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<table>
<thead>
<tr>
<th>Page</th>
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<td>Table of Contents</td>
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<td>Creative Sewing</td>
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<tr>
<td>6</td>
<td>Creative Sewing</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Creative Sewing</td>
<td></td>
</tr>
</tbody>
</table>
Clothes come in many styles and colors. A certain style may look nice on one person but not on another. To look your best you want to find clothes that look good on you. First, you may want to find out more about color.

**Fun with Color**

The light from the sun is made up of several different colors—violet, blue, green, yellow, orange, and red. These colors, or rays, blend together to make the clear, bright sunlight. When you look at a rainbow, you see the different colors of light. This happens because the sunlight hits the raindrops, and each color reflects in a different way.

When colors are mixed, they change and form new colors. Try some experimenting to see how color works.

You will need:
- Red, blue, and yellow food coloring;
- Seven clear glasses or small jars;
- White paper to work on;
- Water; and
- Spoons for stirring.

Place three glasses or jars of clean water on white paper. Add three drops of red food coloring to the first glass, three drops of blue coloring to the second glass, and three drops of yellow coloring to the third glass. Stir each glass. The colors red, yellow, and blue are called **primary colors**.

Look at the chart on page 3. The circles are the primary colors. Finish this chart to find out how colors are related by doing the following exercise.

1. Pour half the yellow water and half the blue water into an empty glass. Stir. The result should be green water, made by mixing yellow and blue. Write "green" in the triangle that joins the yellow and blue circles.

2. Pour half the red water into the rest of the yellow water. Stir. Write the name of the new color in the triangle that joins the red and yellow circles.

3. Pour the blue water into the red water remaining. Stir. Write the name of the new color in the triangle that joins the red and blue circles.

Now you have made the **secondary colors**, which are green, orange, and purple. They are made by mixing the primary colors. Keep these new colors and mix them in the following ways:
1. With three more glasses of clean, clear water, use the food coloring to make another glass each of red, yellow, and blue water.

2. Pour half the yellow water and half the green water into a clean, empty glass. Write the name of the new color in the square that joins the two colors that you mixed.

3. Pour half the orange water into the yellow water that remains. Write the color name in the square connecting yellow and orange.

4. Pour half the red water into the rest of the orange water. Write the new color in the square that joins red and orange.

5. Pour half the purple water into the red water that is left. Write the name of the new color in the proper place in the chart.

6. Pour half the blue water into the purple water that remains. Write in the name of the new color.

7. Mix the green and blue water that remains. Write in the new color.

The new colors you have made are called **intermediate colors**. They are made by mixing a primary color with a secondary color.

Beginning with only three colors—red, yellow, and blue—you have made many other colors. By changing the amounts of color used, you could create many other colors. Another name for the colors you create is **hue**. Try mixing some new color combinations to see what happens. A color wheel is included in this book on page 5 to help you understand color better.

This chart shows how new colors are formed.

- ○ = Primary colors
- △ = Secondary colors
- □ = Intermediate colors
Feelings about Color
Colors can affect the way you feel. Colors also may remind you of different things. Everyone has ideas and feelings about color. This is because of things that have happened to them in the past. For example, red might remind you of fire and give you an excited feeling. Your friend might think of an apple and feel hungry. Another person might see red and think of the 4th of July fireworks and feel happy.

You may be able to lift your spirits on a dull or rainy day by wearing colors that give you good feelings.

Using Color in Clothes
Is there a color you like but you think it does not look good on you? Maybe it will look good on you if you use another value of the color. Value means the lightness or darkness of a hue, or color. For example, red can range in value from light pink to dark maroon. A light value of a color is called a tint and is made by adding white to the color. Pink is a tint of red. A dark value is called a shade and is made by adding black to a color. Maroon is a shade of red. So, if you do not like bright red, try a pink or maroon.

Color also can change in intensity, which means brightness or dullness. Red can be bright, cardinal red or a dull, brick red. To make a color dull, add some of its complementary color, which is the color on the opposite side of the color wheel.

Clothing Color Schemes
In planning what to wear, you can combine clothes according to color schemes. Some color schemes you might like to try are: monochromatic—different values of the same color; analogous—colors next to each other on the color wheel; and complementary—colors opposite each other on the color wheel.

Special Color Effects
Light and bright colors, such as light yellow or bright orange, usually make your body look larger. Dark colors, such as navy blue, or neutral colors, such as brown or gray, usually make your body look smaller.

How Do You Feel about These Colors?

<table>
<thead>
<tr>
<th>Color</th>
<th>Makes me feel . . .</th>
<th>Reminds me of . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purple</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What does red remind you of?
The color wheel can help you choose attractive color combinations for your clothes.
**Design Lines**

The lines of clothing come from the way a garment is designed. The outline of an outfit makes the silhouette, or shape. There are just two kinds of lines—straight and curved.

Lines that run straight up and down from the floor are **vertical** lines. They cause the eyes to travel up and down. Lines that run straight across are **horizontal** lines. They cause the eyes to travel back and forth. Lines that slant are **diagonal**. The eyes will travel up and down or back and forth, depending on how much the line slants.

Curved lines are simply straight lines that have been bent. They cause the eye to travel outward or around, depending on how much they are bent. Curved lines add variety to the shape of clothes.

**Use of Lines**

Many clothes have a combination of lines formed in several of these ways. Some of the lines stand out more than others. Your challenge is to pick the lines that are best for you. If you want to look taller, thinner, or both, lines that go up and down usually help. If you want to look shorter, wider, or both, horizontal lines are usually the best.

Diagonal lines at a more vertical angle can make the shape seem taller and slimmer. Diagonal lines made at a more horizontal angle can create a wider and fuller image.

Curved lines tend to increase the width of the body, especially if they are in more of a horizontal direction. Most vertical curves can make the figure seem taller and slimmer.

It is not too soon for you to begin studying and thinking about clothing design. The next activity will help you see how you look to others. Then you can practice choosing design lines in clothes that will bring out your best features and hide those you don’t like as much.

Design lines may be emphasized by such things as trim, seams, darts, or gathers.

Lines also are formed by fabric design, such as stripes, plaids, or prints.
Getting to Know Yourself
How would you describe yourself?

1. Height:
   ____ Tall
   ____ Short
   ____ In between

2. Weight in comparison to height:
   ____ Above average
   ____ Average
   ____ Below average

3. Legs:
   ____ Long    ____ Thin
   ____ Short    ____ Heavy
   ____ In between ____ In between

4. Arms:
   ____ Long    ____ Thin
   ____ Short    ____ Heavy
   ____ In between ____ In between

5. Is your figure more like A, B, C, or D?

Are you happy with the way you are built? Remember that you are growing and changing and it will be several years before you are the shape you will be as an adult.

However, you can use design lines to make visual changes in the way you look right now.

Design for You
Look at the clothes in your closet or dresser. Find examples of lines like those in the drawings you’ve seen in this project book. Decide if the lines create the look that you want.

Collect pictures from catalogs or magazines of clothes you would enjoy wearing. Look for lines that create the look you want. Mount the pictures on separate sheets of paper and keep them in a folder. Write why you think these outfits would look nice on you. Tell how they draw attention to your best features or hide those you don’t like as well.

This activity is a good one to share with your 4-H leader and others in your 4-H group. You can help each other by discussing your body build and choices of clothing.

Think about your own body build.

Design for Others
Think about someone in your family or another favorite person. Describe his or her body build.

Select one picture of an outfit for a person in your family. Write the reasons for your choice. Would this special person like to hear about clothes you think would look good? If so, why not share your ideas with them?

Activity Ideas
Learning about color and line is much more fun if you look for ways to share your new knowledge with others. Think about presentations, posters, or exhibits you could do. You can use information in this project book to prepare posters, exhibits, or talks. Try these topics:

- How are different colors formed?
  What are the primary, secondary, and intermediate colors?
- How do colors make you feel?
  Find out how other 4-H’ers feel about different colors. Create a color wheel to help you talk about colors.
- How do colors make you look larger or smaller?
- How do lines change how you look? Show how lines are found in clothes.

Another way you can practice what you are learning is to share with friends and family. For example, talk with older people about their favorite colors. Find out what the colors remind them of. Look for cards, pictures, flowers, or other colorful items to share with them.
Choosing Clothes

Deciding What to Wear
How do you decide what to wear each day? Probably you think about what you have that is clean and ready to wear. You also think about the places you are going and what you will be doing. Then you make a choice. This is an example of the decision-making process.

Where do you go and what do you do?

Weekly Activity Chart
Think about places you go every week. List them in the space below.

Favorite Outfit #2
What is it?

Why I like it:

Was this outfit a good choice?
Yes ____ No ____

Now find an outfit you haven’t worn for a while or one you don’t like to wear. Write about it. Tell why you don’t like it. Is it because the color and lines are not right for you? Or have you outgrown it?

Least Favorite Outfit
What is it?

Why I don’t like it:

Was this outfit a good choice when it was new?
Yes ____ No ____

You can build your decision-making skill in clothing for the future. Just remember about good and poor choices made in the past.

What You Like
Do you have one or two outfits that you wear more often than your other clothes? Can you think of some reasons why you like these clothes better than others? Is it the way they fit? Is it the way they feel? Is it because they are your favorite colors? Do they look especially good on you? Is it because they are like what your friends are wearing?

In the spaces below write about your favorite outfits and why you like them.

Favorite Outfit #1
What is it?

Why I like it:

Was this outfit a good choice?
Yes ____ No ____
Deciding What You Need
Do you think you have enough clothes? Even when you have enough clothes you really like, you may want to get more.

When this happens, someone in your family may say, “You don’t need any more clothes. You have plenty already!” Sometimes it’s hard to tell the difference between needs and wants.

One way is to decide on real needs. First, think about whether or not you have clothing that is right for the places you go and the things you do. The answers you wrote on page 9 should help. For example, to go swimming, you need a swimsuit. If you already have one, you may want another, but you may not need another unless your swimsuit is too small or worn out.

Next, think about the clothes you already have. Do this by filling out the Clothing Inventory Chart on page 11. You may find some that do not fit, or some that need mending. Probably most will be all right. Remember to count the clothes in the hamper or wash.

