



<u>Curriculum Overview for Chemistry</u> <u>Year 10</u>

Substantive Knowledge:				
Decoding terms Etymology of key terms	Half Term 5:			Skim and Scan of source information
Substantive Knowledge: Draw and label exothermic reaction profile with activation energy, reactants, products and energy released. Draw and label an endothermic reaction profile with activation energy, reactants, products and energy absorbed. Identify examples of exothermic and endothermic reaction. Describe a method on how to measure temperature change. T - Describe how a battery works. T - Interpret data evaluate the use of relis. T - Evaluate the use of hydrogen fuel cells in comparison to recharge cells and batteries. T (HT) - Write half equations for the electrode reactions in hydrogen fuel cells. Disciplinary Knowledge: HT - Calculate bond energies to identify exothermic or endothermic reactions. Draw reaction profiles with and without catalysts. Quantitative Chemistry unit 3 Substantive Knowledge: Describe the work of conservation of mass. Explain any observed changes in mass in non-enclosed systems given the balanced symbol equation. Packed the products. Percentage by mass Percent				Decoding terms
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→calculate percentage by mass using relative formula masses.				
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	Wider links to the world and diversity
 →how to calculate the mass of one mole of substance →how to calculate the number of moles in a given mass given the relative formula mass of a substance. →Change the subject of a mathematical equation. →calculate the mass of solute in a given volume of solution of known concentration. →calculate percentage yield. →calculate percentage atom economy. →calculate the volume of gas at room temp and pressure from its mass and relative formula mass. →calculate volumes of gaseous reactants and products from a balanced equation and a given volume of a gaseous reactant and product. 	Wider links to the world and diversity
Half Term 6: The rate and extent of chemical change unit 6 Substantive Knowledge: Describe how changing temperature, concentration,	Skim and Scan of source information Decoding terms Etymology of key terms
pressure, surface area affects rate of reaction. Explain using collision theory the effects of changing conditions temperature, concentration, pressure, surface area on rate of reaction. Describe how catalysts impact rate of reaction. Link how catalysts impact rate of reaction to reaction profiles. Identify the symbol for reversible reactions. Link exothermic and endothermic reactions to reversible reactions. Disciplinary Knowledge: Calculate mean rate of reaction. Draw and interpret graphs showing the quantity of product formed or reactant used. HT – Draw tangents on graphs to calculate rate of reaction from a gradient HT-Predict changes on systems using le chateliers	Activation energy Catalyst Collision theory Effect of changing concentration on equilibrium Effect of changing pressure on equilibrium Effect of changing temperature on equilibrium Effect of concentration on reaction rate Effect of pressure on reaction rate Effect of surface area on reaction rate Effect of temperature on reaction rate Effect of temperature on reaction rate Equilibrium Le Chatelier's Principle Rate of reaction
 HT- Predict changes on systems using le chateliers principle. HT – Predict the effect a change of concentration of a reactant or product, temperature or pressure has on equilibrium. 	Reversible reaction Recall questions to start every lesson Recall test Review sheet End of unit assessment
	Revision Card preparation for every lesson Recall test Review sheet Repetition of use of revision cards for end of unit assessment