

Basic Alterations and Repairs

Unit: The Art of Design

Problem Area: Design a Project

Lesson: Basic Alterations and Repairs

- **Student Learning Objectives.** Instructions in this lesson should result in students achieving the following objectives:

- 1 Measure customers for alterations.**
- 2 Alter pattern pieces.**
- 3 Redesign and repair garments.**

- **Resources.** The following resources may be useful in teaching this lesson:

E-unit(s) corresponding to this lesson plan. CAERT, Inc. <http://www.mycaert.com>

Editors of Creative Publishing. *Singer Complete Photo Guide to Sewing*. Creative, 2009.

Editors of Creative Publishing. *Singer New Sewing Essentials*. Creative, 2009.

The Editors of Vogue and Butterick. *Vogue Sewing*. Butterick, 2000.

"How to Take Body Measurements," *Clothing Patterns 101*. Accessed Oct. 8, 2015.

<http://www.clothingpatterns101.com/body-measurements.html>.

"Instructions: Men's Body Measurements," *Tailor Store*. Accessed Oct. 8, 2015.

<https://www.tailorstore.com/mens-body-measurements.pdf>.

"The Seam Method of Pattern Alteration," *threads®*. Accessed Oct. 8, 2015.

<http://www.threadsmagazine.com/item/5053/the-seam-method-of-pattern-alteration>.

The Sewing Dictionary. Accessed Oct. 8, 2015. <http://www.thesewingdictionary.com/>.

"The Sewing Dictionary & Glossary," *Sewing Patterns*. Accessed Oct. 8, 2015.

<http://sewingpatterns.com/sewingdictionary.php>.



■ **Equipment, Tools, Supplies, and Facilities**

- ✓ Overhead or Powerpoint Projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with printers and Internet access
- ✓ Classroom resource and reference materials

■ **Key Terms.** The following terms are presented in this lesson (shown in bold italics):

- alteration
- alteration lines
- body measurements
- circumference
- ease
- fit
- fold line
- grain
- measure
- measuring tape
- pattern
- redesign
- repair

■ **Interest Approach.** Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and situations. A possible approach is included here.

Ask students, “Have you ever ordered clothing online and received a garment that did not fit?” “What body measurements would you take to accurately measure yourself or a client for a garment?” Have students list the measurements they would take to ensure accurate online purchases and happy customers.

Then have students share their lists and create a class list on the whiteboard or projection system. Next, show the class the video, “How to Take Your Measurements for Sewing” at https://www.youtube.com/watch?v=T5fktYo_h3A. Finally, facilitate a question and answer discussion of each measurement, and provide tips from your experience fitting garments.

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Measure customers for alterations.

Anticipated Problem: How are measurements taken?

I. Measuring men and women

- A. **Alteration** is the process of changing or revising a pattern or garment to suit individual sizes or desires. Alterations are performed to provide the desired fit for each person's body. Alteration professionals must understand and perform draping, layout, cutting, sewing, alteration, and repair tasks without ruining the fabric. Tailors, seamsters, and seamstresses perform alterations in the following categories:
1. Bridal
 2. Couture or custom
 3. Costume
 4. Leather and suede
 5. Museum restoration
- B. **Fit** is the correct size or shape of a garment that is becoming to the wearer; it requires an adjustment to the garment's proportions. Fitting a pattern is important to the success of clothing construction projects or client alterations. Commercially produced patterns are designed to fit the average, standard-size figure. However, few people are exactly "standard size." Taking accurate measurements is the first step to good fit.
1. A good fit makes a measurable difference in how a person looks and feels.
 2. A good fit flatters a person's body shape. For example, tag sizes are only an indicator of fit. Purchasing a jacket that fits in the shoulders but is too large at the waist is an excellent example of an appropriate alteration. The jacket can be altered in the waist to create a perfect fit. Size is relative to individual proportions.
 3. A good fit transmits a message to others about the wearer.
 - a. Clothes that fit too tightly may convey "cheapness" or may highlight body areas that a person does not wish to highlight. Depending on the situation, clothing that is too tight can be deemed unprofessional.
 - b. Clothes that fit too loosely may convey sloppiness or being too casual. Depending on the situation, clothing that is too loose can be deemed unprofessional.

- c. Oversized clothing, on a petite figure, can be overwhelming to the body, can make a person look childlike, or can visually “add weight” to the wearer.

C. Taking measurements

1. To **measure** is to find out the size of someone for use in sewing, alteration, and repair. **Body measurements** are the dimensions (numbers) that indicate the size and the proportions of the human body. Knowing the body’s three-dimensional angles allows for an accurate fit whether constructing or altering clothing, purchasing ready-to-wear items, or shopping online.
2. Taking measurements, although relatively easy, requires accuracy. The tools are minimal: a measuring tape, paper, pencil, and a full-length mirror. A **measuring tape** is a long, flexible strip or ribbon marked on both sides with subdivisions of the foot on one side and meters on the other. It is usually 60 inches long (152 cm), with a metal cover on each end. The ultimate goal of taking accurate body measurements is to achieve a great fit and perfectly tailored clothing.
 - a. A person can take personal measurements. However, it requires a bit more attention to detail, and a full-length mirror is mandatory. Body measurements are often taken around the circumference of a body part or area. **Circumference** is the distance around the outer edge of a circle or curved shape; it is a perimeter measurement.
 - b. Measurements taken with a person wearing undergarments only are more accurate than those taken “over” clothing. (NOTE: An alternative is wearing undergarments, a tank top, and leggings. The goal is to reduce any bulky fabric getting between the body and the tape measure.)
 - c. The person being measured must stand up straight. His or her shoulders should be back to open the chest, and he or she should not hold in the stomach. Accurate measurements are necessary for a good fit.
 - d. The tape measure should be held parallel to the floor for the most accurate reading. The same tape measure should be used for all measurements. HINT: Typically, to create the correct amount of ease, the measurer places two fingers between the tape measure and the body and records that measurement. **Ease** is the difference between the body measurement and the finished garment at the same body part or area. For example, if a person places a favorite T-shirt on a flat surface and measures the chest area and takes that measurement times two, he or she gets the chest measurement of the T-shirt. Usually, the T-shirt chest measurement will be larger than the body measurement.
 - e. Measurements are taken by lightly pulling the measuring tape to create a snug fit. How snug is snug? The tape measure should be a close fit, not tight. It should not “dig in” to the body’s soft tissue. The measurer should be able to place at least one finger between the tape and the body.
 - f. It is essential to measure at the widest part of each body area for the most accurate reading. The exception is the waist. The waist measurement is taken at the narrowest point.

