



Product Design

Transition Work Year 11 into Year 12

It is difficult without you having textbooks or resources available to give you too much specific work however, but you can get lots of information from the internet. I have suggested some websites but searching is just as good as long as it is a reliable source. You will be issued with textbooks in September.

I have broken this work down into 6 sections so you can compete as you want over the time. The important thing is you have a genuine interest in the subject and desire to understand the range of topics involved.

Conduct some research into the following areas, some of which you may have looked at for GCSE:

TASK ONE

DESIGN STYLES AND MOVEMENTS

Arts and Craft movement	<i>William Morris – late 19th Century</i>
Art Deco	<i>Decorative styling 1920 & 30s</i>
Modernism , e.g., Bauhaus	<i>Walter Gropius School of Art & Design – 1930s</i>
Post Modernism , e.g., Memphis	<i>Design studio – early 1980s</i>

DESIGNERS AND THEIR WORK

Phillipe Starck	<i>Industrial designer</i>
James Dyson	<i>Inventor/designer, founder of Dyson</i>
Margaret Calvert	<i>Graphic designer/typographer – UK road sign</i>
Dieter Rams	<i>Industrial designer – Braun</i>
Charles and Ray Eames	<i>Husband and Wife industrial designers and Architects</i>
Marianne Brandt	<i>Designer and member of the Bauhaus group</i>

In addition, you need to look at these socio-economic influences that have helped to shape product design and manufacture over the past century:

- Economic recovery after the wars
- Development of new materials
- Introduction of mass production methods for 'everyday' products.
- Change in fashion and trends.

Specifically: –

- Bauhaus and development of furniture for mass production – Post WWI
- Rationing, the development of 'utility' products – During WW2
- Fashion and demand for mass produced furniture and decorative design – Post WW2

TASK TWO

Sustainability is a big topic, not just in Product Design. It is also important you start to look closer at a range of different products and their impact on global society. You should then begin to question why there are as they are, investigating aspects of the history and influence, and ways in which things have or are being changed to address these issues.

Keep a notebook of images, sketches & drawing would be beneficial, making a note of any useful websites you find and writing down any questions you may want it find answers too later. Looking at crowdfunding sites, where designer put forward their ideas, can be very good sources of ideas, but be careful these are genuine not concepts that don't exist.

TASK THREE

Design development (History) is another important aspect of the course. The reason for product design is to understand and try to meet the needs of the users or potential users, whether they are specific or general.

I would like you to produce a timeline, with images and descriptions, of the key development of one of the following products:

- The Bicycle
- The Television
- Food Packaging - you may want to be specific about the food or be very general to include different ones
- Portable Personal music devices
- Modern 'eco' cars

This can be done in any format but the key dates, introduction of materials and/or techniques, personal, need/demand should be the focus. Images to show the developments will help with this. It would be a good idea to investigate them all before settling on one.

TASK FOUR

A recurring task that you need to perform at A Level is being able to look at and judge products; ones that perform the same or similar function, like for like. These are often given to you in questions, with photographs of the products.

You should be able to compare and contrast them (sometimes using given criteria), discuss the positives and negatives, discuss their development and think about the environmental impact they have.

This exam question is a good for this, looking at Domestic appliances i.e. Kettles

Figure 1



Figure 2



Figure 3



Figure 1 shows a 2010s modern cordless kettle

Figure 2 and **Figure 3** show a 1980s kettle

Compare the two kettles shown with reference to the following:

- Product safety
- Energy efficiency
- Ergonomics

	Modern kettle	1980s kettle
Material	ABS	Stainless steel with a polymer handle
Power supply	Detachable base unit	Plug in power cord
Method of filling	Hinged lid	Removable lid
Heating element	Flat hot plate	Heating filament

Ideally you need to balance your answer to equally discuss both products.

You could do similar analysis, comparing and contrasting the following, using your own examples (but include a photo for each) and differing criteria, depending on which you think best suits the product:

Aesthetics, Ergonomics, Materials, Manufacturing, Environmental impact/Sustainability, Safety, Functionality

Examples:

1. A carbon framed Road Racing bike v a Down-hill or Mountain bike.
2. A disposable Paper or Styrofoam cup v a Reusable cup
3. An Analogue v Digital Clock
4. The original Sony Walkman v an iPod or other MP3 player

TASK FIVE

Design development (History) is another important aspect of the course. The reason for product design is to understand and try to meet the needs of the users or potential users, whether they are specific or general.

Produce a timeline, with images and descriptions, of the key development of one of the following products:

- The Bicycle
- The Television
- Food Packaging – you may want to be specific about the food or be very general to include different ones.
- Portable Personal music devices
- Modern 'eco' cars

This can be done in any format but include the key dates which highlight the introduction of new materials and/or manufacturing techniques/methods, as well as meeting the need/demand. Use images/photos to show the developments will help with this.

It is a good idea to investigate them all before settling on one so you can identify which will give you the best sources of information.



