

Clothing and Textiles

Advanced Level



Careers in Fashion, Textiles and Design

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Activity 1: Careers in Fashion Retailing

Project Outcomes:

- Examine possible career opportunities in fashion retailing.
- Examine educational opportunities available at colleges/universities and other postsecondary settings to prepare for careers in fashion retailing.

Do you LOVE fashion?! If so, check any of the reasons below as to why you are a fashion enthusiast.

I love:

- ☐ buying new clothes
- ☐ buying the latest fashions
- ☐ window shopping to see what's new
- ☐ exploring online sites to find the latest trends
- ☐ following my favorite retail store on Facebook or other social media
- ☐ organizing and/or rearranging the fashion items in my closet
- ☐ mixing and matching items in my closet for new looks
- ☐ going shopping with others to help them choose new fashions



If you checked any of the above, you may want to consider a career in the fashion industry. In this activity, you will learn the many different career opportunities in **fashion retailing** as well as where you can go to school after high school to learn and prepare for a career in this exciting industry.

What is fashion retailing?

First, let's define fashion retailing. It is the segment of the fashion industry that acts as a go-between from the manufacturers (factories that make the clothes) to the customer (who buys the clothes). It can be defined as the

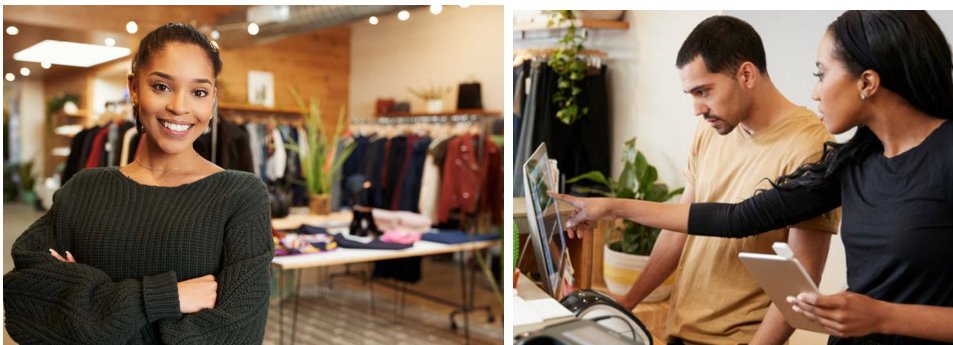
process of buying clothes from manufacturers and selling them to customers. Retailers make initial purchases (ordering items) for sale three to six months before the customer can buy the clothes in-store or online. In today's world of technology, most retailers have both stores that are physical buildings and online sites for selling their merchandise.

Careers in Fashion Retailing

Retail Manager — This position includes individuals who have overall management responsibilities for the store (example: Gap or Forever 21) or a department within a larger store (example: Teen or Misses).

Retail managers are responsible for all the in-store functions, such as:

- generating profits (making money for the store);
- dealing with customer complaints;
- ensuring a smooth shopping experience for customers; and
- supervising the staff (people who work in the store).



Merchandise Manager — Merchandise managers are responsible for ensuring the right products are available in the right stores:

- at the right time;
- in the right quantities; and
- set at the appropriate price.

They can work in retail stores or for an apparel brand at the corporate (headquarters) level. They also analyze sales and inventory data (what's currently in stock in the store) to determine consumer preferences that help them decide which items to put on sale or how much of a particular product they need.



Visual Merchandiser — Visual merchandising can be simply defined as the physical presentation of products. Visual merchandisers work to:

- set up displays throughout the store;
- make sure the fixtures (what holds the clothes) are arranged in a pleasing way; and
- make sure that displays are attractive, engaging and motivate the customer toward making a purchase.



Retail Buyer — Retail buyers work for retail stores and choose the merchandise available for customers. Their responsibilities include:

- keeping up to date with current style trends, the prices, and the quality of merchandise;
- analyzing their customers' shopping habits and using this information when selecting products to sell;
- ensuring the store's stock (clothes and accessories) stays competitive and meets their customers' needs;
- forecasting trends that their customers will love;
- developing plans to maintain inventory levels (what's in the store at any one time); and

- visiting regional and national wholesale markets to view what is available from manufacturers and placing orders for the merchandise that will be available in the store.



To do:

Review the above careers and answer the following:

Which **one** of these jobs would you most like to pursue as a career?

