



Pearson Level 3  
Alternative Academic Qualification BTEC National in

L3

# Applied Science (Extended Certificate)

## Transition Guide

*First teaching from September 2025*

Pre-publication draft

Qualification Number: 610/3965/2

**This document is for centres/practitioners moving (transitioning) from Pearson BTEC Level 3 National Extended Certificate in Applied Science to the Pearson Level 3 Alternative Academic Qualification BTEC National in Applied Science (Extended Certificate)**

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## Introducing the BTEC Level 3 Nationals from 2025 (AAQs)

The BTEC Nationals from 2025 qualifications provide students with meaningful and practical learning experiences across a range of career sectors. They equip students with the applied knowledge, skills and personal attributes they need to enter and thrive in higher education and meet the demands of future employment in our fast-changing world.

BTEC Nationals from 2025 (AAQ) are:

- **Engaging and future-focused** - providing opportunities for students to learn in real, relatable and practical ways and designed to ensure that they develop critical knowledge and transferable skills to navigate the future.
- **Accessible and fair for students, balanced with the demands of progression to the next stage of learning** - the use of the N Grade and our holistic approach to designing assessment criteria means that qualifications are attainable for students whilst ensuring that they have a solid foundation of skills and knowledge, and the confidence to progress.
- **Accepted and supported by universities** - developed in collaboration with educators and universities to ensure students have the right combination of skills and knowledge for success in higher education. Over 100 letters of support from universities.
- **Well supported and straightforward to deliver and administer** - simple structure making unit combination more straightforward; uniformed format of external assessment across subjects to streamline administration; Pearson-Set Assignment Briefs (PSABs) removing the need for centres to plan their own assignments, and wide range of training and support.



## What is new?

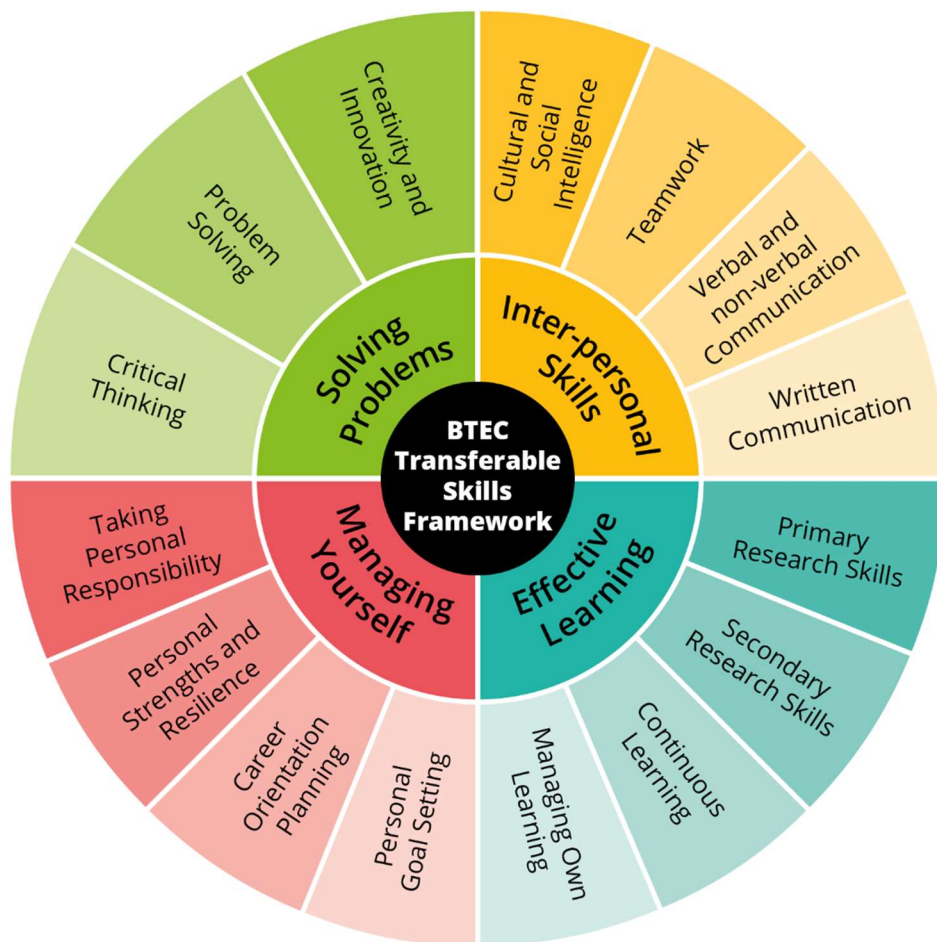
### *Preparing students for their future*

