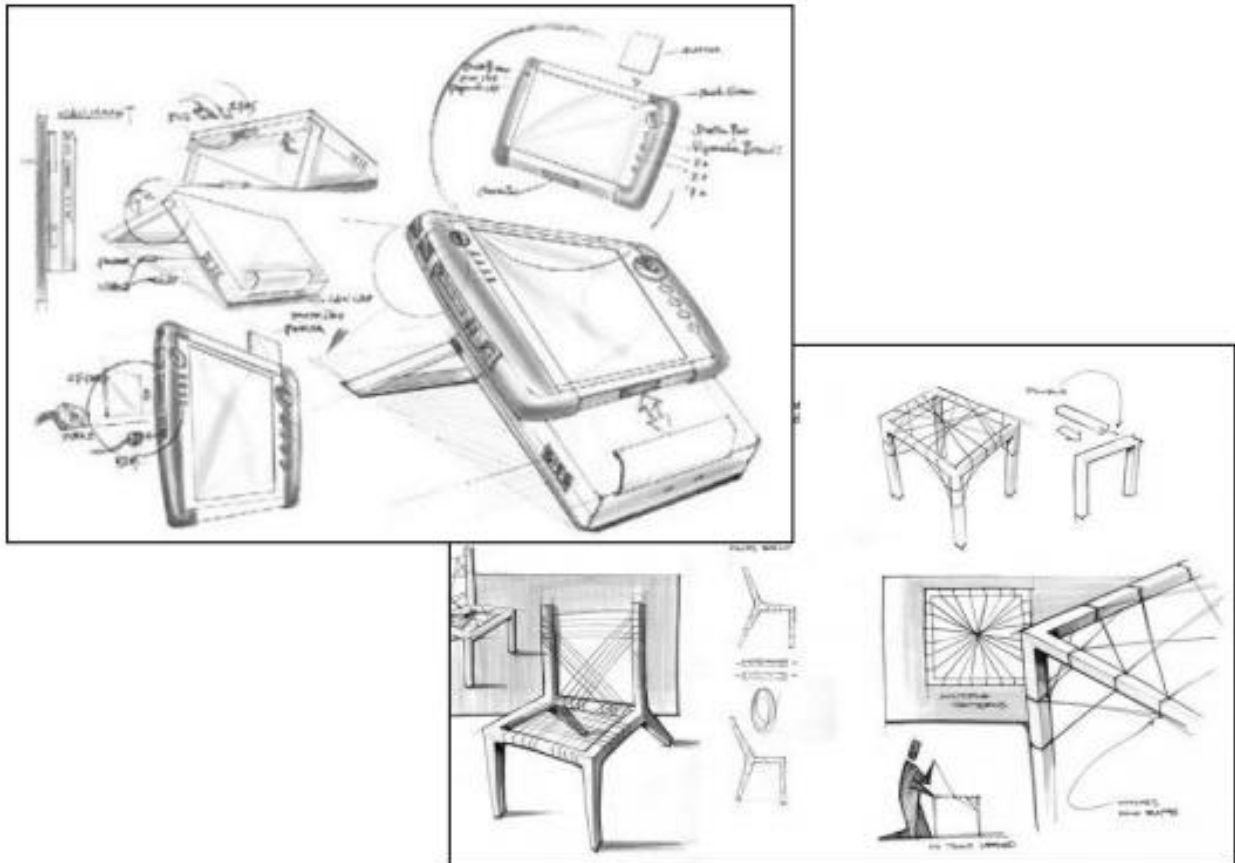


A Level Product Design – Summer Work for new Year 12

NAME _____

Preparation Task

To prepare for your Product Design A level course, you are to do the following tasks over the summer break.



