Mercising treatment applied to cotton makes it more lustrous and smoother. Making it cooler and more comfortable with a silk-like appearance.

Use and care of cotton fabric:
- Wide range of products
- Underwear
- Sleepwear
- Woven cottons good for pleating due to stiff nature
- Good for sportswear (Absorbs and releases perspiration)
- Multi-Seasonal garments depending on construction of fabric
- Heat conducting property
- Most popular T-shirts and denim garments
- Blended cottons more popular (Low cost, crease and shrink less)
  - Can be washed rigorously and laundered repeatedly
  - Strong soaps and alkalis used at high waste temperature
  - Chlorine bleach used but discolor occurs
  - Ironed at moderate to high heat

Cotton markets
- China – largest producer and consumer of cotton.
- Israel and USA highest cost cotton producers worldwide.
- Australia, China, Brazil, and Pakistan are lowest cost producers.
- Cotton manufacturing hubs are located in Bangladesh, Indonesia, Thailand and Russia.

Natural Fibres

Difference of Animal fibres and Plant fibres:

<table>
<thead>
<tr>
<th>Animal:</th>
<th>Plant:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made from Protein(Keratin)</td>
<td>Made of Carbohydrate(Cellulose)</td>
</tr>
<tr>
<td>Not as durable</td>
<td>Durable</td>
</tr>
</tbody>
</table>

Animal Fibre Classification
- Fleece – e.g.) Sheep’s wool
- Hair – e.g.) Camel [and Everything else]
- Skins/Hides/Fur – e.g.) Snakes
- Filament – e.g.) Silk
- Feathers
  (Skin/Cowhide/Leather/Mink – pg. 49, 50, 51)

Minor natural fibres – Animal
- Lamb’s wool (Rarer) *NOT SHEEP
- Cashmere wool (Rarer)
- Angora wool (Rarer) *Little Long Haired Rabbit
- Alpaca wool (Rarer)
- Camel Hair

Major Fibres
- Wool
Silk fibre characteristics:
- Continues filament fibre thus relatively strong
- Triangular cross-section results in light reflective quality therefore lustrous
- More resilient than cotton, less resilient than wool
- Abrasion – resistant and absorbent
- Dimensional stability therefore will not shrink or stretch
- Non-elastic therefore creases easily
- Damaged by bleach and sunlight (Photosensitive)
- Easily stained by perspiration (requires hand-laundering)
- Excellent dye-affinity (can be dyed in deep/bright shades)
- Resistant to mould and fungi
- Soft and smooth handle

Uses and Care of Silk Fabric:
- Excellent draping and movement
- Treated fabrics with salts produce fabrics with firmer drape and more body
- Dresses and suiting
- Ceremonial dress
- Evening wear
- Lingerie

- Shouldn’t be worn when perspiring (damages fibre)
- Strong bleaches deteriorate silk
- Iron under low to medium heats
- Weakens with too much exposure to air, grease, dust, dirt and light (should be worn in the evening and stored in a dark environment)
- Concentrated mineral acidic silk

Silk Markets:
- China, Japan, India, Thailand, Italy, Spain, and France produce the highest quality silks.
- China is the world’s largest producer of silk with over 50% of global production
- India produces approximately 15% and Japan produces over 10% of world’s silk
- Countries that produce silk in Africa are Kenya, Nigeria, Uganda, Zambia, and Zimbabwe
- There are several raw silk producers in South Africa in the Graskop area
Types of Construction
Intro to construction types = pg. 78 in Textbook
- Fabric can be constructed from: Yarns, Fibres, Solutions
- Or, a combination of the above: Multi-components, composites
- Or, a combination of the above: Mu

Fabrics made from fibres:
- Non-wovens: felting and Bonding pg 96

Fabrics Made from solutions
- PVC films (supported or unsupported)
- Polyurethane foams

Multi-component Fabrics
- Quilting
- Laminating (fabric-to-fabric or fabric-to-foam)

Composite Fabrics (Non-Separable)
- Chintz is an example
- Tufted
- Coated
- Flocked
Lecture 12 - Twill Weaves

Textbook pg. 82

Twill Structures:
- Right handed Twills (Z Twill)
- Left-handed Twill (S Twills)
- Broken Twills (Chevron & Herringbone)
  - Twills are interrupted
- Yarn-dyed Twills
  - Produces an icon pattern like tartan

Twill Structures:
- Diagonal twill construction - Wales
- Twill Weaves: Fabric that has parallel diagonal wale lines on the face of the fabric, it is uneven 3:1 dispersed
- @x@ Twill: not the two by two overlapping weave, Z right, S left

Twill Fabrics:
- Carded Natural Yarns: Denim Twill & Linen Twill - Denim isn’t jeans, but jeans made of denim
- Denim process: Cotton needs to be blended first, then its carded, then made into a sliver, then it is spun, cotton then dyed yellow but when then turns blue due to oxidation, then 3:1 as in 3 blue to 1 white and makes denim.
- Raw denim is becoming a trend, difference between the distressed one is that you buy them faded out but raw denim u break them in and make them faded, so its unique to the wearer
- Canvas usually twill
- And twill expensive

Fine Worsted Flannel (woollens)
- Linked to classical vintage style
- Mild Flannel, wool fibre shown makes it look wooly.
- Flannel
  - RH(Z) Twill Weave
  - Mottled appearance, can be yarn dye check or pinstripe
  - Often milled to produce a fluffy surface, slightly concealing the twill wales.
- Flannelette
  - LH(S) twill
  - Usually 100% cotton
  - Both are reversible with twill wales discernible on face and reverse of fabric

Gabardine (Swatch)
- Burberry invented it
- Macintosh created by Burberry as well, its specifically for rainwear

Broken Twills
- Chevron: Chevron Twill - Wales are interrupted but match to from a zigzag pattern, can also be a chevron print if it isn’t woven

- HerringBone
  - Woollen is temp regulating and comfy
  - Woolen: Coats
  - Suiting - Top to medium

NB!!! Make sure you know How to identify them for the exam on description.