

Subject Curriculum Intent, Implementation and Impact

Subject	Science
Curriculum Intent	
<p>Our intent is that our curriculum inspires a love of learning and sustains curiosity about Science. We aim to build on previous knowledge and develop understanding of nature, processes and methods of scientific investigations through different types of scientific enquiries. Our students will develop the practical knowledge and skills needed to use scientific equipment safely and accurately to competently test ideas and demonstrate phenomena.</p> <p>Our curriculum should inform knowledge of the key functions of the human body so that our students can make educated opinions and decisions about health, products and stories in the media.</p> <p>We aim to develop our students' analytical skills so that they will be able to scrutinise data presented in any format and draw conclusions.</p> <p>We encourage intellectual curiosity by helping our students to construct questions and discuss scientific issues that may affect their own lives; presently and in the future. We aim that students will progress unto STEM careers.</p> <p>In order to increase the depth and breadth of scientific knowledge, the National curriculum informs planning at KS3. Knowledge is sequenced linking topics together and reinforcing and solidifying knowledge in a spiral curriculum. At KS4, we offer Combined Science-Trilogy (equivalent to 2 GCSEs) and the Separate Sciences (equivalent to 3 GCSEs) at both higher and foundation tier with AQA exam board.</p> <p>We embed relevant trips, external speakers, STEM club, engage with British national science week and other national calendared events. We also collaborate with STEM initiatives with other departments.</p> <p>Our science curriculum will inform students of issues facing themselves and the wider world and will develop their understanding of the effects of their actions on the evolution of the environment and society.</p> <p>Our aim is that our learners will leave Heron Hall Academy being able to critically analyse and evaluate data, stories and phenomena in everyday situations. They would have developed transferable skills such as time-keeping, teamwork and organisation so they can go on to be life-long learners. Our learners will become more employable so they become self-sufficient and productive members of society.</p>	
Curriculum Implementation	
<p>Mastery of scientific knowledge in biology, chemistry and physics is coupled with the development of investigative skill, mathematical reasoning and conceptual understanding. All lessons involve a knowledge retrieval task to link, check and consolidate knowledge from previous lessons. Assessment for learning activities are embedded throughout the lessons.</p> <p>We incorporate practical skills as much as possible. We cultivate their fascination by students formulating, conducting and analysing their own investigations in key stage 3, in</p>	

addition to GCSE required practicals at key stage 4. Conducting experiments serves as a mean to learning scientific ideas and theories as well as to encourage students to follow science further and nurture practical skills and attitudes that will be valuable in future careers .

There is monitoring and quality assurance through learning walks, observations and book scrutiny. Colleague support with peer observation and feedback.

Teacher feedback is in line with school's assessment cycle and peer and self-feedback are incorporated in lessons. From this, students are given opportunities for reflection. WWW and EBI feedbacks are given on formative and summative assessments and students respond to their bespoke targets in DIRT lessons.

Knowledge and application checks for KS3 are used as formative and summative assessments. There are 3 data drops per year. With the data, adaptations are made to planning and intervention strategies and intervention clubs are implemented. Students are also placed in appropriate sets and learning pathways.

Vocabulary sheets are given before each unit. Keywords are display on each starter slide and students are encouraged to use the keywords in the lessons.

Numeracy skills are embedded in lessons. Students analyse data, develop graph skills, units conversions and mathematical calculations. All students are trained and become familiar with using the physics equation sheets.

Curriculum Impact

The science curriculum at Heron Hall will maintain and sustain developed curiosity about science and the world.

Our learners will develop resilience, organisational skills and problem solving skills through experimental work as they plan, perform and analyse their work.

Students will develop independent working skills, team working and being able to work and respect their communities and their environment, whilst becoming responsible citizens. Our involvement will also allow them to be accepting and tolerant of different values, views and beliefs.

Pupils get extensive experience with trips and visits from external professionals in their field.

Our team of teachers having very high expectations and allowing students to ask questions and encourage their inquisitiveness.