

Physics (0625)

An extract from Syllabus Cambridge IGCSE

<https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-igcse-physics-0625/>

Aims

- ✓ provide an enjoyable and worthwhile educational experience for all learners, whether or not they go on to study science beyond this level
- ✓ enable learners to acquire sufficient knowledge and understanding to: become confident citizens in a technological world and develop an informed interest in scientific matters; be suitably prepared for studies beyond Cambridge IGCSE
- ✓ allow learners to recognise that science is evidence-based and understand the usefulness, and the limitations, of scientific method
- ✓ develop skills that are relevant to the study and practice of physics; are useful in everyday life; encourage a systematic approach to problem-solving; encourage efficient and safe practice; encourage effective communication through the language of science
- ✓ develop attitudes relevant to physics such as: concern for accuracy and precision, objectivity, integrity, enquiry, initiative, inventiveness
- ✓ enable learners to appreciate that science is subject to social, economic, technological, ethical and cultural influences and limitations; the applications of science may be both beneficial and detrimental to the individual, the community and the environment.

Content overview

Candidates study the following topics:

- 1 General physics
- 2 Thermal physics
- 3 Properties of waves, including light and sound
- 4 Electricity and magnetism
- 5 Atomic physics

Subject content:

Length and time; Motion; Mass and weight; Density; Forces; Momentum; Energy, work and power; Pressure; Simple kinetic molecular model of matter; Thermal properties and temperature; Thermal processes; General wave properties; Light; Electromagnetic spectrum; Sound; Simple phenomena of magnetism; Electrical quantities; Electric circuits; Digital electronics; Dangers of electricity; Electromagnetic effects; The nuclear atom; Radioactivity