

# WHAT ARE FIBRES?

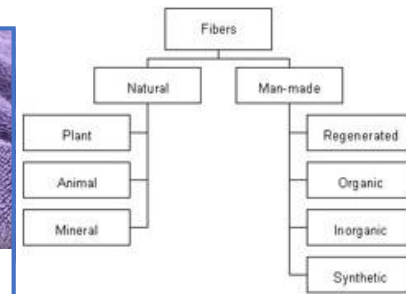
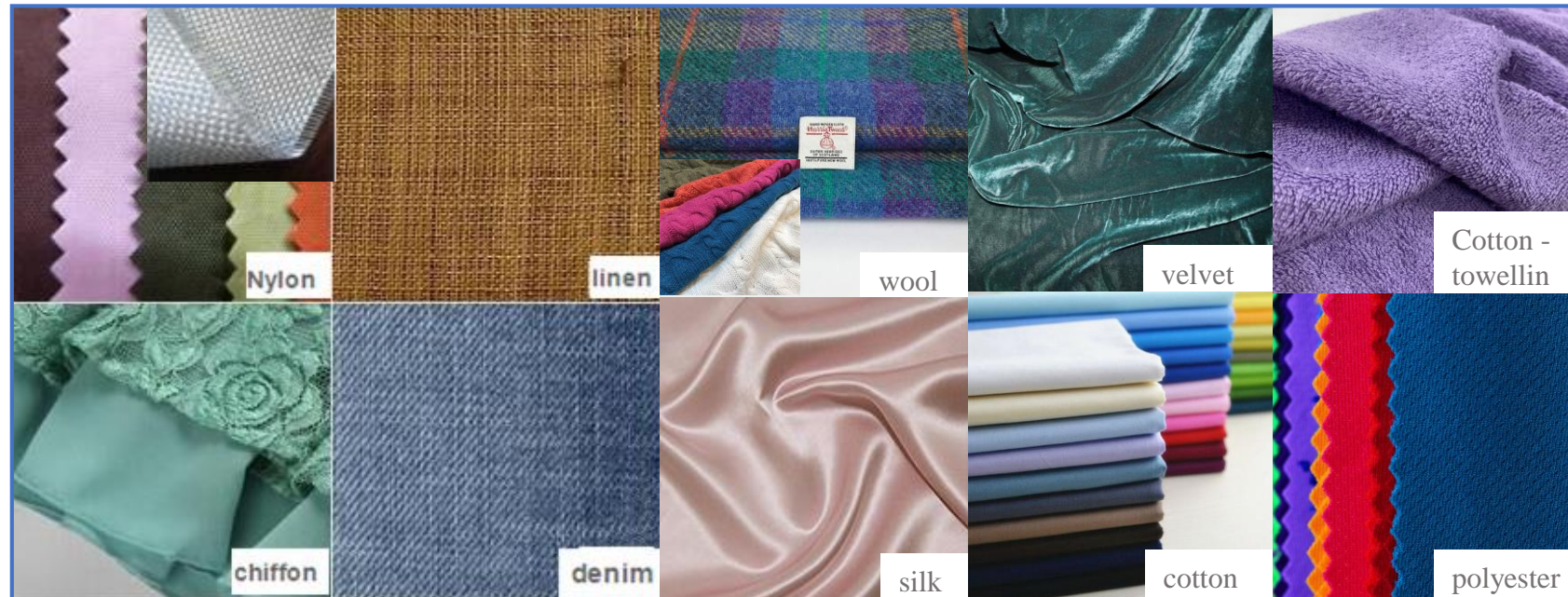
A fibre is thin hair-like structure that can be either long or short.

- Short fibres are called **staples** fibres. **Staple fibres need to be spun into yarns and tend to be slightly hairy in appearance.**
- Long continuous fibres are called **filament** fibres. **Filament fibres are long and give a smooth shiny finish to fabrics.**

All fabric come from fibres. On their own they are weak but when twisted into yarns they take on different properties.

