

BTEC Level 3 Forensic and Criminal Investigation at

The Polesworth School
ENSURING EXCELLENCE



Why should I choose to study Forensics?

This course is perfect if you have a keen interest in science and criminology. Students must be willing to learn new scientific skills, problem solve, and explore the exciting world of forensic science.

This National Foundation Diploma is equivalent to 1.5 A Levels. The course is weighted towards science but also includes but also includes police investigations, psychology and provides the academic and practical skills for a potential role in the science and forensic industry.



How will I know if I will be good at it?

Forensics is ideal for students who can learn independently, research actively and methodically and be able to give presentations and be an active group member. You'll need to be able to plan and schedule coursework making sure that you meet deadlines set. This could include being able to prioritise what needs to be done and by when. Sound background knowledge in mathematics and science is essential. The first mandatory unit covers similar content to the Year 12 A level Biology, Physics and Chemistry courses. Some students find this area of the course demanding and as it is assessed through external examination and not coursework, a sound grasp of the topics covered in all three science disciplines is needed.

Examinations

There are four mandatory units, two internally assessed through completion of assignments and two externally assessed through examinations. Learners must complete and achieve at Near Pass grade or above in all mandatory external units and achieve a Pass or above in all mandatory internal units. There are also two further optional units.

External assessment through written and practical examination makes up **41%** of the course.

Entry Requirements

Students must achieve at least a Grade 5 in Maths along with a minimum of a 55 in Combined Science or if Triple Science is taken, 2 grade 5's in any combination of Biology, Chemistry or Physics.

Students should be aware that a Level 3 BTEC is a demanding course equivalent to 1.5 A levels and a willingness to work hard is essential. Students will be expected to complete at least 3 hours of independent work per week.

Exam Board

Pearson BTEC Level 3 National Foundation Diploma in Forensic and Criminal Investigation.

Will I need Forensics for my Career?

The requirements of the qualification will mean learners develop the transferable and higher-order skills that are highly regarded by both higher education and employers. For example, carrying out practical laboratory tasks and planning forensic investigations. The qualification carries UCAS points and is recognised by higher education providers as contributing to admission requirements for many relevant courses. When combined with other qualifications in a two-year study programme, such as AS/A Levels or another BTEC Level 3 National Foundation Diploma, learners can progress to higher education. For example, if taken alongside BTEC Level 3 National Foundation Diploma in Health and Social Care, learners can progress to nursing and health care courses. If taken alongside an A Level in Chemistry and A Level in Mathematics, learners can progress to an



environmental or forensic science course. Learners should always check the entry requirements for degree programmes with specific higher education providers.

Contents

Unit 1

Principles and Application of Science 1 -

Written examination set and **externally assessed** by Pearson.

- 3 x 40-minute exams, 30 marks each.

Three, 40-minute papers one for each of Biology, Chemistry and Physics. The paper will include a range of question types, including multiple choice, calculations, short answer and open response.

This unit covers some of the key science concepts in Biology, Chemistry and Physics.

The topic areas covered in this unit include, animal and plant cells, tissues, atomic structure and bonding, chemical and physical properties of substances related to their uses and waves and their application in communication.

Unit 2

Practical Scientific Procedures and Techniques

Assessed through 4 assignments set and **assessed internally**. Learners will be introduced to quantitative laboratory techniques, calibration, chromatography, calorimetry and laboratory safety, which are relevant to the chemical and life science industries.

Learning aims - in this unit you will:

- A Undertake titration and colorimetry to determine the concentration of solutions.
- B Undertake calorimetry to study cooling curves.
- C Undertake chromatographic techniques to identify components in mixtures.
- D Review personal development of scientific skills for laboratory work.

Unit 3	<p>Science Investigation Skills</p> <ul style="list-style-type: none"> • This unit will be assessed through a written task (Part B) worth 60 marks. • In order to complete the written task in Part B, learners will be provided with Part A. Part A will outline the method/materials used to generate results/observations from a practical investigation. • Learners will have 45 minutes to review Part A before they complete Part B. • Part B will be one session lasting one hour and 30 minutes. • Both Part A and B will be under supervised conditions. • Part A and B are taken in a single session timetabled by Pearson.
Unit 4	<p>Forensic Investigation Procedures in Practice</p> <p>Assessed through 3 assignments set and assessed internally. Learners develop techniques in collecting, analysing and reporting chemical, physical and biological evidence during forensic investigations.</p> <p>Learning aims - in this unit you will:</p> <ul style="list-style-type: none"> • A Explore procedures used to preserve, collect and record forensic evidence from a simulated crime scene • B Use analytical techniques to examine forensic evidence collected from a simulated crime scene • C Draw conclusions and report on the results of the analysis of forensic evidence.
Unit 10	<p>Forensic Fire Investigation</p> <p>This unit covers the chemistry of combustion, the behaviour of fire, and the processes and personnel involved in the investigation of a fire scene. 3 internally assessed assignments.</p>
Unit 11	<p>Forensic Traffic Collision Investigation</p> <p>This unit covers the factors that cause road traffic collisions and injury, and how science is used in the road traffic collision investigation process. 4 internally assessed assignments.</p>

