



Science at Tetney

Science: The Curriculum.

Science plays a pivotal role within the curriculum at Tetney and is fundamental to our mission of creating aspirational and knowledge-rich individuals. Pupils are encouraged to be curious about the world around them, ask questions about what they observe and will be supported in their understanding of scientific ideas by using different lines of enquiry to answer their own questions. The Science Curriculum at Tetney is sequenced coherently to build knowledge across the three distinct disciplines of biology, chemistry and physics. As a result of the accumulation of essential knowledge and skills pupils' science capital and scientific understanding will provide a secure foundation enabling them to be successful in the next stage of their education.

At the end of Foundation at Tetney

Pupils will gain a secure understanding of what science is, and be introduced to the world around them through science. Pupils will begin to develop scientific vocabulary which, through scientific exploration and investigation, will begin to embed a foundation of scientific thinking.

At the end of Key Stage 1 at Tetney

Pupils will develop their understanding of scientific concepts by using different lines of enquiry to ask their own questions, observe changes over time, recognise patterns, group and classify and conduct simple comparative tests. They will continue to build on their scientific language and communicate their understanding to a range of audiences, in a variety of ways.

At the end of Key Stage 2 at Tetney

Pupils will be able to develop a deeper understanding of a wide range of scientific concepts. They will do this through exploring ideas, asking their own questions about scientific phenomena and analysing functions, relations and interactions more systematically. They will be able to apply their understanding of specific scientific processes and recognise how these ideas help them to understand and predict how the world operates.

Pedagogy: How the Curriculum is Taught

Within our Science curriculum there are three key elements:

- Knowledge and conceptual understanding. This is sequenced and delivered through direct instruction, retrieval practice and explicit vocabulary teaching. It is essential that pupils gain a secure understanding of each unit of learning to aid their progression, and depth of understanding, as they journey through the development of their scientific knowledge.
- Nature, process and methods of science (working scientifically) is encouraged throughout our science curriculum and is encouraged within every lesson. As a result, pupils are encouraged to develop their skills as a scientist through applying their knowledge and understanding ultimately deepening their own scientific understanding.
- Critical thinking around the big questions that are current and relevant to pupils in today's society. Our pupils are encouraged to consider the social, economic, ethical and political implications (with opportunities to debate) regarding key scientific questions.

Assessment

We use a multi-faceted approach to assessment within Science.

- Retrieval practice to take place at the beginning of every lesson.
- Assessment for learning is used within each lesson through skilful use of questioning and live feedback.
- Pupil voice to support evidence that pupils know and remember more over time.
- Science experiments facilitate pupils to independently apply and explore substantive knowledge and disciplinary concepts. These begin in the EYFS with teacher structured experiences and continue throughout every year group with fundamental practises built upon each year.

Cultural Capital

Enrichment events are an essential part of Science at Tetney which enhances the knowledge-driven curriculum. The enrichment events provide pupils with discrete opportunities to focus and deepen their learning and heighten their thirst for the acquisition of scientific understanding.

Career Professional Development

We develop strong subject knowledge amongst all staff which is achieved through; comprehensive middle leadership development, a focus on developing all teachers' subject knowledge and scientific pedagogy.



Science Curriculum Overview:

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	My History		Dinosaurs		Important People	Kings and Queens
Reception	My History Seasons	Our Planet and Beyond Homes	Dinosaurs My body	Important People Growing	10 Downing Street Growing	Materials Different places on Earth
Year 1	Seasons and Weather	Astronomy	Animals Including Humans	Materials	Plants and Growth	Living things and their habitats
Year 2	Plants	Animals and Being Alive	The Human Body and Staying Healthy	Electricity	Living things and their Habitats	Materials
Year 3	Forces and Magnets	Simple Machines	The Human Body	Living things and their Habitats (including classification)	Plants	States of matter (the water cycle).
Year 4	Animals including Humans.	Sound	States of Matter	Astronomy	Light	Living things and their Habitats (including classification)
Year 5	The Human Body	Rocks and Soils	Electricity	Light	Evolution and Inheritance	Environmental Science
Year 6	Changing States of Matter	Forces	Life Cycles	Life Cycles	The Human Body	Living Things and their Habitats.