



TEXTILES

<https://www.youtube.com/watch?v=xj2zxJicgGA>



Provenance:

Since ancient times, people have felt the need to protect their bodies from environmental conditions. The first materials used were the furs of hunted wild animals.

Over time, people began to grow textile plants and raise animals, thus obtaining textile fibers.



<https://blog.scienceandindustry.muse.org.uk/sustainability-in-modern-textiles/>

Textile fibers are solid bodies having an approximately cylindrical shape, from which textile yarns are obtained.

Through the process of spinning (manual) or spinning (industrial) the threads are obtained.

Yarns are long and thin textile products, obtained by twisting several fibers.



**Textile
fibers**

spinning



spinning

**Textile
yarns**



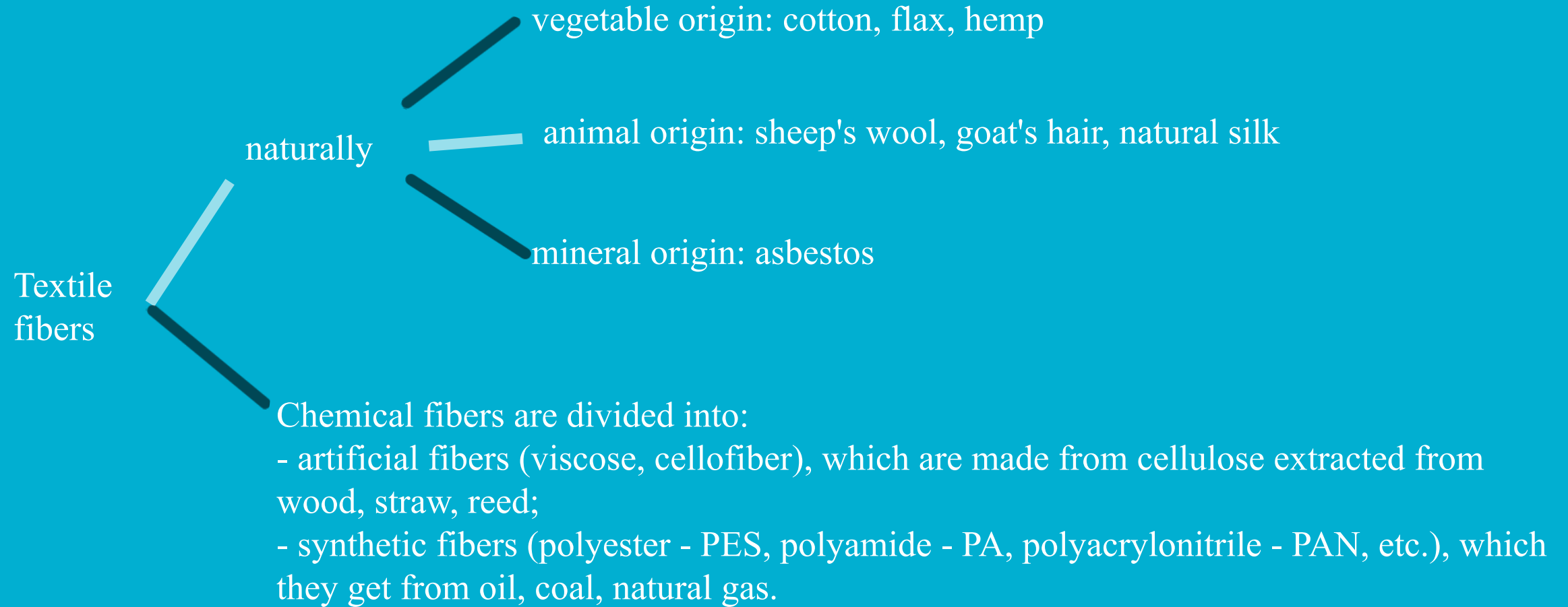
Threads can be obtained manually, by spinning using the spindle and fork; the operation is still performed today in villages in certain areas of the country, where woolen threads are usually obtained.



The technological process of spinning is carried out in specialized enterprises called spinning.



