

# CHEMISTRY

At The Maynard School we offer the Edexcel Chemistry syllabus. The course aims to provide a rigorous and stimulating treatment of Chemistry that both lays appropriate foundations for future studies and satisfies those who will study no further Chemistry.

## ENTRY REQUIREMENTS

The qualification builds on the knowledge, understanding and practical skills that you gained in GCSE Science and GCSE Additional Science, or GCSE Chemistry. You should have at least a grade 7 in these subjects. You should also have at least a grade 7 in GCSE Mathematics, as numerical and mathematical skills are very important in Chemistry. You will need to be able to communicate effectively, be able to plan and carry out research and think critically about problems.

## HIGHER EDUCATION AND CAREER OPPORTUNITIES

A-level Chemistry is a very versatile qualification it is particularly prized by universities and employers for the development of transferrable skills it provides.

It is not only valuable in its own right but it is an essential requirement for many careers, particularly Chemistry, Biochemistry, Pharmacology, Pharmacy, Medicine, Veterinary Medicine, Microbiology, Biotechnology, Chemical Engineering and Teaching.

Many people will tell you that Chemistry is hard but really it is about having a good understanding of the basic principles and then spending the time necessary to practice all the skills you need.

Chemists have developed many of the new technologies around you; mobile phones, electric cars and iPads all owe their existence to chemical advances. New medicines, ever smaller computers and payloads for space missions are all developed by Chemists.

If you like solving problems, if you are curious about the world around you, if you enjoy using your imagination in your thinking, then Chemistry is for you.

## COURSE CONTENT

### Exam Board: Edexcel

There are 19 different topics to cover; some long, some very short.

- 1: Atomic Structure and the Periodic Table
- 2: Bonding and Structure
- 3: Redox I
- 4: Inorganic Chemistry and the Periodic Table
- 5: Formulae, Equations and Amounts of Substance
- 6: Organic Chemistry I
- 7: Modern Analytical Techniques I
- 8: Energetics I
- 9: Kinetics I
- 10: Equilibrium I
- 11: Equilibrium II
- 12: Acid-base Equilibria
- 13: Energetics II
- 14: Redox II
- 15: Transition Metals
- 16: Kinetics II
- 17: Organic Chemistry II
- 18: Organic Chemistry III
- 19: Modern Analytical Techniques II

There is also a practical qualification that is a required part of the A-level, and students will complete a minimum of 12 of the 16 core practicals that will allow them to improve, and then demonstrate their practical skill. These practicals are also assessed by questions within the examinations.

Full details of the specification and course requirements can be found at the exam board website (<http://qualifications.pearson.com/en/home.html>).

