



Chapter I Introduction to Textiles

- **Objectives:**
 - Understand the textile industry
 - Know various segments of textile industry
 - Art and Design
 - Careers Available
 - Textile Legislation

Textile Variables

- Natural or Manufactured
 - Mineral / vegetable / animal or made thru science and technology
- Filament or Staple Fibers
 - Long fibers (18''+) or short fibers (0-18'')
- Properties
 - Absorbency, luster, hand, abrasion resistance, elasticity, resiliency
- Construction
- Finish

Textiles

- Ongoing culture and technology
 - Dawn of civilization
- Continue heritage of culture
- Some things changed little since 3,000 B.C.
- Some discoveries as new as 2008



Textile Industry

- Encompasses every aspect
 - From raw fiber production to final consumption
- Nationally over 560,000 Americans work in the industry
- Research is done in high tech and environmental fields

Science & Technology

- Engineered Products
 - Wrinkle-free
 - Water-proof
 - Lightweight
 - Bulletproof vests
 - Artificial replacements for diseased veins and arteries

Science & Technology Con't

- Industry is working to improve the environment
 - Manufactured fibers from recycled bottles
 - Nylon carpet that can be infinitely renewable



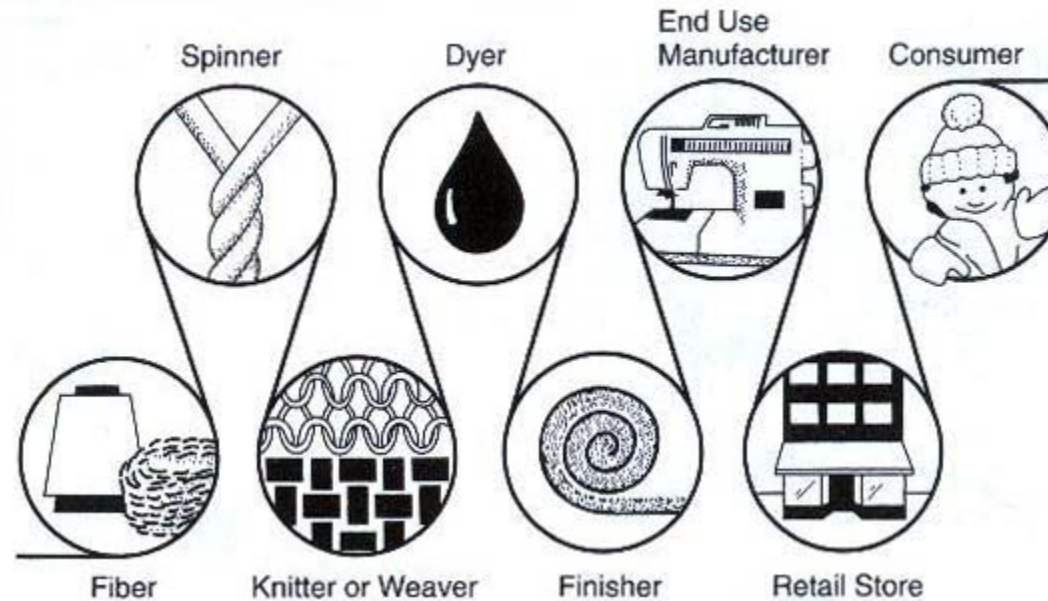
Art & Design

- What do we want from textiles:
 - Physiological comfort
 - Psychological comfort
 - Ease of care
 - Safety
 - Useful/decorative

Business

- Profit Driven
- Product Pipeline
 - Customer
 - Final purchaser
 - Intermediate purchaser

Business



Product pipeline for consumer textiles. (pg.3)



Careers in Textiles

- Production
- Marketing and Corporate Offices
- International Travel
- Offshore Production
- International Sourcing

See p. 4 Career Connections



Careers in Textiles con't

- Five general areas:
 - Science and technology
 - Art and design
 - Manufacturing and production
 - Sales and marketing
 - Product development



Art and Design

- Recommended course study
 - Fine art classes
 - Art history classes
 - Art appreciation courses
 - CAD (computer-aided design) class
 - Costume History – benefits apparel designers
 - Textiles



Textile and Textile Print Designers

- Textile Designers
 - Develop knitting and weaving patterns
 - Select the yarns and/or fibers used in fabric production
- Textile Print Designers
 - Create the patterns and designs used in printed fabric productions



