

Year 10 Triple Chemistry Curriculum Plan							
	Core		Hinterland		NC Coverage	Assessment	Whole Education Opportunities
	Knowledge	Skills	Knowledge	Skills			
Obtaining and using metals and reversible reactions and equilibria	<ul style="list-style-type: none"> Ores and ore extraction Oxidation and reduction Life cycle assessment and recycling metals 	<ul style="list-style-type: none"> Drawing diagrams of electrolysis Linking in ionic bonding Following a scientific method Recognising trends in data Developing exam skills Interpreting graphs Plotting scatter graphs Balancing chemical equations Analysing data and concluding scientific ideas Health and safety understanding 	<ul style="list-style-type: none"> Redox reaction equations Mining processes 	<ul style="list-style-type: none"> Debating skills 	4WD2 4WE2 4WE6 4WE7 4WA1e 4CG1 4CG4 4CG7 4CI1 4CI2 4CC2 4CC6 4CC7 4CG4	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> DT – properties of materials
Transition Metals, Alloys and Corrosion	<ul style="list-style-type: none"> Properties of transition metals Process/reactions of corrosion Electroplating Properties of alloys Uses of metals and their alloys 	<ul style="list-style-type: none"> Writing balanced symbol equations Writing balanced half equations 	<ul style="list-style-type: none"> Jewellery manufacturing 	<ul style="list-style-type: none"> 	4CC2 4CC6 4CC7 4CI5 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> DT/Creativity – jewellery design
Quantitative Analysis	<ul style="list-style-type: none"> Calculating yields Calculating atom economy Calculating concentrations Titrations calculations and analysis Molar volume of gases 	<ul style="list-style-type: none"> Using experimental data in calculations Rearranging equations Using moles Practical work (titrations) and analysing data Developing exam skills in multi-step calculations 	<ul style="list-style-type: none"> Recycling/Environmental considerations of reactions 	<ul style="list-style-type: none"> Debating skills 	4CC2 4CH3 4CH4 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> Maths – using and rearranging calculations
Dynamic Equilibria	<ul style="list-style-type: none"> Fertilisers and the Haber process Factors affecting equilibria 	<ul style="list-style-type: none"> Comparing and contrasting production methods Looking at differences between small-scale and large-scale practical work Using evidence to make experimental choices 	<ul style="list-style-type: none"> Fertilisers and their use in farming 	<ul style="list-style-type: none"> Cost analysis vs impact 	4CC2 4CR2 4CI3 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> Humanities – farming and agriculture development over time
Chemical cells and Fuel Cells	<ul style="list-style-type: none"> Understanding/Comparing chemical cells and fuel cells 	<ul style="list-style-type: none"> Using ionic half equations Drawing practical diagrams Comparing and evaluating practical set-ups 	<ul style="list-style-type: none"> Hydrogen powered cars 	<ul style="list-style-type: none"> 	4CC2 4CC6 4CC7 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> Geography – environmental impact of cars IT/Creativity – designing hydrogen fuelled cars
Groups in the periodic table	<ul style="list-style-type: none"> Understanding properties and trends in group one elements Understanding properties and trends in group seven elements Reactions of halogens Understanding properties and trends in group 0 elements 	<ul style="list-style-type: none"> Analysing data to understand/predict trends Drawing electron configuration diagrams Using tests for chlorine 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	4CG2 4CA3 4CA4 4CA5 4CA6 4CA7 4CC2 4CC3 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none">
Rates of reaction	<ul style="list-style-type: none"> Understanding rates of reaction Factors affecting rates of reaction Catalysts and activation energy 	<ul style="list-style-type: none"> Drawing and interpreting graphs Practical investigation skills Plotting results in graphs 	<ul style="list-style-type: none"> Uses of catalysts in industrial processes 	<ul style="list-style-type: none"> 	4CG6 4CE1 4CE2 4CR1 4CR2 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	<ul style="list-style-type: none"> History – industrial revolution and development of processes over time

Heat energy changes in chemical reactions	<ul style="list-style-type: none"> Exothermic and endothermic reactions Energy change in reactions 	<ul style="list-style-type: none"> Drawing and interpreting reaction profiles Bond energy calculations 			4CG6 4CE1 4CE2 4CR1 4CR2 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	
Fuels	<ul style="list-style-type: none"> Hydrocarbons in crude oil and natural gas Fractional distillation The alkanes – molecular and structural formulae, trends in physical properties, chemical properties Complete and incomplete combustion Pollution caused by sulfur dioxide and oxides of nitrogen Cracking 	<ul style="list-style-type: none"> Word equations Balanced chemical equations Analysing bar charts 	<ul style="list-style-type: none"> More depth on carbon monoxide dangers in the home – linking carbon monoxide poisoning back to the exchange and transport in animals in biology (see above) Catalytic converters Hydrogen fuel cells 		4CI3 4CI4 4CE2 4CE3 4CE4 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	History – industrial revolution
Earth and atmospheric science	<ul style="list-style-type: none"> Earth's early atmosphere How the atmosphere has changed over time The current atmosphere Climate change 	<ul style="list-style-type: none"> Gas tests Interpreting line graphs Correlation and causation 	<ul style="list-style-type: none"> Understanding impacts of climate change on people/places 		4CE1 4CE2 4CE3 4CE4 4CE5 4WD2-5 4WE1-7 4WA1a-f 4WV1-6	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points using mixed topic assessments 	Geography – looking at global climate and economies