

TOPIC: FIBRE TO FABRIC

In continuation of previous worksheet

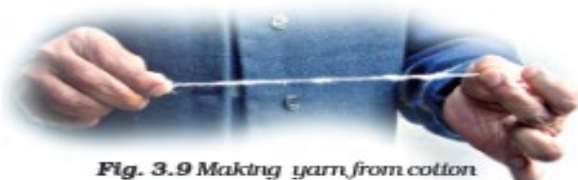


Fig. 3.9 Making yarn from cotton

To make fabrics, all these fibres are first converted into **yarns**. How is it done?

### 3.4 SPINNING COTTON YARN

You can try making cotton yarn yourself.

#### Activity 4

Hold some cotton wool in one hand. Pinch some cotton between the thumb and forefinger of the other hand. Now, gently start pulling out the cotton, while continuously twisting the fibres (Fig. 3.9). Are you able to make a yarn?

The process of making yarn from fibres is called **spinning**. In this process, fibres from a mass of cotton wool are drawn out and twisted. This brings the fibres together to form a yarn.

A simple device used for spinning is a hand spindle, also called *takli* (Fig. 3.10). Another hand operated device used for spinning is *charkha* (Fig. 3.11). Use of *charkha* was popularised by Mahatma Gandhi as part of the Independence movement. He encouraged people to wear



Fig. 3.10  
A Takli



Fig. 3.11 Charkha

clothes made of homespun yarn termed as *khadi* and shun imported cloth made in the mills of Britain. To popularise and promote *khadi*, the Government of India constituted a body called Khadi and Village Industries Commission in 1956.

Spinning of yarn on a large scale is done with the help of spinning machines. After spinning, yarns are used for making fabrics.

### 3.5 YARN TO FABRIC

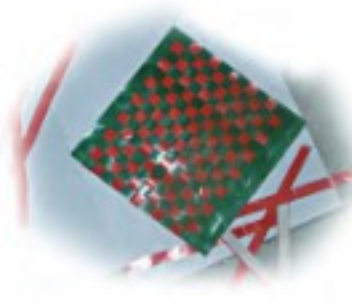
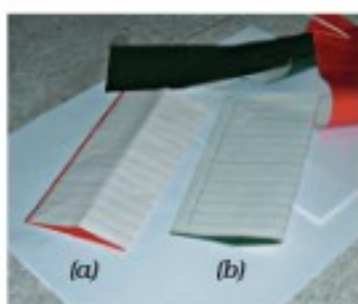
There are many ways by which fabrics are made from yarns. The two main processes are weaving and knitting.

#### Weaving

In Activity 2, you might have noticed that a fabric is made up of two sets of yarns arranged together. The process of arranging two sets of yarns together to make a fabric is called **weaving**. Let us try to weave some paper strips.

#### Activity 5

Take two sheets of paper of different colours. Cut square pieces of length and width equal to 30 cm from each sheet. Now, fold both the sheets into half. On one sheet draw lines as shown in the



**Fig. 3.12 Weaving with paper strips**

Fig 3.12 (a) and on the other as shown in Fig.3.12 (b). Cut both the sheets along the dotted lines and then unfold. Weave the strips one by one through the cuts in the sheet of paper as shown in Fig.3.12 (c). Fig. 3.12 (d) shows the pattern after weaving all the strips.



**Fig. 3.13 Handloom**

In a similar manner, two sets of yarn are woven to make a fabric. The yarns are much thinner than our paper strips, of course! Weaving of fabric is done on **looms** (Fig. 3.13). The looms are either hand operated or power operated.

### Knitting

Have you noticed how sweaters are knitted? In **knitting**, a single yarn is



**Fig 3.14 Knitting**

used to make a piece of fabric (Fig. 3.14). Have you ever pulled the yarn from a torn pair of socks? What happens? A single yarn gets pulled out continuously as the fabric gets unravelled. Socks and many other clothing items are made of knitted fabrics. Knitting is done by hand and also on machines.

Paheli wants to know if you have seen any fabrics that are made of the fibres on the outer covering of coconut. What are these fibres normally used for?





