

Teacher in charge of Physics: Mr S Dack
Teacher: Mr S Dack, Mr M Skuse
Examination Board: WJEC

PHYSICS

Course Outline

If you have an enquiring mind, enjoy a challenge and like solving problems then Physics is the subject for you. From the smallest parts of the body to the great clusters of galaxies Physics helps us understand how our world works.

Entry Requirements

- GCSE grade C or above
- Good analytical/evaluative skills
- Good numerical skills

Course Outline

UNIT 1: This unit covers the following areas of study:

- Basic physics
- Kinematics
- Dynamics
- Energy concepts
- Solids under stress
- Using radiation to investigate stars
- Particles and nuclear structure

UNIT 2: This unit covers the following areas of study:

- Conduction of electricity
- Resistance
- D.C. circuits
- The nature of waves
- Wave properties
- Refraction of light
- Photons
- Lasers

UNIT 3: This unit covers the following areas of study:

- Circular motion
- Vibrations
- Kinetic theory
- Thermal physics
- Nuclear decay
- Nuclear energy

UNIT 4: This unit covers the following areas of study:

- Capacitance
- Electrostatic and gravitational fields of force
- Orbits and the wider universe
- Magnetic fields
- Electromagnetic induction

CHOICE OF 1 OPTION FROM 4:

- A: Alternating currents
- B: Medical physics
- C: The physics of sports
- D: Energy and the environment

UNIT 5: Practical investigation.

This is currently being developed by the examination board

How Will I Be Assessed?

The assessment is divided into a total of 5 units, 2 AS units and 3 A2 units. Weightings noted below are expressed in terms of the full A level qualification.

AS (2 UNITS)

AS Unit 1: Motion, Energy and Matter

Written examination: 1 hour 30 minutes (20% of qualification)

Short answer and extended answer structured questions, some in a practical context.

AS Unit 2: Electricity and Light

Written examination: 1 hour 30 minutes (20% of qualification)

Short answer and extended answer structured questions, some in a practical context.

A LEVEL (THE ABOVE PLUS A FURTHER 3 UNITS)

A2 Unit 3: Oscillations and Nuclei

Written examination: 2 hours 15 minutes (25% of qualification)

Short answer and extended answer questions, some in a practical context; comprehension question.

A2 Unit 4: Fields and Options

Written examination: 2 hours (25% of qualification)

Short answer and extended answer questions, some in a practical context

Choice of one option out of four:

Alternating Currents

Medical Physics

The Physics of Sports

Energy and the Environment

A2 Unit 5: Practical Examination (10% of qualification)