POST 16 SUBJECT OVERVIEW

Post 16 Subject Overview

Name of Subject - Applied Science

Which Examination Specification is Studied for this Course?
Pearson BTEC Level 3 National Extended Certificate in Applied Science (Edexcel)

Why should I study this course?
Applied science is just that with over half the course is concerned with practical techniques and practical investigations. You will learn actual skills and theory that can be applied in a multitude of academic fields and industries.
The course covers a broad range of the fundamentals of scientific knowledge and method, across aspects of biology, chemistry and physics. The biology content is suited to health care professions covering mainly human physiology.
Assessment is through accessible and concise examinations and guided course work, and although there are challenging aspects good outcomes can be achieved through hard work.

Who is suitable to study this course?
Anyone who enjoys science but does not fancy the challenge of a pure science A level or struggles with traditional assessment through exams alone. Anyone who requires a science qualification for their chosen course or career or who intends to work in a practical industry.
Anyone considering a career in healthcare, as a medical technician or in sports science.

What GCSE Qualifications Support the Study of this Course?
Sciences, Maths and English

What are the Qualification Requirements for this Course?
Ideally a minimum of a grade 5 in the above subjects

How is the Course Delivered?

The course is usually delivered over 4 or 5 teaching hours per week. In year 12 you will have a specialist teacher in each of the sciences to deliver the taught content for examination.

One of these teachers will also oversee the practical aspects of the course and the production of course work. In year 13 theory and practical work is usually shared between 2 teachers.

Students are expected to produce their own notes where necessary to support learning, maintain a Laboratory book to record methods, observations and results. Periodically laboratory reports will be produced to make up their coursework which are assessed internally but will contribute to actual grades.

The course is delivered in 4 units

- Unit 1 Principles and key concepts of science, aspects of biology, chemistry and physics via taught lessons and examined externally.
- Unit 2 Practical and Scientific techniques, a range of common practical techniques covering the 3 aspects of science via theory, practical work and laboratory reports assessed internally.
- Unit 3 Scientific Investigation Skills, a range of common scientific investigations covering the 3 aspects of science via theory, practical work and examined externally
- Unit 4 Physiology of Human Body Systems, a study of major organ systems, their function, diseases and treatments via taught theory, independent research and reports assessed internally.

Below is a breakdown of the usual timelines

Subject Overview		
Half Term	**Year 12**	**Year 13**
Autumn 1	Principles and key concepts of science Practical and Scientific techniques, Volumetric analysis	Scientific Investigation Skills Physiology of Human Body Systems Musculoskeletal system
Autumn 2	Principles and key concepts of science	Scientific Investigation Skills

	Practical and Scientific techniques, Calorimetry	Physiology of Human Body Systems Lymphatic and Digestive systems
Spring 1	Principles and key concepts of science Practical and Scientific techniques, Chromatography	**External exam:** Scientific Investigation Skills Physiology of Human Body Systems Lymphatic and Digestive systems
Spring 2	Principles and key concepts of science Practical and Scientific techniques, Evaluation	Physiology of Human Body Systems Lymphatic and Digestive systems
Summer 1	Principles and key concepts of science Practical and Scientific techniques, Evaluation	Physiology of Human Body Systems Lymphatic and Digestive systems
Summer 2	**External exam:** Principles and key concepts Scientific Investigation Skills	

How is the Course Assessed?

Unit 1 50% of year 12, 25% of course
Externally examined in May/June at the end of year 12
Three 40 minute exams (biology, chemistry and physics)

Unit 2 50% of year 12, 25% of course
Four assignments (three lab reports and an evaluation) assigned and internally assessed periodically across year 12

Unit 3 60% of year 13, 30% of course
Externally examined in January of year 13

Controlled practical investigation period (data collection) 3 hours
90 minute exam (analysis and conclusion of the investigation, investigation planning and evaluation of methods and results)

Unit 4 40% of year 13, 20% of course
Three assignments (learning and research reports) assigned and internally assessed periodically across year 13

Internal assessments for praising stars will include routine synoptic tests on examined content and casual and formal assessment of coursework.

What is our Recommended Subject Reading list to Support your Study?

Revision of GCSE content specifically

Biology
B1 Cell biology
B2 Organisation

Chemistry
C1 Atomic structure and the periodic table
C2 Bonding and structure
C3 Quantitative chemistry

Physics
P2 Electricity
P3 Particle model of matter
P6 Waves

Other useful research
Principles and methods used in chromatography.