

In the HPA Science Faculty, our curriculum intent is to ignite excitement and curiosity in the minds of our students while guiding them on a journey of progression from novice to experts in disciplinary science. We are dedicated to providing a dynamic and enriching learning experience that not only instils a deep understanding of biology, chemistry, and physics but also cultivates critical thinking, problem-solving, and creativity. Through hands-on experiments, real-world applications and experiences and interdisciplinary connections, we aim to inspire a lifelong passion for science and empower our students to become confident, informed citizens. By fostering a supportive environment that encourages exploration and discovery, we strive to equip our students with the knowledge, skills, and confidence to excel academically and make meaningful contributions to the world around them.

Year group	Winter term	Spring term	Summer term
7	Science Skills Forces Cells Substances & Solutions	Electrical circuits Elements & Compounds Variation & classification	Energy Reproduction Earth in space
8	Health Light waves Cells to Systems	Electrical energy Earth & Atmosphere	Chemical reactions Acids & Alkalis Movement
9	The periodic table Interdependence Magnetism	Earth cycles Effects of forces Wave properties	Biodiversity Biochemistry & disease Energy transfer Maths Skills in Science

Year group	Winter term	Spring term	Summer term
10	Cell Biology Atomic structure & Periodic table Bonding, structure & properties Quantitative chemistry Energy transfers	Organisation Infection & Response Quantitative Chemistry Electrical circuits	Bioenergetics Chemical changes Energy changes Particle model of matter Atomic structure & Radioactivity
11	Homeostasis & response Rates of chemical reactions Organic chemistry Forces & Motion Waves	Ecology Chemical analysis Chemistry of the atmosphere Using resources Magnetism & Electromagnetism	SUMMER EXAMS

Biology: OCR

Year group	Winter term	Spring term	Summer term
12	Cell Structure Biological Molecules & Membranes Nucleotides & Nucleic Acids Enzymes Cell Division, Diversity & Organisation	Exchange Surfaces Disease & Immunity Biodiversity	Transport in animals and Plants Classification & Evolution
13	Homeostasis and Communiation Plant & Animal Responses Photosynthesis Respiration	Cellular Control Inheritance & Genomes Cloning & Biotechnology Ecosystems, Populations & Sustainability	SUMMER EXAMS

Chemistry: OCR

Year group	Winter term	Spring term	Summer term
12	Electronic structure Bonding & structure Basic concepts of organic chemistry	Alkanes, Alkenes & Alcohols	Haloalkanes Organic synthesis & analytical techniques
13	Aromatic chemistry & Carbonyl chemistry	Carboxylic acids & Esters Nitrogen compounds Polymers & Synthesis	SUMMER EXAMS

Physics: AQA

Year group	Winter term	Spring term	Summer term
12	Particle Physics Mechanics	Particle Physics/Electricity Waves	Electricity Gravitational fields
13	Electric fields Thermal physics Capacitors	Optional unit - Astrophysics Magnetic fields	SUMMER EXAMS