Chapter 8: Clothes — How Things are Made

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Exercise 8.1 — Have you seen products woven out of natural material?

Q1 Have you seen products woven out of natural material at home or elsewhere? What are they?

SOLUTION

Yes. Common woven products made from natural materials include mats and baskets woven from bamboo, cane, or grass; bags made from jute; coconut fibre door mats; palm leaf fans; and cotton or silk cloth used for clothing.

Answer: Yes. Examples include bamboo mats, cane baskets, jute bags, coconut fibre mats, and cotton or silk cloth. (Answers will vary based on what students have seen at home.)

Exercise 8.2 — Activity 1 — Make a paper mat

Q1 Activity 1: Weave a mat using paper strips. Can you use this method to make a basket?

SOLUTION

Guidance: Tape 5-6 blue paper strips vertically. Weave yellow strips horizontally — over, under, over, under — until a mat forms.

To make a basket: after completing the flat mat base, fold up the extra strip ends along all four sides and weave additional strips around them to form the walls. Secure the top edges by folding them inward.

Answer: Yes, the over-under weaving method can be used to make a basket by folding the edges up and weaving strips around the sides after completing the flat base.

Exercise 8.3 — Discuss — Woven things in the classroom

Q1 What can you find in your classroom that is woven?

SOLUTION

In a classroom, woven items may include: cane or plastic chairs, the fabric of school bags, the uniform cloth, curtains, a mat on the floor, or a basket used for waste.

Answer: Woven items in a classroom may include chairs made of cane, school bag fabric, curtain cloth, or a floor mat. (Answers will vary.)

Exercise 8.4 — Activity 2 — Look at cloth through a magnifying glass

Q1 Activity 2: Look at a piece of cloth through a magnifying glass or camera zoom. What do you see?

SOLUTION

Guidance: Hold a piece of cloth (shirt or uniform) up to a magnifying glass or zoom in with a phone camera.

You will see a criss-cross pattern of threads — one set running lengthwise (vertically) and another set running crosswise (horizontally), interlocked over and under each other to form the fabric.

Answer: You can see a criss-cross pattern of threads woven over and under each other, forming the cloth.

Exercise 8.5 — Activity 3 — Spinning cotton into thread

Q1 Activity 3: Pull cotton into a strand and twist it. What happens as you twist it?

SOLUTION

Guidance: Pull a small amount of cotton gently to form a strand. Twist it slowly with your fingers while pulling.

As you twist it, the cotton fibres come together and the strand becomes stronger. Winding the twisted strand on a pencil, while adding more cotton, creates a thread or yarn. This process is called spinning.

Answer: As you twist the cotton strand, it becomes stronger. This process of twisting cotton fibres to make thread is called spinning.

Exercise 8.6 — Activity 4 — Natural or synthetic fibres?

Q1 Activity 4: List some items you use every day. Are they made from natural or synthetic fibres? Write one thing you like about each.

SOLUTION

Guidance: Collect clothing or bags and read their labels, or ask an elder.
Sample answers: Cotton shirt — Natural — soft and comfortable. Polyester bag — Synthetic — light and strong. Jute mat — Natural — eco-friendly. Nylon socks — Synthetic — stretchy and quick-drying.

Answer: Sample: Cotton shirt (Natural — soft); polyester bag (Synthetic — strong and light); jute mat (Natural — eco-friendly). Answers will vary based on items observed.

Exercise 8.7 — Discuss — Stitching at home or neighbourhood

Q1 Have you ever seen someone stitching at home or in your neighbourhood? What were they making or fixing?

SOLUTION

Yes. At home, family members sometimes sew buttons back on shirts, mend a torn seam, or stitch a small tear in clothes. In the neighbourhood, a tailor may stitch new clothes, alter old ones, or repair school bags.

Answer: Yes. People stitch to sew buttons, mend tears, make new clothes, or alter old ones. (Answers will vary.)