D. Seven basic measurements for men

1. Neck: It is necessary to measure the circumference of the neck at the base with the tape resting at the shoulders.
2. Sleeve length: It is important to measure the sleeve length from the joint of the shoulder, following a bent arm to the wrist bone. It is best to measure from a bent arm position by placing the arm on the hip. This position ensures accuracy and comfortable movement of the sleeve.
3. Chest: It is crucial to measure the circumference of the chest from under the armpits while the arms are raised. The measurement is taken around the circumference of the chest at the widest point. The person being measured must be standing in a relaxed pose and breathing out.
4. Shoulder: It is necessary to measure the shoulder width from end to end just above the armpits.
5. Waist: It is important to measure the circumference of the waist at the natural bend of the body. The person being measured bends from side to side, and the measurer marks the area with a piece of elastic or ribbon. This “mark” provides a reference point for measuring from the waist to the knee or floor. The natural waist is usually right above the belly button.
6. Hips: It is essential to measure the hips at the widest point (usually around the seat) while the person being measured is standing with legs a few inches apart.
7. Inseam: It is crucial to measure the inseam from the crotch down to the desired pant length.

E. Six basic measurements for women

1. Bust/chest: It is essential to measure the circumference of the bust/chest under the armpits and around the fullest part while keeping the tape parallel to the floor. This measurement is roughly around the shoulder blades. Another option that is less common is to measure the shoulder at the neckline to the bust point, depending on the styling of the garment.
2. Sleeve length: It is necessary to measure the sleeve length from the joint of the shoulder following a bent arm to the wrist bone. It is best to measure from a bent arm position by placing the arm on the hip. This position ensures accuracy and comfortable movement of the sleeve.
3. Waist: It is important to measure the circumference of the waist at the natural bend of the body or where the waist is smallest, which is about 1 inch above the navel. The person being measured bends from side to side, and the measurer marks the area with a piece of elastic or ribbon. This “mark” provides a reference point for measuring from the waist to the knee or to the floor. Measurement is most accurate when the person is relaxed and is not holding in the stomach.
4. Hips: It is essential to measure the circumference of the hips at the fullest part. Again, the measurer must ensure that the tape measure is parallel to the floor for the accuracy of this measurement. (Optional: A thigh measurement may be taken to ensure the pant pattern is properly altered.)

5. Center back to waist (sometimes referred to as “shoulder to waist”): It is critical to measure the center back to the waist from the prominent bone at the base of the neck to the waistline (or from the top of the shoulder at the neckline to the natural waist line).
6. Inseam: It is important to measure the inseam from the crotch down to the desired pant length or to the end of the ankle.

Teaching Strategy: Many techniques can be used to help students master this objective. Use VM–A through VM–F to facilitate a discussion of accurate measurements, fit, and men’s and women’s basic measurements. Have students practice taking measurements. Copies of VM–C could be reproduced, or similar printable charts may be found online.

Objective 2: Alter pattern pieces.

Anticipated Problem: How are pattern pieces altered?

II. Pattern alterations

- A. A **pattern** is the template from which the parts of a garment are traced onto fabric before being cut and assembled. Alteration requires changing or revising a pattern or garment to suit individual size or desires. In this case, it is about adjusting the size or design of a pattern piece or pieces.
 1. Patterns can be altered or adjusted in three main ways:
 - a. Fold out excess fullness to decrease dimensions.
 - b. Slash and spread an area of the pattern to increase dimensions. (A person can also slash and overlap to decrease dimensions.)
 - c. Redraw darts or seamlines.
 2. Fitting problems typically involve the following body areas:
 - a. Neck
 - b. Bust/chest
 - c. Hips
 - d. Arms (sleeves)
 - e. Shoulders
 - f. Back waistline (sway back)
 - g. Abdomen
 3. Pattern alterations are most accurate when a person selects a pattern size closest to the desired size and uses a few basic tools, including:
 - a. Measuring tape
 - b. Marking pen or marker
 - c. Transparent tape
 - d. Freezer paper or tissue paper
 - e. Client measurements

B. Basic alteration guidelines

1. It is important to keep all grain lines, the center front, and back fold lines straight. **Grain** is the direction of the fabric that runs parallel to the selvage. The grain lines on a commercial pattern have an arrow on either end <——> indicating the direction of the grain to assist in laying out the pattern pieces correctly.
 - a. Center front lines and back fold lines are on the pattern piece to indicate the center of the piece for placement on the fabric (especially when prints or plaids are prominent).
 - b. A **fold line** is the actual fold of the fabric off a bolt or a self-constructed fold of the fabric. Placing a pattern piece “on the fold” eliminates the need for a center front or a center back seam.
2. It is essential to make adjustments with discretion.
3. The wearing ease built into the pattern styling must be maintained.
4. The adjustment lines provided for ease of alteration should be used.
5. When altering one pattern piece, a person must make the corresponding changes on all the related pieces. (NOTE: Each major pattern piece may represent up to a quarter of one’s body. This is important for making circumference adjustments. Again, the same adjustments must be made on all pieces and all adjoining pieces.)

C. Guidelines for pattern alterations

1. **Alteration lines** are double lines shown on certain pattern pieces indicating where the pattern should be adjusted before cutting. Pattern pieces are altered by increasing or decreasing width, adding or redirecting darts, lengthening or shortening (e.g., bodice, sleeve, leg or skirt), and/or refitting or relocating a cuff or collar, etc.
2. Most pattern pieces have adjustments to show where to lengthen or shorten a specific pattern piece. Once measurements are taken, a person uses these alteration line locations to position the necessary adjustments. For example, to lengthen the bodice and/or the sleeves by 1 inch, a person must:
 - a. Cut the pattern tissue along the adjustment line.
 - b. Place the two pieces of pattern tissue on top of the paper (freezer paper or tissue paper).
 - c. Increase the length by 1 inch by spreading the pattern tissue apart by 1 inch to lengthen. (To shorten, lap the tissue by 1 inch).
 - d. Secure the pattern tissue to the freezer or tissue paper with transparent tape.
3. To make adjustments to the circumference of a pattern, it is necessary to make equal adjustments on the front and back pieces. For example, options to decrease the circumference of a skirt waist:
 - a. Decrease the seam allowances (perhaps top to bottom, depending on the styling) or the width of the darts marked on the skirt front and/or back pieces.

