


Year 11 Product Design – Revision Notes 2017

Perfume / Aftershave bottles are always packaged in a protective box. They are boxed for many reasons:

				
For example, to Transport the boxes from the factory to the shop easily.	Also To Contain perfume and any parts	to Protect from damage	to Inform the buyer of contents	to Display in a shop

	What materials would you use for packaging a bottle of perfume? Give two examples.	
	Material	Reason why
	Material	Reason why

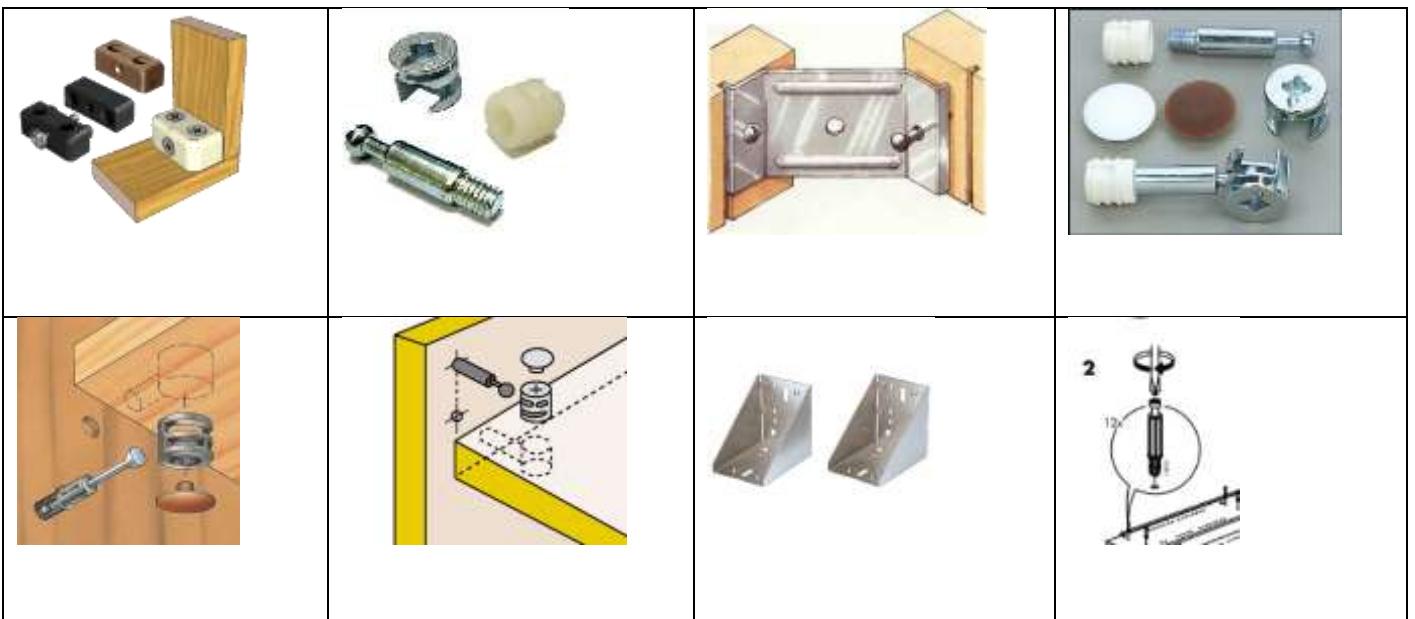
In the space below **SKETCH** a design for the **PACKAGING**.
Be creative, show how the box would be constructed and add Surface decoration.



Large international furniture manufacturers (like IKEA) supply their furniture **FLAT PACKED**.



What does flat pack mean? (clue think of the differences compared to other furniture)



Knock-down fittings are those that can be put together easily, normally using only a screw driver, a drill, a mallet/hammer and other basic tools. They are temporary joints although many are used to permanently join together items such as cabinets and other pieces of furniture that are purchased in a flat pack.

