

Sixth form summer transition project

BTEC Engineering

The following task/ tasks are to be completed and brought to your **first lesson** in September.

Introduction

Some students will be joining the course from GCSE Design and Technology and others will have come from different backgrounds. Whilst the material covered during D&T lessons will be very useful, students should not feel disadvantaged as everyone will be exploring new materials and techniques. We look forward to sharing these with you from September.

The Task

Maths features significantly within engineering and it will be important to strengthen our skills in this area. Maths is always taught in the context of engineering, so you will be able to see the relevance of the tasks.

1. Look at the drawing of the connecting bracket attached. Using the information contained in the drawing, calculate the volume of the component. The trick will be to simplify the block into regular shapes, adding and subtracting as necessary. If you can calculate the area of a circle, you'll be most of the way there.

2. Britain was the first country in the world to design and manufacture a jet-powered passenger aircraft. The image below shows a De Havilland Comet 1, the predecessor of the modern airliners used today.



Do some research into the first Comet airliners and the incidents which occurred in 1953 & 1954 linked to them. Be able to explain a significant engineering change that occurred following these incidents, which is readily visible in modern airliners. Produce a single sheet of A4 to sum up your findings. You may choose to include images to explain your points. Professional levels of written English are expected. Do not exceed a single sheet of paper for this task.

Who to contact if you should require further assistance

Mr K Jones kjones@glossopdale.school