



## Edexcel Design & Technology - Product Design (9DT0)

Unit number and title	Assessment information
<p>Component 1: Principles of Design and Technology</p> <p>Paper code (9TD0 / 01)</p> <p>Written examination</p> <p>50% of overall qualification</p> <p>120 marks</p>	<p>The unit is assessed through a 2 hour 30 minute examination paper set and marked by Edexcel in the Year 13.</p> <p>The paper will be a question and answer booklet and all questions in the paper are compulsory.</p> <p>The paper will consist of short-answer and extended-writing type questions and will be based on the following topic areas:</p> <ul style="list-style-type: none"> <li>• Topic 1: Materials</li> <li>• Topic 2: Performance characteristics of materials</li> <li>• Topic 3: Processes and techniques</li> <li>• Topic 4: Digital technologies</li> <li>• Topic 5: Factors influencing the development of products</li> <li>• Topic 6: Effects of technological developments</li> <li>• Topic 7: Potential hazards and risk assessment</li> <li>• Topic 8: Features of manufacturing industries</li> <li>• Topic 9: Designing for maintenance and the cleaner environment</li> <li>• Topic 10: Current legislation</li> <li>• Topic 11: Information handling, Modelling and forward planning</li> <li>• Topic 12: Further processes and techniques.</li> </ul>
<p>Component 2: Independent Design and Make Project</p> <p>Paper code: (9DT0 / 02)</p> <p>Non-examined assessment</p> <p>50% of overall qualification</p> <p>120 marks</p>	<p>This unit is internally set and marked by the centre and externally moderated by Edexcel.</p> <p>Students will produce a substantial design, make and evaluate project which consists of a portfolio and a prototype.</p> <p>The portfolio will contain approximately 40 sides of A3 paper (or electronic equivalent) There are four parts to the assessment:</p> <p><b>Part 1: Identifying and outlining possibilities for design</b> Identification and investigation of a design possibility, investigation of client/end user needs, wants and values, research and production of a specification</p> <p><b>Part 2: Designing a prototype</b> Design ideas, development of design idea, final design solution, review of development and final design and communication of design ideas</p> <p><b>Part 3: Making a final prototype</b> Design, manufacture and realisation of a final prototype, including tools and equipment and quality and accuracy</p> <p><b>Part 4: Evaluating own design and prototype</b> Testing and evaluation</p>



## Pre course material for A Level Design & Technology - Product Design

Students wishing to study the subject at A Level should look through the information available on the Edexcel website to familiarise themselves with the specification:

<https://qualifications.pearson.com/content/demo/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html>

Students should equip themselves with appropriate materials for the course, as a guide these consist of:

- Set of drawing pencils
- Set of water colour pencils
- Assorted coloured twin nib coloured marker pens
- Variety of black liner pens, e.g. fine liner, broad liner
- Folder to keep all theory work organised
- Lined pad
- A4 and A3 plain pad
- Appropriate word processing software (E-portfolio will be produced on Powerpoint)
- Maths set

Pearson's have not yet created a textbook for their new A Level, they have advised that students purchase the two text books below which cover the majority of the new specification. Textbooks are NOT provided by the school, and it is advised that all students purchase these books in time for September.

Edexcel A Level Design and Technology Product Design: Resistant Materials Technology ISBN 978-0-435757-78-6

Edexcel A Level Design and Technology Product Design: Graphic Products ISBN 978-0-435757-79-3





## Pre course material for A Level Design & Technology - Product Design

### Project Preparation

During your first weeks of the course you will be concentrating on Drawing Techniques, one of the tasks requires you to bring in an object from home that you can disassemble and draw. Examples could include: torches, old remote controls and pens etc. You will need to create an exploded drawing of this product so the more complex the item the more difficult the task will be, it is essential that the product you use has multiple parts.

There are 2 main practical projects in your first year that will help develop your skills. These include:

Design and Make a pair of 'Salad Servers' using Laminating  
Design an Architectural model of a Bus Shelter

You should spend some time over the 6 weeks holidays collecting images that may inspire you whilst completing the projects above. Images of existing products. Look for an architect/artist whose style interests you. You should collect the images on a Powerpoint presentation.



# A Level Product Design

Inspirational  
Transition Work

Seneca Work -

<https://app.senecalearning.com/dashboard/join-class/iiz27h7zc0>

There has been set an assignment to help you with Yr 12/13 revision.

This is work to recap the key points and theory work you have undertaken throughout GCSE and set a strong foundation for A Level as it will help you revise work you may have missed or not gone over again in the run up to exams.

