

Wednesday FOUNDATION Chemistry (single and combined science)

Date	Time	Course	Title	Learning points
15/11/2017	3-3.45	All	1. Atoms, elements, compounds and mixtures	Atoms, elements and compounds Word and symbol equations Separating Techniques
22/11/2017	3-3.45	All	1. Atomic Model	History of the atomic Model Size and mass of atoms Atomic Structure
29/11/2017	3-3.45	All	1. Periodic Table	History of the periodic table Group 0, 1 and 7
	3.45-4.00	Chemistry		Transition Metals
06/12/2017	3-3.45	All	2. Change of State	States of matter
13/12/2017	3-4.00pm	All	2. Ionic Bonding	Joining of atoms Ionic Compounds Properties of ionic compounds
03/01/2018	3-3.45pm	All	2. Covalent Bonding	Joining of atoms Small molecules Giant structures
	3.45-4.00	Chemistry		Nanoparticles

10/01/2018	3-4.00pm	All	2. Metallic Bonding	Joining of atoms Properties of metals Alloys
17/01/2018	3-4.00pm	All	3. Chemical Measurements	Balanced chemical equations Conservation of mass Relative formula mass Concentration of solutions
24/01/2018	3-3.45pm	Chemistry	3. Calculations	Percentage yield Atom economy
31/01/2018	3-3.45pm	All	4. Extracting metals	Reactivity series Metal oxides Extracting metals by reduction
07/02/2018	3-3.45pm	All	4. Reactions of acids	Metals and acids pH and neutralisation Salts
14/02/2018	3-3.45pm	All	4. Electrolysis	Electrolysis of a molten ionic compound Electrolysis of an aqueous solution Using electrolysis to extract metals
28/02/2018	3-3.45pm	All	5. Exothermic and endothermic reactions	Exothermic reactions Endothermic reactions Reaction profiles
07/03/2018	3-3.45pm	Chemistry	5. Chemical cells and fuel cells	Cells and batteries Fuel Cells

14/03/2018	3-4.00pm	All	6. Rate of reaction	Calculating rates of reactions Factors which affect the rate of reactions Collision theory and activation energy Catalysts
21/03/2018	3-4.00pm	All	6. Reversible reactions and dynamic equilibrium	Reversible reactions Energy changes and reversible reactions Equilibrium
28/03/2018	3-4.00pm	All	7. Carbon compounds as fuels and feedstocks	Crude oil, hydrocarbons and alkanes Fractional distillation and petrochemicals Properties of hydrocarbons
18/04/2018	3-3.30pm	All	7. Carbon compounds as fuels and feedstocks	Cracking and alkenes DNA and other naturally occurring polymers
	3.30-4.00pm	Chemistry		Structure and formulae of alkenes Reactions of alkenes
25/04/2018	3-4.00pm	Chemistry	7. Reactions of alcohols and carboxylic acids, polymers	Reactions of alcohols Reactions of carboxylic acids Addition and naturally occurring polymers
02/05/2018	3-3.45pm	All	8. Purity, formulations and chromatography	Pure substances Formulations Chromatography
09/05/2018	3-3.45pm	All	8. Identification of common gases	Tests for hydrogen, oxygen, carbon dioxide, chlorine
16/05/2018	3-4.00pm	All	9. Composition and evolution of the Earth's atmosphere	Proportion of different gases in the atmosphere Earth's early atmosphere How oxygen increased How carbon dioxide decreased

23/05/2018	3-4.30pm	All	9. Carbon dioxide and methane as greenhouse gases	Greenhouse gases Human activities which contribute to an increase in greenhouse gases in the atmosphere Global Climate change Carbon footprint and its reduction Atmospheric pollutants from fuels Properties and effects of atmospheric pollutants
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For the following topics, please attend the THURSDAY session 01/03/2018:

identification of ions by chemical means- flame tests, metal hydroxides, carbonates, halides, sulphates

identification of ions by instrumental methods- instrumental methods, flame emission spectroscopy