



Transition Pack GCSE Design Technology: Textiles

In order to prepare for starting your Design & Technology GCSE in September please complete the following tasks. These tasks will help you to bridge from Year 9 to Year 10 and give you a fantastic start.

ANY QUESTIONS PLEASE SEE ME OR EMAIL PRF@CHURCHDOWNSCHOOL.COM

Name:

Tutor:

Tutor group:

	Task	Pages	Completed
1	Fibre and fabric properties	1-8	
2	Maths Practice	9-10	
3	Techniques	11	
4	Industrial Practices	12-14	
5	Design work	15-16	
Additional work			
	Things to read and watch	17	

	Name the three classifications of textile fibres?
a	
b	
c	

	Research the four natural fibres and then fill in the rest of the chart				
	Fibre name	Where they come from (origins)	Four properties		Two end uses
a	Cotton				
b	Wool				
c	Silk				
d	Linen				

	Research the four synthetic fibres and then fill in the rest of the chart				
	Fibre name	Organic compound (origins)	Four properties		Two end uses
a	Polyester				
b	Elastane (Lycra)				
c	Polyamide (Nylon)				
d	Acrylic				

	Name two regenerated fibres and then fill in the rest of the chart					2
	Fibre name	Organic compound (origins)	Four properties		Two end uses	
a	Viscose					
b	Lyocel					

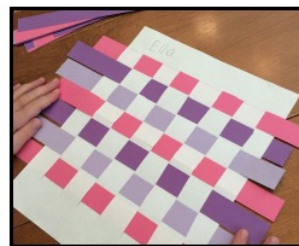
<p>When a designer chooses a fabric he/she has to ensure it is fit for its intended purpose. Below are the factors which make a fabric suitable or fit for purpose. Explain each and give an example of a product to which the factor is essential!</p>			
	Factor	What does it mean?	Example products
1	Wearability		
2	Warmth		
3	Comfort		
4	Absorbency		
5	Durability		
6	After Care		
7	Safety		
8	Flammability		
9	Stain resistance		
10	Aesthetic qualities		

	Explain why these products have been made using these fibre blends, use the table on the previous table to help you		
a	Ladies Cardigan	50% wool, 50% acrylic	
b	Men's Socks	82% cotton, 17% Nylon, 1% Lycra	
c	Ladies Trousers	48% polyester, 48% viscose, 4% Elastane	
d	Boys Blazer	92% polyester, 8% viscose	
Pick 3 more Textiles items from around your home and complete the table			

Whilst you are on school WEAVE...

Fabrics are made by spinning fibers into a yarn and then the yarn is woven into a fabric. This is called fabric construction. Use strips of paper or card to create each different type of weave listed below.

Glue the samples next to each weave.