____Retail Manager

____Merchandise Manager

____Visual Merchandiser

____Retail Buyer

Review what the individual does for the career you chose and list the skills you have and/or want to develop to do well in this career. (Be sure to list “hard” skills, such as good at math and detail-oriented, and “soft” skills, such as good communicator, creative and sense of style.)

Additional Careers in Fashion Retailing

Fashion Promotion and Communications Expert — Promoting what is fashionable and making products desirable is the work of the fashion promotion and communications expert.

Fashion promoters:

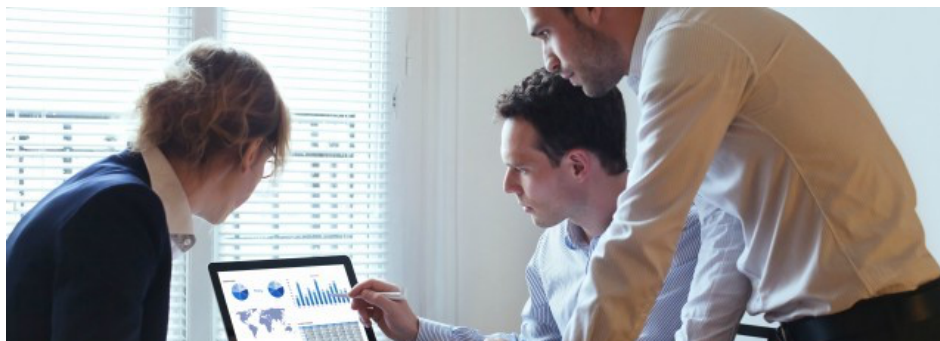
- define advertising campaigns;
- organize promotional activity through the most appropriate media; and
- organize events (including fashion shows) and press office and public relations activities using a variety of communications and media.



Marketing Specialist — Marketing specialists help develop, execute and monitor marketing programs using a variety of media. Their work includes:

- researching the market to find answers about what consumers want, their habits and trends;
- analyzing trends to help define the retailer's marketing strategy (how will they promote their products); and
- providing advice on the best ways to reach the specific customer.

A marketing specialist may also be responsible for managing the company websites and social media accounts.



Inventory Planner — The term “inventory” means how much merchandise a store has for sale at a specific time (what’s actually in the store). The inventory planner determines the amount of clothing/accessories needed in different categories. Their major responsibilities include:

- reviewing current inventory levels;
- determining what is needed each season (fall, winter, spring and summer) for the location of the store;
- determining what the customer will want; and
- allocating and distributing merchandise to warehouses and stores across the country.



Purchase Orders

Reference Details Received/Ordered Expected Date From Destination Warehouse Created

PQ #1	10/15/2020	539 / 1050	May 1, 2020	v1	DownTown Store	Apr 22, 2020
PQ #3	10/15/2020	26 / 26	May 11, 2020	v2	DownTown Store	Apr 27, 2020
PQ #6	10/15/2020	75 / 75	May 17, 2020	v2	DownTown Store	May 03, 2020
PQ #5	10/15/2020	0 / 297	Jan 8, 2020	unknown	DownTown Store	May 26, 2020
T #6	10/15/2020	0 / 379	Jan 3, 2020	Ellecl lower	DownTown Store	May 20, 2020
T #9	10/15/2020	0 / 481	Jan 8, 2020	Ellecl lower	DownTown Store	May 26, 2020
T #6	10/15/2020	508 / 1050	Jan 4, 2020	Ellecl lower	DownTown Store	May 20, 2020
		0 / 12	Jan 4, 2020	unknown	DownTown Store	May 21, 2020
		0 / 6	Jan 4, 2020	unknown	DownTown Store	May 21, 2020
		0 / 6	Jan 4, 2020	unknown	DownTown Store	May 21, 2020

View Incoming Stock

See when inventory will arrive at your POS location

Import Calendar

POS

Stylist — Stylists are responsible for creating outfits and advising their customers on various ways to wear articles of clothing. A stylist can work for a clothing brand, a retail store or individual clients. A brand's stylist creates outfits for photo shoots that will be used to promote their fashions in magazines.

Personal fashion stylists work with individual clients (customers), either within a retail store setting or as an independent consultant, to help them choose styles that flatter their body types and fit within their budgets. Individuals wanting to work as a stylist for a major retail store:

- work in retail sales in the store to prove they have an eye for what looks good on individuals;
- gather outfits from the store and meet with their clients in the store or take the outfits to clients' homes;
- listen to the clients' desires and give them options that suit their needs; and
- suggest new styles or twists on the clients' current wardrobes to elevate their style.

