Computers in the Textiles Industry
What are the main advantages of using computers?

More Efficient
Faster: Reduces the time taken to complete tasks
Cheaper: Decreases costs within industry
Provide a simple means on presenting designs/work
Clearer: Improves and clarifies Communication
Duplicating: Reduces repetition
The 5 main examples of computers systems used in the Textile Industry:

**CAD:**
Computer Aided Design
- Development of designs, creating and grading patterns and lay planning.
- Computers are used for store design, lay planning and cutting, sewing and pressing.

**CAA:**
Computer Aided Administration
- ICT packages are used for marketing, sales order processing and monitoring stock levels.

**CAM:**
Computer Aided Manufacture
- A system - computer based which speeds up sales transactions and keeps account on stock levels.

**CIM:**
Computer Integrated Manufacture
- This ICT system is used at every stage of planning, designing and manufacturing.

**EPOS:**
Electronic Point of Sale
Other New Technology?

Companies take advantage of other new technologies.

Some examples are:

- Skype
- Interactive Design
- Instant Messaging
- Video Conferencing
- Virtual Imaging
- E-retail
- Networking Sites (e.g. Bebo, My Space and You Tube)
- Blogging
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<th>STAGE:</th>
<th>PURPOSE:</th>
<th>EXAMPLES:</th>
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<tr>
<td>Research and Presenting</td>
<td>• Collecting and recording relevant facts • Using digital imagery</td>
<td>• Internet/email • Graphics Software • Digital Camera • Word Processing Software • Video Conferencing</td>
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<td>Design</td>
<td>• Creating visual designs • Developing a specification • Creating a prototype • Experimental work</td>
<td>• Graphics Software • Digital Camera • Scanner • Digital Printer • CAD Systems</td>
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<tr>
<td>Manufacturing/Production</td>
<td>• Producing patterns • Producing end garments • Controlling machinery • Costings</td>
<td>• Lay planning • Digitisers / Digital Printers • 3D body scanning equipment • Computerised sewing, knitting and weaving ,machines • EDI (Electronic Data Interchange)</td>
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<td>Distribution</td>
<td>• Stock control and dispatch systems • Order processing</td>
<td>• Tagging (RFID) • Word Processing / Databases • Spreadsheets • Stock/asset tracking software</td>
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<td>Sales</td>
<td>• Promoting the product e.g. Advertising • Sales channels e.g. on TV, website/E-tailing • E-Commerce • Security Tagging</td>
<td>• Graphics Software • Word Processing Software • Digital Printer • Digital Camera • EPOS software • PDM Software</td>
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There are three main phases to the creation of commercial textiles product. ICT is used in all of these phases:

**Research...** topic using ICT software such as online

**Specification...** typing a garment specification

**Present...** ideas using graphic packages, powerpoint presentations or using mood boards

**Model...** fabric on a product using 2D mapping or 3D image draping system

**Design...** fabrics using CAD package

**Develop...** a series of designs using vector drawing graphics ICT software

**Stage 1:**

- Pre-Production
The Three Phases...

There are three main phases to the creation of commercial textiles product. ICT is used in all of these phases:

- **Testing... on the product**
- **3D image... can be generated via a flat 2D pattern and mapped on a computer = 'avatar'**
- **Costings... are generated using PDM (Product Data Management) software and manufacturing specifications**
- **PDM... These systems are used to track materials/components for manufacturing can begin**

**Stage 2: Production Phase**

- **Product specification is used with specialist software for... creating patterns**
- **Lay Plans... are produced with an ICT package. This will calculate the best way of laying pattern pieces on the fabric - minimising waste**
- **Production Sample... is produced**
- **Production is made**
- **Product is sent to... Production Line (this could be a production plant abroad)**
- **Fabrics are cut out accurately using... cutting tables**

Production is made
There are three main phases to the creation of commercial textiles product. ICT is used in all of these phases:

**Stage 3: Post-Production**

Sales/Marketing...
This involves a virtual design system, which shows how the product can be displayed on in-store systems.

On line retailing...
selling products online

With a computerised barcode system EPS a garment can be tracked at any retail outlet.

When launching the product it can be viewed on the web and a virtual fashion show can be seen.