

25/11/20

Sub-Science

CLASS-VI

CHAPTER-3 (Fibre to fabric)

* Write Q/A in f/c.

Q6: Give name of some animals which give wool.
Ans: Sheep, Goat, Camel, rabbit, yak etc.

Q7: What is ginning?
Ans: The separation of fibres from seeds, is called ginning. Eg. Separation of cotton from cotton seed.

Q8: What is spinning?
Ans: The process of making yarn from fibres is called spinning.

Q9: What is weaving?
Ans: The process of arranging two sets of yarn together to make a fabric is called weaving.

Q10: From which part of plant cotton & jute are obtained?
Ans: Cotton → from fruit of plant.
Jute → from stem of plant.

Q11: Write down name of some fabrics which are used in - stitched?
Ans: saree, shoti, lungi and kurban etc.

substances, which are not obtained from plant or animal sources. These are called **synthetic fibres**. Some examples of synthetic fibres are polyester, nylon and acrylic.

3.3 SOME PLANT FIBRES

Cotton

Have you ever made wicks for oil lamps? What do you use for making these wicks? This cotton wool is also used for filling mattresses, quilts or pillows.

Take some cotton wool, pull it apart and look at its edges. What do you observe? The small, thin strands that you see are made up of cotton fibres.

Where does this cotton wool come from? It is grown in the fields. Cotton plants are usually grown at places having black soil and warm climate. Can you name some states of our country where cotton is grown? The fruits of the cotton plant (**cotton bolls**) are about the size of a lemon. After maturing, the bolls burst open and the seeds covered with cotton fibres can be seen. Have you ever



Fig. 3.6 Field of cotton plants

seen a cotton field that is ready for picking? It looks like a field covered with snow (Fig. 3.6).

From these bolls, cotton is usually picked by hand. Fibres are then separated from the seeds by **combing**. This process is called **ginning** of cotton. Ginning was traditionally done by hand (Fig. 3.7). These days, machines are also used for ginning.



Fig. 3.7 Ginning of cotton

Jute

Jute fibre is obtained from the stem of the jute plant (Fig 3.8). It is cultivated during the rainy season. In India, jute is mainly grown in West Bengal, Bihar and Assam. The jute plant is normally harvested when it is at flowering stage. The stems of the harvested plants are immersed in water for a few days. The stems rot and fibres are separated by hand.



Fig. 3.8

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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