As you fill out the Clothing Inventory Chart, decide what to do with clothes that don’t fit. You can sell them, hand them down to a brother or sister, or give them to someone else. Can you think of anything else to do with them?

If your clothes need mending, can you do that yourself? Refer to Caring for Clothes on page 40. If you can’t fix it yourself, have you told someone in your family that you have clothing that needs to be repaired? Sometimes adults don’t know about stains, rips, and tears unless you tell them.

As you list all your clothes in one of the first three columns on the form, compare your clothes to the needs you have. You may want to look again at your Weekly Activity Chart on page 9. You may feel there are some needs you have. If so, talk about these with someone in your family.

Do the clothes you have meet your clothing needs?
**Clothing Inventory Chart**
(List your clothes by color or fabric.)

<table>
<thead>
<tr>
<th>Clothing</th>
<th>Sell or give away</th>
<th>Mend or repair</th>
<th>Ready to wear</th>
<th>Buy or make</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor coats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snow clothes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jackets, Blazers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy sweaters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slacks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shirts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blouses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T-shirts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dresses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skirts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jumpers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweaters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweatshirts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scarves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mittens</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matching Dollars and Needs

Most families don’t have enough money to buy all the things they want. Your family’s money has to be divided to pay for food, housing, transportation, medical care, your school expenses, and many other things besides clothes. Ask someone in your family about the amount of money available for clothes. The amount for clothes may be quite small. Ask an adult to help you figure out how much you can spend for one or two small clothing items that you need.

This season I can spend $________ to buy or make clothes.

The clothes I need:

Total cost of the items I need: $________.

The total price of items you need may be larger than the amount you have to spend. You will have to decide which of the needs you can get along without. Maybe you will have some money left over after buying what you need. Then you can decide to buy some things you want or save the money for later when other needs come up.

Comparing Quality

Sometimes people think paying more money for clothes gives them better quality. This is not always true. Quality in clothes is a combination of good design, fabric selection, and fine sewing. Sometimes when you don’t expect to wear an item very much, you may not need the very best quality. For example, party clothes may be only worn a few times so they don’t need to be as sturdy as a pair of jeans that you wear often, or a coat you would wear nearly every day in winter.

Inexpensive clothes can have good quality features, but you may need to check carefully before buying them. You can practice looking for quality by checking clothes you already have. Use this list to check the quality of two items you already have. Circle Yes or No for each feature mentioned.

<table>
<thead>
<tr>
<th>Quality Check List</th>
<th>Garment #1</th>
<th>Garment #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care label (see next chapter)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fiber content label (see next chapter)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sturdy seams (won’t ravel or pull apart)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Smooth sleeve caps unless designed with fullness</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Evenly spaced gathers</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zippers (glide smoothly and don’t pucker)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hem (wide enough to alter)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Plaids (match at seams)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fabrics hang straight on body because clothes are cut on grain</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
**Comparing Stores**
Before you buy anything, you'll want to do some comparison shopping. In comparison shopping you look at the same item in several stores to see how the price and quality vary from one place to another.

Ask someone in your family to help you compare cost and quality of an item in several different stores. Go to a discount store, department store, clothing store, used clothing store, or a garage sale.

Which kind of store or garage sale did you like best?

Why?

**Trying on Clothes**
As you try on a new garment, turn slowly in front of a mirror, and look at yourself from all sides. Ask yourself the following questions:

- Does it fit right? Is it too tight or too loose anywhere?
- Does it pull or wrinkle at the sleeves, chest, hips, or waist?
- Is it large enough so I can sit, bend, or stretch comfortably?
- Does it pull open or gap at the buttons or zipper?
- Is it the right length at the shoulders, in the waist, in the sleeves, and at the hem?
- Do I have anything to wear with it?
- Do I need it or want it?
- Does it look good on me? Are the design lines, colors, and textures becoming to me?
- Is the cost about what I can spend for this item?

You may be used to having someone in your family help you buy your clothes. Soon, you'll be making these choices all by yourself, so it is best to learn how to do it right.

**Activity Ideas**
Look back through this chapter about choosing clothes. Are there some ways you could share what you're learning with others in your 4-H group, your family, or others?

- Explain why you like to shop at a particular type of store. How does the store suit your needs?

- How do you identify quality in jeans or some other clothing item? Explain which features should be checked to judge quality.

- Give some of your outgrown clothing to someone else who can wear it.

- Help others in your 4-H group or family have a garage sale. (The County Extension Office has some material that can help you plan the sale. Ask your leader or parent to help you get it.)

**Going Shopping**
After deciding what you really need or want, how much money you can spend, where you like to shop, and the kind of quality you need, you are ready to put your clothing selection plans into action.

You can have fun choosing clothes that create the look you want. But shopping is more than picking out something and handing over the money. You'll want to try on the clothes in front of a mirror to check the fit. Ready-to-wear clothes of different brands may be marked the same size but may not fit the same way.
Learning about Fabrics

The clothes you wear are all made from textile fabrics. This is another way of saying cloth. Probably you have heard of cotton, wool, and nylon fabrics. Also, you may know that different fabrics require different care. You may not know how fabrics are made though, or how they act when made into clothes.

Fibers
Can you imagine how fabrics are made? There are several steps in the manufacturing process. It starts with fibers as the basic building block.

Natural fibers come from plants or animals. Cotton, wool, linen, and silk are natural fibers. Cotton accounts for about one-fourth of the fibers used in the United States to make fabrics. It comes from cotton plants. Only a tiny percent of the fibers used are wool or silk. Wool comes mainly from sheep. Silk comes from a silkworm's cocoon. It is imported primarily from Asian countries.

<table>
<thead>
<tr>
<th>Fiber Chart</th>
<th>Generic class</th>
<th>Durability</th>
<th>Wrinkle resistance</th>
<th>Absorbency</th>
<th>Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetate</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
<td>Poor</td>
<td>Dry clean</td>
</tr>
<tr>
<td>Acrylic</td>
<td>Moderate</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Machine wash</td>
</tr>
<tr>
<td>Cotton</td>
<td>Very good</td>
<td>Poor</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Machine wash</td>
</tr>
<tr>
<td>Nylon</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Poor</td>
<td>Poor</td>
<td>Machine wash</td>
</tr>
<tr>
<td>Polyester</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Poor</td>
<td>Poor</td>
<td>Machine wash</td>
</tr>
<tr>
<td>Rayon</td>
<td>Moderate</td>
<td>Excellent</td>
<td>Slow/good</td>
<td>Good</td>
<td>Machine wash gentle</td>
</tr>
</tbody>
</table>

Manmade fibers are made from chemicals in a factory. Polyester, nylon, acrylic, acetate, and rayon are manmade. About three-fourths of the fibers used are manmade.

Wrinkle resistance means the fabric will not look mussed or wrinkled. Fibers that spring back into shape after bending or crushing have wrinkle resistance.

Absorbency means the fabric will soak up water or moisture such as perspiration. Absorbency depends mostly on fiber content. Special finishes help manmade fibers move water along their surfaces rather than absorb it. This process is called wicking.

Here is an absorbency test you can try.

1. Find three fabrics that you know the fiber content of. Try to get a cotton, a polyester or nylon, and a permanent press blend.

2. Cut small pieces of each that are the same size, about 2 inches (5 cm) square. Place these on a large piece of aluminum foil.

3. Use a teaspoon or eyedropper to place a drop of ink or food coloring on each sample.

Natural fibers come from plants and animals. Manmade fibers are developed by chemists.
Try this experiment to test absorbency of different fabrics.

4. Watch what happens. Record the answer to these questions:

Which fabric absorbs the stain most rapidly?

Which one causes the stain to spread out the most?

5. Now blot up the stain with a paper towel. Which ones were easiest to blot up?

What do you know about the absorbency of the fibers you tested?

6. Write your conclusions.

Making Fibers into Fabrics

All fibers are something like strands of hair. They are longer than they are wide. Many fibers must be used together to make a fabric. Most fabrics are made in one of three ways—bonding, knitting, or weaving. The way a fabric is made affects the way it looks and feels. It also affects strength, durability, and stretch. The way it is made also affects the way it can be used and the care it needs.

The simplest way to make a fabric is to press, or bond, together a tangled mass of fibers. This is how wool is made into felt. Bonding can also be done with other fibers by using special glues. They do not have much strength and so are used mainly for interfacings. These are called nonwoven fabrics.

Yarns

For most fabrics, the second step in the manufacturing process is making fibers into yarns. Many individual fibers are twisted together to make yarns. They can be made of filament or staple fibers. Filament fibers have a continuous length measured in yards or meters. Staple fibers are short. Their length is measured in inches or centimeters. Natural fibers, such as cotton and wool, are staple length. Silk is the only natural filament fiber. Manmade fibers can be either filament or staple.

Yarns can be either plain and simple or fancy and complex. For smooth fabrics, filament fibers with simple yarns are often used. For thicker, warmer fabrics, fancy, thick yarns of staple fibers are used.

Spin a Yarn

Get a small ball of absorbent cotton. Notice that it is just a bundle of short, thin fibers. Gently pull out some of these fibers and begin rolling them between your fingers as you pull. Gradually, if you continue doing this, a string will begin to form. If you twist this fiber strand slightly, it will become quite strong. You have made a yarn.

Cotton fibers are $\frac{1}{4}$ to $1\frac{1}{4}$ inches (.62 to 3.12 cm) long.

Wool fibers are $\frac{1}{4}$ to $4\frac{1}{4}$ inches (.62 to 10.6 cm) long.

Manmade filament fibers can be any length.
Examining Yarns
Get some scraps of a cotton percale or muslin fabric, a polyester fabric, and an acetate taffeta fabric. Pull a yarn from the cut edge. Look at it carefully. You may need to use a magnifying glass. Can you see filament or staple fibers? Mount the yarns below with transparent tape.

Filament yarns

Staple fiber yarns

Weaving Fabrics
Have you ever made a woven mat out of paper strips? If so, you know something about weaving already. If not, try the activity on page 17. Weaving is the most important method used in making fabrics. Woven fabrics have at least two sets of yarns. The lengthwise set is called warp yarns, and the crosswise set is called filling yarns. The yarns cross over and under one another in a regular pattern.

There are three basic weaves—plain, twill, and satin.

