



KS4 – Science Curriculum – Alderman White School

Objectives	<p>The KS4 Science Curriculum at Alderman White follows the National Curriculum to provide the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. Pupils are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.</p> <p>The content delivered during GCSE is designed to develop scientific knowledge and conceptual understanding through the specific disciplines and is enabling students to build on concepts taught during KS3 and prepare students for progression at KS5.</p> <p>AQA GCSE Combined Science is delivered in 6 double lessons spread across the fortnight. Separate Science has an additional 3 double lessons in both Yr 10 and Yr 11.</p>
Assessment	<p>Students complete <i>Topic Tests</i> at the end of each unit in Biology, Chemistry and Physics. Tests will also include questions on previous topics to measure long term retrieval skills.</p> <p>Students will complete a range of practical skills, determined by AQA as Core Practicals. These are examined within assessments, including final exams in summer of Yr 11.</p> <p>Additionally, students will sit 3 <i>Progress Exams</i> using official AQA Past Papers in June/July of Yr 10 and March/April of Yr 11. November of Yr 11 will be used as an opportunity to resit Paper 1 content.</p>
Extending Learning at home	<p>Students will be issued homework from each of their 3 subjects once per fortnight. The tasks set will take a variety of forms e.g. exam questions, revision for tests, reading tasks and target tackling activities.</p> <p>Yr 11 - Jan – April - homework will focus on Yr 10 content and exam technique.</p>
Support Available	<p>Monday night Support sessions run all through the year. Available to support in catching up missed work or help with specific problems. Targeted sessions will be offered from Easter of Yr 11 to support revision.</p> <p>Students can purchase CGP revision guides from the Science Department.</p>
Useful web addresses	<p>SENECA BBC Bitesize – AQA GCSE Oak National Academy</p>

AQA GCSE Combined Trilogy and Separate Science – Unit Breakdown

Topics	Year 10 – Paper 1 Content			
	Biology	Chemistry	Physics	Entry Level – 1 group only
	1. Cells 2. Organisation 3. Infection and response 4. Bioenergetics (revision – covered in Yr 9)	1. Atomic Structure 2. Bonding 3. Quantitative Chemistry 4. Chemical Changes 5. Energy Changes (revision- Covered in Yr 9)	1. Energy 2. Electricity 3. Particles 4. Atomic Structure	1 Human Body 2. Environment + Inheritance 3. AECM 4. Rates and Earth 5. Energy, Forces and Matter 6. Electricity and Waves
	Year 11 – Paper 2 Content			
5. Homeostasis 6. Inheritance + Variation 7. Ecology	6. Rates 7. Organic Chemistry 8. Chemical Analysis 9. Atmosphere 10. Using resources	5. Forces 6. Waves 7. Magnets 8. Space* (Triple only)	Completion of Core Practical work for Combined Trilogy. Completion of parts of Combined Specification previously unexplored.	

*Please note the order of content may differ from class to class to avoid clashes with equipment.

*Each student will have 3 teachers, each responsible for delivery of a different science discipline.

