



**MODULES/UNITS**

**AQA GCSE PHYSICS**

**YEAR TEN**

Unit 1: Energy

Unit 2: Electricity

Unit 3: Particle model of matter

Unit 4: Atomic structure

**YEAR ELEVEN**

Unit 5: Forces

Unit 6: Waves

Unit 7: Magnetism and electromagnetism

Unit 8: Space physics

**EXAMS**

**WHEN**

Paper 1: Topics 1 to 4

Written examination: 1 hour 45 minutes

100 marks

50% of GCSE

Paper 2: Topics 5 to 8

Written examination: 1 hour 45 minutes

100 marks

50% of GCSE

15% of marks assess skills gained through the completion of the required practical activities

ALL EXAMINATIONS ARE TAKEN AT THE END OF YEAR 11

**PROJECTS/SCHEME OF WORK/TOPICS**

**DURING**

Energy: Energy changes, conservation and dissipation of energy, national and global energy resources.

AUTUMN TERM Y10

**Required practicals 1 (specific heat capacity) and 2 (thermal insulation)**

Electricity: Current, potential difference and resistance, series and parallel circuits, domestic uses and safety, electrical energy transfers, static electricity

AUTUMN TERM Y10

**Required practicals 3 (resistance) and 4 (current-p.d. relationships).**

Particle model of matter: changes of state, internal energy and energy transfers, particle model and pressure.

SPRING TERM Y10

**Required practical 5 (measurement of density)**

Atomic structure: atoms and isotopes, atoms and nuclear radiation, hazards and uses of radioactive emissions

SUMMER TERM Y10

Forces: forces and their interactions, work done and energy transfer, forces and elasticity, moments, levers and gears, pressure and pressure differences in fluids, forces and motion, momentum **Required practicals 6 (force and extension) and 7 (acceleration)**

AUTUMN TERM Y11

Waves: waves in air, fluids and solids, electromagnetic waves, black body radiation **Required practical 8 (speed of water waves), 9 (reflection and refraction) and 10 (absorption of IR radiation)**

AUTUMN TERM Y11

Magnetism and electromagnetism: permanent and induced magnetism, magnetic forces and fields, the motor effect, induced potential, transformers and the national grid,

SPRING TERM Y11

Space physics: solar system, stability of orbital motions, satellites; the life cycle of stars; red-shift

SPRING TERM Y11

**OTHER INFORMATION**

**Examination Board:** AQA

**Specification:** Physics – AQA GCSE (8463)

**Textbook:** AQA GCSE Physics (OUP) – provided electronically

**Revision Guide:** CGP AQA Physics

**STUDENTS ARE REQUIRED TO RECALL AND USE A NUMBER OF FORMULAE AND RELATIONSHIPS; THEY ARE PROVIDED WITH THE FULL LIST AT THE START OF THE COURSE.**

**Past papers and specimen papers:** these are available as electronic versions

**Schemes of work:** these are available as electronic versions

**Equipment:** A full scientific calculator should be brought to every lesson.