

Subject: Chemistry

Date	Exams/ Assess	Unit(s)	
		Teacher 1 (5)	Teacher 2 (4)
02/09/2024		Thermodynamics <ul style="list-style-type: none"> Enthalpy changes in ionic compounds Born-Haber cycles Perfect ionic model Enthalpy of solution Feasible reactions Entropy Feasibility of a reaction Graphical calculations Equilibrium constant K_p <ul style="list-style-type: none"> Mole fractions Partial pressure K_p 	Kinetics <ul style="list-style-type: none"> Methods of determining rate of reaction Required Practical 7a. An 'iodine clock' experiment – initial rate method. Required Practical 7b. Measuring the rate of reaction by a continuous monitoring method. <ul style="list-style-type: none"> Rate monitoring Order linked to mechanisms The rate equation The Arrhenius equation Optical isomerism <ul style="list-style-type: none"> Enantiomers Optical activity
09/09/2024			
16/09/2024			
23/09/2024			
30/09/2024			
07/10/2024			
14/10/2024			
21/10/2024			
04/11/2024	PPE1	PPE1 Transition Metals <ul style="list-style-type: none"> General properties Complex formation Ligand substitution Shapes of complex ions Formation of coloured ions Ions in aqueous solutions Transition Metals: Variable oxidation states <ul style="list-style-type: none"> Oxidation states Redox titrations Catalytic activity Required Practical 11. Identify transition metal ions in aqueous solution.	PPE1 The carbonyl group <ul style="list-style-type: none"> Aldehydes & ketones Nucleophilic addition reactions Carboxylic acids & derivatives Esters Required Practical 10b. Preparation of a pure organic liquid – ethyl ethanoate. <ul style="list-style-type: none"> Fats & oils Acylation – acid chlorides & anhydrides Nucleophilic addition-elimination Required Practical 10a. Preparation of an organic solid and a test of its purity – aspirin.
11/11/2024	PPE1		
18/11/2024			
25/11/2024			
02/12/2024			
09/12/2024			
16/12/2024			
06/01/2025		Electrode potentials & cells <ul style="list-style-type: none"> Redox equilibria Cell conventions & EMF Redox reactions & feasibility Conventional cell representation Required Practical 8. Measuring the EMF of an electrochemical cell. <ul style="list-style-type: none"> Commercial applications PPE2	Aromatic chemistry <ul style="list-style-type: none"> Structure of benzene Addition & substitution reactions Electrophilic substitution Amines <ul style="list-style-type: none"> Structure & naming Preparation of primary & aromatic amines Basic properties Nucleophilic substitution PPE2
13/01/2025			
20/01/2025			
27/01/2025			
03/02/2025	PPE2		
10/02/2025	PPE2		
24/02/2025		Acids & Bases <ul style="list-style-type: none"> Bronsted Lowry theory pH Ionic product of water pH of weak acids Dilutions & neutralisations Titration curves Buffers Required Practical 9. Investigate how pH changes when a weak acid reacts with a strong base.	Polymers <ul style="list-style-type: none"> Addition polymerisation Condensation polymerisation Biodegradability of polymers Biological molecules <ul style="list-style-type: none"> Amino acids Proteins & enzyme action DNA Structure determination & analysis <ul style="list-style-type: none"> Chromatography Required Practical 12. Separation of a species by thin-layer chromatography. <ul style="list-style-type: none"> NMR spectroscopy Functional group tests
03/03/2025			
10/03/2025			
17/03/2025			
24/03/2025			
31/03/2025			
21/04/2025		Properties of Period 3 elements & their oxides <ul style="list-style-type: none"> Elements of Period 3 Oxides Trends in melting points Structure of the acids & anions Revision & exam preparation	Organic Synthesis <ul style="list-style-type: none"> Revision & summary of all organic reactions Revision & exam preparation
28/04/2025			
05/05/2025			
12/05/2025			
19/05/2025			
02/06/2025		A-Level/Vocational Examinations	A-Level/Vocational Examinations
09/06/2025			
16/06/2025	EOY		
23/06/2025	Exams		
30/06/2025			

Year 13 Long Term Scheme of Learning 2024-25

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High School



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07/07/2025			
14/07/2025			