Name

Strategies for Clothing

Cornell Cooperative Extension
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This publication is issued to further Cooperative Extension work mandated by acts of Congress of May 8 and June 30, 1914. It was produced with the cooperation of the U.S. Department of Agriculture and Cornell Cooperative Extension, College of Agriculture and Life Sciences, College of Human Ecology, and College of Veterinary Medicine at Cornell University. Cornell Cooperative Extension provides equal program and employment opportunities.

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# Table of Contents

## Looking Good
- Creating the "All-Together" Look
- Principles of Design
  - Proportion
  - Balance
  - Rhythm
  - Emphasis
  - Unity

## Choosing Clothes
- What is Fashion?
- Classics and Fads
- Buying versus Making Clothes
- Getting Your Money's Worth at Sales
- How to Pay?
- Renting Clothes

## Learning About Fabrics
- Fibers in Fabrics
  - Elastomeric Fibers
  - Mineral Fibers
  - Synthetic Fibers
- Fiber Modifications
  - Bicomponent
  - Bionic constituent
  - Modified
  - Cross-section
  - Textured Yarns
  - Making Fabrics
  - Decorative Weaves
  - Jacquard Weaves
  - Lace
  - Nonwoven and Needlepunched Fusible Webs
  - Quilting
  - Foam Laminates
  - Coloring Fabrics
  - Fabric Finishes
  - Calendering and Chemical Treatments
  - Napping

## Creative Sewing
- Pressing Tools
- Selecting a Sewing Machine
- Fitting as You Sew
- Take Sewing a Step Further
- Short Cut Sewing
- The Designer Touch
- Tailoring
- Sewing Active Sport Clothes

## Caring for Clothes
- The Water You Wash In
- Stain Removal
- Specific Stains
- Spot Treatment
- Safety when Removing Stains
- Ironing a Shirt
- Special Care for Special Care for
  - Sweaters, Caps, Scarves, Etc.

## Safety and Clothing
- Clothes and Work
- Clothes and Pesticides
- Care of Pesticide
- Soiled Clothing
- Clothes and Fire
- Flammability
- Standards
- Safe Clothes
  - for Leisure

## Personal Pointers
- Skin Care
- Suntan Products
- Hair Coloring
- Advertising
- Posture
- On Stage

## You and Others
- Special Clothing
- Needs of Special People
- Clothing Worn
- Around the World
- Clothes from
- Our Past
- Careers in Textiles
  - and Clothing
  - Preparing for
  - Job Interviews

## Strategies
- 38

- 39
Strategies for Clothing

An Advanced 4-H Clothing Project
You’ve already learned a lot about textiles and clothing. You’ve worked to develop sewing and/or buying skills. Now, you’re ready to add new strategies for clothing.

This clothing project book assumes that you have participated in Unit I and II of the clothing project. If not, you will want to request those books. If you have taken 4-H clothing projects I and II, your total 4-H past has been preparing you to set out on your own. Earlier clothing projects, citizenship projects, presentations, and planning and preparing exhibits all have been stepping stones for you. Through these experiences, you’ve developed strengths and are ready to try larger in-depth projects.

This project book is full of ideas. Use it to get other ideas. Let it spark your creativity in something that really interests you. Develop your abilities as a teen leader. Share your clothing skills by working with people as a volunteer, teacher, and friend. Plan your own strategy for clothing.

Choose from eight areas. Looking Good tells how to plan your total clothing look. Choosing Clothes gives you valuable shopping know-how. Learning About Fabrics, Creative Sewing, and Caring for Clothes tell what to expect from fabrics, about challenging new sewing techniques, and how to keep your wardrobe looking top-notch.

Personal Pointers focuses on questions you might have about skin and hair care, modeling, posture, and appearance. Safety and Clothing helps you understand ways clothing can add to or detract from your personal safety. Get to know yourself better in You and Others as you explore clothing worn around the world, unique clothing needs of special people, and clothing careers.

To be successful, some of the major clothing projects you choose will require careful planning because you’ll do them over a longer period of time. To accomplish all that you want to, put some thought into the planning, scheduling, and follow up of these projects.

Follow these steps.

• Select a topic or goal to explore.
• Organize your exploration. Know what you plan to accomplish.
• Develop a plan for action.
• Carry out the plan.
• Share what you’ve discovered through presentations, exhibits, teen teaching, or service projects.
• Evaluate your total experience.

In other words . . . plan your strategy for clothing!
Looking Good

Have you thought about why your favorite outfit looks terrific? Being able to combine colors, textures, lines, and shapes in a striking outfit, involves more than just luck. You can create that “all together” look with the help of the following guidelines.

Creating the “All-together” Look
These guidelines are called the principles of design. They are proportion, balance, rhythm, emphasis, and unity. The principles help arrange the elements—color, texture, line, and shape—into pleasing, well-organized design. You can think of the elements as the tools and supplies for a do-it-yourself project. The principles are the instructions for putting everything together.

Spend some time identifying the elements and principles of design in clothes. Then you’ll know why an outfit looks great instead of looking at it and thinking, “I just like it that way, that’s all.” With experience you will develop an eye for good design. Putting together a terrific outfit can become second nature to you.

Create the “all together” look.
Principles of Design

Proportion

Proportion is the relationship of the size of spaces to each other. Blocks of color or texture form spaces. Spaces also are formed by the way lines connect to outline a shape. Varying the sizes of the spaces creates interest. For example, when a skirt is a bigger shape than the blouse you have good proportion. But a skirt and blouse of equal size are less interesting. In addition, that division of space will tend to cut the figure in half.

When you have different colors in an outfit, vary the amount of the colors instead of using equal amounts of each color. Use lots of one color, less of a second color, and small amounts of the others. Or use one color throughout the outfit, with just a dash of another color in the accessories. Treat the proportion of textures the same way you treat colors.

Another aspect of proportion has to do with scale. Good scale means that all parts of an outfit, including accessories, are consistent in size with each other and with the person. A jacket with a large plaid is best for a large person but may overpower a small person. Keep the size of your accessories and the details of your clothes in proportion to your body. Larger accessories (big bags, wide belts, large jewelry, wide ties, big hats) and details (large-scale collars, wide lapels, pockets, prints) are best on larger people. Small accessories (delicate chain necklaces, narrow belts, handbags) and details are better for small people, though some small accessories look fine on almost everyone.

Suspect problems with proportion when:

- A fabric print is too big for the person wearing it.
- An accessory, such as shoes, jewelry, or belt, is too large or too small for the person.
- The length of a jacket is too long or short for the pants or skirt, or for the person wearing it.

Remember, when the parts of an outfit vary in size, but fit each other and you, you have good proportion.
Balance
Balance is a feeling of steadiness. It gives a feel of equal attraction on both sides of a central line. Everything on the garment or outfit looks as though it belongs where it is. No part seems too heavy for the rest. When we look at something, an arrangement of pictures on a wall, a person, a grouping of plants, we need to feel a sense of equilibrium. When you find that balance is lacking, you may feel uneasy.

Two types of balance are formal and informal. Formal balance uses the same lines, colors, or textures on each side of a central line. A shirt with two pockets, one on each side, has formal balance; it is symmetrical or the same on both sides. Formal balance is used effectively in clothing, but it can become monotonous because it lacks variety.

Informal balance is created by ruffle and buttons that balance plain area.
Informal balance is created when one side of a garment is not exactly the same as the other, yet the two sides seem to weigh the same. This is often more interesting than formal balance because it adds variety. If you have ever made a mobile and tried to get several parts of varying sizes and shapes to balance, you have had an experience with informal balance. In that case you were dealing with balancing the weights of the parts. When you are creating a balanced outfit you are judging the impact of various parts of the outfit, rather than their weights.

Balance can be created many ways. Very often classic clothes like shirts and jackets have formal balance. A small attention-getting area can balance a large area that doesn’t attract much attention. So, a large plain area can be balanced with a small decorated area. Or a bright tie can balance a neutral jacket and pants.

Problems with balance exist when:

- A design is not placed well.
- Too much decorative design is on one side, as below.
- Part of an outfit has formal balance and another part has informal balance. Something must provide a pleasing transition between the two different parts.

When your outfit is balanced it doesn’t seem lopsided, but instead, looks as if everything is where it belongs.
**Rhythm**

Rhythm helps your eyes move easily from one part of an outfit to another. This path is formed by the arrangement of lines, shapes, colors, or texture. Often repetition of these elements helps create rhythm. Stripes are one example of repetition. So is a row of buttons. You also have repetition when a dress has a round collar, curved pockets, and puffed sleeves. In that case you are repeating a main theme in different parts of an outfit.

Problems with rhythm exist when:

- Different unrelated lines are used together; for example, a curvy line in the midst of straight lines.
- Plaids or stripes aren’t matched, as below.
- Several accessories that are the same color are used with a contrasting outfit. The accessories will look spotty. They break up the rhythm because they are usually so far from one another that they don’t form a path. One way to solve this problem is to select one accessory that contrasts strongly with the outfit and use somewhat varying shades and textures of a neutral color for the other accessories.

When your outfit has rhythm, you look easily from one part of the outfit to another. Nothing looks out of place.

If a gradual change occurs in some element, that gives a sense of motion, too. A gradual change in the shade of a color, width of tiers in a skirt, or graduated tucks are examples of that kind of rhythm.
**Emphasis**

Emphasis is a center of interest. Emphasis causes your attention to be drawn repeatedly to one area. The line, shape, space, texture, or color of the area may be just different enough from the rest of the outfit to catch your interest. The other parts of the outfit are a background for the center of interest. Without emphasis an outfit might seem cluttered or busy. Or, at the other extreme, it might seem uninteresting and boring.

Decide on a center of interest, and then let the rest of the outfit compliment the center of interest. If the print or design of the clothing is the center of interest, keep the accessories at a minimum. Or if an accessory provides the emphasis, keep the other accessories simple and quiet. So if a necklace is the center of interest, the bracelet and shoes shouldn’t distract or compete for attention. If a colorful vest is the emphasis, the shirt and pants can be subdued.

Plan where you place the center of interest. You can use emphasis to bring attention to a feature you like. A scarf draws attention to your face. A contrast yoke emphasizes shoulders. Contrast can also emphasize what you don’t want noticed.

Problems with emphasis exist when:

- Too many patterned fabrics are together.
- Only plain fabric is used without an accent.

• The center of interest draws attention to a feature that you don’t want to emphasize.

When an outfit makes good use of emphasis, it has one attention-getting center of interest. It is neither cluttered nor boring.

The yoke provides the center of interest.

A problem exists with emphasis because too many patterned fabrics are used together.
Unity

Unity exists when all parts of your outfit create a satisfying combination. Unity is your goal. It’s the result of good proportion, balance, rhythm, and emphasis.

When you have unity or harmony, all the clothes and accessories create a certain mood or theme—sporty, tailored, dramatic, casual, or any other mood you choose to create. The outfit also needs to be in harmony with you—your coloring, your build, your size.

Watch the amount of variety you have in an outfit. If your garment and accessories have lots of colors, keep the textures similar. Or if you would rather vary the textures, limit the colors to two or three. Combining different prints, plaids, and checks in one outfit requires great care. Be sure the colors, textures, and character of the patterns are all very similar.

Problems with unity exist when:

• The character of the fabric doesn’t fit the style of the garment or outfit.

• The character of the accessories doesn’t match the character of the outfit. An example of this is wearing heavy sport sandals with a dainty long gown as below.

When your outfit has unity, it seems organized. It looks as though it all belongs together. And it looks great on you.

Now that you’re acquainted with some ways for combining clothes and accessories, see if you can determine the problems with the combinations on the next page. What design principles are lacking?

A problem with unity exists because character of accessories doesn’t match the character of the outfit.
Now that you know how the elements and principles of design affect the way your clothing is put together, you'll feel more confident about achieving an all-together look.

Design is everywhere. You can apply these design elements and principles to almost everything you make, do, or see.

A woodworking project should be well balanced with all the pieces in pleasing proportion to each other.

Setting an attractive table involves choosing a centerpiece for emphasis that unifies all the necessary utensils in the table setting. Take a long look at your posters and displays. Do they follow the design principles and elements? Has unity been achieved in each exhibit? What other uses of design do you see around you?

