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

Year 4

*Understanding the water cycle

* Mixtures of different materials

Year 5

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

* Delving deeper into properties of materials
*Changes of materials

Year 6

* Separating mixtures and solutions

Year 7

*Introduction to KS3 science

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 8

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

Separation Techniques:
*Mixtures and solutions
*Filtering and evaporation

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

Detection:
* Application of chemistry skills to solve crimes

Year 9

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

Year 10

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

Chemical Changes:
* Understanding electrolysis

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

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

Year 11

Organic Chemistry:
* Hydrocarbons and their properties
* Cracking

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

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

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

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

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