

## Science work – Year 12 – Btec National Applied Science – Diploma

The tasks to work through each week from your textbook June 15<sup>th</sup> until the end of the summer term are given below. The assessment opportunities are listed below and a series of tasks to complete in lieu of lessons are given. The digital version of this sheet is available from the Thomas Deacon website, on this downloadable sheet, the links can be clicked and accessed. Only the name of the site is given on the printed sheet. This is material from Unit 3.

Week	Topic	Reference pages	Assessment tasks	Additional resources
For the next three weeks	Unit 4	Textbook pages Learning aim A – 228 - 236 Learning aim B – 236 - 239	<b>Text book</b> Assessment practise Page 236 Case study pages 232 and 233	<a href="#">Official Btec site</a> <a href="#">Distillation of oil</a> <a href="#">Fractional distillation</a>
Week of 15/6/20 Learning aim A Health and Safety	<b>Task Instructions:</b> From your work in extended certificate you should know the difference between a risk and a hazard. What effect do CLEAPPS, COSHH and the health and safety act have on informing safety assessments? What are the main safety symbols, and why are they displayed? What dangers are associated with display screen equipment? When should accidents and illnesses be reported to the health and safety executive and RIDDOR used?			
Week of 22/6/20 Learning aim A Health and Safety	<b>Task Instructions:</b> Industrial setting may COMAH to inform decisions. What is this? What kinds of professions would use dangerous substances. What PPE can be worn? When you you need to use the following PPE, give two examples for each. Goggles, Gloves, Steel toe cap boots, Lab coat, Chemical resistant over-suit, Mop hat and beard cover.			
Week of 29/6/20 Learning aim B Organic liquids	<b>Task Instructions:</b> Explain the effects of temperature and pH on enzyme function. Use the example of fermentation reactions to explain how enzymes are used in industry. Read through the example plan in the textbook. Use this as a basis to plan out one of the examples listed at the bottom of page 181. E.g. The effect of temperature on the action of protease in milk.			
Week of 6/7/20 Learning aim B Organic liquids	<b>Task Instructions:</b> What is reflux? List the main steps in a laboratory reaction carrying out reflux. What is distillation as process. How is this done in a laboratory? What is fractional distillation? Compare this to distillation as a process and also in terms of product outcome. Explain the distillation of oil in industry is a continuous process.			
Week of 13/7/20 Learning aim B Project	<b>Task Instructions:</b> Write an essay comparing the processes of oil distillation and purification in the laboratory and industry. The maximum word count for this is 500 words.			