



Curriculum Intent and implementation



Science Curriculum Intent:

Our intention is that our curriculum enables students to acquire and develop the key concepts of scientific knowledge and skills. We want our students to be curious and ask questions about the world around them, to develop their scientific thinking to enable them to understand the uses and implications of science. We want to inspire students to take a lifelong interest in science and to potentially become part of the scientific community.

The department will ensure that all learners are provided with knowledge rich learning experiences that aim to:

- Prepare students for a world that is ever increasing in scientific technological.
- Equip students with an understanding of scientific concepts.

Science Curriculum Implementation:

Our curriculum is designed to around central concepts (knowledge and skills) that are developed at all key stages of the student's education. Both knowledge and skills are developed through all years, and students are encouraged to use their prior knowledge to build on this through carefully designed lessons. All central concepts and skills are revisited throughout the curriculum to give students many opportunities to extend their knowledge base and build their understanding.

The curriculum is centrally developed, to ensure that all our core teaching principles are met in lessons, however teachers should adapt these to meet the needs of the students. Student voice, both in and outside the classroom enables us to ensure that our students feel valued in their education, and allows staff to teach lessons that suit their students. A range of teaching tools and activities are used within lessons to ensure staff achieve the best outcomes for their classes. This allows students to apply their learning to contexts that interest them. Student voice, both in and outside the classroom enables us to ensure that our students feel valued in their education, and feel that they are able to succeed.

The department develop the understanding of concepts through establishing prior knowledge, developing knowledge through high quality explanations, allowing time for practice and embedding knowledge and feedback.

Students receive regular feedback to ensure that they understand their level of knowledge and understanding within a lesson or topic. Feedback will form many different guises, whether it is whole class feedback, individual feedback from a test or verbal feedback about a specific piece of work. However, all students should appreciate the progress they have made in key concepts over a period of time.

Central concepts:

Biology

Organisms

Ecosystems
Genes

Chemistry

Substances, Structures & properties

Reactions
Earth systems

Physics

Forces

Waves
Harnessing Energy

Working Scientifically

Safe and appropriate use of scientific equipment and techniques

Development of scientific thinking
Analysis and evaluation of scientific methods and data
Scientific language and nomenclature