Weaving and knitting are used for making different kinds of fabric. These fabrics are used for a variety of clothing items.

### 3.6 HISTORY OF CLOTHING MATERIAL

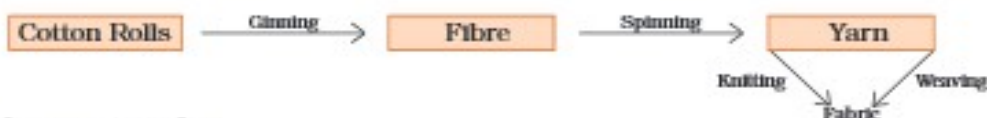
Have you ever wondered what materials people used in ancient times for clothes? It appears that in those times people used the bark and big leaves of trees or animal skins and furs to cover themselves.

After people began to settle in agricultural communities, they learnt to weave twigs and grass into mats and baskets. Vines, animal fleece or hair were twisted together into long strands. These were woven into fabrics. The early Indians wore fabrics made out of cotton that grew in the regions near the river Ganga. Flax

is also a plant that gives natural fibres. In ancient Egypt, cotton as well as flax were cultivated near the river Nile and were used for making fabrics.

In those days, stitching was not known. People simply draped the fabrics around different parts of their body. Many different ways of draping fabrics were used. With the invention of the sewing needle, people started stitching fabrics to make clothes. Stitched clothes have gone through many variations since this invention. But, is it not amazing that even today *saree*, *dhott*, *lungi* or turban is used as an un-stitched piece of fabric?

Just as there is a large variety in the food eaten all over our country, a large variety exists also in fabrics and clothing items.



#### Key words

Cotton wool

Fabric

Fibre

Knitting

Spinning

Weaving

Yarn



#### Summary

- There is a variety of clothing material or fabric, such as, cotton, silk, wool and polyester.

Follow the link given below:

<https://youtu.be/CxvNiyMmk4>

**SUMMARY:-**

- The fabrics are made from fibres.
- The fibres are first converted to yarn by the process of spinning.
- Fabric is made from yarn by the process of weaving or knitting.
- Weaving requires two sets of yarn arranged at right angles to one another.
- In knitting single yarn is required to make the fabric.

Now answer some questions based on the above topic

**Q1- Define the following terms:**

- a. Spinning It is the process of making yarn from fibres.
- b. Weaving the process of arranging two sets of yarn together to make a fabric is weaving.
- c. Retting it is the process in which stems of the jute plant are rotten in water to remove a sticky substance and separate fibres.

**Q2- Name the tools used for performing the following:-**

- a. Ginning comb, machines
- b. Spinning Takli [HAND SPINDLE], charkha
- c. Weaving handloom, powerloom
- d. Knitting knitting needle, machine

Q3- How are jute fibres are obtained from jute plant?

1. the jute plant are harvested at the flowering stage.

2. the stems of the harvested plant are kept in water.

3. after this, stems rot and the fibre is left.

Q4- How do people in ancient times covered their body ?

people in ancient times used to cover their bodies from

big leaves of plant , animal skin and fur.

Q5- Explain the process of making yarn from fibres.

1 the process of making yarns from fibres is done by spinning.

2. fibre is drawn from source and twisted into yarn.

3. two devices used in this process are charkha and spindle.

**Answer key:**

Ans1. a Spinning- The process of making yarn from fibres is called spinning.

b Weaving- The process of arranging two sets of yarns together to make a fabric is called weaving.

c Retting – It is a process in which the stems of the jute plant are rotten in water in order to remove sticky substance and separate fibres.

Ans2. a comb, machines

b charkha, hand spindle (takli)

c power loom, handloom

d knitting needles, machines

Ans3. 1. The jute plants are harvested at flowering stage.

2. The stems of the harvested plants are immersed in water for a few days.

3. During this time , stems rot and the fibres are left behind.

Ans4. People in ancient times used to cover their body by using bark, big leaves of trees, animals skin and fur .

Ans 5. 1. The process of making yarns from fibre is called spinning.

2. In this process , fibre is first drawn out from their source and then twisted into yarn.

3. Two devices used in spinning are charkha and spindle (takli).

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