Chemistry Learning Journey

Yr 11

- Dynamic equilibrium & Le Chatelier's Principle
- Chemical Change
  - Factors affecting rate
  - Rate of reaction & Collison Theory
  - Fuel Cells
  - Reversible reactions
- Organic Chemistry
  - Alkenes
  - Alcohols
  - Amino Acids & DNA
  - Crude Oil, Hydrocarbons & Fractional Distillation
  - Carboxylic Acids
  - Polymers
- Chemical Analysis
  - Identification of ions by chemical means
  - Identification of ions by spectroscopic means
  - Purity & Formulations
  - Chromatography
  - Identification of common gases
- Chemistry of the atmosphere & Using Resources
  - Common atmospheric pollutants & their sources
  - The Early Atmosphere
  - Changes in gases
  - Greenhouse gases
  - Life cycle assessment & Recycling
  - Using Earth resources
- Final GCSE Exams

Yr 10

- Cells and Batteries
- Chemical & Energy Changes
  - Electrolysis
  - Titrations
  - Extraction of metals & reduction
  - Reactions of acids & soluble salts
  - Endothermic & Exothermic Reactions
- Quantitative Chemistry
  - Using concentrations of solutions
  - Moles
  - RFM = Mass/Mr
  - Relative Formula Mass
  - Conservation of Mass & Balancing Equations
  - Percentage Yield
  - Atom Economy
- Bonding, Structure & Properties of Matter
  - Nanoparticles
  - Polymers
  - Metallic
  - Ionic bonding
  - States of matter
  - Covalent bonding
  - Giant Covalent
- Atomic Structure & the Periodic Table
  - Groups 1, 7 & 0
  - Periodic Table Development
  - Development of the model of the atom
  - Mixtures
  - Subatomic particles
  - Transition Metals
  - Atoms, Elements & Compounds

Yr 9

- New Technology
  - Cars in the future
  - Nanoparticles
  - Pollution
  - Alternative Fuels
- Turning Points in Chemistry
  - Change in Theories
  - Development of the structure of the atom
  - Working scientifically while incorporating strands of chemistry
  - Use of data to make comparisons
- Detection
  - Forensics
  - Chemical Tests
  - How scientific techniques are incorporated into different careers
  - Natural & man-made polymers & their effects on the environment.
  - Periodic Table & Mendeleev
  - Polymers & Composites

Yr 8

- Earth & Atmosphere
  - Earth's Resources
  - Composition of the atmosphere
  - The Carbon Cycle
  - Climate
- Chemical Reactions
  - Catalysts
  - Endothermic & Exothermic Reactions
  - Combustion & Thermal Decomposition
  - Types of chemical reactions
- Particle Matter
  - Chemical symbols & formulae
  - Simple atomic model
  - Atoms, Elements & Compounds

Yr 7

- Particle Matter
  - Particle Model
  - Change of States
  - Conservation of mass
  - Pure & Impure Substances
  - Simple separation techniques
- Chemical Reactions
  - Acids & Alkalis
  - pH Scale
  - Neutralisation
  - Metals & Non-metals
  - Reactions of Metals & Acids
- Earth & Atmosphere
  - Composition of the Earth
  - Rock Cycle
  - Structure of the Earth
  - Beyond the atmosphere

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