Cambridge Advanced National in Applied Science

Exam Board: OCR
Entry requirements: GCSE Grades: 4 in Science, 4 in Maths and 4 in English

Intent

- To provide a **practical, career-focussed science qualification** equivalent to A Levels.
- Designed for students who want to **develop scientific knowledge and skills** relevant to real-world applications in health, engineering, and environmental sectors.
- Offers a **blend of theory and hands-on learning**, preparing students for both **higher education** and **employment.**
- Students engage in **project-based assessments** and **practical investigations**, building confidence in scientific methods.
- Encourages **independent learning, critical thinking,** and **teamwork.**
- Supports progression to **science-related degrees,** apprenticeships, or technical roles.

Implementation

Students will study 5 units over the course of the two years. It comprises of 40% examined units and 60% non examined units (NEA).

- 2 externally assessed units. These are exam based units. The exams are 90 minutes long.
- 3 NEA units (coursework). These are delivered through the lessons and students complete coursework that is internally assessed before being externally moderated.

The grading is based on Pass, Merit and Distinction.

The Units

F180: Fundamentals of Science
Covers key topics that are important in Biology, Chemistry and Physics, such as bioenergetics, biodiversity, atomic structure and bonding, rates of reaction, electricity and medical physics. There is a focus on required practicals that will be assessed through the exam paper.

F181: Science in Society
Examined unit. Learn about science skills and the roles they perform in the international scientific community. Examine different kinds of scientific data and use this to draw conclusions.

F182: Investigating Science
This is an NEA unit. Through this unit you will learn about the role of a research scientist in industry and learn how to carry out and risk assess your own investigation.

F184: Environmental Studies
NEA. Use primary and secondary data to study ecosystems. Carry out in situ field work investigations to study an area using different sampling techniques.

F185: Forensic Biology
NEA. Learn how to perform investigation of the macro and ultrastructure of cells and tissues from freshly prepared material. Including investigation and evidence collection.

Exams are sat in January and June. Students are able to retake exams 3 times to improve their grades. They will take the highest grade they achieve. The coursework can be improved and re-moderated to achieve a higher mark.

Impact

- Equips learners with **transferable skills** valued by universities and employers.
- Increases **engagement and motivation** through applied learning.
- Contributes to **closing the skills gap** in STEM industries by producing work-ready science students.

Onward Progression

Progression to Biomedical Science degree, Health and Nursing degrees, Life Science degree, Forensic Science degree and many others in the sector.

Further information contact

Mr M. McKee - Director of Studies: Science
mmckee@shoreham-academy.org