'A' LEVEL Product Design.

Students are required to provide:

Folder/notebook for theory content.
A4/3 Plain Sketchbook
Good Quality HB & 2H pencil
Good Quality colouring pencils
Fine liner
Black writing pen
Basic draughting equipment (ruler, compass, set square)
Good quality Eraser
Good Quality sharpener

We will provide:

A3 Carry folder to keep everything in. Materials for Projects.

At Sir Roger Manwood's we use Solidworks as our 3D modelling system.
This is an industry standard piece of software and is used in most universities.
There are other software available free to download that are similar such as Fusion 360 and Onshape. We would recommend looking at these if you have a laptop.

We recommend purchasing the AQA Approved Text Book, Design & Technology Product Design, Hodder Education, ISBN 978-1-5104-1408-2. But we will have limited copies to borrow.

We will also look to do at least 2 trips. One local to The Turner Centre in Margate, which we use as a client for a project. A trip to the New Designers Show in London, to see a range of new graduate work, which will help inspire students in their final NEA.

Also start to look at new and innovative products, here are some suggestions on where to look.

http://blog.gessato.com/ http://www.newdesignmagazine.co.uk/

http://www.instructables.com/ https://www.pinterest.com/
Also, watching programs such as.

https://www.channel4.com/programmes/george-clarkes-amazing-spaces

BBC Inside the Factory.

Channel 4 Grand Designs

1.Technical Principles task

It is an opportunity to investigate the materials, components, and properties of a variety of products, and thus prepare you for the exam on technical principles.

Over the summer we would like you to carry out a critical analysis of a product through disassembly and technical analysis (targeting relation, form and function)

- Handle the product.
- Inspect inside and outside (aesthetic and ergonomic qualities).
- Limitations - NOT A MAINS POWERED PRODUCT.
- Draw or provide image of an external view before disassembly.
- Record how the casing goes together.
- How components are assembled.
- Draw or provide images of the internal assembly.
- Sketch or record circuitry and components e.g. motors, lights, switches etc.
- Sketch/technical diagrams of mechanisms and indicate how it functions.
- Sketch/technical diagrams of parts and give names.
- List parts, finishes, methods of manufacture.
- Give reasons for the selection and methods of fabrication.
- What does it do and how does it work?
- Are there any areas of failure?

2.Design task

We would like you to create some design ideas that develop from existing products.

Select two household items, analyse the product, how it is used, who is the intended user etc. Then develop a similar product but for someone with a disability or restricted movement.

Please see example of the “cheese grater product”.