All woven fabrics are made using a combination of these three basic weaves. Can you see the difference in how yarns cross each other in the three basic weaves?

A plain weave may be used in making both weak and strong fabrics. The strength of the fabric depends upon the quality of the fiber, the size and twist of the yarn, and the closeness of the weave.

The twill weave has an over two, under one interlacing pattern that progresses one to the right or left with each additional filling yarn. Your denim jeans are probably a twill weave. Other twill weave fabrics are gabardine and drill.

The satin weave has a different interlacing pattern that produces a shiny appearance when woven of lustrous fibers. Satin linings, antique satin, and crepe-back satin have this weave. Sateen is a filling-faced variation of this weave.

The plain weave is the simplest, most common, and least expensive method of weaving. Each filling (or crosswise) yarn passes alternately over and under the warp (or lengthwise) yarns. Plain weave fabrics are reversible unless one side is printed or has been given a special finish.

Some examples of plain weave fabrics are percale, muslin, broadcloth, batiste, and gingham. Look at the sheet or pillowcase on your bed and you will see an example of plain weave.

![Plain weave](image1)

![Twill weave](image2)

![Satin weave](image3)
Making a Woven Placemat

You can learn more about weaving by making woven placemats.

1. Get two different colors of construction paper 12 inches (30 cm) × 18 inches (45 cm).

2. Fold one sheet of paper in half. Then from the folded edge, make a series of cuts 1 inch (2.5 cm) apart. Cut up to 1 inch (2.5 cm) from the open edge.

3. Cut across the width of the second piece of paper making strips about 1 inch (2.5 cm) wide.

4. Unfold the first piece. Lay it flat on a table or working area. Beginning at the upper right-hand corner, use a strip from the second piece to lace over and under through the cuts in the first piece.

5. Using a second strip, start under the right edge of the paper going under and over through the cuts to the opposite side of the paper.

6. Repeat steps 4 and 5 until the cuts in the first piece are filled. You have made a plain weave placemat.

7. Compare your woven paper sample with a plain weave fabric. Look at the fabric through a magnifying glass. How are the yarns placed in the fabric? How is the fabric similar to your paper weaving?

Finishes

The last step in the manufacturing process is finishing. Fabrics are finished with one or more different chemical treatments. Some finishes change the appearance of the fabric, but some do not. Others change the way a fabric acts. For example, cotton fabric with a durable press finish won’t wrinkle as much. Finishes for polyester may make the fabrics more absorbent or stain resistant.

Activity Ideas

• Show others how to make weaves with construction paper.

• Have a scrap bag scavenger hunt to find fabrics with plain, twill, and satin weaves.

• Find some cotton or sheep’s wool to show the first step in making cotton or wool fabric.

• Make a poster comparing the durability, wrinkle resistance, and absorbency of fibers.

• Do a presentation with another 4-H’er on fiber characteristics.

• Look for fiber content and care labels in clothes as you shop. Compare these to the fiber chart on page 14.

Make a Textile Scrapbook collection of fabrics. For each sample you collect, write the name, fiber content, weave, type of yarn, finishes, and price per yard. If you start your collection from scraps, you may not have all this information. As you buy new fabric, try to get this information for your scrapbook. It’s fun to learn new things about textiles. And, it may be even more fun to help someone else learn. Try some of these ideas.

Placemats might be made with plain, twill, or satin weaves.

Study the yarn arrangement in fabrics.
Creative Sewing

Sewing can be fun. When you learn some basic sewing skills, you can make things by yourself for yourself and others. This clothing adventure will help you learn to sew one step at a time. You'll start with easy things and then increase your skills a little at a time.

The Sewing Machine

When you sew, you use and care for a very important power tool—the sewing machine. You'll need to learn about safety and how to leave the machine in good condition.

Knowing the parts and what they do is the first step. Not all sewing machines look exactly alike. But they all have the same basic parts. Look at the drawing in this book. Then study the picture of the sewing machine in the guide book that came with the machine you are using. Ask your 4-H leader or someone else to point out the parts on the machine.

The spool pin holds the spool of thread.

The thread take-up moves up and down with the needle, taking up any slack in the thread.

The upper tension-control regulates the tightness or looseness of the stitches. The thread passes between the disks of this control before it goes through the needle. This is a very important, sensitive control. Do not move it. Someone can show you how to adjust it after you've learned more about the machine.

The needle has an eye near the point instead of at the blunt end, just opposite of the ones used for hand sewing. The sewing machine needle is held in place by a screw.

The presser foot holds fabric in place while the needle passes between its two toes. In the back of the machine above the presser foot is a lever to raise and lower it.

The feed dog moves the fabric through the sewing machine.

The needle hole is the hole the needle goes through to make stitches.

The bobbin holds the thread for the bottom half of the stitches.

Look for these basic parts on your sewing machine.
The bobbin winder winds the thread onto the bobbin, except on machines with self-winding bobbins.

The stitch regulator is used to lengthen or shorten the stitches.

The balance wheel can be used to raise the needle and to help start the machine by hand.

The foot control or knee lever makes the machine go faster or slower.

Learning to Sew
Learning to use a sewing machine is like learning to ride a bicycle or skateboard. You need to practice until you have control over it. You need to be able to start and stop when you want. You can learn to make the machine sew slowly, straight, and around curves.

Try each of these activities to learn to run the sewing machine.

1. Begin by running the sewing machine without a needle and with the presser foot up. Make it go very fast. Make it go very slowly. Try different speeds. Can you make it start and stop smoothly? When you sit in front of the machine, sit up straight with both feet on the floor.

2. Now you can practice with a needle, but without any thread. Find a piece of paper with lines on it. Put the presser foot down on the paper. Guide the paper gently with both hands as you try to follow the lines. Don’t push or pull. See how straight you can make your stitching lines.

3. Draw a big circle on a piece of paper. Can you stitch on that line? You may want to practice this several times.

4. Draw a 6-inch (15 cm) square on a piece of paper. Inside of it draw a 5-inch (12.5 cm) square and a 4-inch (10 cm) square. Stitch on the lines. Make the sewing machine stop at the corner with the needle in the paper. Raise the presser foot and turn the paper so you can continue following the line. Lower the presser foot and start stitching again.

5. Find a small paper sack. Fasten it to the sewing machine table with tape. If you put scraps of thread in the sack, your sewing area will look neat and will be easier to clean up when you finish sewing.

6. Now you are ready to use thread. Have someone show you how to thread the sewing machine. You need to learn to wind the bobbin and put it in the machine too. Practice doing this until you can do it by yourself.

7. The next step is to sew using scraps of fabric. Cut two pieces of fabric the same shape and the same size. Pin the two pieces of fabric together. Put the needle down into the fabric close to one end. Bring the two threads (one from the spool and one from the bobbin) behind the needle. Be sure there are at least 3 inches (7.5 cm) of each thread behind the needle. Lower the presser foot. You are ready to stitch. Do it just as you did before, but hold onto the two threads while you take the first few stitches. Practice sewing until your stitching is straight and even. It takes practice.

Most seams are made ⅛ inch (1.5 cm) from the edge of the fabric.
8. Most seams you will sew will be $\frac{3}{8}$ inch (1.5 cm) from the edge of the fabric. Does your sewing machine have marks in the metal just to the right of the needle? If it does, practice keeping the edge of the fabric along the mark that says $\frac{3}{8}$ inch (1.5 cm) as you stitch. If there are no markings on your machine, make your own. Put a strip of tape $\frac{3}{8}$ inches (1.5 cm) from the needle hole. Use this as your guide for stitching.

Look at the stitching you have done. If it is too tight the fabric will be puckered.

If it is too loose, there will be spaces between the two pieces of fabric when you spread them apart.

If either happens to you, it is not your fault. The tension on the machine isn’t right. Ask someone to adjust this for you. You will learn to do this later.

---

4-H Operator’s License

[Signature]

sewing machine owner

[Signature]

4-H leader

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Your License

Ask the person who owns the sewing machine to watch you name the parts and sew using the machine. If you show your skill and knowledge successfully ask him or her and your 4-H leader to sign your license.

Sewing Tools

Since you are just learning to sew, ask if you can use the sewing tools in your home rather than buying your own. Tools that you will want to collect include:

- Tape measure,
- Ruler, either 6 inches or 12 inches,
- Sharp scissors or shears,
- Tracing wheel and tracing paper,
- Pins,
- Hand sewing needles,
- Seam ripper,
- Iron and ironing board, and
- Thimble.

Keep sewing tools in a box, tray, or basket.
Using Pins
Pinning holds two or more pieces of fabric together so you can sew them easily. When you pin fabric, go through \( \frac{3}{8} \) inch (.31 cm) to \( \frac{1}{4} \) inch (.62 cm) of fabric. If you go through more fabric, the point of the pin may slip and the pin will fall out. You can place pins either parallel or perpendicular to the edge of fabric.

If you pin parallel to the fabric edge, put the pins on the seam line. Place heads of the pins toward you so you can pull them out easily as you come to them.

You can place the pins perpendicular to the edge. Pinning this way helps keep the layers of fabric from slipping. Place pins close enough to hold the layers of fabric securely. You can sew over the pins when you pin this way, but you may damage or break your needle. Also, stitches look uneven when you sew over pins.

Sewing without a Pattern
There are many clothing and accessory items you can make without a purchased pattern. Some suggestions are:
- A grooming or sewing kit,
- A wall holder for sewing supplies,
- Pin cushion,
- Scarf or tie,
- Ribbon belt, or
- Simple back pack.

Look in sewing books or magazines with "how-to" ideas for other projects that don't need a pattern. Ask your leader or someone in your family to help find ideas and instructions.

Make a Stuff Bag
Maybe you would like to make a stuff bag for your sleeping bag or laundry bag. Choose a strong, firmly woven fabric. Look for cotton or polyester/cotton blends. Denim, sail cloth, and other sturdy fabrics such as Kettlecloth are good. They are easy to sew and will wear a long time.

Slippery fabrics such as nylon make it easier to push a sleeping bag into a stuff sack. But this type of fabric slides around when you sew, and it frays or ravel. Do not choose it for your first project.