As you use good design principles in your projects you'll be teaching others about them.

Do these outfits lack proportion, balance, rhythm, emphasis, or unity?
Choosing Clothes

Do you know someone who is always on top of the latest fashion trend? Is that fashion, or is it really a fad? What's the difference? We take for granted the changing clothing fashions in local stores every season. Why or how do they get there? In Choosing Clothes you'll learn more about selecting fashions according to your needs and some marketing strategies that retailers use to try to influence your choices.

What is Fashion?
Fashion may be something you think applies only to clothes, but it's really bigger than that. Think about it. Does your family have the same style car it did four or five years ago? Is your telephone like the one your grandparents had? Do new buildings in your community look the same as those built at the turn of the century? Fashion applies to nearly all parts of our lives—even the music we like. Songs that are popular now are in fashion, but you rarely hear a disc jockey play a song popular only two years ago. Fashions, too, constantly are changing because we get tired of familiar things and want something new.

Fashion designers and professional people in business offer new clothing ideas, and they become the latest fashion. Sometimes people don't like the new idea, and it's quickly forgotten.

As new fashions are accepted, other fashion ideas for our clothes begin to look old. We get tired of the familiar old ideas and we say the clothes are out of date. You've probably heard someone in your family say, "I wish fashions didn't change so often," or "I can't wear that; it's too old-fashioned!" Why do you suppose people feel this way?

Classics and Fads
As you think about clothing and fashion, you'll probably discover that some new fashions last longer than others. Clothes that stay fashionable longer are called classic. Often classic fashions are expensive to buy because they are made of good quality materials and constructed to last longer.

Is this fad or fashion?
New fashions that may be just some little detail of trim or an accessory may be called a fad. Fads last a very short time and may be adopted by only a few people in one locality. For example, it might be a fad for nearly everyone in your school to wear bright colored shoe laces. But if you went to another school the fad might be wearing gray socks. Fads sometimes don’t make much sense, but they are fun. If you have plenty of money, you may be able to afford more faddish items.

Since stores are in business to make a profit, they are usually just as eager to sell fads as classic fashions. You have to learn the difference if you want to get your money’s worth in selecting clothing.

**Buying versus Making Clothes**

When you buy clothes, the price tags tell you how much they cost. When you make clothes, it’s harder to figure out the cost. First, you have to include the cost of the pattern, fabric, and notions needed to make the garment. Then you have to figure out how much time you spent sewing and what your time is really worth.

Computing the value of your time is tricky. If you were working at another job for pay you might be earning minimum wage. To figure what your sewing time is worth, multiply the number of hours you spent sewing by minimum wage to get the total value of your time. But if you don’t have a job opportunity, you could think about other ways you would spend your time. Which use of time is most valuable to you?

You may really enjoy sewing and feel it’s a good way to spend leisure time. And, you may get other benefits from sewing your own clothes like a perfect fit or original design that you couldn’t get at any store. You may end up with superior quality clothing when you buy better quality fabric and sew it yourself.

Whether you choose to buy or make your clothes, don’t underestimate your time and resources that are involved.

**Getting Your Money’s Worth at Sales**

Part of getting your money’s worth in shopping for clothing is learning to take advantage of promotions and sales. Nearly all stores offer sales from time to time. Use sales to your advantage.

Shopping at clothing sales is one way to stretch your clothing dollar if:

- You need the garment.
- It coordinates with your present wardrobe.
- It fits correctly and does something for you.
- You evaluate the merchandise carefully in relation to your spending plan.
- You remember that sales items can seldom be returned.
- You know when a sale is really a sale.

Sales are offered for the store’s benefit, not just for you. The store expects to make a profit even though it is offering merchandise to you at a reduced price. Understanding the various types of sales may help you make more thoughtful choices.

Shopping at sales can save money.
How to Pay?
Money seems to disappear quickly. To make your clothing dollar go further, consider the various ways that you can pay for clothing. Weigh the advantages and disadvantages of each. The final decision is up to you.

<table>
<thead>
<tr>
<th>Ways to Pay</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Saves credit charges</td>
<td>Requires carrying larger amounts of cash which may be lost or stolen</td>
</tr>
<tr>
<td></td>
<td>May discourage impulse buying</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevents shopping beyond credit limits of your own or family charge accounts</td>
<td>May not have cash when item is needed</td>
</tr>
<tr>
<td>Open End Credit</td>
<td>Take advantage of bargains when cash is limited</td>
<td>May encourage shopping at charge sources only without “bargain” hunting</td>
</tr>
<tr>
<td></td>
<td>Don’t have to carry large amount of cash</td>
<td>May encourage charging beyond your ability to pay</td>
</tr>
<tr>
<td></td>
<td>Have monthly record of purchases</td>
<td>Must pay finance charges on unpaid bill</td>
</tr>
<tr>
<td></td>
<td>Helps develop a credit record</td>
<td>Clothing may wear out before paid for</td>
</tr>
<tr>
<td></td>
<td>May receive preferred treatment, i.e., advance notices of sales</td>
<td></td>
</tr>
<tr>
<td>Layaway</td>
<td>Can reserve garment when short of cash</td>
<td>You get neither interest on your deposit nor use of item until you completely pay for it</td>
</tr>
</tbody>
</table>

Buying clothing at sales requires thinking about your needs, planning your shopping list, knowing the merchandise of the store, comparing garments, and judging quality. **Shop sales carefully!**

**Compare Costs**
Some ways to pay cost you extra for the convenience. For an example of how much extra, work through this example of cost comparisons for a $60 jacket.
## Cost Comparison for a $60 Jacket

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>30-day charge</th>
<th>Layaway</th>
<th>Revolving charge</th>
<th>Installment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of jacket</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Down payment</td>
<td>None</td>
<td>None</td>
<td>10% or $6</td>
<td>None</td>
<td>20% or $12</td>
</tr>
<tr>
<td>Carrying charge</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>1½% on monthly unpaid balance</td>
<td>15%</td>
</tr>
<tr>
<td>Time to pay</td>
<td>When bought</td>
<td>30 days after store closes books</td>
<td>6 to 8 weeks</td>
<td>6 months monthly payment $10.52</td>
<td>3 months monthly payment $16.40</td>
</tr>
<tr>
<td>Total cost of jacket</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$60.00</td>
<td>$63.18</td>
<td>$61.20</td>
</tr>
</tbody>
</table>

### Your Choice

How you feel about the cost of credit will influence the way you choose to pay. Consider that when you pay for credit you are paying an extra rental fee to the store for the privilege of taking longer to pay. Meanwhile you'll have the use of the merchandise.

Is this fad or fashion?
Renting Clothes
Sometimes it may be appropriate to rent clothes. For example, if you need a tuxedo for the prom or a special event, renting may be better than buying. Clothing for special occasions such as banquets, formal dances, and weddings often are rented. The rental fee is always less than the cost of buying, and for certain types of clothing, should be investigated before you make a decision. The cost of renting is determined by the cost of the garment and its life expectancy. Remember that the amount you pay in rental fee is gone forever and unavailable to apply toward an outfit you might own. Repeated rental soon adds up to the total cost of the garment.

Things to Do
- Compare the cost of buying and renting a garment. Choose an item, and figure out how much it would cost using the different ways to pay. Then see how much the same item would cost to rent. Multiply that fee by the number of times you will need to rent it.
- Compute the cost per wearing of several garments in your wardrobe.

Suppose you only need to wear a particular item one or two times a year (such as a tuxedo). How does it affect your decision? Another way to look at clothing costs is to compute cost per wearing.

- Discuss with family members the amount of money available for you to spend on clothing. Make a plan that includes your needs and wants. How will you decide the amount to spend for the various items you need? In your shopping plan, remember you can shop at used clothing stores.

- Keep a record of all the clothing expenditures made in your family for one month. Be sure to include incidental clothing purchases such as pantyhose or disposable diapers bought at the grocery store.

Do you think this was a typical month? Or would your family spend more/less in a different month?

Compare the amount spent for clothes with the amount spent for transportation or gasoline $ ; housing or rent $ ; food $ ; medical care $ ; clothing $

What is your reaction to the amount of money your family spent for clothing this month? Ask others in your family for their reactions.

- Figure out how much a garment cost you to construct, and compare it with ready-to-wear prices. Make a poster showing the difference.
### Cost Comparison for Buying and Renting

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>30-day charge</th>
<th>Layaway</th>
<th>Revolving charge</th>
<th>Installment</th>
<th>Rental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of item purchased</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down payment</td>
<td></td>
<td>%</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Carrying charge</td>
<td></td>
<td>% on unpaid balance</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to pay</td>
<td>weeks</td>
<td>months</td>
<td>months</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total cost</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Which is your wisest investment?  

### Cost per Wearing for Garments in Current Wardrobe

<table>
<thead>
<tr>
<th>Item</th>
<th>Original price</th>
<th>Number of times worn</th>
<th>Cost per wearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeans</td>
<td>$</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Winter coat</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>Shoes</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>Suit</td>
<td>$</td>
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<td>$</td>
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</table>

### Family Clothing Expenditures for One Month

<table>
<thead>
<tr>
<th>Date</th>
<th>Item purchased</th>
<th>For whom</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
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</table>
Learning about Fabrics

Attractive fabrics enrich our lives in many ways. They are pleasing to look at, may be comfortable to wear, and protect us from too much sun, heat, or cold.

In Unit I, Adventures in Clothing, and Unit II, Challenges in Clothing, you learned about the most commonly used natural and manmade fibers as well as some of the ways they are made into cloth. You also learned about the Textile Fiber Product Identification Act and the care labeling rule. You may think there isn’t anything left to learn. But there is a lot more!

In this project book, you’ll learn about elastomeric and some newer synthetic fibers. You’ll also learn more about fabric construction and fabric finishes. Again, the same five factors (fiber content, yarn structure, fabric construction, finish, and coloring method) affect fabric performance.

**Fibers in Fabrics**

Fiber content affects the performance of fabrics and the care they require. It’s easier to understand fiber differences when you know about the raw materials used to make them, ways they are made, and ways they are similar.

**Elastomeric fibers** are those that stretch many times their original length and come back into shape quickly. Spandex is an elastomeric with trade names such as Lycra, Numa, Vyrene, Unel, and Glospan. Spandex is resistant to body oil, perspiration, drycleaning, and bleaching, but may turn yellow with exposure to light or bleach. Spandex is lightweight and has good holding power for figure control. Only 3 percent spandex will give stretch properties to woven fabrics making them more comfortable to wear. It is primarily used for knit undergarments and swimwear. It needs frequent washing in regular detergent and warm water.

**Mineral fibers** are made of steel or glass. These fibers are not used for clothes, but are important in home furnishings and industrial uses. Sometimes glass fibers are used for drapery, and of course it is used for insulation. Fiber glass drapery can be washed in a washing machine, but bits of glass fiber may break off and stay in the washer to be deposited on the next load of clothes. It is better to hang fiber glass drapes on the line and hose them down or dip them in a bathtub and wash them by hand wearing rubber gloves. If glass fragments get in clothes, they cannot be removed, and the clothes have to be thrown away.

**Synthetic fibers** are divided into several different generic classes based on their chemical composition. The most common ones were discussed in the books for Units I and II. Several other classes of synthetic fibers have been established. All the synthetic fibers are derived from petroleum. Aramid, novoloid, saran, vinal, and vinyon are classes of synthetic fibers that are used for protective clothing, household, or industrial purposes. Most are resistant to chemicals and are flame resistant.

Earlier generations used a spinning wheel to spin fibers into yarn
Fiber Modifications

Recently fiber manufacturers have placed more emphasis on improving or modifying fibers belonging to the existing generic classes than on developing entirely new fibers. This has led to some terms you may want to know.

Bicomponent fibers are those made with two variations of the same fiber. When these fibers are made, two chemicals are extruded side-by-side through a spinnerette so that the fiber formed has two distinctly different parts. This is the way Cantrec, a hosiery fiber, is made. It is known for its outstanding elastic properties and superior fit.