Design Related Careers

- Merchandising
- Retailing
- Visual Displays
- Customer Service
- Costume Designers
- Set Designers
- Freelance Designers



Sales and Marketing

- Communication skills
- Initiative
- Customer service
- Share knowledge with Product Developers



Product Development

- Research
- Merchandising
- Styling
- Create products for company's target market



Consumer & Industrial Textile Differences

- Consumer includes:
 - Apparel
 - Home furnishings
- Industrial includes:
 - Geotextiles for:
 - Dam and roadbed construction
 - Insulation
 - Industrial filters
 - Materials for the space industry

Terminology of Textile Industry

- **Converter**

- Company that purchases unfinished goods, has them finished, dyed or printed, and resells them

- **Generic Name**

- Name of a manufactured fiber that is based on the fiber's chemical composition
- Established by the FTC

- **Greige Goods**

- Unfinished goods

Terminology of Textile Industry

- **Jobber**

- Company that purchases fabrics from large mills or converters and sells small quantities of finished fabric.

- **Mill/Integrated Mill**

- Factory that produces yarn or fabric.

- **Over-the-counter Fabrics**

- Fabrics sold to retail stores that will ultimately be purchased by the home sewer.

Terminology of Textile Industry

- Spinners
 - Factories that produce yarn from staple fibers.
- Trademark Name / Registered
 - Name a manufacturer uses to identify goods it sells or makes
 - TM names begin with capital letters
 - Ex. Lycra
 - Generic names begin with a lower case
 - Ex. spandex

Components of a Textile Product

- **Fiber**

- Smallest component – fine and hairlike
- Ex. Natural – cotton
- Ex. Manufactured - polyester

- **Yarn**

- Groupings of natural/manufactured fibers – combined to form a continuous strand that can be used to produce fabric.

Components of a Textile Product

- **Fabric**

- Formed by assembling yarns plus/or fibers into one cohesive structure.
 - Most common is woven, knit or non-woven
 - Referred to as cloth, material, piece goods, or goods

- **Dyeing & Printing**

- Adding colors and/or patterns of colors to a textile product

- **Finishing**

- Any chemical / mechanical treatment or processes that modifies the properties of a textile product.

Major Laws & Regulations

- TFPIA Textile Fiber Products Identification Act (1960)
 - Amended in 1984

- 1. Generic name of fiber
- 2. % of each fiber
- 3. Domestic or imported
 - If imported – country of origins
- 4. Manufacturer's name, registered ID#, or ®
- 5. Misleading names prohibited
- 6. Must be securely & conspicuously attached

NOTICE!:CARE INSTRUCTIONS NOT PART OF TFPIA!!!

Sample TFPIA Label

- A. 20% Wool
80% Dacron®
Machine wash, line dry
Made in the USA

What is missing???

Sample TFPIA Label

- A. 20% Wool
80% Dacron®
Machine wash, line dry
Made in the USA

Missing Name of Manufacturer

Sample TFPIA Label

- B. 70% Herculon

27% Cotton

2% Silk

Manufactured by the ABC Company

What is missing???

Sample TFPIA Label

- B. 70% Herculon

27% Cotton

2% Silk

Manufactured by the ABC Company

Country of Origin

Sample TFPIA Label

- C. 60% Cotton
40% Polyester
Made in the USA
Manufactured by the XYZ Company



Major Laws & Regulations con't

- **Permanent Care Labeling Ruling of the Federal Trade Commission 1972**
 - Amended 1984
 - Applies to wearing apparel and fabric bolts
 - Permanent label
 - Recommend care
 - Must remain legible for the life of item
 - Must be easily visible
 - Clearly stated



Major Laws & Regulations con't

- Flammable Fabrics Act 1953

Consumer Products Safety Commission

- Banned the sale and use of highly flammable materials for clothing

Amended:

- 1967
- 1972
- 1973
- 1975
- 1996

Federal Trade Commission Ruling on the Weighting of Silk 1932

- Controls use of metallic salts to add weight to silk fabric
 - All silks weighted 10% + must be labeled as weighted silk
 - Exception: black silk may be weighted 15%

Wool Products Labeling Act 1939

- Amended 1980
- Requires recycled wool be labeled as such
- Wool, Virgin Wool, New Wool
 - Previously unused fleece of lamb or sheep fibers
 - Previously unused specialty fibers such as camel hair