# FIBRES AND FABRIC

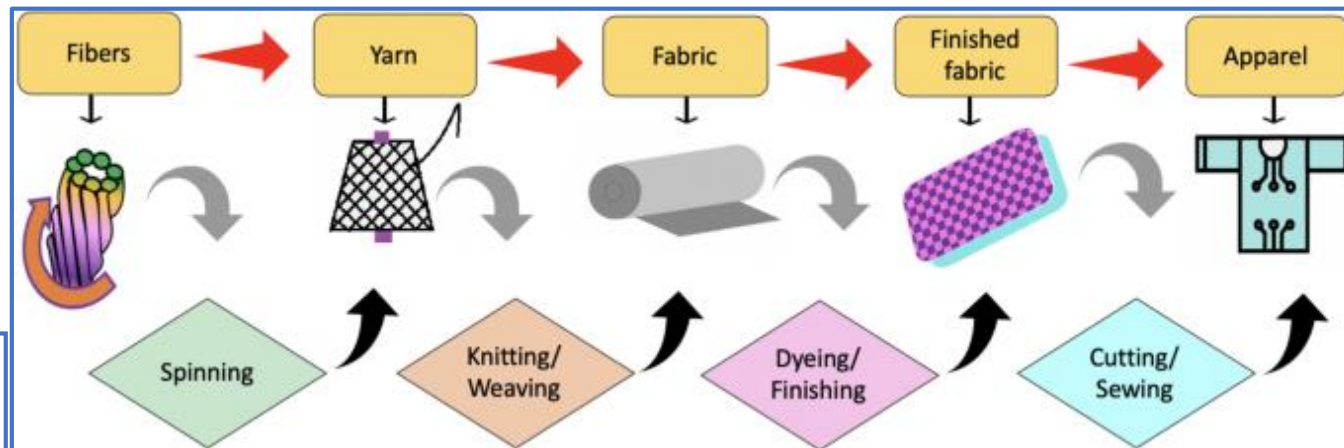
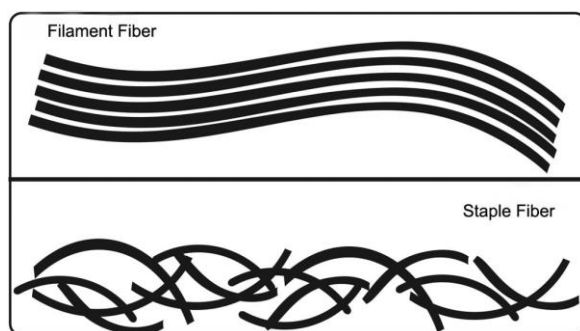
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## Smart/ Technical Textiles

**Technical textiles** are fibres & fabrics which have been developed for their performance, and functional properties, e.g. *performance sports wear, armed forces or medical industry.*

**Smart textiles** can sense, react & adapt to the conditions around them, light, hot/ cold.



Natural fibre from an animal	<b>Wool</b> USED FOR JUMPERS, SUITS AND BLANKETS AND HAS THE FOLLOWING QUALITIES: - WARM TO WEAR - ABSORBENT, DRIES SLOWLY - BREATHABLE, REPELS RAIN - SOFT OR COARSE HANDLE - CAN SHRINK, SHOULD BE DRY CLEANED - GOOD DRAPE - NOT DURABLE - CREASES DROP OUT	
Natural fibre from an animal	<b>Silk</b> USED FOR EVENING WEAR AND TIES AND HAS THE FOLLOWING QUALITIES: - WARM TO WEAR - ABSORBENT - SOFT HANDLE - GOOD LUSTRE AND DRAPE - DURABLE - CREASES DROP OUT - DRY CLEAN	
Natural fibre from a plant	<b>Cotton</b> USED FOR MAKING JEANS, T-SHIRTS AND TOWELS AND HAS THE FOLLOWING QUALITIES: - COOL TO WEAR - VERY ABSORBENT, DRIES SLOWLY - SOFT HANDLE - GOOD DRAPE - DURABLE - CREASES EASILY - CAN BE WASHED AND IRONED	

**Woven fabrics** are made on a **loom** and are made from a **weft** and a **warp**. The weft is the yarn that goes across the width of the fabric and the warp is along the length of the fabric.



In some types of weaving, the weft is doubled back on itself to form the **selvedge**. This is an edge of the fabric that does not fray. **Knitted fabrics** are made by looping together the yarn. There are two types, **weft knitted** (made by hand or machine) and **warp knitted** (made by machine).



Synthetic Fibre	<b>Viscose</b> A REGENERATED FIBRE FROM NATURAL POLYMER MATERIALS LIKE CELLULOSE. IT IS USED FOR SHIRTS, DRESSES AND LININGS AND HAS THE FOLLOWING QUALITIES: - LOW WARMTH - ABSORBENT, DRIES SLOWLY - SOFT HANDLE - GOOD DRAPE - NOT DURABLE - CREASES EASILY - CAN BE WASHED AND IRONED	
Synthetic Fibre	<b>Nylon</b> USED FOR ACTIVE SPORTSWEAR, FLEECE JACKETS, SOCKS AND SEAT BELTS AND HAS THE FOLLOWING QUALITIES: - WARM TO WEAR - ABSORBENT, DRIES SLOWLY - BREATHABLE, REPELS RAIN - SOFT OR COARSE HANDLE - CAN SHRINK, SHOULD BE DRY CLEANED - GOOD DRAPE - DURABLE - CREASES DROP OUT	
Synthetic Fibre	<b>Polyester</b> USED FOR RAINCOATS, FLEECE JACKETS, CHILDREN'S NIGHTWEAR, MEDICAL TEXTILES AND WORKING CLOTHES AND HAS THE FOLLOWING QUALITIES: - LOW WARMTH - NON-ABSORBENT, DRIES QUICKLY - SOFT HANDLE - GOOD DRAPE - VERY DURABLE - CREASE RESISTANT - EASY CARE - CAN BE RECYCLED	

Natural fibre from a plant	<b>Linen</b> USED FOR SUMMER CLOTHING, TEA TOWELS AND TABLECLOTHS AND HAS THE FOLLOWING QUALITIES: - FRESH AND COOL TO WEAR - VERY ABSORBENT, DRIES QUICKLY - STIFFER HANDLE - GOOD DRAPE - DURABLE - CREASES BADLY - CAN BE WASHED AND IRONED	
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