

School Curriculum Intent

Young people leave Vandyke as confident and socially responsible world ready citizens with the skills, knowledge and courage to thrive.

Subject Curriculum Intent

The department aim is for students to leave Vandyke equipped to understand, question and evaluate real-world data and evidence presented to them from either online or off line sources. Students should leave school feeling confident in their scientific understanding of the world around them. Students should have the appropriate skills to be successfully included in real-world discussions and to make informed decisions regarding their own future and that of the world around them.

Subject Curriculum Implementation

- The Science curriculum introduces skills and concepts in manageable chunks, revisits prior knowledge and builds on ideas in logical sequences, to enable students to deepen their understanding, ask questions and build long-term memories of key information. It develops and revisits the KS3 curriculum and moves students logically into GCSEs (KS4) and for some, onto sixth form science subjects (KS5)
- Throughout the school year, in Years 9-11, STAMPs (Science Tracking and Monitoring Points) are normally completed, bi-weekly to assess and support student's knowledge and understanding of a previously taught topic. A centrally set homework precedes the STAMP. This homework is designed to recap / revisit a topic area, helping to build long-term memory and to support students to bridge gaps in their understanding
- Teachers start each lesson with an activity designed to revisit previous knowledge and help retention of key facts and information. In KS3-4, pre-set online forms are used at key checkpoints to assess gaps in knowledge of the current section of work prior to starting new topics
- Teachers employ a range of activities and strategies to develop long term memories from practical tasks and demonstrations, modelling of key concepts and ideas, through to class discussions and knowledge organisers
- The four science subjects at KS5 have curriculums that are tailored to allow students to develop their understanding of KS4, extend their understanding of their opted subject into KS5 content and, help support students to be more independent learners. Monitoring and assessment strategies are planned at key stages throughout the two year courses to evaluate progress, build examination skills and identify gaps in learning
- Questioning strategies are implemented in all year groups to assess and support understanding

Subject Curriculum Impact

- The science curriculum, and implementation, is designed to equip students with scientific skills and knowledge to prepare them for their journey onto their next steps, post Year 11, or to continue their learning of science subjects into one of our sixth form options
- Following KS3, many students will journey through a double science award into KS4. All students have the option to take a triple KS4 science route at the end of Year 9. To help then best select the science route for their post Year 11 journey, students are supported with detailed information during the option process. Either KS4 option will provide students with the knowledge and skills to access a sixth form science subject or to continue their education / career journey via other post Year 11 options
- Where supportive, a number of students can follow a specifically tailored KS4 curriculum path which also has extra timetabled maths lessons to deepen both maths and science concepts and skills. As with the other routes, this tailored curriculum, provides student with the knowledge and skills to continue their education / career journey post Year 11
- The department regularly reviews the implementation of the curriculum and student progress, using data collected from student assessments / gap analysis, student and staff feedback, whole school developments and specialist external information (i.e. updates from RSC, IoP, Ofqual, etc). Where improvements and / or changes are identified, appropriate adaptations are made
- In KS3 and KS4, STAMP assessments are regularly used to monitor student progress in targeted topics and skills. Progress data is reviewed and adaptations to the STAMP schedule and / or planned lesson are implemented, where deemed necessary. At three scheduled points during the year (one per term) students will complete a progress check. This check is a longer assessment of a range of previous topics and is completed under exam conditions.
- In KS4, students have mock exams in Year 11 and an end of year exam is also set in Year 10. The data from these inform planning of revision schedules, ongoing STAMP schedules, individual class and / or departmental lesson planning and targeted support for students. In addition, progress checkpoint activities are set at identified points throughout the curriculum to assess gaps in knowledge. Where gaps are identified by the teacher, ongoing lessons are adapted / or planned in, to bridge these gaps
- In KS5, students have planned assessments and examination points throughout their two-year course
- Progress data that is collected in all year groups is used to identify individual and group progress, gaps in knowledge and learning needs. Actions are implemented at individual, class and / or year group level, to address current concerns. As appropriate, changes are used to adapt future lesson planning

Cultural Capital and Careers input

- Each scheme of learning has a guide to careers links and cultural capital
- Each unit has arrange of linking content to real-world application.
- Staff are encouraged to draw in questions that link concepts to what people do in their day-to-day jobs
- Reading articles are suggested from a range of available resources
- Visual displays of information on career opportunities

Cross-curricular links

- Maths: all science lessons are seen as an opportunity to develop / deepen mathematical skills. Common and specific mathematical language is being shared and identified in both the science and maths departments. A small group of students in KS4 have additional 'maths for science' lessons from a maths teacher.
- Geography: developing linked content (i.e. climate change, atmosphere).
- Product design & Food technology: building practical skills (i.e. following a method, accurate measuring, using equipment)
- PE & Child development: biology linked content (i.e. respiration, reaction rates, reproduction).
- English: development of Level 2 keywords (i.e. obtain, function, evaluate) and implementation of VCOPS and the school literacy strategy in all lessons