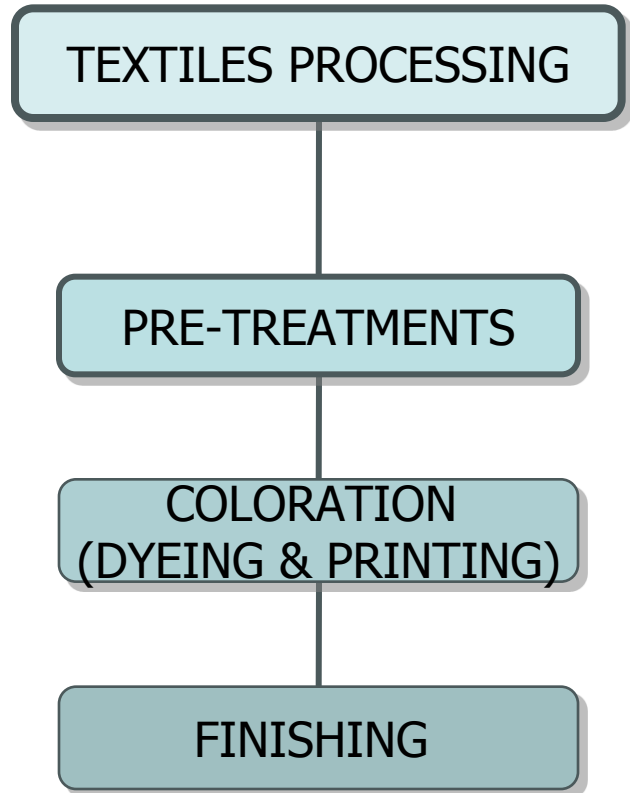
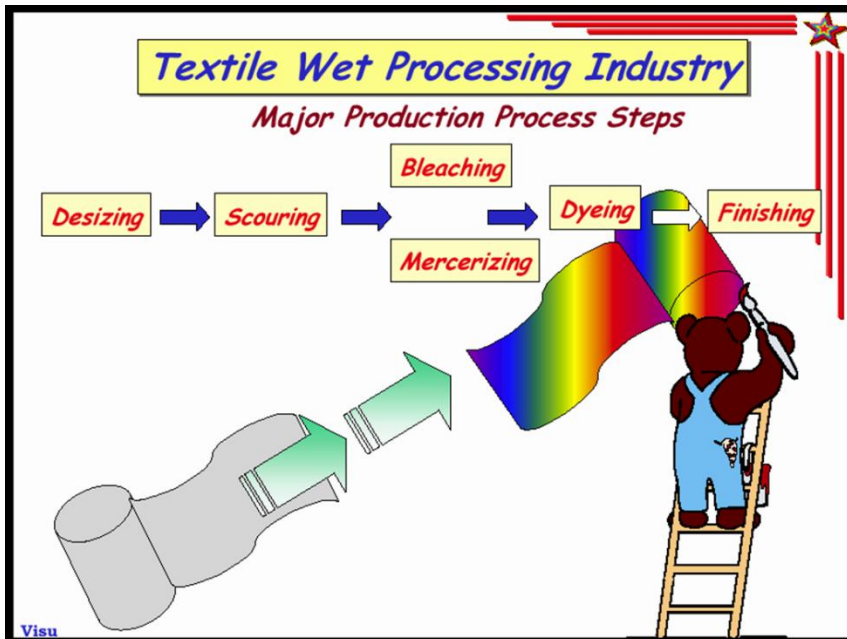


# Textiles Processing

A series of treatments that involve “Preparation”, “Coloration” and “Finishing” processes of textiles.



# Few Definitions

- **Singeing:** A burning process carried out to remove the projecting fibers from cloth.
- **Shearing:** A cutting process carried out to remove the projecting fibers from cloth.
- **De-sizing:** A process carried out to remove the sizing material from cloth which deposited to warp prior to weaving.
- **Scouring:** A process carried out to remove all impurities except color pigments.
- **Bleaching:** A process carried out to remove color pigments from cloth and to provide maximum whiteness.
- **Mercerization:** A process carried out to increase absorbency (dye affinity) and luster of the fabric.

# Importance of Pre-treatment

- Pre-treatment have same importance as coloration and finishing of textile materials, about 60%-70% faults that appears in processing unit are due to inadequate pre-treatment process.
- Textile Pre-treatment, consider to be a series of cleaning operations starting from the raw state of fiber, and lays the foundation for the quality in textile processing.

