

# Clarendon Academy Sixth Form:

## Subject Essentials

### Chemistry

**Exam Board: OCR**

**Specification: A**

**How am I examined in this subject?**

Chemistry is assessed through three exam papers and a practical endorsement:

- **Paper 1 Periodic Table, Elements and Physical Chemistry:** This exam is worth 37% of your A-Level and is 2 ¼ hours long. This paper will assess concepts from modules 1,2,3,5 including, Development of practical skills in chemistry, Foundations in chemistry, Periodic table and energy and Physical chemistry and transition elements.
- **Paper 2 Synthesis and Analytical Techniques:** This exam is worth 37% of your A-Level and is 2 ¼ hours long. This paper will assess concepts from concepts from modules 1,2,4,6, including, Development of practical skills in chemistry, Foundations in chemistry, Organic chemistry and analysis.
- **Paper 3 Unified Chemistry:** This exam is worth 26% of your A-Level and is 1 ½ hours long. This paper will assess synoptically all modules studied.
- **Practical Endorsement:** This is a piece of investigative work, recorded overtime a separate lab book. These practical activities will be carried out and completed in class at various points during the course. The content of these practical activities are also assessed during each of the exam papers. The 'Pass or Fail' certificate is then reported separately and can often be a requirement for university places.

**How are my responses assessed?**

In each assessment, you are assessed on three separate skills or assessment objectives:

- **AO1:** Demonstrate knowledge and understanding of scientific ideas, process, techniques and procedures.
- **AO2:** Apply knowledge and understanding for scientific ideas, processes, techniques and procedures:
  - In a theoretical context
  - In a practical context
  - When handling qualitative data
  - When handling quantitative data.
- **AO3:** Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to:
  - Make judgements and reach conclusions
  - Develop and refine practical design and procedures.

#### Fascinating Idea

From hard hats to plastic bags, polythene is the most common plastic found in products today. In 1898, Hans von Pechmann discovered something waxy at the bottom of his tube. The funny thing is that he was studying something completely different, making the discovery accidental. These chains were later termed polymethylene. Still to this day, it is the most common plastic in our everyday life. Look around and I bet you can spot something that contains polythene

## How could this subject support my future education or career?

Chemistry A Level can lead to a wide range of careers in both the public and private sector; including pharmaceuticals, medicine and engineering.

The skills developed during the course widen analytical and practical skills which can be applied to a wide range of degrees both within and out of the scientific field.

## How do we support students who are aiming for A/A\* grades?

- We encourage our most able students to read widely around the concepts that we are studying in class. A comprehensive chemistry folder is available on the Sixth Form VLE, which contains a number of self-lead activities to consolidate and extend students. Students are encouraged to use mark schemes to evaluate and analyse their work during their Supported Study sessions.
- We provide stretch and challenge activities in class and during the practical endorsement activities students are encouraged to complete the deeper questions which reflect on the practical side of their studies.
- We work with the other science A level disciplines to widen students experience of science visiting Universities and using their facilities, such as the University of Bath.
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## How do we support students who are finding this subject difficult?

- We organise one-to-one sessions with students who are struggling with specific topics or skills in our subject.
- We provide printed versions of the PowerPoint presentations and other notes we use in lessons for students who experience difficulties with the pace of lessons.
- We provide detailed and helpful feedback on the work that students submit to use and give them the opportunity to improve their work at regular opportunities.
- We direct students to a range of online resources that are designed to support them with independent study. Students' mathematical skills are supported by providing them with additional resources to allow practice and further examples of these skills.

### • **Who can I contact if I want to find out more?**

- Mr Mike Griffiths (*Head of Sixth Form*): [mlg@clarendonacademy.com](mailto:mlg@clarendonacademy.com)
- Mrs Emma John (*A-Level Chemistry Teacher*): [ekj@clarendonacademy.com](mailto:ekj@clarendonacademy.com)
- Mr Rhys Jones (*Head of Science*): [rhj@clarendonacademy.com](mailto:rhj@clarendonacademy.com)