



A Level Physics Curriculum Map



FURTHER STUDY

University – science or engineering
Apprenticeships – science or engineering

CAREER PATHS

Engineering, physics, medicine, finance, general science, researcher

SKILLS

Research, analysis, practical/investigation, problem-solving

INTEREST

A continued passion and love of learning about physics

NUCLEAR PHYSICS

- Radioactivity
- Nuclear Physics

Links to GCSE:
Radioactivity, particle model

Links to the outside world:
Nuclear energy, medical physics, background radiation

OPTIONAL UNITS

- Astrophysics
- Medical Physics
- Engineering Physics
- Turning Points (History of Physics)
- Electronics

REVISION



REVISION & EXAMS



MAGNETIC FIELDS

- Magnetic Fields
- Electromagnetic Induction

Links to GCSE:
Electricity, Magnetic Fields

Links to the outside world:
Motors, generators, transformers, national grid



ELECTRIC FIELDS

- Electric Fields
- Capacitance

Links to GCSE:
Electricity

Links to the outside world:
Electrical engineering, lightning strikes, electronic devices



GRAVITATIONAL FIELDS

Links to GCSE:
Forces and motion, Energy

Links to the outside world:
Engineering, structures

THERMAL PHYSICS

- Temperature change
- Change of State
- Ideal Gases

Links to GCSE:
Force and pressure, particle model

Links to the outside world:
Chemical engineering, materials, structures



QUANTUM PHYSICS

- Matter and Radiation
- Quarks and Leptons
- Quantum Phenomena

Links to GCSE:
Particle Model of Matter, Radioactivity

Links to the outside world:
Breakthroughs in current physics research, Nobel Prize winners

FURTHER MECHANICS

- Circular Motion
- Simple Harmonic Motion

Links to GCSE:
Space, Forces and Motion

Links to the outside world:
Theme parks, driving, resonance, bridge design



YEAR 12 MOCKS

YEAR 13

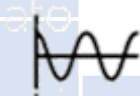
$$E=mc^2$$

WAVES

- Waves
- Optics

Links to GCSE:
Waves, Electromagnetic Spectrum

Links to the outside world:
Engineering, communications, musical instruments, medical physics



ELECTRICITY

- Electric Current
- DC Circuits

Links to GCSE:
Electricity

Links to the outside world:
Engineering, machines, mechanical design, housing



MECHANICS AND MATERIALS

- Forces and Motion
- Energy and Momentum
- Materials

Links to GCSE:
Forces, Energy

Links to the outside world:
Engineering, machines, mechanical design, motion and transport



YEAR 12



A01

Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures

A02

Apply knowledge and understanding of scientific ideas, processes, techniques and procedures

A03

Analyse, interpret and evaluate scientific information, ideas and evidence

