

Science - Chemistry Road Map

Year 1

- * Sorting materials
- * Using them to make different objects

Year 2

- * Solid materials do not change shape
- * Properties of materials and their purpose

Year 3

- * Formation of rocks
- * Types of rocks and their properties
- * Properties and types of soil

- * Separating mixtures and solutions

- * Delving deeper into properties of materials
- * Changes of materials

- * States of matter- Solids, liquids and gases
- * Changing states

- * Understanding the water cycle

- * Mixtures of different materials

Year 6

- * Introduction to KS3 science

Year 5

- Particles and their Behaviour:
 - * Further understanding of states of matter

- Atoms, Elements and Compounds:
 - * Particle diagrams, properties and formulae

- Reactions:
 - * Atoms and compounds
 - * Introduction to types of reactions and equations

Year 7

- Detection:
 - * Application of chemistry skills to solve crimes

- Metals and Acids
 - * Further understanding of reactions, including reactivity series of metals in acids and with oxygen

- Separation Techniques:
 - * Mixtures and solutions
 - * Filtering and evaporation

- Acids and Alkalis:
 - * Neutralisation and making salts
 - * Indicators and pH

Year 9

- The Earth
 - * Further development of the rock cycle
 - * The Earth and atmosphere

- * Atomic Structure
- * Further understanding of patterns in the Periodic table

- The Periodic Table:
 - * Patterns in the groups and periods of the Periodic Table

Year 8

- Chemical Changes:
 - * Understanding electrolysis

Year 10

- Bonding, Structures and Matter:
 - * Further explanation of states of matter
 - * Structure and bonding of carbon

- Quantitative Chemistry:
 - * Extended understanding of conservation of mass
 - * Further equations, including balancing

- Energy Changes:
 - * Extended understanding of reactions, including exothermic and endothermic

Materials and States, Reactions and Separation
Earth and Atmosphere
Periodic Table and Bonding

Year 11

- Chemical Analysis:
 - * Separating Techniques in greater depth
 - * Gas tests

- Organic Chemistry:
 - * Hydrocarbons and their properties
 - * Cracking

- The Rate and Extent of Chemical Change:
 - * Reactions in greater depth
 - * Investigating the factors that affect the rate of a reaction

- Chemistry of the Atmosphere:
 - * The Earth's atmosphere in greater depth, including early atmosphere
 - * Climate change

- Using Resources:
 - * Potable water
 - * Environmental impact of products