Our new BTEC Level 3 Nationals from 2025 (AAQ) qualifications are designed with a clear focus on the future.

Our aim is to ensure that students are given every opportunity to develop the new knowledge, skills, attitudes and values they need to navigate and thrive through the uncertainty and to shape their world. We have identified three critical skill areas for the future – *transferable skills, digital skills and sustainability* – and have designed our new BTEC qualifications with these areas at the heart. Join us on the journey as we prepare young people to be the best versions of themselves for the future.

[Read our brochure.](#)

Click on the infographic to see further information.



## What makes it easy to transition to the new BTEC National from 2025 (AAQ)?

- Auto approval - if you are currently approved to deliver BTEC Nationals you will receive automatically approval for the new qualification.\*
- Refreshed and updated content and assessments – to ensure your learners continue to progress to popular progression routes into HEIs and beyond.
- Simple, manageable and flexible structure – you can continue to structure your delivery of teaching, learning and assessment when it best suits you and your learners.
- Unchanged Quality Assurance process with Standards Verification at the heart.
- Assessments - Externally Assessed Exams available twice a year, and Internally Assessed units, Assessments set by Pearson, and taken by learners when they are ready.
- Familiar retake and resubmission rules.
- Grading, marking and assessment methodologies unchanged - you can continue to teach and assess with confidence.
- Dedicated support - our Subject Advisors and assessments teams are here to support you every step of the way.

\*You must be approved in the relevant sector to receive automatic approval.



## Support offer

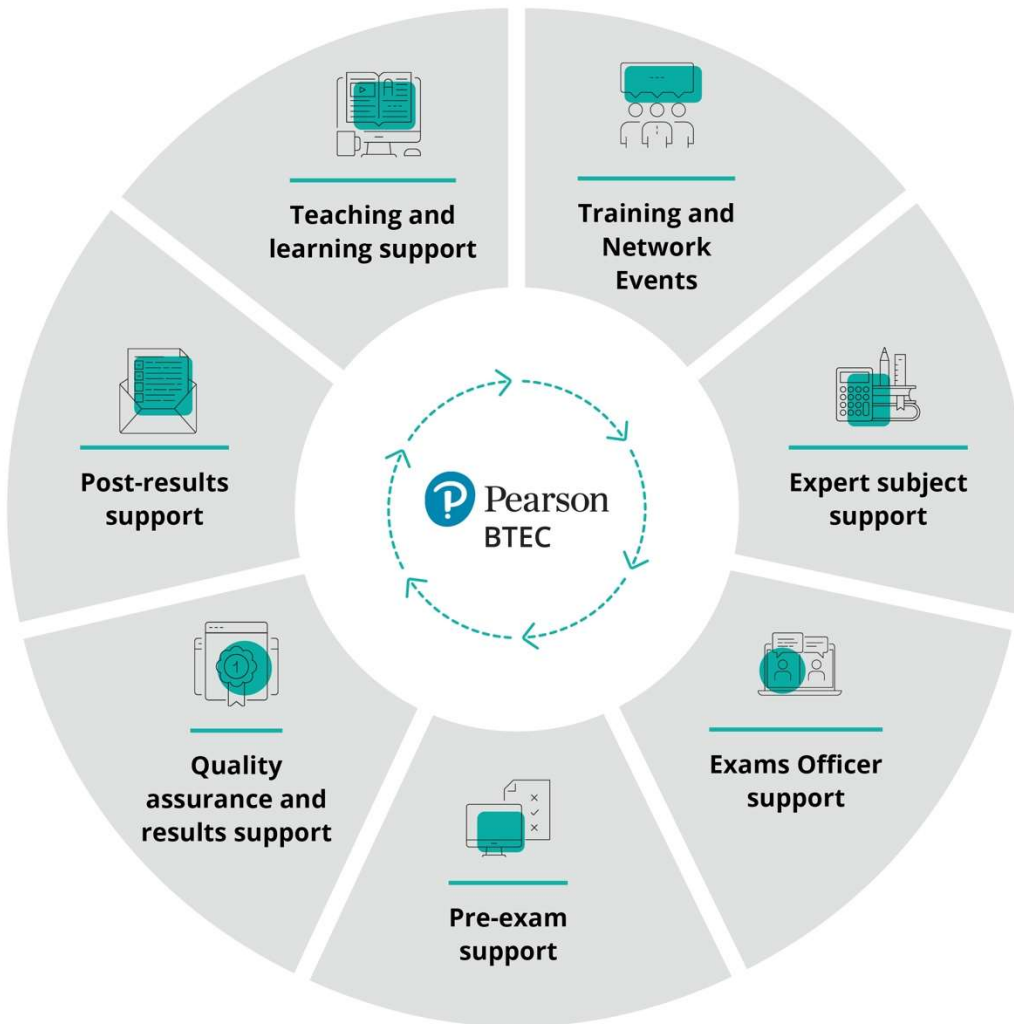
### Complimentary resources and services

