

Sewing: Lab Projects

Unit: Clothing & Textiles

Problem Area: Basic Sewing Techniques

Lesson: Sewing: Lab Projects

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

- 1 Interpret a pattern envelope.**
- 2 Use measurement tools.**

- **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>.

“Fabric Width Conversion Chart,” *Butterick.McCall Pattern Company*, Accessed May 22, 2019. <https://butterick.mccall.com/size-fit-charts/fabric-width-conversion-chart>

“How to Read a Sewing Pattern,” *wikiHow*. Accessed May 19, 2019. <https://www.google.com/search?q=how+to+read+a+sewing+pattern+wiki+how&ie=&oe=>

“How to Read a Sewing Pattern: the Instructions,” *Hobby Lobby*. Accessed May 19, 2019. <https://www.youtube.com/watch?v=DQFvyaFv6NE>

“How to Use a Sewing Pattern: Beginners’ Guide,” *SimplySewing*, Accessed May 21, 2019. <http://www.simplysewingmag.com>

Weber, Jeanette. *Clothing: Fashion, Fabrics, and Construction*, 5th ed. Glencoe/McGraw-Hill, 2009.

Westfall, Mary G. *Successful Sewing*, 7th ed. Goodheart-Willcox, 2013.



■ **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 lines | ▶ kilameter |
| ▶ buttonholes | ▶ meter |
| ▶ center front or back | ▶ metric system |
| ▶ center fold | ▶ mile |
| ▶ centimeter | ▶ milimeter |
| ▶ cutting layout | ▶ notions |
| ▶ dart | ▶ notches |
| ▶ dots, squares, and triangles | ▶ pattern |
| ▶ English system of measure | ▶ pattern envelope |
| ▶ fabric key | ▶ place on fold |
| ▶ fold line | ▶ placement lines |
| ▶ foot | ▶ ruler |
| ▶ grain line | ▶ stitching line |
| ▶ guide sheet | ▶ view |
| ▶ hemline | ▶ yard |
| ▶ inch | ▶ yardstick |

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

Find out how many of your students have ever sewn or ever been to a fabric store. Take your students on a field trip to the fabric store if possible. If not possible have a variety of old pattern books set out and let your students explore these. After some time start with the information on a pattern. Display VM–A.

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Interpret a pattern envelope.

Anticipated Problem: What information is presented on a pattern envelope?

- I. How to use a pattern.
 - A. The pattern envelope shows photos or sketches of the different garments that can be made from the pattern. The **view** is the description of styles contained in the pattern envelope.
 1. The front of the envelope provides the pattern number the figure size and the price of the pattern. Several garments may be shown on the front as options in the pattern. The pictures provide an idea of the fit of the finished garment.
 2. The back cover provides the design variations or “views”. The back will provide a view of the back of the garment. A list of fabrics suitable for the garments in the pattern will be listed. The back of the envelope also lists the **notions**, (items sewn or glued to garments for purpose of finishing or embellishing them) required for the garment and any trims needed or optional. One of the most important parts of the back of the envelope is the body measurement chart which helps align the sizes to body size and ready to wear. The back also gives finished garment measurements so that prior to making the garment one knows if the back length is too long or short along with other important measurements. This provides the seamstress the ability to adjust pattern pieces prior to cutting. The back of the envelope is also the location of the yardage chart, the chart that tells the seamstress how much fabric for their view whether using 36" fabric or 45". The length of fabric will be determined by the width of fabric. Plaids and strips will require additional fabric.
 - B. Reading the guide sheets. The **guide sheet** gives step-by-step instructions on how to sew the pattern. The guide sheet is a large direction sheet with the front providing cutting layouts for all the different sizes and fabric widths for the pattern. It is best to circle the cutting layout being used. There is also a section on the front telling how to lengthen and shorten fabric pieces. The back of the sheet are the step-by-step directions. Follow the directions carefully, making sure to follow only directions for the item or view being made. There will be a **fabric key** (which shows how shading and texture indicate the right and wrong side of the fabric) also found on the back of the directions.
 - C. Pattern pieces. The pattern pieces will all be marked with a name and then a number or letter. Identify the pattern pieces used for the garment being made. Locate these pattern pieces, cut them out and then iron them to lay flat. If working in a classroom put your name on each piece so patterns do not get mixed up. Some of the pattern pieces will have symbols and lines that will help guide you

when putting the pattern pieces together. Some pieces will also have sewing markings. The following is a list of the general pattern symbols and lines;