- b. Decrease the size of the waistband or, if the pattern has a shaped waistband, decrease the side seams (perhaps top to bottom, depending on the styling).
 - c. Slash the pattern down the center front and center back lines, and lap to the desired waist measurement. (In this case, a person would need to redraft the skirt facings to match the decrease in waist circumference on the front and back pieces.)
 - d. Minor circumference decrease: To make minor adjustments to a pattern for a small waist, a person must remove an equal amount at each seam at a maximum of $\frac{3}{8}$ inch per seam while blending the stitching and cutting lines using a curved ruler. All the corresponding width adjustments should be made to the adjoining waistband, facing, or bodice patterns.
 - e. Minor circumference increase: To make minor adjustments to a pattern for a large waist, it is necessary to add equal amounts at each seam, adding up to $\frac{3}{8}$ inch per seam allowance for a total of $\frac{3}{4}$ inch. All the corresponding width adjustments should be made to the adjoining waistband, facing, or bodice patterns.
 - f. Sway back: On the bodice back just above the waistline, it is crucial to fold out the desired amount and to redraw the side seams, dart, and center back seam. On the skirt back just below the waistline, it is important to fold out the desired amount and redraw the side seam, dart, and center back seam.
 - g. Protruding derriere: It is necessary to slash from the waistline to the hemline parallel to the center back through the waistline dart. In the hip area, it is best to slash across the pattern from the center back to the side seam. The pattern should be spread to the desired width and length. Dart and seamlines must be redrawn.
 - h. Flat derriere: It is important to slash parallel to the center back from the waistline to the hemline through the waistline dart. In the hip area, it is best to slash across the pattern from the center back to the side seam. The pattern should be overlapped in the hip area the desired amount to reduce width and length. Dart and seamlines should be redrawn.
4. Hip circumference: To make adjustments to the circumference of a pattern, it is important to make equal adjustments on the front and back pieces. For example, options to adjust the hip circumference of a skirt are:
- a. Full hips: It is necessary to mark the true hipline at the side seam of the back and front pattern pieces. The width must be increased by one-fourth the amount needed at each side seam, next to the mark. Stitching and cutting lines should be blended from the hip to the waist with a curved ruler.
 - b. Small hips: It is important to mark the true hipline at the side seam on the back and front pattern pieces. The width should be reduced by one-fourth the amount needed at each side seam, next to the mark. Stitching and cutting lines should be blended from the hip to the waist with a curved ruler.

5. Skirt or pant hems: The skirt or pant length should be adjusted several inches above the hemline to preserve the skirt or pant leg shape.
6. Bust dart adjustments: Adjusting a pattern for a full, small, high, or low bust requires a person to redraw lines on the pattern piece to indicate where the dart needs to be placed on the body.
 - a. High bust: It is necessary to slash below the dart and up to the armhole (armhole level) and then to fold out the desired amount above the dart. It is important to lengthen any waistline dart as needed. The seamline should be redrawn below the dart.
 - b. Low bust: It is best to slash above the dart and down to the waist. Then it is essential to fold out the desired amount below the dart. The waistline dart should be shortened as needed. The seamline above the dart should be redrawn.
 - c. Full bust: It is crucial to slash across the pattern at the dart foldline to the center front. Then the person must slash across the pattern from waist to shoulder along the waist dart foldline. The desired amount should be spread at the center front and bust area to increase the bust area. Spreading at the shoulder seam is not recommended. Seamlines and darts should be redrawn. (These new darts will be larger than the originals.)
 - d. Small bust: It is necessary to slash across the pattern along the bust dart foldline to the center front. A person should slash across the pattern from the waist to the shoulder along the waist dart foldline. It is best to overlap the darts the desired amount to decrease the bust area. They should not overlap at the shoulder seam. (These new darts will be smaller than the originals.)
7. Other common alterations:
 - a. Hollow chest
 - c. Small or large or gaping neckline
 - d. Sloping, round, square, or broad shoulders
 - e. Narrow or broad back
 - f. Narrow sleeve cap
 - g. Large upper arm
 - h. Large or small arm
 - i. Protruding abdomen
 - j. Large thighs
 - k. Flat side hips

Teaching Strategy: Many techniques can be used to help students master this objective. Facilitate a discussion of basic pattern and garment alterations. Demonstrate how to do some basic adjustments, and engage in step-by-step work with the class, if possible. Use VM–G through VM–I.

Objective 3: Redesign and repair garments.

Anticipated Problem: How are garments redesigned and repaired?

III. Redesign and repair garments

A. **Redesign** is the process of making a revision in the appearance and/or function of a garment. Redesigning a garment is a simple way to update and/or repurpose a piece of clothing, a pair of shoes, a handbag, hat, or other accessory. (NOTE: Redesigns for petite women or short men must be carefully planned to retain the original styling and shape of the garment.) Removing shoulder pads or shortening the waist or bodice requires a thoughtful redesign to maintain design details. For instance, it takes planning to maintain an A-line shape, a full skirt's "fullness," a tapered sleeve finish, and true button placements. Redesigns could include:

1. Blouses, shirts, and jackets

- a. Cuffs can be updated by removing and hemming the sleeve at a different length or with embellishments (e.g., trims, buttons, and fringe). Frayed cuffs could be bound with lace trim, seam binding, or bias-cut fabric remnants.
- b. Removing part of or the entire sleeve has numerous possibilities. Removing the sleeves entirely and re-cutting, re-facing, or binding the armholes would create an updated sleeveless style. Yet removing part of the sleeve to create a $\frac{3}{4}$, elbow-length, or short sleeve would change the garment's appearance and may change the use (e.g., short sleeves for wear in warmer months).
- c. Embellishment may include adding buttons, zippers, beads, appliqués, embroidery, or a variety of trims (e.g., lace, fringe, seam binding, bias-cut fabric, and contrasting fabric) to change the look and potential uses for the garment.
- d. Adding, removing, camouflaging frays, or embellishing pockets is a change to a style detail and functional portion of shirts. For example, changing the look of a patch pocket to that of western-wear styling edits the look and creates a new visual focus.
- e. Alterations to the body of a shirt or jacket must be carefully planned. Shirts and blouses can be adjusted to accommodate a petite size woman or a short man. However, jacket bodies and lengths are typically not attempted unless the jacket is an unconstructed type.

