

## Year 13 Chemistry

	Tracking and Key Dates	EXAMS	Teacher 1 (4 lessons)	Teacher 2 (5 lessons)
04-Sep	Inset Mon&Tues		<b>Topic12 Acid/Base Equilibria</b> Recap of Acid/Base Equilibria	<b>Core Practical 5 from AS - Oxidation of an Alcohol (2 lessons)</b>
11-Sep	Data Collection Opens		Recap of Acid/Base Equilibria <b>CORE PRACTICAL 9 - Ka for a weak acid</b>	<b>Topic 17A-C Chirality and Carbonyl Chemistry</b> Isomerism recap Chirality and SN1/SN2 mechanism
18-Sep	21st Open Evening CRD Deadline		Titration curves - all combinations <b>Practical 4.10 pH acid-base titration</b>	<b>Practical 4.13 - Reactions of Aldehydes and Ketones</b> Reactions of Aldehydes and Ketones <b>Practical 4.14 - Reactions of Carboxylic acids</b>
25-Sep	Work Scrutiny Week		Buffer solutions <b>Practical 4.12 - Buffer Solutions</b>	<b>Practical 4.17 - Reactions of caroxylic acid derivatives</b> Reactions of acids, esters, acyl chlorides Formation of polyesters
02-Oct	Appraisal deadline		Enthalpy of neutralisation of weak and strong acids Practical measurement of enthalpy of neutralisation?	<b>TEST - AS Paper?</b>
09-Oct	Data Collection Closes		Lattice Energy, Hydration Energy Recap	<b>Topic 19A-C Spectroscopy/Chromatography</b> Chromatography Mass Spectrometry

16-Oct			Entropy of system and surroundings <b>Change in Chemical Reaction - Practical 4.4</b>	Introduction to NMR 13C NMR 1H NMR Low and High Resolution
23-Oct	AUTUMN HALF TERM			
30-Oct	Inset Mon		Calculation of total entropy changes Calculation and application of Gibbs Free Energy	<b>Test on Chirality and Carbonyl Compounds</b> <b>Topic 18A - Arenes</b> Structure of Benzene
06-Nov	Data Collection Opens	<b>Year 8 Exam week</b>	<b>Test on Entropy and Equilibrium</b>	Evidence and consequences of benzene structure <b>Practical 5.12 - Experiments with Arenes</b> Mechanism and examples of electrophilic substitution
13-Nov		<b>Year 11 Mock</b>	<b>Topic 16 Kinetics</b> Recap of kinetic - introduction to key terms <b>Practical 4.1 Kinetics of CaCO<sub>3</sub>/HCl</b>	<b>Practical 5.13 - Reactions of the phenolic group</b> Further electrophilic substitution
20-Nov	Observation Week		Methods for determining rate of reaction Determining the order of reactions from graphical data	<b>Test on Organic To Date</b> <b>Topic 18B - Amines and Amides</b> The amine functional group
27-Nov			<b>Core Practical 13b Rates of Reaction - Clock Reaction</b> Analysis of rate data	<b>Practical 5.14 The reactions of amines</b> Reactions of primary amines - including basicity trends
04-Dec	Data Collection Closes (Y11)		<b>Core Practical 13a Rates of Reaction - Iodine Propanone</b> Analysis of rate data	Preparation of primary amines and of amides <b>Practical 5.16 - Polymerisation Reactions</b> Polymerisation reactions - amides and esters

11-Dec	Data Collection Closes		Using rate data to determine reaction mechanisms <b>Core Practical 14 - Activation Energy</b> Activation energy data analysis	Properties of Amino Acids Peptide bond formation and proteins
18-Dec	School Finishes 19th Dec		<b>Exam Preparation</b>	
25-Dec	CHRISTMAS			
01-Jan	School Resumes 3rd Jan	<b>Year 12-13 Mock</b>	<b>Mock Exams</b>	<b>Mock Exams</b>
08-Jan	Year 10 Work Experience		<b>Test Feedback</b>	
15-Jan	Work Scrutiny Week		<b>Topic 14 REDOX II</b> Recap of REDOX 1	Chromatography of amino acids Recap of NMR/MS/IR Using combustion analysis, elemental analysis data
22-Jan	Data Collection Closes (Y12&13)		<b>Practical 5.1 The Reactivity Series of Metals</b> Oxidation/Reduction Standard Electrode Potentials	<b>Core Practical 15 - Analysis of Inorganic and Organic Unknowns</b> <b>Test on Organic Chemistry</b>
29-Jan	Data Collection Closes		Measurement of electrode potentials <b>Core Practical 10 - Investigating Electrochemical Cells</b>	<b>Topic 18C - Organic Synthesis</b> Planning Organic Synthesis Types of reactions - types of reagents
05-Feb			Calculating Ecell for any combination of half cells Predicting Thermodynamic Feasibility	Methods to increase chain length - Grignard's Practical Organic Techniques - reflux/distillation

12-Feb	SPRING HALF TERM			
19-Feb			Link between Ecell and lnK, Kinetic inhibition Applications of Ecell calculations	Practical techniques - solvent extraction/drying Practical technique - recrystallisation and melting point
26-Feb	Observation Week Data collection Opens		Fuels Cells Introduction to REDOX titrations	<b>Core Pracitcal 16 - The preparation of Aspirin</b>
05-Mar		<b>MOCKS 11-13</b>	<b>Mock Exams</b>	<b>Mock Exams</b>
12-Mar		<b>MOCKS 11-13</b>	<b>Mock Exams</b>	<b>Mock Exams</b>
19-Mar	Data collection Yr11-13		<b>Core Practical 11 - Redox Titration</b> Redox titration calculations	<b>Core Pracitcal 16 - The preparation of Aspirin</b>
26-Mar	Data Collection Closes Yr 7-10 School Finishes 29th Mar		Recap of key REDOX principles <b>Test on REDOX II</b>	<b>Topic 15 Transition metals</b> Characteristics of transition metals <b>Practical 5.5 Redox reactions of Iron</b>
02-Apr	EASTER			

09-Apr				
16-Apr			Complex formation - types of ligand <b>Practical 5.7 Copper Complexes</b>	<b>Practical 5.11 Reactions with NaOH and NH<sub>3</sub></b> Ligand exchange vs amphoteric behaviour
23-Apr	Data Collection Opens		<b>Practical 5.6 Vanadium Oxidation States</b> <b>Practical 5.10 Oxidation states of Chromium</b>	Stability of Complexes Transition metals as catalysts - Heterogeneous
30-Apr				Transition metal as catalysts - homogeneous <b>Core Practical 12 - Preparation of a transition metal complex</b>
07-May				
14-May	Data Collection Closes			
21-May				
28-May	SUMMER HALF TERM			

04-Jun		<b>Year 7 Exams</b>	
11-Jun	Data Collection Opens		
18-Jun			
25-Jun		<b>Year 10 Exams</b>	
02-Jul		<b>Year 9 Exams</b>	
09-Jul			
16-Jul	Data Collection Closes Yr 7-10 and BTEC School Finishes 20th July		