Biconstituent fibers contain chemicals that fall into two different generic classes. These may be extruded side-by-side or mixed up together like fruit salad in gelatin. The fiber that results isn’t exactly like either class but combines the properties of fibers from each group. An example is Cordelan, which is used in children’s sleepwear. The Cordelan fiber is made of a combination of vinyon and vinal; the two chemicals exist together in one fiber. This gives a flame resistant fiber that is soft and resilient like vinyon and strong and absorbent like vinal.

Modified cross section fibers are those that are extruded from the spinnerette in a shape other than round. Changing the cross-sectional shape of fibers gives fabrics a different texture (hand) and luster. Trevira (Star) polyester and Touch (Y) nylon are examples. The pictures below show cross-sections of modified fibers.

Antron nylon is a trilobal nylon that sparkles and has greater luster because of its shape.

Antron is used in lingerie and leotards.
**Textured Yarns**
Textured yarns are those made with filament fibers that have crimp or kinkiness added to make them bulky and stretchy. Manmade filaments can be heat set and changed permanently from being straight and smooth to being curly, kinky, and crimped.

Textured yarns add stretch and bulk to fabrics and enable them to "breathe" and hold more moisture. In addition, fabrics made from textured yarn feel softer and warmer because the bulk holds more still air for insulation.

**Making Fabrics**
The way yarns are put together to make fabric can give common fibers and yarns a unique quality all their own.

*Decorative weaves* have a complex pattern of weaving and require special attachments on looms to weave them. *Dobby* weaves are decorative patterns that have small, usually geometric shapes woven into the fabric at regular intervals. When extra yarns are woven into a base fabric, they are called *surface* weaves because these yarns create a design on the surface of the fabric.

*Jacquard* weaves are very ornate and fancy. The patterns are large and the design motif is usually a floral one, although sometimes large geometric patterns are used. Fabrics that may be familiar to you that use a jacquard loom are brocade and damask. Study the pictures to help you recognize fabrics.

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Untextured (plain fibers)  
Sawtooth stuffer box crimp  
Coiled curls formed over knife edge  
Looped and tangled by airjet  

Dobby weave  
Jacquard weave (Damask)
Lace can be made by hand or by machine. Handmade laces are prestige items and very expensive. Machine-made laces vary in quality. Laces are knitted or woven and are surprisingly durable when made from manmade fibers even though the structure is open and fragile-looking. Nylon laces are widely used as trim on lingerie and dressy clothes, but laces can be made with any fiber.

Nonwoven and needlepunched fabrics are made directly from fibers without weaving or knitting. Fiber batts are pressed or matted together by using chemicals, adhesives, heat, or barbed needles that punch and tangle the fibers together. Fabrics tend to be stiff and inflexible like paper, but can vary in the thickness. Thick ones are used for blankets.

Many nonwovens are used for interfacings. They can have a fusible coating (like glue) applied to the wrong side so they can be permanently heat sealed to other fabrics. Many disposable items from towels to hospital gowns are made from nonwovens.

Fusible webs seal two fabric layers together. These webs melt when heat is applied. Directions must be followed carefully for good results.

Quilting is a type of fabric construction where layers of fabric and a fiber batting are held together with sewing thread. Polyester fiber batting is more resilient than acetate batting.

Fabric and batting layers may be held together by fusing or partially melting synthetic fiber layers. This process is called ultrasonic quilting because sound waves are used to produce heat in pinpoint dots that melt the fabric layers together. This process often is used for quilted bedspreads and mattress covers.

Foam laminates have a woven or knitted right side (face) and a knit backing sealed together with a layer of foam. Sometimes the right side is a layer of flocking so the fabric resembles velvet. Foam fabrics are warm and lightweight, but lack drapability. The foam can be damaged by dry cleaning.

Coloring Fabrics
The first thing you notice about a fabric often is its color. Printing is just one way to add color. Check at the library for more information on these printing processes.

- Screen printing
- Warp printing
- Direct roller printing
- Heat transfer printing
- Discharge printing
- Resist printing such as tie dye and batik
**Fabric Finishes**

Fabric finishes are added as a final step in fabric manufacturing. They may alter appearance and performance.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calendaring Treatments</strong></td>
<td></td>
</tr>
<tr>
<td>Embossing</td>
<td>Rollers press a three dimensional design in fabric; more durable when done on synthetics.</td>
</tr>
<tr>
<td>Glazing</td>
<td>Applying starches or resins to make shiny surface by pressing between rollers.</td>
</tr>
<tr>
<td>Moiré</td>
<td>Pressing ribbed fabric to create designs similar to puddles of water.</td>
</tr>
<tr>
<td>Pleat</td>
<td>Using heated rollers to set creases.</td>
</tr>
<tr>
<td><strong>Chemical Treatments</strong></td>
<td></td>
</tr>
<tr>
<td>Parchmentizing</td>
<td>Treatment with sulfuric acid to stiffen and make translucent. Organdy is an example.</td>
</tr>
<tr>
<td>Etching</td>
<td>Acids used to dissolve some of the fabric in patterns such as eyelet.</td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>Sodium hydroxide is used to shrink cotton fabric in some places, creating puckers to make plisse fabric.</td>
</tr>
<tr>
<td>Mercerization</td>
<td>Treatment of sodium hydroxide used on cellulosic fibers to strengthen, take dyes better, and add luster.</td>
</tr>
</tbody>
</table>

**Napping** is a finish that produces a fabric with a soft fuzzy surface. Fiber ends are brought to the surface by running the fabric across steel brush-like rollers. Suede cloths and flannels are produced through napping.

Your new knowledge about textiles will come in handy to you as a consumer. You can use your knowledge as you purchase garments or household items with specific qualities. Share your knowledge.
Part of your clothing strategy might be to sew something challenging and different. You would be building upon the skills you already have to feel more confident about your abilities.

You'll want to expand your skills using various construction tools, short-cut sewing techniques, your own pattern designs, tailoring, using new fabrics, or sewing for other people.

Whatever you choose to try, make it a new challenge. Use these advanced ideas in sewing to begin your exploration of the endless skills you can develop. Then share them with others.

**Pressing Tools**

If you've been sewing for a while you've probably used many of the sewing notions mentioned in Units I and II. Pressing is one of the really important parts of sewing. Pressing aids, in addition to irons and ironing boards, can help you do a professional job of pressing. If you and other members of your family sew a lot, you might want to buy or make some of these pieces of equipment, or try some of the substitute ideas.

**Press Cloth**

A press cloth prevents press marks and shine from pressing. Commercial press cloths, clean diapers, large white handkerchiefs, pieces of washed muslin, cotton sheets, or cheesecloth work well. Paper towels are good to use with fusible interfacings. To dampen a press cloth, dip half of it into water. Wring it out thoroughly. Refold the dry part with the damp part and wring again.

**Pressing Attachment**

A pressing attachment serves the same purpose as a press cloth. It fits over the sole plate of the iron.

**Pressing Mitt**

A pressing mitt is for pressing rounded or small areas such as sleeve caps. Wear it on your hand; place the fabric over it; and press. Be careful not to steam burn yourself.

**Seam Roll**

You can avoid pressing imprints from the seam allowances on the outside fabric by using a seam roll. Place the seam on top of the roll, and press the seam allowances open.

To make a seam roll, use a sturdy cardboard tube or tightly roll one or two magazines. Cover the roll with firmly woven cotton. Or press the seam on the ironing board and use strips of heavy paper or clean white envelopes under the seam allowances to keep the seams from marking the right side.
**Sleeve Board**
A sleeve board makes it easier to press hard-to-reach areas such as sleeve and pant seams. Or these areas can be pressed by placing the seam near the edge of the ironing board. Then press without creasing another part of the garment.

**Metal Hem Guide**
Use a metal hem guide to press hems without leaving a ridge at the top. Place the guide along the hemline. Press the hem allowance over it. Or cut a guide from oaktag or cardboard.

**Tailor's Ham**
Use a tailor's ham to press darts and curved seams. Fit the garment's curve to the appropriate shape on the ham. Or use the narrow end of the ironing board. Keep the dart on the ironing board with the tip of the dart at the end of the ironing board. Let the rest of the piece hang over the edge. For curved seams, use the curved edge of the ironing board.

**Tailor Board**
A tailor board is a wooden tool with several flat surfaces that have curved and straight edges. It often has a pointed end. Use it to press awkward areas and to press smooth sharp seams on collars, faced edges, cuffs, and ends of waistbands. Place the seam or garment area over the appropriate surface or edge and press. Or to press open seams that are difficult to reach, place the piece flat on the ironing board. Press one seam allowance up.

**Point Presser**
A point presser helps press open awkward seams, especially collar points. Use as the tailor board is used. Often the bottom can be used as a clapper.

**Wooden Clapper or Pressing Block**
A wood clapper or pressing block creates sharp creases, seams, and edges. Steam the area with a damp press cloth and steam iron. While the fabric is still steaming, press down on the seam or edge with the wooden clapper. Leave it there until the fabric is cool. You could substitute an unused unfinished wooden breadboard or a thick piece of wood about 10 inches long and three or four inches wide.

**Needle Board**
A needle board is used for pressing pile fabrics such as corduroy, velvet, velour, and velveteen. Place the fabric face down over the wires and press. A velvet cloth uses prickly fibers rather than wires to give similar results. Or substitute a thick terry cloth towel or a piece of the fabric the same as the garment.
Selecting a Sewing Machine
A sewing machine is a major purchase. If you or someone in your family is planning to buy one it will pay to do some thinking and planning beforehand. If your family has said they will give you one as a gift, suggest that you help select the machine. Since you hope to use the machine for many years, you’ll want one that you enjoy using. Here are some things to consider when you choose a sewing machine.

Think about your sewing needs. What features are essential for the kind of sewing you usually do? Do you want to sew backwards, zigzag, use a stretch stitch, overcast seams, make buttonholes, do decorative stitching? Will you consider both new and used sewing machines? A new one will generally have a warranty on some parts for a year and on other parts for many years. A second hand machine may be in good condition, but should be checked carefully. It may be very inexpensive but lack a warranty or instructions for use and care. A reconditioned machine is a second hand machine that has been carefully serviced. The price is usually higher than other second hand machines, but it often has a service warranty for several months.

Study advertisements to learn unfamiliar terms that salespersons are likely to use. Prepare to be confident when you hear free arm, solid state, exclusive mechanism, automatic monogrammer, and so on.

As you shop, remember that you are just gathering information. This does not obligate you to buy.

Ask dealers and sales representatives to demonstrate and explain their machines.

Be sure to note how easy the machine is to haul around and set up.

Experiment with different machines using different techniques on fabrics you frequently sew with. Do the same experiments with each machine so you can make accurate comparisons.

- Try sewing on cotton broadcloth, nylon tricot, corduroy, crepe de chine, denim, and wool flannel.

- Sew plain seams, zigzag seams, overcast stretch stitches, satin embroidery stitches, and buttonholes on each fabric.

- Try each fabric with a single thickness, two layers, and multiple layers—at least four thicknesses.

- Adjust the stitch length and tension as you would if the machine were your own.

- Label each sample so you can remember which machine gave which result.

- How do you like using the machine? Is it easy for you to control and regulate? Can you easily see what you are doing? Does anything about using the machine annoy you?

Compare results of different machines that interest you. If all gave similar performance, then other factors can provide the basis for choice. You could make yourself a chart showing the different models you tried so you can compare price, features, service, etc.

Consider availability of service. Machines that are not in working order are worthless. Travel distance to the repair shop or shipping fee to send it to the manufacturer must be counted in the cost. Consider guarantees, warranties, and service agreements.

Estimate how long it will take the machine to pay for itself. Think about price in relation to frequency of use. For example: assume Goodbuzz machines sell for $200 at a mail order chain store, while Finepurr machines are imported and are sold by a local dealer for $850. If you "save" $10.00 on every garment, and make one garment every month, it will take only one year and eight months to "pay" for Goodbuzz, but it would take a little over seven years to "pay" for Finepurr.

