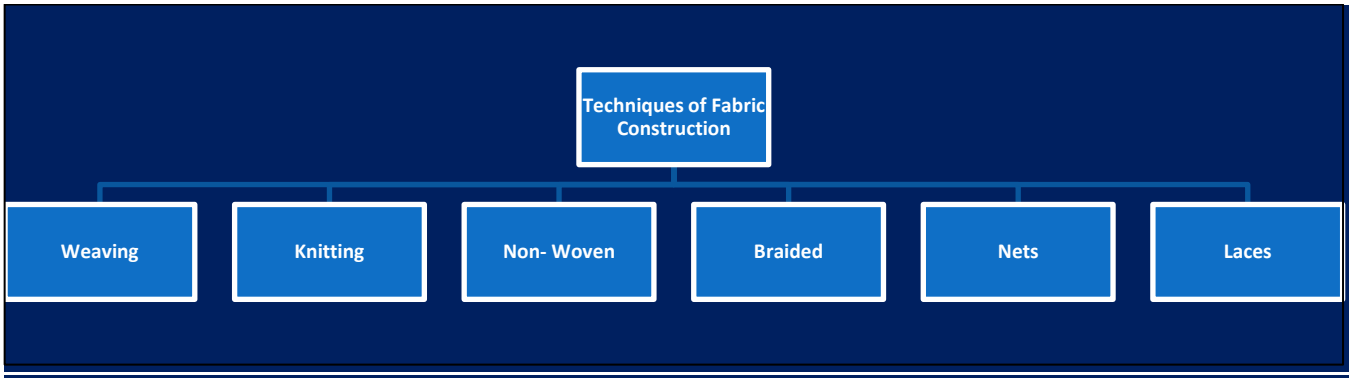
Lesson Number	Title of the Lesson	Skills	Activity
24	Fabric Construction	Creative thinking Decision Making	Draw or make the model of a simple loom and label its parts
		Problem solving Critical Thinking	

Summary

Fabric is constructed from yarns. There are different methods to convert yarns into fabrics. Some methods are done by hand, others are done by machines. The variety in fabrics is due to the method in which yarns are interlaced or inter looped. **Warp** is the term given to the yarn which is placed length wise, and **Weft** is the yarn which goes over and under the warp widthwise thus interlacing it. The most common technique of interlacing is Weaving. Although there are different methods also. The denseness of the fabric depends on its **Thread Count**. Thread count is the total number of warps and wefts per square inch of a woven fabric. Thread count determines the quality and durability of a fabric. More the thread count more durable will be the fabric.

Principal Points

Techniques of Fabric Construction



Build your understanding

Important Features of Fabric Construction Techniques

1. Weaving

- Commonly used method
- Two sets of yarns interlace at right angles
- Fabric constructed is firm
- Done on looms
- Examples: Poplin, Denim

2. Knitting

- Single ball of yarn used
- Loops are made and in the next line the yarn inter-loops with the previous loops

- Knitting needles are used to knit the fabric
- Fabric constructed is stretchable and easy to care
- Examples: Sweaters, T-shirts, Socks

3. Non-Woven

- Fabric made directly from fibers
- Fibers held together by mechanical force, gum or heat
- E.g.- Namadas

4. Braided Fabrics

- Process for construction like braiding of hair
- Examples: fabrics used for trimmings and shoelaces

5. Nets

- Open mesh fabrics with geometrical shapes
- Yarn knotted at the point of intersection
- E.g.- Mosquito nets

6. Laces

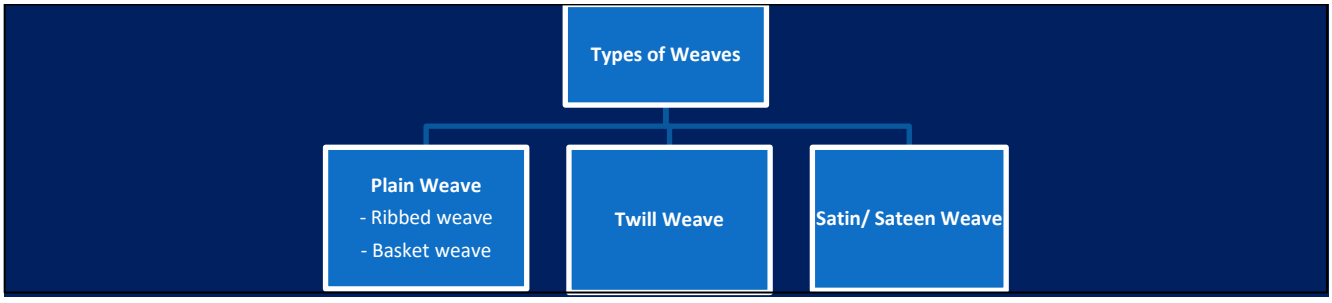
- Yarns are crisscrossed to create intricate designs.
- Yarns can be interlaced, inter -looped or knotted
- Decorative designs can be created
- Examples: decorative fancy trimmings

What is Important to Know

1. Process of Weaving

- Similar to 'Chatai' making
- Carried out on a loom. It can be hand operated or machine operated
- Warp yarns are laid lengthwise parallel to each other
- Weft are wrapped on a shuttle
- Warps are lifted and the shuttle is passed through them widthwise
- A comb like structure called reed pushes the warps tightly to make the fabric compact

2. Types of Weaves



3. Characteristics of Weaves

A. Plain Weave

- Simplest weave
- Inexpensive fabric produced
- Warp yarns laid parallel lengthwise, weft goes over and under the warp across the width
- Compact fabric produced
- Examples: poplin, organdy, chiffon

(i) Ribbed Weave

- Type of plain weave
- Rib or line effect is created using thin yarns with thick yarns in any one direction
- E.g.- Poplin

(ii) Basket Weave

- Type of plain weave
- Weft yarns interlaced as a unit with equal number of warp yarns
- E.g.- Mattee cloth

B. Twill Weave

- Clear diagonal line on the face of fabric
- Fabric is very strong and durable
- Fabric does not soil easily
- E.g.- Denim

C. Satin Weave

- Beautiful shiny surface
- Long floats of weft on the surface of the fabric
- Not a very strong fabric
- Expensive
- E.g.- satin cloth

Did you know

All About Knitting

- A pair of knitting needles used to make a cloth
- Loops are made in one row
- Next row formed by inter -looping with the previous loop
- A single yarn is used
- Size of the needle depends on the thickness of yarn
- Edges/borders made with a thin needle to retain the shape
- Fabric made is stretchable and comfortable
- E.g.- sweaters, hosiery

Extend your Horizon

Difference between Knitting and Weaving

Knitting	Weaving
• One set of yarn used and inter -looped with the previous loop	• 2 sets of yarns interlace each other
• Knitting needles or machines used for fabric construction	• Loom, hand loom, power loom, automatic looms for fabric construction
• Fabrics are stretchable	• Fabrics are firm
• Wrinkle resistant	• Wrinkle easily
• No ironing required	• Ironing required
• e.g. Sweaters, hosiery, sportswear, socks	• Eg. Apparels, upholstery, curtains, household linen

Evaluate yourself

- **Identify and name the weave of your jeans and list its two characteristics**
- **Why is satin weave used in ceremonial fabrics?**

Maximize your marks:

- **Attempt all the exercises given in the lesson**
- **Why is knitting different from weaving?**