

SCIENCES : Year 8 CHEMISTRY

Curriculum content

Six topics are taught during this year.

The topics are :

- Solids, Liquids and gases – diffusions, Kinetic Theory, cooling curves, changes of state, melting and boiling points – Full investigation; Salt and ice
- Chemical Elements – atoms and chemical symbols, metals and non-metals, Periodic Table.
- Chemical Compounds – chemical and physical change, preparation of compounds from elements, preparation of oxygen and oxides, mass change in preparing magnesium oxide and thermal decomposition of copper carbonate, atoms and molecules, mixtures and compounds.
- Formulae and Equations – chemical symbol, common formulae, interpretation of formulae, naming compounds, word equations.
- Acids, alkalis and salts - pH, Neutralisation and its applications, reactions of acids, preparation of salts, in particular copper sulphate, acid rain.
- Air and Oxygen – combustion of fuels, fire triangle, composition of air, products of combustion, types of air pollution and their effects.

Knowledge, skill and understanding

Experimental skills

Individual practical work and work in pairs is designed to develop these practical skills:

- **Planning** - ability to plan a method, identify control variables, control the variables, think up a hypothesis, make an experimental prediction, identify risks and hazards and identify control measures
- **Obtaining and presenting evidence** – ability to follow written instructions, work safely, use apparatus carefully to obtain accurate results and repeat any measurements which appear not to be correct. The results obtained are recorded in labelled tables and then used to draw line graphs.
- **Analysing results** – ability to use tables and graphs to find patterns in results and draw conclusions. Explain the conclusion using scientific knowledge and use correct scientific words and symbols when writing about the experiment.
- **Evaluation of the investigation** – ability to suggest whether or not the method gave accurate enough results and suggest ways of improving the method. Conclude if the hypothesis is correct.

Assessment opportunities

Experimental skills are developed and assessed by practical work including individual practical investigations

Knowledge and recall are assessed by tests at the end of each topic and by the examination at the end of the year.