- **BTEC National Teacher Guide** – a comprehensive guide to support preparation for delivery of your new BTEC National AAQ.
- **Sample Assessment Materials** - showing how tasks, questions and marking will be applied, which can be used as sample papers/tasks to prepare learners.
- **Exam Wizard** - an online resource containing a bank of past paper questions and support materials to help you create your own mock exams and tests.
- **Results Plus** - a free online results analysis tool for teachers that gives you a detailed breakdown of your students' performance in BTEC external assessments.
- **Training** and standardisation – Getting Started and Preparing to Assess training events and recorded sessions will be available from July 2024 onwards.
- **Network events** – an opportunity to hear about the latest developments from subject experts within Pearson and to share good practice with fellow centres.
- Dedicated **Subject Advisor** available throughout the year so please do get in touch if you would like any support or guidance with:
  - Planning your courses
  - Overview of BTEC quality assurance processes
  - Suggested resources
  - Teaching and Assessment of internal units and components
  - Teaching external units and components
  - The training and support materials we have available.

### Comprehensive Package of Paid resources

- **Student Books** – provide concise yet complete coverage of each sector, with ample student activities and assessment practice, covering all mandatory and optional units. Available in print and e-book formats.
- **Teacher Packs** – provide further supporting teacher resources for each sector. Designed to help students excel, including a front-of-class version of the e-book, activity sheets, fact sheets, videos and interactive knowledge check quizzes. Available as a bundle of units for each sector or as single unit packs.

Click on the infographic to see further information.





## Qualification Structure

### Pearson BTEC Level 3 National Extended Certificate in Applied Science

Unit number	Unit title	GLH	How assessed
<b>Mandatory units - learners complete and achieve all units</b>			
1	Principles and Applications of Science I	90	External
2	Practical Scientific Procedures and Techniques	90	Internal
3	Science Investigation Skills	120	External
<b>Optional units - learners complete one unit</b>			
8	Physiology of Human Body Systems	60	Internal
9	Human Regulation and Reproduction	60	Internal
10	Biological Molecules and Metabolic Pathways	60	Internal
11	Genetics and Genetic Engineering	60	Internal
12	Diseases and Infections	60	Internal
13	Applications of Inorganic Chemistry	60	Internal
14	Applications of Organic Chemistry	60	Internal
15	Electrical Circuits and their Application	60	Internal
16	Astronomy and Space Science	60	Internal

