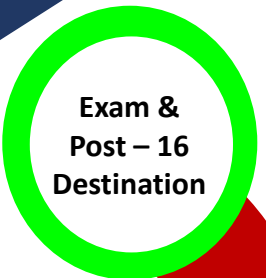




- Understanding variables
- Drawing graphs and analysing graphical data
- Writing methods
- Analysis of secondary data
- Assessing impact of scientific concepts
- Modelling scientific concepts
- Understanding relationships between science and society
- Drawing conclusions
- IDEAL Identify, describe, explain, apply, link
- Applying maths to scientific concepts
- Risk Assessment
- Describe and explain patterns



Year 7

Year 8

Year 9

Year 10

Year 11

Understanding and Applying Scientific Skills

Exam & Post - 16 Destination

Foundations in Chemistry

2) Bonding

3) Quantitative Chem

Chemical changes

Foundations in Chemistry

7) Organic

6) Rates of reaction

5) Energy Changes

Chemical changes

Foundations in Chemistry

8) Chemical analysis

9) Chemistry of the atmosphere

10) Earth's resources

Exam & Post - 16 Destination

Foundations in Chemistry

1) Foundations in Chemistry

4) Chemical changes

Foundations in Chemistry

1) Foundations in Chemistry

Earth Science

Materials

Reactivity

Foundations in Chemistry

1) Foundations in Chemistry

Reactions of acids

Environmental Chem

Reactivity

Foundations in Chemistry

1) Foundations in Chemistry

Simple Chemical reactions

Core Chemistry

Reactivity

Year 7: Simple Chemical reactions (Irreversible reactions, Everyday chemical reactions), Core Chemistry (Changes of state, States of matter)

Year 8: Separating Mixtures (Chromatography, Distillation, Evaporation, Filtrations), Periodic table (History of Periodic table, Elements and compounds), Reactions of acids (Neutralisation reactions, Making salts), Environmental Chem (Recycling, Photosynthesis)

Year 9: Foundations in Chemistry (Atoms, Alkali metals, Halogens), Earth Science (Rock cycle, Earth atmosphere), Materials (Nanoparticles, Displacement reactions), Reactivity (Carbon cycle, Alkali metals reactions and equations, Reactions of metals with acids)

Year 10: Foundations in Chemistry (Transition metals, Covalent bonding, Giant Covalent structures, Avogadro's number, Atom Economy and % yield), Earth Science (Rock cycle), Materials (Nanoparticles, Displacement reactions), Reactivity (Alkali metals reactions and equations, Reactions of metals with acids)

Year 11: Foundations in Chemistry (RAM and RFM, Halogens, Alkali metals, History of the atom, Periodic table, Atoms, Alkali metals, Halogens), Organic (Alcohols, Esters and carboxylic acids, Alkanes and alkenes, Fractional distillation, Catalysts), Rates of reaction (Monitoring rates of reactions, Collision theory, Effect of temperature, Effect of concentration, Effect of pressure), Energy Changes (Endothermic reactions, Exothermic reactions), Chemical changes (RP3 Electrolysis, The reactivity series, RP1 making a salt, RP2 Titrations, Polymers)

Chemistry of the Atmosphere: Greenhouse effect, Evidence for evolution of the atmosphere, Global climate change, Pollution, Carbon footprint, Haber process and reversible reactions, Life cycle assessment, Corrosion and its prevention, RP8 Analysis and purification of water samples, Farming techniques- NPK Fertilisers, Waste-water management and potable water

Chemical Analysis: Tests for gases, RP6 Chromatography, Distillation, Evaporation, RP7 Flame tests and testing anions, Filtration

Energy Changes: Endothermic reactions, Exothermic reactions, Endothermic Reaction graph, Exothermic Reaction graph

Quantitative Chemistry: Moles, Concentration, Moles in a gas, The pH scale

Bonding: Ionic bonding, Metallic bonding, Covalent bonding

Rates of Reaction: Collision theory, Effect of temperature, Effect of concentration, Effect of pressure

Chemical Changes: RP3 Electrolysis, The reactivity series, RP1 making a salt, RP2 Titrations, Polymers

Earth's Resources: RP8 Analysis and purification of water samples, Farming techniques- NPK Fertilisers, Waste-water management and potable water

Chemical Analysis: Tests for gases, RP6 Chromatography, Distillation, Evaporation, RP7 Flame tests and testing anions, Filtration

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