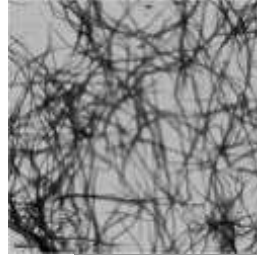


Design and Technology



YSGOL UWCHRADD DINBYCH
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FABRICS AND FIBRES

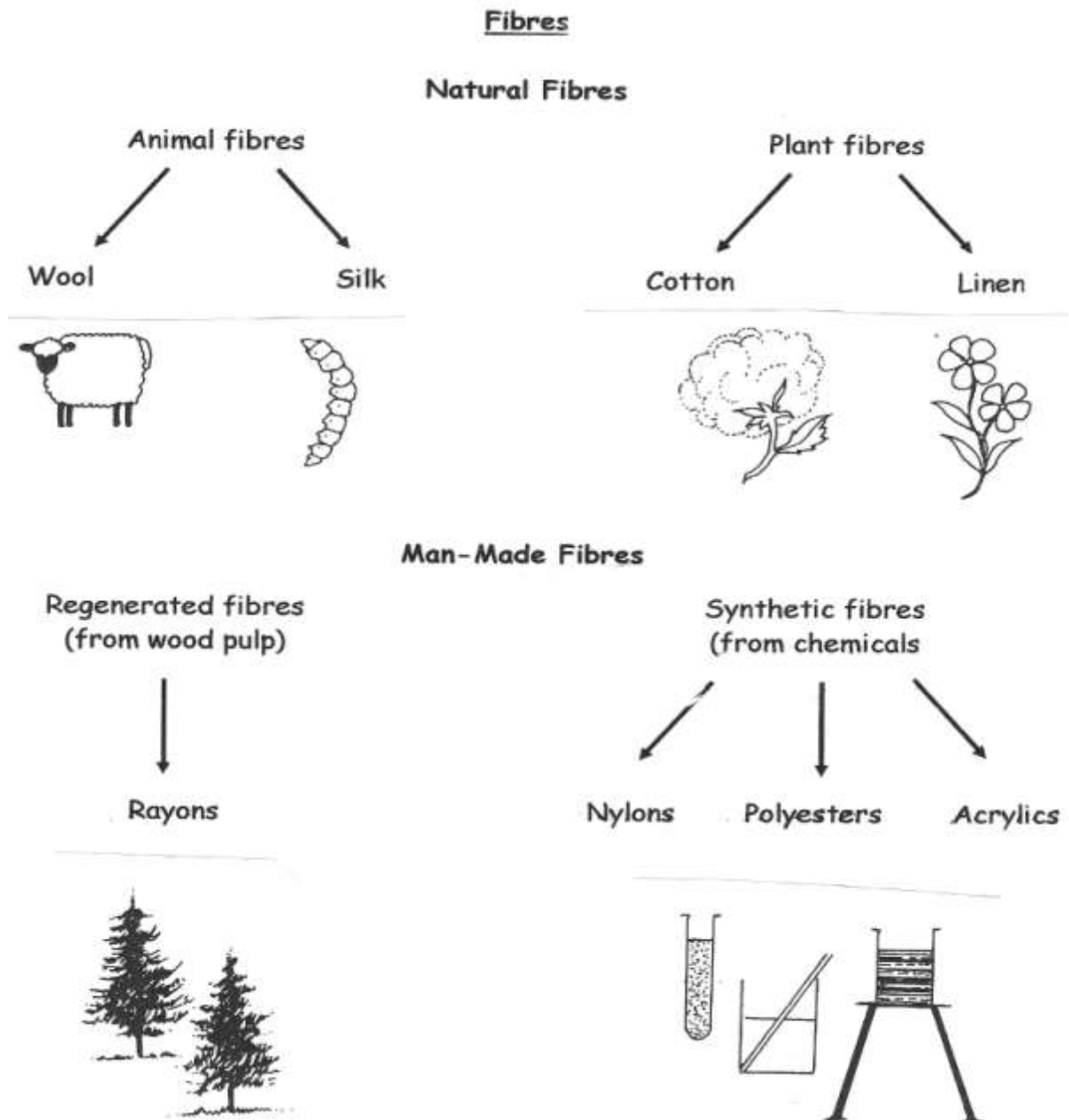


Research information booklet

Looking at fibres and fabrics

Where do fabrics come from?

