BTEC Engineering Applied Science Level 3

Part A - Bridging Work Task 1

This is a fantastic opportunity to expand your understanding of Applied Science as you prepare for enrolment and start at Franklin in September.

Please complete the work and bring a copy to your enrolment, either printed or electronically.

The work will take around **4 hours,** so plan your time to best suit you.

How do I complete and submit my task?	Complete the tasks on paper/handwritten or digitally and bring a copy either paper or electronically to your enrolment appointment, also take this to your first lesson in September. If you did not attend the Taster Day don't worry – this isn't essential for completing this work but, please ensure that you have completed this bridging work.
Introduction to your Bridging Task	This task relates to 'Chemical Quantities' which is part of both the examined unit - Unit 1: Principles and Applications of Science I coursework unit - Unit 2: Practical Scientific Procedures and Techniques
Task details	**Complete the Rf calculations and questions in the work sheet below.** **Work sheet here** **Complete the calculations and questions on the following work sheet.** **Work sheet here** **Complete the quiz attached here**
Resources to help you with the Bridging Task	Link to the tasks Video links: You can also use any other research sources and materials you wish.

Extension Tasks	
Extension Tasks to stretch and challenge you	If you have completed the above to the best of your ability, feel free to try this extension task (*this is optional*): Reseach the different types of chromatography Gas and High-performance Liquid. Be sure to include a description of how the technique works and where it is used, images of the devices/ equipment needed.
Massive Open Online Courses **(MOOCs)**	You might enrol on these online courses and complete the following to push you a little further (this is optional): Biochemistry: Biomolecules, Methods, and Mechanisms | My Mooc (my-mooc.com) Science & Cooking: From Haute Cuisine to Soft Matter Science (chemistry) | My Mooc (my-mooc.com)

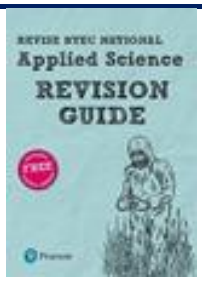
BTEC Engineering Applied Science Level 3

Part B – Preparing for Studying at Franklin

A fantastic opportunity to widen your understanding of the course.

Examining Board and Specification	This course follows the BTEC Level 3 National Diploma in Applied Science specification: Pearson BTEC Level 3 National Diploma in Applied Science Specification Exam Board: Pearson Edexcel Course Code: 601/7435/3 **We cover the following topics:** • Unit 1: Principles and Applications of Science I • Unit 2: Practical Scientific Procedures and Techniques • Unit 3: Science Investigation Skills • Unit 15: Electrical Circuits and their Application You will complete a range of written reports, projects, practical assessments and presentations. **Studying this course will give you a wide range of skills:** By studying this course, you will have the opportunity to develop the following employability skills: • cognitive and problem-solving skills: approaching non-routine problems applying expert and creative solutions, using systems and technology • interpersonal skills: communicating, working collaboratively, negotiating and influencing, self-presentation • intrapersonal skills: self-management, adaptability and resilience, self-monitoring and development.

	This course provides transferable knowledge and skills that will prepare you for progression to university. These include: • the ability to learn independently • the ability to research actively and methodically • the ability to give presentations and be active group members. **Progression after this course:** This course will allow you to go on to study science-based courses such as Biomedical science, Forensics science, Environmental science. Applied Science is a key subject for lots of vocational careers such as Biomedical Scientist, Forensic Scientist, Laboratory Technician, Paramedic, and Sports Scientist.
Preparing for the course	**Here are some helpful sources of information if you would like further information about the subject:** **Websites** **Pearson BTEC website for Applied Science** **Books** There are two textbooks available  BTEC Level 3 Nationals Applied Science Student Book 1. **ISBN:** 9781292134093  BTEC Level 3 Nationals Applied Science Student Book 2. **ISBN:** 9781292134130 There are two revision books available:

	 Revise BTEC National Applied Science Revision Guide. **ISBN:** 9781292150048  Revise BTEC National Applied Science Revision Workbook**.** **ISBN:** 9781292150031 **Digital Resources** https://qualifications.pearson.com/content/dam/pdf/BTEC-Nationals/Applied-Science/2016/teaching-and-learning/BTECNational_AppSci_Unit3.pdf

BTEC Engineering Applied Science Level 3

Part A - Bridging Work Task 2

This is a fantastic opportunity to expand your understanding of Applied Science as you prepare for enrolment and start at Franklin in September.

Please complete the work and bring a copy to your enrolment, either printed or electronically.

How do I complete and submit my task?	Complete the tasks on paper/handwritten or digitally and bring a copy either paper or electronically to your enrolment appointment, also take this to your first lesson in September. If you did not attend the Taster Day don't worry – this isn't essential for completing this work but, please ensure that you have completed this bridging work.

Introduction to your Bridging Task	This task relates to 'Electrical Circuits' which is part of both the examined unit - Unit 3: Scientific Investigative Skills and the coursework unit - Unit 15: Electrical Circuits and their Applications.
Task details	**PART A – CIRCUIT SYMBOLS** 1. Watch the video about Circuit Symbols Circuit Symbols 2. Answer the BRIDGING TASKS **PART B – CIRCUITS AND CALCULATING RESISTANCE** 3. Watch the video about setting up a circuit and calculating resistance Video on circuits and calculating resistance 4. Answer the BRIDGING TASKS **PART C – OHM'S LAW** 5. Watch the video about setting up a circuit and calculating resistance Ohm's Law 6. Answer the BRIDGING TASKS **Complete the attached quiz**
Resources to help you with the Bridging Task	Video links: Circuit Symbols Video on circuits and calculating resistance Ohm's Law You can also use any other research sources and materials you wish.
Extension Tasks	
Extension Tasks to stretch and challenge you	If you have completed the above to the best of your ability, feel free to try this extension task (*this is optional*): Research the following about capacitors → An image/photograph of what it looks like → Symbol as it would be drawn in an electrical circuit → Role of the component in an electrical circuit
Massive Open Online Courses (MOOCs)	You might enrol on this online course and complete the following to push you a little further (this is optional): Introduction to Electronics

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Part B – Preparing for Studying at Franklin

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Preparing for the course	**Here are some helpful sources of information if you would like further information about the subject:** **Websites** **Pearson BTEC website for Applied Science** **Books** There are two textbooks available

BTEC Level 3 Nationals Applied Science Student Book 1.

ISBN: 9781292134093

BTEC Level 3 Nationals Applied Science Student Book 2.
ISBN: 9781292134130

There are two revision books available:

Revise BTEC National Applied Science Revision Guide.
ISBN: 9781292150048

Revise BTEC National Applied Science Revision Workbook**.**
ISBN: 9781292150031

Digital Resources
https://qualifications.pearson.com/content/dam/pdf/BTEC-Nationals/Applied-Science/2016/teaching-and-learning/BTECNational_AppSci_Unit3.pdf