

BTEC Level 3 Applied Science – Developing key skills

Here you will find some suggested activities you can complete before the course if you want to further your knowledge even more before you start in September.

What you will study	Suggested resources
<p>Unit 1 – Principles and Applications of Science I</p> <p>Section A - Chemistry Structure and bonding in applications of science Production and uses of substances in relation to properties</p> <p>Section B - Biology Cell structure and function Cell specialisation Tissue structure and function</p> <p>Section C – Physics Working with waves Waves in communication Use of electromagnetic waves in communication</p>	<p>Use the BBC bitesize revision pages or GCSE Science lessons video clips on Youtube for the GCSE topics outlined below that you may struggle with. Make mind maps of the key points of each video clip.</p> <ul style="list-style-type: none"> - Cell Biology - Microscopy - Specialised cells - Electronic structure - Ionic, covalent and metallic bonding - Mole calculations - Balancing chemical formulae - The periodic table - Electronegativity - Redox reactions
<p>Unit 2 – Practical scientific procedures and techniques</p> <p>Learning Aim A – Undertake titration and colorimetry to determine the concentration of solutions</p> <p>Learning Aim B – Undertake calorimetry to study cooling curves</p> <p>Learning Aim C – Undertake chromatographic techniques to identify components in mixtures</p> <p>Learning Aim D – Review personal development of skills for laboratory work</p>	<p>Use http://www.chemguide.co.uk/ 'Helping you to understand chemistry' to research into chemistry investigations</p> <p>Use www.gov.uk to search for information about good laboratory practice</p> <p>Browse www.rsc.org to find useful journals and articles about chemistry research</p>
<p>Unit 3 – Science Investigation skills</p> <p>Section A – Planning a scientific investigation</p> <p>Section B – Data collection, processing, analysis and interpretation</p> <p>Section C – Drawing conclusions and evaluation</p> <p>Section D – Enzymes in action</p> <p>Section E – Diffusion of molecules</p> <p>Section F – Plants and their environment</p> <p>Section G – Energy content of fuels</p> <p>Section H – Electrical circuits</p>	<p>For a guide to enzyme investigations: www.contentextra.com/lifesciences/files/topicguides/Topic-guide-1.4-Investigating-enzymes.pdf</p> <p>Information on biology fieldwork: www.nuffieldfoundation.org/practical-biology/biodiversity-your-backyard</p> <p>Information on plant identity grids for biology field work: www.saps.org.uk</p> <p>Information on experiments with electrical circuits: www.nuffieldfoundation.org/practical-physics</p>
<p><i>Additional Unit – to be confirmed</i></p>	