



Y13 Learning Journey. Subject: Product Design A Level

Exam Requirements: Your A-level in Product Design is structured, and examined, in the following way:

External Exam	NEA
<p>Content overview</p> <p>Topic 1: Materials Topic 2: Performance characteristics of materials Topic 3: Processes and techniques Topic 4: Digital technologies Topic 5: Factors influencing the development of products Topic 6: Effects of technological developments Topic 7: Potential hazards and risk assessment Topic 8: Features of manufacturing industries Topic 9: Designing for maintenance and the cleaner environment Topic 10: Current legislation Topic 11: Information handling, Modelling and forward planning Topic 12: Further processes and techniques</p> <p>Assessment overview</p> <ul style="list-style-type: none"> • The paper includes calculations, short-open and open-response questions, as well as extended-writing questions focused on: <ul style="list-style-type: none"> o analysis and evaluation of design decisions and outcomes, against a technical principle, for prototypes made by others o analysis and evaluation of wider issues in design technology, including social, moral, ethical and environmental impacts. • Students must answer all questions. • Students must have calculators and rulers in the examination. <p>Written exam: 2 hours 30 Minutes 120 marks 50% of your overall grade</p>	<p>Content overview</p> <ul style="list-style-type: none"> • Students individually and/or in consultation with a client/end user identify a problem and design context. • Students will develop a range of potential solutions which include the use of computer aided design and evidence of modelling. • Students will be expected to make decisions about the designing and development of the prototype in conjunction with the opinions of the client/end user. • Students will realise one potential solution through practical making activities with evidence of project management and plan for production. • Students will incorporate issues related to sustainability and the impact their prototype may have on the environment • Students are expected to analyse and evaluate design decisions and outcomes for prototypes/products made by themselves and others • Students are expected to analyse and evaluate of wider issues in design technology, including social, moral, ethical and environmental impacts. <p>Assessment overview</p> <ul style="list-style-type: none"> • The investigation report is internally assessed and externally moderated. • Students will produce a substantial design, make and evaluate project which consists of a portfolio and a prototype • The portfolio will contain approximately 40 sides of A3 paper (or electronic equivalent) • There are four parts to the assessment: <ul style="list-style-type: none"> Part 1: Identifying and outlining possibilities for design Identification and investigation of a design possibility, investigation of client/end user needs, wants and values, research and production of a specification Part 2: Designing a prototype Design idea, development of design idea, final design solution, review of development and final design and communication of design ideas Part 3: Making a final prototype Design, manufacture and realisation of a final prototype, including tools and equipment and quality and accuracy Part 4: Evaluating own design and prototype Testing and evaluation <p>Non-examined assessment 50% of the qualification 120 marks</p>

Overview of the Year:

Week Beginning	The focus of your learning or revision this week:	Key assessment pieces or specific homework tasks (including deadlines of any coursework/NEAs)
18/09/23	Exam Question Review on Monday (Student led – Metals) Tuesday Core Knowledge Theory activity Completion of NEA Design Ideas – Sketch, CAD design, Review	Exam practice questions
25/09/23	Exam Question Review on Monday (Student led – Metals) Tuesday Core Knowledge Theory activity Completion of NEA Design Ideas – Sketch, CAD design, Review	Exam practice questions
02/10/23	Exam Question Review on Monday (Student led – Polymers) Tuesday Core Knowledge Theory activity Completion of NEA Design Ideas – Sketch, CAD design, Review	Exam practice questions Final Completion of NEA Initial Idea
09/10/23	Exam Question Review on Monday (Student led – Polymers) Tuesday Core Knowledge Theory activity Completion of NEA Final Idea – Sketch, CAD design, Review	Exam practice questions
16/10/23	Exam Question Review on Monday (Student led – Composites) Tuesday Core Knowledge Theory activity Completion of NEA Final Idea – Sketch, CAD design, Review	Exam practice questions Final Completion of NEA Final Idea
Half Term		
30/10/23	Assessment week one	
06/11/23	Exam Question Review on Monday (Student led – Textiles) Tuesday Core Knowledge Theory activity Start of NEA Manufacturing	Exam practice questions
13/11/23	Exam Question Review on Monday (Student led – Smart and Modern Materials) Tuesday Core Knowledge Theory activity NEA Manufacturing	Exam practice questions
20/11/23	Exam Question Review and Core Knowledge Theory activity on Monday (Student led Domestic, commercial and Industrial processes) NEA Manufacturing	Exam practice questions
27/11/23	Exam Question Review and Core Knowledge Theory activity on Monday (Student led Domestic, commercial and Industrial processes) NEA Manufacturing	Exam practice questions
04/12/23	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Drawing Techniques) NEA Manufacturing	Exam practice questions
11/12/23	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Joining Methods) NEA Manufacturing	Exam practice questions

18/12/23	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Finishing Techniques and Processes) NEA Manufacturing	Exam practice questions
Christmas Break		
08/01/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – CAD/CAM and Digital Technologies) NEA Manufacturing	Exam practice questions
15/01/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Ergonomics and Anthropometrics) NEA Manufacturing	Exam practice questions
22/01/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Specification Headings) NEA Manufacturing	Exam practice questions Final completion of NEA Making
29/01/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Designer Styles and Movements) NEA – Testing and Evaluation	Exam practice questions
05/02/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Designer Styles and Movements) NEA – Testing and Evaluation/ Life Cycle Analysis	NEA Final Deadline
Half Term		
19/02/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Effects of Modern Technologies and the Global Market Place. NEA – Mop up of any common issues within the submitted NEA.	
26/02/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Safe working practices hazards and risk) NEA – Mop up of any common issues within the submitted NEA	Exam practice questions
04/03/24	Exam Question Review and Core Knowledge Theory activity on Monday (Student led – Timbers)	Exam practice questions
11/03/24	Assessment Week 2	
18/03/24	Exam Preparation – Topic 1 and 2	Creation of revision material based on topics covered in class
25/03/24	Exam Preparation – Topic 3 and 4	Creation of revision material based on topics covered in class
Easter Break		
15/04/24	Exam Preparation – Topic 5 and 6	Creation of revision material based on topics covered in class
22/04/24	Exam Preparation – Topic 7 and 8	Creation of revision material based on topics covered in class
29/04/24	Exam Preparation – Topic 9 and 10	Creation of revision material based on topics covered in class
07/05/24	Exam Preparation – Topic 11 and 12	Creation of revision material based on topics covered in class

Exam Practice:

You can find past papers to help support your revision and develop your exam technique here:

Edexcel past papers

[Edexcel AS & A level Design and Technology - Product Design \(2017\) | Pearson qualifications](#)

Revision Materials:

We advise that you use the following revision materials:

Your A-level revision guide which has been provided to you in lesson.

GCSE Revision guide, available on the school network; G:\Technology\New D&T Digital Textbook and NEA delivery guide\DT Textbook Edexcel

[ENGINEERING - DESIGN AND TECHNOLOGY \(technologystudent.com\)](#)

Glossaries:

Vocabulary lists to support your revision can be found here:

Exam board Specification

[Specification - A-Level Design and Technology \(pearson.com\)](#)

Advice and Guidance for Revision

When revising, flash cards can be very useful, especially when revising materials, their properties and uses. You can write the material and a descriptor of it on one side, and then its properties and uses on the reverse.

Remember to revisit your maths content, using the revision guide which has been given to you in class.

Try to link your revision back to practical lessons which you have done in school, applying the knowledge to a practical application can help you remember it.

Try as many mock exams as you can, in class we have answered questions on their own, but try a full paper to help familiarise yourself with the layout and getting used to the time allocation.