

1c. Curriculum Overview: Science



Year 10 Science

Refer to	Term 1 – September to December	Term 2 – January to March	Term 3 – April to July
GCSE Specification	<p><u>Bonding, Structure and Properties of Matter</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Chemical bonds – ionic, covalent, metallic • Bonding and structure in relation to properties • Structure and bonding of carbon • Nanoparticles <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p>	<p><u>Infection and Responses and Bioenergetics</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Health issues • Effect of lifestyle • Coronary heart disease • Cancer • Communicable diseases (including plants and their defences) • Human defence systems • Vaccination • Drugs to treat disease • Discovery and development of drugs • Photosynthesis • Uses of glucose • Respiration • Response to exercise • Metabolism <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical • Mock exams <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p>	<p><u>Quantitative Chemistry</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Chemical measurements • Conservation of mass • Quantitative interpretation of chemical equations • Amounts of substances, masses and moles • Concentration of solutions <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p>



1c. Curriculum Overview: Science

	<u>Organisation</u>	<u>Particle Model</u>	<u>Homeostasis and Response and Ecology</u>
	<p><u>What are the students learning?</u></p> <ul style="list-style-type: none">Principles of organisationThe human digestive systemThe heart and blood vesselsBloodCoronary heart diseasePlant tissues, organs, systems <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none">X1 FA linking current learning (AO123)X1 FA: Required Practical <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p> <p><u>Energy and Electricity</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none">Energy changes in a system (E_k, E_e, E_p)PowerConservation and dissipation of energyEnergy transfer and Hooke's LawEfficiencyNational and global energy resourcesCurrent, potential difference and resistanceSeries and parallel circuitsDomestic uses and safetyEnergy transfersThe National Grid <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none">Required practical: Hooke's Law	<p><u>What are the students learning?</u></p> <ul style="list-style-type: none">Particle model of matterInternal energy and energy transfersParticle model and pressure <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none">X1 FA linking current learning (AO123) <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p> <p><u>Atomic Structure</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none">Atoms and isotopesAtoms and nuclear radiation <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none">X1 FA linking current learning (AO123) <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform.</p>	<p><u>What are the students learning?</u></p> <ul style="list-style-type: none">HomeostasisThe human nervous systemEndocrine system: control of blood glucose, hormones in human reproduction/contraceptionAdaptations, interdependence and competitionOrganisation of an ecosystemBiodiversity and the effect of human interaction on ecosystems <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none">Required practical: reaction timeRequired practical: estimating population size <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p>

1c. Curriculum Overview: Science



SAINTS PETER AND PAUL
CATHOLIC HIGH SCHOOL

	<p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p>		
--	---	--	--



1c. Curriculum Overview: Science

Year 11 Science			
Refer to	Term 1 – September to December	Term 2 – January to March	Term 3 – April to July
GCSE Specification	<p><u>Chemical changes</u> <u>Rate and Extent of Chemical Change</u> <u>Organic Chemistry</u> <u>Chemical Analysis</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Reactivity of metals • Reactions of acids • Reactivity series, extraction of metals and metal oxides • Electrolysis • Exothermic and endothermic reactions • Reaction profiles and catalysts • Rate of reaction and collision theory • Effect of temperature and reaction between acids and metals • Effect of surface area and reaction of acids and carbonates • Equilibrium • Carbon compounds as fuels and feedstock • Crude oil, fractional distillation, hydrocarbons, cracking • Purity, formulations and chromatography • Identification of common gases <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical • Mock exams (x6 papers, tiered/triple) 	<p><u>Forces and Waves</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Forces and their interactions • Work done and energy transfer • Forces and elasticity • Forces and motion • Waves in air, fluids and solids • Electromagnetic waves <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical • Mock exams <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p> <p><u>Inheritance, Variation and Evolution</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Inheritance, variation and evolution • Reproduction • Meiosis • DNA Genetic inheritance, inherited disorders, sex determination • Variation • Evolution • Selective breeding 	<p><u>Chemistry of the Atmosphere and Resources</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Composition and evolution of the Earth's atmosphere • Carbon dioxide and methane as greenhouse gases • Common atmospheric pollutants and their resources • Using the Earth's resources and obtaining potable water • Life cycle assessment and recycling <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform.</p> <p style="text-align: center;">AND EXAM PREPARATION</p>



1c. Curriculum Overview: Science

	<p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform</p> <p><u>Homeostasis and Response and Ecology</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Homeostasis • The human nervous system • Endocrine system: control of blood glucose, hormones in human reproduction/contraception • Adaptations, interdependence and competition • Organisation of an ecosystem • Biodiversity and the effect of human interaction on ecosystems <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • Required practical: reaction time • Required practical: estimating population size <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform.</p>	<ul style="list-style-type: none"> • Genetic engineering • Evidence for evolution <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) • X1 FA: Required Practical • Mock exams <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform.</p> <p><u>Magnetism and Electromagnetism</u></p> <p><u>What are the students learning?</u></p> <ul style="list-style-type: none"> • Permanent and induced magnetism, magnetic forces and fields • The motor effect • <p><u>What are the key standardised assessments?</u></p> <ul style="list-style-type: none"> • X1 FA linking current learning (AO123) <p><u>What are the standardised homework tasks?</u> Educake is used as the standardised homework platform.</p>	
--	---	---	--