

DESIGN AND TECHNOLOGY A LEVEL

ESSENTIAL READING AND TASKS FOR SEPTEMBER

PRE-READING

Exam – You have a choice which exam you wish to sit based on your specialism, either:
Fashion and Textiles or Product Design

Design and make task

SUMMARY OF ASSESSMENT

Component 1: Design and Technology in the 21st Century
Written examination: 3 hours
50% of qualification

Learners take a single examination in one of the following endorsed areas:

- fashion and textiles
- product design.

The examination includes a mix of structured and extended writing questions assessing learners' knowledge and understanding of:

- technical principles
- designing and making principles

along with their ability to:

1. analyse and evaluate wider issues in design and technology.

Component 2: Design and make project
Non-exam assessment: approximately 80 hours
50% of qualification

A sustained design and make project, based on a brief developed by the candidate, assessing the candidate's ability to:

- identify, investigate and outline design possibilities
- design and make prototypes
- analyse and evaluate design decisions and outcomes, including for prototypes made by themselves and others

The design and make project will be based within the same endorsed area as the written examination.

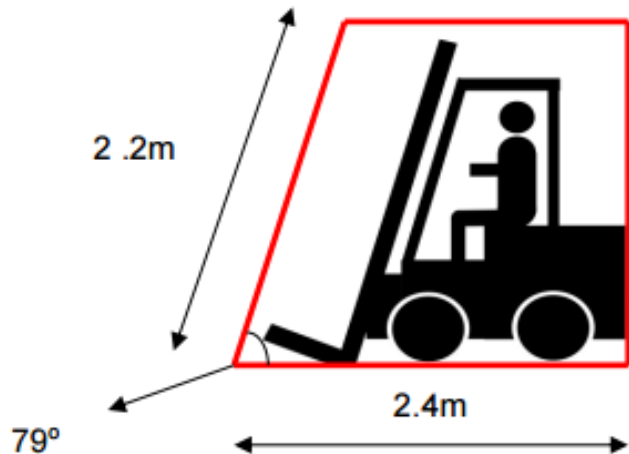
4. (a) A manufacturer uses the process of Just in Time (JIT) to produce washing machines.

Describe two benefits of JIT to the manufacturer. [4]

- (b) A manufacturer rents a storage space of 11,000 cubic metres at £4.32 per cubic metre a month from January to April. From May to December the manufacturer wishes to reduce the amount of storage space rented by 45%. As a consequence, the price per cubic metre will increase by 6%.

(i) Calculate the total cost of renting the space for one year. [4]
Show all calculations.

(ii) The red line below indicates the space that a fork truck would occupy within the factory. If the width of the fork lift is 1.2m calculate what would be the volume occupied by the fork lift truck. [5]
Show all calculations.



Example Product based question

Would you be able to answer these questions now with your GCSE knowledge?

3. Study the picture of a ladies quilted jacket shown below and answer the questions that follow.



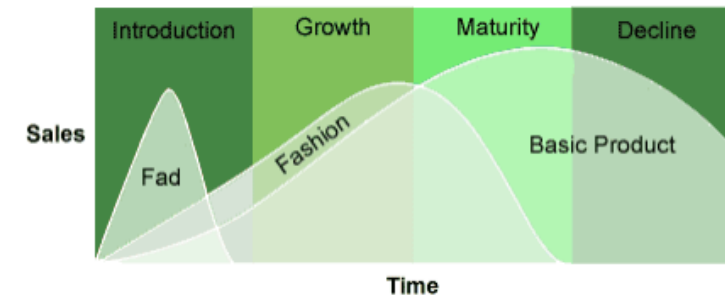
Product details

Outer material: Polyester
Lining: 100% Nylon
Inner lining: Polyester fibrefill

- (a) The jacket has been quilted which helps keep the wearer warm during the cold weather.
Explain how the designer could improve the jacket's insulating qualities. [4]
- (b) Describe an appropriate method of comparing the insulating qualities of different textile materials. *Use notes and diagrams to illustrate your answer.* [4]

Example Fashion based question

10. Product cycle graphs like the one shown below are often used by fashion buyers.



Evaluate the use of product cycle graphs by fashion buyers, on behalf of fashion retailers and manufacturers when planning and developing new products. [12]

Would you be able to answer these questions now with your GCSE knowledge?

