BTEC LEVEL 3 AAQ APPLIED SCIENCE
TWO-YEAR PROGRAMME OF STUDY

AAQ | September 2026 – July 2028

Programme structure

The programme is organised so that all three externally assessed units (Units 1, 2 and 3) are taught in Year 12. Year 13 is then dedicated to the internally assessed units (Units 4 and 5), allowing students to consolidate practical scientific techniques and complete a sustained scientific investigation. Practical skills, scientific literacy, mathematical skills and exam preparation should be embedded throughout both years.

Academic year	Units	Main assessment focus	Intended outcome
Year 12 **Sept 2026–Jul 2027**	Unit 1 – Principles and Applications of Biology Unit 2 – Principles and Applications of Chemistry Unit 3 – Principles and Applications of Physics	External examinations for Units 1, 2 and 3. Use the available Pearson examination series and confirm entries/deadlines against the current specification.	Complete teaching and assessment preparation for all three examined units by the end of Year 12.
Year 13 **Sept 2027–Jul 2028**	Unit 4 – Practical Scientific Procedures and Techniques Unit 5 – Science Investigation Skills	Internally assessed Pearson-set assignments, completed in line with the live assignment briefs and permitted assessment conditions.	Complete and internally assess both practical/investigation units, with time for authentication, assessment and any permitted resubmission.

Year 12: externally assessed units (September 2026 – July 2027)

Suggested sequence: teach Biology first, Chemistry second and Physics third, with planned retrieval and cumulative examination practice across all three units. The sequence can be adjusted to match the centre's teaching hours and the confirmed examination timetable.

Month	Unit	Teaching and learning content	Assessment / evidence
September 2026	Unit 1 – Biology	A1 Cells and tissues: cell structure, organisation and the relationship between cells, tissues and organs. Establish baseline knowledge and scientific vocabulary.	Diagnostic assessment; labelled diagrams; short exam questions.
October 2026	Unit 1 – Biology	A2 Specialised cells and A3 biological tissues. Link structure to function and compare examples of specialised cells and tissues.	Retrieval quizzes; application questions; topic test.
November 2026	Unit 1 – Biology	B1 Water, B2 carbohydrates, B3 proteins, B4 nucleic acids and B5 lipids. Focus on structure, properties and biological roles.	Biomolecule comparison tasks; practical/context questions; exam-style practice.
December 2026	Unit 1 – Biology	C1 Cell transport, C2 enzymes and C3 homeostasis. Consolidate links between biological molecules, cell processes and regulation.	End-of-unit assessment; targeted intervention and revision.
January 2027	Unit 1 – Biology	Final consolidation and examination preparation, where entered for the January series. If not entered, use this period for further teaching and assessment.	Timed practice; feedback and examination, if applicable.
February 2027	Unit 2 – Chemistry	Atomic structure and electronic structure; development of understanding of atoms, ions and electron arrangements.	Knowledge checks; electron configuration and ion questions.
March 2027	Unit 2 – Chemistry	Bonding and structure, including intermolecular forces; periodicity, Period 3 trends and oxidation/reduction.	Model-based explanations; equation practice; topic assessment.
April 2027	Unit 2 – Chemistry	Physical chemistry: moles and quantitative chemistry, rates/kinetics, energetics and equilibrium. Apply calculations and interpret data.	Worked calculations; practical/data interpretation; exam-style questions.

May 2027	Unit 2 and Unit 3	Complete organic chemistry and relevant Unit 2 consolidation. Begin/continue Unit 3 waves, optical fibres and electromagnetic communication. Prioritise confirmed exam dates.	Unit 2 timed practice and examination when scheduled; Unit 3 topic checks.
June 2027	Unit 3 – Physics	Motion and Newton's laws; electrical components, circuit relationships and relevant equations. Continue structured revision for any remaining external examinations.	Problem-solving practice; practical demonstrations; timed exam questions.
July 2027	Unit 3 – Physics	Energy usage, energy transfer and change of state. Consolidate the full Unit 3 specification and review performance across Units 1–3.	Unit 3 assessment/revision; transition and gap analysis for Year 13.

