Level 2 Engineering

Part A - Bridging Work Task

This is a fantastic opportunity to expand your understanding of **Engineering** 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 you around 2 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, bring this along to your first lesson in September. If you didn't attend the Taster Day, don't worry. It isn't essential for completing this work, but please ensure that you have completed this bridging work.
Introduction to your Bridging Task	These tasks link to unit 1 principles of science and unit 21 circuits in action units that you will be studying. Unit 1 is an examined unit and unit 21 is a coursework unit.
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

A fantastic opportunity to widen your understanding of the course.

Examining Board and Specification	This course follows the BTEC Level 2 National Diploma in Applied Science specification: BTEC 2012 Specification **We cover the following topics:** • Unit 1: Principles of science • Unit 2: Chemistry of the earth • Unit 3: Energy and our universe • Unit 4: Biology and environments • Unit 5: Applications of Chemicals • Unit 6: Applications of physical science • Unit 7: Health applications of Life science • Unit 8: Scientific skills • Unit 9: Practical Project • Unit 10: World energy • Unit 13: Monitoring the environment • Unit 18: Designing and making Devices • Unit 19: Chemical Analysis • Unit 20: Exploring our universe • Unit 21: Electronics in action • Unit 24: Further Physics 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 engineering L3 at franklin, a partnership at CATCH or another L3 qualification.
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** **The link below has a range of recommended textbooks that could be useful.** BTEC Firsts Applied Science (2012) | Pearson qualifications