Supplies you will need for a sleeping bag stuff sack or laundry bag are:

- 1 yard (.914 m) fabric 44 inches (110 cm) to 45 inches (112.5 cm) wide;
- \( \frac{1}{4} \) yard (1.14 m) cable cord or other cord; or you can make your own from the fabric of your bag; and
- Thread to match the fabric.

Follow these steps.

1. Cut the fabric the size you need.

2. Stitch \( \frac{1}{4} \) inch (.62 cm) from the top of the bag.

3. Press the fabric toward the wrong side along the row of stitching. The stitching helps you press under \( \frac{1}{4} \) inch (.62 cm) of fabric easily. Work with the fabric flat on the ironing board.
4. Machine stitch near the fold. This is called **clean finishing** or edge stitching.

5. Does the fabric ravel? If it does, finish the bottom edge of the fabric like this. Stitch ⅛ inch (.31 cm) from the edge of the fabric. Use a straight stitch or a zig-zag stitch.

6. Fold the fabric in half so the right sides are together. Pin the bottom edges together.

7. Stitch the seam ¾ inch (1.5 cm) from the edge. Backstitch at both the beginning and the end of the seam. That means you start to stitch about ½ inch (1.25 cm) in from the edge of the fabric. Stitch backwards to the edge. Then stitch forward over those stitches. At the end of the seam, stop, and sew backwards for ½ inch (1.25 cm) again.

8. Press the seam open over the end of the ironing board.

9. Pin the unstitched selvage edges together. Stop pinning 2 inches (5 cm) from the top.

10. Start 2 inches (5 cm) from the top and stitch the seam ¾ inch (1.5 cm) from the edge. Backstitch at both the beginning and the end of the seam.

11. Press the seam open all the way to the top of the bag.

12. Stitch ½ inch (1.25 cm) from the folds on the part of the seam that was left unstitched. Start at the top. Backstitch and stitch down one side two inches, (5 cm). Leave the needle in the fabric, raise the presser foot, and turn the fabric. This is called **pivoting**. Lower the presser foot and stitch across the bottom of the opening to the other side. Leave the needle in the fabric and turn the fabric again. Stitch up the other side. Backstitch again.

13. Turn under the top edge of the bag 1 ½ inches (2.8 cm). The edge will be a little lower than the opening seam. Pin. Press the fold. Stitch close to the lower edge all the way around the bag. Remember to backstitch at both the beginning and the end of the stitching, just as you did before. You have just made a **casing**. You will probably make casings often when you sew.
14. Now you are ready to work with the cord for your stuff sack. If you want to make your own cord, these next few steps tell you how. But if you want to buy a cord, just skip down to step 18.

15. To make your own cord, cut two strips of cloth 2 inches (5 cm) wide. Cut one the width of your fabric (44 to 45 inches (110 to 112.5 cm)). Make the second piece 10 inches (25 cm) long. Sew the two strips together to form one long strip. This is called piecing. Make sure there is a selvage at each end. Use a ¼-inch (.62 cm) seam. Press the seam open.

16. Press under both long sides ¼ inch (.62 cm).

17. Fold the strip in half. Press and pin. Stitch close to the edge around all four sides.

18. Fasten a large safety pin to one end of the cord. If you bought cording, wrap tape around the end of it before putting it on the pin. Push the safety pin and the cord all the way round inside the casing. Knot the two ends of the cord together.

Now the stuff sack is finished. Check how well you did by looking at each of the sentences in the chart below.

Probably some parts of your bag were very good. Some probably needed improvement. Those are things you can try to improve when you make your next project. Ask someone to help you with the parts that were the hardest for you or that you need to improve.

Finally, put your sleeping bag or laundry inside your new stuff sack. How do you like it? If you liked making this sack, maybe you’d like to make another one. How about making one for someone in your family or a friend? Perhaps you would like to trim the next one. If you add initials or sew on some trim, it’s easiest to do it before step 6. You could make a longer bag for an older friend or a parent to use for a hunting rifle or BB gun. You could make a smaller bag to carry a swim suit, gym clothes, or books.

Make a different size bag for a special purpose.
**Activity Ideas**
If you know how to operate a sewing machine and make a stuff sack, you now have some skills listed below to share. Give presentations on these topics or do something for others.

- The parts of the sewing machine.
- How to thread a sewing machine.
- How to wind a bobbin and put it in the sewing machine.
- How to stitch a straight seam and press it open.
- Two ways to pin layers of fabric together.
- Basic sewing tools.
- Help another 4-H'er learn how to make the stuff sack.
- How to clean finish the edge of fabric.
- How to make a casing.
- How to make a cord.
- Choose another project that you can make without a pattern and give it to someone special.

**Sewing with a Pattern**
When you start to sew with a pattern, there are many new things to learn. Talk with your helper or leader about selecting and using a pattern. You can learn to:

- Select your pattern size,
- Choose simple styles,
- Cut fabric, using the pattern, and
- Use pattern directions.

Your 4-H clothing project book will help you, but it would be a good idea to borrow or buy a basic sewing book. Some helpful ones are:

- *Simplicity Sewing Book,*
- *Ready Set Sew* by Butterick,
- *Coats and Clark Sewing Book,*
- *The Readers Digest Complete Sewing Book.*

For your pattern sewing project, start with something simple. Here are some ideas:

- Poncho,
- Sleeveless jacket or vest,
- Simple robe,
- Simple pajamas or nightgown,
- Tie,
- Easy shirt,
- Knit shirt (special hints later in the chapter),
- Towel wrap around for after the shower,
- Easy shorts or pants, and
- Simple jumper or sundress.
Selecting Pattern Size
To choose the correct pattern size, you need to know your measurements and your body build. It’s best to choose your pattern before you buy your fabric. See if you can discover why as you try this project.

Take Your Measurements
Since you are growing and changing shape, it is a good idea to have someone measure you before you buy a pattern. This is especially important if it has been a month or two since you got your last pattern.

You will get the most accurate measurements by wearing just your underwear or very lightweight clothes.

Record your measurements in pencil in the chart on page 27. Each time you remeasure, erase the old measurements and fill in current ones to keep your chart up to date.

Find Your Figure Type
The major pattern companies all use the same body measurements for each pattern type and size. However, you may find that patterns from different companies do not fit the same. This is because they may shape parts of the pattern differently. The size clothing you buy will probably be different from your pattern size, too.

Patterns are divided into classes according to figure types. Your height and body development can help you choose the best figure type for you. To find out what figure type you are, study the silhouettes on page 26.

Measure your body at these points.
### Body Measurement in Inches

#### MISS PETITE
This new size range is designed for the shortened Miss figure, about 5’2” to 5’3” without shoes.

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#### YOUNG JUNIOR/TEEN
This size range is designed for the developing pre-teen and teen figure, about 5’1” to 5’3” without shoes.

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#### MISSES’
Misses’ patterns are designed for a well-proportioned, and developed figure, about 5’3” to 5’6” without shoes.

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#### WOMEN’S
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</table>

#### JUNIOR PETITE
Junior Petite patterns are designed for a well-proportioned, petite figure, about 5’5” to 5’7” without shoes.

<table>
<thead>
<tr>
<th>Size</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bust</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33%</td>
<td>34%</td>
<td>35%</td>
<td>37%</td>
<td>37%</td>
<td>39%</td>
<td>40%</td>
</tr>
<tr>
<td>Waist</td>
<td>22%</td>
<td>23%</td>
<td>24%</td>
<td>25%</td>
<td>27%</td>
<td>28%</td>
<td>30%</td>
<td>31%</td>
<td>33%</td>
<td>34%</td>
</tr>
<tr>
<td>Hip</td>
<td>32%</td>
<td>33%</td>
<td>34%</td>
<td>34%</td>
<td>36</td>
<td>38</td>
<td>40</td>
<td>42</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>Back Waist Length</td>
<td>15½</td>
<td>15½</td>
<td>16</td>
<td>16½</td>
<td>16½</td>
<td>17</td>
<td>17½</td>
<td>17½</td>
<td>17½</td>
<td>17½</td>
</tr>
</tbody>
</table>

#### BOYS’

#### TEEN-BOYS’

#### CHUBBIE
Chubbie patterns are designed for the growing girl who is over the average weight for her age and height. See below for approximate heights without shoes.

<table>
<thead>
<tr>
<th>Size</th>
<th>8½c</th>
<th>10½c</th>
<th>12½c</th>
<th>14½c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>30</td>
<td>31½</td>
<td>33</td>
<td>34½</td>
</tr>
<tr>
<td>Waist</td>
<td>28</td>
<td>29%</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>Hip</td>
<td>33</td>
<td>34%</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>Back Waist Length</td>
<td>12½</td>
<td>13%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Approx Heights</td>
<td>52”</td>
<td>56”</td>
<td>58½”</td>
<td>61”</td>
</tr>
</tbody>
</table>

#### CHILDERN’S MEASUREMENTS
Measure around breast. Toddler patterns are designed for a figure between a baby and a child. Dresses are shorter than the child’s dress and pants have a diaper allowance.

<table>
<thead>
<tr>
<th>Size</th>
<th>½</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Waist</td>
<td>19</td>
<td>20</td>
<td>20%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>Hip</td>
<td>25</td>
<td>26</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Back Waist Length</td>
<td>8½</td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Approx Heights</td>
<td>35”</td>
<td>38”</td>
<td>41”</td>
<td>44”</td>
<td>47”</td>
</tr>
</tbody>
</table>

#### MENS’ (Height approximately 5’10”)

<table>
<thead>
<tr>
<th>Size</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest</td>
<td>34</td>
<td>36</td>
<td>38</td>
<td>40</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>Waist</td>
<td>28</td>
<td>30</td>
<td>32</td>
<td>34</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Hip</td>
<td>35</td>
<td>37</td>
<td>39%</td>
<td>41%</td>
<td>43%</td>
<td>45%</td>
</tr>
<tr>
<td>Neckband</td>
<td>14</td>
<td>14½</td>
<td>15%</td>
<td>15½</td>
<td>16%</td>
<td>16½</td>
</tr>
<tr>
<td>Shirt Sleeve</td>
<td>22½</td>
<td>23½</td>
<td>25</td>
<td>26½</td>
<td>29</td>
<td>30</td>
</tr>
</tbody>
</table>

#### JUNIOR
Junior patterns are designed for a well-proportioned, shorter waisted figure, about 5’4” to 5’5” without shoes.

