

Elements & Principles of Fashion Design

Unraveling the Mystery of Design Process in the Apparel Industry



Gigi Morris

Preface

This book is my attempt to put together information that I have acquired through education and experiences and use them as a teaching guide for student of fashion design. It is my goal to introduce the students to the fashion industry – the way I have known it personally and professionally.

I am a firm believer in the importance of continuing education and, despite my apparel production background and years of sewing experiences; I know that there's more to learn. I continue to learn by taking classes, attending trade shows and conventions, participating in seminars and reading books and other resources. Teaching is another way of learning for me. I enhance the knowledge and skills I have learned whenever I share them with my students. The classroom environment continuously challenges me and motivates me to learn more.

Working on this textbook was a fun experience for me. My objective is that the user of this textbook will learn about fashion design and be inspired to create design presentations; as well as gain confidence in doing it.

Dedication

To all my students and colleague on the Fashion Design program from whom I have learned a lot and thus, inspire me to learn more. Special mention goes to my students whose works were featured in this book.

To my wonderful husband Bob, who's always there for me and has been very supportive in all my endeavors. I always challenge myself to become a better person because of him. I also want to acknowledge his help in editing this textbook.

To my adorable little boys Bobby and Robby whose smiles, laughter, kisses, funny antics and tantrums makes my life crazy, funny and complete. To the rest of my family and friends back in the Philippines, thanks for being proud of me.

Finally, this textbook is dedicated to the people whom I have worked with and for in the apparel industry. Particularly those who mentored me and have given me the opportunity to explore learn and understand the meaning of globalization in apparel industry.

Foreword

I have published a series of reference books for individuals starting in the fashion design industry particularly fashion design students. These books cover several aspects of the fashion apparel industry from elements and principles of fashion design, to clothing construction, to apparel manufacturing production. Each reference book is designed to help students in a particular subject matter. It is beneficial to have the complete series of reference books, as they are cross-referenced with each other; each reference book is available for purchase separately.

The Elements and Principles of Fashion Design is designed as introductory reference book for students of fashion design. It will introduce the fashion design student to the design process in the apparel industry. *What inspires fashion? What influences it? How do you create and design apparel?* These are some frequently asked questions by students of fashion design. This textbook will guide them in finding the right answers to their questions.

As the title suggests, this textbook will focus on the basics of designing; that is, to know the Elements and Principles of Design as applied to the Fashion Design industry. I have included sketches and pictures to better illustrate them. I'd like to thank those who have contributed photos, sketches and ideas on this textbook. I also want to acknowledge those who have modeled for my designs whose photos appear on this book.

Enjoy learning!

Gigi Pontejos-Morris

INTRODUCTION

Okay, so you want to become a fashion designer? I'm sure you have asked yourself these questions? *Where do I get inspiration in creating garments? Where do I begin? How do I start?*

Most students of fashion design have these questions at the beginning of every fashion design class. Although not the be-all and end-all, knowledge of elements and principles of apparel design basically answers most of these questions. Every design process involves understanding the concepts of elements and principles of design. Whether you are creating an object of art, developing a new household project or creating a garment; your starting start process begins with this knowledge.

In the most basic illustration, here is how elements and principles of apparel design are used in the design process:

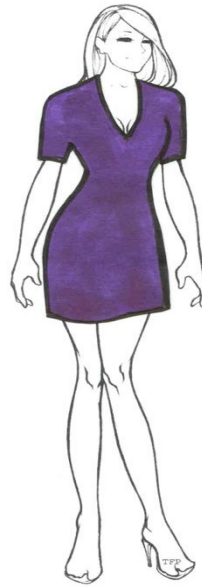
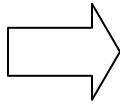
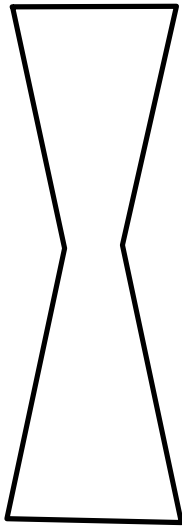


Where do I begin? How do I start?
Hmmm.... Let's see...

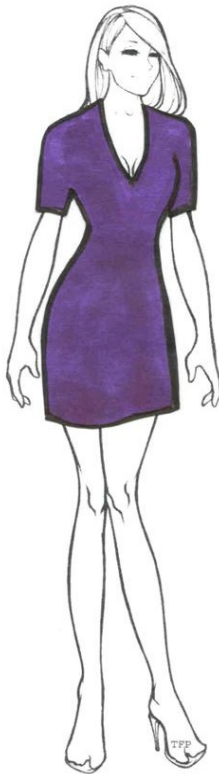
Elements of Design:

1. Silhouette
2. Details & Trimmings
3. Texture
4. Color

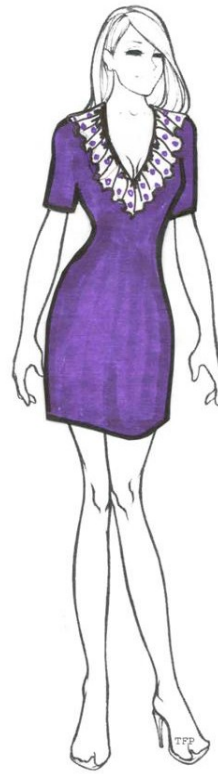
SILHOUETTE



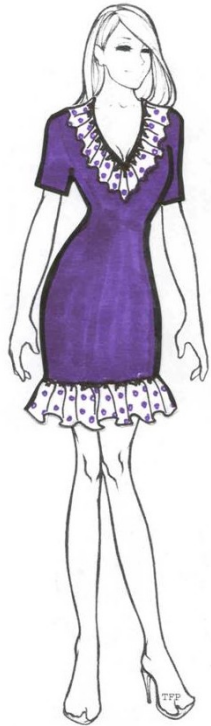
DETAILS & TRIMMINGS



+ DETAIL (flounce) =



By using the same detail in other parts of the garment, you can also create:



This

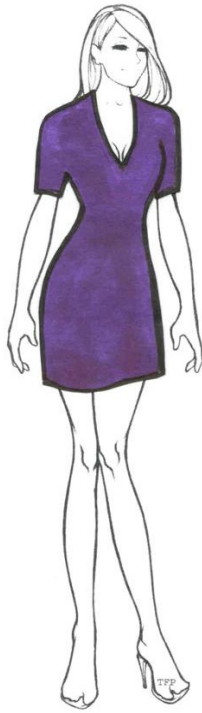


and this....

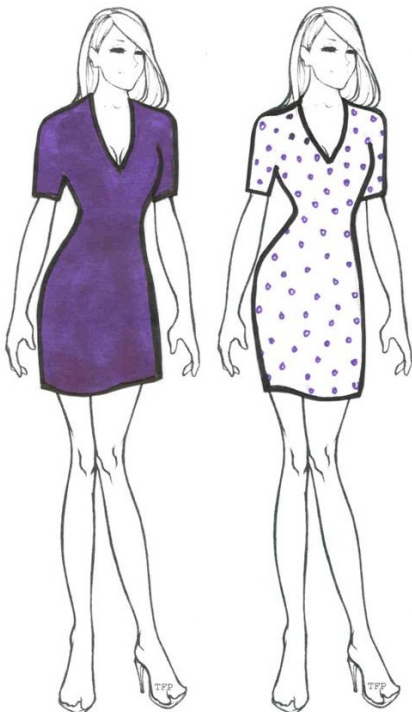
Therefore, by just using a basic silhouette and adding one detail in different areas of the apparel, you can create the following:



Now let's explore more possibilities. Going back to the basic silhouette ...



and then apply a different TEXTURE (fabric)



Let's play around with the texture and details...



Mixing and matching similar and coordinating fabrics are very common in creating an apparel line. Details and trimmings used in garments within the line are likewise similar and/or coordinating. Most of the time, this enables the manufacturer to meet the minimum quantity required in purchasing materials.

In creating an apparel design, the simple illustrations above explain that to know the elements and principles of design is to know where to start the design process.

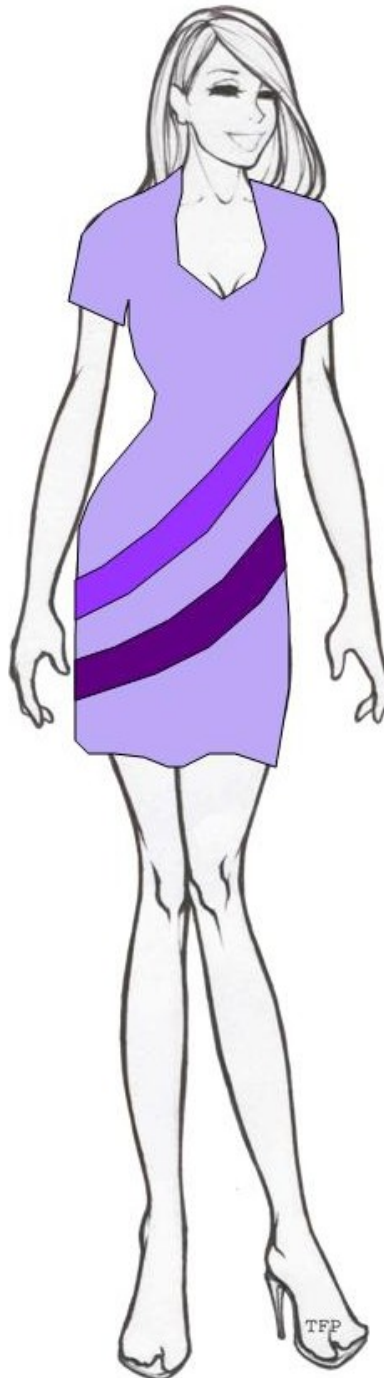
From the basic silhouette we used so far and one detail, we can create this simple design presentation.



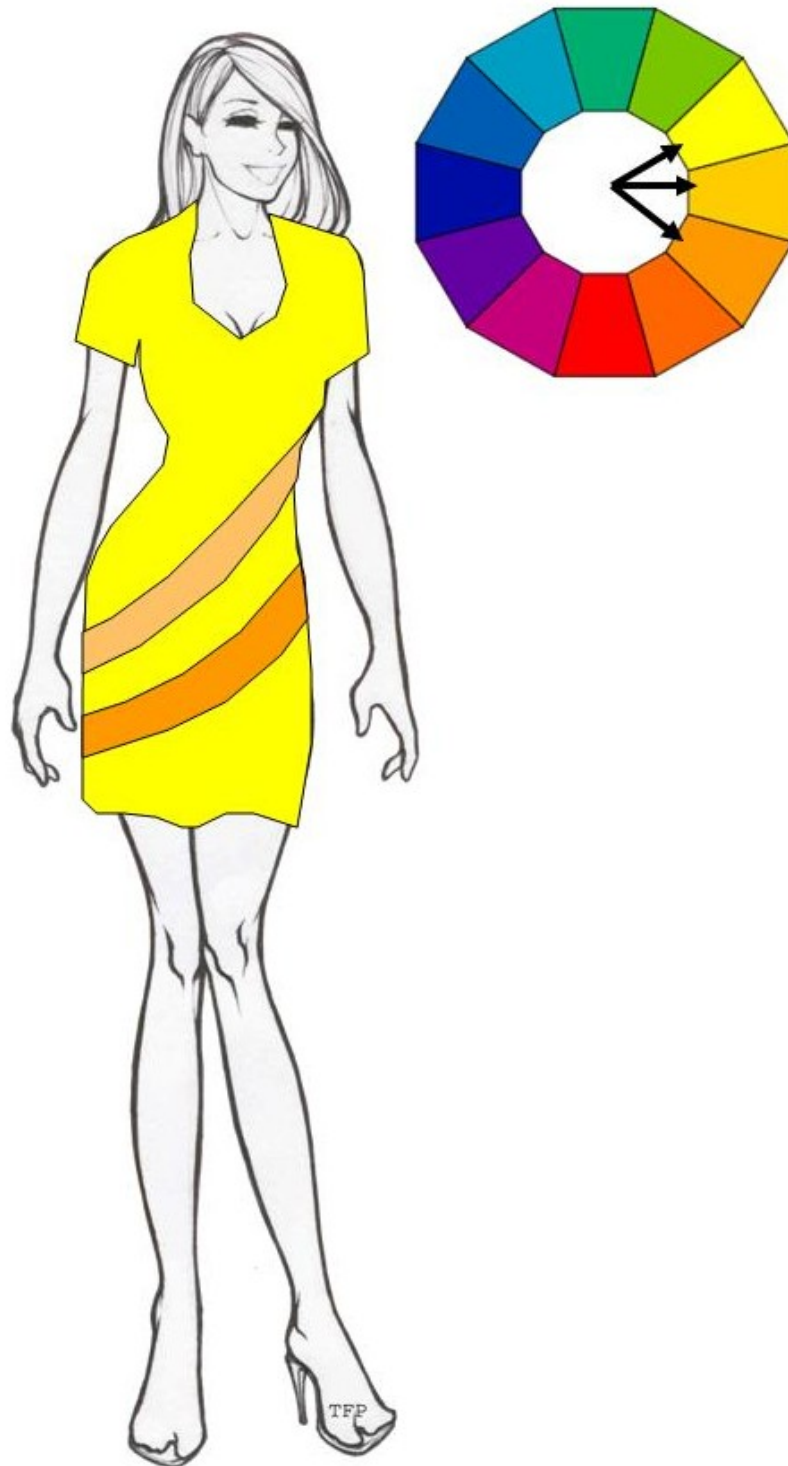
Now, let's use COLOR.

Using the same basic silhouette, add some detailing and use a different color scheme:

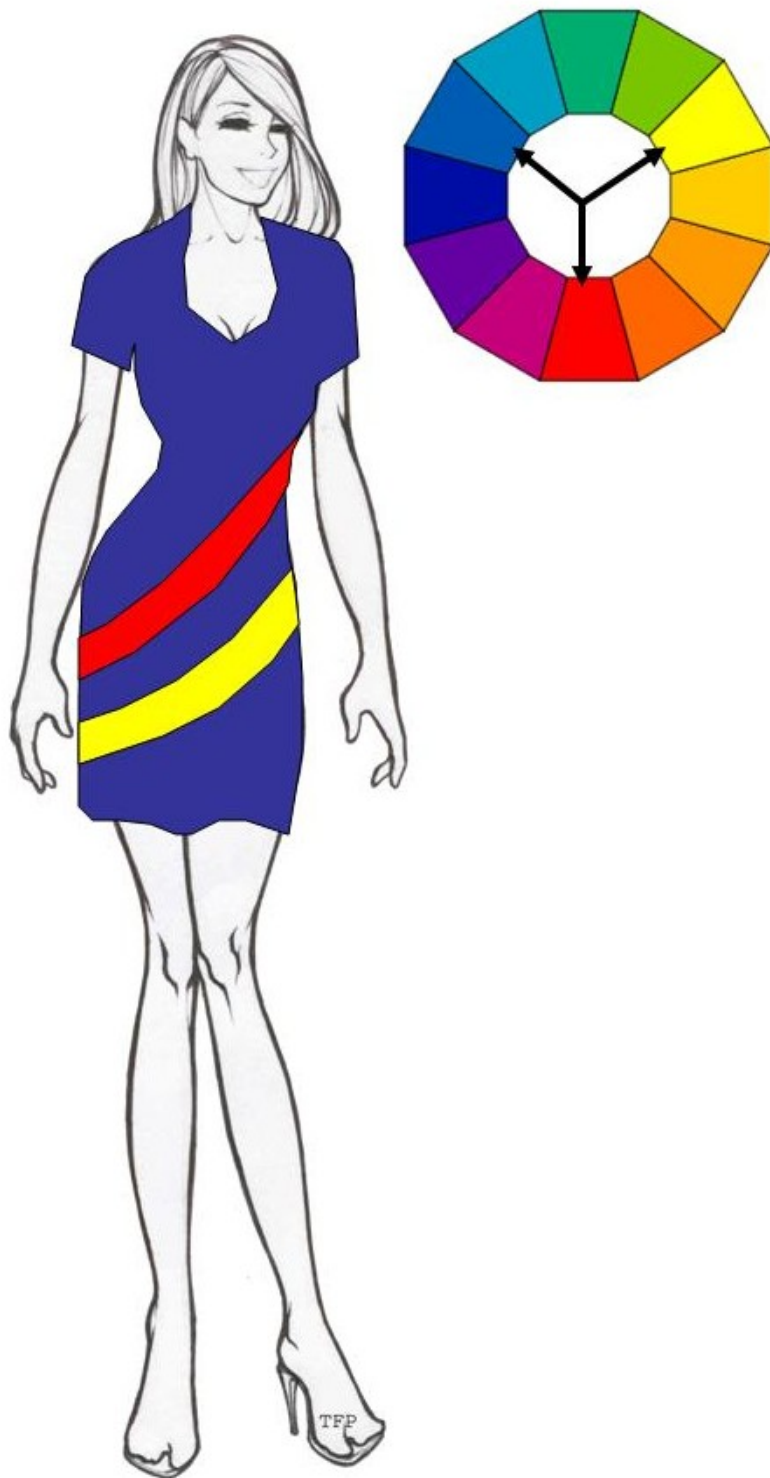
Monochromatic – one basic color made interesting by using different values and intensity.



Analogous – colors that are adjacent to each other on the color wheel.



Triadic - uses three colors that are equally spaced around the color wheel.



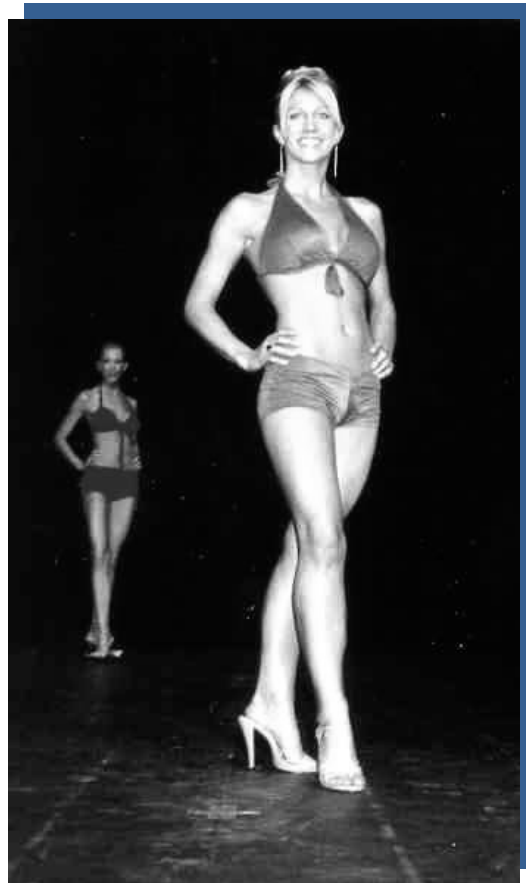
It is important that every fashion design student become familiar with the elements and principles of apparel design. It is the task of every designer to learn the current trend. Knowing current trends mean learning the latest color trends, keeping an eye on new details, updating themselves with knowledge of new trimmings available, gaining knowledge on new industry related-technology, etc. In my classes, this is a mantra that I always tell the students; ***Learning the elements and principles of apparel design is every designer's task but the challenge lies in how you manipulate them. What makes the designer different from each other lies in each other ability to effectively manipulate them.***



THE APPAREL INDUSTRY

If the world is made of several nudist communities, would there be no fashion industry? Well no need to debate on that issue as clothing like shelter is man's basic needs! Human beings have used clothing for body protection since pre-historic times. It is still the primary reason for wearing clothing. Although today, if we take a much closer look at the apparel industry, unlike pre-historic times, human needs for clothing has evolved into much more complicated needs, more than just body protection. This is when the “needs” for clothing transitions to “wants”. Students of fashion design and fashion entrepreneur should be cautious of this phenomenon. This is crucial in any design process. What needs am I fulfilling in the product? What wants am I fulfilling in this product?

