8 Clothes: How Things Are Made

Chapter Notes:

Patterns with Threads

- Nature is full of artists like birds, insects and animals who weave and create beautiful structures.
- **Example**: The baya weaver bird makes hanging nests from grass by weaving strands **over** and **under**.
- Weaving means crossing strips or threads over and under each other to form things like **mats, baskets, cloth.**
- Natural materials used for weaving earlier: **coconut fibre, palm reeds, bamboo, grass, jute, cotton, silk.**

Weaving – What It Means

- When threads are woven instead of paper strips, they form **cloth**.
- In cloth weaving:
  - Vertical threads = **warp**
  - Horizontal threads = **weft**
- Through a magnifying glass, cloth looks like a **criss-cross** pattern.

Handloom Weaving (Traditions of India)

- People in India knew weaving **4,000 years ago.**
- Traditional weaving is done on a **loom**.
- Hand-woven cloth is called **handloom fabric.**
- Famous handloom traditions:
  - **Kanjeevaram** (Tamil Nadu)
  - **Pashmina** (Kashmir)
  - **Ikat** (Odisha & Gujarat)
- Weaving provides livelihood to lakhs of people and preserves our culture.
- **Textile Mills :-** Textile mills use modern machines to spin thread and weave cloth in **large quantities**.

Thread – How It Is Made (Spinning)

- Cotton fibres are twisted together to make **thread or yarn.**
- This process is called **spinning**.
- A **charkha** or spinning wheel helps in spinning.
- A fibre is the thin, hair-like strand that forms thread.
- Khadi and Self-Reliance
  - Gandhiji encouraged Indians to spin their own thread and weave cloth.
  - This symbolised **self-sufficiency and freedom.**
  - Cloth made this way is called **khadi**.

Types of Fibres

A. Natural Fibres

- Obtained from plants and animals.
- **Examples**: Cotton, jute, linen – from plants, Wool – from sheep, Silk – from cocoons of silk moth
- **Life cycle of silk moth:**
  1. Silk moth lays eggs
  2. Eggs hatch into caterpillars
  3. Caterpillars eat mulberry leaves and grow
  4. They spin cocoons
  5. Adult moth comes out
  6. Cycle begins again

B. Synthetic Fibres

- Made by humans (artificial).
- **Examples**: Rayon, Nylon, Polyester, Terylene

Crafting with Needle and Thread (Stitching)

- Tailorbird stitches big leaves to make nests using plant fibres or spider silk.
- Stitching joins pieces of cloth.
- Running Stitch (Basic Stitch):
  - Simple stitch made by moving needle **up and down** in a straight line.
  - Used for joining two pieces of cloth.

Stitch and Decorate

Traditional Embroideries of India and Their Origin

Embroidery	State / Region
• Chikankari	- Uttar Pradesh (Lucknow)
• Banjara	- Rajasthan
• Kantha	- Bengal, Odisha, Tripura
• Gota	- Rajasthan
• Phulkari	- Punjab
• Toda	- Tamil Nadu
• Kashmiri	- Kashmir
• Khneng	- Meghalaya

- These stitches are used to decorate clothes beautifully.

Recycling and Reuse of Clothes

- Old clothes are rarely thrown away in India.
- They are reused, passed on, or made into: **quilts, mats, cleaning cloth, bags**
- This reduces waste and saves resources.

Exhibition Activity

- Children can make mats, stitched cloth pieces, and plate/spoon with leaves.
- Display them with labels and short notes.

New Terms

New Term	Meaning
• **Weaving**	- Making cloth by crossing threads over and under each other.
• **Thread / Yarn**	- Long strands made by twisting fibres together.
• **Fibre**	- Thin hair-like strands used to make thread.
• **Natural Fibres**	- Fibres from plants or animals (cotton, jute, silk, wool).
• **Synthetic Fibres**	- Man-made fibres from chemicals (nylon, polyester, rayon).
• **Spinning**	- Twisting fibres to make thread.
• **Charkha**	- A spinning wheel used to make thread from cotton.
• **Loom**	- A device or machine used for weaving cloth.
• **Handloom**	- Cloth woven by hand on a loom.
• **Muslin**	- A very fine cotton fabric, known as “woven air”.
• **Khadi**	- Hand-spun, hand-woven cloth promoted by Gandhiji.
• **Embroidery**	- Decorative stitching done on fabric.
• **Running Stitch**	- A simple up-and-down stitch used to join cloth pieces.
• **Cocoon**	- Covering made by a caterpillar; silk threads come from this.
• **Life Cycle**	- Stages of growth of a living thing
• **Recycling**	- Reusing old materials to make new things.
• **Tailorbird**	- A bird that stitches leaves to make its nest.
• **Warp**	- Vertical threads used in weaving.
• **Weft**	- Horizontal threads used in weaving.

