

KS4 Curriculum Overview (GCSE PHYSICS)

YEAR 11

Year 2 GCSE/BTEC Option Subjects

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Waves, electromagnetism and space: P12 Wave properties (continued) P13 Electromagnetic waves P14 Light P15 Electromagnetism	P12 Practical techniques to investigate the speed of waves in a string and in water. P13 Recall and use the wave speed equation. Evaluate the uses and dangers of Electromagnetic radiation. Estimate radiation dose. P14 Practical skills: Investigating lenses. Construct and interpret ray diagrams. Magnification calculations. P15 Flemings left hand rule to make connections between directions of field, movement and current. Corkscrew rule to make predictions about the direction of a magnetic field round a current carrying wire. Plotting field lines using a plotting compass. Math Link – prefixes, standard form. Art Link – colour.	Career links Sound mixer, audio engineer, acoustic engineer. Photographer, optician, ophthalmologist, forensic scientist, medical physicist, doctor, radiographer, motoring engineer, airport security, structural engineer, scrap metal merchant. British Values Individual Liberty: Opportunities for students to work independently and make choices in a safe environment when carrying out investigations. Rule of Law: Regulation of ionizing radiation e.g., gamma ray therapy and X-rays.

	Photography Link – lenses, the camera. Biology Link – the eye, image formation.	
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Waves, electromagnetism and space: P15 Electromagnetism (continued)	P15 refer to Term 1 above.	
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Waves, electromagnetism and space: P16 Space Forces in action: P11 Force and pressure	P16 Evaluate the evidence supporting the Big Bang. P11 How to use the pressure equation. Explain how to use a U tube to find out the density of sea water. Practical skills: Investigating upthrust and flotation.	Career links Astronomer, astronaut, Sea Captain, boat pilot, aerospace engineer, automotive industry. British values Mutual respect and Tolerance: Opportunity to discuss the evidence for the beginning of the Universe and conflicts with religious beliefs. Students learn about the continual evolution of scientific ideas which occurs through the acceptance that different people have different ideas about a concept, e.g., the Big Bang.
TERM 4 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Revision programme: Paper 1 and Paper 2	N/A	N/A
TERM 5 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
GCSE Course completed: bespoke revision timetable	N/A	N/A
TERM 6 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
GCSE Course completed: bespoke revision timetable.	N/A	N/A