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 7and 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.

KS4 Rationale

Building on the concepts met and explored at KS3, KS4 continues the AQA five-year scheme. We facilitate both the Separate Science and Trilogy Science routes to GCSE success. As a department, we have chosen the Trilogy Science route as each specialism is able to be taught by an individual, specialist teacher, this exposes the students to a range of teaching styles and the passionate delivery from a subject specialist. This allows the curriculum delivery model to mirror that of the Separate Sciences.

The topics met through KS4 further develop the students' knowledge, application and investigative skills. The required practical element of the courses allows the students to become familiar with common scientific apparatus, methods and laboratory techniques.

Through scientific inquiry, students are able to formulate methods, collect measurements and observations to investigate their own hypotheses. Recording, presenting and evaluating both secondary and primary data to draw conclusions.

The mathematical skills needed to successfully calculate, present and interpret data are embedded through the schemes of work.

Regular exposure to exam style questions with a focus on scientific literacy, further prepare the boys to effectively communicate their knowledge and understanding in a logical and coherent manner.

By relating the science curriculum to current affairs, environmental issues, public health and developments in technology, our students can grow as responsible, culturally and scientifically aware citizens of the community.

Empowered by a strong academic and cultural foundation, they are better equipped to make the most appropriate choices for their future lives, personal well-being, further studies and careers.

West Hill School **Department Curriculum Rationale**

Pedagogy within the classroom **High expectations** of all pupils 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 pupils are challenged in order for them to make the best possible progress from their individual starting points **Questioning** will be effective in developing pupil 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 pupils are given opportunities to respond to it so that pupils 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
Skill Progression Pupils 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 pupils to be more demanding and to match the aims of the ambitious curriculum.	**SEN** Working to increase our own knowledge of different areas of SEN and how to differentiate appropriately Understanding the SEN needs of all pupils on the SEN register in the class Being flexible and adaptable in teaching approaches to meet the needs of all pupils, 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 pupils 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