Physics

Year 7

Energy – Energy stores and transfers, conservation of energy, efficiency and simple calculations.

Forces – How forces affect motion, including balanced forces, pressure and floating and sinking.

Space – The Solar System, day and night, seasons and the Moon's phases.

Year 8

Electricity and Magnetism – Electric current in series and parallel circuits, voltage, resistance and electromagnets.

Moving Around – How forces affect motion, including acceleration, moments, pressure and motion graphs.

Heating and Cooling – Thermal energy transfer by conduction, convection and radiation, using the particle model.

Light and Sound – How light and sound waves travel, reflect and transfer energy.

Year 9

Forces and Motion – Speed, acceleration, and momentum in context, with motion graphs, practicals and how forces affect movement and safety.

Energy – Energy stores, transfers, and efficiency, including calculations of kinetic, potential, and thermal energy and renewable resources.

Waves in Air, Fluids and Solids – Properties of sound and mechanical waves, including their behaviour in different media and practical wave investigations.

GCSE AQA - 8463

Year 10

Light and EM Waves – EM wave properties, uses, hazards, lenses, visible light and infrared radiation.

Atomic Structure and Radioactivity – Atomic models, isotopes, radiation types and risks, fission and fusion.

Electricity – Current, resistance, IV graphs, circuits, static electricity, and the National Grid.

Particle Model – Density, internal energy, specific heat capa

Year 11

Forces and Interactions – Contact and non-contact forces, free body diagrams, Hooke's Law, work done, moments, and resolving vectors.

Magnetism and Electromagnetism – Magnetic fields, electromagnets, motors, generators, transformers and electromagnetic induction.

Space – The Solar System, life cycle of stars, satellite orbits, red shift, and evidence for the Big Bang theory.

A-Level Edexcel - 9PH0

Year 12

Working as a Physicist

Teacher 1:

- Materials
- Mechanics
- Nuclear and Particle Physics

Teacher 2:

- Waves and Particle Nature of Light
- Electric Circuits
- Further Mechanics

Year 13

Working as a Physicist

Teacher 1:

- Nuclear Radiation
- Thermodynamics
- Space

Teacher 2:

- Electric and Magnetic Fields
- Gravitational Fields
- Oscillations