YEAR 7 TEXTILES KNOWLEDGE ORGANISER

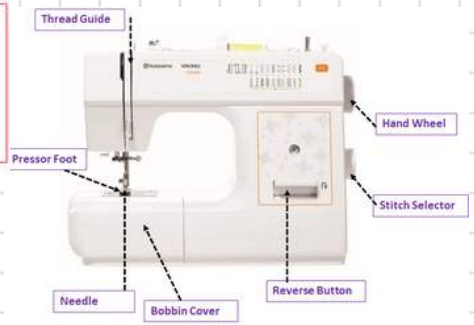

Needle

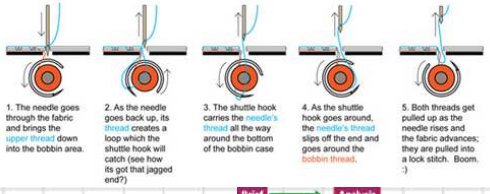

Pins


Fabric scissors


Stitch ripper

When you have finished
- Raise the presser foot
- Take out your work
- Pull the threads long again
- Cut of your work





Natural fibres are strands that come from natural sources, such as wool.
Synthetic fibres are created by humans using a process called polymerisation.
Fibres are long thin strands or threads with a flexible structure.

Health & Safety

Systems

E-textiles, or electronic textiles, as it stands for, are **fabric that you embed electronic components in**.

iterative design cycle

The iterative design process is revisited and reflected upon at regular points in order to improve and refine design ideas to ensure they best meet the needs of the final user. Designing a product for a client can be done in several ways. Manufacturers cannot risk investing large amounts of money into the production of a product that has not had adequate design, modelling, testing, prototyping and evaluation. Iterative design is a circular design process that models, evaluates and improves designs based on the results of testing

Knowledge

- Health and safety
- Iterative design cycle
- Properties & Origins
- Natural & synthetic fabrics
- Fabric construction
- Simple systems
- E Textiles

Natural fabrics

Natural fibres are all derived from vegetation, cellulose-based materials, as well as products that are made from animals.


Cotton plant – Cotton


Sheep – Wool


Silkworm – Silk

fabric properties

Material properties are physical, chemical, or mechanical components of a specific product that would determine its functionality and manufacturability.

Acrylic	Elastane	Polyester
• Resemblance to wool - it has a **luxurious** appearance. • Takes colour very well - can be **dyed** or **printed** on. • **Resistant** to **shrinking**.	• Good **resistance** to tearing. • Excellent **elongation** qualities **(stretchability)**. • Very **durable**.	• A **strong** fibre. • **Resistant** to **stretching** and **shrinkage**. • **Washable**. • **Abrasion** resistant.

Synthetic fabrics

Synthetic fibres are human-made fibres produced in a laboratory. They are made from either polymers that are derived from petrochemicals, or naturally sourced materials which undergo a chemical process.

fabric construction

Polyester

Nylon

Acrylic

Elastane

Woven is a simple and strong technique to make fabric such as a denim.
Non-woven are fibres that are fused, compressed and glued together to make fabrics such as felt.
Knitted is another technique to make fabric such as cotton.

Natural fibre	Properties
Cotton	Cool, cheap, strong, renewable, comfortable to wear, can withstand high temperatures
Wool	Soft, hardwearing, renewable
Silk	Expensive, drapes (hangs) well, renewable, good insulation properties (cool in summer, warm in winter)