

Subject Overview Combined Science – Year 11

Year 11 combined science is where students begin to refine their understanding of the themes they have studied in their high school career, and further extend and challenge themselves with the most difficult concepts in the GCSE course

The work they complete through their five year journey will allow students to leave Rastrick High school as scientifically literate members of society.

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5
Knowledge & Skills	<p>Homeostasis and response (15 Lessons) How the body uses hormones and nerves to maintain internal conditions</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Assessment 1A</p> <ul style="list-style-type: none"> • Bioenergetics • Chemical changes • Domestic electricity </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Assessment 1B</p> <ul style="list-style-type: none"> • Adaptations & Interdependence • Quantitative Chemistry • How forces affect motion </div> <p>Rates of reactions (16 Lessons) Investigate how to measure and alter reaction rates in lab and industry</p>	<p>Chemical analysis (10 Lessons) Use techniques to separate mixtures and identify unknown substances.</p> <p>Organic chemistry (10 Lessons) Understand crude oil formation, separation, uses, and environmental impact.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Assessment 2 - Mock</p> <ul style="list-style-type: none"> • Biology paper 1 • Chemistry paper 1 • Physics paper 1 • Biology paper 2 • Chemistry paper 2 • Physics paper 2 </div>	<p>Magnetism in depth (15 Lessons) Explore magnetic fields, electromagnetism, and calculate forces using models and equations.</p> <p>Inheritance and variation (15 Lessons) Model and explain how genetic information is inherited and causes variation.</p>	<p>Theories of evolution (10 Lessons) Evaluate evolutionary theory, supporting evidence, and reasons for extinction.</p> <p>Using Earth's resources (15 Lessons) Examine how we use natural resources and explore sustainable alternatives.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Assessment 3</p> <ul style="list-style-type: none"> • Magnetism in depth • Inheritance, variation & theories of evolution • Using Earth's resources </div>	<p>Curriculum re-teach Revisit key content and skills identified from mock exam performance.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">GCSE exams</p> <ul style="list-style-type: none"> • Biology paper 1 • Chemistry paper 1 • Physics paper 1 • Biology paper 2 • Chemistry paper 2 • Physics paper 2 </div>
Beyond The Curriculum	<p>Places to visit Thackray Museum of Medicine (Leeds)</p> <p>Reading "The Man Who Mistook His Wife for a Hat" Oliver Sacks "Why Chemical Reactions Happen" - James Keeler</p>	<p>Places to visit National Coal Mining Museum (Wakefield)</p> <p>Reading "Napoleons Buttons" Penny Le Couteur</p>	<p>Places to visit Science and Industry Museum (Manchester)</p> <p>Reading "Gregor Mendel: The Friar Who Grew Peas" Cheryl Bardoe</p>	<p>Places to visit Yorkshire Wildlife Park (Doncaster) Ponderosa Zoo (Heckmondwike)</p> <p>Reading "Sapiens: A Brief History of Humankind" Noah Harari</p>	
<p>Extra revision YouTube: Free science lessons Cognito Combined Science Biology, Cognito Combined Science Chemistry, Cognito Combined Science Physics BBC bitesize</p>					