2. Dresses and skirts

- a. Shortening or lengthening the skirt of a dress can create a new style. For instance, shortening a dress can make an out-of-style fashion item fresh. Yet lengthening a dress—flounces, trims, contrasting fabric blocking—can dress up or dress down a garment.
- b. Adding buttons, zippers, beads, appliqués, embroidery, or a variety of trims (lace, fringe, seam binding, bias-cut fabric, contrasting fabric, etc.) changes the look and potential uses for the garment. On a dress,

numerous options exist for embellishing: collar, cuffs, button placket, belt, pockets, seaming details, over-skirt, and “all-over” appliqués. They can profoundly change the look and uses for an older dress.

- c. A simple change to the dress buttons can change its appearance and appeal. For example, changing the buttons from simple clear or shell buttons to a variety of button types and/or more colorful buttons is an easy and impactful change.

3. Slacks and pants

- a. Women’s slacks may be shortened to capris or walking short length; this is easiest when the original leg is stovepipe or straight. Skinny jeans and slacks may need additional fabric added at the side seam or in each leg’s front and back to create an appropriate capris or short look. Men’s pants may be shortened to walking short length, again with appropriate consideration to the leg width, drape, and shape. Also, all slacks and pants may have cuffs removed or added to adjust the length.
- b. Adding buttons, zippers, beads, appliqués, embroidery, or a variety of trims (e.g., lace, fringe, seam binding, bias-cut fabric, and contrasting fabric) changes the look and potential uses for the garment. Numerous Web sites and fashion blogs have attacked the alteration of style and shape of men’s and women’s pants and slacks, such as creating bell-bottom pants from skinny jeans and adding contrasting fabrics and side-seam detail to edit the look of the garment. Tie-dying, staining, acid-washing, and distressing jeans and khakis are other options.
- c. Adding, removing, and camouflaging frays and embellishing pockets are profound changes to functional portions of the pants or slacks. Pockets are a stress point on pants and slacks; often side seam pocket corners become frayed and/or worn due to repeated use. Replacement of side seam pockets is a common alteration, yet the worn aspect of the stress point may still require some innovative solutions. For example, Levi’s added a rivet to that stress point on their jeans years ago; it is a functional alteration that has become a characteristic symbol of Levi’s pockets.

- B. To **repair** is to restore a garment or a feature of the garment to its original state. To repair a garment can be as simple as fixing a rip in the fabric, re-stitching a seam or hem, or replacing a zipper. A person needs to match the thread color, lay the garment flat, or use a mannequin so the garment lies flat or drapes as intended during the repair. Deciding on a plan to fix the garment may take longer than the actual repair itself. For example, it is important to fix a rip in the least noticeable fashion. Repairs can be done by hand or on a machine. Common alterations and repairs by a tailor, a seamster, or a seamstress:

- 1. To shorten sleeves: \$19
- 2. To hem pants: \$7 to \$10
- 3. To shorten jacket sleeves: \$23

Teaching Strategy: Many techniques can be used to help students master this objective. Begin the discussion with this question: Have you ever redesigned a

garment? Use VM–J and VM–K. Allow students time to understand that redesigned is another way to say, “updated.” Bargain lovers can, with minimal alteration and expense, create an updated look for an existing piece of clothing, pair of shoes, or accessory. Assign LS–B.

- **Review/Summary.** Use the student learning objectives to summarize the lesson. Have the students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. If a textbook is being used, questions at the ends of chapters may be included in the Review/Summary.
- **Application.** Use the included visual master(s) and lab sheet(s) to apply the information presented in the lesson.
- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.

■ **Answers to Sample Test:**

Part One: Matching

1. g
2. a
3. b
4. d
5. f
6. c
7. e

Part Two: Completion

1. waist
2. sleeve
3. alterations
4. alteration lines or adjustment lines
5. repair
6. dart
7. average, standard-size
8. pattern

Part Three: Short Answer

1. Answers will vary but should include five of the following common measurements: neck, sleeve, bust/chest, shoulders, waist, hips, inseam, and center back to waist.

2. Patterns can be altered or adjusted in three main ways:
 - a. Fold out excess fullness to decrease dimensions.
 - b. Slash and spread an area of the pattern to increase dimensions. (You can also slash and overlap to decrease dimensions.)
 - c. Redraw darts or seamlines.
3. Answers will vary but should include one of the following “fit” messages:
 - a. Too tight—Clothes that fit too tightly may convey “cheapness” or may highlight body areas that you do not wish to highlight. Depending on the situation, too tight clothing can be deemed unprofessional.
 - b. Too loose—Clothes that fit too loosely may convey sloppiness or being too casual. Depending on the situation, too loose clothing can be deemed unprofessional.
 - c. Too big—Oversized clothing, on a petite figure, can be overwhelming to the body, can make you look childlike, or can visually “add weight” to the wearer.

Basic Alterations and Repairs

► Part One: Matching

Instructions: Match the term with the correct definition.

- | | |
|----------------------|-------------------|
| a. alteration | e. measuring tape |
| b. body measurements | f. redesign |
| c. circumference | g. repair |
| d. fit | |

- _____ 1. To restore a garment or a feature of the garment to its original state
- _____ 2. The process of changing or revising a pattern or garment to suit individual size or desires
- _____ 3. The dimensions (numbers) that indicate the size and the proportions of the human body
- _____ 4. The correct size or shape of a garment that is becoming to the wearer; adjustments to the garment's proportions
- _____ 5. The process of making a revision in the appearance and/or function of a garment
- _____ 6. The distance around the outer edge of a circle or curved shape; it is a perimeter measurement
- _____ 7. A long, flexible strip or ribbon marked on both sides with subdivisions of the foot on one side and meters on the other

► Part Two: Completion

Instructions: Provide the word or words to complete the following statements.

