hand experiences. This includes their physical world as well as their community. Children begin to gain an understanding of the past, and present by exploring the lives of themselves and those around them. We are a culturally diverse school and we aim to educate children about and celebrate what is important to the children and families that we serve. Our physical environment at Queenswell allows children to connect with nature through our Environmental Education and

Forest School approach. These first-hand experiences help to enrich and widen the children's vocabulary, supporting communication and Language; and later reading comprehension as well.

Implementation

We provide a culturally, socially, technologically and ecologically diverse environment. This includes:

- Providing a broad selection of stories, non-fiction, rhymes and poems
- Globes and maps in every class
- Forest School approach to learning across the curriculum
- Our onsite environmental features include pond, meadow and wooded areas.
- A range of off-site visits such as parks, museums and places of worship
- Celebrating a range of religious and cultural practices throughout the year.
- Planned visitors from important members of society such as Fire fighters, police officers, dentist, nurses.
- Continuous provision that makes the most of the weather as a learning resource and using this to support learning around seasons.
- Continuous provision that reflects that cultural diversity of the children
- Continuous provision that includes use of technological toys or devices

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	<ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials and the world around them. • Explore how things work. • Plant seeds and care for growing plants. • Explore and talk about different forces they can feel. • Understand the key features of the life cycle of a plant and an animal. • Make healthy choices about food, drink, activity and toothbrushing. • Recognise some environments that are different to the one in which they live. • Understand the effects of changing seasons on the natural world around them. 					
Year 1	Everyday Materials (Chemistry)		Animals including Humans (Biology)		Plants (Biology)	
	Seasonal Changes (Physics/Biology/Working Scientifically)					
Year 2	Animals including humans (exercise, food & hygiene) (Biology)	Living things and their habitats (Biology)	Uses of everyday Materials (Chemistry)	Plants (growing seeds & bulbs) (Biology)		
Year 3	Rocks and soils (Chemistry)		Forces & Magnets (Physics)	Light (Physics)	Plants (Biology)	Animals including humans (Biology)
Year 4	Sound(Physics)	Electricity(Physics)	States of matter(Physics)	Living things and their habitats(Biology)	Animals including humans(Biology)	Working Scientifically

Year 5	Earth & Space(Physics)	Forces(Physics)	Living things and their habitats(Biology)	Animals including humans(Biology)	Properties & changes of materials(Chemistry)	Working Scientifically
Year 6	Light(Physics)	Living things and their habitats(Biology)	Evolution and inheritance(Biology)	Electricity(Physics)	Animals including humans(Biology)	Working Scientifically