

CHEMISTRY YEAR 7

Curriculum Content

- Safety
 - Apparatus, Diagrams, Measuring and Heating
 - Observing and Recording
 - The Earth a valuable resource
 - Water cycle
- Introduction to separating techniques

Knowledge, Skills and Understanding:-

Skills

Boys will learn how to:-

- Work safely in a laboratory.
- Using common apparatus. to develop key practical skills
- Write an experiment up.
- Observe and record carefully.
- Use variables and fair testing in an investigation.

Knowledge and understanding

- Laboratory rules and Hazard symbols.
- Recognising apparatus.
- Mass, volume and temperature.
- Physical change and changes of state.
- Structure and composition of the earth.
- The rock cycle.
- Extraction of salt and manufacture of glass and cement.
- Extraction of copper and iron from their ores.
- Physical changes within the water cycle

Assessment Opportunities:-

- Regular homework tasks, including fun activities to do at home.
- Topic tests through the year.
- Observation test.
- End of year examination.

CHEMISTRY YEAR 8

Curriculum Content

- Water
- Separation techniques
- Acids, alkalis and indicators
- Elements, compounds and mixtures
- Effect of heat on substances
- Composition of air
- Combustion of fuels
- Reactivity series of metals
- Rusting

Knowledge, Skills and Understanding:-

Skills

Boys will learn how to:-

- Test for common gases.
- Apply more complex separating techniques.

- Use indicators to identify acids and alkalis.
- Write word and symbol equations.

Knowledge and understanding

- Changes of state.
- When to use separation techniques.
- pH scale, indicators, neutralisation to form salts.
- Define elements, compounds and mixtures in terms of particles.
- Oxidation and thermal decomposition reactions.
- Composition of the air and the tests for gases.
- Combustion of fuels.
- Reactivity series of metals and their uses.

Assessment Opportunities:-

- Regular homework tasks.
- Topic tests through the year.
- Presentations
- End of year examination.

CHEMISTRY YEAR 9

Curriculum Content

- Particles and kinetic theory
- Atomic structure and the periodic table
- Ionic and covalent bonding
- Analytical chemistry
- Acids and salt preparation

Knowledge, Skills and Understanding:-

- Understand the movement of particles in the three states of matter.
- Explain how dissolving and diffusion explain the existence of particles.
- How to use solubility curves.
- Atomic structure and the periodic table.
- Law of conservation of mass, formulae and balancing equations.
- The chemistry of groups I and VII and VIII.
- History of the periodic table.
- Ionic and covalent bonding.
- Tests for positive and negative ions.
- Definitions of acids and bases.
- How to make salts from acid reactions.

Assessment Opportunities:-

- Regular homework tasks.
- Topic tests through the year.
- Group presentations.
- End of year examination.