### Pearson Level 3 Alternative Academic Qualification BTEC National in Applied Science (Extended Certificate)

Unit number	Unit title	GLH	How assessed
<b>Mandatory Units, learners complete and achieve all units</b>			
1	Principles and Applications of Biology	60	External
2	Principles and Applications of Chemistry	60	External
3	Principles and Applications of Physics	60	External
4	Practical Scientific Procedures and Techniques	90	Internal
<b>Optional units - learners complete one unit</b>			
5	Scientific Investigation Skills	90	Internal
6	Contemporary Issues in Science	90	Internal

### Summary of key similarities and differences

- **Continued vocational approach to the qualification** ensuring practical application and skill development important for progression into higher education.
- **Established and well-recognised grade profiles** inclusive of Pass, Merit and Distinction.
- **Mandatory content inclusive of foundational principles** in Biology, Chemistry and Physics developed to allow flexibility to progress into a variety of degree programmes.
- **Familiar, but streamlined optional units provide opportunities to develop practical scientific investigation skills** alongside personal project management as well as the potential to develop analysis and interpretation skills of scientific challenges reporting in the media and publications.
- **Identified opportunities to develop sustainability, digital and transferable skills** including critical thinking, problem solving and primary research skills.



## Assessment Structure

Pearson Level 3 Alternative Academic Qualification BTEC National in Applied Science (Extended Certificate)

Mandatory units, learners complete all units				Assessments
1	Principles and Applications of Biology	60 GLH	External	<ul style="list-style-type: none"> <li>An external examination set and marked by Pearson</li> <li>50 marks</li> <li>Assessment Availability: January and June</li> <li>First assessment June 2026.</li> </ul>
2	Principles and Applications of Chemistry	60 GLH	External	<ul style="list-style-type: none"> <li>An external examination set and marked by Pearson</li> <li>50 marks</li> <li>Available January and June</li> <li>First assessment June 2026.</li> </ul>
3	Principles and Applications of Physics	60 GLH	External	<ul style="list-style-type: none"> <li>An external examination set and marked by Pearson.</li> <li>50 marks</li> <li>Available January and June</li> <li>First assessment June 2026.</li> </ul>
4	Practical Scientific Procedures and Techniques	90 GLH	Internal	<ul style="list-style-type: none"> <li>Pearson sets the assignment for the assessment of this unit</li> <li>The PSAB will take approximately 75 hours to complete, and consists of 4 tasks</li> <li>The PSAB will be marked by centres and verified by Pearson</li> <li>You will make assessment decisions for the PSAB using the assessment criteria provided in the specification</li> <li>The PSAB will be valid for the lifetime of this qualification.</li> </ul>

Optional units - learners complete one unit				Assessments
5	Science Investigation Skills	90 GLH	Internal	<ul style="list-style-type: none"> <li>• Pearson sets the assignment for the assessment of this unit</li> <li>• The PSAB will take approximately 65 hours to complete, and consists of 3 tasks</li> <li>• The PSAB will be marked by centres and verified by Pearson</li> <li>• You will make assessment decisions for the PSAB using the assessment criteria provided in the specification</li> <li>• The PSAB will be valid for the lifetime of this qualification.</li> </ul>
6	Contemporary Issues in Science	90 GLH	Internal	<ul style="list-style-type: none"> <li>• Pearson sets the assignment for the assessment of this unit</li> <li>• The PSAB will take approximately 50 hours to complete, and consists of 3 tasks</li> <li>• The PSAB will be marked by centres and verified by Pearson</li> <li>• You will make assessment decisions for the PSAB using the assessment criteria provided in the specification</li> <li>• The PSAB will be valid for the lifetime of this qualification.</li> </ul>

## Pearson Set Assignment Briefs

Internally assessed units are assessed using a Pearson Set Assignment Brief (PSAB), which is set by Pearson, marked by you and subject to external standards verification. The PSAB will be valid for the lifetime of this qualification, with [clear guidance on how to deliver for each new cohort](#).