- 1. Measuring the circumference at the natural bend of the body is a/an _____ measurement.



2. Measuring from the joint of the shoulder following a bent arm to the wrist bone is a/an _____ measurement.
3. When using a measuring tape, marking pen or pencil, and freezer or tissue paper, you are probably making _____.
4. Double lines shown on certain pattern pieces indicating where the pattern should be adjusted before cutting is/are _____.
5. Restoring a garment or a feature of the garment to its original state is a/an _____.
6. To adjust a pattern for a full, small, high, or low bust requires you to redraw lines on the pattern piece to indicate where the _____ needs to be placed on the body.
7. Commercially produced patterns are designed to fit the _____ figure.
8. The template from which the parts of a garment are traced onto fabric before being cut and assembled is called a/an _____.

► Part Three: Short Answer

Instructions: Answer the following.

1. List five common body measurements.

2. Patterns can be altered or adjusted in three main ways. List and describe each.

3. Fit transmits a message to others about the wearer. Typical fit issues are garments that are “too tight,” “too loose,” or “too big.” Select one of these messages and describe what is transmitted about the wearer.

ALTERATIONS

◆ Most bridal dresses, regardless of the size ordered, will require alteration to fit each bride.

◆ Alteration is changing or revising a pattern or garment to suit individual size or desires. A person must drape, lay out, cut, sew, alter, and repair without ruining the fabric. Alterations are performed in the following categories:



- Bridal
- Couture or custom
- Costume
- Leather and suede
- Museum restoration

FIT

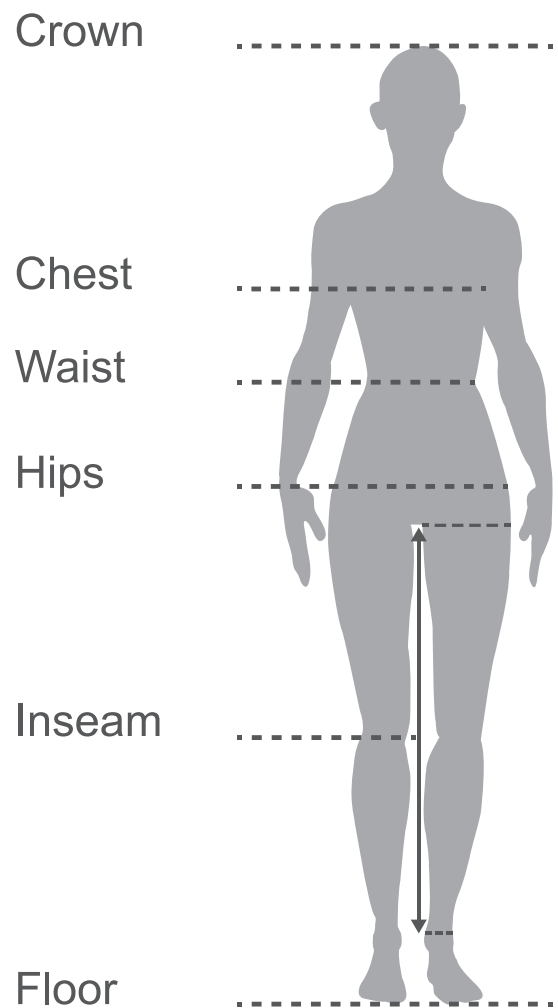
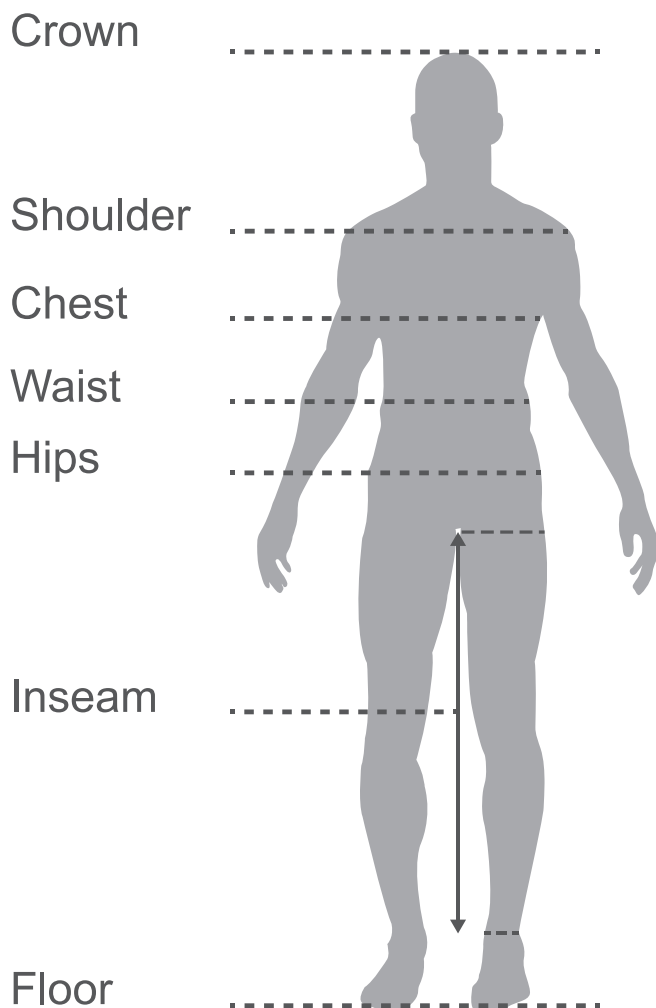
Fit is the correct size or shape of a garment that is becoming to the wearer; it requires an adjustment to the garment's proportions. Fit transmits a message to others about the wearer.



- ◆ Too tight—Clothes that fit too tightly may convey “cheapness” or may highlight body areas that a person does not wish to highlight. Depending on the situation, clothing that is too tight can be viewed as unprofessional.
- ◆ Too loose—Clothes that fit too loosely may convey sloppiness or being too casual. Depending on the situation, clothing that is too loose can be viewed as unprofessional.
- ◆ Too big—Oversized clothing, on a petite figure, can be overwhelming to the body, can make a person look childlike, or can visually “add weight” to the wearer.

