**The Door Buzzer**

**Project brief**

You have been asked to design and build a prototype *door buzzer*.  
The buzzer can be affixed to a door handle.  
The door buzzer should make a sound when activated to let the room's occupier know there is somebody wishing to enter.

**Research**

*As part of your research, it is important to see which products are already on the market and to evaluate how effective they are.* *Use the Web, to find three other door buzzers that can be purchased or made.* *For each of the buzzers you look at, make a note of the URL, save an image and write a few lines outlining the advantages and disadvantages of the product design.*

**Product 1**

* Name
* [Link to product](NULL)
* Advantages
  + Advantage 1
  + Advantage 2
* Disadvantages
  + Disadvantage 1
  + Disadvantage 2

**Gantt Chart**

*Insert or link to your Gantt chart here*

**Initial Circuit Design**

*Describe here why you can't simply place contacts in your circuit that would allow your finger to complete the circuit.*

**Transistors**

*Give a basic description of a how a transistor works*

**Darlington Pair**

*Give a basic description for how a Darlington Pair works*

**Circuit Design**

*Insert a screenshot of your circuit design and describe how the circuit works*

**PCB Design**

*Insert a screenshot of your PCB design and describe how it was designed.*

**Testing the PCB**

*Describe how you tested that the PCB would work and accounted for the resistance of human skin.*

**Case Design**

*Insert an export (PNG is best), of your case design, and describe how it meets the needs of the project.*

**Drilling the PCB**

*Insert a photo of your drilled PCB and annotate it with the sizes of the holes.*

**Soldering**

*Insert a photo or photos of your soldering. Make sure you also include a photo of your LED with the flying leads.*

**Case Assembly**

*Insert photos here showing how you assembled your case, and describe the process of line-bending.*

**Testing**

*Insert photos (or video) of your finished project, showing it working.*

**Evaluation**

*Evaluate your performance on the project. Ensure you talk about key points such as time management, soldering quality, problems you encountered and how you overcame them.*