A level
DESIGN AND TECHNOLOGY
SAMPLE ASSESSMENT MATERIALS
Duration approximately 80 hours

Design and make task – sample briefs only
At A Level you get to write your own briefs, you do not follow exam board ones like you may have done in Year 11.

A defining feature of design and technological activity is that it is context dependent, as are the outcomes of such activities. The role of the contextual challenge is to provide an external stimulus for learners, from which they will explore and clarify design problems and opportunities. This will lead to the development of their own design briefs, which will inform and direct their designing and making activities.

Learners will be assessed on their ability to analyse and respond to contexts, rather than their knowledge of specific contextual areas. Learners are required to select one of the following contexts as the basis of their design and make task:

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- **How to improve the daily lives of people who have difficulty with mobility.** Learners are expected to consider this group of people, their needs, and any issues they have with performing everyday tasks.
 - **Improving the function of a household object.** Learners are expected to identify a household product and consider how its function and use can be improved for a specific group of users.
 - **Sustainability in the home and our future needs.** Learners are expected to consider issues related to sustainability in the context of the home environment and ways to accommodate our present and future needs.



INDUCTION TASKS

Each slide describes the tasks that will help lead you from GCSE to A Level. Please submit all tasks to Miss Greenbank and keep a copy safe for yourself

TASK 1 – FASHION AND TEXTILE ONLY

- The Great British Sewing Bee has recently had a new series on BBC I player. Select 5 of these episodes to watch and complete the sewing bee diary for each episode.

<https://www.bbc.co.uk/iplayer/episodes/b03myqj2/the-great-british-sewing-bee>

Name:

Group:

The Great British Sewing Bee

The Great British Sewing Bee is back on the BBC. We will be using this programme as an additional educational tool during your fashion project. You will need to watch the programme each week and answer a selection of questions linked with textile skills and knowledge.

Week:

Theme:

Provide a summary of the tasks from this episode. E.g. what garments did they have to make, were there any materials they had to use?

Use this box to write down any new textile words you hear in this episode. These should be words that you cannot define.

Now research the definition of these new key words. Write them down in this box. Add a diagram if it will help you to remember them.

Finally write a couple of sentences to summarise your own opinions on this episode. Do you agree with the garment of the week? Which was your favourite?

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TASK 1 –PRODUCT DESIGN ONLY

- There are many episodes of 'How it's made' on YouTube. At A Level you need to have a good understanding of manufacturing processes and how products are made. Do not watch any food related videos.
- Watch 7 of these episodes and answer the following questions for each.

<https://www.youtube.com/channel/UCELt4nocnVDEnYJmov4zqyA>

Questions:

1. What product is being made?
2. What materials is it made from?
3. What machinery is being used to make the product?
4. Write down the stages of making
5. What are your opinions on the final product.

Answer all in full sentences. The more detail you can answer in the better for A Level.

TASK 2

Create a case study on four designers of your choice;

Fashion and Textiles

Matthew Williamson
Vivienne Westwood
Stella McCartney

Product Design

Jonathan Ive
James Dyson
Zaha Hadid

Include a section on each of the following;

- 3-4 key pictures of their products with labelled features
- Innovative features , materials or manufacturing processes
- Links to trends, historical events, social, moral, environmental and cultural influences
- Dates, could be made on a timeline
- DO NOT copy and paste text from the internet
- It does not matter on your specialism which ones you choose

TASK 3

Create a case study on two materials and two manufacturing processes of your choice;

Fashion and Textiles manufacturing

Batik
Micro-encapsulation
CAD/CAM Textiles laser
cutting

Fashion and Textiles materials

Gore-Tex
Cashmere
Microfibre

Product Design manufacturing

Steam bending
Aluminium casting
Injection moulding

Product Design materials

Bronze
Carbon Fibre
Plywood

Include a section on each of the following;

- Labelled features/properties
- 2-3 images with explanations of context (i.e close up shot of plywood construction)
- Examples of products that it is used in
- Links to designers
- Dates – when introduced etc.

TASK 4

Create a mood board of products/clothing/architecture/textile items that you feel are inspiring and represent your views on;

- beautiful design
- fashionable design
- intelligent design
- highly functional design
- creative design

