

Textiles Technology

Fibres and Fabrics *22 slides*

This presentation looks at what fabrics are and defines natural and manufactured fibres. Students learn how fibres become fabric through weaving, knitting and non-woven methods. They are asked to research and record the fabric properties of different fabrics before being tested by an interactive quiz.

Which fabric am I?

clue 1: I am not very hard-wearing.
 clue 2: I can be soft or crisp.
 clue 3: I fade and become brittle in sunlight.
 clue 4:

00:29

Polyester	Cotton	Nylon	Linen
Acrylic	Elastane	Silk	Wool

(Note: The 'Wool' button in the image has a checkmark, indicating it is the correct answer.)

Finishing Processes *16 slides*

This presentation covers physical, chemical and biological finishing processes. Students learn how these processes are applied and how they can alter the properties of a fabric. New finishes are also discussed.

What have you learned?



Sofa – stain resist and flame proofing

Components *22 slides*

This presentation introduces students to a range of threads, yarns, fastenings, elastics, bindings, interfaces and fillings used when manufacturing textile items.

Fastenings – D rings and drawstrings

- D rings are similar to buckles but have a less complicated fastening action and can be easily adjusted.
- Two rings are used together to make the fastening.



- Drawstrings can be found on many different textile items.
- They are an extremely cheap way of fastening a product.
- Common applications are skirts, trousers and bags.



Product Analysis *21 slides*

This presentation asks students to conduct a product analysis of an existing product, evaluating the product's function, health and safety and hygiene implications, environmental impact, practicality and cost and availability. They are encouraged to disassemble products and note both positive and negative features as well as looking at how a product has been made and how it has been marketed to consumers.

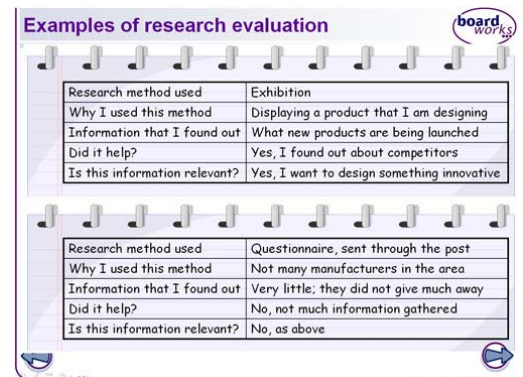


Existing products - function

		
lightweight waterproof	secure fastening	soft to touch
washable		secure components
easy to carry		decorative pockets

Evaluation Techniques *21 slides*

Students are asked to evaluate products at different stages of the design and manufacturing process. They are shown how to evaluate their research and to evaluate their final product against the design brief and the product and manufacturing specifications.



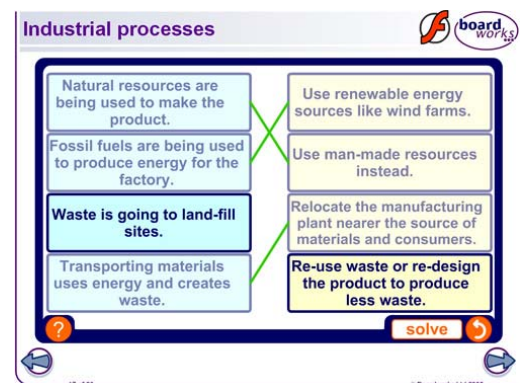
Examples of research evaluation

Research method used	Exhibition
Why I used this method	Displaying a product that I am designing
Information that I found out	What new products are being launched
Did it help?	Yes, I found out about competitors
Is this information relevant?	Yes, I want to design something innovative

Research method used	Questionnaire, sent through the post
Why I used this method	Not many manufacturers in the area
Information that I found out	Very little; they did not give much away
Did it help?	No, not much information gathered
Is this information relevant?	No, as above

Social, Cultural, Moral and Environmental Issues *21 slides*

This presentation looks at how social, moral, cultural and environmental issues influence designer and consumer choices. Students investigate the reasons we wear clothes, and the different needs different markets have. They consider the environmental impact of growing and manufacturing fibres and of manufacturing, transporting, cleaning and disposing of textile goods.