<table>
<thead>
<tr>
<th>Size</th>
<th>5</th>
<th>7</th>
<th>9</th>
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<tbody>
<tr>
<td>Bust</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33%</td>
<td>35%</td>
<td>37%</td>
</tr>
<tr>
<td>Waist</td>
<td>22½</td>
<td>23½</td>
<td>24%</td>
<td>25%</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>Hip</td>
<td>32</td>
<td>33</td>
<td>34%</td>
<td>35%</td>
<td>37%</td>
<td>39%</td>
</tr>
<tr>
<td>Back Waist Length</td>
<td>15</td>
<td>15½</td>
<td>16½</td>
<td>16½</td>
<td>17%</td>
<td>17½</td>
</tr>
</tbody>
</table>

#### CHILDERN’S

<table>
<thead>
<tr>
<th>Size</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Waist</td>
<td>20%</td>
<td>20%</td>
<td>21%</td>
<td>22%</td>
<td>22½%</td>
</tr>
<tr>
<td>Hip</td>
<td>24</td>
<td>25</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Back Waist Length</td>
<td>8½</td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Dress Lengths from Back Neck Line to Lower Edge</td>
<td>18”</td>
<td>19”</td>
<td>20”</td>
<td>22”</td>
<td>24”</td>
</tr>
</tbody>
</table>

**Courtesy of McCall's**
## Measurement Chart

<table>
<thead>
<tr>
<th>Measurements to take</th>
<th>Measurements (girls or boys)</th>
<th>*Pattern body measurements</th>
<th>*Changes to make</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chest/bust—Measure snugly over the fullest part of chest. Keep tape measure parallel to the floor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. High bust—Measure around the back and chest above the fullest part of the bust.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Waist—Measure around your natural waist. To find your waist tie a string or elastic snugly around your waist. Bend forward, back, and sideways. The string or elastic will locate your waistline.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hips/seat—Measure around the fullest part of your hips. Keep the tape parallel to the floor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Height—Measure without wearing shoes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Back waist length—Measure your back from the prominent bone at the base of your neck to your waistline.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Skirt or pants length—Measure from waist to hem at the side.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Sleeve length-girls—Measure with your arm bent. Start at the top of the shoulder. Measure to the tip of the elbow and down to the wrist bone. <strong>Sleeve length-boys</strong>—Measure with your arm bent. Measure from the base of your neck at center back, along the shoulder, to the tip of your elbow, and down to the wrist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Neck—Measure around your neck, plus 1/2 inch (1.25 cm) for your neck band size (see page 25).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*See page 28 for instructions for filling in these two columns.*
Pick Your Size

Once you have found your figure type, look at the body measurements for the different sizes in that figure type. See which measurements are closest to yours.

You may find that your measurements and your body build do not put you exactly into one pattern type and size. Then you have to make some decisions and perhaps some pattern alterations, too. These are some general guides to help you decide on your size.

• If your measurements are between two sizes, take the smaller size if you are small-boned or like your clothes to fit snugly; take the larger size if you are large-boned or like your clothes to fit more loosely.

• If you are tall enough for Young Junior/Teen or Teen-Boys, but your body measurements are closer to the Girls’ or Boys’ figure types, don’t panic. This situation is common. Usually it’s easier to lengthen the Girls’ or Boys’ patterns than to make the more complicated alterations on Young Junior/Teen or Teen-Boys patterns.

• If your chest measurement indicates one size and your hips indicate another size, pick your pattern size according to what you are making. For pants, shorts, or skirts, use your hip/seat measurement to select your size. For shirts, blouses, vests, jackets, jumpers, or dresses, use your chest or bust measurement.

• (Girls) If there is more than a 2-inch (5 cm) difference between your high bust and bust measurements, choose your size by using your high bust measurement. That will give you better fit through your shoulder and neck area.

Now that you have your measurements, ask your 4-H leader or your helper to help you pick the best pattern size for you.

Comparing Measurements

Now that you have picked your size, note the body measurements for that size (see the Body Measurement Chart, page 26). Write those measurements on your own Measurement Chart (page 27) in the column Pattern Body Measurements. Skirt and pants lengths will be listed on your pattern envelope.

Compare your measurements with the body measurements for your size. Write down any differences between the two in the last column, Changes to Make.

At your age, these are the most common places for changes, or alteration: back waist length; waist, hip, or seat; and length of skirt, pants, or sleeves.

If you want to check to see if there are other places you need to make alterations, pin the pattern together and try it on. To do this, cut the pieces apart, leaving some margin outside the cutting line. Pin in all darts, tucks, or pleats. Pin the pattern together at the seam lines. Clip the margins at armholes and necklines. Carefully put the pattern on over your undergarments. Be sure that the center front and center back of the pattern are in proper positions on your body.

Look at yourself in a mirror and have someone help you decide if you need to make changes in the pattern so it will fit you better.

Alter Your Pattern

Pattern alterations must be made before you cut out the garment. To find out how to do the pattern alterations you need, check your sewing book. If you look in several sewing books, you may find that they don’t all do the alterations in the same way. After doing alterations several times, you will be able to decide which method is best for you.
Do the alterations needed. Look carefully at your altered pattern. Do you see any reasons why it was important for you to alter the pattern before you cut out your garment instead of waiting and making changes in the garment as you were sewing it? Would it make more difference in some fitting problems than others?

By selecting the pattern type and size best for you, you can save yourself a lot of time and work. You will not have to make as many pattern alterations (maybe none), and your finished garment will fit you better. It's worth the time to choose your size wisely.

### Choosing a Pattern

As you look through the catalogs to choose a pattern for your project, watch for simple styles. See if any patterns have special trademarks:

- Beginner Pattern level 1 and 2,
- Quick and Easy, Learn to Sew for Fun, Easy Fit, Easy Sew, or Beginners Choice, level 1 and 2. These labels mean the clothes are easy to make. Look for styles with only a few seams, darts, or other details such as pockets or cuffs. For your first project using a pattern, you may want to avoid collars, set-in sleeves, zippers, and waistbands.

When you buy a pattern, pay special attention to the pattern envelope, the guide sheet or instructions, and the individual pattern pieces.

### The Envelope

The envelope that contains your pattern tells you many important things. Look at one, and find each of the following.

- An illustration of the finished garment. Several views are usually shown.
- The number and size of the pattern.
- A description of the garment or item.
- A picture of the pattern pieces you will use. Fewer pattern pieces mean an easier style.
- The sewing notions needed, such as buttons or elastic.
- Suggestions for kinds of fabrics to use.
- On the fabric chart, look for the size you are using and the view you are making.
- When you have found the fabric you want to buy and know how wide it is, look at the fabric chart to see how much fabric you need.

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**Illustration courtesy of McCall's**
Choosing Fabric

When you are learning to sew, it is important to choose a fabric that is easy to work with.

Choose a tightly woven fabric of 100 percent cotton or a blend of cotton and another fiber. The yarns should be close together. If you are making a T-shirt, pick T-shirt fabric with moderate stretch. Labels on the bolts will give the fiber content and care recommendations. Write this information down for your use in caring for your garment.

The fabric bolt tells fiber content.

Look at your fabric very carefully. What happens when you hold up your fabric from one end and then from the other end? If your design is like the one with daisies, it looks right one way and wrong the other way. It's a one-way design. That means all your pattern pieces need to be cut with their tops pointing in the same direction. To be sure you buy enough fabric for a one-way design, use the yardage amount listed for "with nap" or "without nap."

Sometimes, even if the fabric is all one color, it will look different if you hold it one way or the other. It may look shinier one way and duller the other way. Ask an adult to help check this before you buy so you know how much to buy.

If the fabric has a design, make sure that the design is printed straight on the fabric. This is important whether you are a beginner or not. Avoid plaids and stripes for a while.

Always check to see that the fabric is woven and finished with the yarns straight across and up and down. This is sometimes called the straight grain of the fabric or the straight of the material. On knitted fabrics the columns of loops should also be straight across and up and down. Most cotton fabrics and cotton blends have been finished so the yarns are set in place. The yarns cannot be moved from the position in which they are set, so do not buy crocheted or off-grain fabric.

To see that the fabric is on grain, place the fabric on one corner of a counter or table top. The selvage edge should be even with one side of the table. Now look at the torn or cut edge of the fabric. If it has been cut, has it been cut along one of the crosswise yarns? If the cut edge does not line up with the edge of the table, see if the crosswise yarns do. That's the most important thing to check, since the fabric may have been cut crooked.

Look for a fabric that has been preshrunk. Many bolts have labels that tell you how much, if any, the fabric may shrink. If the bolt does not state whether the material has been preshrunk or not, wash the fabric before you start to cut and sew. Wash it in the same way that you plan to launder the finished garment.

The word Sanforized means that shrinkage will not be more than 1 percent. That is not enough to affect the fit of a garment. If a garment shrinks over 3 percent, it may become too small to fit. Zippers and trims also may need to be washed to preshrink them.

Colorfastness is another important quality. It means that the dye will not fade or run when the fabric is laundered. Vat dyeing is a method of dyeing that makes fabric very colorfast.
The Pattern Guide
The pattern guide or instruction sheet contains more information about your pattern. On it you will find the following:

- Directions for using a pattern. Read them carefully before you cut and sew.

- Illustrations of different ways to lay out your material for cutting.

- The steps for making your garment. Read these steps before you begin to sew. Pattern guides are written for people who have had some experience sewing before. Don’t be upset if you don’t understand everything in the guide. Ask your helper to explain.

Pattern Pieces
Use the pattern guide for the view you have selected. This will help you pick out the pattern pieces you need to sew your garment. Put the rest back into the envelope. Use a warm iron without steam to press the ones you need. If any alterations are needed, ask someone to help.

Look at all the markings, called symbols, on the pattern pieces.
Cutting out a Garment

Follow these steps when you cut out a garment.

1. The pattern guide has pictures showing how to place the pieces on the fabric. Find the picture for your pattern size and the width of your fabric. Circle it.

2. If the fabric is to be folded, fold it so the right sides are on the inside.

3. Read the instructions on the pattern pieces. Some will say to place the edge of the piece against the folded edge of the fabric. Some pieces will have arrows that must be matched to the grain of the fabric.

