AQA Chemistry Paper 1		Covered in Lesson	Diagnosis			Revised		
C4.3 Quantitative chemistry			R	A	G	1	2	3
4.3.1 Chemical measurements, conservation of mass and the quantitative interpretation	State that mass is conserved and explain why, including describing balanced equations in terms of conservation of mass							
	Explain the use of the multipliers in equations in normal script before a formula and in subscript within a formula							
	Describe what the relative formula mass (Mr) of a compound is and calculate the relative formula mass of a compound, given its formula							
	Calculate the relative formula masses of reactants and products to prove that mass is conserved in a balanced chemical equation							
	Explain observed changes of mass during chemical reactions in non-enclosed systems using the particle model when given the balanced symbol equation							
	Explain why whenever a measurement is made there is always some uncertainty about the result obtained							
4.3.2 Use of amount of substance in relation to masses of pure substances	**HT ONLY:** State that chemical amounts are measured in moles (mol) and explain what a mol is with reference to relative formula mass and Avogadro's constant							
	HT ONLY: Use the relative formula mass of a substance to calculate the number of moles in a given mass of the substance							
	HT ONLY: Calculate the masses of reactants and products when given a balanced symbol equation							
	HT ONLY: Use moles to write a balanced equation when given the masses of reactants and products (inc changing the subject of the equation)							
	HT ONLY: Explain the effect of limiting the quantity of a reactant on the amount of products in terms of moles or masses in grams							
	Calculate the mass of solute in a given volume of solution of known concentration in terms of mass per given volume of solution							
	HT ONLY: Explain how the mass of a solute and the volume of a solution is related to the concentration of the solution							

4.3.3 Yield and atom economy of chemical reactions	**Chem ONLY:** Explain why it is not always possible to obtain the calculated or expected amount of a product							
	Chem ONLY: Calculate the theoretical amount of a product and percentage yield of a product using the formula % yield = mass of product made/max theoretical mass of product x 100							
	Chem & HT ONLY: Calculate the theoretical mass of a product from a given mass of reactant and the balanced equation for the reaction							
	Chem ONLY: Describe atom economy as a measure of the amount of reactants that end up as useful products							
	Chem ONLY: Calculate the percentage atom economy of a reaction to form a desired product using the equation % atom economy =RfM of desired product/sum of RfM of all reactants x 100							
	Chem & HT ONLY: Explain why a particular reaction pathway is chosen to produce a specified product, given appropriate data							
4.3.4 Using concentrations of solutions in mol/dm3	**Chem & HT ONLY:** Calculate the amount of solute (in moles or grams) in a solution from its concentration in mol/dm3							
	Chem & HT ONLY: Calculate the concentration of a solution when it reacts completely with another solution of a known concentration							
	Chem & HT ONLY: Describe how to carry out titrations of strong acids and strong alkalis and calculate quantities in titrations involving concentrations in mol/dm3 and g/dm3							
	Chem & HT ONLY: Explain how the concentration of a solution in mol/dm3 is related to the mass of the solute and the volume of the solution							
	Chem & HT ONLY: Explain what the volume of one mole of any gas at room temperature is							
	Chem & HT ONLY: Calculate the volume of a gas at room temperature and pressure from its mass and relative formula mass							