## Mapping Guide

Mapping of Pearson Level 3 Alternative Academic Qualification BTEC National in Applied Science (Extended Certificate) to the Pearson BTEC Level 3 National Extended Certificate in Applied Science specification.

Title: Pearson Level 3 Alternative Academic Qualification BTEC National in Applied Science (Extended Certificate)	Pearson BTEC Level 3 National Extended Certificate in Applied Science	Comments
<p><b>Unit 1: Principles and Applications of Biology (60 GLH) External</b></p> <p><b>Assessment outcomes:</b>  <b>AO1</b> Demonstrate knowledge and understanding of scientific concepts and theories, terminology, definitions and scientific formulae used in Biology  <b>AO2</b> Apply knowledge and understanding of scientific concepts and theories, procedures, processes and techniques in Biology.  <b>AO3</b> Analyse and interpret scientific information in Biology.</p>	<p><b>Unit 1: Principles and Applications of Science I (90 GLH) External</b></p> <p><b>Assessment outcomes:</b>  <b>AO1</b> Demonstrate knowledge of scientific facts, terms, definitions and scientific formulae  <b>AO2</b> Demonstrate understanding of scientific concepts, procedures, processes and techniques and their application  <b>AO3</b> Analyse, interpret and evaluate scientific information to make judgements and reach conclusions  <b>AO4</b> Make connections, use and integrate different scientific concepts, procedures, processes or techniques.</p>	<ul style="list-style-type: none"> <li>• Content on structure and function of cells and tissues has been retained.</li> <li>• Content on structure and function of biological molecules has been introduced.</li> <li>• Cellular transport and enzyme activity content has been introduced.</li> <li>• Homeostasis content has been introduced.</li> <li>• Chemistry and Physics content has been removed and is covered in units 2 and 3 respectively.</li> </ul>
<p><b>Unit 2 Principles and Applications of Chemistry (60 GLH) External</b></p> <p><b>Assessment outcomes</b>  <b>AO1</b> Demonstrate knowledge and understanding of scientific concepts and theories, terminology, definitions and scientific formulae used in Chemistry.  <b>AO2</b> Apply knowledge and understanding of scientific concepts and theories, procedures, processes and techniques in Chemistry.  <b>AO3</b> Analyse and interpret scientific information in Chemistry.</p>	<p><b>Unit 3 Principles and Applications of Science I (90 GLH) External</b></p> <p><b>Assessment outcomes</b>  <b>AO1</b> Demonstrate knowledge of scientific facts, terms, definitions and scientific formulae  <b>AO2</b> Demonstrate understanding of scientific concepts, procedures, processes and techniques and their application  <b>AO3</b> Analyse, interpret and evaluate scientific information to make judgements and reach conclusions  <b>AO4</b> Make connections, use and integrate different scientific concepts, procedures, processes or techniques</p>	<ul style="list-style-type: none"> <li>• Atomic structure content has been retained.</li> <li>• Content on bonding and structure has been enhanced.</li> <li>• Content on periodicity has been enhanced.</li> <li>• Aspects of physical chemistry have been introduced.</li> <li>• Aspects of organic chemistry have been introduced.</li> <li>• Content associated with biology and physics has been removed to units 1 and 3 respectively.</li> </ul>

