

Year 13 Long Term Scheme of Learning 2025-26

Subject: Chemistry

HELSBY

High School



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Date	Exams/ Assess	Unit(s)	
		Teacher 1 (5)	Teacher 2 (4)
01/09/2025		Thermodynamics - 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 - Mole fractions - Partial pressure - K_p	Kinetics - 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. - Rate monitoring - Order linked to mechanisms - The rate equation - The Arrhenius equation Optical isomerism - Enantiomers - Optical activity
08/09/2025			
15/09/2025			
22/09/2025			
29/09/2025			
06/10/2025			
13/10/2025			
20/10/2025			
03/11/2025	PPE1	PPE1 Transition Metals - General properties - Complex formation - Ligand substitution - Shapes of complex ions - Formation of coloured ions - Ions in aqueous solutions Transition Metals: Variable oxidation states - Oxidation states - Redox titrations - Catalytic activity Required Practical 11. Identify transition metal ions in aqueous solution.	PPE1 The carbonyl group - Aldehydes & ketones - Nucleophilic addition reactions - Carboxylic acids & derivatives - Esters Required Practical 10b. Preparation of a pure organic liquid – ethyl ethanoate. - Fats & oils - Acylation – acid chlorides & anhydrides - Nucleophilic addition-elimination Required Practical 10a. Preparation of an organic solid and a test of its purity – aspirin.
10/11/2025	PPE1		
17/11/2025			
24/11/2025			
01/12/2025			
08/12/2025			
15/12/2025			
05/01/2026			
12/01/2026		Electrode potentials & cells - Redox equilibria - Cell conventions & EMF - Redox reactions & feasibility - Conventional cell representation Required Practical 8. Measuring the EMF of an electrochemical cell. - Commercial applications PPE2	Aromatic chemistry - Structure of benzene - Addition & substitution reactions - Electrophilic substitution Amines - Structure & naming - Preparation of primary & aromatic amines - Basic properties - Nucleophilic substitution PPE2
19/01/2026			
26/01/2026			
02/02/2026			
09/02/2026	PPE2		
23/02/2026	PPE2		
02/03/2026			
09/03/2026		Acids & Bases - 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 - Addition polymerisation - Condensation polymerisation - Biodegradability of polymers Biological molecules - Amino acids - Proteins & enzyme action - DNA Structure determination & analysis - Chromatography Required Practical 12. Separation of a species by thin-layer chromatography. - NMR spectroscopy - Functional group tests
16/03/2026			
23/03/2026			
30/03/2026			
20/04/2026			
27/04/2026			
04/05/2026			
11/05/2026		Properties of Period 3 elements & their oxides - Elements of Period 3 - Oxides - Trends in melting points - Structure of the acids & anions Revision & exam preparation	Organic Synthesis Revision & summary of all organic reactions Revision & exam preparation
18/05/2026			
01/06/2026			
08/06/2026			
15/06/2026			
22/06/2026		A-Level/Vocational Examinations	A-Level/Vocational Examinations
29/06/2026	EOY		
06/07/2026	Exams		
13/07/2026			

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