# Objectives of Pretreatment

- The main objective of textiles Pre-treatment is to produce a clean and absorbent cloth or to pass the textile materials by standard procedure; so that, it may brought to the state; which can be dyed or printed and finished with out any hurdle and displaying any kind of faults.
  1. Projecting fibers
  2. Natural impurities (Fats, natural pigments, mineral substances and seed particles).
  3. Artificial impurities (Sizes, mineral oils, fungus, rust and coloring materials).

# PRE-TREATMENTS PROCESS FLOW

SINGEING/SHEARING

DE-SIZING

SCOURING

BLEACHING

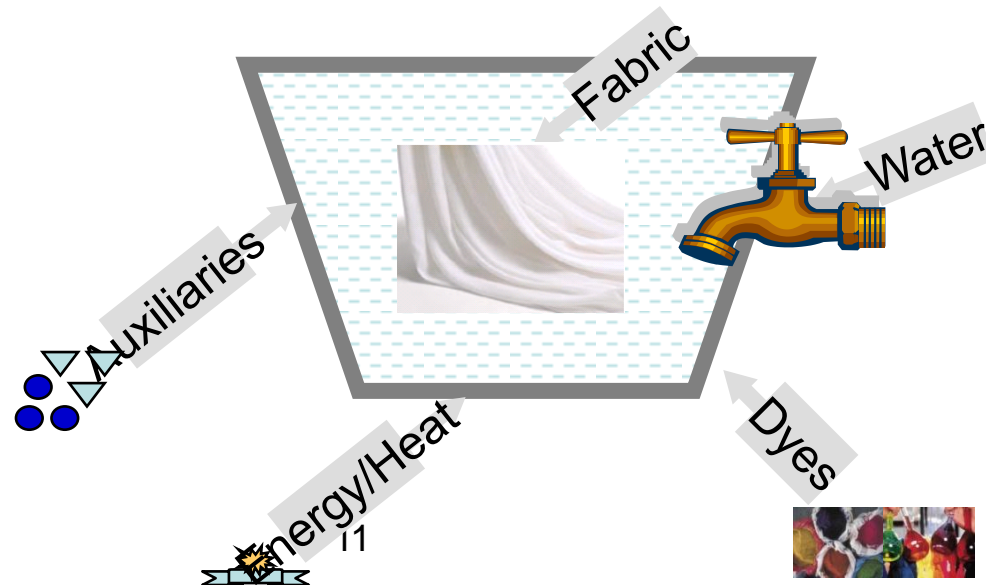
MERCERIZATION

# Summary of Pre-treatments Process

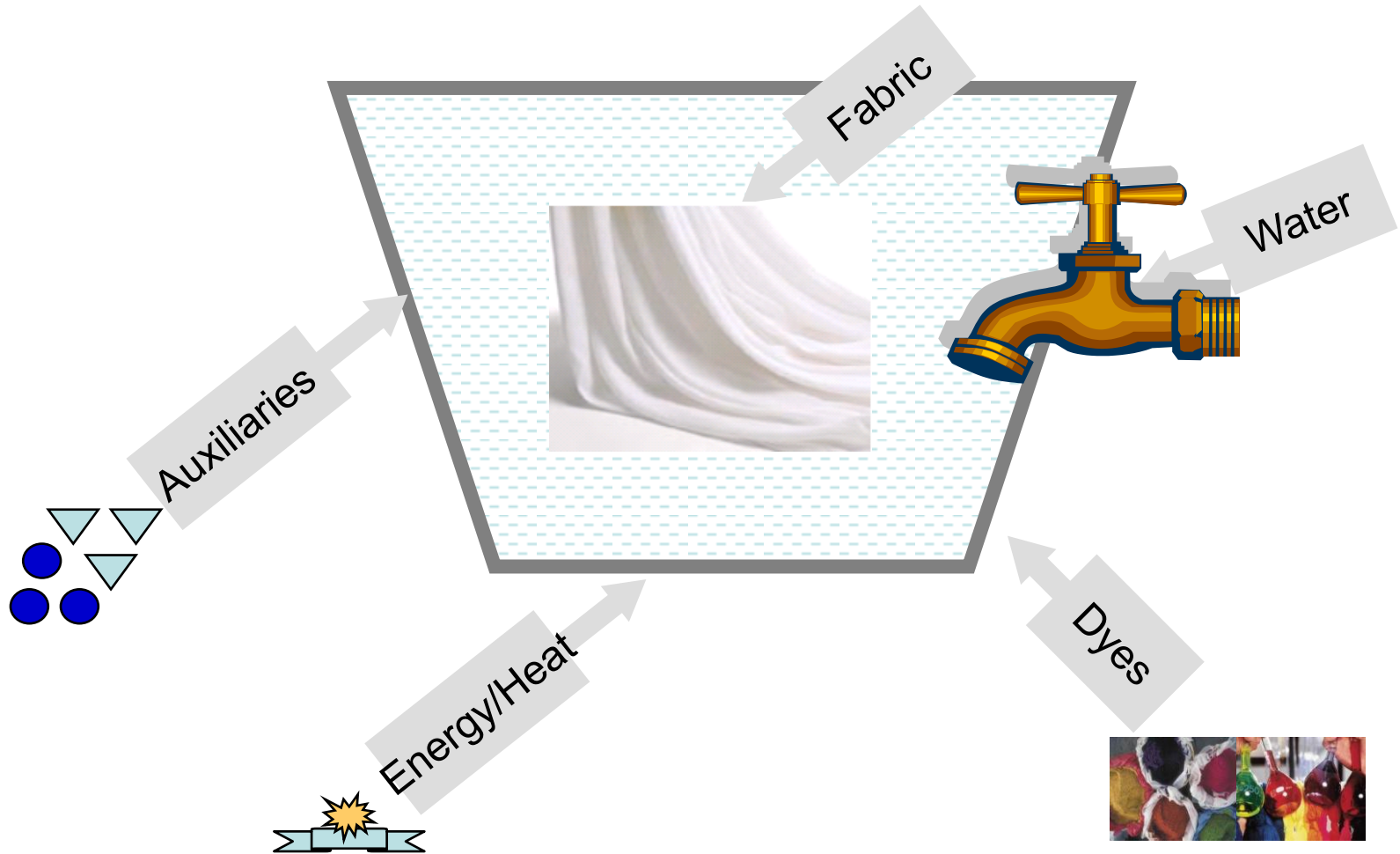
<b>Stage</b>	<b>Objective</b>	<b>Types of Process</b>
<b>Singeing/ Shearing</b>	<b>Removal of Projecting fiber.</b>	<b>By burning or by cutting</b>
<b>De-sizing</b>	<b>Removal of starches.</b>	<b>By Extraction</b>
<b>Scouring</b>	<b>Removal of Natural &amp; artificial impurities.</b>	<b>By Extraction</b>
<b>Bleaching</b>	<b>To provide whiteness.</b>	<b>By oxidizing</b>
<b>Mercerization</b>	<b>To provide luster and increase absorbency.</b>	<b>By Swelling</b>

# Dyeing

- Dyeing is a process of coloring textile materials by immersing them in dye liquor/dye solution (Dyestuff+ Auxiliaries+ water) is called dyeing. However, certain conditions are essential to carry out dyeing process.



# Dyeing Model





# General Theory of dyeing

- The general theory of dyeing explain, the dyeing process is the interaction between dye, water, auxiliary (electrolyte, dispersing agent, wetting agent) and textile material.

# Printing

- Printing is different from dyeing in that way as it is designed to produce multi-colored patterns on textile material by using printing paste, rather than a single color all over the fabric.
- In case of Pigment Printing, the printing paste is a combination of coloring material (pigment color), thickening agent and the binding agent.

# Printing

## Block Printing



## Screen Printing



# Printing

Printing Screen



Printed Fabric



# Finishing Process

- **Finishing is a process in which fabric is treated with some mechanical or chemical process before or after dyeing or printing to give the fabric a fancy/novelty touch to make it more durable, flexible ,soft and good in appearance and handle.**

**Or**

- **Finishing is a process which performed by mechanical or chemical treatments of fabric to eliminate undesired properties of fabric and to add the value added effects.**

# Types of finishing process

## 1. Mechanical finishing process

When the finishing process is done by some mechanical means including heat treatment of fabric.

## 2. Chemical finishing process

When the fabric is treated with some chemical solution during finishing treatment.