BODY MEASUREMENT CHARTS

Use a measurement chart, such as the one illustrated here, to capture body measurements for you or for a client.



WHY TAKE MEASUREMENTS?

This tailor's mannequin is proportioned for a specific standard size, such as women's size 8. To create a garment that fits women close to size 8, you need to measure and alter the pattern or garment to each client. For accuracy, the measurer must ensure that the tape measure is parallel to the floor.



MEN'S MEASUREMENTS

Measure the circumference of the neck at the base, with the tape resting at the shoulders. Measure the sleeve length from the joint of the shoulder following a bent arm to the wrist bone.



WOMEN'S MEASUREMENTS

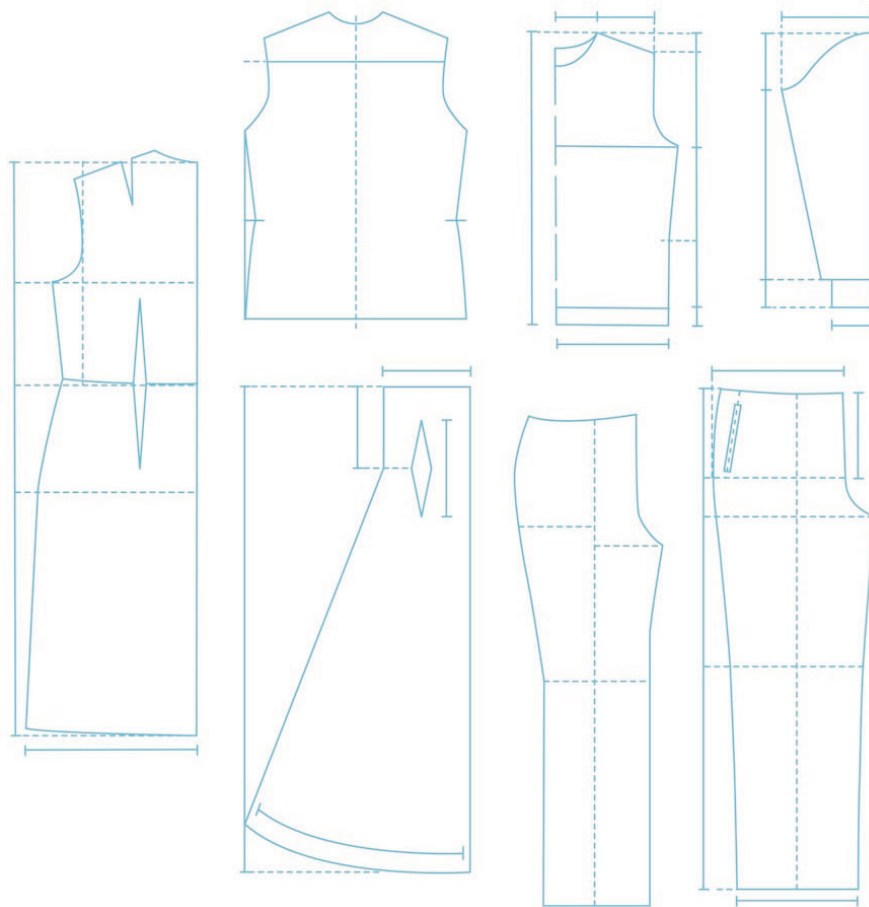
Measure the circumference of the waist at the natural bend of the body or where the waist is smallest: about 1 inch above the navel. The preferred way to measure sleeve length is from a bent arm position by placing the arm on the hip. What could happen if the tailor uses the measurement shown in this image?



PATTERN ALTERATIONS

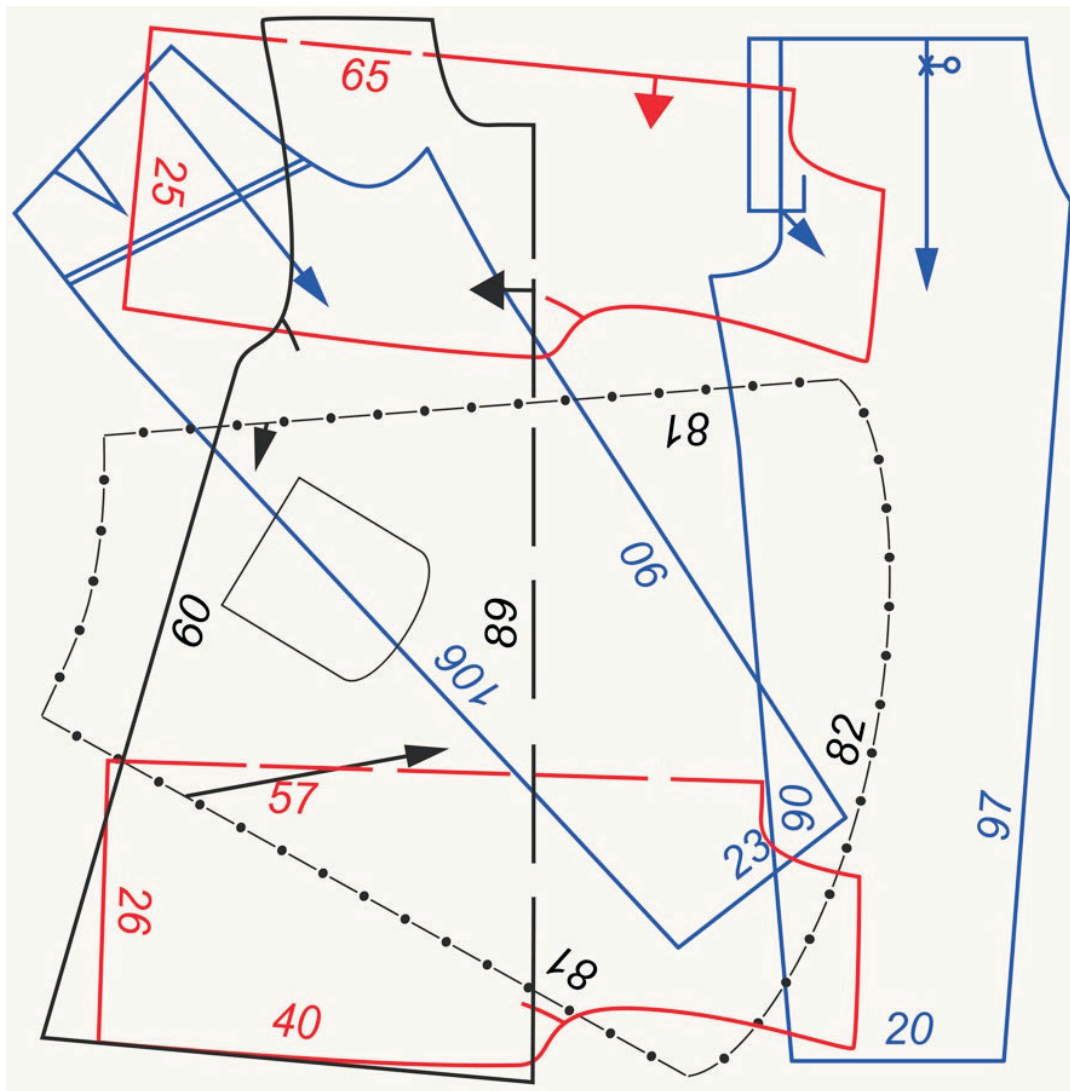
Patterns can be altered or adjusted in three main ways:

