

Further Study

University – physics, engineering, computing
Apprenticeships – mechanical engineering, lab scientist

Career Paths

Astrophysicist, meteorologist, aerospace engineer,
electrical engineer, software developer, nuclear scientist

Skills

Research, analysis, practical/investigation,
problem-solving

Interest

A continued passion and love of learning about
physics

REVISION

REVISION & EXAMS

ASTROPHYSICS

Comparing optical and non-optical telescopes, investigating the properties of stars and the stellar life cycle, and cosmology

RP10 Investigation of the relationship between the force, flux, current and length of a wire

RP11 Investigation on the effect on magnetic flux linkage using a search coil

RP8 Investigation of Boyle's law and Charles' law for a gas

NUCLEAR PHYSICS

Describing modes of radioactive decay, exponential decay, and using nuclear fission and fusion in nuclear reactors

MAGNETIC FIELDS

Investigating charges in fields, flux and flux linkage, and transformers

CAPACITORS

Dielectrics, and charging and discharging capacitors

GRAVITATIONAL FIELDS

Newton's law, field strength, potential and satellites

ELECTRIC FIELDS

Coulomb's law, field strength, potential and accelerators

THERMAL PHYSICS

Changes of state, the gas laws, and kinetic theory of gases

RP12 Investigation of the inverse-square law for gamma rays

RP9 Investigation of the charge and discharge of capacitors

RP3 Determination of g by a free-fall method

RP4 Determination of the Young Modulus by a simple method

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FURTHER MECHANICS

Investigating motion in a circle and simple harmonic motion

RP7 Investigation into simple harmonic motion

FORCES AND MOTION

Statics and dynamics – from forces in equilibrium to objects in motion

MOMENTUM AND ENERGY

Finding the momentum in one and two dimensions, and using the conservation of energy to look at collisions and explosions

MATERIALS

The bulk properties of materials and how they act under stress and strain

ELECTRICITY

The fundamentals of electricity and the characteristics of circuits

ELECTRICITY

Building circuits and investigating their applications

RP6 Investigation of emf and internal resistance of electric cells and batteries

RP5 Determination of the resistivity of a wire

WAVES

Diffraction, interference, and Young's double slit experiment

RP1 Investigation into the variation of the frequency of stationary waves on a string

End of introduction practical assessment

RP2 Investigation of interference in Young's slit experiment

WAVES

Transverse and longitudinal waves, superposition, wave interactions and optics

QUANTUM PHYSICS

The photoelectric effect, atomic spectra, and the wave-particle duality

INTRODUCTION TO PHYSICS

Building the fundamental skills needed in A Level Physics

ATOMIC PHYSICS

Looking at the building blocks for atoms, interactions of matter, and the particle zoo

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