Patterns with Threads

Q. What do you see in the picture below? Did you know we have a hidden artist around us who has been weaving long before humans ever did?

Answer: In the picture, I can see the baya weaver bird's nest, which is beautifully woven and hangs from a tree. This shows that the weaverbird is a hidden artist that has been weaving strong and neat nests long before humans learned to weave. The bird uses grass and plant fibres to create its home.

Discuss

Q. Have you seen products woven out of natural material at home or elsewhere? What are they?

Answer: Yes, I have seen many products woven out of natural materials. Some examples are bamboo baskets, jute bags, mats made from grass, cane chairs, and coconut-leaf baskets. These items are strong, eco-friendly, and commonly used in many homes.

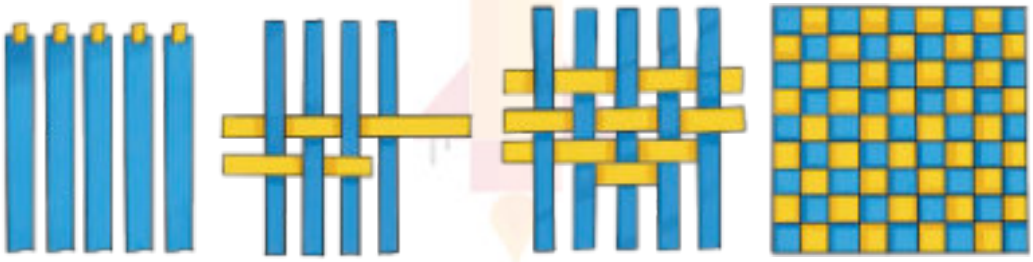
Activity 1

1. Take 5–6 strips of blue paper and tape them at the top of a surface.

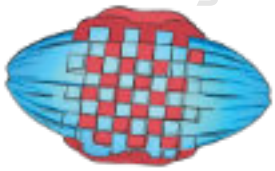
2. Take another set of yellow paper strips and weave them through—over, under, over, under.

3. Keep repeating until you get a mat.

4. Can you use this method to make a basket?



Try using materials other than paper, such as strings, ropes, ribbons or reeds.



Answer: Yes, this weaving method can also be used to make a basket. By weaving the strips tightly and folding or shaping them upwards, we can create the sides of a **basket. Instead of paper, we can also use strings, ropes, ribbons, reeds, or thin bamboo strips** to make a stronger and more durable basket.

Think

Q. What can you find in your classroom that is woven? If we weave with threads instead of paper strips, it becomes cloth.

Answer: In the classroom, we can find many woven things such as mats, chair seats, baskets, and sometimes window curtains. These items are made by weaving strips or fibres. When the same weaving method is done using threads instead of paper strips, it forms cloth.

Activity 2

Q. Look at a piece of cloth through a magnifying glass or by using zoom on a mobile phone camera. It could be a shirt or something you are wearing. Can you see the amazing criss-cross pattern?

Answer: Yes, when I look at a piece of cloth closely using a magnifying glass or mobile zoom, I can clearly see a criss-cross pattern. The threads run over and under each other in both directions. This pattern shows how the cloth is woven using vertical and horizontal threads.

Activity 3

- **Take a ball of cotton and gently pull it out to make a strand.**
- **Now, try twisting the strand slowly with your fingers. Notice how it becomes stronger as you pull it in a spin.**
- **Take a pencil. Now, wind your cotton strand onto your pencil, by twisting and adding more cotton to your ball.**

Answer: When I gently pull the cotton, it forms a thin strand. As I twist the strand with my fingers, I notice that it becomes stronger and tighter. This twisted strand starts to look like thread or yarn. When I wind the twisted cotton around a pencil and keep adding more cotton, it becomes a long, continuous thread. This shows how spinning turns loose cotton fibres into a strong thread.

