

Chemistry

Date	Exams/ Assess	Unit(s)	
		Teacher 1 (5)	Teacher 2 (4)
4/9/23		Atomic structure <ul style="list-style-type: none"> Relative mass of subatomic particles Atomic number & mass number Mass spectroscopy Electron configuration Ionisation energies Amount of substance <ul style="list-style-type: none"> Chemical formulae Balanced equations The mole and Avogadro constant 	Bonding <ul style="list-style-type: none"> Ionic bonding Nature of covalent and dative covalent bonds Metallic bonding Bonding & physical properties Types of crystalline substances States of matter Shapes of molecules Bond polarity Forces between molecules
11/9/23			
18/9/23			
25/9/23			
2/10/23			
09/10/23			
16/10/23			
30/10/23		Amount of substance <ul style="list-style-type: none"> The mole and Avogadro constant Calculations involving solutions Titrations Indicators Calculations involving gases The Ideal Gas equation Determining empirical & molecular formula Combined calculations Required Practical 1. Make up a volumetric solution and carry out a simple acid-base titration.	Kinetics <ul style="list-style-type: none"> Collision theory Enthalpy profile diagrams Distribution of molecular energies Maxwell-Boltzmann Required Practical 3. Investigation of how the rate of reaction changes with temperature.
6/11/23			
13/11/23			
20/11/23			
27/11/23			
4/12/23			
11/12/23			
1/1/24		Energetics <ul style="list-style-type: none"> Enthalpy Hess's Law Required Practical 2. Measurement of an enthalpy change. Assessment Weeks Equilibrium <ul style="list-style-type: none"> Chemical equilibria Le Chatelier's principle Industrial examples 	Introduction to Organic Chemistry <ul style="list-style-type: none"> Carbon – a unique element Nomenclature Isomerism Assessment Weeks Alkanes <ul style="list-style-type: none"> Physical properties Fractional distillation Industrial cracking Combustion Environmental consequences
8/1/24			
15/1/24	Ass 1		
22/1/24			
29/1/24			
5/2/24			
12/2/24			
26/2/24		Equilibrium <ul style="list-style-type: none"> Equilibrium law Equilibrium constant K_c Calculating K_c Using K_c Effect of changing concentration Effect of changing pressure & temperature 	Halogenoalkanes <ul style="list-style-type: none"> Physical properties Synthesis – free radical substitution Nucleophilic substitution reactions Elimination reactions Alkenes <ul style="list-style-type: none"> E-Z isomerism Addition Polymers
4/3/24			
11/3/24			
18/3/24			
25/3/24			
15/4/24		Redox reactions <ul style="list-style-type: none"> Oxidation state Proper names & formulae Oxidation & reduction Redox Half equations Organic redox reactions Combining half equations Group 2 -The Alkaline Earth Metals <ul style="list-style-type: none"> Trends down Group 2 Solubility of Group 2 hydroxides Solubility of Group 2 sulfates Uses of Group 2 elements & their compounds 	Alkenes <ul style="list-style-type: none"> Electrophilic addition reactions Industrial production of ethanol (from ethene) Alcohols <ul style="list-style-type: none"> Physical properties Classification Oxidation reactions Elimination reactions Required Practical 5. Distillation of a product from a reaction.
22/4/24			
29/4/24			
6/5/24			
13/5/24			
3/6/24		Periodicity <ul style="list-style-type: none"> Blocks on the periodic table Trends across Period 3 End of Year Exams Group 7 - The Halogens <ul style="list-style-type: none"> Physical properties Redox reactions of halogens Identification of halide ions Identification tests Required Practical 4. Identifying cations and anions in solution.	Alcohols <ul style="list-style-type: none"> Industrial production of ethanol (by fermentation) Biofuels End of Year Exams Organic Synthesis <ul style="list-style-type: none"> Mass spectroscopy of organic compounds Infrared spectroscopy Chemical test identification of functional groups. Required Practical 6. Test for functional groups.
10/6/24			
17/6/24	EOY		
24/6/24	Exams		
1/7/24			
8/7/24			
15/7/24			



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