4. Measure from the grain line arrow to the selvage edge of the fabric to be sure that the pattern piece is on the grain line of the fabric.

5. Pin each corner of the pattern piece to the fabric. Then place pins about 4 or 5 inches apart around the edges of the pattern pieces.

6. After you have pinned all the pattern pieces into place, have someone check what you have done. Then start cutting with sharp shears. Cut carefully, following the cutting lines of the pattern. Make a smooth edge.

Marking the Fabric

You will need to transfer some of the markings from the pattern pieces to the garment pieces. Do this before you remove the pattern from the fabric.

The markings show the location of buttonholes, the center front and center back, darts, pockets, and the tops of sleeves. You do not need to mark seamlines. There are many ways to mark fabrics. For beginners, the tracing paper method is a good one.

Be careful using tracing paper on white and light-colored fabrics because the marks may not wash out. Follow these steps:

1. Place the fabric on a magazine or other surface that will not be damaged by the tracing wheel.

2. Place the tracing paper so it will mark the wrong side of the fabric pieces.

3. Remove any pins that are in the way and replace them after each tracing.

4. Use a ruler to mark straight lines.

A good way to mark woven cotton fabric is with a tracing wheel and paper.
Sew It Up
After cutting and marking the garment pieces, you are ready to sew. Follow the directions in your pattern guide as much as you can. Ask your helper to explain things you do not understand.

Seams
Plain seams have a ½-inch (1.5 cm) seam allowance and are pressed open. Machine stitch length may be 9 to 12 stitches per inch (2.5 cm), depending on the fabric.

Or edge stitch by sewing a straight line next to raw edge.

Use one of these seam finishes for knits. Trim seam allowances close to the stitching and press to one side.

- Clipping—Concave seams (inside curves) need to be clipped to lie flat. Make clips every ½ to 1 inch (1.25 to 2.5 cm). Clip close to the seam.

Clip inside curves.

- Notching—Convex seams (outside curves) need to have notches cut out. Make notches every ½ to 1 inch (1.25 to 2.5 cm).

Notch outside curves.

Reduce Bulk
Seams sometimes need extra attention to help them lie flat and look smooth. Often this means taking steps to reduce bulk. Here are common methods used mainly on enclosed seams. Those are seams at the outer edge of collars, cuffs, plain necklines, sleeveless armholes, and the openings of some jackets and coats.

• Understitching—This keeps the facing or undercollar from rolling to the outside. After pressing and clipping the seam, press the seam allowances toward the facing or undercollar. On the right side of the facing stitch close to the seamline through the facing and all seam allowances.

Seamline
Understitching

- Grading or Layering Seam Allowances—Trim each seam allowance to a different width. The seam allowance that will be next to the right side of the garment should be the longest one. Trim sewn-in interfacings very close to the seamline.

Grading means trimming seam allowances to different widths.

Understitching keeps facing from rolling.

Plain seam

For knits, you can use a straight stitch, but stretch the fabric as you sew the seam. Pull the fabric a little from both the back and front.

Stretch

Stretch knits slightly.

Seam Finishes
On woven fabrics, zig-zag raw edges that may ravel.

Straight Zig-zag Overedge
Handling Fullness

**Eased seams** are made when two pieces of fabric of different length are sewn together. The seam looks smooth, but has more fullness on one side. When difference is small, hold the longer side on top. First, pin the ends, matching any notches or dots. Second, put a pin in the middle so that half the fullness is on either side of the pin. Then pin each half in half. Continue until the seam is pinned smoothly. It helps to hold the fabric over one finger as you pin.

![Diagram of eased seams](image)

For **sleeve caps**, you can use a machine basting line on the seam line and ⅛ inch (.31 cm) from it on the seam allowance. Tie the sewing threads around a pin at one end. Then pull the bobbin thread to distribute fullness to fit, matching notches and dots.

For **knit fabrics**, keep the shorter side on top. Stretch the smaller section to fit the larger one.

Ribbing

Sometimes knit shirts call for a ribbed knit neckline, hem, or sleeve cuff. Here is a quick and easy way to get it to fit just right.

- First cut it the length your pattern says.
- Sew the ends of the ribbing together to form a circle. Stitch again right over the first row of stitching. Press the seam open with your finger.
- Fold the ribbing in half so the wrong sides are inside. Divide the ribbing into four sections and mark with pins.
- Divide the edge of the neck, sleeve or waist into four parts and mark those with pins.
- Pin the ribbing to the shirt so that the pins match. Put the ribbing against the right side of the shirt. Place the seam of the ribbing at the center back of the neckline.
- Stitch the ribbing to the shirt. It is easiest if you sew with the ribbing on top. Stretch the ribbing to fit the shirt. Stitch again about ⅛ inch away from the first row of stitching.

![Diagram of ribbing](image)

Machine baste to ease sleeve caps.
**Gathers**

Gathers are tiny puckers that give fullness and attractive designs. The puckers should be small and even in size. Make three rows of machine basting, one \( \frac{1}{8} \) inch (.31 cm) below the seamline, one just above the seamline, and one \( \frac{1}{4} \) inch (.31 cm) closer to the cut edge.

Match with the other garment piece. Pin in place. Tie the gathering threads around a pin at one end.

Pull on the bobbin thread from the other end until the two seams fit together. Tie the ends around another pin. Distribute the fullness evenly across the whole area. Pin.

Stitch in place. Remove any gathering threads that show from the right side of the garment.

**Darts**

Darts also help control fullness. They make a flat fabric more three dimensional. Some darts are straight and some are curved.

To make darts, follow this procedure:

- Mark the fabric, following the paper pattern, using a tracing wheel and tracing paper.
- Fold the fabric on the middle line. Pin so that the points match.
- Starting at the wide end, back-stitch, and sew to point.
- Tie threads at the points.
- Press dart in folded position. Then press vertical darts toward the center back or center front. Press horizontal darts toward the hem of the garment.
- Use a pressing ham to iron the curved dart to keep the shape of the curved dart.

**Straight dart** **Curved darts**
Hand Sewing
First, practice threading the needle, tying knots, and doing some basic stitches. Use double thread when you are sewing on buttons. Use single thread for other hand sewing.

Thread a Needle
1. Cut a piece of thread about 18 inches (45 cm) long. Breaking the thread leaves fuzzy ends. Those do not go through the needle easily.

2. Grasp the needle between thumb and finger.

3. Brace other hand against it.

4. Push thread through the hole. Moisten the end, if needed.

Tie a Knot
1. Wrap one end of thread around forefinger.

2. Allow about ¼ inch (.31 cm) of thread to lap over.

3. With thumb, roll the threads together.

4. Slip loop off finger, and pull to end of thread.

Use a Thimble
Using a thimble keeps the needle from punching your finger when you sew thick fabric.

1. Place on the middle finger of the hand that holds the needle.

2. Hold needle between thumb and first finger.


4. Push it through using the side or end of the thimble.
**Baste Stitch**
Basting stitches hold fabrics together temporarily. Then, they are removed. To baste, sew in and out through fabric, using big stitches. Each stitch should be \(\frac{3}{4}\) to \(\frac{1}{2}\) inch (.31 to .62 cm) long.

![The baste stitch](image)

**Running Stitch**
Running stitches are just like basting, except they are smaller. Each stitch should be \(\frac{1}{8}\) to \(\frac{1}{4}\) inch (.31 to .62 cm) long.

![The running stitch](image)

**Backstitch**
A backstitch is made by inserting the needle behind the hole where the thread comes out of the fabric from the stitch just made. It is used to repair seams and for topstitching by hand. It is the strongest hand stitch.

![The backstitch](image)

**Fastening the End**
1. Take a very small stitch and put the needle through the loop.
2. Repeat two more times, making knots.
3. Cut thread \(\frac{1}{2}\) inch (1.25 cm) from knots.

![Fastening the end](image)

**Hems**
Hems shouldn’t show from the right side. On all hems, finish the raw edge first, if the fabric ravels. Turn up the hem, and press it lightly before you sew. A hem can be blind stitched by hand or machine, or fused with an iron and fusible web.

**Hand Blind Hem**
This hem is done between the two layers of fabric rather than over the hem edge. To begin, finish raw edge, if necessary, so it will not ravel. Press in hem and pin. Roll back the hem edge about \(\frac{1}{4}\) inch (.62 cm). Take loose stitches between the body of the garment and the rolled edge. Pick up only one or two threads of the garment. If you are very careful, this stitching will not show on the outside. That is why it is called a blind hem.

![Hand blind hem](image)

**Machine Blind Hem**
If your sewing machine has a zigzag, it may also do blind hemming. Machine blind hems do show slightly on the outside so only use them when this will not matter. Machine hems are good for pants, children’s clothing, and curtains, for example. Read your machine instructions for blind hemming. Fold the fabric as the illustration shows. It will take practice before you can do this well.

![Machine blind hem](image)
**Fused Hem**

Sometimes it is hard to make a hem that is invisible (or nearly invisible) from the outside. For example, soft T-shirt type knits may be a problem to hem. You can put in a stitchless hem by using fusible web and an iron. There are two ways to begin:

1. Use ½- to ¾-inch (1.25 cm to 1.86) strip of fusible web. Place it inside the pressed hem, about ¼ inch (.31 cm) below the top raw edge of the hem.

2. Use a wider strip of fusible web. Cut it just ¼ inch (.62 cm) narrower than the hem. Place inside the hem.

![Fused Hem](image)

In either of the above cases, hold the web in place with a few pins. Then, heat baste by pressing lightly with the iron. Remove pins and follow the instructions given on the package of fusible web. Before putting in a fused hem, try both ways on a scrap of fabric to see which looks best. The narrow strip will be less stiff, but may show a ridge on the outside. The wider strip works best for hems 1½-inches (3.75 cm) wide, or less.

**Pressing**

Pressing is not the same as ironing. To iron, glide or slide the iron back and forth on the fabric to smooth out wrinkles.

Pressing is an up and down motion. You lift the iron, and set it gently over seams you have just sewn to smooth out seam lines and edges. Steam irons work best for this. They use moisture, heat, and pressure to help the fabric stay in place. If you don’t have a steam iron, you can use a damp press cloth. The press cloth can be made from muslin, cheesecloth, a worn sheet, handkerchief, or diaper.