Think

Q. What happens if you use thinner or thicker rubber bands? Do they sound different?

Answer: Yes, they sound different. Thinner rubber bands make a higher-pitched (sharper) sound, while thicker rubber bands make a lower- pitched (deeper) sound.

Activity 4

Look at some clothes, bags or other things you use every day. List some of the materials that you have used. Are they made from natural or synthetic fibres? Then, write one thing you like about it in the table below. Item Natural Synthetic What I Like About It?

Answer:

Item	Natural	Synthetic	What I Like About It
• Cotton T-shirt	✓	✓	- It feels soft and comfortable.
• School Bag	×	✓ (polyester/nylon)	- It is strong and lasts long.
• Woollen Sweater	✓	×	- It keeps me warm in winter.
• Raincoat	×	✓ (plastic/nylon)	- It protects me from rain.
• Jute Shopping Bag	✓	×	- It is eco-friendly and reusable.

Activity 5

In small groups, collect fresh leaves of palash, teak, jackfruit or similar broad leaves. If leaves are not available, try using paper.

Also, collect some small twigs like toothpicks.

Now, using the leaves or pieces of paper and the toothpicks, pin them together to create a plate or a spoon.

Answer: We collected broad leaves and small twigs (toothpicks). By carefully pinning the leaves together, we were able to make a plate. The leaves overlapped and were held firmly with the toothpicks. We also tried shaping a single leaf and fixing it with a twig to create a spoon-like shape. This activity showed how natural materials can be joined together to make useful items.

Activity 6

Q. Have you ever tried stitching? You will need a needle and thread to stitch a piece of fabric together. Can you fix a tear or sew a button? Let us learn simple stitching.

Answer: Yes, I have tried stitching. Using a needle and thread, I can do simple stitches. I can fix a small tear and also sew a button onto a piece of cloth. With practice, stitching becomes easier and helps in repairing clothes at home.

Think

1. **Have you ever seen someone stitching at home or in your neighbourhood? What were they making or fixing?**

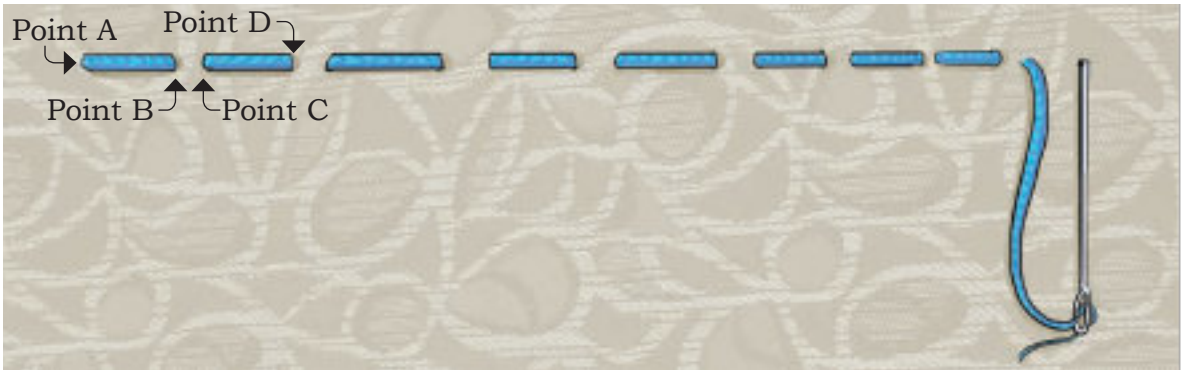
Answer: Yes, I have seen people stitching at home and in my neighbourhood. They were usually fixing torn clothes, sewing buttons, repairing school uniforms, or stitching small bags and pillow covers.

2. **Look at your shirt or school bag. Can you find where the pieces have been stitched together?**

Answer: Yes, I can see the stitching clearly. On my shirt, the pieces are stitched together at the sleeves, collar, sides, and buttons. On my school bag, the stitching is visible on the straps, pockets, zippers, and sides, where different parts of the bag are joined.

Activity 7

Let us begin by learning the basic running stitch.



1. Take a piece of thread through a needle. Tie a knot at one end of the thread.

2. Start from the back of the cloth. Bring the needle up at Point A.

3. Push the needle down at Point B.

4. Bring it up at Point C, then down at Point D.

5. Keep going—up, down, up, down—in a straight line.

6. This is called a running stitch.

Answer: When I followed the steps—bringing the needle up at Point A, down at Point B, up at Point C, and down at Point D—I noticed that the thread formed a straight line of small, even stitches. By repeating the motion of up and down, the stitches continued in a neat pattern. This simple and continuous line of stitches is called a running stitch, which is commonly used for joining pieces of cloth.