The apparel industry is part of a bigger and exciting industry – the fashion industry. Study of fashion is not just the study of making clothes but also a study in sociology, history, psychology, etc. This will further be discussed when we study fashion of the past. Studying fashion of the past era will tell us a lot. It can tell us about the economy of the time, the social trend of an era, the industrial invention of the time, etc. More than anything else, for student of fashion design, studying fashion of the past is a good starting point in design process.



Swimwear design inspired by the popularity of hot pants in the 60's and 70's.

The role of Industrial Revolution in the development of Fashion Industry

Fashion history started with individual couturiers creating one-of-a-kind apparel. Later on it evolved into a mass-market industry. The mass market industry is as a result of the Industrial Revolution.

Although history of fashion can be traced back hundreds of years but it was not until 1700's that distinctiveness of design emerged. This is when advancements in spinning and weaving started. Prior to this clothing were slowly made by hand and fabrics were hand-woven.

This era we have seen inventions of Englishmen such as John Kay (1733, flying shuttle loom), Sir Richard Arkwright (1769, water-powered spinning machine), and James Hargreaves (1764, spinning jenny). This time the western world eyewitness the rise of the middle class. The growth of the middle class prospered new avenues of trade and industry. They continue to grow in importance. Soon, their influence in the society become so strong that it created and influenced new fashion directions.

The Industrial Revolution brought forth mechanization in the industry. Then, royalty sets the trend. Their clothing finely created by their dressmakers. They are precious workers to wealthy families and at times were jealously guarded. Wealthy families were afraid to lose them to other families that they try to keep their identities secret.

In the 18th century, the RTW (ready-to-wear) industry had its early stages. One prominent personality to remember is Marie-Jeanne Rose Bertin. She started as a milliner's apprentice and modiste to Queen Marie Antoinette. She was the first celebrated French premier fashion designer. She is very influential during her time. Her creations has brought fashion and *haute couture* to the forefront of popular culture. The elegance of her creations have established France as the center of the fashion industry. She became very famous that later on her creations were sent to London, Vienna, Venice and other places. We can say that she started the early trend of exporting fashion.

In 19th century, the world came to know another influential designer in the person of Charles Frederick Worth. He is an Englishman who immigrated to Paris. He first worked as an apprentice to fabric merchant and later on opened his first couture house. Just like Rose Bertin, Worth became famous because of the patronage of another royalty, Empress Eugenie, wife of Napoleon III. Napoleon III initiated changes and modernization that invigorated the French economy. His reign made Paris into a showpiece of Europe. The empress is known for her high taste in fashion and Frederick Worth succeeded in making her set the style during her time. The House of Worth creations are known for use of lavish fabrics and trimmings. There was a huge demand for luxury goods which includes luxurious textiles and fashionable dress.

The development and advancement of the textile industry helped increase apparel production. Inventions of the Industrial Revolution contributed to change and growth of the fashion industry. Apparel industry was invigorated Industrial revolution. By 1947, people working in textile mills outnumbered people working in any other industry in the United States.



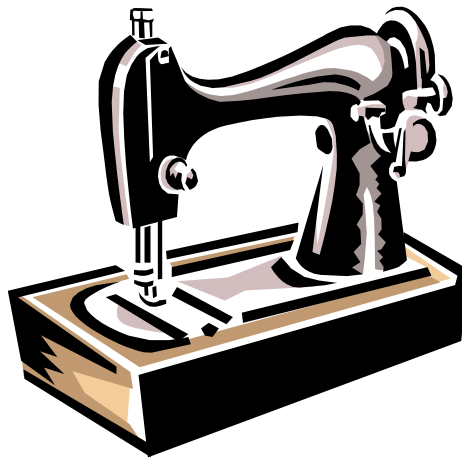
The Sewing Machine

As fabric production advanced, the demand for ready-made clothing followed. The invention of sewing machines made ready-to-wear apparel available to a majority of consumers. Important contributors were:

- Walter Hunt – invented the sewing machine in 1832 but did not apply for a patent until 1854. It was denied on the grounds of abandonment.
- Elias Howe, Jr – received a patent for his sewing machine in 1846
- Isaac Singer – in 1858 he designed a machine that worked with a foot treadle thereby freeing the hands to manipulate the fabric.

Sewing machines have evolved from a very basic home sewing machine to the highly industrialized and specialty machines used in apparel production today.

From this



To this...



Relationship between Unionization and the Garment Industry

New inventions during the industrial revolution, coupled with the significant growth of the American population, led to an increase in apparel production. Factories were built and New York City became a gateway to the new world of fashion.

As the demand for mass-produced goods increased, more and more workers were used in the factory. Working conditions deteriorated and employees were trapped in unsanitary and dangerous environments.

In an effort to improve working conditions and wages, seven local unions amalgamated to form the International Ladies' Garment Worker's Union in 1900. Unfortunately, it was not until tragedy struck (fire at Triangle Shirtwaist Co) that unions made inroads in cleaning up the factories.

As a result of this incident, many Americans came to support garment workers in their struggle against "sweatshops".



Finishing section of an apparel factory in the Philippines.

The Birth of Retail Industry

As a result of the Industrial Revolution, merchandise was produced in quantity. New facilities were needed for selling large assortments of apparel and accessory items to the masses.

The first were limited-line stores or specialty stores that restricted their merchandise to Limited classifications:

- ◆ Joseph Lowthian Hudson started a small men's and boy's haberdashery store in 1881 (Hudson's).
- ◆ Nordstrom opened its doors in 1901 as a shoe emporium.

With the immediate success of these stores, other companies opened new facilities. This started the trend toward chain store retailing.

At the turn of the twentieth century merchandise assortment became more abundant and varied than ever before. From limited-line stores, the full-line department stores follows.

- ◆ George Dayton built a six-story multi-use building in Minneapolis in 1902 (Dayton's). It eventually merged with Hudson's to become Dayton Hudson.
- ◆ Henri Bendel started as a small millinery business in 1912 which eventually evolved into a specialized department store operation.

Other retailers who began their businesses during this time were Macy's in New York City, Filene's in Boston, and Neiman Marcus in Dallas.

Although these stores flourished in the major cities, consumers in rural areas had little access to these retailers. In response, companies began to sell merchandise through the mail. The early mail-order merchants were both located in Chicago:

- ◆ Montgomery Ward began its business in 1872
- ◆ Sears and Roebuck & Co. began its business in 1893

HISTORY OF FASHION

It is important to study fashions of the past to become an effective designer. It will help one understand what influenced fashion and have a better grasp of what will become fashion. Every student of fashion design should understand that fashion is not just art and design but the study of history, sociology and psychology as well.

In studying fashion, you will recognize that most styles come back into the fashion scene ever now and then. It is important to take a good look at the details, trimmings, and other elements of design that were popular in the past as you can always use them as a guide in your design creation process. In many cases events going on during a particular decade influenced the fashion scene. To be an effective fashion designer, you have to be sensitive to the time of year, the event of the moment, what's going-on in town, the popular personality – you should be able to synthesize all of these and use them as a guide in your line creation.

Fashion 1900-1910

What's going on during the decade?

- The French refer to this time as La Belle Époque. (meaning "Beautiful Age"). Paris was the center of fashion world.
- Women's role in society was changing; women went to college, played sports and entered politics.
- Aviation history was made by the Wright brothers.

What's going on in fashion?

- Pinch-in waistlines.
- Dresses made mostly in 2-pieces.
- Tight-fitting corsets, mostly made of chiffon, and lace fabrics with leg-of-mutton sleeves.
- Gored skirt.
- "Gibson Girl" look.



Fashion 1910-1920

What's going on during the decade?

- Outbreak of World War I.
- Women continue to gain more independence.
- Women suffrage movement.
- Charlie Chaplin is the celebrity of the decade.

What's going on in fashion?

- Fashionable yet functional outfits.
- Skirts were straight with narrower hemlines.
- Lines are very simple.
- Hobble Skirt became popular.
- Paul Poiret, Madeline Vionnet are the famous designers.



Design inspiration: Hobble-look of 1910s



1920-1930

What's going on during the decade?

- Jazz is the music of the decade.
- Era of glamour, frivolity and excitement.
- Development of mass media.

What's going on in fashion?

- The Flapper.
- Long-torso silhouettes with ruffled flounces.
- Layers of chains adorning necklines. Beads and fringes are popular.



1930-1940

What's going on during the decade?

- The decade of the Great Depression.
- Nylon was developed by DuPont.

What's going on in fashion?

- Bias cut was an important silhouette.
- Back sweeping trains for gowns.
- Strapless necklines was a favorite style.
- Easy-care and washable fabrics become the trend.
- Chanel, Elsa Schiaparelli, Vera Maxwell were the designers of the decade.



30's fashion



30's inspired-fashion

1940-1950

What's going on during the decade?

- World War II. This decade is a classic example of how social trend dictated fashion.

What's going on in fashion?

- Fashion was simple at the beginning of the decade. Austere silhouettes.
- Sportswear and separates that could be mixed and matched are popular.
- Peplums were in vogue.
- Bikini made their debut.
- Embellishment and trims were kept to a minimum.
- Later part of the decade, Dior's "New Look" emerges. Longer lengths and fuller skirts.
- Recycling of garment is popular. Pattern companies introduced "Make Do and Mend" and "Rescued Remnants" styles. War Production Board Yardstick is used as guide in apparel production.

The most important points of the War Production Board's regulation L-85, relating to women's clothing, are presented herewith.



SUITS
Women's sizes — 36"-52". Skirt length 28¾"-30". Sweep according to fabric, 66" to 88". Misses' sizes—10 - 20—Skirt length 26¾"-28½". Sweep according to fabric, 60" to 75". Jacket length, Women's and Misses sizes—23½" to 28".



BLOUSES
Sleeve width limited to 14" for size 32. Length from neck to hem, 22". Only one patch pocket.

CULOTTES OR SKIRT
Women's sizes — length 28¾" - 30" Sweep, 66" - 97". Misses' length, 26¾"-28½". Sweep, 60" to 84".

Prohibited—Dolman, balloon, leg o'mutton, bias cut sleeves. All-around pleated skirts. Wide belts, aprons, tunics.



1950-1960

What's going on during the Decade?

- Famous celebrities were Marilyn Monroe, Elvis Presley, and Brigitte Bardot.
- I Love Lucy.
- There's a sense of economic optimism after the war.
- Economy boomed.
- New household consumer products were introduced to the market that freed women from most household chores.
- Women had more time to enjoy life outside of home. More time for social gatherings. Casual outdoor activities are common.

What's going on in fashion?

- Fashion was extremely diverse this decade.
- Hemlines alternately changed from long to short.
- Menswear in the early part of the 50's was conservative.
- Beatnik culture.
- Poodle Skirts
- Circle skirts are popular.
- Pedal pushers, slacks, halters were favorites.
- Peter pan collared shirts
- Saddle Shoes
- Cat's Eye glasses
- Hawaiian shirts



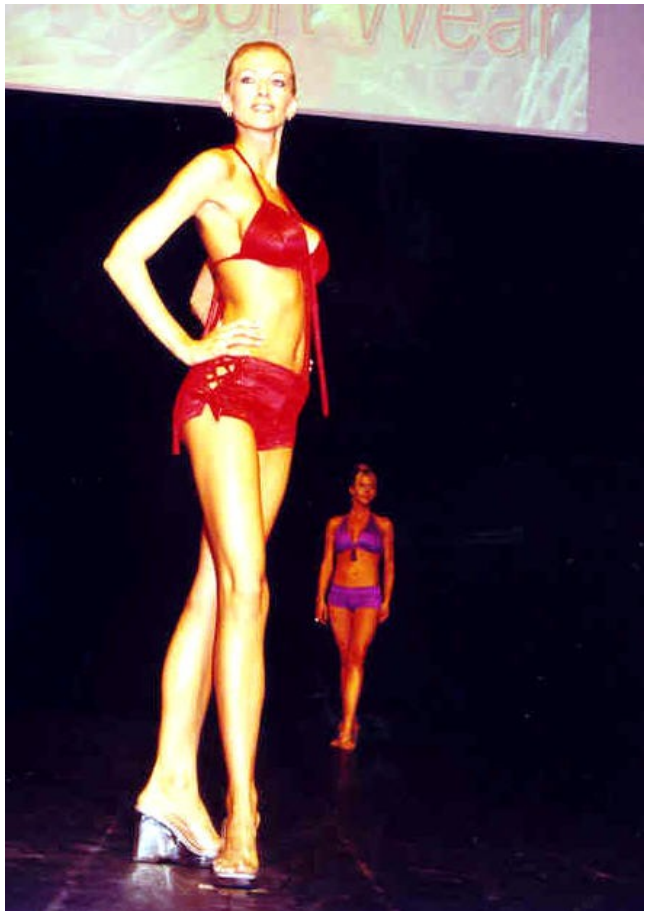
1960-1970

What's going on during the decade?

- Election of JFK and his assassination.
- Barbie Doll is a favorite toy.
- Woodstock and Beatle mania.
- Culture of the 1960's was youth-focused. WWII resulted in baby boom that generated millions of teenagers during this decade. These youth heavily influenced fashion, politics and lifestyle of the 60's.

What's going on in fashion?

- Knee-length is a popular hemline at the beginning of the decade.
- Mini-skirt made its entrance in 1967! Mary Quant is a favorite designer and credited for introducing fashion with raised hemlines.
- Chanel suit and pillbox hat.
- Pantsuit, denim and jeans are basic fashion.
- Turtlenecks are in fashion.
- Nehru jackets are popular for men.
- Go-go boots
- Hot pants
- Baby doll dress
- 3/4 length sleeves
- Tie-dye



1970-1980

What's going on during the decade?

- John Travolta, Charlie's Angels, Elton John, Cher were the popular celebrity figures.

What's going on in fashion?

- There's more individuality than ever before in this decade as far as fashion is concerned. Almost anything goes – from soft and romantic to casual and funky.
- Designers and manufacturers start to focus on the likes and dislikes of consumers.
- A tunic pant over blouse is common.
- Unisex clothing, mini-skirts, bell-bottoms from the 60's lasted through this decade.
- Knits reach their popularity.
- Layered look is popular.
- Giorgio Armani, Calvin Klein, Betsey Johnson, Mar McFadden, Ralph Lauren, YSL were the influential designers.
- Platform shoes
- Leisure suits
- Disco/glam rock
- Printed nylon or polyester shirts
- Corduroy



1980-1990

What's going on during the decade?

- Prince Charles married Princess Diana.
- Ronald Reagan was elected president.
- Madonna, Michael Jackson, Don Johnson were the famous celebrities.
- Top designers like Halston and Perry Ellis were known to have died of AIDS.

What's going on in fashion?

- “Power-dressing” for women. Shoulder pads were in. Suits and pants are in women's clothing.
- Physical fitness craze inspired fashion. Flashdance: leg-warmers, ripped sweatshirts
- Levi's jeans is a basic garment for the youth.
- Lace, lace stockings, beads, crosses that Madonna popularized made entry into fashion.
- Acid-washed jeans were popular.
- Donna Karan, Perry Ellis, Christian Lacroix, Tommy Hilfiger were the influential designers of the decade.
- Polo shirts
- Birth of Designer jeans
- Punk look



1990-2000

What's going on during the decade?

- Soviet Union collapsed in 1991.
- Bill Clinton was elected President.
- Trade pacts such as NAFTA and GATT were agreed to improve trade among nations.

What's going on in fashion?

- Styles from the previous decade were carried over at the beginning of the 90's but individuality in fashion emerged and thus developed into many interesting styles.
- Retro fashion.
- Grunge look. Flannels.
- Dress-down Fridays were the corporate buzz. Khakis and button-down shirts were very popular clothes for work.
- Vintage clothing.
- Long, straight hair parted down the middle
- Power bead bracelets
- Pashminas
- Tattoos
- Ghetto fabulous
- Minimalistic designs details.
- Colored jeans like red, green and indigo.



Inspired by colored jeans trend of 90s

ELEMENTS OF DESIGN

The elements of design form the most basic and important foundation that every student of fashion design must master. Knowing the basic elements of design aids the designer in moving beyond them. The designer can then re-create and modify the basic elements during the creative process of designing.

As mentioned earlier, effectively manipulating the elements and principles of design during apparel creation is the greatest challenge every fashion designer faces.