Many machines can be used for several years. However, after a few years you may find yourself interested in features of a newer machine that will make your sewing easier.
Fitting as You Sew

By now you have learned to take your measurements, compare them to measurement charts, and make some basic alterations. Often when people want to see what kinds of alterations their patterns need, they measure the pattern and compare those measurements to their body measurements. They measure the pattern without including seam allowances or darts in order to know how large the garment will be when it is sewn together.

To try that, you need to know about "ease."

Ease
Most clothes that you wear are bigger than you are. That's so you will be able to move around while you wear them. This extra amount of fullness in your clothes is called ease. (Knit swimsuits and some snugly fitted sweaters are often smaller than you are, but they are meant to be tight. The stretchiness of the fabric allows you to move around.)

There are two types of ease. The first is called basic ease or wearing ease. This is the amount of ease a basic pattern will have that has a fitted top with darts, a fitted waistline seam, and a bottom that fits smoothly over the hips. It is made from a woven fabric. Wearing ease used by the pattern industry in its basic patterns is approximately:

- chest: 2½" to 3" larger than the body measurement
- waist: ½" to 1"
- hips: 2" to 3"

That means most patterns you use will be at least this large. Exceptions are patterns made for stretchable knits only, swimwear, strapless tops, or similar types of fitted bodices on gowns or sundresses.

As styles are created from the basic pattern, they may end up being larger than this. Additional fullness is called design ease or fashion ease. It is this ease that gives us variety in the styles of our clothes. It explains why a shirt that fits the body closely and has darts in front and back is smaller through the chest and waist than a shirt without darts. And that shirt is smaller than the type that has a yoke and gathers or pleats.
In addition, jackets and coats have extra ease in order to fit over other clothes.

**Knowing What to Expect**
When you look at patterns also read the description. The description will include certain words that tell you how fitted the clothing is designed to be. These words are commonly used:

- fitted
- semi-fitted
- loose-fitting
- very loose-fitting.

Pattern companies have guidelines so they will use the same term for clothes that fit about the same way.

The width at lower edge is also helpful information. It tells you how wide the garment is around the hem. In addition, it helps you to see how other parts of the garment will fit when you look at both the measurement and the shapes of the pattern pieces. Measure the width at lower edge of clothes you especially like to help you select patterns that you also will like.

**Time to Try On**
When major seams have been sewn, try on the garment to see if any changes are needed. Center and side seams should hang straight so they are perpendicular to the floor. The garment should fit smoothly. If you see pulls and folds of fabric, you have problems. Publications on fitting clothes will help you see what to do.

Here are a few general hints to get you started.

- Start your alterations at the top with the neck and shoulder, and move toward the hem. Often alterations made in the shoulders solve problems that you notice at the hemline.

- Pulls are wrinkles that indicate that the garment is too small. They point to the problem. You'll need to make the garment larger at one end or both ends of the pull.

- Folds are wrinkles that show you that the garment is too large. The garment is too large at right angles to the fold. So if you have vertical folds up and down the center of a jacket, it is probably too large across the jacket.

- Don't overfit. While you need to be happy wearing the garment, remember how the designer planned to have it look.
Take Sewing a Step Further

Would you like to increase your sewing skills? Practicing and learning one or two new details with each sewing project are ways to do that. Another way to increase your skills is to try different approaches to sewing. Some you might consider are:

- short cut sewing
- the designer touch
- tailoring
- sewing active clothes
- sewing with new fabrics
- creating your own designs
- sewing for other people.

Each of these approaches to sewing has value. Each requires that you learn new skills and that you do them well. Some information on each topic is included here to get you started. You’ll need to look for more information in other resources such as sewing books, Extension publications, special features in sewing magazines, other people who sew, and the free monthly pattern company flyers. If other resources are especially helpful for a specific type of sewing, they will be mentioned.

Short Cut Sewing

Short cut sewing isn't sloppy sewing; it's efficient sewing. If you like to sew, it pays to know quick techniques so you can make the most of your sewing time.

Here are four guidelines for short cut sewing:

1. Organize your work area, your tools, and yourself so you can make good use of your time. Set goals for each day.

2. Eliminate steps and hand work that won't adversely affect the appearance or durability of your project. Learn to judge when less durable methods are okay to use.

3. Be open-minded. Be open to new ideas, notions, and sewing machine attachments. Try a method before judging it. Remember that you may need to practice some methods before they become quick for you.

4. Work faster. See if you can work more quickly without sacrificing quality.

Good places for getting ideas are sewing hint columns in newspapers and magazines. Also look at moderate and lower priced ready-made clothes. In order to save money, manufacturers use the quickest and most efficient sewing methods possible.

The Designer Touch

What makes designer clothes special? Often it’s the wonderful fabric and especially interesting styling. The other ingredient is the special construction methods used to show off the fabric and styling to perfection. We usually think of designer clothes as having a lot of time-consuming hand work. That’s true some of the time, but not always. It’s more a matter of matching the technique with the effect the designer wants.

A few sources are especially good for information on custom sewing techniques. Some sewing books have sections for special sewing techniques. Often this section includes information on working with lace, dressy fabrics, and more exotic trims. In addition, designer patterns include many of the techniques used on the original garments. If you are able to examine designer clothes, including more expensive ready-made clothes, that’s an excellent source of ideas.
Tailoring

Tailoring is a special kind of sewing used for jackets, coats, vests, skirts, and pants. It's a method of adding shape and durable construction to clothes so that they can be worn often and still look as good as new. It involves careful use of interfacings, accurate sewing, and meticulous pressing. We usually think of tailoring the collar and lapels of a coat or jacket. But tailoring also includes constructing smooth, flat vents in the back of a jacket; adding shaping to shoulders and sleeve caps for a smooth, crisp appearance; constructing waistbands that don't roll or wrinkle; constructing pockets that keep their shape.

Traditional tailoring uses sew-in hair canvas for interfacings and a lot of hand stitching to build permanent shape into collars, lapels, and pockets. Newer methods use machine stitching or fusible interfacings to do this more quickly. Learning to tailor a garment is a challenge whether you use traditional or newer methods. When carefully done, the results provide a huge reward.

Look through several tailoring books to see what method you would like to try. You can learn to tailor by yourself, but it is easier if you have someone to go to when you have a question.

Tailoring is a major undertaking. You will spend a lot of time making tailored clothes, so invest in good quality fabric that has some body. It should be fairly closely woven or knitted. When you squeeze the fabric and let it go, it should bounce back into shape. Even if the fabric used for a tailored jacket or coat is washable, consider having the finished garment dry cleaned to help preserve the shape.
Sewing Active Sport Clothes
Sewing clothes and equipment for outdoor activities and swimming is great fun.

You can sew cold weather clothes and equipment. Parkas, down or polyester fiber filled jackets and vests and sleeping bags are some projects you can try. You can use kits or gather all the supplies yourself.

Some new skills you will learn include topstitching and machine quilting through thick layers. To prevent puckers, pin carefully; hold the fabric taut; stitch slowly; and stop often to check on the bottom fabric layer.

You’ll also learn a new seam finish. Nylon fabrics are used extensively for these projects. Nylon ravel a lot. One way to prevent this is by searing the edges before you sew the seams. Hold the fabric taut and pass the edge through the base of a candle flame. Or use a wood burning tool for searing. Do this in a well ventilated room to avoid problems with fumes.

You’ll also learn more about pressing. Press with an iron on a very low temperature or use your fingers. Don’t press after you have added the fiber fill or down because that would flatten the insulation and decrease the insulation value.

You can sew swimwear too. Sewing swimwear from knitted fabric that contains spandex is easy once you master the two following techniques. Use a ballpoint needle to avoid skipped stitches.

• Seams—Keep seams stretchy. If you use a straight stitch, stretch the fabric as you sew. If you use a zigzag or stretch stitch, don’t stretch the fabric.

• Sewing elastic around legs, waists, armholes, and necklines—Stitch the elastic to the wrong side of the fabric with fabric and elastic edges even. Stitch near the edge of the fabric using a wide, long zigzag stitch, if possible (figure 1). Then turn the elastic to the inside of the swimsuit. Use a smaller zigzag to stitch over the raw edge of the fabric and elastic (figure 2).
Sewing with New Fabrics

Have you ever seen a fabric that you really like, but were afraid to sew on? You can learn how to successfully sew the fabric by conducting a mini-research project.

Start by reading about the fabric. You also can figure it out for yourself by experimenting; that can be the most interesting approach.

You will probably have enough scraps left after cutting out your garment for the experiment. But if you want to do your research before cutting out your fabric, buy about ½ yard extra. As you try different techniques for handling the fabric, start with the methods you usually use. If those aren’t satisfactory, then try an alternative. Your basic sewing book will give you some ideas for other methods to try. The samples you make can help you remember the best techniques, and they also can help other people learn to sew with the fabric. So, you might like to make neat samples, mount them on paper, oaktag, or poster board, and label them for future sharing.

See if the fabric shrinks? Do you need to use a “with nap” layout? Sew through two layers of fabric to check the tension, pressure on the presser foot, and stitch length. Other things to check: methods for marking, making and finishing seams, pressing, hemming, buttonholes, zippers. Also check needle type and size and appropriate interfacings.

Skipped stitches and puckered seams are common problems, especially with lightweight knits and wovens and tightly woven fabrics. If you are having a problem with this, try these suggestions:

- Wash the fabric before sewing on it.
- Change the needle. If you are using a universal needle, try a sharp one for wovens or a ball-point for knits.
- Loosen the tension.
- Change the pressure on the presser foot.
- Use a longer stitch. Use a narrow zigzag on knits.
- Hold fabric taut, both behind and in front of the needle.
- Use a straight stitch foot for straight stitching and throat plate with the small round hole.

Now that you have completed your research, you can sew on your new fabric with confidence. And you have lots of good information to share with others.
Creating Your Own Designs

It's fun to be able to make something exactly the way you want it to be. You've probably had an idea in your head or have seen a picture of something you'd really like but can't find a pattern just like it. You might like to try one of these ways to create just what you want.

Combine Patterns

You can take sleeves, collars, etc., from one pattern and use them with another pattern if you remember a few points.

- Use the design principles in planning your design.
- The patterns should be the same size.
- It's easiest to combine patterns that are from the same pattern company because the patterns have been drawn from the same basic pattern.
- When you are switching pattern pieces, use patterns that fit about the same and have fairly similar styling. For example, don't try to use a sleeve with a drop shoulder with a pattern for a regular set-in sleeve. The sleeve caps are too different and the fit of the garment may be different too. Don't combine pattern pieces of two different kinds of garments such as a jacket and a shirt; the size and shape of the pieces are not the same. Avoid changing necklines too drastically. A garment with a low scoop or vee neckline is fitted differently from one with a high neckline.

- Sleeves look best when they are sewn into their original armhole. This means you need to compare the armholes of the two patterns. Match up the shoulder seam and underarm seam of the two patterns. If the armhole curves are different, trace the armhole belonging to the pattern with the sleeve you are using onto the other pattern.

- The same thing is true of collars. Line up shoulder seams, center fronts, and center backs of the two patterns; then compare the two necklines. Change the neckline on your front and back pattern pieces to correspond with the pattern containing the collar you are using.
Designing Fabric and the Garment

You may have had experience learning to design fabric in a 4-H visual art project or elsewhere. Have you learned to tie dye, batik, block print, applique, weave, or embroider? How about combining your skills in designing fabric with making a garment or accessory?

Think about a fabric design technique that you especially like to do, and get a general idea of the kind of garment you would like to make. Either you can plan your design for the fabric first, and then use a garment design that compliments it. Or you can select a garment design, and plan the fabric design to go with it. (Often, this is the easier route.) In either case, it is important to use the design elements (color, line, texture, shape) and the design principles (proportion, balance, rhythm, emphasis, unity) to give you pleasing results.

This is one way to approach such a design project.

1. Select a garment style. Sketch several small outlines of the style on a piece of paper.

2. Use crayons or felt tip pens to draw possible fabric designs on the sketches of the style you have chosen.

3. Look at each one carefully in terms of the design elements and principles. Can you see how you could improve your ideas? Continue sketching until you are pleased with one design.

4. If you want a good idea of how the finished project will look, cut out the front of the style in life size. Use shelf paper or newsprint.