**Evaluating what You’ve Done**

When you finish your sewing project, look it over to see how well you did. Fill in the chart on the next page. You may not be able to fill in every part.
How Is the Construction?

<table>
<thead>
<tr>
<th></th>
<th>Very good</th>
<th>Average</th>
<th>Needs improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garment is cut on grain.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seams are straight and even.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gathers are even (if any).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darts (if any) are straight.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stitching is straight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>around the zipper.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zipper doesn’t show.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facings are smooth.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facings don’t show from the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>outside.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hem is even in width.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand stitching doesn’t show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>on the outside of the garment.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does It Fit Your Needs?

If you made a garment, try it on and look at yourself in the mirror. Check the following questions about how you look.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Not sure</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you like the way the garment looks on you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you like the color?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does the garment fit you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does the style look on you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can you wear the garment many places?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can you wear this garment with many other clothes you have?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can the garment be easily cleaned (laundered)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the garment comfortable?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you learn new skills from making this garment?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activity Ideas

Would you like to sew something else? You are not limited to any certain types of garments or to any number of garments for your 4-H projects.

Each time you can pick out a pattern that is a little bit harder to sew. Consider your family’s budget and clothing needs as you decide what to make. You may want to sew for someone else in your family, too.

What have you learned about sewing with a pattern that you would like to share with someone else? You can make presentations on these topics:

- How to take measurements.
- How to tell if fabric is on grain.
- How to pin patterns to fabric.
- How to finish seams on fabric that ravel.
- How to sew a hem.
- How to sew seams on knit material.
- How to trim and grade curved seams.
- How to make hand stitches.

Add other ideas you have.

Now that you know how to make some clothes, you have some special skills to share with others. What else can you think of?

- Make a knit-shirt for someone in your family.
- Show another 4-H’er how to sew on knit material.
If you give your clothes good care, they will not only look better, but also last longer.

**Daily Care**
Many clothes need to be washed after each wearing. When you take off your clothes, decide if they need to be washed before you wear them again.

- Do they have dirty places, spots, or stains?
- Do they smell bad?
- Do they have rips or tears?
- Do they have missing buttons or snaps?

If you can answer No to all questions, then you can wear the clothes again before they are washed. If so, hang up or fold them and put them away. Sweaters may stretch out of shape on a hanger. It’s better to fold them and store in a drawer or box or on a shelf.

If you answer Yes to any of these questions, then your clothes need to be washed, dry cleaned, or repaired.

**Helping with Family Laundry**
You can do several things to help with the laundry in your family.

- Report stains right away. Stains may not come out if they are not removed quickly. Tell someone who can help you remove the stain or decide what to do about it.

- Always be sure pockets are empty before you put your clothes (especially jeans) in the hamper. Crayons, pens, tissues, coins, and other pocket contents can cause trouble in the washing machine or dryer. Crayons and ballpoint pens can stain whole wash loads. These stains are very hard to get out. Tissues fall apart and cling to other fabrics making a big mess. Pins and small metal objects can get caught in the washing machines and lead to costly machine repair bills.

- Put dirty jeans, socks, and underwear in a hamper or laundry bag until time for washing. Dirty permanent press shirts, blouses, etc. keep their press better if they are left on hangers until washing. Keep them away from clean clothes, so they won’t make your clean things smell bad. Maybe you can use one end of your closet for your dirty permanent press things on hangers and a hamper.

Identify stains so they can be removed. Learn to use the washing machine.
• Be sure clothes are dry before they go into the hamper. Damp clothes left in the hamper too long can cause mildew to grow. Mildew grows in dark, moist, warm places. Mildew can stain and weaken clothes. It is difficult to remove.

• Help get ready to wash clothes by learning to sort them properly. Put all the white things in one stack. Put all the colored things in another. Look for permanent care labels in your clothes. These labels may say:

- If clothing care labels say "dry clean only" you won't want to wash that garment at home. Care labels may suggest the different care methods for different kinds of clothes, as indicated in the chart below.

**Hand wash**
- Wool sweaters, caps, scarves
- Delicate fabrics

**Presoak in cold water**
- Muddy jeans
- Clothes with milk, ice cream stains
- Diapers

**Machine wash cold**
- Brightly colored clothes
- Clothes that aren't very dirty

**Machine wash warm**
- Knits
- Synthetics and synthetic blends
- Sturdy colored clothes

**Machine wash hot**
- White cottons
- Underwear, handkerchiefs
- Socks (after mud is soaked out)
- Heavily soiled clothing (after presoak)
- Clothes from sick people

**Professionally dry clean**
- Tailored clothes—coats, suits
- Wool and silk clothes
- Leather or fur-trimmed clothes

• After you have the clothes sorted into stacks, ask someone in your family to see if you did it right.

• Next, get someone to help you start the washing machine.

• When the clothes are finished washing, put them in the dryer or hang them up on a line. Get someone to show you how to set the controls. Turn on the dryer for the correct temperature and right amount of time.

• When the dryer stops, remove the clothes promptly so they will not wrinkle.

• Fold the clothes carefully or hang them up. Put them away in drawers or closets.

---

**Clothing Care Record**

You may want to keep a record to show how you cared for your clothes and helped with the wash. Use this chart.

<table>
<thead>
<tr>
<th>Task</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung up clothes to wear again</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty pockets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Put dirty clothes in bag or hamper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped with family wash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Making a Laundry Bag or Hamper

You can make a laundry bag by following the directions for making a stuff sack in the Creative Sewing chapter. Or, you can use a pillow case that's already constructed. Just thread a cord through the hem of the pillowcase. You can make an opening for the cord at the seam-line. Just carefully rip out a few stitches of the seam.

You can make a hamper from a large cardboard box or an unused waste basket. Line the inside of the box with a plastic garbage bag. Use masking tape to fasten it around the box at the top. Then cover the outside by using contact paper or by gluing on wallpaper, shelf paper, or fabric.

Simple Clothing Repairs

You can help keep your clothes in good shape with simple repairs. Learning these basic repairs means you are more independent and can take care of your clothes.

Sewing on Buttons

Buttons should be sewn firmly, but not tightly, against the garment. Follow these steps.

1. Thread a needle with about 15 inches (38 cm) of heavy duty or doubled sewing thread. Knot the end.

2. Fasten the thread by taking several small stitches on the right side where the button is to be placed.

3. Put the needle through one hole on the button, back through the other hole, and through the fabric onto the wrong side.

4. Place a pin under this stitch. Sew over the pin and down through the cloth three or four times.

5. Bring the needle up through one hole of the button and down through the second, but not through the cloth.

6. Remove the pin. Pull up the button as far as the slack thread will let it come.

7. Wrap the thread from the needle around this slack thread several times without putting the needle through the fabric. This is called making a shank for the button.

8. Bring the needle to the wrong side, putting it through the fabric close to the shank. Take three little stitches on the wrong side in the same place to fasten the thread. Clip off the extra thread.
Repairing Rips
Ripped seams can be embarrassing. You can learn how to repair them to take care of those emergencies.

1. Thread the needle with about 15 inches (38 cm) of doubled sewing thread. Knot the end.

2. Turn the garment wrong side out to reach the ripped seam.

3. Match the two sides of the seam together. Use small hand stitches to mend the seam. See page 36 to learn how to do hand stitches. Hand stitched seams will not be as strong as machine stitched ones, but hand stitching can help you out until you can get to a sewing machine.

Keep a repair kit handy.

Mending with an Iron
You can mend many tears and worn spots in clothing with press-on patches or tape. Choose a color that matches the garment. Cut the mending tape slightly larger than the tear, and round off each corner.
Place the shiny side of the mending tape against the wrong side of the garment. Press the tape firmly with a moderately hot iron. Follow the package directions about time and temperature. If you do a good job, the tape will not come off when the garment is washed.

Make a Repair Kit
Get a small box or pencil case. In the box, put a needle, several colors of thread, safety pins, some fusible tape, and some iron-on patches. You may want to include a small pair of scissors. This repair kit will be handy to take along if you are away from home at 4-H camp, for example, and need to make some simple clothing repairs.

Activity Ideas
When you care about other people, you do things to help them. When you care about clothes, you repair and launder them correctly. Think of some ways you can combine these two kinds of caring—for other people and for your clothes.

- Show other 4-H’ers how to sort laundry.
- Demonstrate how to sew on button.
- Make a laundry bag, clothes hamper, or repair kit for others in your family.
- Show 4-H’ers how to mend rips and tears in clothes.
- Sew on snaps and buttons that come off your clothes.
- Offer to sew on buttons or stitch ripped seams for others in your family.
Safety and Clothes

You probably watch for traffic so you can safely cross the street. You may have studied bicycle safety rules. But have you ever thought about safety and clothing? Probably not. Clothing safety is something we take for granted. Sometimes, though, the clothes you wear can get you in trouble.

In this section, you’ll learn some of the ways clothes can help protect you from harm.

Clothes that Protect You

You know clothes protect you from the weather. In summer, clothes and hats shield you from sunburn. In winter, layers of clothes, hats, and mittens protect you from freezing cold. Clothes can protect you in other ways, too.

White or fluorescent stripes on clothes make you more visible at night. This is why coats and jogging suits often have white or reflective trim. When you shop for these items, look for this safety feature. Wearing white caps, socks, and mittens is another way to be more visible at night.

If your coat or jogging suit doesn’t have reflective safety trim, you can buy some at a notions counter, and put it on. Some trims have an adhesive backing to stick on. Other trims need to be sewn on. You can create a design on the sleeves, back, and front of your suit or coat with the trim.

Clothing Fit Affects Safety

Clothing design and fit affect safety at work and play. Some types of clothes that are more apt to catch fire or get caught in machinery are: extra loose or floppy clothes; clothes that stand out from the body; and dangling ties, hoods, scarves, strings.

If caught, clothes can pull your hand or arm into moving parts of equipment and cause injury. Power take-off shafts, augers, blades, gears, and pulleys are the parts of equipment you should be especially aware of, so your clothes don’t get caught.