**To do:**

Review the listed careers and answer the following:

Which **one** of these jobs would you most like to pursue as a career?

____ Fashion Promotion and Communications Expert

____ Marketing Specialist

____ Inventory Planner

____ Stylist

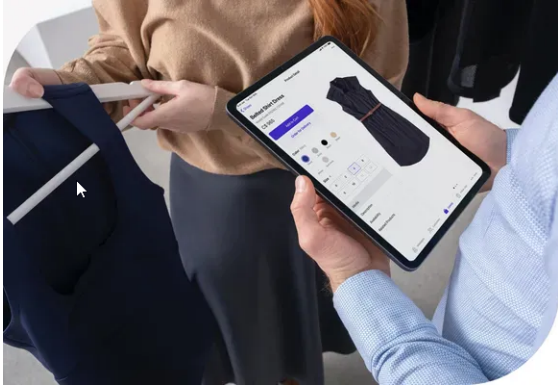
Explain why you chose this career:

Matching

Match the career with the correct picture:

- ____ 1. **Visual merchandiser** sets up store displays.
- ____ 2. **Retail buyer** determines what will be sold in a store.
- ____ 3. **Merchandise manager** analyzes sales and inventory in the store and how much of a particular product is needed.
- ____ 4. **Fashion promotion and communications expert** promotes what is fashionable through events.

A.



B.



C.



D.



Answers: 1-C, 2-A, 3-D, 4-B

Preparing For a Career in The Fashion Industry

Now that you know many of the careers that are available in fashion retailing, it's time to discover how to prepare for the career of your choice.

Here are some tips to help you be successful:

1. Get experience in the retail industry.

This usually means working for a retail store as a sales associate. This can be a small local store, specialty store or department store. Many students, while in high school and/or college, work part-time for a fashion retailer, which is a perfect opportunity to get experience and learn about retailing. Regardless of the type of career you want in fashion, working in sales is important. This gives you an understanding of customers, knowledge about different brands, an opportunity to develop necessary communications skills, and more.



2. Pursue a college degree. Consider a degree in fashion merchandising, business or marketing, depending on your specific interest. In Tennessee, most colleges/universities offer one or more of these degrees. So, explore and find one that meets your needs for both a fantastic career and a great college experience!



3. While in school, be sure to do an internship, which means a formal placement in a retail business toward the end of your college experience. You will usually work for a semester or summer and receive college credit. You may find that the place where you intern will offer you a job after you graduate.



Activity 2: Careers in Fashion Design

Project Outcomes:

- Examine possible career opportunities in fashion design.
- Examine educational opportunities available at colleges/universities and other postsecondary settings to prepare for careers in fashion design.

Do you wonder how a fashion becomes a fashion? Do you love to explore new fashion trends? Are you always sketching fashions that you would love to wear? Are you business-oriented, with good math and management skills? If you said “yes” to any of these questions, then a career in fashion design may be for you.


You may dream of being a fashion designer like Ralph Lauren or Donna Karan, though few can attain such fame and notoriety. However, that won’t keep you from being a designer for the thousands of companies that provide fashion to consumers or being involved in the many careers related to fashion design.

In this activity, you will learn about the careers related to fashion design and the path to follow to be prepared for these dynamic careers.

To Get Started:

Before we explore one of the most popular careers in the industry, let’s look at the possibilities. Answer the following to discover your love for the fashion design industry:

Of the following famous designers and/or design lines, check the ones with which you are familiar:

<input type="checkbox"/> Ralph Lauren	<input type="checkbox"/> Stella McCartney	
<input type="checkbox"/> Donna Karan	<input type="checkbox"/> Louis Vuitton	
<input type="checkbox"/> Calvin Klein	<input type="checkbox"/> Vera Wang	
<input type="checkbox"/> Giorgio Armani	<input type="checkbox"/> Jimmy Choo	
<input type="checkbox"/> Betsey Johnson	<input type="checkbox"/> Christopher John Rogers	
<input type="checkbox"/> Tommy Hilfiger	<input type="checkbox"/> Michael Kors	
<input type="checkbox"/> Coco Chanel	<input type="checkbox"/> Kate Spade	
<input type="checkbox"/> Zac Posen	<input type="checkbox"/> Christian Siriano	

Don't worry if you aren't familiar with many of these designers, as you find only a few of these designers' lines in retail department stores. Many have their own retail stores that are found in upscale malls. You may have also seen their stores in fashion outlet malls. Most of today's designers must provide a wide price range of merchandise to be successful.

