

PORTION FOR FINAL ASSESSMENT - MAY 2021

YEAR 9 - CHEMISTRY

SC3-Atomic structure

SC3a – Structure of atom

SC3b – Atomic number and mass number

SC3c - Isotopes

SC4-The periodic table

SC4 a –Elements and the periodic table

SC4b- Atomic number and the periodic table

SC4c- Electronic configurations and periodic table

SC5 – Ionic Bonding

SC5a –Ionic bonds

SC5b – Ionic lattices

SC5c – Properties of ionic compounds

SC6 – Covalent bonding

SC6a – Covalent compounds

SC7 – Types of substances

SC7a – Molecular compounds

SC7b – Allotropes of carbon

SC7c – Properties of metals

SC7d – Bonding models

Extra topics included for GL Assessment (Yr 9)

SC1-States of matter

SC2-Methods of separating and purifying substances

SC2a – Mixtures

SC2b – Filtration and crystallization

SC2c – Paper chromatography

SC2d – Distillation

Know examples of the production of carbon dioxide by human activity.

Understand the impact of carbon dioxide production on the climate.

Know what is meant by the terms solvent, solute, solution, saturated solution and suspension.

Understand the term biodegradable.

Know names of some composite materials and relate their properties to their uses.

Know about the experiments to find the approximate percentage of oxygen in air using iron and copper.

Know about a test for the presence of water using anhydrous copper(II) sulfate.

Know about exothermic and endothermic chemical reactions.

Know the general equation for neutralization reactions between acids and alkalis.

Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate

Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety.

Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions.

YEAR 12 - CHEMISTRY

TOPIC 1 - Atomic structure and the Periodic Table

1.1 Atomic structure

1.2 The Periodic Table

TOPIC 2 - Chemical Bonding and structure

2.1 Giant Structures

2.2 Discrete Molecules

2.3 Physical properties related to structure and bonding.

TOPIC 3 - Redox Reactions

3.1 – Oxidation and reduction in terms of electrons

3.2 – oxidizing agents and reducing agents

TOPIC 4- Inorganic chemistry and the periodic table

4.1 – Group 2

4.2 – group 7

TOPIC 5 – Formulae , equations and amount of substance

5.1 – Empirical and molecular formulae

5.2 – Amount of substance

5.3 – Equations and calculations

5.4 – Errors and uncertainties

5.5 – Yield and Atom Economy

5.6 – Types of reaction

TOPIC 6- Organic Chemistry

6.1 – Introduction to organic chemistry

6.2 – Hydrocarbons

6.3 – Halogenoalkanes

6.4- Alcohols

TOPIC 7 – Modern analytical techniques

7.1 – Mass spectroscopy

7.2 – Infrared spectroscopy

TOPIC 8- Chemical Energetics

8.1- Heat energy and Enthalpy

8.2 Bond Enthalpy

TOPIC 9 – Reactions kinetics

9.1 – Reaction rate

TOPIC 10 – Chemical Equilibrium

10.1 – Reversible reactions and dynamic equilibrium

10.2 –Equilibrium position