1. Fold out excess fullness to decrease the dimensions.
2. Slash and spread an area of the pattern to increase dimensions. (Or slash and overlap to decrease the dimensions.)
3. Redraw darts or seamlines.



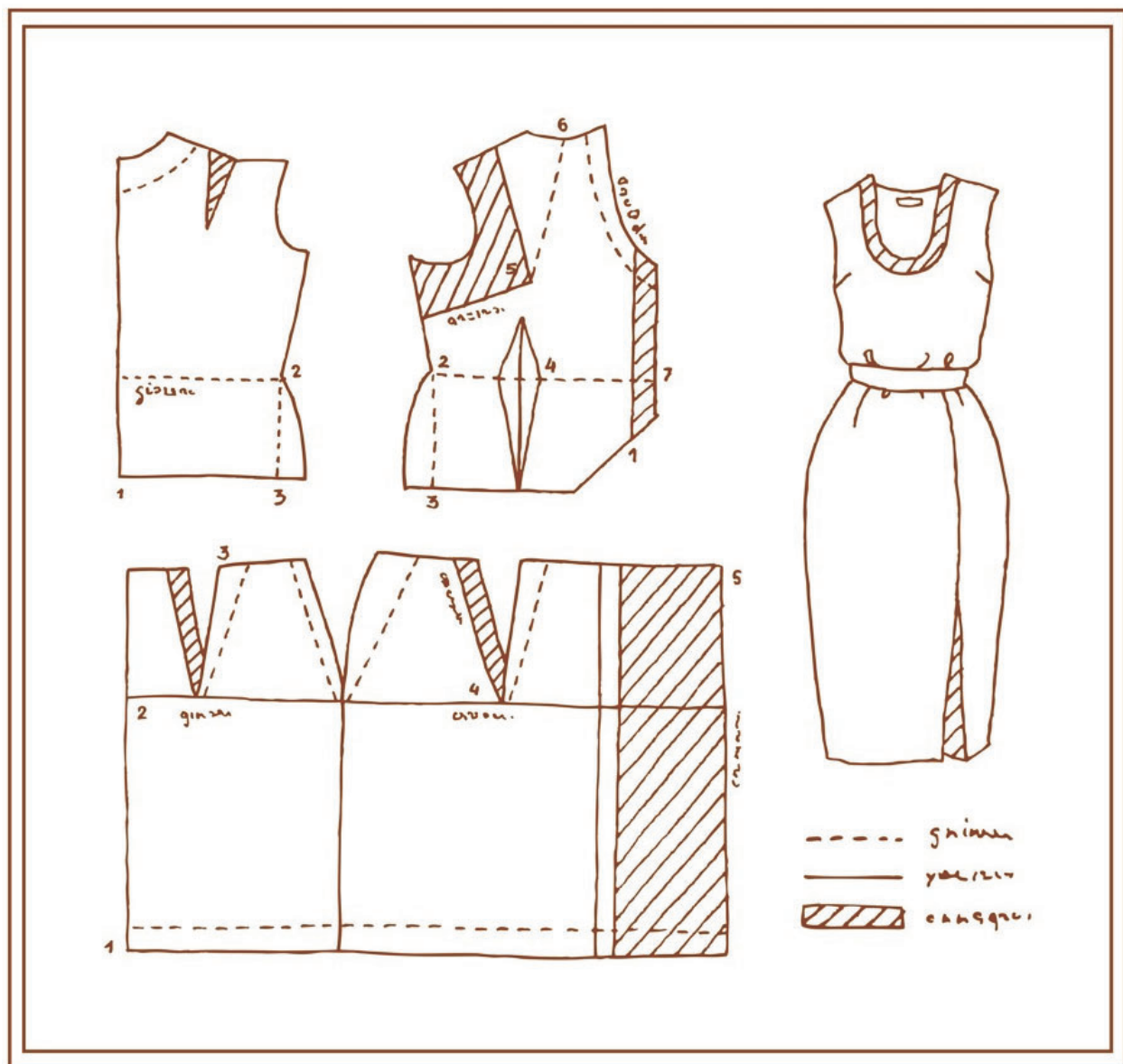
ALTERATION LINES ON PATTERN TISSUE

Can you spot the alteration lines on one of these pattern pieces? Alteration lines are double lines shown on certain pattern pieces indicating where the pattern should be adjusted before cutting.



DART ALTERATIONS

The tailor's pattern darts shown here include bust darts, bodice/waistline darts, and shoulder darts. Darts are one way that you can create shape and great fit in your garments.



BLUE JEAN FUNCTIONAL AND NON-FUNCTIONAL REDESIGNS

Levi's added a rivet to the stress point on the pocket of their jeans years ago; this functional alteration has become a characteristic symbol of Levi's pockets. Many embellishments—usually non-functional—are also used on blue jean pockets.



REPAIR

To repair is to restore a garment or a feature of the garment to its original state. Repairs can be done by hand or on a machine.



Taking Body Measurements

Purpose

The purpose of this activity is to take and record an individual's body measurements.

Objectives

1. Take and record body measurements.
2. Find a pattern close to your size.
3. Compare your measurements to the pattern you have chosen.