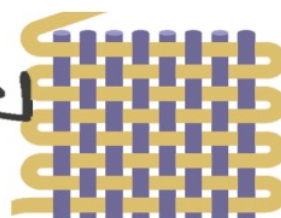
Fibre

Spun

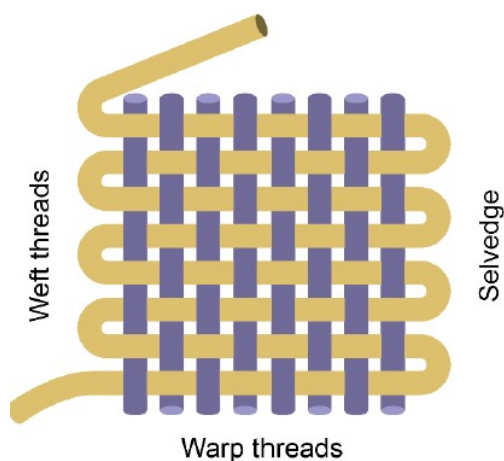


Yarn

Weaved

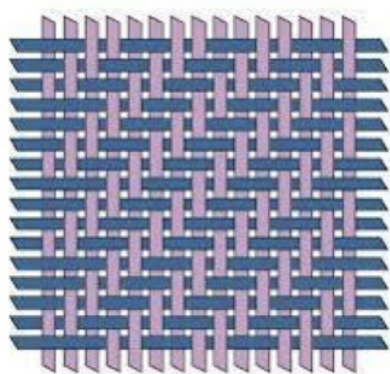


Fabric



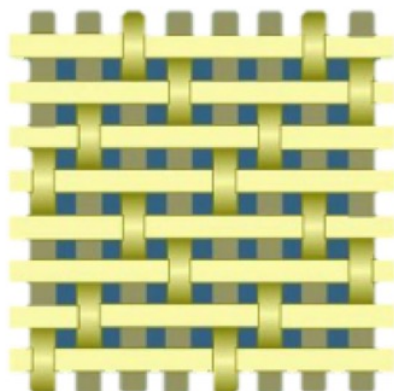
Plain Weave

The warp and weft pass over and under each other forming a criss-cross pattern.
Example: Calico



Twill Weave

The weft yarn goes over two warp threads then under two. This is repeated one along on the next row. It makes a diagonal pattern.
Example: Denim



Satin Weave

Satin weave has a shiny 'right' side and a matt 'wrong' side. On the shiny side the weft threads go over more than four warp threads then under one.
Example: Satin

PLAIN WEAVE - <https://youtu.be/SeG7exc7pek>

TWILL WEAVE - <https://youtu.be/1Th3-lBgAw0>

SATIN WEAVE - <https://youtu.be/XBekWv8KZV8>

What are the methods of making fabric?

5

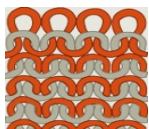
1)

2)

3)

Name the following methods of construction.

a

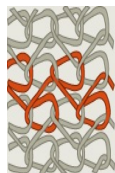


Name the construction method

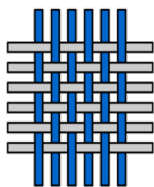
Properties

Give an example of a fabric

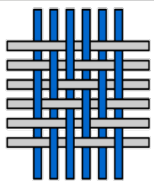
b



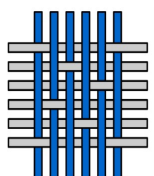
c

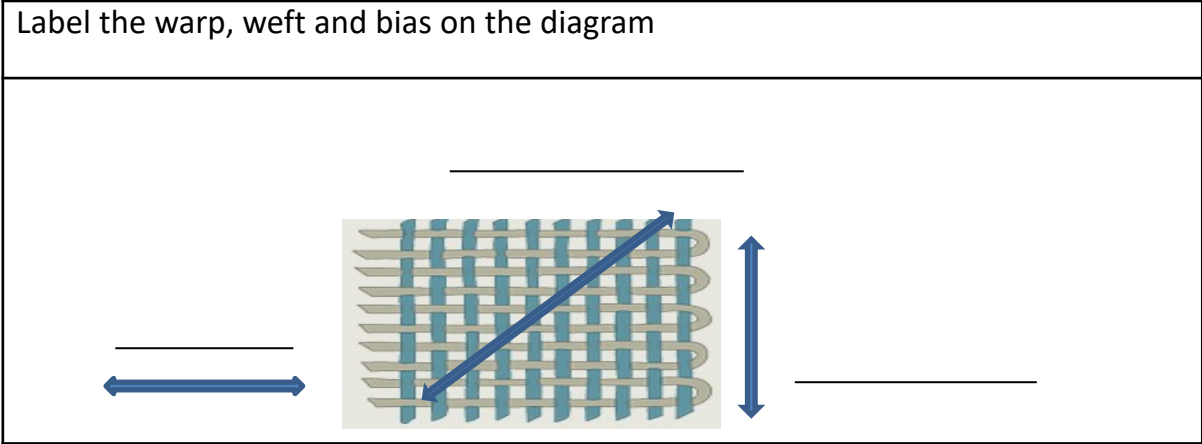










d



e





24	What do these labels stand for?		
			
			
			
			

Write a 500-1000 word essay explain why a designer needs to consider the fibres and fabrics that they use in a product. You need to include;

- The origins of the fibres
- The properties of the fibres and fabrics
- The properties that make it fit for purpose
- The construction of the fabric
- How the product is cared for

PLEASE COMPLETE ON THE FOLLOWING PAGES

Handwriting practice lines consisting of 40 horizontal dotted lines.

