Science at GHES

At GHES, we believe that every student can succeed in science. We are committed to providing an inclusive learning environment where lessons are carefully differentiated, accessible and responsive to individual needs. This enables all students to make meaningful progress, regardless of their starting point, previous experiences or barriers to learning. We celebrate achievement at every stage and support students to build confidence in their learning, helping them to realise their potential and achieve success in science.

Our intent is to deliver an engaging, accessible and flexible science curriculum that meets the diverse needs of all learners within our provision. Through both in-person and online teaching, we aim to foster curiosity, develop scientific understanding and equip students with the knowledge and skills needed to make sense of the world around them. We seek to inspire students to ask questions, think critically and engage positively with science, both within and beyond the classroom.

The secondary science curriculum at GHES is ambitious, broad and adaptable. We aim to ensure that all students:

- Develop secure scientific knowledge and understanding across Biology, Chemistry and Physics.
- Build the skills of scientific enquiry, including questioning, investigating, analysing evidence and drawing conclusions.
- Access high-quality teaching, clear explanations and regular opportunities to ask questions and deepen their understanding.
- Engage with scientific concepts through a range of approaches, including practical work, demonstrations, digital tools and interactive simulations.
- Develop confidence in using scientific vocabulary and communicating scientific ideas effectively.
- Experience a curriculum that is responsive to their individual needs, enabling them to progress at an appropriate pace.
- Gain recognised accreditation and qualifications that support their future educational pathways and aspirations.
- Appreciate the relevance of science in everyday life and develop an awareness of potential STEM-related careers.

Through our curriculum, we strive to develop resilient, curious and confident learners who are well prepared for further study, employment and active participation in an increasingly scientific and technological world.

The KS3 Science curriculum at GHES follows the National Curriculum and is designed to provide students with a strong foundation in Biology, Chemistry and Physics. Alongside developing scientific knowledge and understanding, students learn about scientific enquiry and investigative skills, preparing them for future GCSE study and potential STEM-related careers. KS3 modules are delivered in conjunction with the **AQA Unit Award Scheme (UAS)**. The UAS provides recognition for the achievement of small, bite-sized learning goals. Although it is not a formal

qualification, it offers students formal recognition for their progress and achievements. Throughout their time at GHES, students build a portfolio of certificates which can be shared with their mainstream school upon reintegration or with future educational providers.

The KS4 curriculum at GHES follows the **AQA Combined Science GCSE** course, enabling students to achieve the equivalent of two GCSEs in Science. Where appropriate, some Year 11 students follow the **AQA GCSE Biology** course, leading to a single GCSE qualification. Students for whom GCSE study may not be the most suitable pathway can complete the **Edexcel Entry Level Certificate in Science**. This qualification is initially delivered alongside the GCSE curriculum, ensuring flexibility and maintaining progression options for future education. Students have opportunities to participate in practical science activities, providing valuable hands-on experience of the GCSE required practicals. For students who find attending in person challenging, interactive resources and simulations are used to support engagement and learning. In line with schools across the county, delivery of the KS4 curriculum begins in Year 9. During the spring term of Year 11, dedicated revision time is provided for all modules, helping to consolidate learning and address any gaps that students may have experienced during their education.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7	Forces Introduction to Cells	Particles & State of Matter Magnets	Introduction to Flowering Plants Space	Physical & Chemical Changes	Reproduction & Inheritance	Ecosystems Separating Mixtures
Year 8	Health & Disease Elements, Mixtures & Compounds	Density Natural & Artificial Selection	Intro to Earth Sciences	Electricity Photosynthesis	Materials & Properties Energy Resources	Respiration
Year 9	Cells & Organisation Acids & Alkalis	Light & Sound Organ Systems & Digestion	Energy Chemical Reactions	GCSE Chemistry 9 Chemistry of the Atmosphere GCSE Biology 7 Ecology GCSE Physics 3 Particle Model of Matter GCSE Chemistry 10 Using Resources		
Year 10 Combined Science	Biology 1 Cell Biology Chemistry 1 Atomic Structure & Periodic Table		Physics 1 Energy Biology 2 Organisation		Physics 5 Forces Chemistry 2 Bonding, Structure & Properties	
Year 11 Combined Science (+ Entry Level for Foundation)	Biology 5 Homeostasis & Response Biology 6 Inheritance, Variation & Evolution (Entry Level B1a) (Entry Level C1a) Chemistry 4 Chemical Changes (Entry Level C1b) Chemistry 5 Energy Changes Chemistry 6 Rate & Extent of Chemical Change Chemistry 3 Quantitative Chemistry		Biology 3 Infection & Response (Entry Level B1b) Biology 4 Bioenergetics Biology 1 Cell Biology Revision Biology 2 Organisation Revision Chemistry 7 Organic Chemistry Chemistry 8 Chemical Analysis Chemistry 1 Atomic Structure & Periodic Table Revision		Biology 7 Ecology Revision Targeted Biology Revision (Entry Level completion) Chemistry 10 Using Resources Revision Targeted Chemistry Revision (Entry Level completion) Physics 5 Forces Revision Targeted Physics Revision (Entry Level completion)

	(Entry Level P1a) Physics 6 Waves Physics 4 Atomic Structure (Entry Level P1b) Physics 7 Magnetism & Electromagnetism	Chemistry 2 Bonding, Structure & Properties Revision Chemistry 9 Chemistry of the Atmosphere Revision Physics 2 Electricity Physics 1 Energy Revision Physics 3 Particle Model of Matter Revision	
Year 11 Entry Level	Entry Level B1a Entry Level C1a Entry Level P1a	Entry Level B1b Entry Level C1b Entry Level P1b	Entry Level completion
Year 11 Biology	Biology 5 Homeostasis & Response Biology 6 Inheritance, Variation & Evolution Biology 3 Infection & Response Biology 4 Bioenergetics	Biology 1 Cell Biology Revision Biology 2 Organisation Revision Biology 7 Ecology Revision	Targeted Biology Revision