Materials

- ◆ lab sheet
- ◆ class notes
- ◆ VM-A
- ◆ writing utensil
- ◆ measuring tape
- ◆ full-length mirror

Procedure

1. Review your class notes about taking accurate body measurements.
2. Watch "How to Take Your Measurements for Sewing" at https://www.youtube.com/watch?v=T5ftYo_h3A.
3. Work with a partner to take and record each measurement. Take measurements in English Standard (ft = feet, in = inch) and in metric (m = meter, cm = centimeter) units. Use VM-A, and/or the YouTube video, as a reference point for measurements. Use the full-length mirror to ensure that measurements are parallel with the floor



Height	_____ ft	_____ in
	_____ m	_____ cm
Head circumference	_____ in	_____ cm
Neck circumference	_____ in	_____ cm
Bust/chest circumference	_____ in	_____ cm
Sleeve length	_____ in	_____ cm
Waist circumference	_____ in	_____ cm
Hip circumference	_____ in	_____ cm
Inseam	_____ in	_____ cm
Center back to waist	_____ in	_____ cm
Waist to knee	_____ in	_____ cm
Waist to floor	_____ in	_____ cm

4. Find a pattern (envelope, online example) close to your size, and record the following information:

- Pattern company: _____
- Pattern number: _____
- Pattern size: _____
- Pattern measurements:

Bust/chest	_____ in	_____ cm
Sleeve length	_____ in	_____ cm
Waist circumference	_____ in	_____ cm
Hip circumference	_____ in	_____ cm
Center back to waist	_____ in	_____ cm
*Other: _____	_____ in	_____ cm
*Other: _____	_____ in	_____ cm

[*NOTE: Include any measurements critical to the selected pattern. For example: Hip at 9 inches below the waist or finished back length from base of neck to hem.]

5. Use the measurements from Steps 3 and 4. Compare and contrast your actual measurements to those of the pattern.
 - a. What alterations, if any, would need to be made to the pattern pieces?
 - b. List any measurement variations not accommodated by the “ease” built in to the measurement procedure.
6. Turn in your completed lab sheet to your instructor.

Redesign a Shirt

Purpose

The purpose of this activity is to redesign a shirt to update the style.

Objectives

1. Take a “before” photo of your shirt.
2. Plan the redesign of a shirt to update the style.
3. Gather available materials, resources, and tools.
4. Take your measurements.
5. Make the alterations.
6. Take an “after” photo of your redesign.
7. Write two captions for the “before and after” photos, or write a paragraph to accompany your sketch describing the alterations made to the shirt.

Materials

- ◆ button-up long sleeve shirt or an oversized T-shirt
- ◆ scissors
- ◆ paper
- ◆ lab sheet
- ◆ writing utensil
- ◆ tailor’s chalk or marking pen
- ◆ measuring tape
- ◆ pins and pincushion
- ◆ seam ripper, optional
- ◆ camera



Procedure

1. Review your class notes about alterations and redesign planning. The goal of this lab is to shorten the sleeves and the body length of a button-up shirt to update the style.
2. Try on the shirt, wrong side out. Button the buttons. Determine what needs to be altered: sleeves too long, body too big, shirt too long? Take a “before” picture of your shirt right side out. Then wash and dry the shirt before altering.
3. Take shirt measurements. (Work with a partner to take each other’s measurements.)
 - a. Measure the shirt’s sleeve length from the shoulder to the wrist or cuff.
Total sleeve length = _____ inches
 - b. Measure the shirt’s length from the center back neckline to the hem. The shirt should be buttoned up and laying flat.
Total shirt length = _____ inches
4. Take your measurements.
 - a. Measure the length from your shoulder to just above your elbow.
Your shoulder to elbow length = _____ inches
 - b. Measure from your center back neckline to the desired length of the redesigned shirt.
Your center back neckline to the new hem = _____ inches
5. Plan the redesign.
 - a. Sleeve length: How much would you shorten the shirt’s sleeves? You have your measurement from shoulder to elbow: Do you want $\frac{3}{4}$ -sleeves, elbow-length sleeves, short sleeves, cap sleeves, or sleeveless? If the sleeve tapers to a cuff, the width of the sleeve at the length you desire may need to be altered.
 - b. Body length: How much would you shorten it (the shirt’s body length)? You have your measurement from the center back neckline to the desired length in back: Do you want the back and the front length to be equal? How would the hem be finished? Would you use any trims or buttons or excess pieces of the shirt for decoration?
 - c. Embellishment: How would the finishing details be accomplished? Sketch your design to show embellishments: trims, appliqués, sequins, cuffs, repurposed shirt scraps, etc.
6. On your paper, list the materials, trims (e.g., ribbon, lace, and seam binding), buttons, and threads that you will use to alter the shirt.
7. Gather the materials and tools to redesign the shirt.
8. Make the alterations. Use the measurements you took in Steps 3 and 4. To keep the fabric flat and easy to stitch, press as you work.
 - a. Measure the shirt’s sleeve to match the point of your desired sleeve length. Mark it with pins. Then, on the wrong side of the shirt’s sleeve, mark a line $\frac{1}{2}$ inch longer than the pin line. Mark it with tailor’s chalk or a marking pen. Do this on both sleeves.

- b. Cut the sleeves off at the marked line. Save any buttons or other trims.
 - c. With the shirt laying flat and buttoned up, measure the center back to a spot that matches your desired length measurement.
 - d. Mark the front and back shirt hem at 2-inch intervals with pins. On the wrong side of the shirt's front and back, mark a line $\frac{1}{2}$ inch longer than the pin line. Mark it with tailor's chalk or a marking pen. Do this on the front and back.
 - e. Cut the front and back body lengths on the marked lines. (You have removed part of the front and the back body of the shirt.) Save any buttons or other trims.
 - f. Hem the sleeves and the body of the shirt.
 - g. Embellish the shirt as planned.
- 9. Take an "after" photo of your redesigned shirt.
 - 10. Write two captions for the "before" and "after" photos, or write a paragraph to accompany your sketch describing the alterations made to the shirt.
 - 11. Display/model your redesigned shirt.
 - 12. Turn in your completed lab sheet and your redesigned shirt to your instructor.