Elements of Design:

- Silhouette
- Texture
- Color
- Details and Trimmings

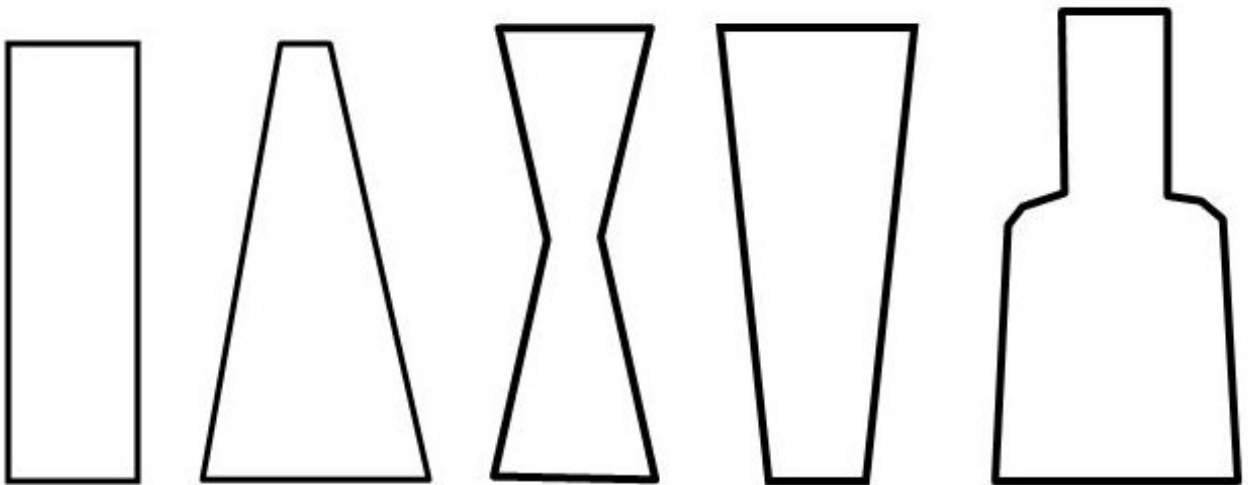


SILHOUETTE

Silhouette is the outline of the entire outfit and is often spoken of as the “shape or form”

FIVE BASIC SILHOUETTES:

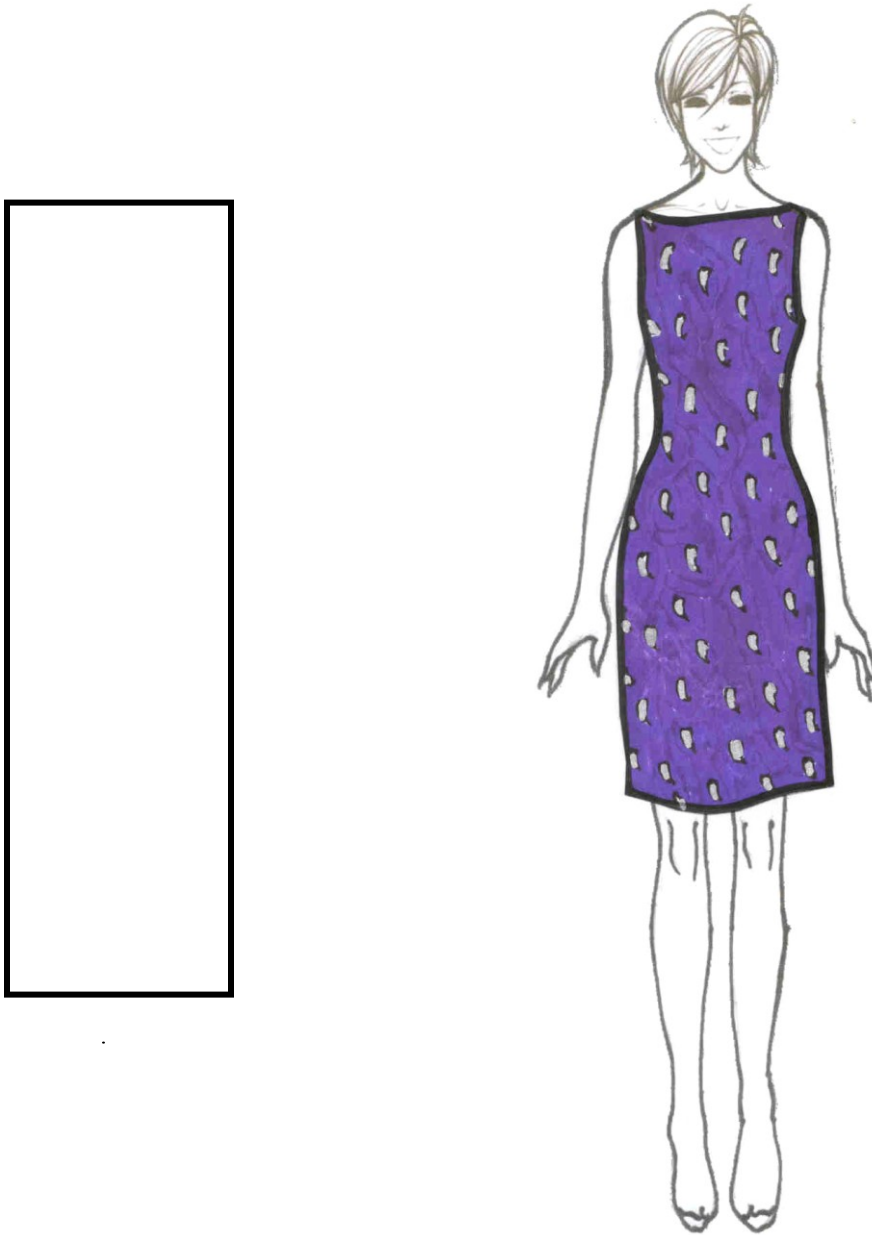
- Tubular or Straight model
- A-Line
- Hourglass
- Wedge
- Bell



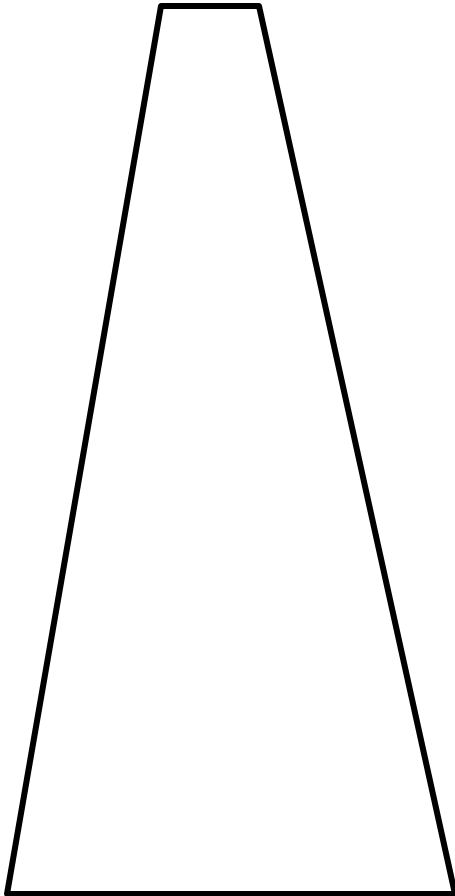
Other silhouettes are variations and modifications of the above five basic silhouettes.

Examples of using silhouettes as basic guide in the design process:

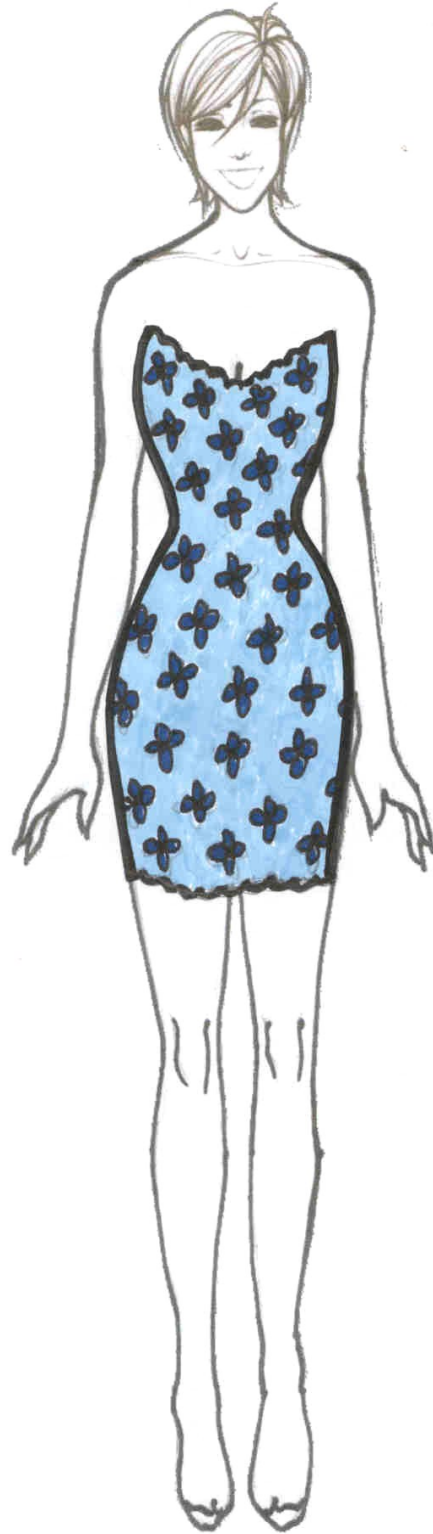
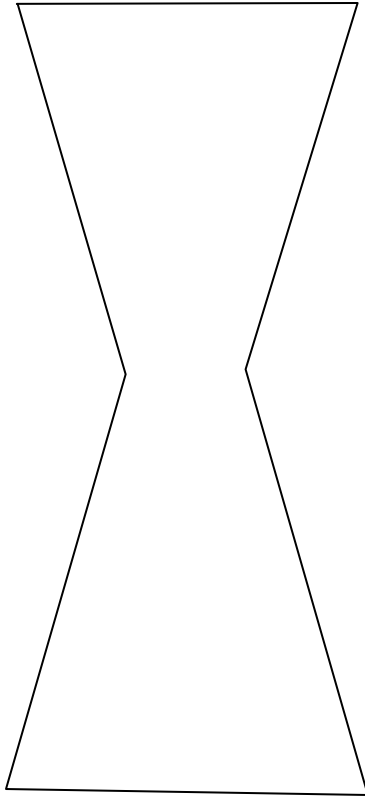
TUBULAR or STRAIGHT



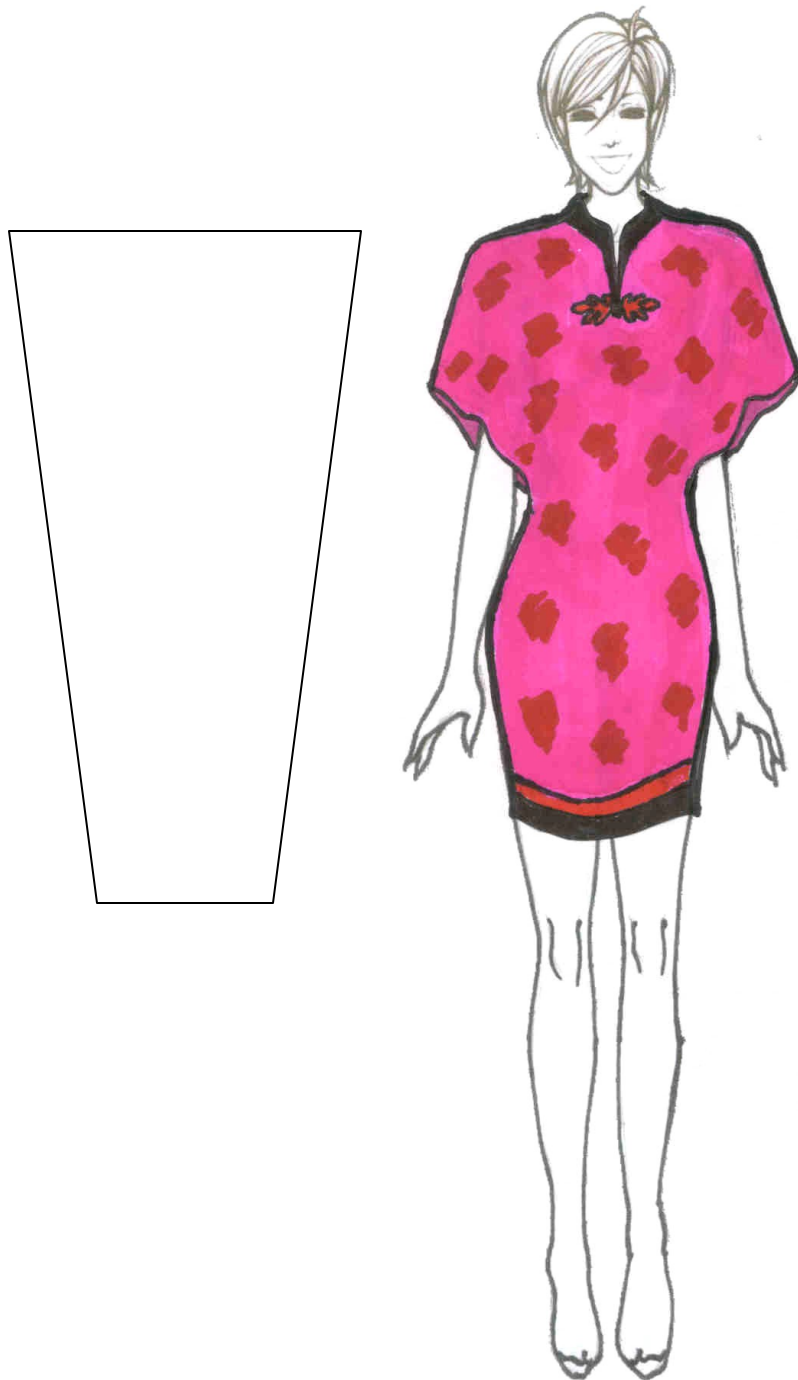
A-LINE



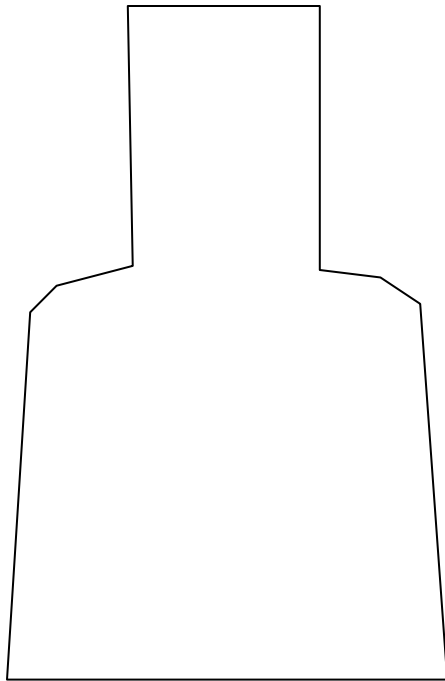
HOURGLASS



WEDGE OR TAPERED



BELL



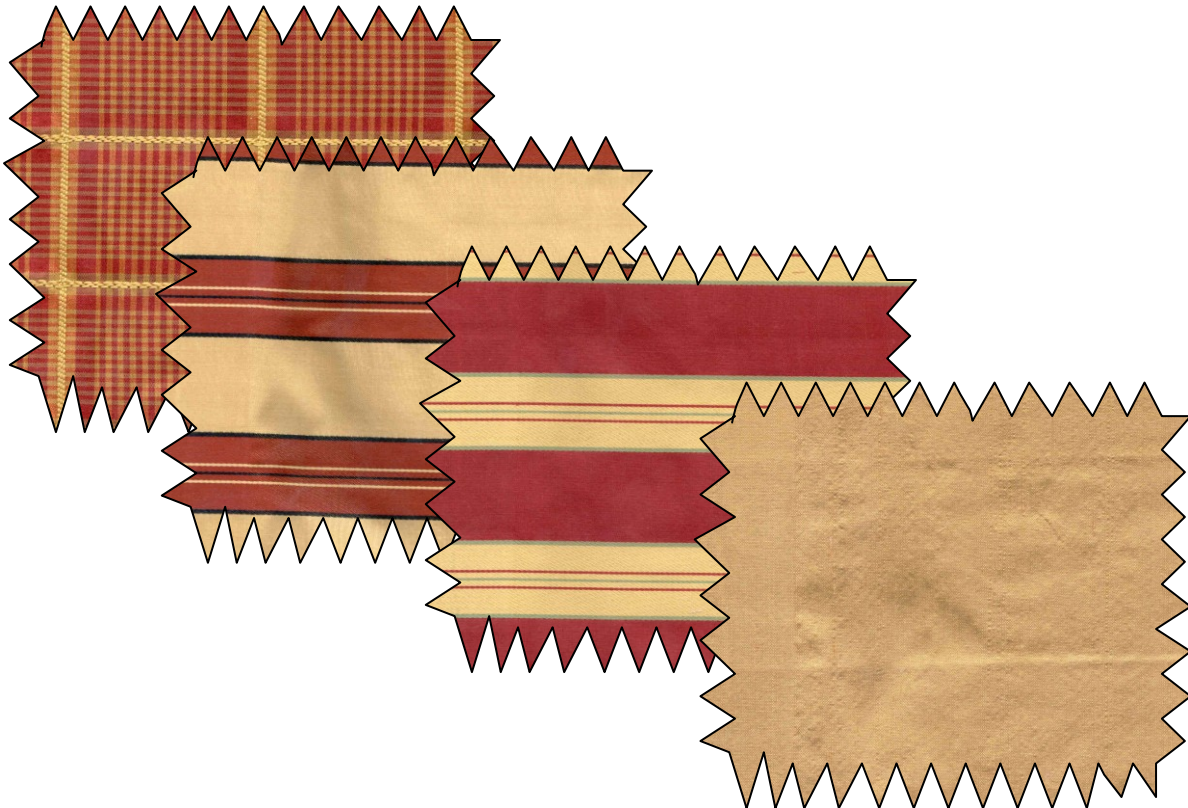
TEXTURES

Understanding texture means understanding the behavior and characteristics of the fabric. Although as element of design, is not just about the fabric. Trims, accessories and other finishings applied or used in the garment also affect the overall texture of the apparel.

Texture is the surface feeling or appearance of the garment whether woven or non-woven. Texture can appeal to the sense of touch or to the sense of sight or to both of these senses. Texture can thus be sensed in many ways. A surface can appear rough or smooth, prickly or pebbly, shiny or dull, soft or hard.

It is important for the student to get a basic understanding of different fibers that are used for fabrics. Different fibers have different ways of draping, feeling and looking. This also applies to the way the fabric is constructed, i.e., whether they are woven or knitted. As a designer, you can manipulate the fabrics, trims and accessories to create an exciting texture for your apparel.

Texture affects the “coloration” of a fabric. The shiny surface of satin brilliantly enhances a color but corduroy fabric, employing the same color, does not provide the brilliance because of its textural ridges or wales.





Here is an example of manipulating different texture to achieve a certain look and detail in a garment. Leather is combined with sheer and soft tulle.



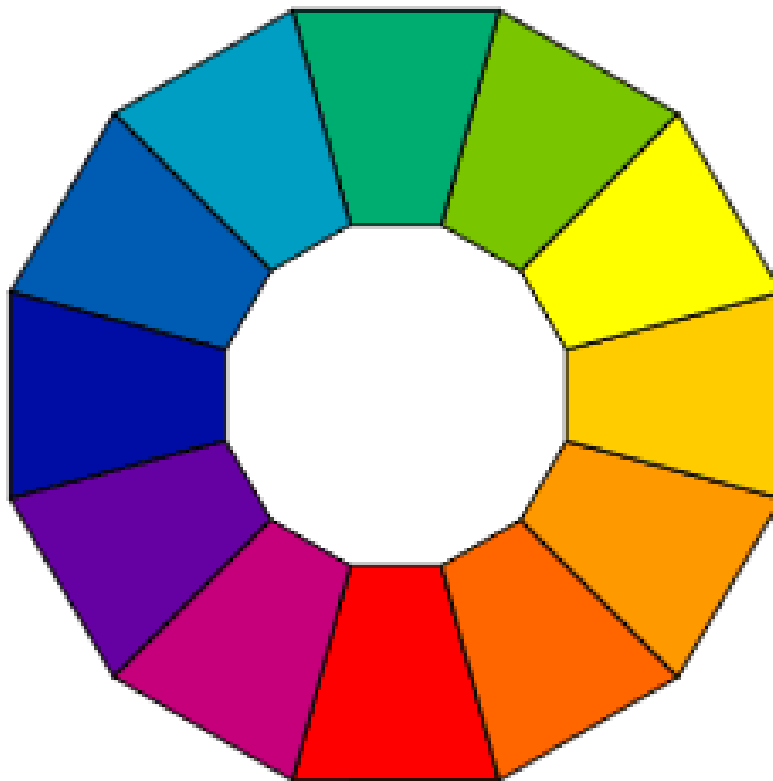
COLOR

- *Color* provides excitement, mood and emotion to a design
- Color is the single element that contributes the greatest visual impact without affecting the price.
- *Hue* – the technical term for the name of the color.
- *Value* – the lightness or darkness of a color. The lightest colors are achieved by different amounts of white and are called *tints*. The darkest colors are achieved by the addition of black and is referred to as *shades*.
- *Intensity* – refers to the color's saturation or purity, brightness or dullness. A color maybe dulled by adding gray, or its complement.