Q2 Look at your shirt or school bag. Can you find where the pieces have been stitched together?

SOLUTION

Yes. On a shirt, the pieces are stitched along the sides, the shoulders, and around the collar and sleeves. On a school bag, the panels are stitched at the edges, and the handles and straps are also stitched on.

Answer: On a shirt, stitching is visible at the sides, shoulders, collar, and sleeves. On a school bag, stitching joins the panels and attaches the handles. (Students should observe and describe what they see.)

Exercise 8.8 — Activity 5 — Leaf plate using toothpicks

Q1 Activity 5: Pin broad leaves together with toothpicks to create a plate or spoon. Describe what you made.

SOLUTION

Guidance: Collect fresh broad leaves (palash, teak, jackfruit) and toothpicks. Overlap two or three leaves and pin them through the edges using toothpicks, like stitches. Shape the assembly into a plate or a spoon.

This traditional method is used in many parts of India to make disposable, eco-friendly leaf plates and bowls for serving food.

Answer: By overlapping leaves and pinning them with toothpicks, you can make a leaf plate or spoon — an eco-friendly alternative to plastic. Answers will vary based on what students create.

Exercise 8.9 — Activity 7 — Running stitch

Q1 Activity 6 / Activity 7: Describe how to do a running stitch.

SOLUTION

Guidance: Thread a needle and tie a knot at one end of the thread.

Steps: Bring the needle up at Point A (from the back of the cloth). Push the needle down at Point B. Bring it up at Point C. Push it down at Point D. Continue — up, down, up, down — in a straight line.

This repeated up-and-down pattern through the cloth is called a running stitch.

Answer: A running stitch goes: up at A, down at B, up at C, down at D — repeating in a straight line. It is the most basic hand stitch.

Exercise 8.10 — Activity 8 — Stitching two cloth pieces together

Q1 If one thread breaks in your stitching, what do you think will happen to the rest of the stitches?

SOLUTION

If one thread breaks, the stitches near the break may begin to come loose or unravel, but the rest of the stitching usually stays in place because each running stitch is a separate loop. However, the break creates a weak point, and with use or pulling, more stitches may come undone from that spot.

Answer: The stitches near the break may loosen or unravel, but the others usually hold. The break creates a weak spot that may spread with use.

Q2 Where else can we use running stitches in daily life?

SOLUTION

Running stitches are used to: sew a button back onto a shirt, mend a small tear in cloth, stitch the hem of trousers, create decorative embroidery patterns, join cloth pieces to make a quilt, and make simple bags or pouches from fabric.

Answer: Running stitches are used to mend tears, stitch hems, sew buttons, make quilts, and create decorative embroidery.

Exercise 8.11 — Let us reflect — End-of-chapter questions

Q1 Have you ever reused or recycled an old piece of cloth? What did you or your family make from it?

SOLUTION

Yes. Old cloth is often reused at home: worn-out clothes are turned into cleaning rags or dusters; torn sarees are cut into small squares for quilts; old shirts may be donated or passed to a younger sibling; and small cloth scraps are used to stuff toys or cushions.

Answer: Old cloth can be made into cleaning rags, quilts, or given to younger siblings. Answers will vary based on family traditions.

Q2 If one thread breaks in a stitched cloth or in a woven mat, what might happen? Why is each thread important?

SOLUTION

When one thread breaks in a stitched cloth, the seam near that point may open up, and with continued use the gap can widen. In a woven mat, a broken thread leaves a loose strand and a gap in the weave; nearby threads lose their support and the mat may start to come apart.

Each thread is important because weaving and stitching depend on every thread holding its neighbour in place. Together they give the fabric or mat its strength and shape. One broken thread weakens the whole structure.

Answer: A broken thread in cloth or a mat weakens the structure and may cause it to unravel or develop a hole. Every thread supports the others, so each one is important.

Q3 Visit a tailor's shop or a handloom store with an adult. What tools or machines did you see being used there?