Handwriting practice lines consisting of 40 horizontal dotted lines.

Please show your working (use a separate sheet of paper if its easier)

(c) Figure 2 shows a table of average daily costs related to running two types of light bulb.

1.



Traditional filament bulb



LED Bulb

Bulb type	Average daily cost (Pence)
Traditional filament bulb	5.69 p
LED bulb	1.12 p

Figure 2

Calculate the percentage daily cost saving of using an LED bulb instead of a traditional filament bulb.

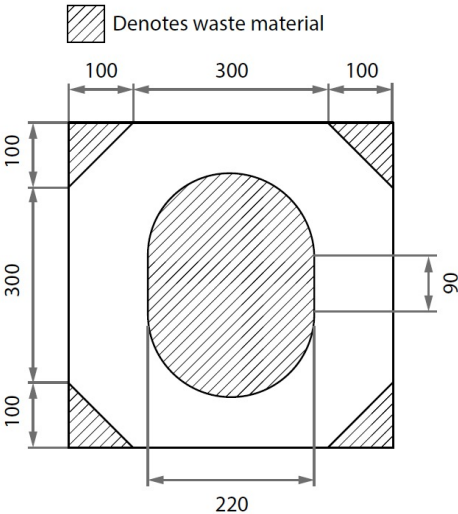
Give your answer to the nearest whole number.

(2)

Answer:.....

2.

(c) Figure 17 shows one side of the cat house.



All dimensions are in millimetres.

Figure 17

Calculate how much cardboard is used when cutting out one side of the cat house from a square piece, in cm².

Give your answer to 2 decimal places.

Area of a circle = $\pi \times r^2$

Area of a triangle = $\frac{1}{2} \times \text{base} \times \text{height}$

Use $\pi = 3.142$

(5)

Forget about the price tag...

To be successful designers shouldn't ensure that the cost of making the product should be lower than the price they are selling it for so they can make a profit.

Find a product at home or design your own. Look up the price of each of the parts on the product. You should consider the cost of fabric, decoration and thread, start up costs for machines plus the wage of the worker. Work out the profit that is made on that item, consider if the cost would be reduced if it were made in bulk. Present your findings below.

SEAMs legit...

There are many different types of seams that can be used for joining two pieces of fabric together to create a product. Research the advantages and disadvantages of each seam listed below. Use this information to sketch an image of a product that would use each seam. Justify your reasoning for choosing that product for each seam.

Seam

Product

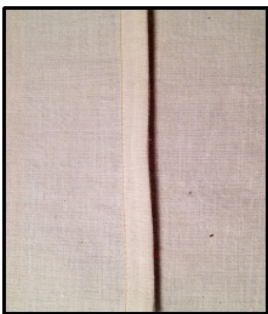
Justification



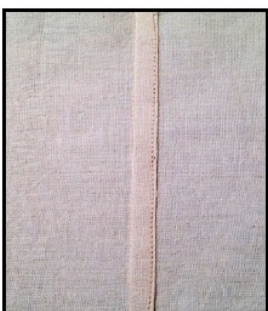
Plain / Flat Seam



Closed Seam with Overlocked Edge



French Seam



Felled Seam

I'll keep this one BRIEF...

A design brief is a short statement of what you are planning to make, where it will be used and who the target market is. Designers are usually given contexts by companies and clients to help them write a design brief. Create a design brief for each of the contexts below. Use the example below to help you.

Context: How can products be used to create a relaxing environment in hotels?

