



# Curriculum Overview 2024 onwards

## Curriculum Area: Biology, Chemistry and Physics (Triple)

Year: 10

**Curriculum covered From September 2024. This covers the Content from the paper 1 GCSE science exams.**

### Autumn Term

**Biology** – (B1 Paper 1) Cell Biology: cell structure, cell specialisation, cell differentiation, Microscopy, Cell division, chromosomes, mitosis and the cell cycle, stem cells, diffusion, osmosis, and active transport,

**Biology** – (B2 Paper 1) Organisation: animal & plant tissues, organs and organ systems, health & lifestyle issues.

**Chemistry** – (C1 Paper 1) Atomic Structure: atoms, elements, compounds and the periodic table.

**Chemistry** – (C2 Paper 1) Bonding: ionic bonding, covalent bonding, metallic bonding, and their properties.

**Physics** – (P1 Paper 1) Energy: Energy stores, power, efficiency, dissipation and national and global energy resources

**Physics** – (P2 Paper 1) Electricity circuit symbols, DC circuits electricity, mains electricity, power and national grid.

### Spring Term

**Biology** – (B3 Paper 1) Infection and response: Types, spread and defence of disease, Vaccinations, drugs & uses.

**Biology** – (B4 Paper 1) Bioenergetics: Photosynthesis, Limiting factors, Respiration, Metabolism, Exercise.

**Chemistry** – (C3 Paper 1) Quantitative chemistry: Chemical measurements, Conservation of mass, chemical equations, amount and masses, concentration.

**Physics** – (P3 Paper 1) Particle model of matter: Density, Change of state, Internal energy, pressure in gases.

**Physics** – (P4 Paper 1) Atomic structure: Model of the atom, Radioactive decay, half-life & contamination.

### Summer Term

**Biology** – (B7 Paper 2) Ecology: Adaptations, interdependence, competition, ecosystems, biodiversity & humans.

**Chemistry** – (C4 Paper 1) Chemical changes: Reactivity of metals, reactions of acids, Electrolysis

**Chemistry** – (C5 Paper 1) Energy changes: Exothermic and endothermic reactions, reaction profiles & energy changes

**Physics** – (P5 Paper 2) Forces: Types of forces, work done, Elasticity, motion, newton's laws, braking & momentum

### Internal Assessment

In lesson time pupils will use formative assessments to check understanding at the point of learning to allow immediate intervention.

After every topic there will be an end of topic test that follows a similar structure to the GCSE exam papers. These will be approximately every term for each of Biology, Chemistry and Physics. Each topic test has been designed to be in line with exam board requirements for demand and mathematical content.

The feedback from these tests will be used to improve the pupil's knowledge in this topic.

Year 10 pupils will sit a Year 10 exam in March which will be a paper 1 style GCSE paper for each Biology, Chemistry and Physics.

### Exam Board/Exam Paper Requirements/% Weighting

#### Key dates (mocks and final exams)

#### AQA Biology GCSE

#### AQA Chemistry GCSE

#### AQA Physics GCSE

Each subject has two papers sat in May/June of Year 11.

Each paper is 1 hour 45 minutes each and 100 marks.

Each paper is 50% of the individual GCSE award.

Each subject has paper 1 and paper 2.

Each of the papers will assess knowledge and understanding from distinct topic areas.

### Helpful resources/revision guides/websites/exam preparation

Specification GCSE Biology: [www.aqa.org.uk/subjects/science/gcse/biology-8461](http://www.aqa.org.uk/subjects/science/gcse/biology-8461)

GCSE Chemistry: [www.aqa.org.uk/subjects/science/gcse/chemistry-8462](http://www.aqa.org.uk/subjects/science/gcse/chemistry-8462)

GCSE Physics: [www.aqa.org.uk/subjects/science/gcse/physics-8463](http://www.aqa.org.uk/subjects/science/gcse/physics-8463)

BBC GCSE Bitesize Science <http://www.bbc.co.uk/education/subjects/zrkw2hv>

Educake Science <http://www.educake.co.uk>

#### Revision guides

AQA Biology, Chemistry and Physics science revision guides are sold from school or many other versions are available elsewhere.