
CHEMISTRY

Week 1: Topic 1a: Atoms, Elements, Compounds, and Mixtures (Pages 22-29)

- Atoms
- Elements
- Isotopes
- Compounds

Week 2 (Pages 31-35)

- Chemical Equations
- Mixtures
- Paper Chromatography

Week 3 (Pages 37-45)

- More Separating Techniques
- Distillation
- The History of the Atom
- Electronic Structure

Week 4: Topic 1b: The Periodic Table (Pages 50-55)

- Development of the PT
- The Modern PT
- Metals and Non-metals

Week 5 (Pages 56-63)

- Group 1 – The Alkali Metals

- Group 7 – The Halogens

Week 6 (Pages 64-68)

- Group 0 – The Noble Gases
- Transition Elements

Week 7: Topic 2a: Bonding and Structure (Pages 72-79)

- Ions
- Ionic Bonding
- Ionic Compounds

Week 8 (Pages 80-86)

- Covalent Bonding
- Simple Molecular Substances

Week 9 (Pages 87-93)

- Larger Covalent Substances
- Allotropes of Carbon
- Metallic Bonding

Week 10: Topic 2b: Types of Matter (Pages 99-107)

- States of Matter
- Changing State
- Nanoparticles
- Uses of Nanoparticles

Week 11: Topic 3a: Amounts of Substances (Pages 110-06)

- Relative Formula Mass
- The Mole
- Conservation of Mass

Week 12 (Pages 117-25)

- The Mole and Equations
- Limiting Reactants
- Volumes of Gases

Week 13: Topic 3b: Concentrations (Pages 129-36)

- Concentrations
- Concentration Calculations

Week 14: Topic 3c: Atom Economy and Yield (Pages 138-44)

- Atom Economy
- Percentage Yield
- Reactions and Industry

Week 15: Topic 4: Chemical Changes (Pages 146-54)

- Acids and Alkalis
- Titrations
- Strong Acids and Weak Acids

Week 16 (Pages 155-63)

- Reactions of Acids
- Reactivity of Metals
- Metal Oxides and Redox

Week 17 (Pages 164-72)

- Redox Reactions
- Electrolysis
- Electrolysis of Metal Ores
- Electrolysis of Aqueous Solutions

Week 18: Topic 5: Energy Changes (Pages 177-85)

- Energy Transfer in Reactions
- Reaction Profiles
- Energy in Reactions

Week 19 (Pages 186-91)

- Cells and Batteries
- Fuel Cells

Week 20: Topic 6a: Rates of Reaction (Pages 196-02)

- Rate of Reaction
- Measuring Rates of Reaction

Week 21 (Pages 203-09)

- Rate of Reaction Graphs
- Reaction Rate Experiments

Week 22: Topic 6b: Reversible Reactions (Pages 213-18)

- Reversible Reactions
- Le Chatelier's Principle

Week 23: Topic 7a: Hydrocarbons and Crude Oil (Pages 220-28)

- Hydrocarbons
- Fractional Distillation of Crude Oil
- Uses of Crude Oil
- Cracking Crude Oil

Week 24: Topic 7b: Organic Compounds (Pages 230-37)

- Alkenes
- Reactions of Alkenes
- Addition Polymers

Week 25 (Pages 238-43)

- Alcohols
- Carboxylic Acids

Week 26 (Pages 244-47)

- Condensation Polymers
- Naturally Occurring Polymers

Week 27: Topic 8: Chemical Analysis (Pages 252-56)

- Purity and Formulations
- Analysing Paper Chromatography

Week 28 (Pages 257-63)

- Tests for Common Gases
- Tests for Ions

- Flame Emission Spectroscopy

Week 29: Topic 9: Chemistry of the Atmosphere (Pages 268-77)

- Evolution of the Atmosphere
- Greenhouse Gases & Climate Change
- Carbon Footprints
- Air Pollution

Week 30: Topic 10: Using Resources (Pages 280-86)

- Properties and Uses of Materials
- Alloys

Week 31 (Pages 287-96)

- Corrosion
- Resources and Sustainability
- Reuse and Recycling
- Life Cycle Assessments

Week 32 (Pages 297-05)

- Potable Water
- Waste Water Treatment
- The Haber Process
- NPK Fertilisers

Week 36-39

- Revision, Practice Papers

