WILBERFORCE
sixth form college

Summer Preparation Work

Engineers change the world with solutions that improve people's lives. There are a huge range of projects in our local area that Engineers have been a key part of. With work ranging from designing clean energy sources to detecting cancer there are many paths that a career in Engineering can take you. At Wilberforce you will develop your skills and knowledge so that you are ready for skilled employment or further education. We offer a wide variety of units that will build your mathematical and practical ability along with your skills in problem solving.

Please be aware that Prep work is an important aspect of your induction onto all courses at Wilberforce Sixth Form College. Please have this ready to hand in during enrolment or to your course teacher in the first week of lessons.

Kind regards

Ashley Howe
Faculty Head for STEM

Task 1 - Research

There is a design element to your course starting in September. In readiness for this I want you to research a number of career paths that you might follow to a career in engineering design.

Task 2 - Create

Give 3 examples of career that have designers in engineering and follow up with a reason why.

For example – you might say; "Design engineers in the aerospace industry are critically important because they are responsible for the safety of a plane carrying passengers. In this industry, design must ensure the safety of all on board, whilst also maximising the eco-credentials of the company and providing a level of comfort and service that people would expect".

Task 3 - Question

1. Is it more efficient to use CAD (computer aided design) or to hand draw technical documents? Explain your answer.
2. Computer modelling is used to simulate physical changes to a component, why do designers follow this up with real physical testing? Justify your reason.

Offer 3 positives and 3 negatives about using computer systems to design, render and test engineered components. Produce a list with a short description of each one.