



Safety.

It's important to be safe when making your Hugly. There are some Health and Safety rules you will need to follow to reduce the risk of accidents. Here are some of them:

- Tuck your chair in.
- Listen carefully to the teacher.
- Keep your bags and coats out of the way.
- Concentrate when using tools and machinery.
- Only one at a time on the sewing machine.
- Do not touch the sole plate on the iron.

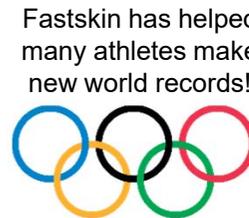
You will find out more rules when you are in the classroom.

Technical Fibres and Fabrics

Technical textiles are fibres and fabrics which have been developed for their performance, and functional properties. They are often made of microfibres (synthetic fibres up to 60 times finer than human hair)

Other types of Technical fabrics include those that are called Biomimetic. That means that they mimic (copy) nature in some way.

An example is Speedo's Fastskin® swimsuit, which was developed using V-shaped fibres which mimic the ridges found on the skin of a shark.



Fastskin has helped many athletes make new world records!

Key words

Techniques

Applique
Couching
Embroidery

Fabrics

Smart Fabric
Technical Fabric
Cotton
Silk
Wool
Linen

Tools

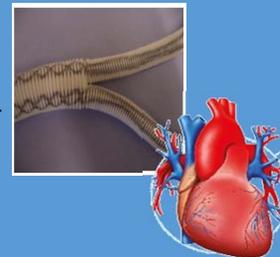
Sewing Machine
Iron
Scissors/Shears
Pin
Needle

Technical Fabrics Examples

High Visibility jackets use 3M retro- reflective tape. This works by concentrating the light source & reflecting it back.



Super stretchy polyester yarns knitted in tubes & used in artery replacement



Kevlar – used in body armour / bullet proof vests





Smart Fibres and Fabrics

Smart textiles can sense, react & adapt to the conditions around them.

For example, they can react to:

- Hot or cold temperature
- Light
- Pressure
- Moisture
- Time

Some smart materials meet a real need & have been developed for specific functions. Others are more of a novelty design feature.



Appliqué

A 'How to' Guide

1. Draw the shape you want to appliqué on onto a piece of tracing paper.
2. Cut out the tracing paper with paper scissors.
3. Rummage in the scraps box to find some fabric you would like to use as your appliqué piece.
4. Pin your paper shape onto your chosen fabric and cut round the outside with fabric shears.
5. Take the paper off, then glue your fabric shape onto your background fabric (eg apron/cushion/bag etc).
6. Using a zig-zag stitch, sew around the edge of your appliqué shape so the stitch is right on the edge.



Smart Fabrics Examples

D3o is a new innovation. It is a soft malleable material most of the time, but when it comes into contact with force, it hardens on impact.



Chemicals / Fragrances are captured in microscopic polymer bubbles which are added to natural fibres or microfibrils.



Thermo chromic textiles change colour with heat. They are engineered to change colour at a particular temperature.





Natural Fibres

Natural fibres are fibres that come from animals, plants or insects. They are not human made, but have been found in nature.

Wool could come from any hairy animal. It's mostly made from a sheep's fleece but could also come from goats, alpaca's, llamas and even the Angora rabbit. The wool is sheared off the animal- like having your hair cut. It's warm to wear and hardwearing too.



Cotton is the most widely used fibre and comes from a plant that grows in warm climates. It needs lots of water to grow, so isn't very sustainable. The soft fluffy 'boll' that holds the seeds is the part that is processed and made into cotton fabric. Cotton is used for a lot of items like T-shirts, Jeans, underwear and bedding.

Silk comes from the cocoon of a caterpillar called Bombyx Mori (usually called the silk worm, even though it's a caterpillar!) You need roughly 10,000 cocoons to make one silk shirt! Because silk is so expensive to make and buy, it's usually used for special occasion clothes like wedding dresses or expensive ties.



Linen comes from a plant called the Flax plant. The stalk is cut, then put in water so the soft parts rot away and the tough fibres are left behind. It's cool to wear so often used for summer clothes.

What are they made into?

Wool



Cotton



Silk



Linen