TASK SIX

The A level written exam always has Maths/Numeracy questions which require you to apply your knowledge and understanding to calculate things such as Area, Mass, Volume, Angle, and Length. For example:

Figure 1

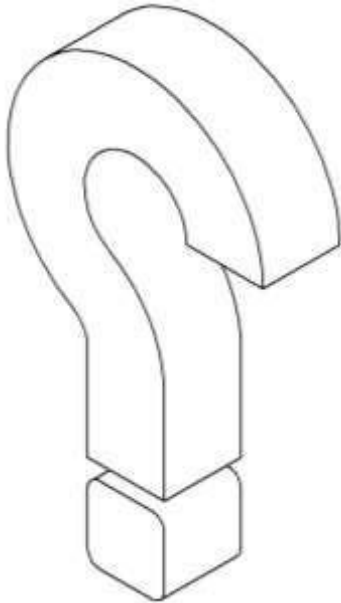


Figure 2

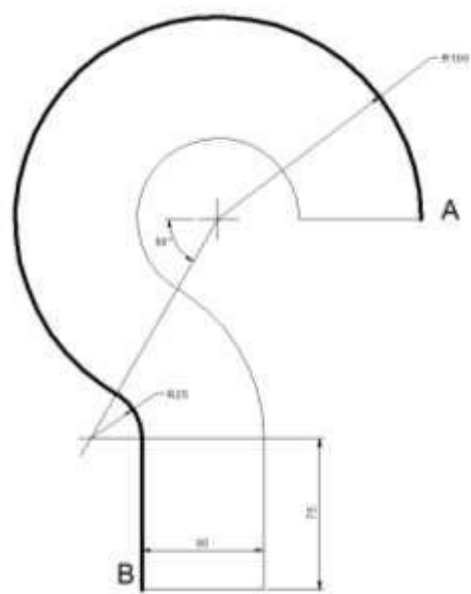


Figure 3

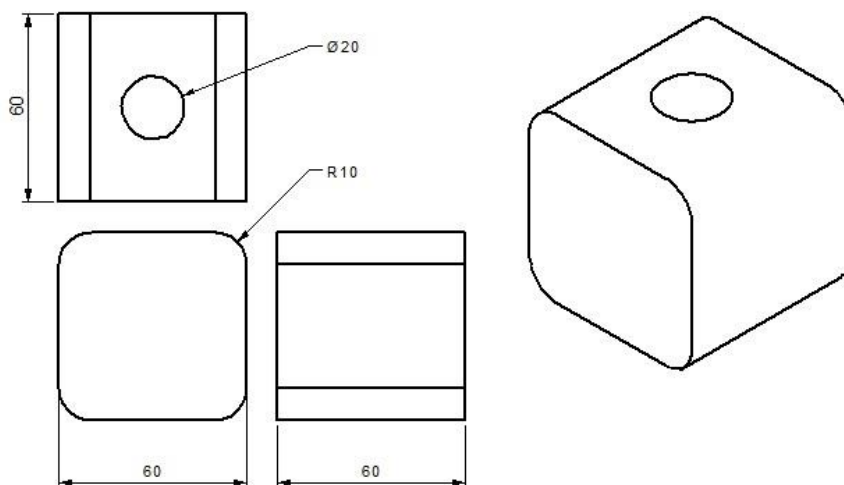


Figure 1 shows a Question Mark shaped light being developed as a prototype. The top part of the lamp is made by laminating plywood around the outside edge.

Figure 2 gives the dimensions of the light in millimetres.

Give all answers to 2 decimal places.

(i) Calculate the length A-B, so the plywood can be cut to the correct length.

Figure 3 show the base of the light which is to be cast in Aluminium.

(ii) Calculate the volume of the block, before the hole is drilled through the centre.

ADDITIONAL RECOMMENDATIONS

Finally, no doubt you watch YouTube and occasional the odd bit of 'normal' TV.

There are some very good design and technology based programs, videos and clip on how products are designed and made from building to cars to oil rigs to airplanes.... some of these are very specific!

Watch a few (or more) and make a note of the ones you think are good and could benefit everyone. I would like to start collating clips that we all can use to help learning and understanding, particularly if they use processes you haven't seen before.

SUBMISSIONS EXPECTED

I would like you to submit two (2) pieces of work:

- **one of your timelines from the Design development (History) section**
- and**
- **a 'compare and contrast' of one of the products, using three of your own criteria**

Both these questions can be emailed to me before the first day of term.

My email address is: whiting.g@myton.co.uk should you have any questions or need any help with this.

Suggested Websites

- [Design Museum – designmuseum.org](http://designmuseum.org)

this has a database of lots of different products, some iconic, across a range of different areas.

- [RIBA Stirling Prize – architecture.com](http://architecture.com)

this has the past winners of the UK building of the year.

- [YouTube – Producttank](https://www.youtube.com/watch?v=CnKeVs-_9zs&t=355s)

a series of video clips for 'students of product design' and goes through the different stages with ideas and suggestions of how to implement them.

https://www.youtube.com/watch?v=CnKeVs-_9zs&t=355s