These designers have unique styles that have helped them be successful. If you research them, you will find that most have a "higher-end" line, which for French designers would be called haute couture, and "ready-to-wear" lines, which are mass-produced for retail stores.

These designers, along with and others you may not have heard of but see the results of their designs in stores where you shop, have many individuals working with them to create what you see in the stores and online. Let's explore the various careers associated with fashion design. We will start with **fashion designer**.

Fashion Designer

A fashion designer is a professional who works in the world of fashion, designing and creating new clothing styles. While it may sound glamorous to be a fashion designer, it requires a lot of dedication and a variety of skills. A love for fashion is a must. Fashion designers must be creative and understand current fashion trends to produce items to help their company maintain a competitive edge in the fashion industry. They also need to have strong communication skills, as they will work with a team of designers and engineers to produce fashion items throughout the year.



Designers can work in any specialization, from handbags to sportswear to children's wear. They may also design accessories such as belts, purses, boots and glasses. Fashion designers work across a variety of settings, including large retail brands, boutique labels and freelance. Fashion designers apply design and art principles to clothing and apparel or accessories in ways that make clothing both functional and aesthetically attractive.

The typical duties performed by a fashion designer include:

- following trends in the fashion industry and determining which designs are likely to appeal to consumers in the future;

- conducting market research to identify new trends and fabrics and seek design inspiration;
- developing theme-based clothing lines and collections;
- developing designs using computer-aided programs;
- attending trade shows to follow trends, present designs and find fabrics;
- working with other designers and merchandisers to create design prototypes (sample designs); and
- overseeing clothing designs from inception through to final production.

Fashion designers also:

- collaborate with team members to select seasonal themes, make edits to lines, and create new concepts;
- ensure products are in agreement with business strategies;
- select fabrics and trims;
- create production sketches for development packages; and
- collaborate with a technical designer to ensure development packages are accurate.

To obtain a job as a fashion designer, you will need:

- work experience as an assistant fashion designer or similar role;
- proficiency with software such as Microsoft Excel and Adobe Illustrator and other design software;
- ability to do sketches by hand;
- excellent design and conceptual skills;
- a bachelor's degree in design or fine arts; and
- relevant training and/or certifications that qualify you as a fashion designer.

Facts about the design process:

- It usually takes 18-24 months to design and produce a new clothing line.
- Research of future trends and the selection of a theme for each line is the first step in the process.
- After fabrics have been selected for a new line, initial designs are created with inexpensive materials, and models (called fit models) try on the designs to determine how a garment will fit.
- After the clothes have been altered, sample designs constructed with the actual fabric are created and sent to different wholesale markets to be viewed by potential buyers.
- Designers often market their clothes at fashion shows to get their designs and products in front of merchandisers and retail buyers.



Fitting design on fit model



Wholesale market — buyers viewing line to place orders for their retail stores



Fashion show at AmericasMart Wholesale Market

For whom do fashion designers work and what are their responsibilities?

Large retail firms: Designers working for retailers select colors and materials, create designs and supervise the development team. Large clothing manufacturers such as Gap Inc. or Abercrombie & Fitch and private lines offered by department stores such as Style Inc. for Macy's design their clothing to either be sold in stores or to independent stores, catalogs and to online businesses.



Design firms: Some companies work to create designs for specific labels/brands. The designer is responsible for designing clothing and patterns and may supervise clothing production.



Film and video producers: Designers design costumes, many using computer-aided design (CAD) programs to experiment with different colors, lines and shapes before selecting fabrics that complement their design. The design

is then used to create a garment (called sample) that is viewed on a model and modified as needed.



Self-employed:

- High-end designers design custom clothes for individual clients (who are usually quite wealthy).
- Designers may design clothes for their own stores or department stores.
- Designers may contract to work for theaters to conduct historical research about the time period and then design costumes.



Famous fashion designer: As a designer working for another (famous) designer, you would have specific duties from a variety of jobs. An example would be taking ideas and sketches and creating patterns to create the garments.



Assistant Fashion Designer

On your way to being a fashion designer, you will first need to fill the role of an assistant fashion designer. This is an entry-level position that can be valuable in terms of gaining solid experience in the industry. This position is a way to get your foot in the door at a design studio, retail chain or apparel manufacturing company while earning a good salary. It is a great way to establish a reputation in the industry. Assistant fashion designers typically have the same academic background as established designers, minus the years of experience.



