

# PRODUCT DESIGN

## TRANSITION WORK

### YEAR 11 INTO YEAR 12

You will be given a textbook at the start of the course next year, but there are plenty of resources available online to investigate lots of information about Product Design. I have suggested some websites but searching your own is just as good, as long as it is from a reliable source.

I have broken this work down into multiple sections so you can complete them as you want over the time you have. The important thing is you have a genuine interest in the subject and desire to understand the range of topics involved. Please see the task at the end on details of the work that is to be submitted.

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#### 1.

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

#### Design styles and movements

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


#### Designers and their work

<b>Phillipe Starck</b>	<i>Industrial designer</i>
<b>James Dyson</b>	<i>Inventor/designer, founder of Dyson</i>
<b>Margaret Calvert</b>	<i>Graphic designer/typographer – UK road sign</i>
<b>Dieter Rams</b>	<i>Industrial designer - Braun</i>
<b>Charles and Ray Eames</b>	<i>Husband and Wife industrial designers and Architects</i>
<b>Marianne Brandt</b>	<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 WW1
  - Rationing, the development of 'utility' products - During WW2
  - Fashion and demand for mass produced furniture and decorative design - Post WW2
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## 2.

Sustainability is a big topic, not just in Product Design. It is also important you start to look closer at a range of various 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 designers put forward their ideas, these can be useful sources for ideas, but be careful to ensure these are genuine - not concepts that don't exist.

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## 3.

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 highly recommended that you investigate them all before settling on one.

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## 4.

A recurring task that you will need to do 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** 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*

Figure 1



Figure 2



Figure 3



	Modern kettle	1980s kettle
<b>Material</b>	ABS	Stainless steel with a polymer handle
<b>Power supply</b>	Detachable base unit	Plug in power cord
<b>Method of filling</b>	Hinged lid	Removable lid
<b>Heating element</b>	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.

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

**5.**

Design development (history) is another important aspect of the course. As a product designer you need to understand and try to meet the needs of the users or potential users. This often requires the need to investigation how the product has developed and evolved over time.

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 would be highly recommended that you investigate them all before settling on one so you can identify which will give you the best sources of information.

6.

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. This doesn't require you to apply anything beyond your GCSE maths skills. For example:

