



# Applied Science

## (Pearson Edexcel BTEC Level 3)

The BTEC Extended certification in Applied Science is suitable for all students who wish to build upon all three science specialisms studied at GCSE, as the course will broaden your understanding of science and its applications in the workplace.

This course takes a different approach to the traditional 'A' level route and provides the skills that employers are looking for. If you want a career in Medical Science, Forensic Science, Nursing, Pharmaceutical Science or as a science technician in a lab to name a few, then Applied Science is for you.

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### Qualities and qualifications needed

Grade 5 in GCSE Biology, Chemistry and Physics or grade 5,5 in Combined Science. Additionally, a grade 5 or above in Mathematics is desirable to cope with the mathematical demands of this course.

You need to have an interest in Science and enjoy practical work, as well as being organised, self-motivated, independent and have the ability to meet deadlines.

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### How will the course be assessed?

Formal assessment includes:

- Home Learning Assessments
- End of topics tests
- Practical assessment



#### Units 1 and 3

are externally examined.



#### Unit 2

and the option unit are internally assessed.

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## Course content

The course is assessed via examinations (58%) and coursework (42%). Learners will study four units over the duration of the course:

### Unit 1

#### Principles and Applications of Science (externally assessed examination)

This unit covers core concepts in Biology, Chemistry and Physics. Topics include: chemistry of the elements, structure and function of cells and tissues, and the use of waves in communication.

### Unit 2

#### Practical Scientific Procedures and Techniques (internally assessed)

Learners develop their practical skills in core laboratory techniques. Learners will become proficient in carrying out titrations, colorimetry, calorimetry and thin layer chromatography.

### Unit 3

#### Scientific Investigation Skills (externally assessed practical task)

Learners will study plants and the environment, enzymes, the movement of molecules, the energy content of fuels, and electrical circuits and will be assessed via an externally set practical examination.

### Optional Unit

#### (Internally assessed)

This unit will build upon the skills developed throughout the course and learners will apply their knowledge to a new concept in either Biology, Chemistry or Physics.



## Examinations

Modules 1 and 3 are assessed through examinations.



### Module 1

3 x 40 minute written examinations taken over two days, one paper for each of Biology, Chemistry & Physics.



### Module 3

Part A is a practical examination taken over 3 hours at SRPA. The data collected will be taken into the Part B examination, which is a written examination of 1 hour 30 minutes duration.

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## Methods of teaching and learning

The course is designed to develop scientific knowledge and understanding linked to practical roles in the workplace, whilst learning a wide range of skills. Guided learning is accompanied by practical activities and ongoing assessment and feedback. Group work, research, reports, presentation and discussion develops students' problem solving abilities, independence and confidence.

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