



The Camford International School

ANNUAL LESSON PLAN[2023-2024]

GRADE : 12

SUBJECT : CHEMISTRY

MONTH	CHAPTER NO. AND NAME	DETAIL CONCEPTS TO BE COVERED	PRACTICALS
MARCH 24 days	SOLUTIONS	Types of solutions, Methods of expressing concentration of solution. solubility of solid in liquid, Gas in liquid, Vapour pressure of liquid-liquid solutions, Ideal and non Ideal solution, Azeotrope, Colligative properties(elevation in boiling point. depression in freezing point, osmotic pressure), Abnormal molecular mass.	Preparation of inorganic crystals.

<p>APRIL 19 days</p>	<p>HALOALKANES AND HALO ARENES.</p>	<p>Nomenclature of haloalkanes and haloarenes, classification, nature of bond, reactions involved in the preparation of haloalkanes and haloarenes and different types of reactions, S_N^1, S_N^2 mechanism, stereo chemistry to understand the reaction mechanism, applications of organo-metallic compounds, the environmental effects of polyhalogen compounds and distinction of halo compounds.</p>	<p>Preparation of organic crystals.</p>
	<p>ELECTROCHEMISTRY</p>	<p>Description of electrochemical cell, difference between galvanic and electrolytic cells, standard hydrogen electrode, Nernst equation, applying Nernst equation for calculating the emf of galvanic cell and standard potential of the cell, deriving the relation between standard potential of the cell, Gibbs energy of the cell reaction and equilibrium constant, resistivity, conductivity and molar conductivity of ionic solutions, difference between ionic and electronic conductivity, method for the measurement of conductivity of electrolytic solutions and calculation of their molar conductivity, variation of conductivity and molar conductivity of solutions with change in their concentration and meaning of limiting molar conductivity, Kohlrausch law and its applications, quantitative aspect of electrolysis,</p>	

<p>MAY 8 days</p>	<p>ALCOHOLS, PHENOLS AND ETHERS</p> <p>BIOMOLECULES</p>	<p>IUPAC system of nomenclature; the reactions involved in the preparation of alcohols from (i) alkenes (ii) aldehydes, ketones and carboxylic acids; the reactions involved in the preparation of phenols from (i) haloarenes (ii) benzene sulphonic acids (iii) diazonium salts and (iv) cumene; the reactions for preparation of ethers from (i) alcohols and (ii) alkyl halides and sodium alkoxides/aryloxides; physical properties of alcohols, phenols and ethers with their structures; chemical reactions of the three classes of compounds on the basis of their functional groups.</p> <p>The bio molecules like carbohydrates, proteins and nucleic acids; classification of carbohydrates, proteins, nucleic acids and vitamins on the basis of their structures; the difference between DNA and RNA; the role of bio molecules in bio system</p>	<p>Food stuff analysis</p>
<p>JUNE 23 days</p>	<p>COORDINATION COMPOUNDS</p>	<p>The postulates of Werner's theory of coordination compounds; the meaning of the terms: coordination entity, central atom/ ion, ligand, coordination number, coordination sphere, coordination polyhedron, oxidation number, homoleptic and heteroleptic; the rules of nomenclature of coordination compounds; writing the formulas and names of mononuclear coordination compounds; definition of different types of isomerism in coordination compounds; the nature of bonding in coordination compounds in terms of the Valence Bond and Crystal Field theories; the stability of coordination compounds..</p>	<p>VOLUMETRIC ANALYSIS(MOHR'S SALT VS KMnO_4)</p> <p>VOLUMETRIC ANALYSIS(OXALIC ACID VS KMnO_4)</p>

<p>AUGUST 23 days</p>	<p>d AND f BLOCK ELEMENTS</p>	<p>The positions of the <i>d</i>- and <i>f</i>-block elements in the periodic table; the electronic configurations of the transition (<i>d</i>-block) and the inner transition (<i>f</i>-block) elements; the relative stability of various oxidation states in terms of electrode potential values; the general characteristics of the <i>d</i>- and <i>f</i>-block elements and the general horizontal and group trends in them; the properties of the <i>f</i>-block elements and give a comparative account of the lanthanoids and actinoids with respect to their electronic configurations, oxidation states and chemical behaviour,</p>	<p>SALT ANALYSIS</p>
<p>SEPTEMBER 28 days</p>	<p>AMINES</p>	<p>Amines as derivatives of ammonia having a pyramidal structure; classification of amines as primary, secondary and tertiary; name amines by common names and IUPAC system; some of the important methods of preparation of amines; the properties of amines; distinguish between primary, secondary and tertiary amines; the method of preparation of diazonium salts and their importance in the synthesis of a series of aromatic compounds including azo dyes</p>	<p>Functional group analysis</p>
<p>OCTOBER 17 days</p>		<p>Revision</p>	
<p>NOVEMBER 22 days</p>		<p>Pre-Board Examination- I</p>	

DECEMBER 20days		Pre-Board Examination-II	
JANUARY 21 days		CBSE Board practical examinations	