Activity 8

Stitching Clothes Together

Now, let us use this stitch to bring two pieces of cloth together.

1. Collect small cloth pieces left over at a tailor's shop or some pieces of old cloth.

2. Lay one piece of cloth flat on the table. Place the second piece of cloth on top of it, slightly overlapping it.

3. Now, use a needle and thread to do a simple running stitch to join them together.

4. Add more pieces to create a table cloth, mat, coaster, cleaning cloth or any material of your interest.

Answer: I collected small pieces of cloth and placed one piece slightly overlapping the other. Then I used a needle and thread to make a running stitch along the overlapping part. As I stitched, I observed that the two pieces became firmly joined together. When I added more pieces, the cloth grew bigger, and I was able to create a small mat (you may also create a tablecloth, coaster, or cleaning cloth).

This activity showed me how stitching helps join different cloth pieces to make useful items.

1. Where else can we use running stitches in daily life?

Answer: We can use running stitches in many daily-life tasks such as repairing torn clothes, sewing buttons, attaching patches, stitching small bags, hemming handkerchiefs, and making simple craft items.

2. If one thread breaks in your stitching, what do you think will happen to the rest of the stitches?

Answer: If one thread breaks, the rest of the stitches may loosen or open up because all stitches are connected in a line. The cloth may start to come apart from that place unless it is repaired quickly.

Let us reflect

1. Have you ever reused or recycled an old piece of cloth? What did you or your family make from it?

Answer: Yes, we have reused old clothes at home. My family has made cleaning cloths, small bags, pillow covers, and quilts from old pieces of cloth instead of throwing them away.

2. If one thread breaks in a stitched cloth or in a woven mat, what might happen? Why is each thread important?

Answer: If one thread breaks, the cloth or mat may start to open up or become loose. Each thread is important because all the threads hold the cloth together and give it strength and shape.

3. Visit a tailor's shop or a handloom store with an adult. What tools or machines did you see being used there?

Answer: At the tailor's shop, I saw tools like scissors, measuring tape, needles, thread, sewing machine, chalk, pins, and cloth pieces.

In a handloom store, I saw looms, shuttles, bobbins, yarn, and spinning wheels.

4. Find out what kind of weaving or stitching work is famous in your area or state. Name it.

Answer: In my state, the famous weaving/stitching work is (Example: Phulkari in Punjab / Chikankari in Uttar Pradesh / Ikat in Odisha / Kanjeevaram in Tamil Nadu / Bandhani in Gujarat or Rajasthan).

5. We should not throw the old clothes away. Why?

Answer: We should not throw old clothes away because they can be reused or recycled, which helps in reducing waste, saving resources, and protecting the environment. Old clothes can also be given to someone who needs them.

6. Below are the jumbled-up steps of the life cycle of a moth. Read and number them from 1 to 6 in the correct order.

1. **Adult moth comes out of the cocoon.**
2. **Eggs hatch into tiny caterpillars.**
3. **Silk moth lays eggs.**
4. **The cycle begins again.**
5. **Caterpillars eat mulberry leaves and grow big.**
6. **Caterpillars spin cocoons around themselves.**

Answer: Life Cycle of a Moth – Correct Order

3. Silk moth lays eggs.
2. Eggs hatch into tiny caterpillars.
5. Caterpillars eat mulberry leaves and grow big.
6. Caterpillars spin cocoons around themselves.
1. Adult moth comes out of the cocoon.
4. The cycle begins again.

7. Bring 5–6 pieces of different types of clothes from home or nearby tailors (leftover scraps). Observe the material closely and complete the table. Ask an elder or search in your book to find out whether it is made from cotton, wool, silk, jute, polyester or nylon.

Answer:

Cloth Piece No.	How Does It Feel? (Smooth/Rough)	Thick / Thin	Shiny (Yes/No)	Stretchy (Yes/No)	What Do You Think It Is Made Of?
1	Smooth	Thin	No	No	Cotton
2	Rough	Thick	No	No	Wool
3	Smooth	Thin	Yes	No	Silk
4	Rough	Thick	No	No	Jute
5	Smooth	Thin	No	Yes	Polyester/Nylon