1. The **grain line** is a heavy solid line with arrows at each end. This line should be on all pattern pieces not placed on the fold. The grain line arrow is to help make sure and place the piece with that line on the grain unless otherwise noted.
 2. The **cutting line** is a heavy line that outlines the pattern pieces. If a piece has multiple sizes it will have multiple cutting lines.
 3. Some of the pattern pieces will have notches on them. These **notches** are diamond shaped symbols that extend outside the cutting line. Always cut around the notches as they will help you match pattern pieces when sewing.
 4. The pattern may have other symbols (square, dots, triangles) used for matching and joining pattern pieces.
 5. The **center front** will be marked on the pattern with a solid line, if brackets appear on this line it should be placed on the fold.
 6. There may be a **place on fold line** if is a bracketed grain line found on the edge of the piece that needs to be placed on the fold.
 7. A **fold line** is a solid line that shows where fabrics will be folded to make a finished edge. The hemline is a good example of a fold line.
 8. The **stitching line** is a broken line that shows where to sew.
 9. The **hemline** is a solid line that indicates the finished hemline and the depth of the hem.
 10. There are **alteration lines**, double parallel lines that show the best place for pattern pieces to be lengthened or shortened. These are not found on all pieces.
 11. The **placement lines** are lines to show where pieces like pockets should be placed.
 12. Pattern pieces will have **buttonhole markings** which show the exact location and length of the buttonholes.
 13. Some patterns have **dart markings** which are triangle or diamond shape markings indicated by dots and two broken lines. These markings will help make sure both darts are the same.
- D. The next step is to use the pattern pieces. First you need to make sure all pattern pieces for the garment view being made are cut out and ready to use, return the rest of the pieces to the envelope. It is best to put your name on the piece. Flatten out the pattern pieces and if they are not good and flat iron out the wrinkles. Make sure and circle the layout being used, check pieces, fabric width and size. Pin the pieces to the fabric following the layout. Mark the symbols needed with a fabric marking pen or tracing wheel and paper. Cut out the pattern on the cutting lines.

Teaching Strategy: *Many techniques can be used to help students master this objective. Provide the class a variety of old pattern envelopes and pattern pieces. Working in pairs have the students use these patterns as you go through the lesson,*

letting students locating each piece as you are talking about it. The students will have a lot more questions as you go through the material if they have patterns in front of them. If in need of patterns ask your local fabric center for some old ones they are eliminating. Display VM–B, VM–C, VM–D, and VM–E.

Objective 2: Use measurement tools.

Anticipated Problem: How are measurement tools used in sewing?

- II. In general the world uses two different systems of measure, the metric system and the English system of measure.
 - A. The **metric system** of measure is a system of measurement in which the basic units are the millimeter, centimeter, meter and the kilogram. In this system the ratios between units of measurement are multiples of ten. In this unit we are only concerned with the meter and the units related to that. A **meter** is a unit of length in the metric system equal to 39.37 inches. A **centimeter** is a length equal to one hundredth of a meter. A **millimeter** is a thousandth of a meter and a **kilometer** is equal to 1000 meters.
 - B. The **English system of measurement**, is used in many countries including the United States and the units are inches, feet, yard, and mile. In this unit we are only concerned with the measure in feet and the units related to that. The standard units related to length that we use in measuring fabrics and patterns are inches, feet and yards. A **foot** is 12 inches. A **yard** is 36 inches. Fabric is sold by the yard. Tools we use with the English system are the **rule** which is always 12 inches, the fabric tape measure which is generally 60 inches and the **yardstick** which is a usually a **yard** or 36 inches. It is important that you become comfortable with converting inches to feet and feet to yards.

