



Science Key Stage 4

SWCA is committed to providing the best pathway to success for our pupils whilst rigorously conforming to the assessment plans the government sets out for us.

At Key Stage 4 students will regularly complete exam practice questions using examples from past exams in previous years; this regular assessment will give the teacher an ongoing understanding of student's strengths and areas for development. At regular intervals students will also sit summative assessments of past exam papers based on the content that they have covered.

Year 9 and Year 10 are currently working towards the completion of the **AQA Combined Science Trilogy** qualification (equivalent to 2 GCSEs) for the new GCSEs set to be examined in **summer 2018**. The most able students will be directed on a route to complete the separate science qualifications; **AQA Biology**, **AQA Chemistry** and **AQA Physics** also set to be examined in **summer 2018**

Course Content: Same for both sets of qualifications (See below). There is also a '**Required Practical**' element that is not explicitly assessed but compulsory and will be addressed in the terminal exams.

Subject content

Biology

1. Cell biology
2. Organisation
3. Infection and response
4. Bioenergetics
5. Homeostasis and response
6. Inheritance, variation and evolution
7. Ecology

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 of the atmosphere
17. Using resources

Physics

18. Energy
19. Electricity
20. Particle model of matter
21. Atomic structure
22. Forces
23. Waves
24. Magnetism and electromagnetism

Assessments

Assessment Structure: There are **six** papers: two biology, two chemistry and two physics. Each of the papers will assess knowledge and understanding from distinct topic areas, asking multiple choice, structured, closed short answer, and open response questions.

40% of marks will be based on **demonstrating** knowledge and understanding; **40%** of marks will be based on **applying** that knowledge and understanding and **20%** on **analysing** given information and ideas.

There is also an **increased maths/numeracy component to the examinations**. Overall **20%** of marks will be derived from numeracy based questions (10% from Biology, 20% from Chemistry and 30% from Physics)

For the Combined Science qualification

Biology element- 2 papers

2 written exams: each 1 hour 15 minutes
Foundation and Higher Tier
70 marks each
16.7% of GCSE each paper

Chemistry element- 2 papers

2 written exams: each 1 hour 15 minutes
Foundation and Higher Tier
70 marks each
16.7% of GCSE each paper

Physics element- 2 papers

2 written exams: each 1 hour 15 minutes
Foundation and Higher Tier
70 marks each
16.7% of GCSE each paper

For the Separate Science qualifications:

Biology - 2 papers

2 Written exams: 1 hour 45 minutes each
Foundation and Higher Tier
100 marks each
Each worth 50% of GCSE

Chemistry - 2 papers

2 Written exams: 1 hour 45 minutes each
Foundation and Higher Tier
100 marks each
Each worth 50% of GCSE

Physics - 2 papers

2 Written exams : 1 hour 45 minutes each
Foundation and Higher Tier
100 marks each
Each worth 50% of GCSE
