



Year 12/13 DT Product Design – Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	1. Materials 2. Performance Characteristics of Materials 3. Processes & Techniques Drawing techniques <i>Focused Practical task</i>	3. Processes & Techniques cont 5. Factors influencing the development of products. Potential hazards and risk assessment <i>Mock examinations preparation</i> <i>Focused Practical task</i>	4. Digital Technologies 6. Effects of Technological developments	7 Safe working practices, potential hazards and risk assessment	11 Information Handling, modelling and forward planning	NEA: Part 1: Identifying and outlining possibilities for design
Key Knowledge	Basic workshop skills – wood focus – Passive speaker project, CAD/CAM development.	Workshop skills - Metal work Drawing techniques and presentation skills	Product analysis and development Lamp project	Product analysis and development Design movement bus station project.	Major Project Coursework and mock revision	Major Project Coursework
Y13	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	8 Features of manufacturing industries 9 Designing for maintenance and the cleaner environment NEA: Part 1: Identifying and outlining possibilities for design Specification Part 2: Designing a Prototype	10 Current Legislation 11 Information handling, modelling, and forward planning cont 12 Further processes and techniques NEA: Part 2: Designing a prototype Part 3: Making a final prototype	NEA: Part 3: Making a final prototype Planning and making	NEA: Part 3: Making a final prototype Part 4: Evaluating own design and prototype	Prepare for assessment of NEA Revision	Exams
Key Knowledge	Major Project Coursework	Major Project Coursework	Major Project Coursework	Major Project Coursework/ Revision		

Further information and reading list

- Our examination board is Edexcel. <https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.coursematerials.html#filterQuery=Pearson-UK:Category%2FSpecification-and-sample-assessments>
- Recommended reading include
 - The Design of Everyday Things (The MIT Press) - Donald A. Norman
 - The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems - Michael Lewrick, Patrick Link & Larry Leife
 - Design: The Whole Story Paperback – Elizabeth Wilhide & Jonathan Glancey
 - Making It, Third edition: manufacturing Techniques for Product Design - Chris Lefteri
 - Manufacturing Processes for Design Professionals - Rob Thompson
 - Drawing for Product Designers (Portfolio Skills) - Kevin Henry
 - Research Methods for Product Design (Portfolio Skills) - Alex Milton and Paul Rodgers



- o Design for the 21st Century (Icons Series) - Charlotte Fiell and Peter Fiell
- o The eco-design handbook (Thames and Hudson) - Alastair Fuad-Luke
- o Design Sketching by Erik Olofsson and Klara Sjolen

- **Links to useful websites**

- o <http://www.technologystudent.com/> <http://www.mr-dt.com/> <https://www.bbc.co.uk/bitesize/subjects/zvg4d2p>
<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html>
<https://www.dexigner.com/> <https://designmuseum.org/> <https://www.designweek.co.uk/> <https://www.behance.net/>
<https://www.designcouncil.org.uk/> <https://www.designcurial.com/>

- **Useful YouTube links to Product Design topics**

- o Product Design Maker <https://www.youtube.com/c/productdesignermaker/videos>
- o Mr Ridley's Product Design - A level <https://www.youtube.com/channel/UCGirUTJfqDH5e8Sux8EaYNQ>
<https://www.youtube.com/channel/UC6G71CSi8N4fHJq5YK3Pd6g>
- o Miss Mott Product Design - <https://www.youtube.com/channel/UCpKATFT1OWWIIdvfY3hXKYgA>

Ways to support and extend student learning in this subject

Support for pupils

The greatest challenge for many students is the quantity of subject content that is necessary to cover in the course. Our A Level students tell us that breaking this down into manageable chunks (often in the form of flashcards) and quizzing / consolidating little and often is the best way of keeping on top of what has been covered. We also recommend applying that knowledge to exam-style questions as often as possible

Revision and lesson materials will be on each Google Classroom. You can refer to these to help your child with their homework or if they are absent from school.

Stretch and Challenge Pupils.

It is important to have lots of practice exam questions and scenarios to give a wider extension of exam practice.

Some past papers are available to download from the Edexcel website:

<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.coursematerials.html#filterQuery=Pearson-UK:Category%2FExam-materials>

Students should aim to complete a minimum of one hour of independent study for every timetabled lesson per week.

Detailed revision cards, mind maps and revision techniques such as Spaced repetition are especially useful for building knowledge. These should be created by the student and reviewed frequently.

Reading widely around the subject, watching relevant documentaries and listening to Podcast should be encourage and following the exam board topic guide is advised.

https://qualifications.pearson.com/content/dam/pdf/A%20Level/Design%20and%20Technology%20-%20Product%20Design/2017/Teaching%20and%20learning%20materials/GCE_D&T_Topic_Guide_issue_1_October_2018.pdf