

Science Department Curriculum Rationale KS3

KS3 Rationale

As a department we have adopted the AQA five-year scheme of work. The curriculum approach is designed to work through Years 7 to Year 11, providing a coherent 5-year curriculum and consistent assessment framework that is designed to enable every student to master concepts and progress to the next step in their science journey. Maths, literacy, and Working Scientifically skills are fully embedded throughout our knowledge-rich curriculum. It's an inquisitive and accessible approach which sparks a passion for science from Year 7, so that learners develop knowledge and key skills coherently as they progress through secondary school.

Exam skills support encourages familiarity with command words, skills, and extended response questions through KS3.

The 'big ideas' met in years 7 and 8 are revisited providing an opportunity to build and scaffold a secure knowledge and skill base. They include: Force, Electromagnets, Energy Waves, Matter, Reactions, The Earth, Organisms, Ecosystems and Genes. Enquiry processes are interleaved between each topic.

In year 9, key concepts are further explored. Emphasis is placed on the application of the knowledge gleaned in the early years and the development of the skills necessary to communicate their knowledge understanding in a logical and coherent manner.

The big ideas spark the imagination and passion in our students by allowing them to formulate their own understanding of the physical, chemical and biological aspects of the world around them, this underpins and develops their own thought processes and opinions on matters relating to their own personal well-being and their impact on the environment.

Pedagogy within the classroom

High expectations of all students regarding behaviour for learning and outcomes

Pace - Every lesson matters. Lessons are well planned and purposeful. "Do now" activities will be followed by brisk and timed activities.

Challenge - All students are challenged in order for them to make the best possible progress from their individual starting points.

Questioning will be effective in developing student knowledge and understanding, assessing progress and informing teacher planning.

Progression - All learning builds towards an end point. Learners are being prepared for their next stage of education, training or employment at each stage of their learning.

Links to School Improvement Plan

Increase the use of low stakes assessments, revision tools and consolidation resources so that pupils increase in confidence and remember the content they have been taught in the longer term.

Ensure that incisive feedback is in place and that students are given opportunities to respond to it so that students learn from mistakes, close gaps in their learning and ultimately take more responsibility for their own progress.

Literacy- Promote a passion for reading and a thirst for knowledge. Any gaps in reading to be addressed rapidly.

SEN

Working to increase our own knowledge of different areas of SEN and how to differentiate appropriately.

Understanding the SEN needs of all students on the SEN register in the class.

Being flexible and adaptable in teaching approaches to meet the needs of all students, not just those with no SEN.

Not seeing the "label" but seeing the child.

Having as high expectations of lower-ability as we do for the highest; recognising that these students may need even more knowledge to plug gaps in their learning than their peers, not less.

Creating a "no-excuses" culture: never letting a child's SEN become an excuse for inadequate or poor-quality work.

Skill Progression

Students build on prior knowledge and skills to help them prepare for the next stage of their education.

Skills are consolidated from one year to the next, providing the foundation for increasing challenge.

Work given to students to be more demanding and to match the aims of the ambitious curriculum.