

Sunbeck Centre Science Long Term KS4 Curriculum Overview

Subject:		Combined Science: Trilogy						
Year 10	TERM	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
	WHAT ARE WE LEARNING ABOUT?	Biology 1 – Cell biology Biology 2 - Organisation	Chemistry 1 – Atomic structure + the periodic table Chemistry 2 – Bonding, structure and the properties of matter	Physics 1 – Energy Physics 2 - Electricity	Biology 3 – Infection and response Biology 4 – Bioenergetics	Chemistry 3 – Quantitative chemistry Chemistry 4 – Chemical changes Chemistry 5 – Energy changes	Physics 3 – Particle model of matter Physics 4 – Atomic structure	
	ASSESSMENT OBJECTIVES	AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.						
	PATHWAY	GCSE Combined Science : Trilogy						
Year 11	TERM	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
	RATIONALE	Each of the 21 required practicals and the underpinning scientific knowledge are taught to students						
	WHAT ARE WE LEARNING ABOUT?	Chemistry Practicals <ul style="list-style-type: none"> • Making salts • Temperature changes • Electrolysis • Rates of reaction • Chromatography • Water purification 	Biology Practicals <ul style="list-style-type: none"> • Microscopy • Osmosis • Enzymes • Food tests • Photosynthesis • Reaction time • Field investigations 	Physics Practicals <ul style="list-style-type: none"> • Specific Heat Capacity • Resistance/I-V characteristics • Density • Force and extension • Acceleration • Waves / Radiation and absorption 	Revision of the basic scientific principles and exam technique	Revision		
	ASSESSMENT OBJECTIVES	AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures. • AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures. • AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.						
	PATHWAY	GCSE Combined Science : Trilogy						

The core aims of the Key Stage 4 Combined Science: Trilogy Curriculum are to encourage learners to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science, through different types of scientific enquiries that help them to answer scientific questions about the world around them
- develop and learn to apply observational, practical, modelling, enquiry and problem-solving skills, both in the laboratory, in the field and in other learning environments
- Develop their ability to evaluate claims based on science through critical analysis of the methodology, evidence and conclusions, both qualitatively and quantitatively.

All schemes of learning are tailored the National Curriculum requirements for:

Combined Science: Trilogy and the new GCSE specification

Assessment:

- Each scheme of learning will conclude with a formal assessment focused on the content of that topic
- The assessments and marking criteria will be modelled on GCSE frameworks and the school's data entry policies.
- Formative assessment will take place continuously with either written or verbal feedback.