Year 13: internally assessed units (September 2027 – July 2028)

Year 13 focuses on applying scientific knowledge through practical procedures and an extended investigation. Unit 4 and Unit 5 may be interleaved where this supports practical skill development, but assessment must follow the current Pearson-set assignment briefs, deadlines and conditions.

Month	Unit	Teaching and learning content	Assessment / evidence
September 2027	Unit 4 – Practical Scientific Procedures and Techniques	Introduce safe and professional laboratory practice. Select, use and maintain equipment; calibration; measurement accuracy; preparation of solutions.	Practical skills baseline; equipment-use observations; safety records.
October 2027	Unit 4	Titration and solution preparation; purity of organic compounds and relevant separation/analysis techniques. Develop accuracy, reliability and recording of results.	Practical records; calculations; evaluation of accuracy and reliability.
November 2027	Unit 4	Colorimetry and investigation of plant growth. Select appropriate apparatus, control variables, collect results and interpret data.	Practical data tables/graphs; method evaluation; assignment preparation.
December 2027	Unit 4	Thermal transfer, electrical circuits and renewable energy investigations. Develop professional practice, personal responsibility and interpersonal skills.	Practical evidence; analysis and evaluation; review of assignment requirements.
January 2028	Unit 4 / Unit 5	Complete Unit 4 assessment activity as scheduled. Introduce Unit 5: literature review, research question and project proposal.	Unit 4 assessment and internal verification; Unit 5 proposal checkpoint.
February 2028	Unit 5 – Science Investigation Skills	Plan the investigation: methods, variables, equipment, sampling/data collection, scheduling, resources, risk assessment and ethical considerations.	Approved investigation plan; risk and ethics documentation; teacher checkpoint.
March 2028	Unit 5	Carry out experimental procedures and collect primary data. Maintain a clear record of methods, observations, measurements and any changes made.	Practical logbook; raw data; teacher observation and progress review.
April 2028	Unit 5	Complete data collection where required; collate, process, analyse and present findings using suitable tables, graphs and calculations.	Processed data; graphs; analysis notes; quality-of-data review.
May 2028	Unit 5	Produce the scientific report: introduction/literature context, aim, method, results, analysis, conclusion and evaluation. Relate findings to the original question.	Draft report checkpoint; feedback in line with assessment rules.
June 2028	Unit 5	Finalise scientific report and evaluate the investigation, including limitations, reliability, validity and improvements. Reflect on development of scientific and practical skills.	Final assignment submission; assessment and internal verification.
July 2028	Units 4 and 5	Complete quality assurance, authentication and any permitted assessment actions. Review student progress and programme effectiveness.	Assessment records; standardisation; course review and progression guidance.

Assessment, monitoring and quality assurance

- Use low-stakes retrieval, regular knowledge checks and exam-style questions throughout Year 12, rather than relying only on end-of-unit revision.
- Schedule formal mock or timed assessments for Units 1, 2 and 3 in advance of the relevant Pearson examination series. Confirm the live assessment windows before finalising the calendar.
- Track performance by topic and skill; use question-level analysis to identify misconceptions and plan targeted reteaching or intervention.

- For Units 4 and 5, maintain clear records of practical activity, student progress, assessment decisions, authentication and internal verification.
- Use the current Pearson specification and live Pearson-set assignment briefs as the definitive sources for content, assessment requirements and permitted conditions.
- Build in contingency time for absence, practical equipment issues, assignment completion, internal verification and any permitted resubmission.

Implementation notes

This is a proposed high-level programme of study based on the supplied Pearson delivery-guide materials. It assumes that Units 1–3 are completed in Year 12 and Units 4–5 in Year 13. The monthly allocation is indicative and should be mapped to the centre's actual teaching hours, term dates, examination entries and the current Pearson assessment calendar. Where the precise order or detail of a topic is not specified in the supplied guide, teachers should use the current specification and centre scheme of work to finalise lesson-level sequencing.