5. Develop the design with felt tip pens, crayons, or paint on this large scale sample.

6. Hold the sample up to you to see how it will look on you. Does it compliment your body shape and size?

7. Apply the fabric design and construct the garment or accessory.

Designing on fabric

Completed fabric design
Sewing for Others
It can be very satisfying to sew for other people. You need three main skills.

- You need good sewing skills so people will be proud to wear what you've made.
- Time to sew is another must.
- You need good skills in getting along with other people.

If you'd like to sew for others, here are some ways to do it.

- Sew for others for free. You can make gifts for family or friends. Or you can trade skills such as you sew for someone and he or she paints some of your furniture. You can sew for an elderly or handicapped person as a citizenship project. See Clothing for People with Special Needs for information on this.

- Sew for others for pay. You can alter clothes or make clothes from scratch. Or you can make things to be sold in a store or at bazaars.

Keep several things in mind when you are sewing for others.

1. Don't take on too much work. Consider the amount of time you have committed to school, homework, home responsibilities, and extra activities. How much time do you really have to sew for other people?

2. Know your skill limitations. Don't be afraid to turn down a job if you don't have the specific skill required, or if you don't want to risk ruining the fabric. You can end on a positive note by saying that although you can't handle this one request, there are many things you can do, and you'd be happy to sew for the person in the future.

3. Agree on a due date. That helps you and the person you are sewing for.

If you are sewing for pay, you need to decide how much to charge. That's not easy to do. Remember you have a valuable skill, and people need to be willing to pay you a fair price. Use the same pricing system for all your clients. There are various ways to determine prices. Extension Service has information on that. In general, the faster and better you sew, the more you can charge. Don't forget to include in the price the time you spend planning the layout, cutting out the pieces, shopping for linings, and fitting the person.

Sewing for pay means you are in business. That involves some business responsibilities. You need to keep records of your income and your expenses to know what kind of profit you are making. You also need to add sales tax to the bills you give your customers, and pay the tax to the state of New York. To get information and forms write to: Taxpayer Assistance Bureau, Department of Taxation and Finance, State Campus, Albany, New York 12227.
Caring for Clothes

As you add clothes to your wardrobe, clothing care becomes more complicated. You can’t wash a sweater the same way you would a pair of blue jeans. Some clothes need dry cleaning.

Others need stains removed. A few clothes may need mending. Your clothes strategy is taking shape and so should the responsibility you have toward caring for your wardrobe.

**The Water You Wash In**

Water temperature affects cleaning. Hot water (140°F or 60°C) helps kill bacteria, and warm water (110-120°F or 49°C) prevents wrinkles in synthetics and helps detergents work well. Cold water (60°F or 40°C) may protect colors, but is not as effective in soil removal.

Water affects cleaning in other ways too. Soft water allows detergents and soaps to work as intended. Most families have hard water that contains minerals such as calcium and magnesium. If you have a ring in the tub after you take a bath, you probably have hard water. In hard water, detergents lose part of their effectiveness because they first act to soften the water. Soaps leave a sticky scum that is difficult to rinse out of clothes in hard water. You can soften the water you use for laundry by using extra detergent or by using a packaged water conditioner. These water conditioners usually contain mild all-fabric bleaches in addition to the chemicals needed to soften water. Water conditioners can be used to brighten dingy looking clothes. To do this, use a cup of water conditioner instead of detergent and wash as you normally would. If you see suds as your clothes wash, you know excess detergent (from a previous washing) and hard water deposits are being stripped off your clothes.

**Stain Removal**

Stain removal is a necessary part of clothing care. Few people like to wear clothes that have spots or stains, but getting stains out can be difficult unless you do it right away. When stains are fresh, blot up as much as possible with a paper towel or clean cloth. Then decide which stain removal method is best for the stain.

When stains are on “dry clean only” clothes, take them to the cleaner as soon as possible, and tell what the stain is. Then the cleaner will have a better chance of getting the stain out without damaging your garment.

If the stain is on clothes you care for at home, you may be able to use regular washing or spot treatment depending on the fabric and kind of stain. Many stains come out with regular washing if you use the right detergent and water temperature. You should avoid putting hot water on unknown stains or ironing clothes that have stains because heat can set stains and make them hard to remove.
**Specific Stains**

Protein stains, such as milk, egg, blood, and soybean formula, can be removed by soaking and rubbing in cold water before washing. Hot water cooks these stains permanently into fabric. Normally, cold water will soften these stains when fresh, but if they are old, then a detergent or an enzyme soak may be helpful.

Tannin stains, such as coffee, fruit juice, or cola drinks, will come out in regular laundry without pre-treatment, if detergent, not soap, is used. Soap bars or flakes cause these stains to be permanent.

Oil stains, such as those from body oil (inside collars), suntan lotion, bacon grease, salad dressing, cooking or light motor oil, can be removed by rubbing the area with heavy-duty liquid detergent, or a spot treatment product (pump or aerosol) before machine washing. If you don't have one of these, use a paste of powdered detergent mixed with water to pretreat the stain.

Dye stains, such as permanent ink, felt tip pen, mustard, and cherry, are harder to remove. First, treat the stain with a liquid detergent, then rinse thoroughly. Next soak the stain in a dilute solution of all-fabric powdered bleach and water. If the stain persists, and if the garment is white or colorfast, treat with a dilute solution of liquid chlorine bleach and water.

Dye stains on colored clothes present a special problem because some fabrics are faded by liquid chlorine bleach. Many colored fabrics are colorfast to chlorine bleach, but you can't always tell by the label. To decide if a fabric can be safely bleached, test with a solution of one tablespoon of liquid bleach diluted in ¼ cup of water. Put a drop of the diluted bleach solution on a seam edge that is hidden inside the garment. Let it stand for one or two minutes, then blot dry. If there is no color change, it is probably safe to bleach the colored garment to remove the stain.

Combination stains, such as ball-point ink, crayon, and lipstick, need a two-step treatment. Remove the oil portion first with a grease solvent, such as detergent and water or a petroleum based solvent such as perchloroethylene. Then, treat the dye part of the stain with diluted bleach, as above.

Rust stains won't come out with normal laundry. Use of chlorine bleach makes them permanent. Rust removers are effective and safe for most fabrics, but they are highly toxic, can damage the finish on appliances, and must be used with extreme caution.
Spot Treatment
Many combination stains are easier to remove with spot treatment. Spot treatment confines the stain to a small area and keeps it from spreading. Spot treatment is advised with fabrics that are not very strong. If the fabric seems too fragile to take a lot of rubbing and flexing, then spot treatment should be used.

For spot treatment you need a supply of clean rags or paper towels and a drycleaning solvent or spot remover. Then follow these steps:

1. Pad the working surface (a kitchen counter or table) with clean rags or paper towels that can be stained as you work.

2. Turn the stained area or spot on the garment face-down over the padded surface.

3. Dampen a small white cloth with solvent.

4. Use the dampened cloth to rub the stain from the wrong side. Feather the edges of the stain working from the outside toward the center of the stain to keep the stained area from getting larger.

5. As the stain transfers to the absorbent material underneath, move it to a different place on the absorbent material so that the stain has a clean place to exit into.

6. Repeat this procedure until all traces of the stain are gone, then launder the garment as you normally would to remove excess solvent that may leave a ring if not washed out.

Safety when Removing Stains
Safety is an important consideration for you and for your clothes. Several pamphlets and books give stain removal advice. Some methods work better than others. It is better to use conventional methods than to try strange sounding ones if you want to preserve your clothes. Sometimes combining chemicals which might be used safely by themselves gives dangerous results. For example, you should not use liquid chlorine bleach with ammonia, toilet bowl cleaners, or rust removers. The chemicals can react to produce toxic gases that can cause death.

Ironing a Shirt
Ironing a shirt, especially an all cotton or linen one, can be a real challenge. Refresh your memory on pressing by reviewing Unit II, Challenges in Clothing.

With permanent press shirts, dampening is not needed, but you must be sure the iron is set for a low temperature so it won't stick. There are different ways to iron a shirt, but if you are just learning, try doing it this way:

1. Iron the cuff of one sleeve, then smooth the whole sleeve flat on the board and iron one side; turn it over and do the other side. Iron the other sleeve.

2. Pull the shoulders of the shirt over the end of the board. Iron the yoke and any part of the shoulder that was missed.

3. Iron the collar.

4. Iron one side of the front.

5. Continue around the shirt. Let the iron spend enough time on seams to dry them flat, being careful not to over-press, scorch, or glaze the fabric.

Remember the old saying, practice makes perfect. It works here, too.
Special Care for Sweaters, Caps, Scarves

Knit sweaters, caps, and scarves can easily shrink or stretch out of shape when they are washed, especially if they are wool. Acrylic sweaters often can be machine washed and tumble dried, but wool sweaters need loving care.

Follow these steps for wool.

1. Use a big piece of paper (a grocery bag opened out flat may be big enough) and draw around the garment to record its original size and shape.

2. Put the garment in a basin filled with mild detergent and warm water. Special high priced wool detergents are not superior in cleaning ability or safer than other more moderately priced products.

3. Gently immerse the garment to get it completely wet.

4. Allow it to soak for one to three minutes. Drain the basin and refill with cool water.

5. Rinse the garment by squeezing until all traces of detergent are gone.

6. Squeeze out water. Then gently fold the garment in a towel and press and squeeze to remove as much excess moisture as possible. Avoid wringing, since wool is weaker when wet and can be damaged.

7. To dry, place your paper drawing under a clear plastic cleaner bag and put the garment on top. Gently pat out the garment to fit its original outline. Allow to air dry.

8. After it is dry, gently steam press the garment. Do not over-press or steam too long because shrinkage may occur.

Special Care of Fiber or Down Filled Garments or Gear

Check the care label to learn recommendations for cleaning the garment or gear. If the label says dry clean only, take it to a professional cleaner experienced with down or fiber filled items. Do-it-yourself dry cleaning is not recommended for down. Thoroughly air your down filled article to remove any fumes left from the dry cleaning process.

When the label says your garment or gear is washable, follow these steps:

- Treat heavily soiled areas with liquid laundry detergent. Rub gently.

- Machine wash with warm water using regular detergent and non-precipitating water softener.

- Sleeping bags may be too large for regular washing machine; laundromats have larger machines, or you can hand wash them in a bathtub filled with warm water and detergent; rinse in clear water until foam disappears.

- Support wet down garments or gear carefully since absorbent down holds water; the weight of the wet down can strain and tear cover fabrics.

- Tumble dry at medium setting; use towels and two or three old tennis balls or child-sized tennis shoes to help break up clumps of down.
Dry Cleaning

You may need the services of a professional dry cleaner when clothing is labeled professional dry clean only, when you want a professionally pressed look, when a stain is on a garment that can't be washed, and when you have limited time for clothing care.

Take clothes to the cleaners promptly when they are soiled or stained. Tell the cleaner the fiber content of the clothes and the stain. Remember, aged stains are more difficult or impossible to remove.

The first step in the dry cleaning process is inspecting the clothes to identify stains or make repairs. Then clothes are brushed to remove lint and crusted soil. Stains are treated with solvents such as amyl acetate, alcohol, or perchloroethylene. Water based stains and perspiration stains are sprayed lightly with a solution of detergent and water.

Before processing, light and dark colors are separated. This prevents graying of light colored fabrics if any dye is leached from the dark clothes by the solvent.

Clothes are dry cleaned by tumbling in the solvent for three to 45 minutes. Afterward, clothes are tumbled to remove excess solvent, aired, and dried. They are inspected a second time, and spots missed or incompletely removed are treated again. Spotters sometimes use steam and air guns in stain removal.

Finally clothes are "finished." This is a pressing process that involves careful use of steam and sometimes specialized air forms or pressing tables. The air forms have a body shape and are designed so that air or steam can be forced through the fabric from the inside while it is pressed or held in place by the operator of the equipment.

Dry cleaning is not recommended for fabrics that have flocked designs sealed on with adhesives, polyurethane finishes, or fabrics that contain olefin, vinyl, spandex, or rubber. Also repeated steam pressing may shrink synthetic fiber clothes.

Down filled items need special care.