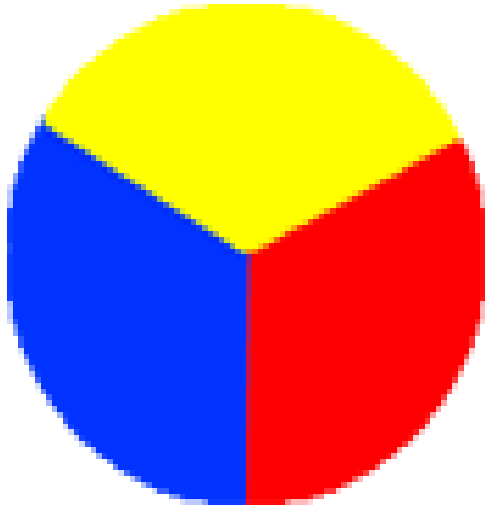
The Color Wheel

The colors of the visible spectrum arranged into a circle is called the *color wheel*.

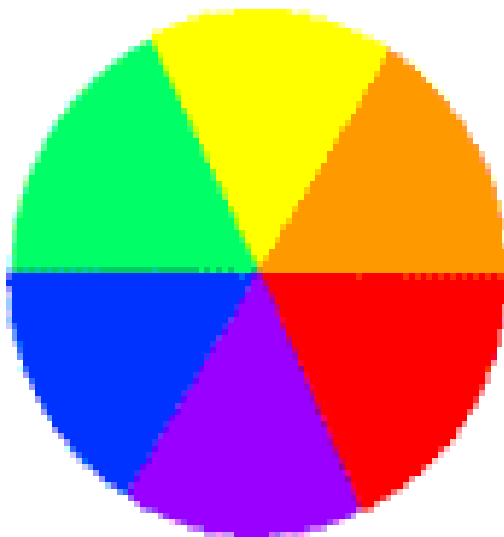
In the field of art and design, the color wheel is a traditional guide. In 1666 Sir Isaac Newton developed the first circular diagram of colors. It is based in primary colors; red, yellow and blue.



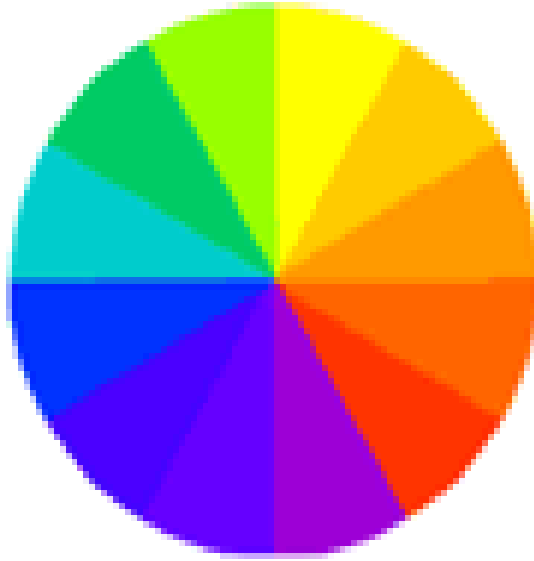
Primary Color - The basic colors that can be mixed to make all other colors. The primary colors cannot be made by combining other colors.



Secondary Color - Colors that are made by mixing two adjacent primary colors. For example, red and blue light mixed give magenta light.



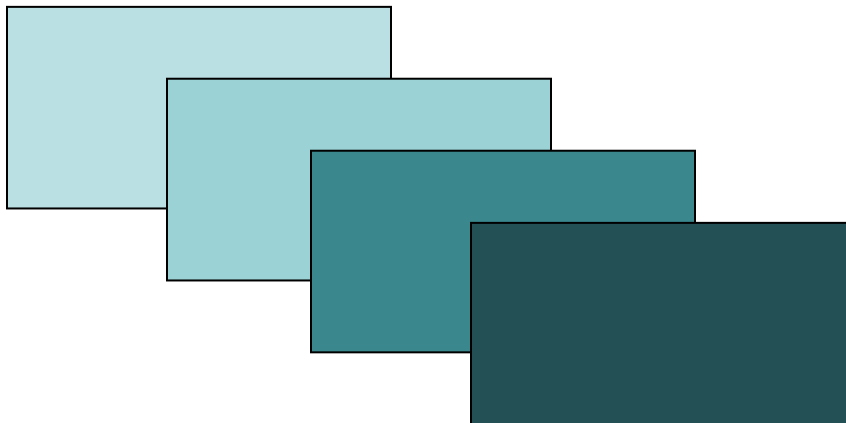
Tertiary Color – Colors that result from mixing the secondary colors and all other shades.



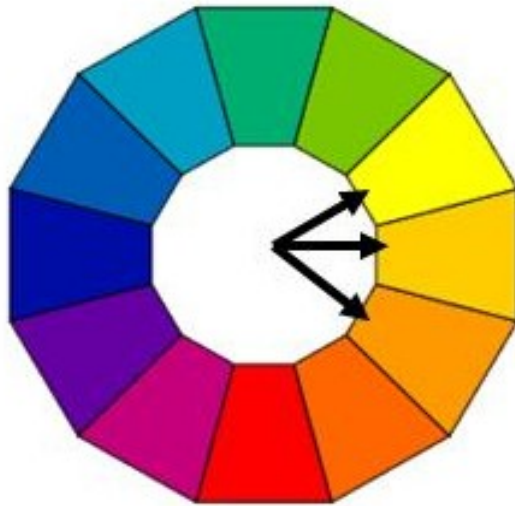
Color Scheme

Color schemes are harmonious color combinations that use colors in different patterns or combinations on the color wheel.

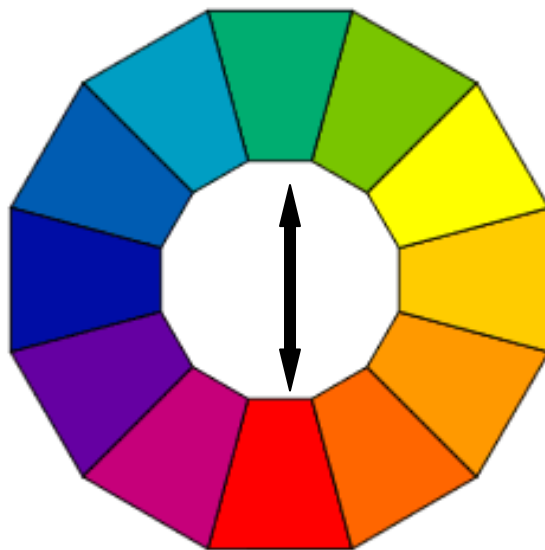
Monochromatic - Monochromatic color scheme is one basic color made interesting by creating different values and intensities.



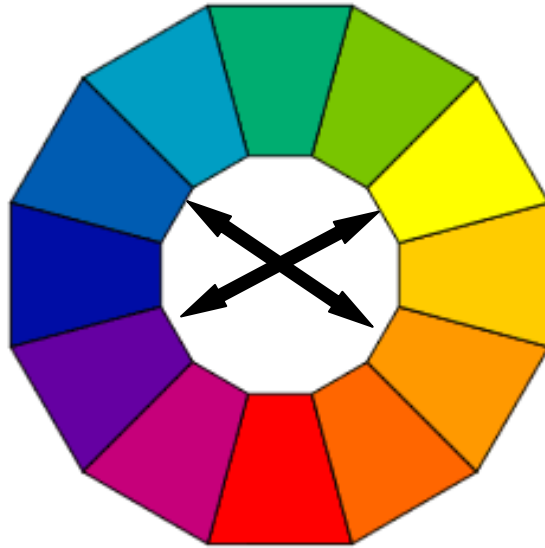
Analogous - Analogous color scheme contains colors that are adjacent to each other on the color wheel.



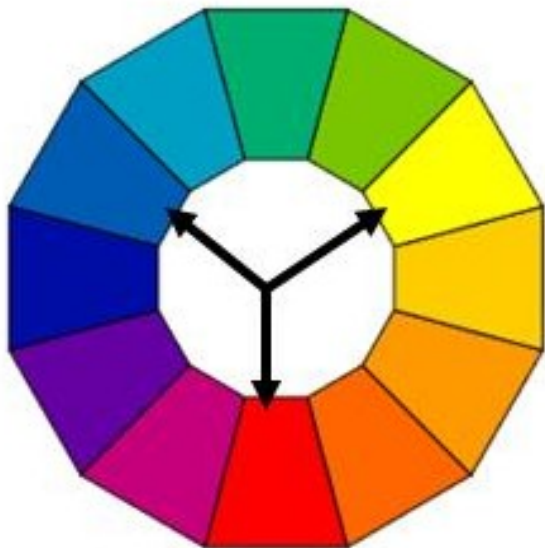
Complementary - Complementary color schemes are two colors directly opposite each other on the color wheel.



Double Complementary - Double Complementary color schemes are two sets of complementary colors.



Triadic - triadic color schemes use three colors that are equally spaced around the color wheel. This scheme is not as contrasting as the complementary scheme but looks more balanced and harmonious



MEANING OF COLORS

Color provides emotion to a design. Most fashion designers use color when they want their design to evoke a certain feeling or mood. The following is the general perceptions of meanings associated with different colors.

Red

Red is associated with love, desire, passion, energy, war, danger, strength and power. It is a very emotionally intense color and is often believed to stimulate human metabolism. Red has a very high visibility and if a designer wants to enhance an otherwise boring color, red is often used for bindings, trims, or as an accent color.

Orange

Orange combines the energy of red and the happiness of yellow. Therefore it is associated with joy, pleasure and bliss. Orange represents thrills, fascination, elation, delight and encouragement.

Orange is a very hot color to the human eye, so it gives the sensation of heat. Orange produces an invigorating effect and stimulates mental activity. It is highly popular among young people. Fall and harvest is represented by orange color.

Although not as intense as red, it also has very high visibility, so it can be used to catch attention and highlight the most important elements of your apparel design.

Yellow

Yellow is the color of sunshine therefore when we see yellow we associate it with happiness, joy, and energy.

Yellow produces a warming effect, creates cheerfulness, and stimulates mental activity.

Yellow is often associated with food. Bright, pure yellow is an attention getter. When overused, yellow may have a disturbing effect. It is known that babies cry more in yellow rooms. Yellow is seen before other colors when placed against black. This combination is often used to present contrast in designs.

Designers use yellow when they want to highlight their design or parts of their design. A lighter shade of yellow disappears into white, so it is not recommended to combine it with white.

Green

Green is the color of nature. It symbolizes growth, fertility and freshness. Green is also commonly associated with money.

Green has great healing power. It is the most restful color for the human eye.

Blue

Blue is the color of calmness. It is the color of the sky and sea. It is often associated with tranquility and calmness. It is associated with depth and stability.

Blue is used by designers to represent cleanliness. Oftentimes blue, particularly darker shades of blue, are perceived as a masculine color. Blue is highly accepted among males. When used together with warm colors like yellow or red, blue can create high-impact, vibrant designs.

Purple

Purple combines the stability of blue and the energy of red. It has long been the color associated with royalty. It symbolizes nobility, power, luxury and ambition. It also suggests wealth and extravagance. Purple is associated with wisdom, creativity, mystery, and magic.

White

White is associated with light, purity, goodness, virginity, and innocence. It is considered to be the color of simplicity.

White means cleanliness, thus it has a positive connotation. Designers use white to suggest simplicity in their design. Oftentimes designers use white in combination with other colors to denote the mood that they want to create in their line.

Black

Black suggests power, elegance, mystery and formality. Although black usually has negative connotation, it is very popular in fashion. The little black dress is a must for every woman's closet!

Black contrasts well with bright colors. Combined with red or orange – other very powerful colors – black gives a very aggressive color scheme.

TERMS TO REMEMBER

Hue - The color in its purest form, with no black, gray, or white added.

Lightness - The 'blackness' or 'whiteness' of the color.

Saturation - The amount of hue in proportion to the neutral gray of the same lightness; that is, the intensity of the color.

Shades - Shades are mixtures of a hue and black. This example shows five different shades of red:



Tints - Tints are mixtures of a hue and white. This example shows five different tints of red:



Tones - Tones are mixtures of a hue and its complement, or grays. This example shows five different tones of red:



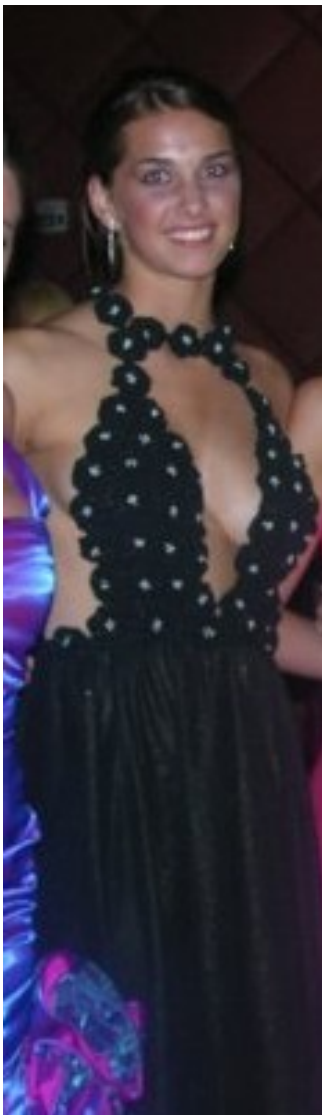
DETAILS & TRIMMINGS

Lines and Details

- The artistic treatments used on a garment that visually enhances the design and sometimes increases its functionality.

Trimmings

- The ornamentation in a garment. They provide pizzazz, glitter and excitement to a design.
- *Findings* are trimmings that also add a functional element.
- Some trimmings are both decorative and functional.



A designer can showcase his/her true creativity in this element of design. Manipulating the lines and details of a garment effectively can pose a real challenge. A single detail can be made a focal point or a part of a more complex design. Line can outline a pattern, draw attention, divide a space, show motion and even communicate a feeling. Lines can be straight, crooked, curved, diagonal, thin or thick, horizontal or vertical. The lines in the garment can be part of the fabric design or part of the garment detail.

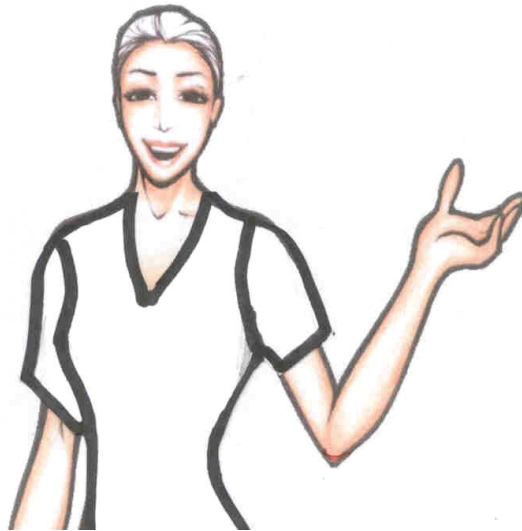


SLEEVES

Sleeves can be both functional and decorative and come in variety of styles and length.

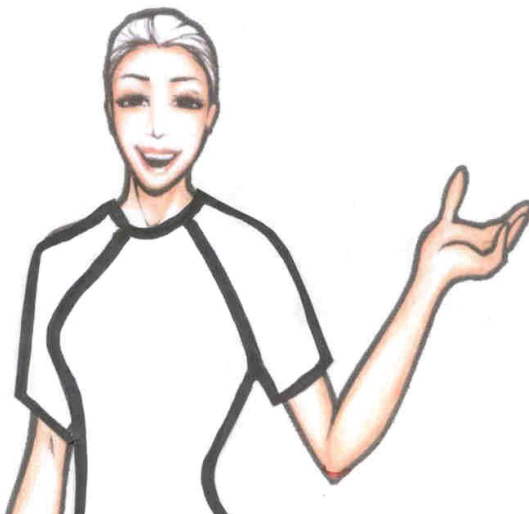
There are many variations of the sleeve but they are based on three main styles:

- *set-in*
- *raglan*
- *kimono*



Set-in

Raglan



Kimono



NECKLINES

Neckline is a design detail that highlights the face and the neck.



A designer can use various lines, e.g. straight, curve, diagonal to create different interesting shapes to outline the neck opening of a garment.

Here are some actual samples of ladies tops made interesting by using different lines and shapes to create interesting neckline shapes.



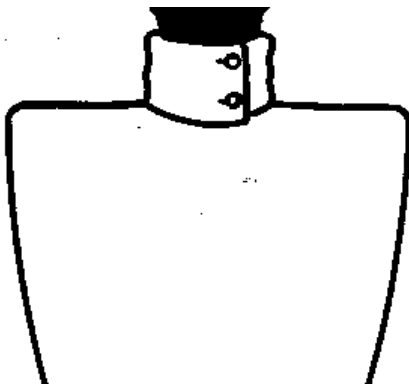
COLLARS

Collars are a design feature that frames the face and draws attention to it. A collar is an extra piece of fabric attached to an apparel at the neckline.

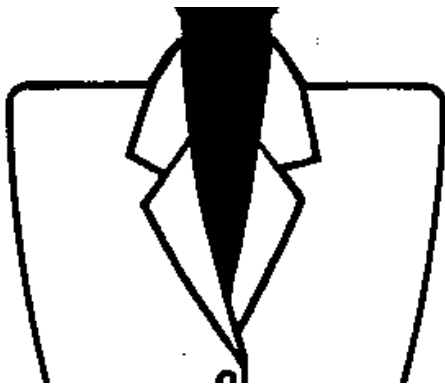


There are many kinds for collar style but they are based on three basic styles:

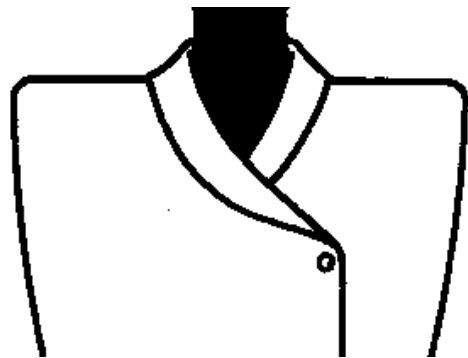
- Stand
- Rolled
- Tailored



Stand collar



Tailored Collar



Rolled collar

BOWS & TIES

The *bow* is decorative feature used in fashion design. It is often used as a main feature in a design placed at the neck, hip, shoulder or on the back of the garment. Bows drape better when cut on the bias. Oftentimes the edge is finished in an angle rather than straight line.



Bows and ties may also be used as a fastener (functional) or just a decorative piece of the garment.



This is an interesting design from CLOE.
It made use of bow ribbon as detail for
the sleeves.

