# Supporting your child through GCSE
# AQA Separate Science (Triple)

## Biology:

**Exams:**

Paper 1: Biology
Paper 2: Biology

**Topics Covered:**

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

## Chemistry:

**Exams:**

Paper 1: Chemistry
Paper 2: Chemistry

**Topics Covered:**

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 of the atmosphere
10. Using resources

## Physics:

**EQUATION SHEETS WILL BE PROVIDED IN THE REAL EXAMS**

**Exams:**

Paper 1: Physics
Paper 2: Physics

**Topics Covered:**

1. Energy
2. Electricity
3. Particle model of matter
4. Atomic structure
5. Forces
6. Waves
7. Magnetism and electromagnetism
8. Space physics (physics only)

**Assessments:** There are six papers: two biology, two chemistry and two physics. Each of the papers will assess knowledge and understanding from distinct topic areas.

### Paper 1

**What's assessed**

Topics 1–4: Cell biology; Organisation; Infection and response; and Bioenergetics.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

### Paper 2

**What's assessed**

Topics 5–7: Homeostasis and response; Inheritance, variation and evolution; and Ecology.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

### Paper 1:

**What's assessed**

Topics 1–5: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry, Chemical changes; and Energy changes.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

### Paper 2:

**What's assessed**

Topics 6–10: The rate and extent of chemical change; Organic chemistry; Chemical analysis, Chemistry of the atmosphere; and Using resources.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

### Paper 1:

**What's assessed**

Topics 1-4: Energy; Electricity; Particle model of matter; and Atomic structure.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

### Paper 2:

**What's assessed**

Topics 5-8: Forces; Waves; Magnetism and electromagnetism; and Space physics.

Questions in paper 2 may draw on an understanding of energy changes and transfers due to heating, mechanical and electrical work and the concept of energy conservation from Energy and Electricity.

**How it's assessed**

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

**Questions**

- Multiple choice, structured, closed short answer and open response.

**Useful resources:**

| Resource | What it is / How it can be used | Link(s) |
|---|---|---|
| Past papers | Real exam papers that have been completed by students in the past<br>Mark schemes, examiners reports and grade boundaries also available<br><br>Ideas for use:<br>- Open book<br>- Watch the relevant Kay Science video, then try to answer the exam Q<br>- Timed and in exam conditions (combined papers are 1hour 15 minutes, separate science papers are 1 hour 45 minutes)<br>- Use mark schemes to self-assess<br>- Use grade boundaries to work out what grade would have been awarded<br>- Make flashcards on the Qs students got wrong and practice with them | Biology:<br>  <br>Chemistry:<br>  <br>Physics:<br>  |
| BBC Bitesize | Bitesize is the BBC's free online study support resource for school-age students. It is designed to aid students in both schoolwork and, for older students, exams.<br><br>Ideas for use:<br>- Mind maps; read a section of information on a particular topic area, add branches and information to a mind map on this.<br>- Look-Cover-Write-Check; read a section → cover it/scroll down → write out what you just read → check by scrolling back to the section → repeat until get it all correct, then move on to a different section<br>- Flashcards; use the information to make up your own Qs and perfect answers. Write the Q and answer on the same side of a flashcard. Get someone to test you.<br>- Video clips; there are some short video clips within some of the content. Watch these and make notes on the information<br>- Self-quizzing; complete the multiple-choice quizzes at the end of each topic → make flashcards on weak areas → practice with them and then repeat the quiz. |  |
| Seneca Learning | Seneca helps 2,500,000+ students to learn faster and memorise better. It is a homework & revision platform that applies cognitive neuroscience to make learning more efficient and enjoyable.<br><br>Seneca's algorithms are adaptive and personalise students' education to their abilities, prior knowledge and performance. Their algorithms are based on students' knowledge and performance, as well as principles such as the 'Forgetting Curve' to deliver an optimal learning experience. Seneca uses spaced repetition, active retrieval, interleaving, multimodal representations and visual memory cues to increase students' retention of information.<br><br>Different tiers are available – speak to your teacher to find out which tier you should focus on at the moment |  |

**Apps:**

Several really good apps are available to download, including:

**Gojimo** – Excellent question-based activities

**Scholastic GCSE 9-1 Revision**– Excellent revision planning and questions

**Brainscape Flashcards** – Excellent revision flashcards

**Revision Buddies** – Large selection of multiple-choice questions, just choose your subject

**GCSE Combined Science** – many great revision resources

**Quizlet** – lots of flashcards already made, or you can make your own and either use them on the app or print them off and make them into physical flashcards

**Tier Entry:**

Students will either be entered for Higher or Foundation Tier. The tier entry will be discussed with students and parents if necessary but ultimately the teacher will enter students for the most appropriate tier.

**Grades**

Students' marks for both papers of each science discipline will be added together and then a grade will be awarded accordingly. Students will receive three grades: one for biology, one for chemistry and one for physics. They are examined and awarded as three separate subjects.