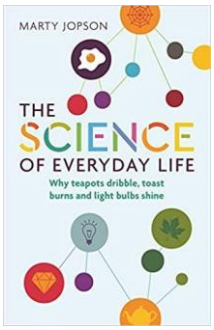
A-Level Chemistry

Welcome to A-level Chemistry!

Chemistry is the study of substances; what they are made of, how they interact with each other and the role they play in living things. Chemistry students get to investigate a huge range of ideas: the big question you'll ask yourself is 'what is the world made of?' From research in space, to the depths of the oceans, chemistry helps you understand the world around you and opens up lots of career opportunities.

If you choose it as a career, you have the potential to help solve all sorts of problems. You could work on a cure for cancer, or you might develop a new food: the possibilities are endless. Even if you don't decide to work in chemistry, studying it still develops useful and transferable skills for other careers. You'll develop research, problem solving and analytical skills, alongside teamwork and communication. Universities and businesses regard all of these very highly. A chemistry qualification can take you almost anywhere.

The most important thing you can do to support your preparation for the A-level course is ensure that you are confident with the GCSE Chemistry course and GCSE Maths. A lot of the content we explore builds upon your GCSE knowledge and the more confident you are with this, the more success you will have on the course.



Read Around The Subject

There are loads of science resources out there to read to stay up to date with the latest scientific developments. Take a look at these websites and books;

The Science of Everyday Life - Science of Everyday Life: Why Teapots Dribble, Toast Burns and Light Bulbs Shine. The title says it all really, lots of interesting stuff about the things around your home!

https://edu.rsc.org/student

https://www.chemistryworld.com/

Tasks

Experiments and practicals are some of the most exciting parts of chemistry and why many people choose to study chemistry at A-Level.

- The first experiment that you will be doing independently in year 12 is making a standard solution and titrating it. Use the website to try the titration screen experiment, step by step, to become and expert in it before you try it out in person. https://virtual.edu.rsc.org/titration/experiment/2
- In your taster session you will be experimenting to find unknown ions or functional groups. Observe all the results to confirm each ion or functional group here https://edu.rsc.org/practical/qualitative-tests-for-anions-and-cations-practical-videos-16-18-students/4012298.article

Research

Independent scientific research is a vital skill for all chemists. Research the following areas and present your findings however you choose, to share with your new class in September. You could create a written report; series of cue cards; create a podcast or video; PowerPoint presentation; poster or factsheet.

- **How the idea of the atom has changed from the Greeks to the present day?**
- **Provide a brief history of the periodic table**
- **Outline the four stages that occur in a Mass Spectrometer to explain how they accurately determine relative atomic masses of elements**