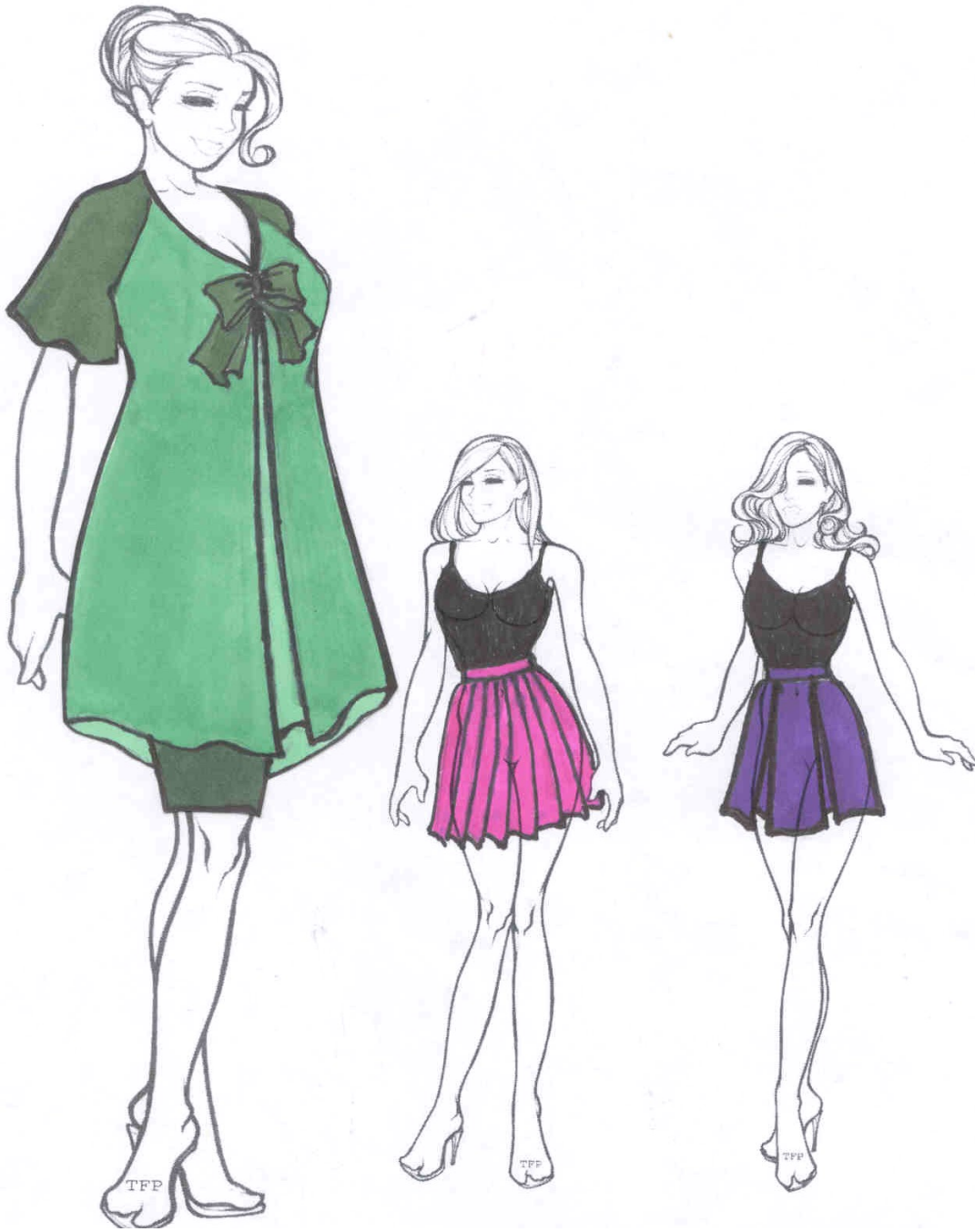
Uses as main decorative/functional design detail in
the shoulder. Function as closure on the shoulder.



PLEATS

Pleats are folds of fabric and may be added to a design by allowing enough extra fabric where it is required and folding it into place.

Pleats give movement and are used in the design of a garment in a variety of ways on the skirt, bodice or sleeve. They can also be used as a style detail for a pocket, within a yoke or panel.



Left – Inverted pleats

Center – Continuous or Knife pleats

Right – Box pleats



Electric Pleating – the kind of pleating done by an electric pleating machine. Fabrics can be pleated in various widths, sizes and patterns.



Box pleating detail on sleeves

POCKETS

Pockets can be both functional and decorative and come in a variety of types.

They may be constructed as separate pieces and sewn to the garment or may be created as part of the garment.



Decorative Patch Pocket



Levi's back pocket
with and without pocket flap



Chest patch pocket



Double-welt pocket

GATHERS

Gathers are used in a variety of places on a garment to achieve extra fullness. They can be used as a major detail like a full-gathered skirt and can also be used as decorative treatment for the garment. Gathers are achieved by “gathering fabrics” to give extra fullness and therefore reduces the width of the fabric to about one-half or one-third of its original width.



Gathers used in skirt to achieve fullness

Depending on the fabric used, the effects will vary from very soft draped folds of jersey silk or fine wool to the rich deep gathers produced on brocade, taffeta or cotton. Gathers fall best on the lengthwise grain of the fabric.



Gathers used in variety of places to achieve extra fullness look

In discussing gathers as a detail – you will also encounter the term ruching. **Ruching** is a French term which means to gather, ruffle or pleat. If referred to as early art form, ruching means the hand method of stitching commonly on the zigzag pattern to create interesting texture for ribbon or fabric. The term is also used in contemporary way meaning gathers being used in regular pattern in a garment.



Gown with ruching details on the bodice



Hand Ruching Method



(pictures from www.anitashackelford.com)



Using gathering method – another trim can also be create; ruffles. Ruffles is a strip of fabric, lace or ribbon tightly gathered or pleated on one side and applied to a garment. It is also used in home décor items and in other textile as a way of decorating and creating different texture.



Tiny strips of sheers cut and gathers to form layers of ruffles.
Design by Gigi Morris

FRILLS & FLOUNCES

Frills or *flounces* are wide and deep ruffles. Usually, when it is made from fabrics in a circular pattern, we refer to it as flounce instead of frills. The side attached to the garment is a smooth line while the outer part flares. They are used as a major detail such as a full-flounce skirt and can also be used as a decorative treatment for the neckline or hemline.

Soft fabrics are ideal to use as they fall naturally into soft folds.



SHIRRING

Shirring is a detail created by using elastic thread that runs row after row on a garment and produces a controlled fullness.

It is often used to in a garment when you want to achieve fullness and stretchability at the same time. It is provide different texture to an otherwise plain fabric.



The waist portion of this blouse have a controlled fullness look achieved by stitching several rows of elastic thread.

COWLS & DRAPES

Cowls and *drapes* are design details in which the fabric falls in soft folds.

Drapes can be used in different parts of the garment. To use effectively, soft fabrics and fabrics with good draping qualities should be used. Drapes will vary depending on the kind of fabrics used. Use of draping in the design gives a soft, sensual, sexy and seductive look.



SEAMS & STITCHES

A *seam* is achieved when joining two pieces or layers of fabrics together. Stitching happens whenever a threaded needle is stitched thru a fabric. Seams have more functional purpose while stitches are more decorative although both can be used as design details. Examples are overseaming, piped seam, SNTS, DNTS, etc. The example below illustrates topstitching as a major element of design.



QUILTING

Quilting is a technique used to create a “puffed up” effect. It is created by stitching a design on two layers of fabric with padding inserted between them. This technique is often used in bed comforters and quilts. It is commonly used in insulated garments. Creative designers have used this detailing in leather jackets, skirts, blouses and others.



Quilting detail used all over the fabric to create the puffed-up look.



Quilting creatively used in the center front detail

FABRIC TRIMS

Every conceivable type of knitted, woven, or crocheted fabric produced in narrow strips for application as a trim.



Trim with felt strips

BRAID

Involves interlacing three or more yarns or strips of fabric to produce a narrow, decorative trims.



Braiding technique using self-fabric of an apparel is also a popular way of texturing an otherwise plain fabric. Braided fabric can be use as straps, belt and as decorative trim to the garment.

APPLIQUE

Appliqué is a small, individual pieces of fabric used to create a design detail in a garment. It is called appliqué when cut-out pieces are sewn or fastened to a larger pieces of fabric to form trim.

In broader term when a separate piece is added to the larger piece – one is doing an appliqué. An appliquéd cloth is an important art form in many countries. This method is used in making quilts.

Appliqué embroidery is very popular decorative item for children's apparel



Example of pieces of fabric cut to make a design and used as an appliqué to children's apparel



Appliqué embroidery is very popular decorative item for children's apparel



Examples of ladies' tops made interesting by applying embroidery appliqué as a trimming.

EMBROIDERY

Embroidery can be hand sewn or produced by machine. In embroidery various yarns are used to form a decorative embroidery patterns or designs.



Used as decorative design on pants bottom.

LACE

Lace is most popular in intimate apparel, bridal gowns and evening wear. It is available from markets all over the world with choices ranging from finest, detailed variety to types that are heavily textured.



Example of ladies' tops made interesting by using piece of lace as an inserts to the garment.

BEADS, SEQUINS & RHINESTONES

Beads - beading is a popular method of decoration when a glitter and sparkle finish is wanted on the garment. Most are glass and metal beads and come in variety of styles, color and shapes. Beads are available in pieces or in finished trimmings.



Rhinestones - Rhinestones are small bits of glass that have been cut to resemble diamonds and other precious and semi-precious stones.



Sequins - Small circular metallic disks that reflect the light. They come in variety of styles and colors.





Apparel adorned with Beads, Rhinestones and Sequins.

BUTTONS

Both functional and decorative and can also be used to trim a garment. Buttons are available in pearl, wood, metal, glass, leather, etc.





This skirt is made attractive by using contrasting covered buttons.



Another example of design idea using contrast color buttons in an apparel.

DECORATIVE LABELS

Originally used on the inside of the garment then came into their own status providing identifiers for fashion designers. Other than for quick recognition – it is now used as decorative trimmings.



Decorative labels are made from different materials:

- Woven and non-woven materials.
- PVC materials.
- Leathers
- Metal
- Combinations of different materials

EYELETS, GROMMETS, SNAPS, etc.

Eyelet – Usually made of metal and available in different finishes: gold, silver, pewter, antique brass and antique silver. Often used to finish round openings where drawstrings and other materials are interlaced. They are available in different sizes and serve as a functional and decorative treatment to a garment.



Grommet – Similar to an eyelet, grommets are usually made of metals and available in different finishes: gold, silver, pewter, antique brass and antique silver. They are available in different sizes and shapes.



*Snap*s – Press studs usually made of metal come in different finishes. They are made in different sizes, colors and designs. They can be both functional and decorative features.



Metal trims – there are several metal trims in silver, bronze, gold finish. It can be used in apparel in different ways.



Example of ladies' top with metallic chain in silver finish.

THREADS

Threads come in variety of yarn and are manufactured by a yarn producer. Other than its functional purpose, it is now used also for decorative trimmings.

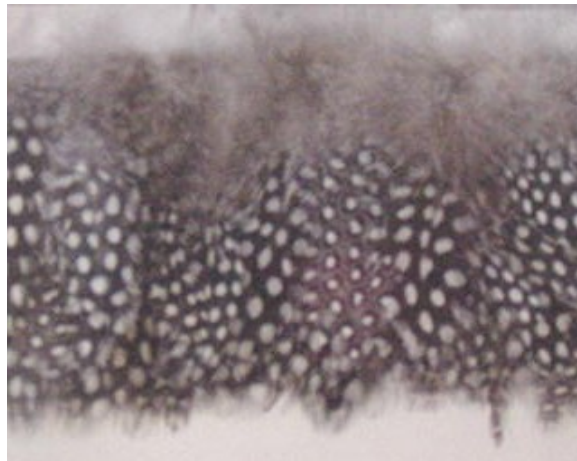
Decorative threads such as silver and gold metallic threads are often used as decorative stitching and in embroidery design.

Colored threads are used as decorative topstitching as well.



FEATHERS, BOA, etc

Decorative trimmings made from real or synthetic feathers. They lend a flamboyant finish to a design. Comes in different types, colors and makes.





Fabric adorned with feathers.
Designs by Gigi Morris



Fabric adorned with feathers and beads.
Design by Gigi Morris



Ladies' top made interesting with boa-like trim.

TASSLES, etc

Tassels are made from different materials in different styles. They vary from a small single item to a more elaborate design using beadings and other materials. Normally used as a finish for the corner of a garment. Also, very popular for window treatments.



Design by Gigi Morris



Top: Example of single tassel.

Left: Example of trim tassel by yardage.

ELASTIC

Elastic is used when gathering is needed or wants to be achieved. Once used to keep the top of socks from rolling down or for form-fitting swimwear, elastic is now used in a variety of forms for many fashion items.



Elastic used as belt

PIPING, RIBBONS & BINDINGS

Piping – it is a trim on clothing made from diagonal cut fabric (bias) and used on edges of garments to give a clean finished look. It has been used on clothing to provide contrast and ornamentation.

This is a staple decorative feature for uniforms. In military uniforms piping is used in gold, red, white or blue. The piping material may be flat, or puffed out with batting. There are some commercially available bias tape in most fabric store commonly referred to as piping tape. It is now also available with adhesive and can be fuse by ironing on the garment. Traditionally, it is sewn either flat or double folded.



Ribbons – can be made from a finished fabric trim or self-fabric and sewn into the garment. It gives a dainty look to the design.

Binding – usually sewn flat on the garment and can be used effectively when a designer wants to add a contrasting color to the design. It is also used on the outer edges of the garment for a finished and clean look.



Above is an example of design that used both bindings and ribbons together in apparel.

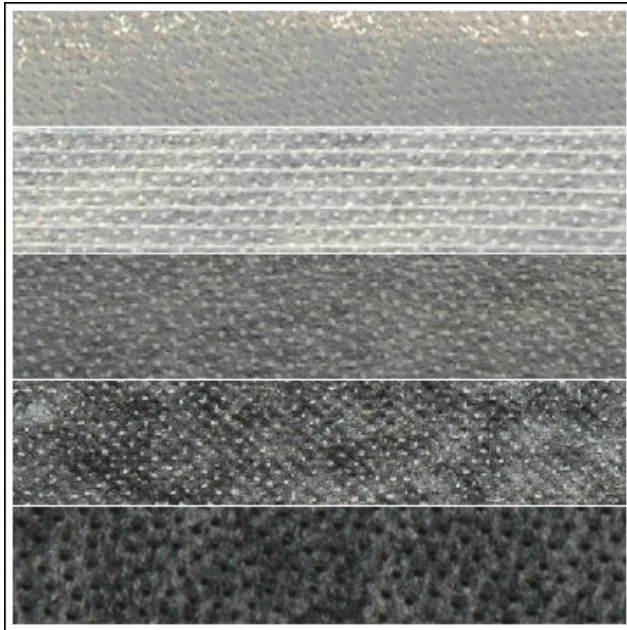


Here's an example of binding and a complimenting decorative trim used together in apparel.

Design by Gigi Morris
Modeled by Elle
Photo by Adam Martinez

INTERFACING

Functional trimmings used to give shape and support to the garment and accessories. They are not seen by the eye but are used between the outside layer of the garment and the lining.



Non-woven interfacing with fusing



White non-fusible
interlining



Non-woven interfacing in black and
option and in different weight



Colored Non-woven white
heavyweight interlining

DYES & PAINTS

Dyes are applied to fiber or fabric mostly to achieve color in garment. Tie Dying is a very popular method of decorating apparel. It is accomplished by folding the apparel (typically a T-shirt) into a pattern, and tying it with string or rubber bands. This method of dyeing was fashionable in the late 1960s and early 1970s as part of style of the hippie generation.

Fabric paints are normally used to apply design to already finish apparel such as in screen printing, fabric painting and to enhance an existing fabric design.

Before



After



This is an example of unbleached muslin dyed in purple dye; then silver fabric paint is used to create some silver sparkle on fabric.



This is the finished garment using muslin as the fabric base.

PRINCIPLES OF DESIGN

In using elements of design in the design process, it must always be guided by the following principles to create harmony in the garment.

- Balance
- Emphasis
- Proportion
- Rhythm

BALANCE

There are two kinds of balance:

- *Symmetrical*
- *Asymmetrical*

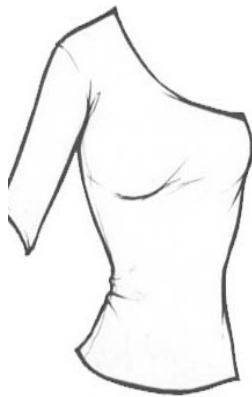
Symmetrical

- Both side of the design are a mirror image of each other.



Asymmetrical

- Irregular or uneven on other side.



EMPHASIS

Drawing attention to a particular area of a design.
- it is central to a success of a design.



PROPORTION

Proportion is the feeling of unity created when all parts, e.g. sizes, amounts, or numbers relate well with each other.



- Elements in the design should be scaled to fit its overall proportion.
- Scale refers to the overall size of an object or its parts compared to the size of other objects or parts in the design.

RHYTHM

Rhythm is the repeated use of lines, shapes, colors, trims and details to create a pattern that the eye can follow throughout the design.





Repeating design details in a garment will create rhythm. Designer must use the principle of rhythm as well in combining fabrics and trims. Effective use of combining different fabric, trims and details will create harmony in the garment. It should provide a harmonious and interesting overall texture. Otherwise, it will create a mess or clutter look instead.



Here is an example of a design combining satin and organza and heavy lace trim in a garment. Each one has different texture characteristic. The stiffness of organza is used to provide contrast on the soft drape of the satin. Repeated lines are used by repeating the folded bias details and accentuated by the embroidery lace.

The multiple-layer satin ribbon is used to complement the repeated lines of the organza.

HARMONY

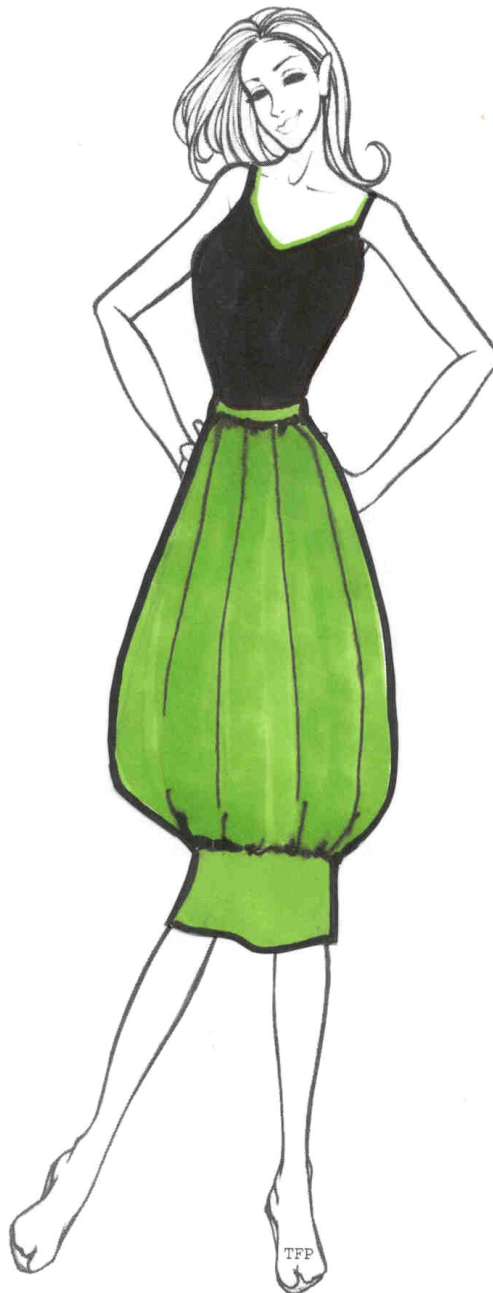
It is the feeling of unity between all parts of the design, thereby, creating a sense of completeness. When manipulating the elements of design, a designer must use the principles of balance, emphasis, proportion and rhythm as guide to create harmony in the garment.