Assistant fashion designer job description:

Assistant fashion designers assist fashion designers and chief fashion designers with everything from designing clothes to preparing for fashion shows. Depending on the size of the company or design studio, the assistant fashion designer may also assist with production work, such as sewing, cutting, patternmaking, making prototypes, coloring and sketching. Assistant fashion designers may coordinate meetings, assist at meetings with clients or retailers, attend fashion shows and trade shows, and assist with managing other workers as needed.

Assistant fashion designers can work for independent designers, design firms, design studios, boutiques, manufacturing companies, wholesalers, department stores, chain retailers, retail shops and boutiques. Some assistant fashion designers are self-employed.

Preparing to Work as a Fashion Designer

Education requirements for fashion designer (and assistant fashion designer): You will need a well-rounded education and knowledge in areas like science, art history, math and business management. Manufacturers, design firms and apparel companies look for students with a bachelor's degree in a fashion-related field. In your search for places to study after high school, look for a program where you will learn:

- art and fashion history;
- textiles and fabrics;
- graphic design;
- art and design;
- drawing;
- fashion industry processes;
- fashion design strategies and techniques; and
- computer-aided design.

Minoring in business or taking marketing classes can help aspiring designers understand the financial side of design as well.

You have choices related to your education, either at a university that offers fashion design or related majors or an art and design school (which is usually more expensive as they are private schools). Many students choose to receive their four-year degree and then apply to a fashion design school for specialized training. Also, while in school, be sure to take advantage of travel-study opportunities, whether it is two weeks in New York City or a semester abroad in Milan or Paris. Internships are also vital, and most universities offer

these experiences in New York City or other fashion centers. Be sure to explore your options.

Source: theartcareerproject.com/careers/fashion-design

To do:

Look at this list of characteristics that are preferred for those wanting to be a fashion designer and check all that would characterize you:

- ☐ good communication skills
- ☐ good negotiation skills
- ☐ able to work under deadlines
- ☐ good at making decisions
- ☐ computer skills
- ☐ good organization and planning skills
- ☐ creative and artistic skills
- ☐ knowledge of fabrics and materials
- ☐ interest in fashion and a desire to know about fashion trends
- ☐ good sense of color
- ☐ good visualization skills
- ☐ competitive
- ☐ sewing skills

Based on what you have checked, are you a good fit to be a fashion designer?

Explain why or why not:

Design-Related Careers

Creative Design Director — The creative director is responsible for determining the overarching theme, color palette and styling of an apparel season's collection.

The duties of a creative design director include:

- conducting trend research;
- reviewing sales data to determine what trending colors and styles their customers are purchasing and are likely to purchase in the future;

- meeting with senior designers to establish the color palette, theme, inspiration sources and any key design elements they want to see in the collection;
- ensuring, throughout the process, that the designs are staying on track and maintaining cohesiveness; and
- managing design teams and supervising the manufacturing process.



Technical Designer — This position is a hybrid of development, technology and design, requiring a dynamic individual who can work independently and push the boundaries.

The duties of a technical designer include (note that some duties are similar to those of a creative design director):

- designing new silhouettes;
- researching the market and collaborating with the head designer;
- determining the technical design (specific measurements and ease, etc.) for new silhouettes;
- creating new designs based on existing sizing/fit;
- fitting samples on models and guiding patternmakers on adjustments;
- locating fabric and trim, as well as collecting options, inventory and prices from vendors (suppliers);
- managing and completing the sample-making process, including but not limited to working with patternmakers, material vendors and sample makers to ensure timeliness;
- working with clients (retailers) to determine fabric, fit, price and time; and
- creating and explaining the specific costs of a garment, including materials and labor, to a client.

Activity 3: Careers in the Garment Manufacturing Industry

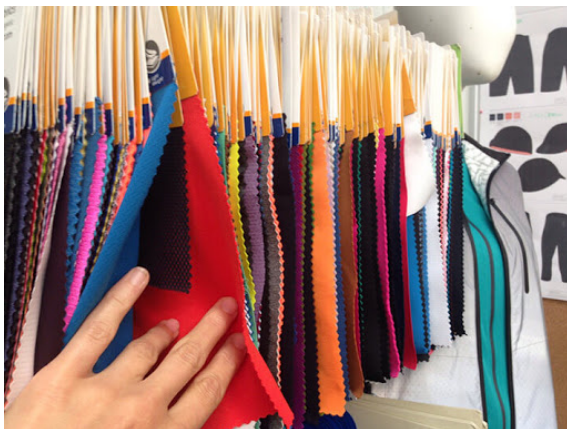
Project Outcomes:

- Examine possible career opportunities in fashion (garment) manufacturing.
- Examine educational opportunities available at colleges/universities and other postsecondary settings to prepare for careers in fashion/garment manufacturing.

