

**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 Y10Forces: 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 Y11Waves: 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:** Complete Physics (Stephen Pople – Oxford University Press)

Not issued but used for background reading and exercises in lessons.

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.