

**Required Practical's**

Required Practical Number	Title	Topic	RAG
8	<b>Prepare a salt from an insoluble metals carbonate or oxide</b> Prepare with the appropriate apparatus and techniques, a pure, dry sample of a soluble salt from an insoluble carbonate or oxide	C5.5 C5.6	
9	<b>Investigate the electrolysis of a solution</b> Investigate the electrolysis of different aqueous solutions using inert electrodes	C6.4	
10	<b>Investigate temperature changes</b> Use appropriate apparatus to investigate the variables that affect energy changes in reactions involving at least one solution	C7.1	
11	<b>Investigating the effect of concentration on rate of reaction</b> Investigate how changes in concentration affect rates of reactions using a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity	C8.4	
12	<b>Calculating R<sub>f</sub> values</b> Use paper chromatography to find out the R <sub>f</sub> value of the dyes found in different food colourings	C10.2	
13	<b>Purify and test water</b> Analyse and purify water from different sources, including pH, dissolved solids and distillation.	C12.2	

**Chemistry Paper 1 – 16<sup>th</sup> May**

Chapter	Topic	Page	RAG
C1 Atomic structure	C1.1	Atoms	
	C1.2	Chemical equations	
	C1.3	Separating mixtures	
	C1.4	Fractional distillation and paper chromatography	
	C1.5	History of the atom	
	C1.6	Structure of the atom	
	C1.7	Ions, atoms, and isotopes	
	C1.8	Electronic structures	
C2 The periodic table	C2.1	Development of the periodic table	
	C2.2	Electronic structures and the periodic table	
	C2.3	Group 1 – The alkali metals	
	C2.4	Group 7 – The halogens	
	C2.5	Explaining trends	
C3 Structure and bonding	C3.1	States of matter	
	C3.2	Atoms into ions	
	C3.3	Ionic bonding	
	C3.4	Giant ionic structures	
	C3.5	Covalent bonding	
	C3.6	Structure of simple molecules	
	C3.7	Giant covalent structure	
	C3.8	Fullerenes and graphene	
	C3.9	Bonding in metals	
	C3.10	Giant metallic structures	
C4 Chemical calculations	C4.1	Relative masses and moles	
	C4.2	Equations and calculations	
	C4.3	From masses to balanced equations	
	C4.6	Expressing concentration	

<b>C5 Chemical changes</b>	<b>C5.1</b>	The reactivity series		
	<b>C5.2</b>	Displacement reactions		
	<b>C5.3</b>	Extracting metals		
	<b>C5.4</b>	Salts from metals		
	<b>C5.1</b>	The reactivity series		
	<b>C5.5</b>	Salts from insoluble bases		
	<b>C5.6</b>	Making more salts		
	<b>C5.7</b>	Neutralisation and the pH scale		
<b>C6 Electrolysis</b>	<b>C5.8</b>	Strong and weak acids		
	<b>C6.1</b>	Introduction to electrolysis		
	<b>C6.2</b>	Changes at the electrodes		
	<b>C6.3</b>	The extraction of aluminium		
<b>C7 Energy changes</b>	<b>C6.4</b>	Electrolysis of aqueous solutions		
	<b>C7.1</b>	Exothermic and endothermic reactions		
	<b>C7.2</b>	Using energy transfers from reactions		
	<b>C7.3</b>	Reaction profiles		
	<b>C7.4</b>	Bond energy calculations		

### Chemistry Paper 2 – 12<sup>th</sup> June

<b>Chapter</b>	<b>Topic</b>	<b>Page</b>	<b>RAG</b>	
<b>C8 Rates and equilibrium</b>	<b>C8.1</b>	Rate of reaction		
	<b>C8.2</b>	Collision theory and surface area		
	<b>C8.3</b>	The effect of temperature		
	<b>C8.4</b>	The effect of concentration and pressure		
	<b>C8.5</b>	The effect of catalysts		
	<b>C8.6</b>	Reversible reactions		
	<b>C8.7</b>	Energy and reversible reactions		
	<b>C8.8</b>	Dynamic equilibrium		
	<b>C8.9</b>	Altering conditions		
<b>C9 Crude oil and fuels</b>	<b>C9.1</b>	Hydrocarbons		
	<b>C9.2</b>	Fractional distillation of oil		
	<b>C9.3</b>	Burning hydrocarbon fuels		
	<b>C9.4</b>	Cracking hydrocarbons		
<b>C10 Chemical analysis</b>	<b>C10.1</b>	Pure substances and mixtures		
	<b>C10.2</b>	Analysing chromatograms		
	<b>C10.3</b>	Testing for gases		
<b>C11 The earth's atmosphere</b>	<b>C11.1</b>	History of our atmosphere		
	<b>C11.2</b>	Our evolving atmosphere		
	<b>C11.3</b>	Greenhouse gases		
	<b>C11.4</b>	Global climate change		
	<b>C11.5</b>	Atmospheric pollutants		
<b>C12 The earth's resources</b>	<b>C12.1</b>	Finite and renewable resources		
	<b>C12.2</b>	Water safe to drink		
	<b>C12.3</b>	Treating waste water		
	<b>C12.4</b>	Extracting metals from ores		
	<b>C12.5</b>	Life cycle assessments		
	<b>C12.6</b>	Reduce, reuse and recycle		