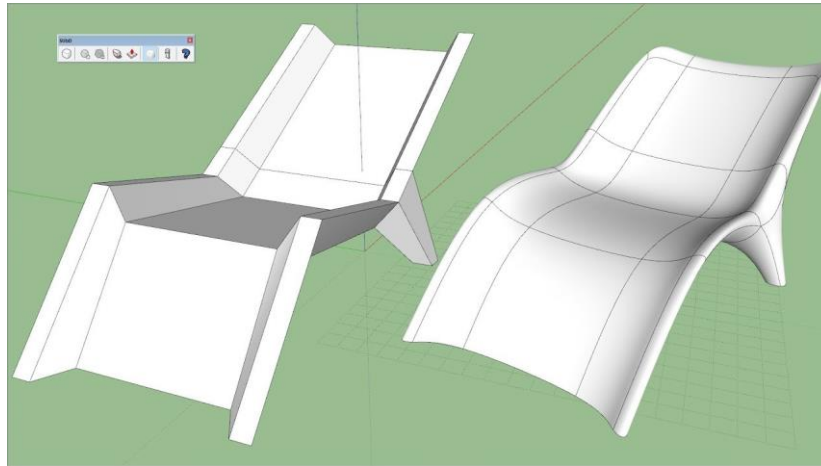
Task 1- Drawing a Sustainable Product

Find a good example of a sustainable product. This might be a product made from recycled materials, materials from a sustainable source, or a product that encourages recycling, waste reduction, has a low carbon footprint etc. Draw it carefully from several angles (including a 3D perspective view), using colour and shading to represent the materials used. Label the drawings, identifying the materials used, how they are joined together and how they are finished. Give reasons why you think these materials have been used.

Add further notes on the following

- The appearance of the product
- The cost – does it cost more than a less sustainable alternative?
- The function – describe what it does and how well it performs
- Anything else you would like to add.

Task 2 – CAD – 3D Modelling in Google Sketchup (or similar software)



<https://www.sketchup.com/products/sketchup-for-web>

Visit the link above to access a good web based computer modelling software. The software is called Google Sketchup and you can use the latest version online without having to download to your computer. You can access other software and they don't all need downloading. It is possible to work on-line and either save the file to your Trimble account (this is Sketchup's cloud). It will ask you to set up a Trimble account (please make sure you get the link sent to your school email address) computer or print screen it and load it into a word file. Other software could include Autodesk Fusion 360.

Use the modelling software to create your own sustainable product. Then write a script for a presentation about your product when you arrive in September. Your presentation should include how your product addresses the following issues ...

- Choices of materials
- Selection of sustainable materials
- Choices of manufacturing methods suitable for the form and function
- Ways to make the manufacturing environmentally friendly
- Scale of production
- Ergonomic factors
- Environmental issues at the end of the products life (6 R's)

Save the final image on a word document or similar and if possible print it for presenting at the start of term. Alternatively save it to a memory stick and we can download it on the day you have your first lesson. (As a backup and if you are not able to access the software, the task can be completed as a rendered and annotated sketch)

Visit the Youtube address below to help you get started on Sketchup for web.

Hand in a completed checklist with your work.

Remember to bring this work to your first Product Design lesson after the summer. Take pride in your work and see this as an opportunity to show us what you can do!

Regards

Mr Crook (Head of Design and Technology)

A LEVEL PRODUCT DESIGN CHECKLIST NAME _____

Checklist

Task 1 - Sustainable Product		Task 2 - Computer model (Computer-Aided Design-CAD)	
3D View		Download or access chosen software	
Other views		Model your design	
Colour Shading		Print screen into a document like word	
Identify materials		Write a script for the presentation	
Identify joining methods			
Identify finishes Reasons for materials, joining methods & finishes			
Notes on - Appearance Cost Function			

HAND IN THIS CHECKLIST WITH YOUR COMPLETED SUMMER WORK

Reading List

GCSE and A Level Reading List			
Design for the Real World: Human Ecology and Social Change	Victor Papanek	Thames and Hudson Ltd	ISBN-10: 0500273588 ISBN-13: 978-0500273586
The Measure of Man and Woman: Human Factors in Design	Alvin R. Tilley	John Wiley & Sons; Revised Edition edition (13 Feb 2002)	ISBN: 0471099554
Invention by Design – How Engineers get from Thought to Thing	Henry Petroski	Harvard University Press, 1998	ISBN 0674463684
Small Things Considered: Why there is No Perfect Design	Henry Petroski	Random House, 2004	ISBN 1400032938
Product Design (Portfolio)	Paul Rodgers	Laurence King (1 Aug 2011)	1856697517
Material Innovation: Product Design	Andrew H. Dent	Thames and Hudson Ltd (12 May 2014)	0500291292
Process: 50 Product Designs from Concept to Manufacture	Jennifer Hudson	Laurence King; 2 edition (25 April 2011)	1856697258
Visit the exam board website to have a look at the course content ... https://www.edugas.co.uk/qualifications/design-and-technology/as-a-level/A-LEVEL-Design-and-Technology-Specification.pdf			