Do you ever wonder how the clothes you buy in the store are made? If you have made (sewn) a garment for yourself, you have a general idea of the process of putting a garment together, but there is so much more. Think about a manufacturing company that may produce thousands of garments in just one week! There are so many people involved in getting that garment from the fabric to the finished garment and then to the retail store. In this activity, you will learn about some of the professional careers related to the garment manufacturing industry.

This activity will explore the following careers:

- Manufacturing Manager
- Production Manager
- Wholesale Sales Representative
- Piece Goods/Trimmings Buyer
- Apparel Patternmaker
- Quality Control Manager



Manufacturing Manager

For a fashion design to get to the retail store, it must first be manufactured. There are many jobs in the manufacturing industry. Being a manufacturing manager carries several responsibilities.



Job responsibilities:

- Analyze costs to compete with other manufacturers in the industry.
- Follow up with vendors (those providing materials) for timely delivery of materials.
- Function as a coordinator/liaison for quality, technology design, sourcing and planning.
- Make sure best practices at the factory levels are being followed to improve manufacturing excellence.
- Improve speed and flexibility in production via manufacturing and work-engineering techniques.
- Monitor performance of workers to maximize production.

Skills needed as a manufacturing manager:

- Strong analytical and computer software skills
- Team player and strong coordinator/collaborator
- Strong written and spoken communication and presentation skills
- Knowledge of fabrics and trims for apparel
- Results-driven, positive attitude and self-motivated

Production Manager at an apparel sewing company

A production manager directly oversees the making of garments, from the cutting of the pattern to the final pressing of the finished garment.



Responsibilities of a production manager:

- Help manufacturing staff achieve company goals by communicating expectations, planning, monitoring and evaluating job results, and creating sewing schedules.
- Coach and train employees on quality and efficiency standards.
- Implement time-saving strategies and techniques.
- Ensure that production plans are completed by a certain time.

Qualifications:

- Previous management experience (required)
- Sewing experience (required)
- Previous experience with manufacturing, production or related field
- Excellent coaching and communication skills
- Strong leadership skills
- Understanding and operation of industrial sewing machines (not required but is a benefit)
- Ability to deal with complex issues in a fast-paced setting

Education requirement: A bachelor's degree in clothing/textile production or other relevant area.

Wholesale Sales Representative

For fashions that manufacturers produce to get to the retail store, there must be someone to show the fashions to buyers who work for retail stores. These individuals are called wholesale sales representatives. The sales representative must know all aspects of the fashions they are trying to sell.



What do wholesale manufacturing sales representatives do?

- Identify prospective customers (buyers from retail stores) by using business directories, following leads from existing clients, and attending trade shows and conferences.
- Contact new and existing buyers to discuss their needs and explain how specific products and services can meet those needs.
- Help buyers select products to meet the needs of their retail store, product specifications and regulations.
- Emphasize product features that will meet retailers' needs.
- Answer buyers' questions about the prices and availability of the products they are selling.
- Negotiate prices and terms of sales and service agreements.
- Prepare sales contracts and submit orders from buyers for the quantity of merchandise they need for their stores.
- Follow up with buyers to make sure they are satisfied with their purchases and to answer any questions or concerns.

Piece Goods/Trimmings Buyer

If you love to select fabrics in a fabric store, this career may be for you! The piece goods and findings/trimmings buyers work for companies that use these products in the production of garments.



Here are some definitions to make sure you know what these terms mean:

- **Piece goods** are fabrics.
- **Findings** are zippers, thread, linings and interfacings.
- **Trimmings** are decorative components, such as braid, lace, etc.

Responsibilities include:

- determining from which vendors (those making the fabrics, findings and trimmings) goods will be purchased;
- planning the amount of fabric, findings and trimmings to purchase;
- coordinating with production managers and warehouse managers for the company for which you work;
- working out financial arrangements for purchases; and
- quality control (making sure everything that is bought is good quality).