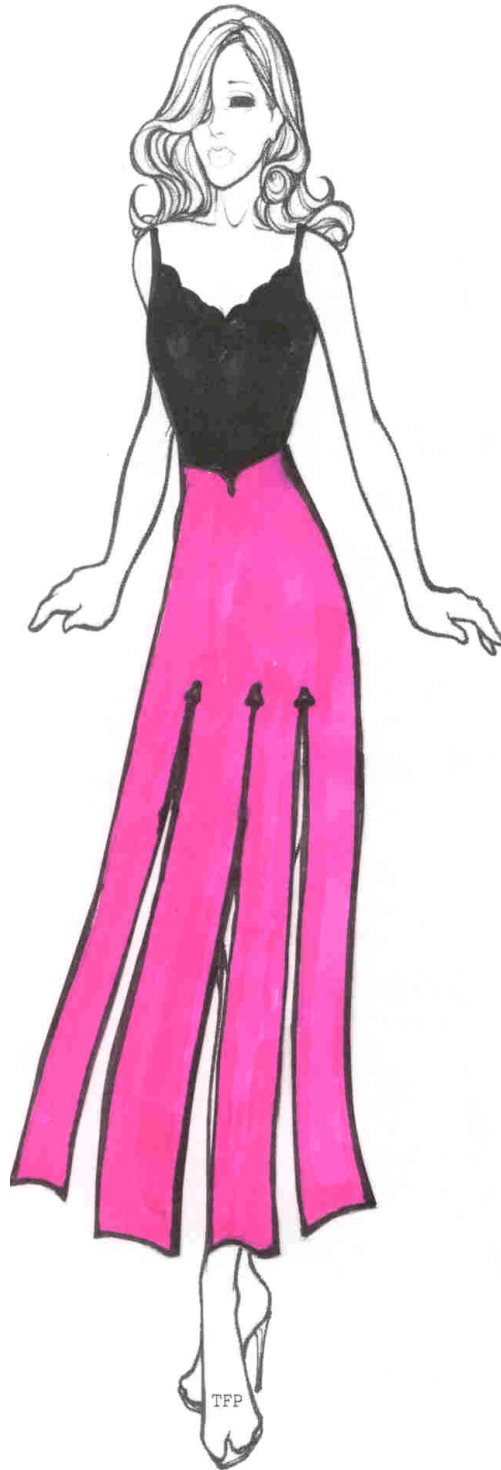
SKIRT

– separate garment starting from waist; length varies normally from midthigh to floor length.

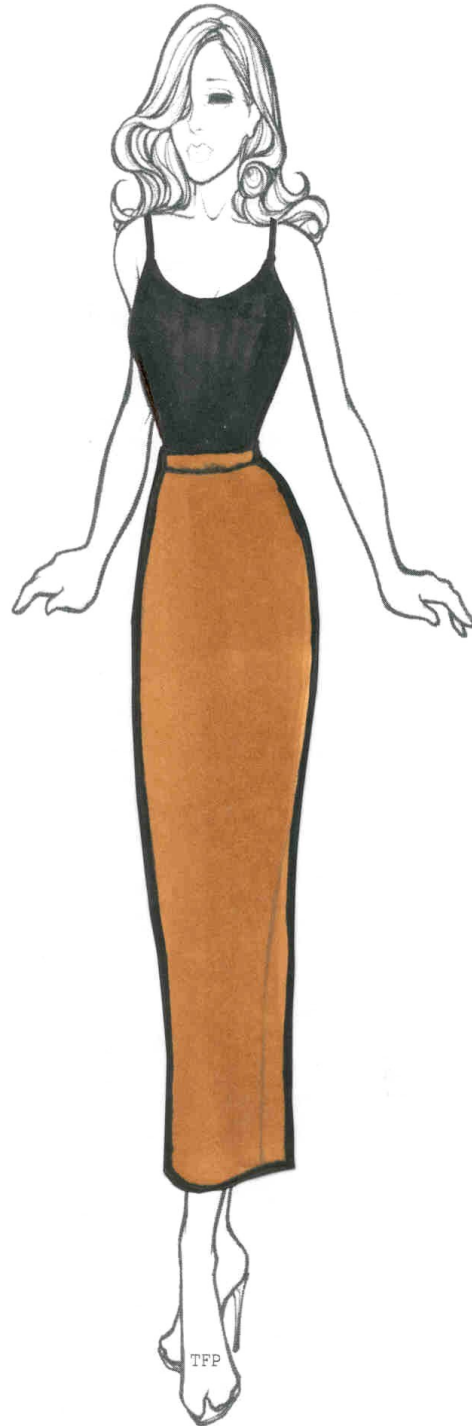
Bubble Skirt – introduced by Pierre Cardin, it is normally small from the waistline and “balloons” and closes or tapered at the hemline.



Car Wash – a 1990 invention inspired by the modern automatic carwash machines. It is a skirt with vertical slits reminiscent of a carwash. It was first introduced by Karl Lagerfeld for Chanel.



Cigarette Skirt – straight cut skirt like a cigarette.



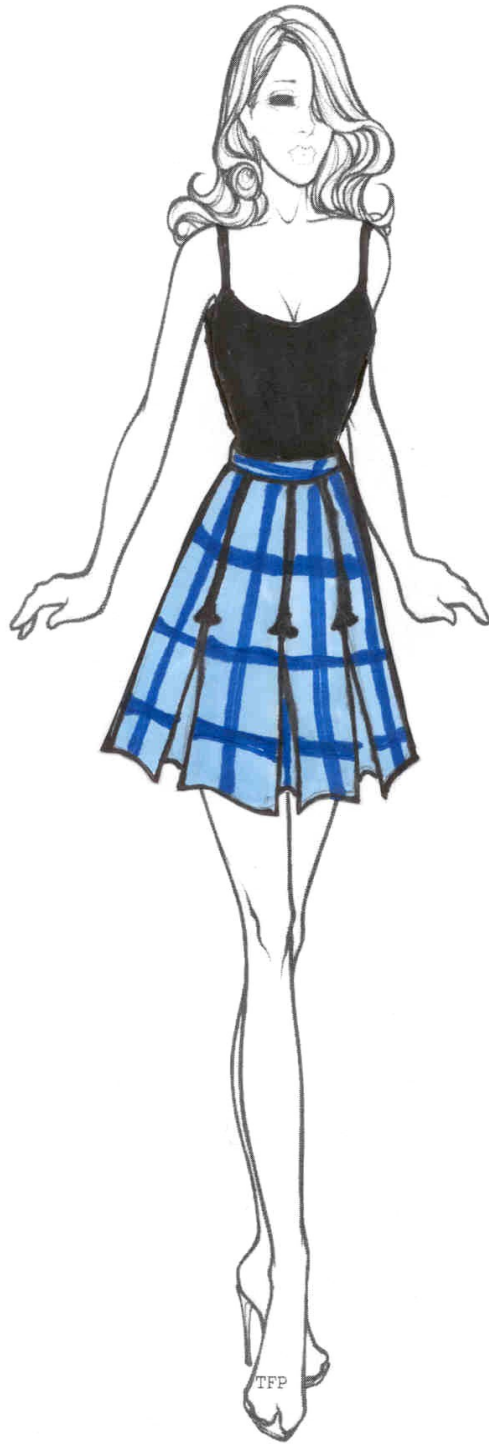
Circle Skirt – popular since 1950s; it is a swingy skirt literally made from circular-cut fabric.



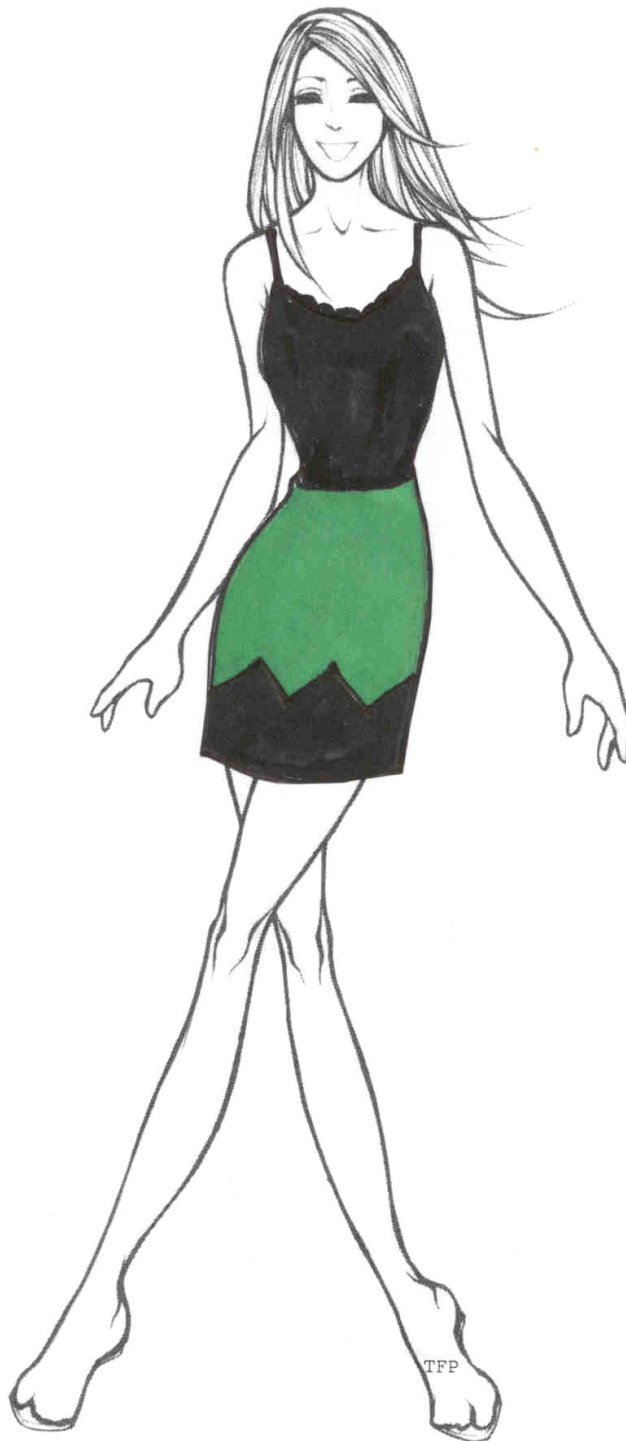
Crinoline Skirt – term used for full skirt with underskirt made from stiff fabric and other materials (like crinoline).



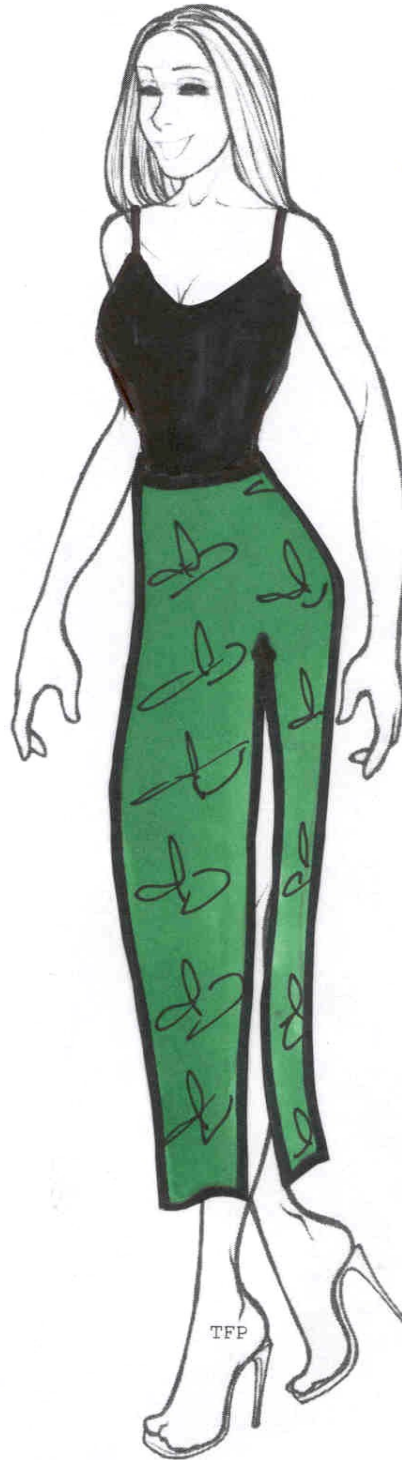
Kilt – regimental skirt worn by Scotland men. Normally made in plaid and wool material. It has folds or pleats in the same direction.



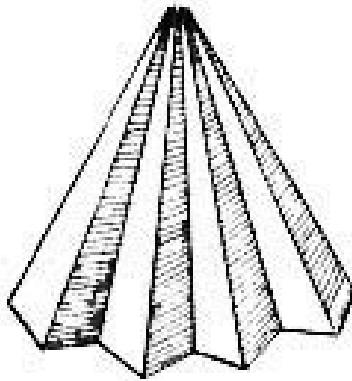
Micro – shortest of skirts in length, sometimes barely covering the behind. Popularized by Mary Quant in the 1960s.



Slit Skirt – revealing straight skirt with straight line slit normally in front; but slit can be at the sides, back, etc.



Sunburst skirt – has radiation of pleats from waistband to hemline. This is made from a style of pleating called “sunburst pleats”.

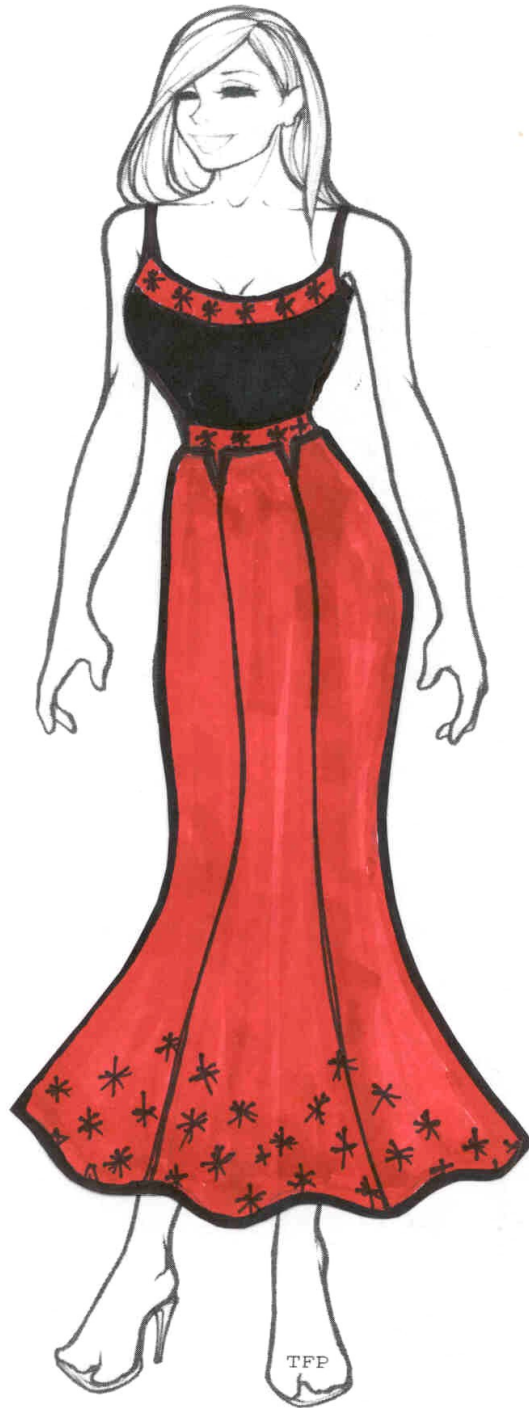


Sunburst pleats (normally achieve thru electric pleating method)



Sunburst skirt

Swing – flared but fitted on hips; swings wide at the hem.



Trumpet – straight line skirt with circular flounce pattern attached on the bottom.



Wrap – rectangular pattern of fabric that literally wraps the body from waist to any desired length. Normally with ties on the sides.



PANTS

– *an outer garment w/c covers the body from waist to ankles in two separate leg sections.*

Bermuda – just above the knee shorts that fit close to the leg. First worn by women in the early 20th century.

Bloomers – full pleated pants, gathered at the knee & worn by women in the early 20th century.

Capri - tight-fitting pants with very narrow tapered legs that fall above the ankle.

Culottes – pants of any length cut to look like a skirt. A divided skirt.

Flares – pants with exaggerated wide bottoms. Usually worn very long. Also called bell-bottoms.

Gaucha – wide calf-length pants. Copied from Spanish Andalusian riding suit.

Harem – bouffant pants gathered with a band at the ankle, resembling a Middle Eastern style.

Hot pants – slang term given meaning by WWD magazine to describe short shorts in 1970's.

Jodhpurs – riding pants that flare at the thigh and have narrow straight cut legs below the knees, cuff at the ankles.

Knickers – knee pants cut full and held in just below the knee by a strap or cuff.

Oxford Bags – long trousers with very wide, cuffed legs. Started at Oxford University in England.

Palazzo – long wide culottes with large flared legs, often gathered at the waist.

Pedal Pusher – below the knees, straight-cut pants often with cuffs.

Sailor – pants with buttoned-drop front closing, lacing across the back at the waist, and wide-bottom.

Stirrup pants – sturdy, long tight pants held at the ankles by knitted bands or straps under the feet.

Western – low-waisted, slim-fitting pants of denim or gabardine, jeans-style tailoring.



Different cut or pattern for jeans. Oftentimes referred to as the kind of “jeans fit”





More examples of how different jeans line market their product line by different “jean’s fit” or jean’s cut/pattern.

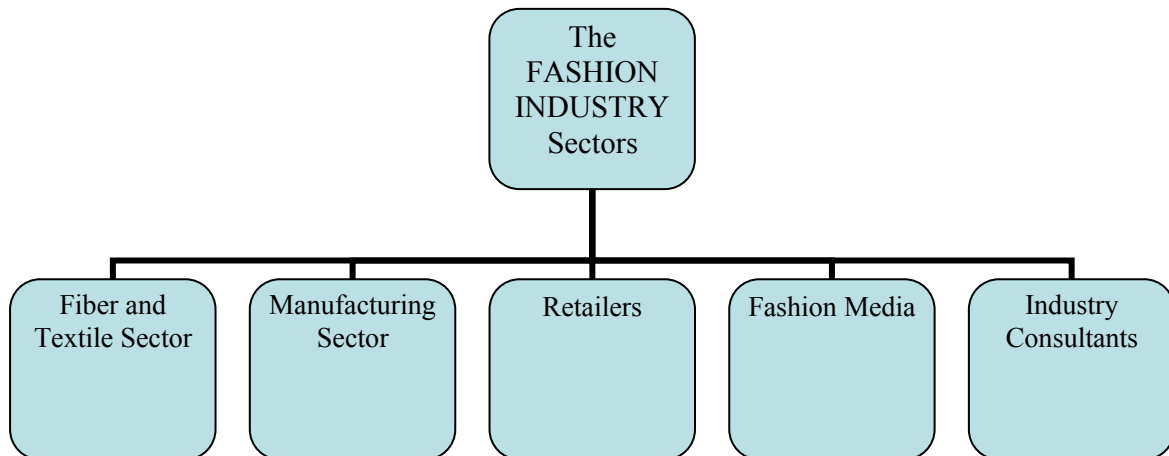




Arizona Jeans in JCPenney ads showcasing different jean's cut for teens.



