Bishop Milner Catholic College

Curriculum Plan year 11 chemistry triple curriculum

2016

Autumn Term	Spring Term	Summer Term
Controlled Assessment Completion Atomic Structure • Atoms, Elements and Compounds • Isotopes/Electronic structure/Configurations • Balanced Equations • Ions and Ion formation • Separating Mixtures The Periodic Table • The Periodic Table and Development • Metals/Properties of Metals and Alloys • Transition Metals • Group 1/7/0 Bonding, Structure and the properties of matter • Ionic, covalent and metallic bonding • Relating Bonding and Structure to properties • Metals as conductors • States of Matter/State symbols • Properties of ionic and covalent molecules • Giant covalent structures (Diamond, graphite & Buckminsterfullerene) • Polymers and nanoparticles	Reactions of acids • The pH scale and neutralisation • Reactivity Series and Metal Reactions • Reactions of metals with acids • Neutralisation of acids and Making salts • Soluble and Insoluble salts (Salts from Metals, Metal oxides and Hydroxides and Ammonia) Electrolysis • Process of electrolysis • Electrolysis of molten ionic compounds • Electrolysis for metal extraction • Electrolysis of Aluminium Ore • Electrolysis of aqueous solutions (CuSO4 and NaOH) • Electroplating • Purifying Copper • Electrochemical Cells • Electrolysis half-equations	Analytical Techniques • Testing for Gases (Cl_2, O_2, CO_2 and H_2) • Qualitative Analysis – Flame tests and NaOH test • Qualitative Analysis – Anions • Chromatography/ Instrumental methods of analysis Quantitative Chemistry • RAM and RFM • Balancing Equations • Empirical Formula • Predicting Masses • Reacting Masses • Moles and Molarity • Titration Calculations • Hard water • Atom Economy and Percentage Yield
HALF TERM		

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Chemistry of the Atmosphere • Development of Atmosphere • How the Atmosphere changed • Greenhouse gases and global warming • Atmospheric pollutants and their effects Crude Oil and Fuels • Fraction distillation of Crude Oil • Properties and Uses of Fractions • Environmental problems of Crude Oil/Alternative fuels • Cracking • Plant Oils and Uses • Unsaturated Oils/emulsions	Energy Changes and Rates of Change • Monitoring Chemical Reactions • Exothermic and Endothermic reactions • Collision Theory • Factors affecting rate of reaction • Reversible Reactions • Haber process and Fertilizers • Ideal Gas Law • Avogadro's Law	Organic Chemistry • Homologous Series • Alcohols • Carboxylic Acids • Esters • Soaps and Detergents Revision for Summer Examinations