Industrial processes

Natural resources are being used to make the product.	Use renewable energy sources like wind farms.
Fossil fuels are being used to produce energy for the factory.	Use man-made resources instead.
Waste is going to land-fill sites.	Relocate the manufacturing plant nearer the source of materials and consumers.
Transporting materials uses energy and creates waste.	Re-use waste or re-design the product to produce less waste.

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Health and Safety *15 slides*

This presentation covers the importance of adhering to health and safety guidelines both at school and in the workplace. Students are taught the importance of producing products that are safe for the end user.



Tools and Techniques *21 slides*

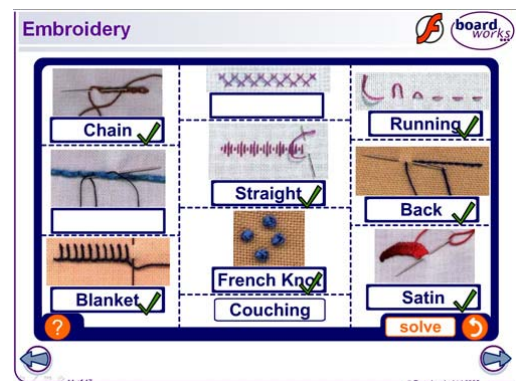
This presentation looks at the different tools and equipment that are used to create textile items, both in the classroom and in industry. Students are also introduced to a variety of textile techniques. A plenary quiz asks students to select appropriate tools for different tasks.



Decorating Textiles *17 slides*

This presentation details the many ways in which a textile product looking at

- dyeing, painting and printing a fabric
- appliqué
- beading and sequins
- hand and CAD/CAM embroidery
- patchwork
- quilting.



Production Processes *14 slides*

This presentation looks at one-off, batch and mass production methods as well as different production systems including:


- cell production
- the make-through system
- just-in-time production.

Scales of production

How a product is produced depends on the quantity of items being manufactured. Production systems include:

- one-off production
- batch production
- mass production.

Which method of production do you think is used to produce high street clothes?

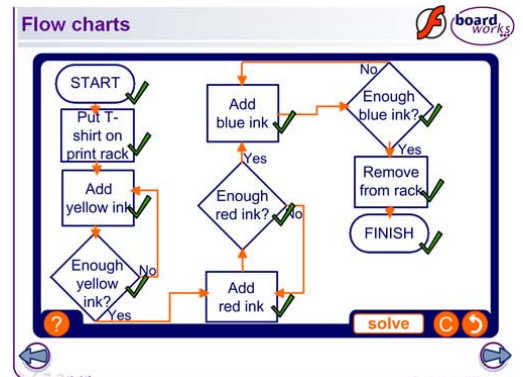


Style
SAYING THE NATION
OF THE FUTURE

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Systems and Control *15 slides*

This presentation explains what a system is and then splits working systems into inputs, processes and outputs. It covers open and closed loop systems, including feedback and control.

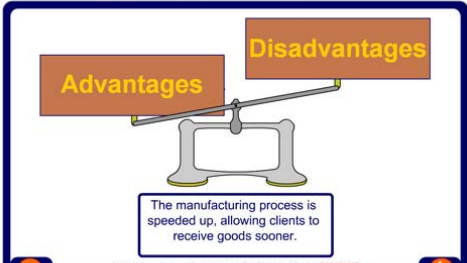


ICT in Textiles *18 slides*

This presentation looks at how ICT is used, both in the classroom and in the textile industry, to aid:

- research
- presentation
- design
- manufacturing.

Advantages and disadvantages of CAD/CAM



Advantages **Disadvantages**

The manufacturing process is speeded up, allowing clients to receive goods sooner.

Is each statement an advantage or a disadvantage of using CAD/CAM?

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Industrial Practices *22 slides*

This presentation looks at how textile designers research new designs, looking at costs, fabrics, manufacturing processes, packaging, marketing and retailing.

Intelligence gathering 

When designing a new product, designers consider how their potential customers might be influenced by:

- current trends
- street fashion
- celebrity style
- fashionable designers
- cost
- fabrics.



 **What factors influence you most when you are buying clothes? What about when you are designing them?** 

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