

Chemistry 1 a Week Activity		Higher	34 th Week
Name:		Class: 	
State the functional group of a carboxylic acid.	What is the general formula of an alkane?		
Fluorine reacts vigorously with iron to produce iron(III) fluoride, FeF ₃ . Write the balanced equation for this reaction.			
State the formula of an ammonium ion.	Name the positive electrode used in electrolysis.		
Calculate the relative formula mass of calcium carbonate, CaCO ₃	Give the electronic configuration of an ion of calcium.		
Hydrochloric acid reacts with a solution of sodium carbonate. $2\text{HCl}(\text{aq}) + \text{Na}_2\text{CO}_3(\text{aq}) \rightarrow 2\text{NaCl}(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{l})$ Write the ionic equation for this reaction.			
The figures below show the structures for butane and pentane. $\begin{array}{ccccccc} & \text{H} & & \text{H} & & \text{H} & & \text{H} \\ & & & & & & & \\ \text{H} & - \text{C} & - & \text{C} & - & \text{C} & - & \text{C} & - \text{H} \\ & & & & & & & \\ & \text{H} & & \text{H} & & \text{H} & & \text{H} \end{array}$ butane $\begin{array}{ccccccccc} & \text{H} & & \text{H} & & \text{H} & & \text{H} & & \text{H} \\ & & & & & & & & & \\ \text{H} & - \text{C} & - & \text{C} & - & \text{C} & - & \text{C} & - & \text{C} & - \text{H} \\ & & & & & & & & & \\ & \text{H} & & \text{H} & & \text{H} & & \text{H} & & \text{H} \end{array}$ pentane Explain, using these formulae, why butane and pentane are neighbouring members of the same homologous series. 			
State the products of the electrolysis of molten sodium chloride.	State the products of the electrolysis of aqueous sodium chloride.		