Education requirement: A bachelor's degree in fashion merchandising, fashion design, textiles or a related field

Apparel Patternmaker

Patternmakers are also called pattern technicians. Patternmakers create clothing patterns in specified sizes and specifications for ordered garments. They use computers to aid in design and cutting. If you like the idea of working on a computer and you are detail-oriented, you might enjoy this type of career.



Job responsibilities include:

- creating patterns and specifications for how each component of a garment should be manufactured and put together (using computer software, CAD and 3D imaging to create patterns and develop specifications);
- using existing product lines to create patterns to meet specific measurements and ease required for garments;
- modifying existing patterns/styles within the company for new looks;
- making recommendations in collaboration with teams on matters pertaining to patterns to be used, construction methods and techniques to improve the overall quality of the garment while considering predetermined costs; and
- marking and cutting fabrics from the patterns created to then create a prototype (sample of the garment).

Quality Control Manager

Do you seek perfection in everything you make? If so, then the job of quality control manager may be for you. The primary responsibility of a quality control manager is to assure quality in a finished garment that is manufactured.



- This person checks (inspects) fabric, fit and construction of garments for quality and adherence to product specification guidelines. (Specification guidelines may include such things as the kind of stitching used, the length of the stitch, and the type of seam finish used.)

- This person is responsible for training new and existing quality control employees and for developing specific guidelines and standards for the company.

Education requirement: At least a bachelor's degree in textiles or textile testing; a master's or PhD is preferred

Test your knowledge

Now that you have learned about some of the jobs in garment manufacturing, see if you can match the following descriptions with the appropriate job title.

___ 1. This person is responsible for making sure the manufacturing plant runs well, overseeing all aspects for the company.	A. Production Manager
___ 2. This person is vital to a manufacturing plant because this person orders the materials needed to make a garment.	B. Wholesale Sales Representative
___ 3. This person works with the buyers of retail stores to sell them products (garments) that they need.	C. Manufacturing Manager
___ 4. This person is responsible for making sure that every garment produced is well made and meets the specifications set forth by the manufacturer and/or the company buying the product.	D. Quality Control Manager
___ 5. This person is directly responsible for overseeing the making of garments.	E. Apparel Patternmaker
___ 6. This person creates patterns to be used by the manufacturer to produce garments.	F. Piece Goods/Trimmings Buyer

Answers: 1-C; 2-F; 3-B; 4-D; 5-A; 6-E

To do:

1. Choose one of the careers described in this activity and go online to do more research. Share what you have learned with a 4-H group.
2. Visit a garment manufacturer in your region. You will need to set up an appointment by calling the manufacturer. While Tennessee now has fewer manufacturers, you can find several close to the major cities in Tennessee by searching “garment manufacturers in Tennessee” and look at the map that pinpoints their locations. If you can’t visit them, look at their websites to learn more about what they make. Share this information with fellow 4-H’ers.

Activity 4: Careers in Fabric Design and Textiles Science

Project Outcomes:

- Examine possible career opportunities in fabric design.
- Examine possible career opportunities in textiles science.
- Examine educational opportunities available at colleges/universities and other postsecondary settings to prepare for careers in textile design and textile science.

What is the textile industry?

The U.S. textile industry broadly includes yarn, fabric and man-made fiber manufacturing; wool and cotton farming; fiber dyeing and printing; textile research and development; and apparel fashion design.

The International Trade Association indicates that the U.S. textile industry is one of the largest sectors of the economy, producing nearly \$70 billion annually. In addition to clothing, the textile industry produces a variety of essential products used in home furnishings, carpets, body armor, medical devices, automobile upholstery and much more. In this activity you will learn about some of the careers in the textiles design and manufacturing industry, including:

- Textile Designer
- Textile Scientist
- Textile Engineer



Textile (Fabric) Designer



Textile designers create designs either by hand or using computer-aided design (CAD) software that can be printed on or woven into a fabric. These

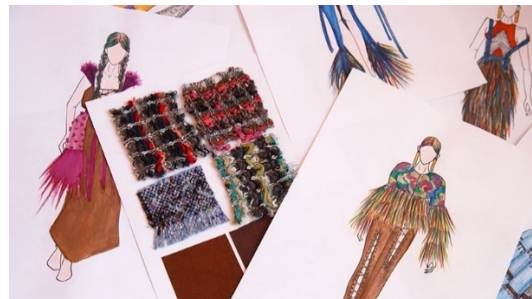
designs can be used for fabrics that will be used for clothing or interior design products such as bedspreads, upholstery and curtains.

