

Subject:	BTEC Applied Science Intent:	Our Exam Board is: Edexcel
BTEC Applied Science	BTEC applied science is a general qualification for post 16 students who wish to continue their education through applied learning and progress to higher education and ultimately to employment. The UK is currently regarded as a world leader in sectors ranging from Renewable energy and space through to pharmaceutical and bioscience. This course is designed to offer students the opportunity to gain the knowledge, understanding and skills required to become occupationally ready and to take up employment in the applied science sector.	

The Big Questions...

Year 12	Year 13
<p>Unit 1 - Principles and applications of Science (Sept-Dec): How will different chemicals react in different environments? How do we manufacture different chemicals in a range of industries such as farming, perfume and construction? How do cells work? And what causes disease? How can we use this information to help us treat different diseases? How do mobile phones and other modern communication systems work? How do we use some of these advances to help doctors diagnose different diseases?</p> <p>Unit 2 - Practical scientific procedures and techniques (Jan-June): How do we use standard laboratory techniques such as calorimetry, colourimetry and chromatography to inform research and collect data? What can we do with this data that we have collected and how is it used in industry? How do these techniques link to more complex procedures undertaken at higher education course such as Biochemistry and forensic science?</p>	<p>Unit 3 - Science investigation skills (Sept- March):</p> <ul style="list-style-type: none"> - What role do laboratory technicians and scientists play in developing new technology in our lives? - What procedures and methods do research scientists follow to help them understand the world around us and advance technology - What inferences and conclusions can be drawn from real data that allow us to further our understanding of the world around us? <p>Unit 4 - Physiology of human body systems (Sept-March):</p> <ul style="list-style-type: none"> - How do the musculoskeletal, lymphatic and digestive systems work in our body? - What happens to our body when these systems fail? - How can doctors, sports scientist or care professionals manage or treat these ailments to support their patients and improve their life?

What skills will I develop?

- Science and technology are at the forefront of modern life and by furthering our understanding of the world around us we can work to improve many aspects of our
 - cognitive and problem solving skills: use of critical thinking, approach non-routine problems applying expert and creative solutions, use of systems and technology
 - Interpersonal skills: communicating, working collaboratively, negotiating and influencing
 - Interpersonal skills: Self-management, adaptability and resilience, self-monitoring and development

How will I be assessed?

Examination: Units 1 and 3 are assessed via external written examination that is completed at the end of year 13. This accounts for 60% of the course

Coursework: Units 2 and 4 are assessed via coursework. Unit 2 involves completing an assignments brief where you will undertake a range of different scientific procedures and produce and report to establish your findings. Unit 4 involves the production of a written report, a presentation and a lab book of evidence that models different aspects of human physiology

What great resources can I use?

- <https://qualifications.pearson.com/en/qualifications/btec-nationals/applied-science-2016.html> has further information about the course
- <https://senecalearning.com/en-GB/> contains lots of excellent revision resources and quizzes to aid in your study of the course

Three ways that parents/carers can help...

1. <https://www.bbc.co.uk/iplayer/categories/science-and-nature/featured> is full of brilliant high quality science programmes that can spark your imagination. Check it out!
2. <https://www.bbc.co.uk/sounds/category/factual-scienceandnature-scienceandtechnology%3Fsort=popular> Radio programmes and podcasts are also useful to further your understanding of our scientific world around us.

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3. Look through science YouTube channels such as: VSauce, ASAPscience, smater everyday, Kurzgesagt, scishow, veritasium, minute physics, periodic videos for lots of fantastic content.