

YEAR 13 PHYSICS

Term 1

Pupils study Module 4 of the Edexcel A level course, Waves and the Universe. Topics include:

- Circular Motion
- Simple harmonic Motion
- Wave Properties
- Superposition of Waves
- The Expanding Universe

Term 2

Pupils study Module 5 of the Edexcel Physics course. Topics include:

- Gravitational Fields
- Electric Fields and Capacitors
- Electromagnetism

They also prepare for the Practical Examination.

Term 3

Pupils prepare for the Synoptic Paper by revising all the work covered during the two year course.

YEAR 12 PHYSICS

Term 1

Pupils are preparing for OCR AS Physics B. They begin by studying Physics in Action. Topics include:

- Imaging
- Sensing
- Signalling
- Testing Materials
- Looking inside Materials

They also complete a piece of individual coursework on a particular designer material

Term 2

Pupils are preparing for OCR AS Physics B. They study the module Physical Processes. Topics include:

- Wave behaviour
- Quantum behaviour
- Mapping space and time
- Computing the next move

They also complete a piece of practical coursework – Quality of Measurement.

Term 3

Pupils revise for the final AS examination.

YEAR 11 PHYSICS

SET 1

Term 1

Pupils complete their study of the second module of AQA GCSE Physics. The topics covered are:

- Static Electricity
- Current Electricity
- Electricity in the Home
- Nuclear Power

Students will prepare for and complete a second Investigative Skills Assessment (ISA) – this is part of the coursework which contributes 25% to their GCSE grade.

There is a short revision period in preparation for the GCSE examination in January.

Term 2

Pupils study the third module of AQA GCSE Physics. The topics covered are:

- Turning forces
- Light and Sound
- Electromagnetism
- Stars and Space

Term 3

Pupils revise for the final GCSE examination in June.

SETS 2 - 6

Term 1

Pupils begin their study of the Physics strand of AQA Additional Science. The topics covered are:

- Motion,
- Speeding up and Slowing Down,
- Work, Energy and Momentum
- Static Electricity

There is a short revision period to prepare for the Mock examinations in January.

Term 2

Pupils complete their study of the Physics strand of AQA Additional Science. The topics covered are:

- Current Electricity
- Electricity in the Home
- Nuclear Power

Students will prepare for and complete their Investigative Skills Assessment (ISA) – this coursework contributes 25% to their GCSE grade.

Term 3

Pupils revise for the final GCSE examination in June.

YEAR 10 PHYSICS

SET 1

Term 1

Pupils study the AQA Physics GCSE Module P1a – Energy and Energy Resources. They begin by considering methods of heat transfer and energy usage in the home. The topic then extends to how electricity is used in the 21st century with particular reference to the production, supply and distribution of electricity in the UK. Alternative energy sources are included; pupils consider how *all* energy supply and its use impinges on the environment. After the module examination in November, pupils begin work on GCSE Module P1b – Radiation and the Universe. They study the full range of waves that comprise the electromagnetic spectrum and their associated properties.

Term 2

Pupils continue their study of AQA Physics GCSE Module P1b – Radiation and the Universe. The pupils study radioactivity; how it is used commercially, medically and industrially. They also look at risks from radioactive materials and the legacy from decisions about the use of nuclear power. The last topic is on the Origins of the Universe, the ‘Big Bang’ and knowledge gained from the study of space. They will sit the GCSE 1a module examination in March.

Term 3

Students will prepare for and complete an Investigative Skills Assessment (ISA) – this is part of the coursework which contributes 25% to the GCSE Physics grade. They begin their study of GCSE Physics Module 2. The topics covered are:

- Motion,
- Speeding up and Slowing Down,
- Work, Energy and Momentum

SETS 2-6

Term 1

Pupils study the AQA Core GCSE Module P1a – Energy and Energy Resources. They begin by considering methods of heat transfer and energy usage in the home. The topic then extends to how electricity is used in the 21st century with particular reference to the production, supply and distribution of electricity in the UK. Alternative energy sources are included; pupils consider how *all* energy supply and its use impinges on the environment.

Term 2

Pupils cover the AQA Core GCSE Module P1b – Radiation and the Universe. Pupils study the full range of waves that comprise the electromagnetic spectrum and their associated properties. The pupils then progress to radioactivity; how it is used commercially, medically and industrially. Students will prepare for and complete their Investigative Skills Assessment (ISA) – this coursework contributes 25% to their GCSE grade.

Term 3

The third term completes the study of radioactivity by looking at the risks from radioactive materials and the legacy from decisions about the use of nuclear power.

The last topic is on the origins of the Universe, the 'Big Bang' and knowledge gained from the study of space. The final weeks will be spent preparing and revising for the exams.

YEAR 9 PHYSICS

Term 1.

During the Autumn term Year 9 pupils study two topics and are examined after each unit. Gravity and Space covers the history and development of space travel as well as looking at the physics behind space flight and gives pupils the opportunity to carry out a GCSE style investigation into the flight of rockets. The second unit, Pressure and Moments, looks at some aspects of Physics that we use everyday, from levers to hydraulic brakes.

Term 2.

Year 9 start their study of AQA GCSE Core Science during the spring term, initially looking at energy and energy resources. A wide range of issues are covered: the transfer of thermal energy, efficiency of machines, electrical power and the various methods of generating power.

Term 3

Year 9 continue to study for their first Physics GCSE module 1A and look at the various environmental factors affecting the generation of power in the world. Investigative skills assessments are started, with pupils assessed on their practical skills in the laboratory and their ability to interpret data. The first modular GCSE exam is taken in June.