

OUR CHEMISTRY JOURNEY

EXPLORE. INVESTIGATE. UNDERSTAND. TRANSFORM.

SKILLS DEVELOPED

-  Scientific Enquiry
-  Practical Investigation
-  Observation
-  Data Analysis
-  Evaluation
-  Problem Solving
-  Laboratory Skills

KEY CONCEPTS

-  Matter
-  Reactions
-  Earth
-  Atoms
-  Elements
-  Compounds
-  Bonding

WHERE CHEMISTRY CAN TAKE YOU

-  Chemist
-  Pharmacist
-  Materials Scientist
-  Chemical Engineer
-  Environmental Scientist
-  Forensic Scientist
-  Geologist
-  Nuclear Physicist
-  Research Scientist

...and many more!

YEAR 9

ADVANCED CHEMISTRY & GCSE FOUNDATIONS



ATOMIC STRUCTURE & THE PERIODIC TABLE

- Atomic Structure
- Isotopes
- Scientific Models of the Atom
- Development of the Periodic Table
- Group 1, Group 7 & Group 0



BONDING, STRUCTURE & PROPERTIES OF MATTER

- Ionic Bonding
- Covalent Bonding
- Giant Covalent Structures
- Properties of Materials
- Polymers

Big idea: Matter

YEAR 8

UNDERSTANDING MATTER



ATOMS, ELEMENTS & COMPOUNDS

- Atomic Theory
- Elements
- Compounds
- Chemical Formulae
- Relative Proportions



THE PERIODIC TABLE

- Organisation of Elements
- Groups & Periods
- Patterns and Properties



TYPES OF REACTION & ENERGY CHANGE

- Conservation of Mass
- Combustion
- Thermal Decomposition
- Exothermic Reactions
- Endothermic Reactions



CLIMATE & EARTH RESOURCES

- Global Warming
- Carbon Cycle
- Climate Change
- Extracting Metals
- Recycling



SCIENTIFIC ENQUIRY

- Planning Investigations
- Variables
- Presenting Data
- Evaluating Results

Big ideas: Matter, Reactions, Earth

YEAR 7

DISCOVERING MATTER & REACTIONS



PARTICLE MODEL

- States of Matter
- Particle Arrangement
- Changes of State
- Diffusion



ACIDS & ALKALIS

- pH Scale
- Indicators
- Neutralisation
- Strong & Weak Acids



CHEMICAL REACTIONS

- Combustion
- Reversible Reactions
- Investigating Burning



SEPARATING MIXTURES

- Pure & Impure Substances
- Filtration
- Chromatography
- Physical Separation Techniques



METALS & NON-METALS

- Reactivity
- Metals and Oxygen
- Metals and Acids
- Displacement Reactions



SCIENTIFIC ENQUIRY

- Variables
- Fair Testing
- Recording Results
- Evaluating Evidence

Big ideas: Matter, Reactions, Earth



EXPLORE
Be curious



INVESTIGATE
Ask questions



UNDERSTAND
Make connections



TRANSFORM
Make a difference