Design Brief: I will be designing and making a luxury PJ pack for visitors to purchase when staying at the Hampton Hotels. The pack will include a set of PJs, eye mask, slippers and dressing gown and help the Hampton's guests feel relaxed during their stay. The product will be made from luxurious fabrics such as satin and will be branded with the Hotel's logo.

Context: How can products be used to promote or support a high profile event?

Context: How can products be used to educate people on a particular culture?

Context: How can products be used to meet the storage needs of a user?

Designers have a responsibility to design products that address environmental issues. It has become fashionable to design sustainable textile products using recycled second hand products and reusing fabrics and components.

The use of organic cotton, biodegradable fibres/fabrics has become a strong feature in the sales of many high-street brands. Fairtrade textiles products are becoming increasingly available and their sale helps to support developing countries.

[illegible]

This image shows a full page of a document template designed for writing. It features approximately 30 evenly spaced, thin horizontal grey lines across the entire width of the page. The background is white, and there are no margins, headers, or footers visible. This type of template is commonly used for students to practice handwriting or for anyone needing a simple space to write notes.

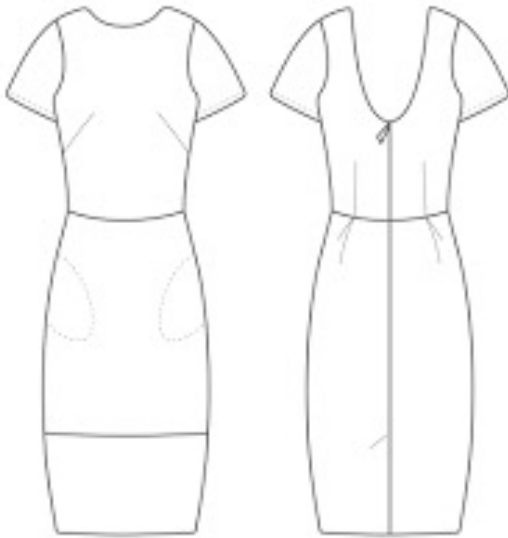


Figure 1 shows an evening dress. It is made from silk with a bias binding trim.

It needs to be improved to

- Be easy to care for
- It needs to be appropriate for a black tie event
- Needs to reflect a floral theme

Use notes and/or sketches to show how the design could be modified to include these points

(6 marks)



Figure 2 shows a pair of children's' dungarees. They are made from denim and have 2 pockets at the back and 1 large pocket at the front.

They need to be improved to

- Appeal to more user groups
- Be easy to care for
- Allow children to carry their favorite toys with them

Use notes and/or sketches to show how the design could be modified to include these points

(6 marks)



Figure 3 shows a backpack. It is made from polyester with a metal zip.

It needs to be improved to

- Be easy to be comfortable to wear
- It needs to be appropriate a 5 year old girl
- Needs to be able to show their name.
- Needs to be able to carry an A3 folder

Use notes and/or sketches to show how the design could be modified to include these points

(6 marks)

Use the space below to draw a design that answers one of the briefs that you wrote on page 18 of this booklet. You can use templates found on the internet if that helps.

3 TED talks on “The big problem with fashion – and how to fix it”

https://www.ted.com/playlists/627/the_big_problem_with_fashion_and_how_to_fix_it

A free tour of the amazing “Christine Dior, Designer of Dreams” at the Musee des Arts Decoratifs that was a complete sell out when it came to the V&A last year

<https://youtu.be/FLWDWzMrkBE>

How Stuff Works:

<https://www.youtube.com/user/HowStuffWorks>

Story of Stuff Project (clue is in the title!):

<https://www.youtube.com/user/storyofstuffproject>

Design Technology TV on You Tube:

<https://www.youtube.com/channel/UCrEUBLZSIhI-8Dxx2pBfZRw>

How to make ... The Trainer

<https://www.bbc.co.uk/iplayer/episode/m000gwzd/how-to-make-series-1-1-the-trainer>

Other things that you could watch are

If you have Netflix - Coco before Chanel, Vivienne Westwood, McQueen