Other revision:

You may have other sources of revision such as a revision guide.

Feel free to revise from this source instead and post your revision notes or exam question responses.

Extra Revision Sources:

<https://www.bbc.co.uk/bitesize/examspecs/zby2bdm>

<http://www.technologystudent.com/>

<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html>



# Wider Reading (Books, articles, podcasts and videos)

Below is a list of links to relevant websites, articles, videos, shows etc etc

These are here purely to extend your knowledge of current trends in design and how it is currently being used in the world today.

Evidence any wider reading you do by summarizing what you have learned. (potentially through bullet points, a review, a small paragraph, a reflective piece of writing or any other media you find appropriate such as trying out some of the drawing techniques)

- <https://99percentinvisible.org/?fbclid=IwAR3-foomjkomcOnvRDw79upF5BnrVkY9W5cuU2ix82ntkjuYOL6qEsJ4L84> – A long series of podcasts about products and other ways in which design has impacted the world
- <https://www.bbc.co.uk/programmes/b08k9pv0?fbclid=IwAR1O-REp7H72oZnoEemZZ6Bby7mXouo019xfZR1wuENSAAoFKI--NPhqXo> – Podcast about ideas and inventions that created the modern world.
- <https://www.dezeen.com/design/> - podcasts, articles, design newsletters and magazine.
- <https://www.bbc.co.uk/programmes/m000gwzg> How to Make series starts beginning of April on BBC Four
- <https://www.bbc.co.uk/iplayer/episode/m0007trf/bauhaus-100> Bauhaus 100
- <https://www.bbc.co.uk/programmes/b05ttnd7> Handmade craft
- <https://www.bbc.co.uk/programmes/b09rfb1v> Inside story of IKEA
- <https://www.youtube.com/channel/UCeLt4nocnWDEnYJmov4zqyA> – How Its Made YouTube. Loads of content on production processes and materials uses.
- <https://www.youtube.com/watch?v=9uOMectkCCs> – The Secret of Great Design – TED Talk
- [https://www.youtube.com/channel/UC62Ngds\\_ZBWkX-6yFV-10UQ](https://www.youtube.com/channel/UC62Ngds_ZBWkX-6yFV-10UQ) – Product designer maker youtube channel
- <https://www.youtube.com/channel/UCxyQKi7ipjA3Cz-VQUYanNQ> – Producttank youtube channel
- <https://www.youtube.com/watch?v=FwvLkmdV9QA> – Interview with Braun
- <https://www.youtube.com/watch?v=wChkvofR7Q0> – Dieter Rams' 10 Principles of Good Design
- <https://www.thisiscolossal.com/category/design/?fbclid=IwAR0X73ArtGT6jqMp2f5xYddmmSEDTf1z47FO1-XyZylhyCt14rOxVYjGc18> – Design magazine/articles
- <https://www.netflix.com/gb/title/80057883> – 2 Netflix series about the art of design
- [https://www.youtube.com/channel/UCJyreQlGA\\_X62cfouSlrgMw](https://www.youtube.com/channel/UCJyreQlGA_X62cfouSlrgMw) – Lockdown lectures are excellent but there are other sections too
- <https://designmuseum.org/digital-design-calendar> – Digital exhibitions and articles
- <https://www.youtube.com/watch?v=iVy0qGqmKFU> – How to sketch like a product designer
- <https://www.youtube.com/watch?v=O-SM3Fpcji0> – Industrial and product design sketching
- <https://www.youtube.com/watch?v=DRq60nRWYDI> – Marker pen shading and rendering basics

# Online Learning and Courses

There are a large variety of courses that you can do and complete online to enhance your learning. Some of the content may be aimed at y13+ but give it a go, you might surprise yourself!

## Future Learn Courses

- <https://www.futurelearn.com/courses/designing-futures>
- <https://www.futurelearn.com/courses/medtech-trends-and-product-design>
- <https://www.futurelearn.com/courses/modern-building-design>

Open University have free Design related courses here:

- <https://www.open.edu/openlearn/science-maths-technology/design-innovation/design/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/science-maths-technology/design-innovation/design-thinking/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/science-maths-technology/computing-ict/designing-the-user-interface-text-colour-images-moving-images-and-sound/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/science-maths-technology/engineering-technology/introduction-design-engineering/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/science-maths-technology/introduction-interaction-design/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/science-maths-technology/engineering-and-technology/design-and-innovation/design/people-centred-designing/content-section-0?active-tab=description-tab>
- <https://www.open.edu/openlearn/nature-environment/natural-history/studying-mammals-winning-design/content-section-0?active-tab=description-tab>