

# CHEMISTRY: TECHNICAL INFORMATION

## GCSE

GCSE Course Title	Code	Awarding Body
Chemistry	8462	AQA

Paper	Code	Method of Assessment	Weighting
Chemistry 1 – Topics 1-5	8462/1	100 marks 105 minute examination  Multiple choice, structured, closed short answer and open questions.	50%
Chemistry 2 – Topics 6-10	8462/2	100 marks 105 minute examination  Multiple choice, structured, closed short answer and open questions.	50%

## CHEMISTRY

### Background Knowledge and Qualifications

The AQA GCSE Chemistry course makes use of the knowledge and understanding developed in the Key Stage 3 Science and Chemistry courses. Topics such as particles, elements and compounds, metals, acids and alkalis and formulae and equations are covered in greater depth at GCSE.

### Course Description

The AQA Chemistry course aims to help you become confident in an increasingly technological world. It will help you develop an informed interest in matters of scientific importance through the development of abilities and skills. These skills are not only relevant to the study, practice and application of Chemistry, but are also useful in everyday life. The Chemistry is taught using real-life examples of Chemistry in action and the emphasis of the course is to demonstrate its relevance to everyday life.

The Chemistry separate Science consists of the core of the Chemistry content of Double Award and some additional topics which are **of the same standard as the topics covered in the Double Award.**

A breakdown of the core topics are listed below.

### **CORE TOPICS**

1. Atomic structure and the periodic table
2. Bonding, structure, and the properties of matter
3. Quantitative chemistry
4. Chemical changes
5. Energy changes
6. The rate and extent of chemical change
7. Organic Chemistry
8. Chemical analysis
9. Chemistry and the atmosphere
10. Using resources

### **ADDITIONAL TOPICS** (*only studied by girls taking triple science*)

- Properties of Transition Metals
- Bulk and surface properties of matter including nanoparticles
- Yield and atom economy of chemical reactions; using concentrations; amount of substance in relation to volume of gases.
- Chemical cells and fuel cells
- Reactions of alkenes and alcohols
- Synthetic and naturally occurring polymers
- Identification of ions by chemical and spectroscopic means
- Using materials
- The Haber process and the use of NPK fertilisers

## DOUBLE AWARD SCIENCE: TECHNICAL INFORMATION

### GCSE Combined Science Trilogy: **DOUBLE AWARD**

Certificate Course Title	Code	Awarding Body
AQA Certificate in Science: Double Award	8464	AQA

PAPER	Code	Method of Assessment	Weighting
Biology 1	8464	70 marks 75 minute examination Multiple choice, structured, closed short answer and open questions. <b>Topics 1-4</b>	16.67%
Chemistry 1	8464	70 marks 75 minute examination Multiple choice, structured, closed short answer and open questions. <b>Topics 8-12</b>	16.67%
Physics 1	8464	70 marks 75 minute examination Multiple choice, structured, closed short answer and open questions. <b>Topics 19/21/23/24</b>	16.67%
Biology 2	8464	70 marks 75 minute examination Multiple choice, structured, closed short answer and open questions. <b>Topics 5-7</b>	16.67%
Chemistry 2	8464	70 marks 75 minute examination Multiple choices, structured, closed short answer and open questions. <b>Topics 13-17</b>	16.67%
Physics 2	8464	70 marks 75 minute examination Multiple choice, structured, closed short answer and open questions. <b>Topics 18/20/22</b>	16.67%

## SCIENCE COURSES

### Background Knowledge and Qualifications

AQA GCSE's in the Science subjects build upon the knowledge and skills of Science you acquired in Year 7, Year 8 and Year 9. **You must study either Double Science or Triple Science.**

### Course Content

**Everyone takes at least Double Award Science. Some of you may choose to opt for Triple Award Science.**

The Scheme of Assessment is linear, with six question papers (two in each science area) to be taken in the same examination series. This means that you will take the entire set of examinations at the end of the course when you are in Year 11. Paper 1 and Paper 2 in each of the Science subjects will contain questions relating to practical skills which have been built up throughout the course. You will receive **two** grades based on your overall performance on all papers. (E.g. 9-9, 9-8, 8-8 etc).

**In Double Award Science** you will study Biology, Chemistry and Physics, taught by specialist teachers but for 4 lessons per 2 week cycle for each Science subject. Because Double Award Science is studied in less time than Triple Science you have to do less work in each of Biology, Chemistry and Physics whereas girls doing Triple Science have to study some additional topics in each Science.

The content of **Double Award Science** is described under Biology, Chemistry and Physics in this brochure.

**In Triple Science** you will study Biology, Chemistry and Physics, each taught by specialist teachers, with 6 lessons per 2 week cycle for each subject. This course leads to an GCSE award in each subject so that you finish up with three Science awards. You will study the same core of work as girls doing **Double Award Science** but have to do additional topics in each Science subject. **The extra work is not harder than Double Award Science but is work of the same standard; girls doing Triple Science simply do more work but of the same standard.**

There are separate entries in this brochure which describe the course content of each Science subject.

### **CORE TOPICS**

Biology etc

Chemistry

8. Atomic structure and the periodic table
9. Bonding, structure, and the properties of matter
10. Quantitative chemistry
11. Chemical changes
12. Energy changes
13. The rate and extent of chemical change
14. Organic Chemistry
15. Chemical analysis
16. Chemistry and the atmosphere
17. Using resources

Physics etc

### Practical and Investigative Skills

Questions on practical work will be assessed in all written papers and will count for at least 15% of the overall mark.