<p><b>Unit 3 Principles and Applications of Physics (60 GLH) External</b></p>	<p><b>Unit 1: Principles and Applications of Science I (90 GLH) External</b></p>	
<p><b>AO1</b> Demonstrate knowledge and understanding of scientific concepts and theories, terminology, definitions and scientific formulae used in Physics. <b>AO2</b> Apply knowledge and understanding of scientific concepts and theories, procedures, processes and techniques in Physics. <b>AO3</b> Analyse and interpret scientific information in Physics.</p>	<p><b>AO1</b> Demonstrate knowledge of scientific facts, terms, definitions and scientific formulae <b>AO2</b> Demonstrate understanding of scientific concepts, procedures, processes and techniques and their application <b>AO3</b> Analyse, interpret and evaluate scientific information to make judgements and reach conclusions <b>AO4</b> Make connections, use and integrate different scientific concepts, procedures, processes or techniques</p>	<ul style="list-style-type: none"> <li>• Content on waves and optical fibres has been enhanced.</li> <li>• Content on forces and Newton Laws of Motion has been introduced.</li> <li>• Electrical circuit content has been introduced.</li> <li>• Aspects of energy transfer have been enhanced.</li> <li>• Biology and Chemistry content has been removed to units 1 and 2 respectively.</li> </ul>
<p><b>Unit 4 Practical Scientific Procedures and Techniques (90 GLH) Internal</b></p>	<p><b>Unit 5 Practical Scientific Procedures and Techniques (90 GLH) Internal</b></p>	
<p><b>Learning aims:</b> <b>A</b> Undertake techniques to prepare solutions and determine concentrations and purity. <b>B</b> Undertake biological procedures to investigate concentration and distribution of biological components. <b>C</b> Undertake physical procedures to examine energy transfer <b>D</b> Review personal development of scientific skills for laboratory work.</p>	<p><b>Learning aims:</b> <b>A</b> Undertake titration and colorimetry to determine the concentration of solutions. <b>B</b> Undertake calorimetry to study cooling curves. <b>C</b> Undertake chromatographic techniques to identify components in mixtures <b>D</b> Review personal development of scientific skills for laboratory work</p>	<ul style="list-style-type: none"> <li>• Practical applications and equipment requirements have remained largely the same.</li> <li>• Additional practical applications have been introduced in physics to ensure all sciences have equal representation.</li> <li>• Application of personal development and scientific skills have remained in the unit content.</li> </ul>
<p><b>Unit 5 Science Investigation Skills (90 GLH) Internal</b></p>	<p><b>BTEC National Diploma in Applied Science Unit 6: Investigative Project (90 GLH) Internal</b></p>	
<p><b>Learning aims:</b> <b>A</b> Undertake a literature search and review to produce an investigative project proposal. <b>B</b> Produce a plan for an investigative project based on a proposal. <b>C</b> Safely undertake the project, collecting, analysing and presenting the results. <b>D</b> Present the conclusions from the project using correct scientific principles.</p>	<p><b>Learning aims:</b> <b>A</b> Undertake a literature search and review to produce an investigative project proposal. <b>B</b> Produce a plan for an investigative project based on the proposal. <b>C</b> Safely undertake the project, collecting, analysing and presenting the results. <b>D</b> Review the investigative project using correct scientific principles.</p>	<ul style="list-style-type: none"> <li>• This unit has remained largely consistent with the investigative project approach of unit 6 in the extended diploma qualification.</li> </ul>

<b>Unit 6 Contemporary Issues in Science (90 GLH) Internal</b>	<b>BTEC National Extended Diploma in Applied Science                      Unit 7 Contemporary Issues in Science (120 GLH) External</b>	
<p><b>Learning aims:</b></p> <p><b>A</b> Investigate contemporary scientific issues that impact the global population and environment.</p> <p><b>B</b> Examine the effect different organisations have on contemporary science.</p> <p><b>C</b> Understand how to evaluate and report scientific information.</p>	<p><b>Learning aims:</b></p> <p><b>AO1</b> Demonstrate knowledge and understanding of contemporary scientific issues</p> <p><b>AO2</b> Apply knowledge and understanding of contemporary scientific issues to real-life scientific scenarios</p> <p><b>AO3</b> Be able to make valid judgements based on interpretation, analysis and evaluation of different sources of scientific information</p> <p><b>AO4</b> Be able to apply and synthesise scientific ideas from several sources and adapt to other real-life scenarios</p>	<ul style="list-style-type: none"> <li>Content in this unit has remained largely the same with small updates to the content.</li> </ul>