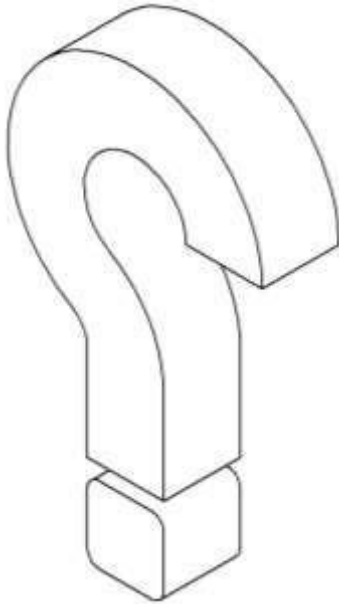


Fig. 1

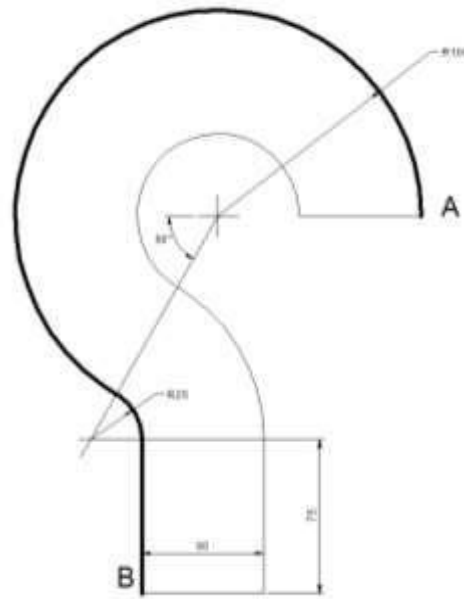


Fig. 2

**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.

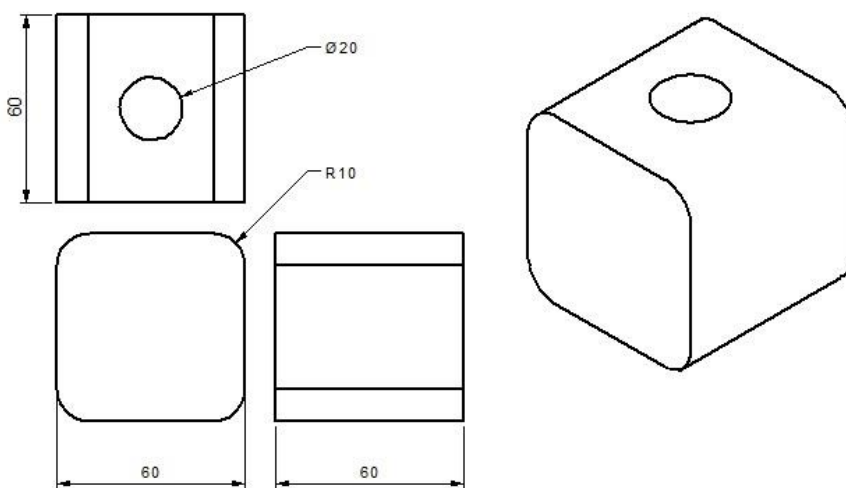


Fig. 3

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## 7.

Finally, no doubt you watch and use YouTube, TikTok, Snapchat, Instagram etc. and occasional the odd bit of 'normal' TV.

There are some particularly good design and technology based programs, videos and clips on how products are designed and made from building to cars to oil rigs to airplanes... some of these are quite specific and some have dedicated channels which show these. Watch a few (or more) and make a note or bookmark the ones you think are good and could benefit everyone. I would like to start collating clips that we all can use to help our learning and understanding; particularly if they use processes you haven't seen before. Newspapers - or at least their websites - often also have art and design sections which carry relevant content.

### Suggested Websites

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

This has a database of lots of assorted 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](http://producttank)

Producttank have produced a series of video clips for '*Students of Product Design*' and goes through the distinct stages with ideas and suggestions of how to implement them. This is the first episode of their Students of Product Design series: <https://www.youtube.com/watch?v=CnKeVs-9zs&t=355s>

**Core 77** – [core77.com](http://core77.com)

Core77 is an online gathering point for designers and enthusiasts alike by publishing articles and forums, producing design competitions and running lecture series and exhibits.

**New Designers** – [newdesigners.com](http://newdesigners.com)

New Designers is an annual London showcase of the UK's most innovative emerging design talent.

### Design Related Places to Visit

- The Design Museum
- The Science Museum
- The V&A
- Any degree shows, design shows or exhibits

### Product Design Journals

- International Journal of Product Development
- The Journal of Sustainable Product Design

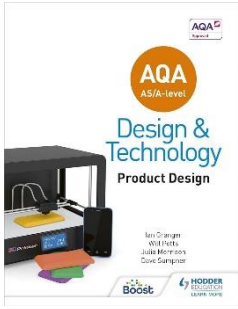
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## TASK

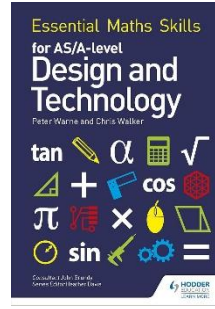
**I would like you to submit TWO pieces of work:**

- 1) one of your timelines from the design development (history) section *and***
- 2) a 'compare and contrast' of one of the products, using three of your own criteria**

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



This is *AQA A-Level Design and Technology: Product Design* which is the essential AQA textbook for this course. This textbook will be provided to you when you start the course in September



There is also an *Essential Maths Skills for DT* textbook available for students who may have concerns about the mathematical components of the course. If interested, we can make copies available for sale once the course has begun.