

KS4 Combined Trilogy Curriculum map

		Terms 1+2	Terms 3+4	Terms 5+6
Year 9 (Transition year)	Biology	Cells structure + transport and Cell division Plant, animal, bacterial cells, movement of substances, stem cells, microscopes.	Organisation (digestive system) Cells to organ systems, food chemistry, enzymes, food tests.	Organisation (Circulatory) and Communicable diseases Circulatory system, heart disease, diseases & pathogens, human defences.
	Chemistry	Atomic structure and the periodic table History of atomic model and periodic table, atom structure, trends in group 1 & 7 groups.	Chemical analysis and Earth's atmosphere Mixtures, pure substances, tests for gases & ions, history of earth's atmosphere, climate change.	The Earth's resources Finite and infinite resource, safe water, extracting metals from ores, recycling.
	Physics	Forces and motion Vector & scalar quantities, motion graphs, elasticity, momentum, resultant forces.	Molecules and matter Density, changes of state, calculations for heating and changing state, pressure and temperature.	Radioactivity Isotopes, discovery of the nucleus, radiation uses & hazard, nuclear decay equations.
	Skills	<i>Calculations, apparatus, measurements, observations, terminology, models, development of theories, data analysis and transfer, evaluation.</i>	<i>Apparatus, methods, risk assessments, predictions, models, measurements, data analysis and transfer, conclusions, evaluation of methods.</i>	<i>Dissection, observation, models, personal + social + environmental implications, apparatus, theory development, risk assessment, units, peer review.</i>
Year 10	Biology	Non communicable disease and treatment of disease Smoking, alcohol, cancer, vaccinations, antibiotics, drug development.	Bioenergetics Photosynthesis and links to agriculture, limiting factors, respiration with links to exercise and fermentation in plants.	Biological responses The nervous and endocrine systems, growth, adolescence, menstruation, fertility, response to stimuli, homeostasis.
	Chemistry	Structure and bonding States of matter, types of bonding and structures, molecular structures and ions.	Chemical calculations Relative masses and moles, equations and calculations, linking mass to balanced equations.	Crude oil and Chemical Changes Fuels, fractional distillation of oil, reactivity series, metal reactions, acids and alkalis.
	Physics	Energy Conservation, transfer and store of energy, heat transfer, energy calculations, insulation.	Energy resources and Waves Renewable & non-renewable energy resources, environmental issues, evaluation of resources.	Electricity Circuits, components, domestic electricity, safety, National Grid, appliances and efficiency
	Skills	<i>Calculations, data analysis & transfer, peer review, developing theories, personal + social impact, correlation and causation.</i>	<i>Calculations, evaluations, data analysis & transfer, methods, apparatus, graph skills, personal + social + environmental impact.</i>	<i>Apparatus, methods, evaluation, conclusions, units, predictions, risk assessment, terminology, social + personal impact, data analysis & transfer.</i>
Year 11	Biology	Genetics and reproduction Reproduction in organisms, cell division, genetics, genetic engineering, evolution, classification.	Ecology Ecosystems, adaptations, natural selection, food webs, carbon and water cycles, pollution.	Examinations
	Chemistry	Electrolysis and Energy changes Electrolysis in industry (e.g. aluminium), reactions that emit and absorb heat, bonding energy.	Rates and equilibrium Collision theory, effect of temperature, concentration and pressure on rates of reaction.	Examinations
	Physics	Waves Properties of wave, reflection & refraction, electromagnetic spectrum uses & hazards.	Electromagnetism Magnetic fields, motors, electromagnets and calculations.	Examinations
	Skills	<i>Theory development, environmental impact, units, calculations, peer review, evaluations, conclusion, data analysis & transfer, personal + social impact.</i>	<i>Environmental impact, measurements, units, observations, conclusions, evaluations, calculations, data analysis & transfer</i>	