Fashion Industry Sectors



To understand the Fashion Industry, it is important to understand the role each segment represents:

- *Fiber and Textiles* – responsible for producing the major component of any apparel; examples are companies like Burlington Mills, DuPont, Hoechst-Celenese.
- *Manufacturing* – responsible for production of the products. This includes contractors and sub-contractors.
- *Retailer* – responsible for selling and distributing to consumers.
- *Fashion Media*– responsible for communicating trends and other fashion information to the public or consumer. They are represented by the media, e.g. Women’s Wear Daily, Elle, Harper’s Bazaar, Vogue, etc.
- *Industry Consultants* – composed of fashion forecasters, resident buying offices, reporting services, etc. They are primarily sources for global fashion trend information for manufacturers. They also provide information and services to manufacturers to facilitate smooth global business transactions and negotiations.

Fashion Terminology

There are terms that we sometimes use interchangeably. As students of fashion design, you should be able to distinguish between them and their correct meaning as used in the industry.

Definition of terms:

STYLE

- In general term, a characteristic or distinctive artistic expression of a presentation. In the apparel industry it is the characteristic or distinctive appearance of a garment including a combination of features which makes it different or unique from other garments.

FASHION

- A style that is accepted and worn by the majority of a group at any given time regardless of the size of the group.
- Remember, a fashion is always based on some particular style but not every style becomes a fashion.

DESIGN

- A particular or individual interpretation or version of a style. Simply put it is a variation of details within a specific style.

FASHION CATEGORY

The dollar amount a consumer pays for apparel is determined in different price points. Different price points will also be discussed in a later chapter. Oftentimes the apparel's worth or quality is perceived by its price tag. As a student of fashion design, when you create a line or a garment you have to take a good look at these different categories. You need to study them closely when you are developing a business plan or creating a product line. In doing so, you can focus your effort in designing the apparel appropriate for your business or line in a cost effective manner. Remember, you are in this industry not just to satisfy your creativity but it is important that you gain a profit from your endeavor. As we study this topic you will understand that in designing a garment, price is a determining factor and oftentimes, a limiting factor.

The apparel industry is basically made up of an *Haute Couture* category and *Prêt-a-Porter* category. *Haute Couture* is a French term that literally means high fashion. It is strictly custom-designed and custom-made from a fashion design house. All other apparel falls into *Prêt-a-Porter* category. *Prêt-a-Porter* is a French term for ready-to-wear (RTW). The garments in this category come in basic sizes, are less expensive, and are produced in larger quantities.

HAUTE COUTURE – Literally *Haute* means high and *Couture* means sewing. As mentioned earlier, they are custom-made and custom-designed for an individual client. The term *Haute Couture* is something not any aspiring or even established fashion designer can use in describing their creation. Yes, even if you custom-design and custom-make your design to a specific client. *Haute Couture* is a designation used by design houses that currently meet the strict standards of Syndicale Chamber for Haute Couture in Paris. In fashion design, it is the elevated art form.

Prices in this category are the highest. An evening gown can cost \$50,000 and more. These creations are normally seen on top fashion runways. Some fashion houses only present them to selected clients. Very little couture apparel is made but almost always they inspire the mainstream fashion scene.

Related articles to visit:

http://www.elegant-lifestyle.com/haute_couture.htm

DESIGNER – In the *Prêt-a-Porter* category, apparel belonging to this price point is the most expensive. Just like in *Haute Couture*, they are seen on top fashion runways and targeted to the very wealthy client. They are sold in fashion houses like Armani, Chanel and Donna Karan.

BRIDGE – This category costs more than the “Better” category but less than the “Designer” category; thus the term “Bridge”. This line is targeted to clientele who want designer lines but don't want to pay, or sometimes can't afford to pay, for its price tag. It is for the client who can afford or able to pay more than the “Better” line price tag.

Many design houses have developed an “almost designer’s” line in a little less expensive category. They are often referred to as diffusion lines. DKNY and Armani X are examples of brands that fall into this category. Ellen Tracy and Adrienne Vittadini lines also fall into this price point category.

BETTER – “Better” lines are nationally known brands that cost more than an average price point but less expensive than Designer and Bridge categories. Anne Klein, Liz Claiborne, Jones New York are examples of Better category price points. Private label merchandise carrying a retailer’s name or its own unique line like J C Penney’s “Worthington” or Nordstrom’s “Talbot” lines fall into this category as well.

MODERATE – “Moderate” lines are typically sold by many nationally known sportswear brands such as Guess?, Levi’s, Gap, and Banana Republic. Many times these companies also make “Better” lines. Retailer’s also carry “Private Label” merchandise that fall into the “Moderate” price point like Macy’s “Charter Club” line.

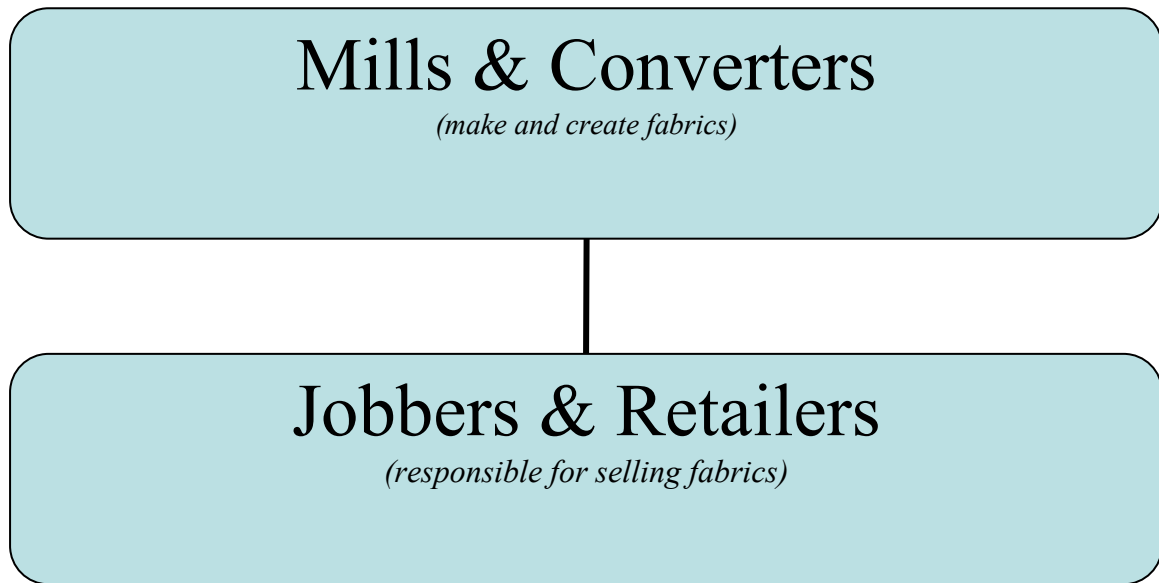
BUDGET or MASS – This line is usually sold by mass merchandisers and by discount stores. The price tag is the least expensive of the price points. Mass retailers carry private merchandise sold in this price range like Kmart’s “Jaclyn Smith” line. Production of apparel lines belonging to this price point are in the greatest quantities.

CUSTOM - Any clothing that is custom-made, but not done in *Haute Couture* houses, falls into this category. These are oftentimes clothing made one-at-a-time for specific clients by independent fashion designers. The price range for this varies but expect it to be usually at a higher end because it takes time to develop and create one-of-a-kind designs.

FABRICS

Primary and Secondary Sources of Fabric

- *Primary Sources* – Mills and Converters (make and create fabric)
- *Secondary Sources* – Jobbers and Retailers (responsible for selling fabric)

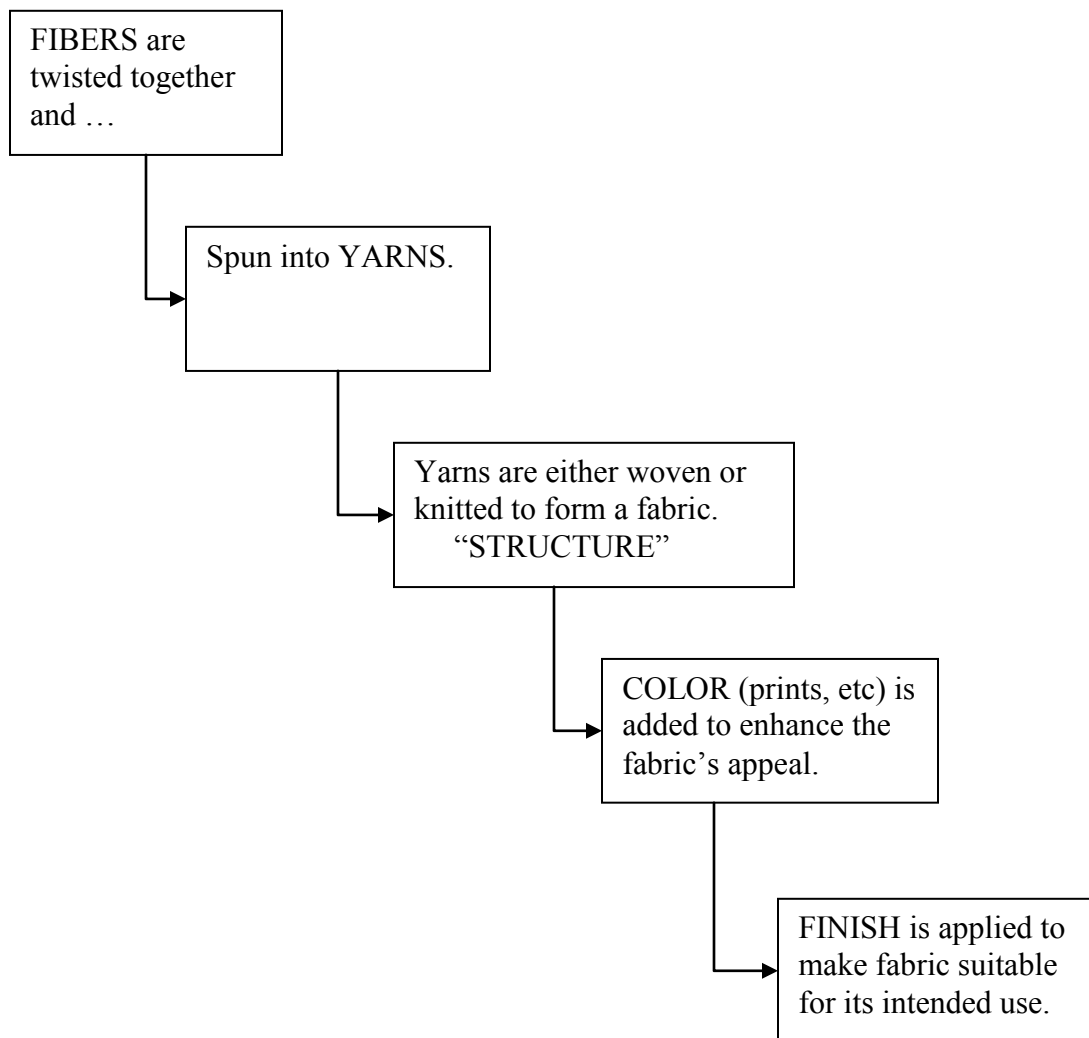


From Fiber to Fabric

Elements involved in the production of fabrics:

- Fibers
- Yarns
- Structure
- Color
- Finish

Below is an illustration of the elements involved in the fabric production:



Fiber

Fibers are either natural or man-made (manufactured).

Natural Fibers:

- Cotton
- Flax
- Wool
- Silk

Man-made or manufactured Fibers:

- Rayon
- Acetate
- Acrylic
- Nylon

Yarns

Yarns are formed when fibers are twisted together. The process where fibers are twisted together is called *spinning*.

- *Spun* – short length of fiber twisted or spun to hold them together.
- *Filament* – continuous strands of fibers.

Constructing Fabrics

Weaving - the process of combining warp and weft components to make a woven structure. Yarns are interlaced in a regular order called a binding system, or weave.

- *Plain* - Weft yarns are passed alternately over and under the warp yarns
- *Twill* – warp yarns are exposed in patterns that create diagonal ribs.
- *Basket Weave* - this is a variation of the plain weave in which two or more vertical warp yarns are passed under the same number of warp yarns in alternating rows. It gives a distinctive woven effect.
- *Pile* – examples of this weave type are velour and velvet. Looking on the side, it consists of loops in the weft yarn when pile weave loops are cut. The yarn ends give different “fluffiness” depending on the fiber used.
- *Satin* - A more flexible but complicated type weave than the plain weave. In a five-harness satin weave, one warp runs over the “face” of the fabric using one

less fill yarn. Satin weave is pliable and has the ability to conform to complex and compound contours.

- *Dobby* - produces a consistent design all over the fabric. They are made on looms having a dobby attachment, with narrow strips of wood instead of Jacquard cards. Dobby weaves are limited to simple, small geometric figures, with the design repeated frequently, and are fairly inexpensive to produce.
- *Jacquard* – the weft and warp yarns are of different colors and are woven to form patterns which are in reverse colors on the back side.

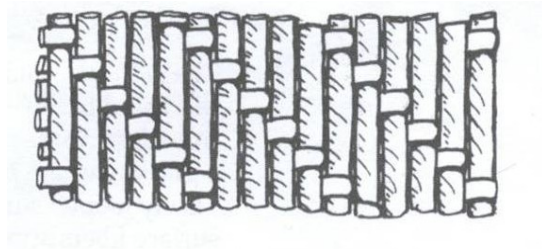


Weave Type

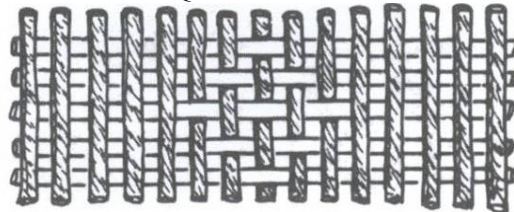
PLAIN WEAVE



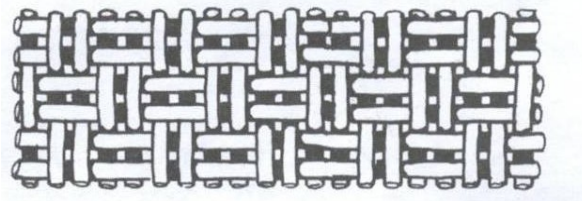
TWILL WEAVE



JACQUARD WEAVE



BASKET WEAVE



PILE WEAVE



Knitting - construction of a fabric made of interlocking loops of yarn by means of needles. They can be hand-knitted or machine-knitted.

- *Weft knitting* - produces a horizontal material. In weft knitting, which includes hand knitting, the fabric is constructed in horizontal courses with one continuous yarn. The basic stitches are the plain (or jersey), purl, and rib. Either flatbed or circular machines may be used.
- *Warp knitting* – involves producing fabrics in which loops are vertically attached. The warp, or chain-loom, machine, generally flatbed, builds vertical chains, or wales, each having a separate yarn. The wales are tied together by zigzagging the yarns from needle to needle in the basic tricot or milanese stitches or variants of these. The warp-knit fabric is run-resistant but less elastic than the weft.

Warp and Weft of a Fabric

- *Warp* – placed lengthwise on the loom. Usually the stronger yarn.
- *Weft* – crosswise yarn. Also called fillings and is interlaced with the warp yarn.



Coloring Fabrics

DYEING FABRIC

- Fiber or Stock Dyeing
- Yarn Dyeing
- Piece Dyeing
- Garment Dyeing

PRINTING FABRICS

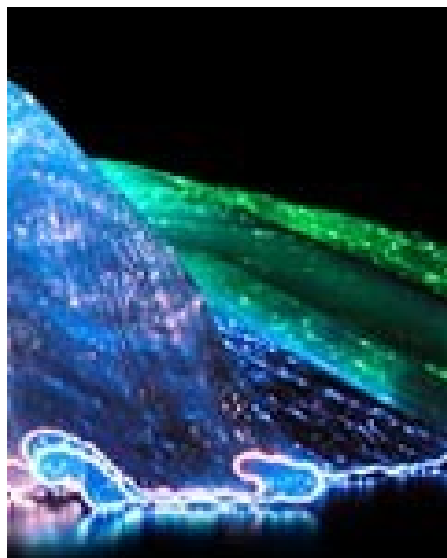
- Screen Printing
- Roller Printing
- Heat-transfer printing

Finishing Fabric

Finishing of the fabric means adding the final treatment to the fabric that will enhance both its performance and aesthetics and make it suitable for its intended use.



Different denim wash and finish.



Fabric with luminescent finish

THE FUR INDUSTRY

Components of Fur Industry

- Farmers and Trappers – sells pelts (undressed skins with the hair intact)
- Processors - processing companies that transform them into skins that can be turned into garments.
- Designers and Manufacturers – creates the style that will be constructed and marketed.

Regulations in the Fur Industry

Fur industry is a segment of the fashion industry that is regulated and is highly controversial. The fur industry includes:

- Farming or trapping certain animals for their fur.
- Processing the skins so that they can be sold to those who make fur products.
- Selling finished products to shops.
- Shops selling fur items to customers.

Skins of animals used for their fur are also called peltries or pelts.



Fur Products Labeling Act of 1952

- Furs must be advertised and labeled using their English names.
- The name of one fur may not be used to describe another
- The country of origin, if not US, must be clearly stated in ads and on labels.
- Garments made of waste and scraps must be labeled as waste or section furs
- Furs that are dyed must be noted as such in ads or labels

THE FASHION MERCHANDISE INDUSTRY

Study of fashion design is not just limited to apparel. Studying fashion design means studying the whole fashion merchandise industry. Apparel being the major component of the fashion merchandise industry is not complete without accessories. Below are the major components of the industry:



Apparel – collectively made up of Women's, Men's and Children's wear.

Accessories and other components – made up of trimmings, wearable accessories, cosmetics and fragrances and fashions for homes.

Apparel Business

Women's Wear – includes merchandise in a number of classifications and price points

Women's Wear Classifications

- Sportswear / Coordinated Separates
- Knitwear
- Active wear / Sports
- Coats / Suits
- Daytime Dresses
- Evening Wear
- Intimate Apparel

Price Points

Haute Couture – The merchandise is one of a kind, custom tailored, and made of finest fabrications with prices as high as \$2,500 for a jacket or \$60,000 or more for an evening dress.

Designer – Designer merchandise in Prêt-a-Porter. Average price points for a jacket is \$500 to \$1,500 in retail.

Bridge – appeals to trendy consumer who is very status conscious. The average jacket price retails from \$300 to \$800.

Better – merchandise that falls between the designer levels and the more moderate price point.

Contemporary – price points that appeal to the widest audience. Prices for jackets range from \$150 to \$225. Examples include Liz Claiborne, Jones New York, and Carole Little.

Upper Moderate/Lower bridge – a price point that is more fashion forward and updated than traditional merchandise. Jackets range from \$100 to \$120, examples are Karen Kane and Evan Picone.

Moderate - consists of moderately priced groups of merchandise. They represent offerings by such leading retailers like Guess? and Esprit. Prices generally range from \$70 to \$100 for jackets.

Budget – lowest level of the price structure such as Wal-Mart, and Kmart.

Size Specifications

Misses – the misses' figure is fuller-figured and longer-waisted. Even numbered and begin with size 2 up to size 18.