Steam pressing form used by dry cleaners.
Clothes and Work
With many jobs, protective clothing is provided or specified by the employer. The National Institute for Occupational Safety and Health (NIOSH) is a government agency that provides guidelines for clothing safety in many manufacturing operations.

Protection from fire and heat is required not only by firefighters, but also by many in industrial jobs such as glass or metal working, welding, or kiln maintenance. Specialized clothes of heat resistant fabrics allow workers to perform hazardous tasks in extreme heat or to enter flaming buildings for short time periods. (Flame resistant sleepwear does not offer this kind of protection.)

Nuclear power plant workers, X-ray technicians in medical clinics, and many others in industry need special clothes to protect them from radiation. Nearly everyone has seen on television the protective suits astronauts wear into space.

Clothes and Pesticides
Agricultural workers applying pesticides in orchards and on field crops depend on clothing to protect them from toxic chemicals used for weed and insect control. Pesticide poisoning can occur when too much of an agricultural chemical gets into the body through the lungs, mouth, or skin.

Respirators, goggles, and clothing can help minimize skin absorption of pesticides and prevent poisoning. Research is still in progress to determine the best kinds of clothing for farm workers to wear to protect themselves from overexposure to pesticides. Tyvek (olefin) and Goretex are two types of synthetic films that are being studied to see if they offer more protection than ordinary farm clothing. These materials breathe to allow air and moisture out, but help prevent chemicals from permeating through to the skin.

Disposable Tyvek suits can be purchased from laboratory supply companies for use when exposure is heavy—such as in orchard spraying. If you are interested in knowing where to get these, ask your Extension staff.
Care of Pesticide Soiled Clothes

Selection of safe clothing is not the only challenge. Since contaminated clothing is unsafe to wear, laundry is an important part of safety also.

The following laundry suggestions are based on research findings, but may be changed as more research becomes available.

1. Collect pesticide soiled clothing in a disposable hamper until time for washing. To make a disposable hamper line a cardboard box with a plastic garbage bag, then dispose of the hamper when the pesticide application season is finished.

2. Wear rubber gloves to handle pesticide soiled clothes. Dispose of the gloves with the hamper.

3. Wash pesticide soiled clothes separately from the family laundry. Pesticides can be transferred from one garment to another in the wash water.

4. Pre-rinse pesticide soiled clothes by hosing them on a line outdoors (be sure water running off the clothes does not get on any people or pets), or soaking in a tub or bucket (afterward throw the dirty water on the field—not the garden or lawn), or using the pre-soak cycle of your washer that drains and refills again to wash.

5. Wash as soon as possible after soiling.

6. Use hot water (140° F) and a full water level.

7. Wash only a few items at one time.

8. Use the 12 to 14 minute wash cycle, not a shorter cycle. A double rinse is a good idea, if possible.

9. Use a heavy duty detergent.

10. Line dry to avoid getting pesticide residue in your dryer.


12. Discard any clothes that are fully saturated with full strength liquid pesticide concentrate.

Handle chemical-contaminated clothing safely.
Clothes and Fire
In many situations we use clothing to protect us, but in the case of fire, clothing can be a problem rather than a protection. In fact, burn injuries from fires involving clothing are more severe than the burn injuries from any other fire. In clothing fires:

- Burns are often deeper and cover more skin surface.
- Burns are more likely to cause hospitalization and death.
- Hospital treatment is longer and more expensive.

Children and the elderly are more likely than middle-age people to die from clothing related burn injuries. Children may not know what to do. Often they run which makes the fire burn more easily. Perhaps you can teach younger children to “stop, drop, and roll” so they will know what to do if their clothes catch on fire. Elderly people, on the other hand, may react more slowly because they don’t notice the fire or the heat as easily.

In the 18- to 44-year-old age group, there are many burn victims, but the injuries are often less severe. This may be because these people know what to do and act more quickly to put out the fire. Men in this group have more injuries, and these are usually related to their jobs. When women are burned, they are generally in the kitchen wearing night clothes.

Flammability Standards
The federal government has regulated fabric flammability since 1953 under the Flammable Fabrics Act. In the 1970s standards were established for children’s sleepwear, sizes 0 to 14, carpets and rugs, mattresses and mattress pads. The Consumer Product Safety Commission administers the law and regulations. These products must pass specific flammability tests in order to be sold in the United States.

The flammability tests have some problems:
- The tests may not represent the different ways clothes or fabric may be exposed to flame or heat.
- They don’t regulate the design of the clothes or the ease of removal.
- They don’t take into account the heat from burning and melting that causes burn injuries.
- They don’t measure the toxic smoke from burning. Toxic smoke can cause death.

It costs a lot to carry out the testing program and develop new fibers. These costs are passed on to consumers. Some people object to the high price. Others feel it’s a small price to pay for increased safety. How do you feel about this? Ask others (men, women, and youth) how they feel about having standards of fabric flammability for children’s sleepwear. Ask them how they feel about having standards of flammability for adult clothing, particularly considering the elderly.

One bright note: deaths from clothing fires are decreasing, especially among children. This may be because of the requirement that children’s sleepwear be flame resistant and partly because of increased consumer awareness.
Safe Clothes for Leisure

Protective clothing also is important for many leisure time activities. For race car drivers, flame resistant coveralls are a must. For deep sea divers, special suits and breathing tanks keep them safe in cold, deep water. Hunting is another leisure time activity where clothing is needed to keep people safe, dry, and warm—whether in the blind, field, or woods.

Clothes for hunting should allow freedom of movement, but fit close to the body so they don't get caught on brush or fences. Jackets often have special shoulder padding to cushion the shoulder against the recoil of guns. Pockets for game should close securely so they don't get caught, but open out completely so they can be easily cleaned. For warm weather, mosquito net parkas are available as protection against mosquitoes.

To stay dry, hunters can choose waterproof or water-repellent clothes. Waterproof fabrics usually have rubber or polyurethane coating. Seams should be sealed so water cannot penetrate. In warm weather, these will feel hot, since there is no way for perspiration to get out. Water-repellent fabrics breathe but will soak through in a heavy rain. Finishes such as Zepel or Scotchgard often are used to make clothes water-repellent.

To stay warm, hunters need to dress in layers. Hunting clothes are available with an outer layer of cotton/polyester poplin, duck, or acrylic Ten Mile Cloth in bright orange. Inner layers can be down or polyester fiberfill, Thinsulate, or wool batting. Thinsulate claims to provide the same insulative value of down or fiberfill with half the thickness or bulk. When equal weights of down and fiber fill are compared they offer the same insulative value. Lining fabrics should be smooth to glide over regular clothes. Nylons are often used, but sometimes acrylic pile is used for extra warmth.

Bright orange clothing is required during the shotgun deer season. Vests, jackets, coveralls, hats, and gloves are available. Hunter's orange also is available in camouflage, and is recommended in the pheasant season to be visible in or above the cornfields. Many hunters object to orange for duck hunting, but wildlife specialists say motion, not color, scares game.

Do you need to add another measure of safety or comfort to your hunting attire? Look through catalogs or visit stores to study features of specific items you might need. Compare. What choice would you make?
As you plan your wardrobe, take time to look at your total appearance. Clothes are important, but so is being clean, well groomed, and physically fit. No matter what you’re wearing, you’ll look and feel better if you have your own personal care routine. You’re a step ahead if you take time to plan what products or appliances will be your best basic grooming tools. Stick to the simplest plan that works for you, and you’ll save some hard earned cash.

Skin Care
You can tell from the advertisements on TV, radio, and in magazines that having clear skin is a common concern among most teens. Pimples most often appear on the face, but they also show up on shoulders, chest, neck, and back. Minor problems usually can be controlled by keeping your skin as clean as possible. If you are unhappy with the appearance of your skin, check with your family about seeing a dermatologist or skin doctor.

Hundreds of products claim to clear up skin problems. Two ingredients, sulfur and benzoyl peroxide, seem to be most effective in treating acne. These are the generic names that will be found under the ingredient list on the label. It will help you to know the generic names of proven medications and what they do so you can spend your money wisely.

- Benzoyl peroxide is the most effective acne treatment ingredient available without a prescription. It helps prevent lesions from forming. The gel form is more effective than lotions or creams.

- Sulfur medications help heal existing lesions by peeling and drying them out. But they are not as useful in preventing new pimples from occurring. The flesh-colored tints help hide pimples.

- Salicylic acid cleansers may help remove blackheads in mild acne. The alcohol in these products helps remove surface oil.

- Medicated soaps are no more effective against complexion problems than ordinary soaps.

- Scrubs can irritate the skin and may make acne worse. Avoid these abrasive cleansers and rough surface sponges.

Regular skin care helps complexions.
Suntan Products
How many times have you admired a friend’s suntan? Getting a deep dark tan is a favorite summer pastime. But what really is a tan? Suntan and sunburn are the skin’s responses to injury from ultraviolet radiation in sunlight. Research has shown that exposure to the sun is definitely linked to skin cancer. That is why protecting your skin with suntan products and common sense is so important.

To make sure you can fully enjoy sunny summer days, without setting yourself up for early wrinkles and damaged, peeling skin, start tanning gradually, and use the protection best suited for your activity and skin type. A good skin preparation can help you, but it can’t take the place of good judgment. Remember to protect your skin whenever you’ll be spending time in the sun—whether it’s sun bathing and swimming or walking the beans or painting the house.

There are two types of protective products available, suntan products and sunblocking products. Suntan products will emphasize their use in getting a tan and will generally contain a small amount of sunscreen to keep out the sun’s burning rays.

Sunblocking products (also called sunscreens) list a sunscreen effectiveness rating on labels. This rating is called the sun protection factor or SPF. Higher ratings give more protection. Sunscreens usually have SPF’s ranging from 8 to 15 or greater.

One point to remember is that no product makes you tan faster than you would without protection. Some preparations, such as baby oil, only keep you greased up and more comfortable, while you tan or burn as fast as you would with nothing on your skin.

Help the suntan preparation do its job by reapplying it often. Swimming, perspiration, and contact with towels, clothing, and sand can remove some of the preparation.

Drugs can increase your susceptibility to sunburn. If you are taking any medication, ask your doctor if you need to take special precautions when out in the sun for long periods of time.

Fragrances like aftershave, cologne, and perfume directly on the skin can increase your chances of burning. These may contain bergapten, a chemical that reacts with the sunlight to exaggerate a sunburn.

Hair Coloring
If you are thinking about changing your hair color, the first step should be to discuss the pros and cons with your family. If they give you the go ahead, you would be smart to consult a professional. He or she can give you pointers or do the job so that your hair turns out pleasing and natural looking.

There are a wide variety of hair coloring products. Bleach permanently lightens hair color. A tint or dye is permanent, too, and will lighten or darken hair. Color rinse adds color, but cannot lighten and washes out with a shampoo. Semi-permanent color rinse enriches or darkens color and lasts through about four to six shampoos. Frosting lightens selected strands of hair. When using any of these products, directions should be read and followed to a “T” to avoid allergic reactions and damaging your hair.
Advertising

Once the product is distributed to all stores and available to consumers, the manufacturer uses advertising to tell consumers about it.

Advertising uses several methods to make a product appeal to consumers. The promises of popularity, sex appeal, health, and that everyone has one are difficult to resist. Your responsibility as a consumer is to make wise, well-thought-through decisions. Ask yourself these questions when you see an ad.

- What does the ad claim? Is it a reasonable promise?
- Do I want or need what is promised? Can I afford it?
- Do I need more information than the ad gives me? If so, look on the product package, ask store clerks, or consult the manufacturer.
- Does the manufacturer have a good reputation? Stores that stand behind the products they sell are usually a safe bet.

You the consumer make the final decision whether or not an advertisement has been honest when you decide to buy or not buy a product. It's your responsibility to weigh all the facts.

Getting out in the market place and doing some serious shopping will help you evaluate advertising. The more you think about your purchases the better consumer you'll be.

Posture

Good posture works wonders. It makes you look trimmer, more confident, gives your internal organs a chance to function normally, distributes weight so your figure is in better proportion, and helps you wear clothes with distinction. With all this going for good posture, why would anyone want to slouch?