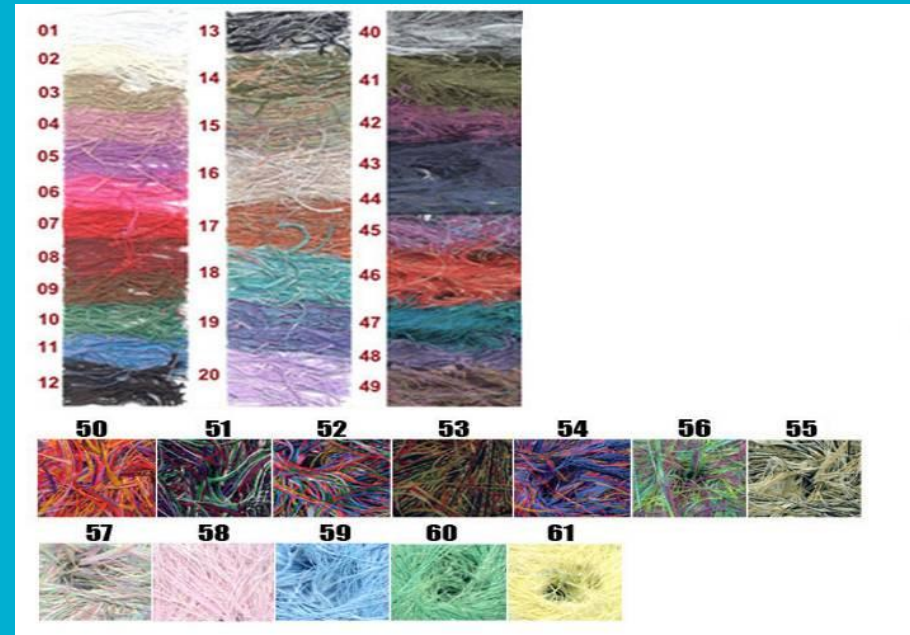
Classification of textile fibres:



Cotton



Linen



Hemp:



Material textile:

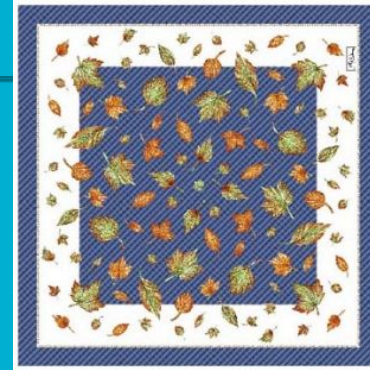
Textile yarns have the same nature as fibers, being of the cotton type, of the wool type, of the silk type, etc. Most of the yarns are used for: obtaining fabrics and knits.

FABRICS are textiles obtained by intersecting warp yarns with weft yarns at right angles.

The warp threads are arranged along the length of the fabric;

Weft threads are arranged in the width of the fabric.

KNITWEAR are textile materials obtained from yarns transformed into stitches and chained in a certain order.



Fabrics



Knits

Weaving is done with the help of looms.

The operation of obtaining knits is called knitting and is done manually or mechanically with knitting machines.

In the households of people from certain areas of our country, weaving and knitting are still practiced today.



Properties:

a. Gloss: represents the ability of fibers to scatter light. Silk threads are the most glossy.

b. Color: the color of the fibers depends on the degree of natural pigmentation.

c. Length: expressed in mm.

- short fibers: cotton;

- long fibers: linen, hemp.

d. Elasticity: the property of fibers to return to their original shape after stretching
The wool has the best elasticity, and the lowest, the wool fibers
hemp.

e. Hygroscopicity: is the property of fibers to retain water in the atmosphere. Most
wool has great hygroscopicity.

f. Strength: is the property of textiles to resist breaking. High strength o
they have natural yarn fabrics (linen, hemp).

g. Fineness: represents the degree of thinness of the fibers and is expressed by the ratio between the
length of the fibers (in meters) and the mass of the fibers (in grams). This ratio is called the metric
number and is denoted by Nm. $Nm = L (m) / M (g)$.





THANK YOU!