

Overview

All three separate sciences taken together at Key Stage 4 represent a balanced science course. You cannot choose Physics and Single Award Science.

There are six main areas of study in this course:

- Forces
- Radioactivity
- Electricity and Magnetism
- Energy
- Waves, Sound and Light
- Space Physics

In Physics you will look at how things work, from the very largest stars and black holes to incredibly small particles that cannot be seen even with the most powerful microscopes.

Unit	Content	Assessment
P1: Forces, Energy and Radioactivity	The first part of this module builds on the Physics of forces and motion you studied at the start of Year 10 with practical work on Newton's laws. The mathematical content continues into the energy topic, with calculations on energy use and efficiency. This develops on previous work you did on renewable energy resources in Key Stage 3. Radioactivity, the final unit, contains little mathematical content with the focus instead on explanations. From medical uses to the cores of stars, radioactivity, its uses and dangers are examined in this topic that is unrelated to your previous work in Science in KHS.	37.5% of Final Grade
P2: Waves, Electricity and Earth in Space	The waves, sound and light unit is a continuation of work you did last year. In Physics we often study how things work and then explore applications and uses. This is true for lenses – their properties are studied and these are used to understand their applications in correcting eye defects and also in magnifying lenses, projectors and cameras. The unit on electricity makes advances on the Year 10 topic with your practical skills and logical thinking being developed. The abstract world of electromagnetism is studied in motors and generators before the focus moves on to the physics of the largest objects in the universe: from our Sun to planets other stars that are impossible to reach in our lifetimes.	37.5% of Final Grade



Unit	Content	Assessment
P3: Practical Skills	Pupils complete two practicals in class and a one hour examination. The understanding of accuracy, reliability and a fair test are all checked.	25% of Final Grade

Careers

Aeronautical Engineer, Architect, Astronomer, Astrophysicist, Automobile Engineer, Surveyor, Civil Engineer, Cyberneticist, Electrical Engineer, Flight Engineer, Forensic Scientist, Laboratory Technician, Land Surveyor, Materials Scientist/Technologist, Medicine, Meteorologist, Mining Engineer, Motor Mechanic, Nuclear Scientist, Radiographer, Research Physicist, Structural Engineer, Physics Teacher, Marine Engineer, Optometrist, Patent Agent, Orthotist/Prosthetist, Medical Technical Officer, Veterinary Medicine