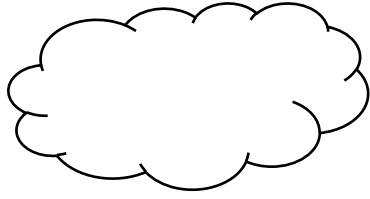
<p>Why is it good for the USER (YOU) to use these fittings when putting together flat pack furniture? 2 reasons</p>	<p>Why is it good for the MANUFACTURER (IE IKEA) to use these fittings when selling flat pack furniture? 2 reasons</p>
<p>1</p>	<p>1</p>
<p>2</p>	<p>2</p>

	<p>1940 Mahogany bookcase. £2000. Single unit. Hardwood. High level of craftsmanship. Made in Britain.</p>		<p>2010 Ikea bookcase. £180 Flat pack. Laminated chipboard. Machine made. Made in Poland.</p>
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Above are two types of furniture from two different times. Think about the major differences between the two items and explain how flat pack furniture has changed the way we furnish our homes.

One criticism of IKEA is that it produces cheap furniture that is thrown away too easily with a huge impact on the environment. Provide as many reasons as you can WHY this has a negative impact on the environment. (Tip think about every stage of manufacturing from tree to factory to store to home to landfill).





A young designer is selling simple products at a school craft fair. She is making 200.

This could be a . .

Biscuit

Jewellery

Badge

Key ring

Make notes and sketch to make the shape into a product to sell.

What would you make the product out of?

Why is this material suitable to make 200?

How would you make sure that all the products were the same?

What equipment would you use and how would you keep safe using it?

Equipment 1

Equipment 2

Health and safety 1

Health and safety 2



Inclusive design is about adapting products to ensure people have access to their use. For example, this telephone has been adapted for visually impaired and hearing-impaired users. How has it been adapted?

Visually impaired

- 1
- 2
- 3

Hearing impaired

- 1
- 2
- 3





A standard issue wheelchair has been criticised for not being good enough at helping people move around easily. As a designer how could you improve it so it is easier to use?





Frame

Wheels

Moving

Ergonomics

<p style="text-align: center;">COMPUTER WORKSTATION</p>  <p>D. THE MONITOR IS AT A COMFORTABLE HEIGHT AND ANGLE FOR THE USER.</p> <p>C. THE TABLE IS THE CORRECT WIDTH, AVOIDING OVER-STRETCHING BY THE USER.</p> <p>B. THE BACK OF THE CHAIR SUPPORTS THE USER'S LOWER BACK. IT IS IN THE CORRECT POSITION.</p> <p>A. THE SEAT OF THE CHAIR IS FIXED AT A COMFORTABLE HEIGHT. IT CAN BE ADJUSTED FOR USERS OF DIFFERENT HEIGHTS.</p> <p>E. THE HEIGHT OF THE TABLE TOP, ENSURES THAT THE KEYBOARD IS WITHIN COMFORTABLE REACH.</p>	<p>Anthropometrics is the study of the sizes of people in relation to products. For example, chairs used in schools need to be suitable for the average size of pupils in the schools.</p> <p>What would the impact be of a chair that was at the wrong height?</p>
	<p>Anthropometric data (measurements) are used to determine the shape of handle and distance to be held from head. Designed for average size hand. The length of lead is determined from anthropometric data (length of average arms and average height of users). The hair dryer is now ergonomically designed</p>

<p>You must learn how to draw these symbols and what they mean.</p>			
			
<p>The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity".</p>	<p>The Kitemark is most frequently used to identify products where safety is paramount, such as crash helmets, smoke alarms and flood defences.</p>	<p>A barcode is a machine-readable code in the form of numbers and a pattern of parallel lines of varying widths, printed on a commodity and used especially for stock control.</p>	<p>The Forest Stewardship Council (FSC) logo on a wood or wood based product is your assurance that it is made with, or contains, wood that comes from FSC certified forests or from post-consumer waste</p>



Just in Time (JIT), as the name suggests, is a management philosophy that calls for the production of what the customer wants, when they want it, in the quantities requested, where they want it, without any delay.

Primark is a Just in Time company. It has no stockrooms to store clothes. It does not keep clothes that are unsold for the next year. A lorry arrives and the clothes are put on sale within an hour. Any leftovers are sold very cheaply.

How can computers help Primark be a **JIT** company?

How do computers help Primark with its **stock control**?



Most products that are needed in large quantities that are identical in size and need to be of an exact measurement are mass produced using Computer Aided Manufacture. CAM. Give some advantages and disadvantages.

Advantage

Advantage

Advantage

Disadvantage

Disadvantage

Disadvantage