Fabrics are manufactured from yarn, which is made from fibres, A fibre is the smallest element of a fabric; it looks rather like human hair. Fibres come from several sources; they are either natural or manufactured.



Natural fibres come from animals or plants. Manufactured fibres come from two different sources. Either from natural fibres, or minerals such as oil or coal which have chemicals added to them. These are referred to as regenerated fibres or by combining chemicals to produce fabrics.

How are fabrics made?

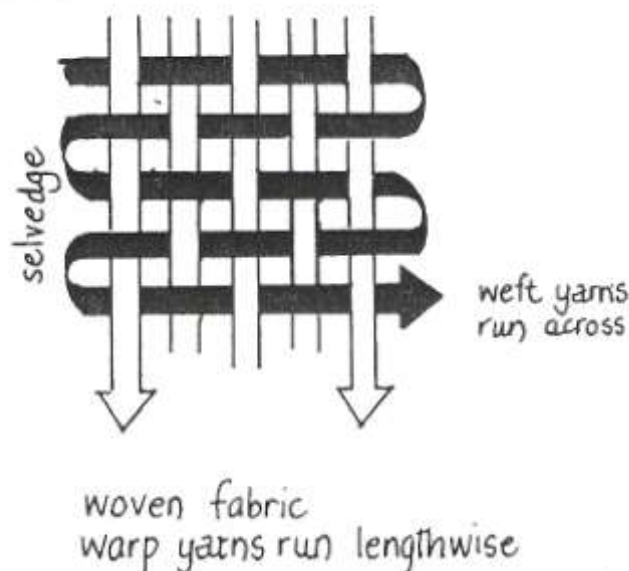
Before a fabric can be manufactured, a yarn has to be produced. Yarns are made from fibres. Each fibre has its own set of properties, and each method of making a fabric has its own set of characteristics. The fibre and a method of making a fabric combine together to produce fabrics that are suitable for very different uses. There are three main methods used to manufacture fabrics:

- Weaving
- Knitting
- Bonding

Natural fibres are usually short and known as staple fibres. Manufactured fibres are known as continuous filament fibres. Micro-fibres are fibres that are manufactured so they are ten times finer than human hair. These fine fibres are used to make modern fabrics, often from a manufactured source.

Weaving

A woven fabric is very strong. Woven fabrics are made from weaving two yarns together, using a loom. The yarn that is used from the top to the bottom of the loom is the warp thread. The yarn that goes under the warp yarn is known as the weft thread. Where the weft thread turns around at the edge of a fabric it is known as the selvedge.

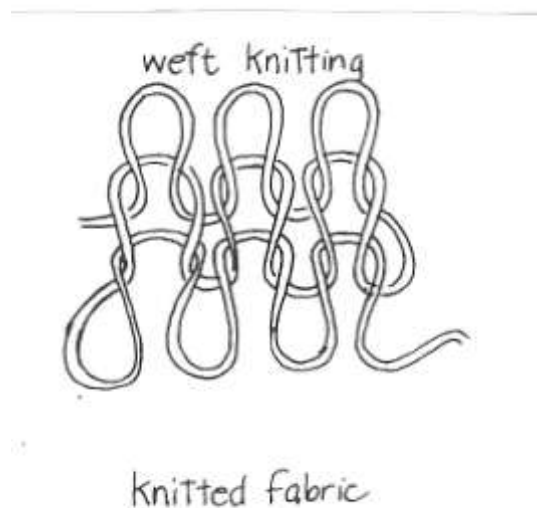


Knitting

A knitted fabric is a stretchy fabric. Knitting is forming loops on a set of needles and pulling a thread through the loops.

There are two main methods of knitting.

- ◆ Weft knitting is where loops interlock across the width of the fabric.
- ◆ Warp knitting can only be produced on a knitting machine. This is where the yarns themselves are interlocked along the length of the fabric and both sides of the fabric look identical.



Bonding

A bonded fabric is a weak fabric. Fibres are bonded together by heating, gluing or stitching the fibres together. A bonded fabric has no weft or warp threads and no right or wrong side. They are usually inexpensive fabrics that do not fray, such as felt or stitch and tear Vilene.