AAQ BTEC NATIONAL IN APPLIED SCIENCE (EXTENDED CERTIFICATE)

Explore the fascinating world of biology, chemistry and physics through practical investigation and real-world applications, developing the scientific knowledge and skills needed for university and careers in science.

Level 3 · A Level (or equivalent) · Truro College

TOP COURSE HIGHLIGHTS

COURSEWORK AND EXAMS | EXPERT TEACHERS | PRACTICAL LABORATORY WORK | SCIENTIFIC INVESTIGATION | CONTEMPORARY ISSUES

EXAMINED CORE SCIENCE

Study biology (cells, tissues, biological molecules), chemistry (atomic structure, bonding, organic chemistry) and physics (waves, motion, electricity) through three externally examined units that build strong foundational knowledge.

HANDS-ON LABORATORY EXPERIENCE

Develop practical skills through titration, colorimetry, chromatography, microscopy and circuit construction, learning professional scientific techniques used in research and industry while maintaining safety standards.

INDEPENDENT INVESTIGATION

Complete your own scientific research project from literature review through to evaluation, developing critical thinking, data analysis and scientific reporting skills essential for university-level study. AAQ Applied Science is ideal for science students who want to progress to higher education, but prefer a focus on coursework. It is equivalent to one A Level and combines coursework with three exams. You'll study fundamental principles across biology, chemistry and physics, developing theoretical understanding and hands-on laboratory skills. The course emphasises practical scientific procedures, investigation skills and contemporary scientific issues, preparing you thoroughly for science-related degree courses. At Truro and Penwith College, you'll benefit from well-equipped laboratories, experienced staff and a supportive learning environment that encourages scientific curiosity and independent research. You will be taught by expert staff specialising in each field (biology, chemistry, physics and applied science respectively).

WHAT WILL I LEARN?

Units with exams: **Principles and Applications of Biology** – Explore cell structure and function, specialised cells and tissues, biological molecules including proteins and DNA, cell transport mechanisms, and enzyme activity. Understand homeostasis and how body systems maintain balance. **Principles and Applications of Chemistry** – Study atomic and electronic structure, chemical bonding and molecular shapes, periodicity focusing on Period 3 elements, physical chemistry including rates of reaction and energetics, and organic chemistry including hydrocarbons and polymers. **Principles and Applications of Physics** – Investigate waves and optical fibres, electromagnetic spectrum applications in communication, forces and Newton's Laws of Motion in transportation, electrical circuits and energy transfer, plus renewable energy sources. Units with coursework: **Practical Scientific Procedures and Techniques** – Master laboratory equipment calibration, solution preparation and titration, chromatography and melting point determination, colorimetry

FOR THE LATEST COURSE INFORMATION
Scan for assessment arrangements, learner support, confirmed start dates and how to apply.

techniques, plant growth investigation, cooling curves, electrical circuit analysis, and solar panel efficiency. Optional units: **Science Investigation Skills** – Plan and conduct your own investigative project including literature review, hypothesis formulation, experimental design, data collection and analysis, statistical testing, and scientific report writing. **Contemporary Issues in Science** – Examine current scientific issues such as climate change, food security, clean energy and medical treatments, exploring their social, economic, ethical and environmental implications. Analyse how different organisations influence science and evaluate scientific reporting in various media.

WHERE WILL IT TAKE ME?

Careers: Scientific fields, including Laboratory Technician, Healthcare Assistant, Research Assistant. **Progression:** Applied science fields: Biomedical Science, Forensic Science, and Sport Science.

ENTRY REQUIREMENTS

Five GCSEs at Grade 4 or above, including:

- Grade 4-4 in Combined Science or 4 in each separate science
- Grade 4 in Maths
- Grade 4 in English Language OR Literature

IMPORTANT

Course information can change. Please use the QR code below for the current assessment arrangements, entry requirements and start dates.

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