Clothes often contain strong synthetic fibers such as nylon and polyester. Heavy weight cottons are almost as strong. Strong fibers and fabric don’t tear easily if they get caught in something, making it more difficult to get free. Clothes that fit close to the body, so they move with you, are less likely to get caught.

Protective boots also are important for some jobs. When you are working around livestock or carrying heavy loads, steel-toed boots can protect your feet from getting crushed.

Clothes Protect You from Pesticides

Pesticides are used to control weeds, diseases, and insects in field crops, lawns, and gardens. Clothes help protect people from pesticide poisoning. You don’t have to eat pesticides for them to poison you. They can enter the body through the skin or lungs as you breathe.

When safety rules are followed, pesticide poisoning doesn’t happen often. It is important to understand the warnings on labels of pesticide containers. The words caution, warning, and danger all mean you should leave the chemical products for adults to take care of. When the label says danger and has a skull and crossbones sign, only a taste is enough to kill you.

Never play with pesticide containers. Never use them to hold other things. If you accidentally get pesticide on yourself, tell your parents, then wash thoroughly in soapy water, and put on fresh clothes. If your parents aren’t home, wash and change clothes right away, then tell them later. Be sure your parents understand that clothing soiled with pesticide must be washed separately from the regular family laundry. Ask your county Extension office for information on care of pesticide soiled clothing.
Clothing and Fire Safety

All clothing will burn in the right conditions. To start a fire, all you need is heat, not necessarily flames. Some things that can set clothes and other textiles on fire are matches, candles, cigarettes, gas flame, fireplaces, stoves, and space heaters. A flame or spark can ignite flammable liquids and vapors such as charcoal lighter fluid, gasoline, and paint thinner.

Think about the clothes you wear and your actions around the things listed above. Can you think of ways to be more careful? Long loose sleeves and full garments are especially hazardous.

Some fabrics burn more easily than others. Labels will tell you if a fabric is flame resistant. If the label doesn’t say, assume the fabric will burn easily. You may find these words on labels:

<table>
<thead>
<tr>
<th>If the label says</th>
<th>It means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable</td>
<td>Will burn readily.</td>
</tr>
<tr>
<td>Inflammable</td>
<td></td>
</tr>
<tr>
<td>Combustible</td>
<td></td>
</tr>
<tr>
<td>Fire resistant</td>
<td>Won’t burn readily; may burn</td>
</tr>
<tr>
<td>Fire retardant</td>
<td>slowly; flame</td>
</tr>
<tr>
<td>Flame resistant</td>
<td>will usually go out when heat</td>
</tr>
<tr>
<td>Flame retardant</td>
<td>source is removed.</td>
</tr>
<tr>
<td>Fire proof</td>
<td>Will not burn.</td>
</tr>
<tr>
<td>Flame proof</td>
<td></td>
</tr>
<tr>
<td>Noncombustible</td>
<td></td>
</tr>
<tr>
<td>Nonflammable</td>
<td></td>
</tr>
</tbody>
</table>

Look at the labels on your sleepwear. You will find one of the terms meaning “won’t burn readily,” if you have store-bought sleepwear. Children’s sleepwear in sizes 0 to 14 sold in the United States must pass tests showing it will not burn readily. Some people think flame resistant clothes are safer than they really are. They will still burn, but do give a little extra time to take the clothes off or put out the fire.

You can sew your own flame resistant sleepwear. The ends of fabric bolts will tell if the fabric is flame resistant. Look for a fabric that is labeled: “Passes the children’s sleepwear standard.” Not many flame resistant fabrics are available, but you can probably find a flame resistant polyester flannelette. Choose a pattern style with only a few seams. Use plain seams without finishes, since homemade sleepwear tends to burn longer along the seam lines where more thread is used.

Activity Ideas

- Add reflective trim to a garment you wear outdoors at night.
- Study labels on flame resistant sleepwear in stores.
- Make a list of trade names of flame resistant fibers.
- Compare the tear resistance of two fabrics. Use fabrics of the same weight and weave, but different fiber content. One should be 100 percent cotton and the other 50 percent polyester/50 percent cotton. Clip a selvage and try to tear. Which tears more easily?
- Give a talk or presentation on clothing safety.
- Make a poster showing how to attach reflective trim to garments.
- Make a poster showing how fires get started.

Children’s sleepwear in the USA must pass a strict flammability test and is flame resistant.
Personal Pointers

How you look and feel about yourself is important. When you like yourself and how you look, you have self-confidence. Getting along well with your friends starts with your own self confidence. You may not be able to change the size and shape of your body, but you can learn how to look and feel great. Follow these general guidelines:

• Eat a balanced, nutritious diet. Focus on fruits and vegetables, meats or meat substitutes, breads and cereals, and milk and dairy products. Go easy on junk food like candy and potato chips.

• Get plenty of rest and exercise. You need a regular period of sleep each night plus regular exercise. Get out and run, ride your bike, or roller skate.

• Cleanse your skin from head to toe. Good grooming means making yourself as neat and clean as you can be.

Steps for Grooming
It only takes a few minutes each day to keep your body well groomed. Practice these steps to look your best:

• Don't take chances with perspiration odor. Use a deodorant or antiperspirant under your arms every day. A deodorant eliminates odor; it doesn't stop perspiration. An antiperspirant eliminates odor and also stops perspiration.

• Keep hair clean, groomed, trimmed. Wash hair at least once a week and more often if it is oily or if you've been exercising a lot. If you have dandruff or oily hair, use a shampoo especially made for these conditions. If your hair is dry, don't wash it every time you take a shower. Brush hair often and have it trimmed as needed. A dirty brush and comb will make clean hair dirty, so make sure yours are clean.

• Brush your teeth after every meal and before going to bed. Frequent brushing cleans teeth and helps prevent cavities and bad breath. Using dental floss daily also helps to prevent cavities. See your dentist at least every six months. Remember to show off your teeth with smiles.

• Wash hands often during the day. Scrub fingernails, gently push back cuticles, and clip or file nails to oval shapes. Use a hand cream before doing dirty jobs. It keeps dirt from getting ground into the skin.

• Trim toenails weekly. To prevent ingrown toenails, cut nails straight across. Wear clean socks and well fitting shoes every day.
Posture
Good posture makes you look and feel better in every way. Good posture doesn't come with a stiff "standing-at-attention" position, but with a body carried easily in perfect balance. Try standing with your body, head, chest, and hip sections balanced one over the other. This will help your muscles fall in line and work smoothly and gracefully.

Now, stand with your best posture and ask a friend to rate you according to the following points:

<table>
<thead>
<tr>
<th>How is Your Posture?</th>
<th>Good</th>
<th>Needs improving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head high</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder blades flat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stomach in</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Practice good posture every day. Your clothes will look better on you, and you'll feel better, too.

Part of the fun of buying or sewing a garment is showing it off. If you have good posture, poise, and confidence, you'll do a better job of showing your friends and others what you learned.

Activity Ideas
- Give a presentation on guidelines for looking and feeling great.
- Show how to check and practice good posture.
- Enter the county 4-H clothing programs, and encourage others to enter with you.
- Help your leader or teen leader plan a local clothing show for your group's family night.
- Always clean up the bathroom after your own personal grooming so others won't have to.
- Clean brushes and combs for your family.

Can you think of other ways you can share these personal pointers with others?

Good posture shows your best you.
You and Others

Have you ever thought about why you wear clothes? There are several important reasons:

**Decoration**—Everyone has a basic need to look handsome or attractive. Throughout history, people have always decorated their bodies in different ways. You probably have some clothes that are your favorites because of their color or design. Clothes can help you look and feel part of a group.

**How You Look to Others**
Your clothing tells others about you. It may express your personality, how you feel, or what you are doing. The way you dress gives people a first impression of you. If they get to know you better, then their feelings may change. What first impression do you give others? Is it the one you want them to have?

You may like certain clothes because your friends do. When you dress like your friends, do you feel more accepted? It's fun to dress like your friends sometimes. It's also important to discover your own personal style of dress.

**Protection**—Animals have furry skins to protect them from the weather, but you use clothes for the same purpose. Clothing also protects you from injuries like scratches, bruises, or insect bites. (Refer to the chapter on Safety and Clothes.)

**Comfort**—The type of clothing you wear can help you stay cooler or warmer. Wearing several layers of clothes that fit close to your body can help you stay comfortable, even when it is cold around you. Think about what you wear in the summer. Naturally, you wear fewer clothes, and they probably fit looser to help you stay cooler.

**Modesty**—You also wear clothes because people in this country are expected to cover their bodies. Where you live and what you are doing help determine what is appropriate to wear.
**Dressing for Your Roles**

Clothing tells people about "roles." A role is what you do or what you are expected to do in a particular situation. You have several roles yourself, such as student, 4-H'er, band member, sports team member, or others. You sometimes dress differently for the roles you have.

Think about roles you have, as well as roles of your family. You will be well groomed if you've eaten nutritious meals, have gotten rest, and have kept your clothes clean and in good repair.

<table>
<thead>
<tr>
<th>Roles I have</th>
<th>Clothes I wear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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Activity Ideas

• Make a list of all the roles you have and what type of clothes you wear to be properly dressed for each one.

• You learned that there are four general reasons why people wear clothes: protection, comfort, modesty, and decoration. Look through old magazines, and clip out pictures that demonstrate each one of the reasons.

• List different jobs in which people wear clothes that are clues to what they do. Why do you think they wear those clothes on the job? For each job, write down the reasons. See if you can talk with someone who has one of the jobs to find out why he or she wears specific kinds of clothes for the job.

What have you learned about clothing for you and others that can be shared with 4-H friends and your family? Explain:

• Why clothes are important,
• How clothes tell others about jobs,
• Clothes that are appropriate for roles that you and your friends have,
• How clothes protect you, and
• How to wear clothes to stay warm or cool.

Congratulations

You have discovered some important ideas during this 4-H clothing adventure. There is a lot to learn—more than you could possibly do in one year. Think about taking another clothing project in 4-H. Go back to topics in this book that you haven't yet explored. Try to learn more about a topic that is especially interesting to you.

You can take this clothing adventure as far as you want. Your 4-H leader and your county extension office can help you get some additional material for special interests you have. When you feel you have fully explored this project book, you'll be ready for the next level. Then, ask for Challenges in Clothing (4H-312-B), and continue your clothing adventure!