Facts to know:

- Textile designs are developed as repeats to cover the fabric yardage with the design.



- Textile designers can work as freelancers or for a company, such as a fabric manufacturer or clothing brand.
- Textile designers work closely with fashion designers and merchandisers to create textile designs that suit specific clothing styles, seasons and customers.
- Textile designers also conduct trend research and forecasting for their products to ensure their designs are on-trend.



To do:

Try your hand at creating a textile design. Use drawing paper and colored pencils, markers or paint, or be creative on your computer. Remember that the design you create will be repeated on fabric. Here are some ideas to get you started.

Designs can be:

Realistic – This means they look as much like the object as possible.



Stylized – This means you can tell what the objects in the design are, but they have been made with a modern/artistic twist.



Abstract – You cannot distinguish any specific object. These designs tend to use geometric shapes.

Zentangle (Abstract)



Abstract Design



For a realistic and stylized design, try using objects in nature, fruit or other objects that you like drawing. Be sure to take photos of you creating the design and the finished design to put in your portfolio.

Education requirements: If you are interested in a career in textile design, you will need a bachelor's degree. Textile designers usually study graphic design, apparel and textiles, and fine arts. Seek a university that offers such courses as product development, merchandising, textile evaluation, apparel design, 2D drawing, marketing and accounting. You also will need to start developing a portfolio of sketches and samples of your designs to prove your artistic ability.

Careers in Textile Science and Technology

Textile science and technology involves the creation, design, use and distribution of cloth and other similar materials.

Textile scientists apply mathematical and scientific principles to the design, development and operational evaluation of systems to test and manufacture fibers and fiber products, both synthetic and natural. They develop new and improved fibers and textiles, and they analyze related engineering problems such as structural factors, molecular synthesis, chemical manufacturing, weaves, strength and stress, useful life and dyes.

In today's world of striving to preserve our planet and produce ecologically friendly products, textile production has taken a new twist. This means there is a keen interest in organic, vegan-friendly, sustainable clothing. You may find a career in textile technology fascinating if you have a passion for fashion coupled with an interest in science. For example, your work might involve finding substitutes for leather, such as fiber extracted from pineapple leaves that can be used to make dresses and purses. Mushrooms, coconut husks, corn, seaweed and banana peels are other materials being studied for possible use in textile production.



Corn

Fabric Made
From Corn



Pineapple → Fiber → Fabric
Leaves

New technology is being used to manipulate fabrics to make our lives easier and more fun. Smart fabrics can change color or monitor a wearer's health. To the right is an example of sensors that are woven into fabric to monitor the wearer's vital signs.



Textile Engineers: As a textile engineer, your job might include helping to design and create fabric as well as understand and work with the equipment and materials needed for creating the fabric. You may determine the best way to develop a type of fiber or how to add graphic designs to completed textiles. You may also ensure smooth production of each project.



Textiles Testing



If you are interested in a career in textiles science and technology, some of the job responsibilities you might have are to:

- research and develop new product applications (ways to use new products);
- develop improvements and new products in upholstery fabrics and wall coverings;
- experiment with printing innovations;
- create innovative textile products;
- work with manufacturers to ensure quality; and
- find and develop new resources for materials.

Education requirements: If you are interested in being a **research scientist in textiles science and technology**, working to produce fabrics as described above, you will probably need a PhD in textiles science. Here's how to get started:

- Take an undergraduate college program that is science based and has a textiles component.
- Internships, working in the industry as part of college credit, are important for a successful career. So be sure to ask about these opportunities.

- This may lead you to a job after your undergraduate degree is complete or to scholarships to pursue an advanced degree.
- You will start on the ground level and, as you get more experience and more education, you will work your way up in the industry.
- This will mean continuing your education on the master's and PhD levels in textiles science, textiles, textile engineering, textile chemistry, or fiber and polymer science.

To begin your exploration, talk to universities that offer undergraduate programs that include courses in textiles. Many universities in Tennessee have such offerings. You may want to consider a major in chemistry and take courses in textiles, or make sure you add extra courses in such subjects as chemistry as well as design within apparel, textiles and design or merchandising programs. If you are sure you want to pursue a career in textile science, look for a university with a textile science major.

Congratulations!

You have now completed the Advanced Project Area Guide for Careers in Fashion, Textiles and Design.

If you would like more information on activities and other resources, be sure to visit the Tennessee 4-H Clothing and Textiles website:

4h.tennessee.edu/clothing-textile



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