



## Design and Technology



*'As designers, we have a great responsibility'* Dieter Rams

Over the summer holidays, as much as you will need to rest, you should also be thinking ahead to next year... your A Levels!

In order to return to school without forgetting everything you have learnt; you should complete the following tasks in preparation for Design and Technology.

It is important that you all complete all these tasks to the best of your ability. I want the other members of the class to be envious of what you can produce – we will be comparing work side by side.

### Task 1 – Kettle Design Task

Create a mini A3 portfolio based around designing a kettle. The design, materials, selling points and unique features are all down to you, so take some time to pick the best you can. Ideally, your kettle designs will be creative and unique.

What you will need to include:

- **One page of initial ideas with at least three different ideas.**
- **One page of development showing improvements, features, materials etc of two kettles.**
- **One / two pages dedicated to a final design. This page/pages should have a fully rendered design, an orthographic drawing with measurements, a cross sectional drawing presented in whichever way you feel fit.**
- **Each page should have a boarder, a title and your name included.**
- **One prototype made to scale. Check against your measurements!**

This mini portfolio can be laid out in a similar way to how you presented your GCSE work; however, I will appreciate and commend anyone who tries to be as creative as possible with his or her presentation.

I would expect you to spend no more than **6 hours** in total on this task.

Bring your pages and prototype to the first lesson ready to present.

## Task 2 – Material / technology development

Reading and keeping up to date with current technology, trends and materials is part of the subject that is very interesting. I would like you to spend some time researching some of the latest technology that is being developed, or some of the newest materials being worked with. This could be looking into what Boston Dynamics are working on or looking into how companies are trying to solve the issues of electric cars and vehicles to reduce carbon emissions.

It is up to you, but I would like you to spend a few hours on this, keeping a record of interesting findings and saving it somewhere safe so you can refer to this research perhaps during your A Level NEA. Please also be ready to present what you find and summarise it to the class.

## Task 3 – Disassemble / Assemble

Choose a product at home that you no longer have a use for. It may be that you no longer use that particular gaming controller, or you have just bought a new cabinet and it needs building etc.

I would like you to take pictures of the process, and present them informally on an A4 page, focusing on how easy / hard it is to do.

**Please do be careful**, I do not want you to hurt yourself whilst doing this process. Some things have been designed in such a way that they are not meant to come apart.

Depending on what you choose to disassemble or assemble, will depend on the time that it takes. Include the overall time to complete somewhere on the page.

## Challenges

Challenges are not compulsory; however, it would be good to see some of you complete some or all of them.

### Challenge 1

- Find both an **embossed** and **debossed** business card and bring them in.

### Challenge 2

- Create, out of wood, one or all of the following wood joints:

<u>Hard</u>	<u>Medium</u>	<u>Easy</u>
Dovetail Joint	Housing Joint	Comb Joint
Mortise and Tenon Joint	Half Lap Joint	Dowel Joint

Again, please follow the health and safety rules when using any tools and equipment. If it is not safe for you to do, then do not do it.

Some useful websites include:

[www.Technologystudent.com](http://www.Technologystudent.com)  
[www.wired.com/category/gear/](http://www.wired.com/category/gear/)  
[www.ted.com/topics/technology](http://www.ted.com/topics/technology)

Some interesting YouTube channels include:

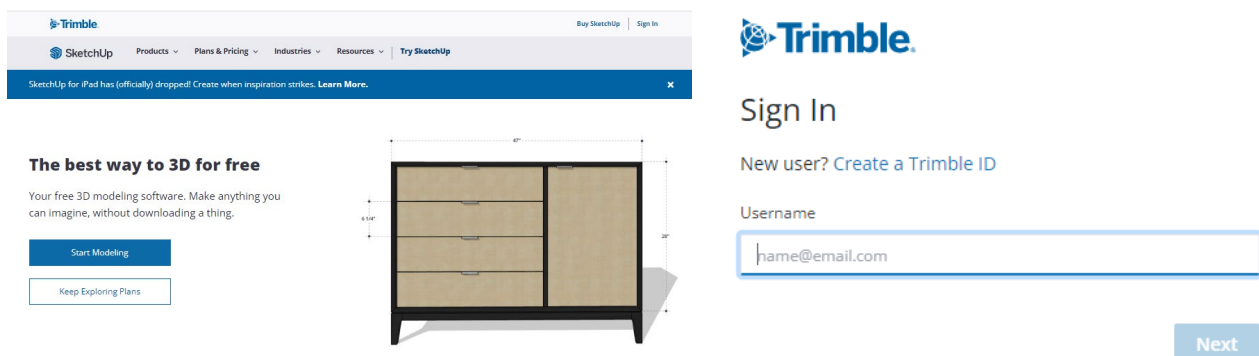
A2C Arts And Crafts  
Be Creative  
Northmen

### Challenge 3

Have a go at creating some forms or some functional products on CAD. Below is a link to Sketchup online which is free to use, and you can get to know some of the tool bars. It is a software that is available at school and can be used next year during your NEA and some of the smaller practical projects that we do.

You will need to sign in and create a free account. I would use your becket keys email to do this so it can be used in school as well when you return in September.

<https://www.sketchup.com/plans-and-pricing/sketchup-free>



If you can, try and design the Kettle that you made for Activity 1.

However, anything that you are able to make, screen shot it and present some images on the page.

