

## OVERVIEW

Students follow the AQA GCSE Science course and continue to build on the knowledge and understanding gained from Year 10. Lessons include regular retrieval practice and past paper questions across current and past topics to build up recall and application skills in readiness for their exams. Students continue to study topics across biology, chemistry and physics with a mixture of theory and practical work. Students are taught by three teachers, each taking 4 lessons a fortnight.

## Autumn

**Biology***B5 Homeostasis*

Nervous system, Reflexes investigation, Brain, Eyes and Vision, Thermoregulation, Endocrine system, diabetes, menstrual cycle, artificial control of fertility, plant hormones.

**Chemistry***C7 Organic Chemistry*

Crude oil and hydrocarbons, Fractional Distillation, Cracking, reactions of alkenes, alcohols, carboxylic acids, synthetic polymers, condensation polymerisation.

*C8 Chemical Analysis*

Chromatography, Purity, Gas tests, Identification of ions, Flame emission spectroscopy.

**Physics***P5 Forces*

Contact & Non-contact forces, Resultant Forces, Hooke's Law, moments, gears & levers, pressure, Velocity/Distance Time graphs, acceleration, stopping distance, car safety.

*P6 Waves*

Wave features & calculations, measuring waves, reflection, sound and seismic waves, EM Spectrum, IR investigation, lenses, black body radiation.

**Assessment:**

*End of topic test for each unit.*

Mock 1 exams –  
3 x Paper 1

## Spring

**Biology***B6 Inheritance*

Genes, DNA, Inheritance, Inherited Diseases, Genetic Diagrams, Protein synthesis, the work of Mendel, Darwin and Wallace, Theory of Evolution, evidence of evolution, fossils, cloning.

**Chemistry***C9 Atmosphere*

Composition of Earth's atmosphere, Greenhouse gases and climate change, Atmospheric pollutants.

*C10 Using Resources*

Sustainable development, Potable water, extracting metals, Life Cycle Assessment, Corrosion, Use of alloys, Ceramics, polymers, composites.

**Physics***P7 Magnetism*

Magnetic fields, Motor effect, Electric motors, speakers and microphones, transformers & the National Grid.

*P8 Space*

Solar system, Life cycle of stars, orbital motion and satellites, red shift.

**Assessment:**

*End of topic test for each unit.*

Mock 2 exams –  
3 x Paper 2

## Summer

*Revision and Exam Preparation*

The lead up to the exams will be spent consolidating the curriculum and making sure that students have the required knowledge and skills in Science. A range of resources and techniques will be shared such as using mind maps, flash cards, past exam questions, revision guides, videos and quizzes. As well as reviewing all knowledge and skills there will be a focus on exam technique.

**Assessment:**

GCSE Exams

*Students will sit 2 papers for each area (6 papers in total)*

**Useful resources for supporting your child at home:**

- CGP Science Revision Guide x 3 (provided)
- BBC Bitesize revision pages
- YouTube: Cognito Science lessons

**Homework:**

Weekly exam questions based on what they have studied in Period 6.

Weekly period 6 sessions to attend for revision.