



Applied Science - AAQ Extended Certificate

Examination Board

- Edexcel

Alternative Academic Qualification (AAQ)

The AAQ is a new type of qualification which is being offered for the first time in September 2025 and is the equivalent of one A Level. It is a vocational course designed to be taken alongside two other A level qualifications. It replaces the BTEC Level 3 National Extended Certificate in Applied Science and is made up of five units: units 1, 2 and 3 cover the foundations in Biology, Chemistry and Physics and are studied in Year 12; unit 4 teaches a range of important laboratory skills and techniques and the use of common laboratory equipment essential for work or further study in the sciences, and unit 5 is an investigative project on a topic of the students' choosing; these units are undertaken in Year 13.

Unit 1 Principles and Applications of Biology

The topic areas covered in this unit include the structure and function of cells and tissues, biological molecules, enzymes and their role in organisms.

Assessment will be a one hour exam set and marked by Pearson.

Unit 2 Principles and Applications of Chemistry

The topic areas covered in this unit include the structure of the Periodic Table and its implications on physical and chemical properties of substances, through analysis of different bonding methods.

Assessment will be a one hour exam set and marked by Pearson.

Unit 3 Principles and Applications of Physics

The topic areas covered in this unit include waves and their applications; force principles and their application in transportation; and construction of electrical circuits.

Assessment will be a one hour exam set and marked by Pearson.

Unit 4 Practical Scientific Procedures and Techniques

This unit introduces you to standard laboratory equipment and techniques, including titration, colorimetry, chromatography, calibration of equipment, electrical circuits and laboratory safety.

Assessment will consist of completing an assignment brief where you will carry out tasks, creating evidence to support a work-related scenario. This will be marked by your teacher.

Unit 5 Science Investigative Skills

In this unit you will research, plan, carry out and evaluate your own Scientific investigation.

Assessment will consist of completing an assignment brief where you will carry out and write up a Scientific Investigation. This will be marked by your teacher.

The units for the qualification will each be awarded a pass, merit, distinction or fail. A student's unit grades are then aggregated to give an overall qualification grade of pass, merit, distinction or distinction star.

**Skills required**

- Ability for independent study and reading relevant science in the news
- Ability to memorise key words, patterns and concepts within Biology, Chemistry and Physics
- Ability to follow technical instructions to carry out experiments and to write up and evaluate them
- Organisation
- Passes in GCSE Biology, Chemistry, Physics / GCSE Combined Science and GCSE in Maths

Useful websites / reading materials

- Text books specific to this course are under production and students will be advised at the start of the course which one is the most suitable.
- New Scientist magazine (available in the school library)
- Follow New Scientist, Guardian Science, Naked Scientists, Dr Alice Roberts etc. on twitter.
- A Short History of Nearly Everything by Bill Bryson ISBN-10: 0552997048
- <http://www.chemguide.co.uk/>
- <http://www.rsc.org>
- <http://www.nuffieldfoundation.org/practical-physics>
- <http://www.iop.org/>

Recommended study

- 2 - 3 hours homework / study per week, during which time specific work will be set by staff.
- Reading over and writing up notes in neat
- Completing set homework tasks and assignments
- Small group revision and study sessions
- Answering and self-assessing past paper questions
- Preparing for practicals such as writing risk assessments and methods.
- Watching science programmes on TV / online
- Reading ahead for the next lesson
- Reading relevant science stories in the news eg. conservation, health issues etc.
- Writing up the assignment briefs