

Curriculum Overview

Subject: BTEC Applied Science

Year Group: 13



Advancement in science and technology has produced great benefits for society. This advancement depends on research and investigative approaches in science and technology. In research, development, analytical and industrial laboratories, laboratory technicians and scientists are employed to safely carry out practical investigations, or follow prescribed laboratory procedures. They repeat measurements to obtain consistent, reliable results. They use investigative skills, including planning, recording and interpreting data, analysing and evaluating findings in order to test a hypothesis to inform further research and development.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS Unit 3 – Investigative skills In this unit, students develop the essential skills underpinning practical scientific investigations. These skills will be delivered through subject themes ranging from enzymes and diffusion to electrical circuits. The subject themes provide different contexts for the development of the investigative skills. Unit 5 – principles and Applications of Science II This unit includes: properties, uses and production of some inorganic compounds; structures, reactions and properties of commercially important organic compounds; enthalpy changes; the cardiovascular system; ventilation and gas exchange in the lungs; urinary system structure and function; cell transport mechanisms; thermal physics; physical properties of materials; and fluids in motion.	KNOWLEDGE/SKILLS Unit 6 – Investigative project In this unit, students carry out an investigative project that they have chosen in collaboration with the teacher. They choose one topic area of interest and this will form the basis of your investigative project. They carry out a scientific literature search and review, considering the project's aims and objectives, then produce a realistic plan and carry out the project safely using a range of scientific investigation skills. Unit 8 – Physiology of human body systems The human body is a complex mix of organs and organ systems. Knowledge of how they function to maintain human life is an essential part of the study of human physiology. In this unit, students will focus on three body systems: musculoskeletal, lymphatic and digestive. Each one is examined as a functioning unit, identifying their structure and function. By exploring the anatomy of these systems, through experimentation and use of simulations, you will develop your knowledge and understanding of their role in the human body.	KNOWLEDGE/SKILLS This term sees the completion of Unit 8 and 6 Students who have opted to resit the externally examined units are then prepared for these resits following a bespoke revision programme.

	Students will also give attention to understanding the implications of what happens when the systems fail to work properly and the available treatments.	
KEY ASSESSMENTS Half term 1: Topic tests Unit 3 (Enzymes, Circuits) Unit 5 (Chemistry, Biology, Physics) Half term 2: Internal PPE exams Unit 3 Unit 5	KEY ASSESSMENTS Half term 1: Externally assessment units Jan; Unit 3 Unit 5 Half term 2: Internally assessed assignments Unit 6 (6A, 6B) Unit 8 (8B, 8C)	KEY ASSESSMENTS Half term 1: Internally assessed assignments Unit 6 (6C, 6D) Unit 8 (8A) Half term 2: Practice papers for any resit opportunities
Extended reading suggestions and external resources: Exam board – details of specification https://qualifications.pearson.com/en/qualifications/btec-nationals/applied-science-2016.html You tube channel 'BTEC applied science help' https://www.youtube.com/@btecappliedsciencehelp		