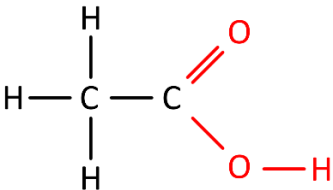


Chemistry 1 a Week Activity		Higher Answers	45 th Week
Name:		Class:	
Complete the displayed structure of ethanoic acid (CH ₃ COOH). 	Calcium nitrate contains the ions Ca ²⁺ and NO ₃ ⁻ Give the formula of calcium nitrate. Ca(NO₃)₂		
A student titrates 25.00 cm ³ of hydrochloric acid with sodium hydroxide solution of concentration 0.200 moles per dm ³ . The equation for the reaction is: $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$ The student added 28.60 cm ³ of sodium hydroxide solution to neutralise the hydrochloric acid. Calculate the concentration of the hydrochloric acid. Moles of NaOH = concentration × volume Moles of NaOH = 0.200 × 0.0286 Moles of NaOH = 0.00572 Concentration of HCl = moles ÷ volume Concentration of HCl = 0.00572 ÷ 0.025 Concentration of HCl = 0.2288 = 0.229 Concentration of the hydrochloric acid = 0.229 mol/dm³			
What is meant by the term activation energy? The <u>minimum amount of energy required for a reaction to occur.</u>	What is meant by an endothermic reaction? A reaction in which more heat energy is taken in than given out.		
Complete and balance the chemical equation for the production of ammonia from nitrogen and hydrogen. $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$			
A solution of KNO ₃ has a concentration of 84g/dm ³ . What is this in mol/dm ³ ? Mol/dm³ = g/dm³ ÷ Mr Mol/dm³ = 84 ÷ 101 Mol/dm³ = 0.83	H ₂ SO ₄ is a strong acid. What is a strong acid? A strong acid is <u>one that completely dissociates/ ionises in solution.</u>		
Describe the effect of adding a catalyst to a reaction. A catalyst <u>lowers the activation energy and provides an alternative reaction pathway.</u> Both effects must be mentioned.			