SOLUTION

At a tailor's shop, you may see: a sewing machine (electric or manual), scissors, measuring tape, needles and thread, chalk for marking cloth, pins, buttons, and an iron.

At a handloom store or weaver's workshop, you may see: a loom (handloom), bobbins and spindles of thread, a shuttle (used to pass thread through the loom), and a charkha.

Answer: At a tailor's: sewing machine, scissors, measuring tape, needles, chalk, and iron. At a handloom store: loom, shuttle, bobbins, and spindles. Answers will vary based on what students observe.

Q4 Find out what kind of weaving or stitching work is famous in your area or state. Name it.

SOLUTION

India has many famous weaving and embroidery traditions. Examples: Kanjeevaram silk weaving (Tamil Nadu), Pashmina weaving (Kashmir), Ikat weaving (Odisha and Gujarat), Phulkari embroidery (Punjab), Kantha embroidery (West Bengal), Chikankari (Uttar Pradesh), Bandhani tie-dye (Gujarat and Rajasthan).

Students should find out from a family member, teacher, or local resource what craft is famous in their own state or district.

Answer: Examples: Kanjeevaram (Tamil Nadu), Pashmina (Kashmir), Phulkari (Punjab), Kantha (West Bengal), Chikankari (Uttar Pradesh). Answers will vary based on the student's state.

Q5 We should not throw old clothes away. Why?

SOLUTION

We should not throw old clothes away because: (1) Cloth takes a very long time to break down in the environment, causing pollution. (2) Old clothes can be reused — passed to a younger sibling, donated to someone who needs them, or cut into cleaning rags. (3) They can be made into beautiful quilts or other useful things. (4) Making new cloth requires cotton, water, energy, and human effort, so reusing cloth saves all these resources. (5) India has a rich tradition of recycling cloth — throwing it away wastes this heritage.

Answer: Old clothes should not be thrown away because they can be reused, donated, or recycled into rags or quilts. Throwing them wastes resources and adds to pollution.

Q6 The steps of the life cycle of a moth are jumbled up. Number them from 1 to 6 in the correct order:

(a) Adult moth comes out of the cocoon.
(b) Eggs hatch into tiny caterpillars.
(c) Silk moth lays eggs.
(d) The cycle begins again.
(e) Caterpillars eat mulberry leaves and grow big.
(f) Caterpillars spin cocoons around themselves.

SOLUTION

The correct order of the life cycle of the silk moth is:

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

Answer: Correct order: 1-c (lays eggs), 2-b (eggs hatch), 3-e (caterpillars grow), 4-f (spin cocoon), 5-a (adult moth emerges), 6-d (cycle begins again).

Q7 Bring 5-6 pieces of different types of cloth. Observe each closely and complete the table: How does it feel (smooth/rough)? Shiny (Yes/No)? Thick/Thin? Stretchy (Yes/No)? What do you think it is made of?

SOLUTION

Guidance: Collect small cloth scraps from home or a tailor. Feel each piece and examine it closely.

Sample answers for the table:

Piece 1 (Cotton shirt) — Smooth, Not shiny, Thin, Not stretchy — Cotton (natural)

Piece 2 (Woollen fabric) — Rough/warm, Not shiny, Thick, Slightly stretchy — Wool (natural)

Piece 3 (Silk cloth) — Very smooth, Shiny, Thin, Not stretchy — Silk (natural)

Piece 4 (Polyester fabric) — Smooth, Slightly shiny, Thin, Stretchy — Polyester (synthetic)

Piece 5 (Jute bag cloth) — Rough, Not shiny, Thick, Not stretchy — Jute (natural)

Answer: Sample: Cotton — smooth, not shiny, thin, not stretchy; Wool — rough, thick, slightly stretchy; Silk — smooth, shiny, thin; Polyester — smooth, slightly shiny, stretchy. Answers will vary based on the cloth pieces observed.