Juniors – the word junior refers to size not age. Junior sized garment are proportioned to fit those who are slender and shorter-waisted. Sizes range from 1 to 15.

Petites – petite sizes are manufactured for women measuring 5'4" and under. Petite sizes are odd-numbered, beginning with size one and ending with size 13.

Women's – size for the larger and fuller figures of average height. They are even numbered and most frequently available in sizes ranging from 14 to 24.

The shorter, fullest-figured women wear half sizes. Size is proportioned for the short-waisted, heavier figure and generally comes in sizes 12 ½ to 26 ½.

Tall Sizes – available in even sizes that begin as small as 8 and range up to 20. This size range is proportioned for taller women with a longer hemline, sleeves and even waistline.

Maternity Sizes – this size range duplicates the regular misses and junior sizes except that the construction allows for the expansion of the garment.

Selling Seasons

Fall – generally this is the most profitable for the manufacturer. Some manufacturers produce two lines at this time, Fall I and Fall II.

Holiday – it is a brief season and manufacturers offer a new, but abbreviated line.

Resort – sometimes referred to as cruise wear. It is a seasonal line that many producers bypass. Those who invest in these collections use the line as barometer for testing fashion that will be shown during summer.

Spring – before, it was a season for the lightweight coats, suits dresses, and sportswear. Now, this season often provides the greatest difficulties for manufacturers and retailers. Today, most consumers shed the heavy garment of winter and move directly into summer attire.

Summer – Used to start after Easter in the stores, now begins right after the President's Week clearances. The season slows down in June, with retailers beginning to clear away summer inventories.

Product Classifications

Tailored Clothing – collectively comprised of coats, suits, sport coats and dress trousers.

Friday Wear – made up of casual attire worn in the workplace from casual to dress-down Fridays. Manufacturers like Tommy Hilfiger and Alexander Julian capitalized on this concept by featuring comfortable apparel appropriate both for work and leisure activities.

Men's Furnishings – catch-all category that includes shirts, neckwear, underwear, belts, socks and pajamas. It is a classification that capitalizes on designer licensing agreements with names such as Pierre Cardin, Bill Blass, Calvin Klein, etc.

Casual Wear – merchandise group that came into prominence during the 1970s. Merchandise made up relaxed dress code for some businesses coupled with the requirement of leisure time activities. Unstructured sport coats, sweaters, knits and jeans.

Active sportswear – inspired by the physical fitness craze that took United States by storm. Sweatshirts, jogging apparel, running shorts, tennis shorts, etc.

Work Clothes – inspired by the construction-type jobs but is adapted for other uses. Made up of mostly of jeans, denim shirts, sweatshirts and overalls.

Rain Wear – from basic model designed to repel water to the most important classic rainwear creations.

Size Classification

- REGULAR
- LONG
- SHORT
- EXTRA LONG
- PORTLY
- STOUT
- EXTRA LARGE
- ATHLETIC CUT

CHILDREN'S WEAR

In the early in the twentieth century, children's wear echoed the styles worn by their parents. In the 1950s, a significant change was noted in children's wear. Rock n Roll music and television helped separate the younger generations taste from those of their parents.



Size Specifications

Infants – most lines are produced in a range of “months” sizes beginning with newborn or 3 months and moving up to 24 months. The sizes selected for individual size do not necessarily reflect a child's true age because each child experiences a different rate of development. It is used together with equivalent weight classifications.

Toddlers – 2T through 4T is the size range for toddlers. For children who are crawling and beginning to walk.

Children's – girls clothing in this classification ranges in size from 3 to 6X and boys from 3 to 7.

Girls – size 7 to 14 / *Boys* – 8 to 20

Preteen – size 6 to 14

FASHION ACCESSORIES

Fashion Accessories - it lends drama and provides pizzazz to a clothing collection. Includes footwear, hosiery, jewelry, gloves, handbags, millinery, belts, scarves, hair ornaments, etc.



FASHION FORECASTERS

Designers and manufacturers must understand the needs and values of consumers before they begin to create a design.

Fashion Forecasters are individuals or companies that provide or offer a variety of services ranging from one to unlimited consultations about trends and news in the fashion market.

Forecasters are often based throughout the world so that they can bring a broader perspective to the industry.

By working with textile fiber producers, weavers, colorists and fashion researchers and by observing people on the streets, forecasters digest what they have learned and transmit the information to the clientele they serve.

Forecast Reports

- Forecast reports may range from a one page flyer or brochure to entire books with supplements added throughout the years.
- Fabric and Color Libraries
- Design Services
- Trend Books/Slides/Audio-Visual Packages

Resident Buying Office

Independent Offices and Store-owned Offices

Independent Offices:

Provide the fashion retailer with a significant number of services. The Doneger Group provides fashion forecasting, planning guides, trend booklets and buying assistance e.g. importation and exportation.

Store-owned Offices:

Private Offices

Company is sufficiently large or its degree of specialization is unique.

Ex. Montgomery Ward, Sears, Neiman Marcus.

The Cooperative Office

Group of stores that are not competitive but are affiliated in some manner.

Retailers in these groups own the resident operation, control its activities and share in the cost of operating the venture.

Ex. Associated Merchandising Corporation, Bloomingdale and Burdines & Other Federated Stores

The Corporate Office

Complex businesses that operate a number of store operations with different names.

Ex. Macy's Corporate

Buying Office Services

- Purchasing Merchandise
- Preparing for Market Week
- Product Development
- Best-Seller Notification
- Importing
- Group Purchasing
- Promotional Activities
- Off-price Purchase
- Checking on Delivery
- Making Adjustments
- Merchandising
- Making Available Store Supplies
- Direct-Mail Programming

Doneger is a very popular and respected fashion forecasting company.

TFS Fast Forward



Women's TFS Fast Forward publications feature coverage of European RTW, American RTW and the Haute Couture collections as well as a special St. Tropez street report. Runway images and text are categorized by Theme, Shape & Detail, Color and Fabric. Included is the interactive Fashion INK CD-ROM featuring a narrated trend, color & fabric presentation, a designer library of up to 2000 slides and a color card utilizing the Scotdic® Colour Standard system.

Online Men's TFS Fast Forward designer collections reports review the most important concepts to come down the runways as well as a show-by-show review of the key collections.

Youth TFS Fast Forward Street Scene reports identify the hottest looks on the streets and in store windows, from Miami to Los Angeles, New York and Europe. Reports highlight core color messages, fabrics, prints and patterns, motifs, items, and details. Youth TFS Fast Forward Runway Reviews recap the most translatable junior trends from the runway with an analysis of looks, trims and details, key items, colors, fabrics, and prints & patterns.

- > Women's delivered 7 times a year with accompanying interactive CD
- > Men's online edition posted 2 times a year
- > Youth delivered 7 times a year

Products

[Color Forecasts](#)

[Clipboard Report](#)

[Design Elements](#)

[TFS Forecast](#)

[TFS Fast Forward](#)

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From Doneger Website: www.doneger.com

Promostyl is another respected fashion forecasting company.

PromoSTYL INTERNATIONAL DESIGN AGENCY RESEARCHING TRENDS 

2004 HIVER WINTER 05

INFLUENCES-STYLE-DESIGN
COLORS
FABRICS
BEACH
BABY-LAYETTE
STREET & SPORT
INTIMACY
HOME TEXTILES

FABRICS - PRINTS

The new structure for this season's Fabrics & Prints TrendBook is more concise than before: for each theme (of which there are 4), there are 6 double-pages – each corresponding to a fashion story. The stories are expressed through the fabrics, silhouettes and iconographic references for a precise understanding and a practical, easy-to-use working tool.

A Book destined to fabric manufacturers and garment-makers alike, both for diffusion and mass-market brands. For Winter 2004/05, we will first take a playful, simple and colorful approach to express the happiness of the 50's and 60's. Then, we will enter into a cold, modern atmosphere simultaneously pure and rugged: an instinctive sense of graveness and protection. Thirdly: the evocation of abundance in all its glory, a brilliantly ornamental story. Lastly, the supreme distinction and refinement of Couture allowing us to rediscover its audacious elegance – and to bring it into today's context.



TEXTILE CONCEPT

PRINTS

COLOR HARMONIES

ICONOGRAPHY



From Promostyl website: www.promostyl.com

THE FASHION RETAILERS

Retailers are the segment of the industry responsible for distributing and selling to the consumer. There are different kinds of retailers and most of them can be differentiated from the kind and quality of service and merchandise they provide.

Department Stores - Presents a wide range of merchandise in defined areas or departments.

Ex. Macy's Bloomingdale, Marshall Fields

Specialty Stores - Limited line stores which concentrate on one major merchandise classification. It can be a single unit operation or part of a chain organization.

Ex. Ann Taylor, The Limited

Boutique - It is often a one-unit operation that features upscale, fashion-forward merchandise. The assortment is generally restricted to just a few pieces of each item with custom-tailored apparel sometimes featured.

Off-price Retailer - Retailers who meet the needs of consumers who look for fashion bargains. Normally they buy late in season merchandise, broken assortments, close-outs and other distressed merchandise.

Ex. T.J.Maxx, Burlington Coat Factory, Marshalls, etc

Factory Outlet - Fashion Manufacturer's own retail unit. Normally used to dispose of season leftovers and current slow-selling items. Also, top fashion names way of liquidating their inventories. Clustered in centers that group as many as 100 or more stores.

Direct Retailer/Catalog Retailer - Retailers who satisfy the needs of customers who have less time for in-store shopping. Traditional department stores and specialty chains reach their customers through direct mail.

Ex. Macy's, Lord & Taylor, Marshall Field, Hudson, etc.

Mass Merchant Retailers - Retailers that sell at small profit margins but make up for it with enormous volume. The emphasis is mostly on price and value.

Ex. Wal-Mart, K-Mart

Franchisees and Licensees - Some established companies expand their retail operations by inviting qualified individuals to open their own franchise or licensed unit.

Interactive Retailer - Cable Television and On-Line Shopping Services

Other Services offered by Retailers

- Personal Shopping
- Corporate Purchasing
- Interpreters
- Gift Registries
- Beauty Salons
- Travel Services
- Restaurants
- Gift Wrapping
- Executive Retreats



CHARACTERISTICS OF A LINE

Designers and manufacturers are responsible for the direction of their own line characteristics. They determine the scope of their collections. Here are some considerations when developing an apparel line:

Themes

- sometimes depicted in terms of the silhouettes that will be featured, a particular color range, or fabric usage, etc.
- sometimes there are several themes within a line, which are presented as groups. They can be shown together in specific fabrications, color patterns or shapes.





Very Vegas Fashion Line
Designs by Gigi Morris



Fashion Direction

- a designer rarely appeals to every segment of the market. The designer must decide on a fashion direction. For example:

“Will it be a fashion-forward innovation?” or “Will it be more classic design?”

Single Items

- Throughout the industry, it is common for some manufacturers to produce copies of items that were bestsellers at higher price points. These items are called “knockoffs”. Most of the time no relationship exists among the various items on the line.

Coordinated Items

- In the sportswear industry, designers create a variety of items that may be worn together. The separates concept enables the store buyer to select those pieces that best suit their customer’s needs.



Theme for a New Line

Color Inspiration

- The design team studies color trend reports gathered during the research phase and discuss possible groups of colors (referred to as color stories) for the new line.



Historic Inspiration

- Fashion silhouettes or garment details popular during historical periods provide a source of design inspiration.

Ethnic Inspiration

- Designer may be inspired by the clothing styles of other cultures. Nowadays, it is common for designers to seek inspiration from “exotic” cultures with clothing styles, fabrics, and accessories that are unique.



“African-inspired fashion” Presentation board by Belinda Botha

Fabric, Texture and Trim inspiration

- An intriguing fabric textures or interesting prints might serve as the design foundation for a line.



“Batik” Presentation Board by Christina

Steps in the Creation of an Apparel Line

Below are the steps in the creation of an apparel line. This textbook will focus on the design, design development & style selection process.

- Research
- ***Design***
- ***Design development & style selection***
- Marketing
- Preproduction
- Sourcing
- Apparel production process and quality assurance
- Distribution and retailing

Design development & style selection

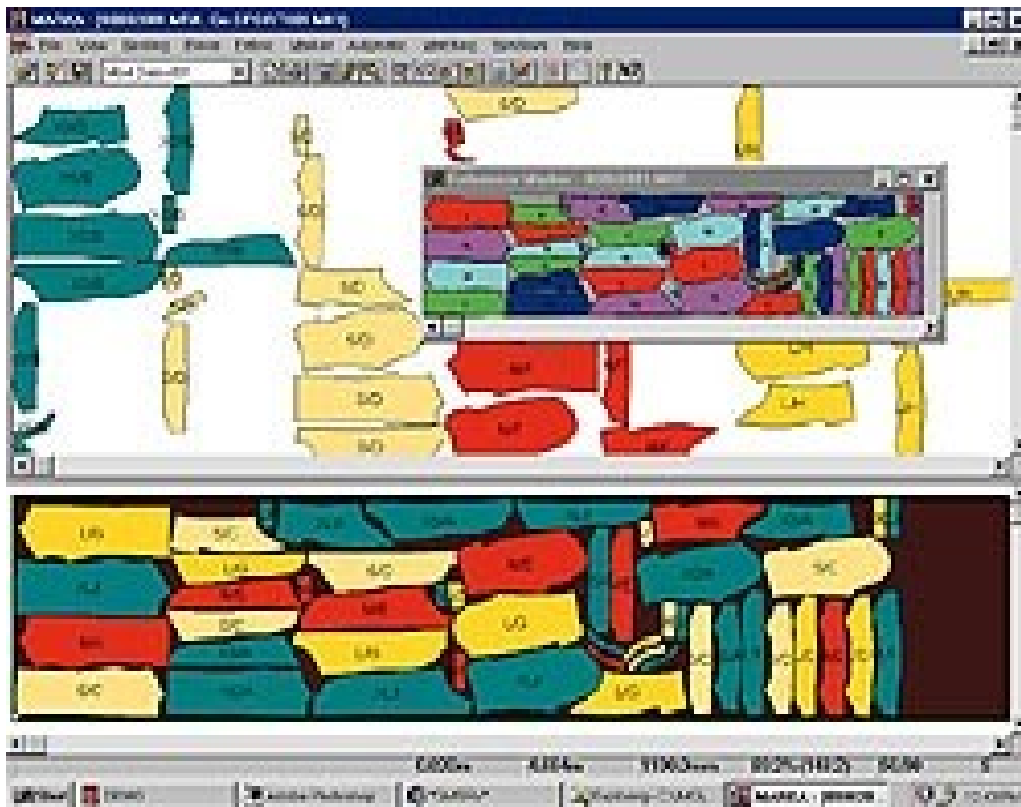
Design Development involves the following process

- Pattern Making
- Marker Making
- Preliminary Costing

Pattern Making – Terms

Marker

- Flat “map” of various components of a garment
- Used to cut fabric into correctly sized & shaped pieces to construct a garment



Block Pattern (base pattern)

- Basic pattern in a company’s sample size

Pattern Making Methods

Flat pattern – patternmaking method where the pattern is done by hand, or uses an existing block pattern as a guide.



Pattern Design System (PDS) – patternmaking method using a computer to create patterns.



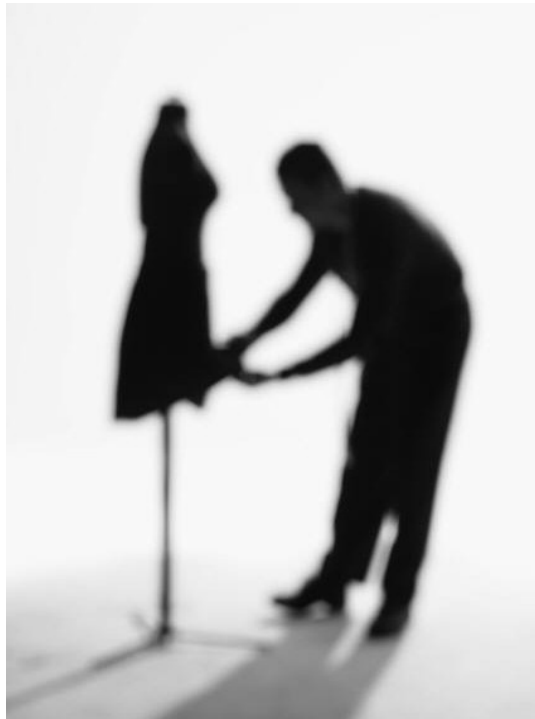
Advantages of PDS

- Quick
- Accuracy
- Improved ergonomics
- Integrate with other production operations
- Product information management

Disadvantages of PDS

- Cost
- Visualization difficulties
- User “unfriendly”
- Down time

Draped design – patternmaking method where carefully marked draped fabrics from a form are used to create a pattern.



- Designer drapes fabric on a mannequin to create the initial garment.
- Completed design is marked to preserve style lines and construction details.
- A pattern is created from the fabric pieces removed from the mannequin.

Sample-Making

Prototype Making - Terms

- *Prototype*
 - Sample garment
- *Specification Sheet*
 - Technical drawing of each style
 - May include swatches of fabrics

Prototype Making - People

- *Cutter*
 - Cuts fabric for prototype
 - Includes cutting linings, interfacings, pocketing, etc
- *Sample sewer*
 - Highly skilled on all types of sewing equipment
 - Sews the prototype (first sample) garment
 - Adjustments may be made
- *Fit Model*
 - Represents body proportions of target customer
 - Helps evaluate fit, style & overall look

Prototype Making - Process

- Pattern, fabric & spec sheet delivered
- Prototype approved on fit model
- Consult with production engineers for feasibility
- Launder garment to test fabric & trims
- Preliminary line sheet produced
- Team approval

Preliminary Costing

Based on estimates of material usage & labor costs

- Fabric Cost
- Trim/findings
- Labor for assembly

- *Production Marker*
 - Layout plan of pattern pieces
- *Costing marker*
 - Layout plan to determine yardage (fabric usage) for new style
- *Cost Sheet*
 - Cost estimated based on designer's sketch
 - Design revised to bring garment cost in line with desired cost

Style Selection

Line Review - People (the Team)

- Merchandiser
- Designer & assistant designers
- Production people
- Others (sales reps, upper management)

Line Review - Process

- Line Review Meeting
 - Line presented to Team for overall review
 - Design boards show fabrics, colors, inspirational pictures and garment sketches
 - Each style evaluated on:
 - Production
 - Styling
 - Relationship to other styles in the line
 - Fabric and trim availability and performance
- Adoption Meeting
 - Finalize styles passing evaluation
 - Balance styles across Line
 - Additions
 - Deletions
 - Add trial styles

Costing Terms

COST

- The manufacturer's total cost to produce the goods.

WHOLESALE PRICE

- Cost to manufacture + M's Profit
- Price shown to buyers at market
- The amount the retail store will pay for the goods



I'd like to end this textbook to emphasize that as fashion designer, it is important to have the basic understanding of apparel construction. To be really successful in this industry, one needs to have the sewing skills and patternmaking basics. For a fashion designer, these skills are important tools in the design process.

I am hoping that as you learn the elements and principles of design, you will continue to explore, create and manipulate them. This will always be your challenge as a designer!

Good luck!

Understanding the Business of Apparel Production



By Gigi Morris