Analyze your posture by having someone take your picture and study it. Look at your photo to decide your posture strengths and weaknesses. When you have identified the weaknesses, exercise to improve these. Practice good posture until it feels natural. Check yourself in the mirror to see that the three heavy sections (head, chest, and hips) are lined up and balanced one over the other. Take another picture after two or three months.

Walking

Walking is as natural as breathing and should look effortless. For an attractive walk remember good posture. Take even steps swinging legs from the hips with feet parallel and close together. Keep relaxed, and let your arms swing smoothly close to your sides.

Sitting

Sit comfortably by placing the back of one leg against the edge of the chair seat. The other foot should be slightly ahead for good balance. Stand straight and tall as you lower yourself into the chair without leaning forward. As you sit keep your feet together and your back against the back of the chair.
Exercises
As you practice good posture, do you see some parts of your body that need strengthening to make pleasing posture easy and natural? Try some of these exercises for specific problems.

1. For strengthening abdominal muscles, lie on your back, knees bent, feet on the floor, arms resting at sides. Raise your head and shoulders from the floor, tuck your chin in, and try to look at your heels. Your back should be fully rounded with lower back against the floor. Reach toward feet with hands. Hold briefly and relax. Work up to 10 to 15 times daily.

2. To strengthen muscles of upper back, shoulders, and neck, sit on the floor with legs crossed, and bend arms to bring clenched fists in front of your chest, palms down, elbows at shoulder level. Slowly pinch shoulder blades together as if trying to break a chain held in your hands. Keep elbows at shoulder level, shoulders low, and avoid thrusting your head forward. Repeat 10 times.

3. This exercise can help swayback. With your back against the wall, your feet together, and about 10 inches away from the baseboard, relax your arms. Bend forward slowly from the waist, head down. While in this position make a conscious effort to push your spine upward by stretching each vertebra. After stretching the spine, come up slowly, head still down, starting with the waist, and press each vertebra against the wall until your head touches. Repeat 10 times.

4. For flexibility and general strengthening, stand with feet slightly apart with hands clasped high overhead; bend slowly from one side to the other, keeping head back and abdomen and lower back in position.

5. To strengthen muscles of feet and ankles, stand with feet parallel and about two inches apart. Keeping toes and heels on the floor, lift arches, throwing ankles apart and weight onto the outer edges of your feet.

6. Walk as high on your toes as possible with your ankles straight to also strengthen your feet and ankle muscles.

These are just a few of the exercises that can help improve posture. Check with your physical education teacher and in books or magazines for other exercises. Try them to upbeat music!

Strength the abdomen

Flex
On Stage
Sharpen your modeling skills. They will help you do your best in Fashion Revue and Clothing Selection. Modeling know-how also helps you carry yourself confidently in anything you do.

Showing clothing to its best advantage is the main objective in modeling. The 4-H Fashion Revue involves that plus a whole lot more. In that event you also have a chance to experience showing others your accomplishments in constructing a garment, accessory selection, posture, and grooming. In place of constructing an outfit, Clothing Selection shows your skills in selecting and coordinating appropriate purchased garments and accessories.

Posture is supreme in modeling. Walk tall with your head held high. Move with a smooth stride. Walk briskly, but not so fast that you seem to be in a hurry to get off the stage. Listen to the commentator so you are showing the audience what he or she is talking about. Never point out details; the commentator will call attention to them. Listen for your cue to leave the stage so you don’t leave before the commentator is finished talking about your outfit. Most important, Smile ... Smile ... Smile!

A great way to learn about modeling and staging a fashion show is to help with one. The adult in charge of your county Fashion Revue and Clothing Selection events surely would welcome your help. Perhaps you could coach the junior and intermediate 4-H’ers on modeling turns (review Unit II, Adventures in Clothing), posture, and walking.

Stance
A model’s stance is designed to make the person look as good as possible. Avoid directly facing the audience. Instead, keep your body turned slightly, with arms relaxed, one arm forward and the other tucked behind you. Place your feet in the “T” position. Knees are never stiff but slightly flexed.

Hands
Using your hands is a very important part of modeling. Hands should not be noticed. This is done by a limited number of smooth gestures. Most often your hands will be relaxed with fingertips hanging straight down at your sides. Your elbows should be slightly bent away from your body to show the silhouette of the garment. For variety, one or both hands also may be placed on the waist, behind you, or at the hips with wrists dropped.

Hold accessories to show clothing to best advantage.
Accessories

Accessories can make or break your total look. If you have chosen accessories for your outfit, practice modeling with them so you move naturally. Hold a purse or tote bag close to your body but slightly behind you so it does not hide your outfit. Practice will help you decide if an accessory is more of a nuisance than an asset. Avoid accessories that could be distracting because of noise or size. Chunky, hulky bracelets may make it too difficult to take off your jacket or coat. (Hold sports equipment like tennis rackets or golf clubs so your outfit can be seen.)

Polishing Touches

Every trade has a few tricks, and modeling is no exception. Try some of these hints for a polished, professional look.

Pose for entrances and exits. Get ideas from magazines on how to use your hands, props, or accessories. You'll see that poses are often exaggerated to be effective. A rule of thumb is to keep actions simple.

You'll be more confident if your shoes are easy to walk in. Avoid wearing slippery shoes or shoes that make you stumble.

Facial expressions are very important in setting the mood for the garment you're modeling. Look alive, and always smile. Let the audience know you enjoy wearing your outfit. As you leave the stage, give the audience one last smile.

These personal pointers have shown you how others form impressions of you from your grooming, posture, appearance, and body movements. Now that you have these insights, share them with others. You can help your friends look better and feel more confident. Younger 4-H'ers look up to you, so practice what you've learned, and help them make these pointers an every day habit.

Showing Jackets and Coats

Jackets and coats may or may not be taken off; it's your decision. If your jacket is the feature you most want to show, leave it on. Show what's underneath by pulling back the jacket front with one or both hands on the waist.

If you are showing the total outfit, by all means, take your jacket off. Turn your back to the audience as you unbutton the jacket beginning with the bottom button. Drop the jacket off your shoulders and let it slide off one arm, then the other. Don't tug or pull the sleeves from your arms. Grasp your jacket by the center back and fold it over the arm away from the audience.
You and Others

In this project book you’ve been working through your strategies for clothing. All of the knowledge and skills you’ve been developing are preparing you for one thing—your strategy for the future. Your skills enable you to be much more independent than you were before. You can select attractive clothes, care for them, construct or repair them, and make yourself look your best. Your interest and talents in textiles and clothing also can lead to fascinating careers.

You and Others will help you discover the special clothing needs of handicapped people, clothes worn around the world; and the fashions of your grandparents, great-grandparents, and on up the family tree; and careers.

Special Clothing Needs of Special People

When most people select clothes they probably don’t give a lot of thought to all the characteristics that are important to them. But if you think about it you’d probably find that most of these features are at least somewhat important to you.

- Attractiveness—Clothes look good on you and help you fit in with the rest of your friends.
- Comfort—They allow you to move easily. They aren’t scratchy or annoying in other ways.
- Convenience—They are easy to put on and take off.
- Safety—They don’t offer any obvious hazards as you go about your usual activities.
- Care—They are easy to take care of.

Everyone wants clothing to be attractive, comfortable, convenient, safe, and easy care.
If you are handicapped, if you know someone who is, or if you have spent some time with an elderly person with physical limitations, you know that the same clothing features are just as important to handicapped or elderly individuals. It may just be harder to find clothes that have all those features. Clothes that let a handicapped person dress independently and still look like his or her friends can be difficult to locate. However, independent dressing and looking like one’s peers are very important to a person’s self-confidence.

You have learned many things and developed many skills in clothing that you could share with a handicapped or elderly person. How can you go about working with a person with special clothing needs? It’s easier than you think!

1. Meet with your client. This will be a very interesting time. Many handicapped people talk in a matter of fact way about their clothing needs—the same way you would talk with a clothing salesperson when you are looking for something specific.

Focus on the particular clothing problem rather than on the accident or when the person became ill, or how they feel about the disability. Most likely your client accepts the disability and hopes you don’t pity or feel sorry for him or her.

Learn what you can about the clothing problem and the factors you need to consider as you look for a solution. For example, if a person has a hard time putting on a shirt, it may be because the fingers are stiff and it’s hard to button little buttons. Or it may be that the person can’t move the fingers to button and unbutton, but have enough control over movements to press two layers of fabric together with Velcro.

2. Make an agreement with your client about what the two of you will do. It’s helpful to each of you to know how much is involved in this project. You’ll also want to make an agreement about who pays for the supplies and how much each is willing to pay. When you have finished with the project, you might want to try another. That’s great. Just make another agreement with the client for the next one.

Some possibilities:

You could alter something already in the wardrobe. For example, you could replace the buttons on two or three shirts with closures that are easier to handle.

You could help coordinate some of the clothes into attractive outfits for school, work, or other activities.

You could go shopping together to select clothes that work well. This could mean that you’d do some looking around ahead of time so that you could plan an efficient shopping trip. Extensive shopping trips can be very tiring.

If your client uses a wheelchair, check ahead of time to see if there is a place for trying on clothes that will accommodate a wheelchair. Or you can ask to take the clothes home to try on with the understanding that they can be returned if they don’t work.

3. Take time for some research. In addition to the information here, there are also Extension publications and some books on clothing solutions for people with special needs. Discuss possible solutions.

4. Try the solution. The two of you should evaluate how successful it is. Does it need to be modified a bit to make it even better? Take pictures of your client wearing or using the item, if that’s okay with your client.
## Common Clothing Problems

<table>
<thead>
<tr>
<th>Physical Situation</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a person who has difficulty manipulating fingers.</td>
<td>Hard to button and unbutton.</td>
<td>Sew buttons on cuffs with elastic thread. Leave a shank. Replace small buttons with larger ones. Take off buttons and use small pieces of Velcro. Sew buttons on top of buttonholes to maintain usual appearance.</td>
</tr>
<tr>
<td>For a person who wears a back or leg brace.</td>
<td>Shirts or jackets are too tight across the back for comfortable movement. Knee of pants wears out because of friction from the brace.</td>
<td>Select knit fabrics that stretch or add action pleats near the armholes of the jacket back. Reinforce the inside of the pants with fusible patches or make a cover for the brace that will fit over the knee.</td>
</tr>
<tr>
<td>For a person who wears a Milwaukee brace to straighten spine.</td>
<td>Clothes are hard to fit over the brace.</td>
<td>Select clothes that are loose fitting and have large necklines. Select skirts and pants with elastic in at least part of the waist. Will need to pick a larger size than usual.</td>
</tr>
<tr>
<td>For a person who uses a wheelchair.</td>
<td>Pants and skirts are too full at the waist in front and pants are too short in the back. Sweaters, jackets, vests, tunics, and overblouses are too long.</td>
<td>Shorten pants and skirts in front and add length to pants at center back waist. Shorten the clothes, and add vents at side seams.</td>
</tr>
<tr>
<td>For a person who lacks bladder or bowel control. This is often accompanied by use of a wheelchair.</td>
<td>It’s hard to keep clothes dry. Clothes need to be easy to change.</td>
<td>Use clothes that open or spread in the back so that the person doesn’t sit on them. Should be easy to take off. Check with the Extension office for directions.</td>
</tr>
</tbody>
</table>
Clothing Worn Around the World

You may have clothes that are based on the ethnic or traditional clothing of people from a variety of places.

- Kimono—Japan
- Dashiki—several African countries including Nigeria
- Kilt—Scotland (worn by males)
- Quilted jacket—China
- Peasant blouse—Russia and many other European countries including Romania
- Poncho—Latin American countries including Mexico

Designers sometimes use ethnic clothes as inspirations for their lines of clothing. They are fun to wear, but perhaps you would like to learn more about the real thing.

You will find that ethnic clothing is interesting in design, fabric, color, and decoration. But there is more to it than just the appearance of the clothing. By finding out about the clothing of a group of people, you will also learn about the people of that culture and how their clothing relates to the way they live.

