

## Chemistry S2/3 Elective Course

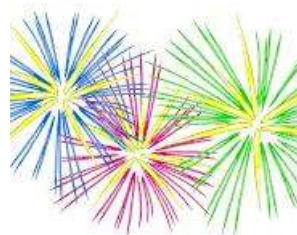
### Course Content

This is a two year course which will be taught through a themed approach. The transferable skills you learn in Chemistry are highly valued by almost every profession.

**The Chemistry of Fireworks** - Everybody loves to see fireworks explode but people rarely think of the chemistry behind them. This unit explores atomic structure and the elements of the Periodic Table, to explain the vivid colours seen when a firework explodes.

#### Lessons cover:

- Elements & the periodic table
- Elements & compounds
- Making 'bat poo' fireworks
- The 60 second fuse challenge



**The Chemistry of Forensics** - You may have seen the TV shows CSI and Raising the Dead, but how do real crime scene investigators and forensic departments work? In this unit you will use your chemistry knowledge to solve a major crime.

#### Lessons cover:

- Investigating a robbery!
- Fingerprints and shoe prints
- Chemical & soil analysis
- Chromatography & DNA analysis



**Chemical Communication** - You will learn how atoms join together to make molecules. Using your knowledge of atomic structure you will be able to write chemical formulae and use these to write balanced chemical equations.

#### Lessons cover:

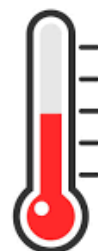
- Making models of molecules
- Writing formulae and equations



**Chemical Energy**- This unit covers chemical energy and how it can be used in everyday situations. You will design and test a method to cool an explosive liquid.

#### Lessons cover:

- Exothermic and endothermic
- Speed of reactions
- Catalysts
- Keep Your Cool Challenge



**To Infinity and Beyond** - Fossil fuels and metals are running out and alternative sources are required to meet society's needs.

**Lessons cover:**

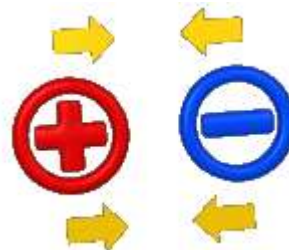
- Fossil fuels
- Plastics
- Environmental chemistry



**Opposites Attract**- Different substances can have very different chemical and physical properties. You will learn about the forces which hold particles together and you will begin to appreciate how the properties of substances depend on these forces.

**Lessons cover:**

- The properties of substances
- Conductivity and electrolysis



### Teaching Methods - what will I do?

A **Curriculum for Excellence** approach will permeate all topics, giving you opportunities to learn by discovery, take ownership of tasks, make decisions for yourself and relate chemistry to your everyday living. You will also acquire transferable thinking skills which should help you cope well in the senior school, and take responsibility for your own learning.

### Homework Policy

Homework exercises should be completed regularly, and will include knowledge, understanding and problem solving tasks. There may be opportunities to complete small projects at home and you will have the chance to present your findings to your peers.

### Assessment

Multiple choice tests

- Written assessments, covering recall of facts and problem solving skills
- The design of posters, leaflets and class presentations
- Self evaluation and peer assessment will be utilised

### Progression in the Senior School

The S2/3 Chemistry Course will help you progress into the Chemistry Course at National 4 & 5 Levels. From there you can proceed to Higher Chemistry. The S2/3 Chemistry course will also be useful for progression into Physics, Biology or Science at National 4 or 5.