

Introduction to BTEC Engineering Summer Homework

In preparation for the course we would like you to complete the following tasks:

Using Breadboards

In electronic engineering (Units 6 & 35), a key piece of prototyping equipment is called a 'breadboard' which you will be using extensively for your own circuit builds.

In Communications for Engineering (Unit 2), you will be studying methods engineers use for effective communication and the digital methods available in the modern engineering environment.

Scenario: In engineering, a prototype is a first example of a product that can be tested and used as a demonstration tool of the finished product. A College has requested your engineering education company to create an introduction powerpoint they can utilise as an introduction to what a breadboard is for their engineering department.

You task:

Create a powerpoint detailing how an electronics breadboard works.

You should include:

- i) Description of the function of a resistor in a circuit
- ii) Description of the function of an LED in a circuit
- iii) Description of the function of a capacitor in a circuit
- iv) Diagrams/Images
- v) Explanations of what your chosen diagrams/images show
- vi) An example on a breadboard of how to connect a resistor and LED in series
- vii) An example on a breadboard of how to connect a resistor and capacitor in series
- viii) References for all resources used
(A website reference should include the website name, full URL address, the date you accessed it and a clear link to which section of work it relates to)
- ix) A justification for the quality and reliability of the web resource
(i.e. is it Dave's blog on completing homework, a University, a College or an individual/organisation with stated Engineering qualifications and experience)