When you see pictures of people in their traditional clothes, look further to find out when the clothes are really worn. In many places in the world people dress pretty much the way we do in Western dress—the kinds of clothes Americans and Western Europeans wear. (This Western dress shouldn’t be confused with country-western clothes.) In those countries, some people still retain interest in their traditional clothing. They may have an outfit that they wear for special events. Sometimes these clothes are passed from generation to generation. In some countries people in the cities wear Western dress while people in the countryside may wear their traditional clothes every day.

Traditional clothing changes more slowly and less dramatically than Western dress, but it does change. Sometimes the changes follow fashions in Western dress. For example, in Nigeria, lengths of women’s clothing rise and fall as ours do.

Try to avoid having stereotypes about other peoples. Stereotypes are untrue beliefs that all people in a group behave in the same way. Beliefs that all Arabs ride camels, or all Americans are rich, are stereotypes. We all hold some stereotypes, but if we know that, it’s easier to correct them. People of all cultures have the same basic needs, but different cultures go about meeting those needs in different ways.

With that brief background it’s time for action. Decide on the culture you would like to study. Perhaps you’ll choose to concentrate on the clothing of your ancestry or the main ethnic group in your community. If an exchange student or adult will be visiting your community, you could select that culture. Or you may have interest in a country that is often in the news.

As you learn about the clothes of other people, you will probably also learn something about our clothes. You might compare the clothes and clothing practices of the country you are studying with ours. You will find similarities and differences, and no doubt you will find more similarities than you expected.

It’s important to remember that one way of dressing isn’t right, sensible, and rational, and the other wrong, silly, and irrational. Try not to judge the practices of others by your own standards.

Poncho from Latin America
• Check the library and your own home for books and magazines with information on other countries.

• Talk with people in your community or visitors who are from the area of the world you are studying. If the person has examples of a traditional outfit, ask if you can photograph him or her in the outfit.

• Ask someone who is from the country or who has a strong interest in his or her ancestry to talk with your club about the clothing. Here are some questions you might ask as you talk with someone from another country.

Why is the ethnic clothing important to the person?

How long has the culture used this type of traditional outfit?

What are the different parts of the traditional outfit?

What fabrics are used?

What colors are used? Do they have special meanings?

When is it worn in their culture (everyday, special occasions)?

When is it worn in their American community?

How does the ethnic outfit change for specific occasions (i.e., weddings, funerals)?

Is the outfit different for people at different stages in life (i.e., boys and girls, unmarried adults, married persons, widowed people)?

Does the traditional clothing change with fashion?

Who makes the clothing (manufacturer, tailor, someone in the family)?

Are the clothes passed down to the next generation?

**Clothes from Our Past**

Learning about clothes from the past can give you a fascinating view of the people and the times. The past can be Roman times, even earlier, or as recent as the teeny bopper days of the 50's or mini skirt times of the 60's. Several aspects of historic clothing may interest you such as learning about the clothing of a particular time, caring for old clothing, displaying clothes from the past, and recreating historic costumes from today's fabrics.

An attic treasure hunt is great fun. Clothing that your family has hidden away, friends’ keepsakes, museums, and historical societies are rich in clothing heritage. Find out when the clothes were worn, to what occasions, and what fabrics were used. If you have the opportunity to handle the clothes, be very careful. Old clothes are fragile.

Good books are written on historic costume. But don’t overlook local resources such as family photographs, paintings, diaries, newspaper articles, pictures and advertisements, old magazines, catalogs, and patterns. Your local newspaper, photo studio, library, and historical society may be able to help you.
Caring for Old Clothes
This is a task to approach with a great deal of caution. Improper care is worse than no care at all. Good storage can help prolong the life of old clothes. Old treasures should be stored in places where the temperature and humidity stay constant. The humidity should be neither too high nor too low. You've guessed it—that means attics and damp basements are not ideal storage places. Hang clothes on padded hangers or better still, store the clothes flat in boxes or dresser drawers. Wrap the clothes in clean cotton sheets or tissue paper. Do not wrap them in plastic.

It's not always necessary or advisable to wash or clean old clothes. Sometimes airing the clothes outside on a mild day gives them the freshness they need. Avoid direct sunlight.

If your family has clothes that you feel need further cleaning, ask your county Extension office for information. Discuss the suggestions with your family before proceeding further.

Displaying Clothes from the Past
Many people enjoy seeing clothes from the past. Just as with caring for old clothes, use precautions for displaying old treasures. Daylight and artificial light can damage the fibers and dyes. Also be careful not to put strain on the clothes. If a dress form is used, the clothing should not fit tightly around it.

Having a fashion show may sound appealing, but here again, be careful. Putting historic clothing on a person is destructive, no matter how short the wearing time. Major culprits are body oil, perspiration, and strain on the garment. One alternative used by a major U.S. museum was a historic costume fashion show in which the models carried their costumes across the stage on padded hangers. The show was a pleasure to see and had no unhappy after effects on the clothes.

Recreating Historic Costumes in Today's Fabrics
If you are involved with a play, community centennial, or other historic celebration, you may want to make replicas of clothes that would have been worn during the period. You can combine learning about old clothes with your construction skills.

Once you have some good ideas of the styles and fabrics of the clothes, you can look for patterns to help you recreate them. The major pattern companies have "old fashioned" patterns that might get you started. Or you may find patterns of current styles that have some of the major features you need. The Wisconsin Historical Society and Folkwear Patterns are other sources. To get an authentic style you may need to adapt patterns by using your pattern making skills.

Find out about clothing from earlier eras.
Careers in Textiles and Clothing
The fashion industry is an enormously broad industry. It covers all the areas that have been a part of your 4-H clothing project materials and more. It offers many job possibilities, even those that have nothing to do with clothes, textiles, or appearance. If computers intrigue you, for example, there could be career opportunities for you in retailing, clothing manufacturing, textile production, pattern making, and in the business departments of most companies involved with the fashion industry. Since the fashion industry has many different kinds of jobs, there will be variety in the kinds of training needed, the amount of schooling required, and the places where the jobs are found.

Some jobs are right there in your home town. For some, you'd need to go to a nearby city. Others are located in major cities, fashion centers, and manufacturing centers of the United States. Much apparel manufacturing is done around the major fashion centers (New York City, Los Angeles, Dallas, and Chicago). However, the Midwest has a few clothing, accessory, and textile manufacturers. In general, textile manufacturing is concentrated in the southeast with some in the northeast and northwest parts of the country. The home sewing industry is concentrated around New York City.

Here is a list of some of the jobs available in the fashion industry. Some of the positions are entry-level positions; you could apply for them after finishing the necessary schooling. Others require experience in the field first. See if some of these sound interesting to you. Remember that most companies in the fashion industry will have support positions in addition to positions mentioned. These important supports include personnel and training departments, business and financial departments, and clerical staff.
Careers in the Fashion Industry

Manufacturing

Fibers and Fabrics:
Fiber production engineer and chemist
Fabric production engineer
Fiber and fabric librarian
Educational consultant
Industry consultant
Publicity executive
Market researcher
Textile artist
Color stylist
Machine operator
Spinner
Weaver
Mechanic
Production supervisor
Warehouse manager
Transportation and shipping director
Public relations representative
Purchasing director
Fashion coordinator

Apparel and Accessory Production:
Sketcher
Designer
Patternmaker
Samplemaker
Advertising and promotion manager
Sales representative
Production supervisor
Machine operator
Draper
Fashion coordinator
Cutter
Marker
Presser
Examiner
Production inspector
Machine mechanic
Plant engineer
Plant manager

Retailing

Independent, Chain, Mail Order
(includes fabric stores)
Merchandising
Sales personnel
Head of stock
Department manager
Buyer
Assistant buyer
Display personnel
Advertising and promotion manager
Fashion coordinator
Merchandise distributor
Comparison shopper
Market researcher and reporter
Customer service manager
Security supervisor
Fitter—alterationist

Notion Supplies
(home sewing and apparel production companies)
Sales representative
Educational consultant
Machine operator
Production supervisor
Machine mechanic
Plant manager

Handcraft Industry
Designer
Materials production
Instruction writer
Demonstrator
Materials tester
Market researcher
Samplemaker
Sales representative
Distributor

Personal Care
Cosmetologist
Hair stylist
Operator—beauty/barber shop
Exercise consultant
Market researcher
Product engineer
Advertising and promotion manager

Planning and Promotion

Advertising Agencies
Account executive
Copy writer
Art director
Illustrator
Fashion coordinator
Photographer
Researcher and marketing manager
**Consumer and Trade Publications**
- Fashion editor
- Merchandiser
- Advertising sales
- Researcher
- Reporter

**Trade Associations**
- Researcher—market and legislation
- Publicity director
- Convention director

**Theater**
- Costume designer
- Costume maker
- Alterationist

**Education**
- Elementary, junior high, and high school teacher
- High school vocational education teacher
- Adult education teacher
- Junior college, university and college teacher
- Youth and adult organization teacher
- Extension home economist
- 4-H and youth leader
- Extension textiles and clothing specialist

**Museums**
- Photograph file clerk
- Reference file clerk
- Display supervisor
- Care and preservation specialist
- Researcher
- Educational consultant
- Editor of museum publication
- Curator

**Clothing Maintenance**

**Dry cleaning/Laundry**
- Counter sales
- Spotter
- Inspector
- Presser
- Alterationist
- Assembler and recorder

**Uniform Services**
- Sales representative
- Plant manager
- Uniform fashion coordinator

**Free Lance**
- Lecturer
- Demonstrator
- Custom clothing maker
- Writer
- Designer
- Consultant—wardrobe, color analysis
- Fashion modeling

To learn more about these clothing and/or grooming careers, you’ll need to read and ask questions. In reading you can find out about the qualifications, personal characteristics, and schooling needed for the career.

A good way to learn is asking people in these careers about the skills needed and schooling to help prepare you for the career. You may want to ask some of these questions.

- What type of qualifications would be important for this job?

- How easy is it to find a job in such a career?

- What are the opportunities for advancing from one job to another in this career?

- About how much money per year does a person make in a job like this?

- What type of benefits go along with this career?

- What kind of working conditions should a person expect?

- What does the person especially like about the job?

- Are there things the person doesn’t like about the job?
• What other kinds of jobs did the person have before this one?

• Did the person always plan on this career, or have career ideas and paths changed from time to time?

• What advice does the person have for someone who wants to prepare for this career?

• What recommendations could be given about where to receive educational training in this career?

Another interesting way to learn more specifics about a career is to spend a half or whole day on the job with a person in the career you want to learn about.

The final step is to analyze your personal qualities and see how they fit with those required for careers that interest you. You'll want to consider:

abilities
interests
accomplishments
values

Preparing for a Job Interview

You may know you're perfect for the job, but how is an employer going to? He or she can visit with you about your training, skills, and abilities, but in a job interview appearance speaks for itself. Appearance counts in getting a job and in keeping a job.

A poor appearance makes the job interviewer sensitive to other undesirable traits. A person who is dirty and wears wrinkled clothing appears haphazard and disinterested in detail or what others think. Dress the part, look neat and clean, and always remember good manners!

Wonder what to wear? If a suit or a dress would be required on the job, wear that to the interview. Even if it is not required, the general rule is to wear an outfit that's a little dressier than what you would wear on the job. So if you are interviewing for a job for which you would generally wear jeans and a T-shirt your interview outfit would be a neat shirt or blouse with slacks, skirt, or your best jeans. Be sure you are comfortable in your clothes so you can forget about them and concentrate on the interview. Whatever you wear, make sure:

• Your clothes are clean and properly pressed.

• Your clothes are not too flashy.

• Shoes are in good repair.

Strategies

This project book has encouraged you to plan a clothing strategy. Did you reach the goals you set for yourself? Evaluate what you've done. Evaluation is something you'll be doing throughout life no matter what task you set out to do.

Are there some skills you don't feel comfortable with yet? Is there something you haven't tried? Strategies for Clothing has been a stepping stone. Use it as a guide, then take off with your own ideas.

"I pledge my hands to larger service..." You've said that portion of the 4-H pledge many times. Live up to your pledge by continuing as a teen leader. You'll find many ways through 4-H and community service projects. Make this clothing project the beginning of your strategy for the future.