English	Metric
Length:	Length:
1 foot (ft) = 12 inches (in)	10 millimeters (mm) = 1 centimeter (cm)
1 yard (yd) = 36 inches	10 centimeters = 1 decimeter (dm)
1 mile (mi) = 5280 feet	100 centimeters = 1 meter (m)
1 mile = 1760 yards	1000 meters = 1 kilometer (km)

Some comparisons in lengths.
1 inch = 2.54 cm
1 foot or ruler = 30.48 cm
1 60 inch tape measure = 152 cm
1 yard or yardstick = 36 inches
1 meter = 39.37 inches
1 mile = 1609.34 meters

Teaching Strategy: Many techniques can be used to help students master this objective. Assign LS–A. Display VM–F

- **Review/Summary.** Use the student learning objectives to summarize the lesson. Have 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 also 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: Completion

1. 36
2. grain line
3. 60
4. placement lines
5. buttonhole
6. 12

Part Two: True/False

1. F
2. T
3. F
4. T
5. F
6. F

Part Three: Short Answer

1. Tape measure, more flexible.
2. Identify the pattern pieces, locate pattern pieces, cut out pattern pieces, flatten or iron pattern pieces, put name on pattern pieces, pin pieces to fabric, mark pattern pieces.
3. The wider the fabric the more pieces that can be laid side by side

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► Part One: Completion

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

1. The yardstick is _____ inches long.
2. A heavy solid line with arrows at each end is the _____.
3. The average tape measure comes _____ inches long.
4. Lines to show where pieces like pockets should be placed are _____.
5. Patterns with buttons will have markings which will show the exact location and length of the _____.
6. The ruler is _____ inches long.

► Part True: True/False

Instructions: Write *T* for true or *F* for false.

- ____ 1. A fold line is a dotted line that shows where fabrics will be folded to make a finished edge.
- ____ 2. The view is the description of styles contained in the pattern envelope.
- ____ 3. The metric system and English system of measure are identical.
- ____ 4. Generally fabric tape measures have inches on one side and centimeters on the other.
- ____ 5. The back of the pattern envelope only has the back view of the garments.
- ____ 6. The place on fold line, which is a bracketed grain line found on the edge of the piece that needs to be placed on the fold is a cutting line.



PATTERNS

Sewing patterns is an exciting process.



PATTERN ENVELOPE CHART

The pattern envelopes are very informative.

7264 Misses' and men's robe in two lengths: Floor- or knee-length robe has long sleeves, a tie belt with side leeps, and patch pockets.

Suggested fabrics: cotton or cotton blends, flannel, and chambray

Sizes	Small	Medium	Large	X-Large	XX-Large	
Bust/Chest	31½–32½	34–36	38–40	42–44	46–48	Inches
Hip	33½–34½	36–38	40–42	44–46	48–50	Inches

Combinations: B (Small, Medium, Large) C (X-Large, XX-Large)

View A—Robe	Floor Length				
45 inches***	5 ¹ / ₈	5¼	5¼	6 ⁷ / ₈	7 Yards
60 inches***	4¼	4 ³ / ₈	4 ³ / ₈	4 ³ / ₈	4½ Yards

View B—Robe	Knee length				
45 inches***	4 ¹ / ₈	4¼	4¼	5 ⁷ / ₈	6 Yards
60 inches***	3	3¼	3½	5 ⁷ / ₈	4 Yards

***With Nap ***With or Without Nap**—Use “With Nap Yardages and Layout” for pile or one way design fabrics. Additional fabric may be needed to match stripes or plaids.

Notions: Thread, 4 yards fusible interfacing

Finished garment measurements

Measurement at bust/chest line

Robe A or B	47	50½	54½	58½	62½	Inches
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Measurement at hipline

Robe A or B	48	51½	55½	59½	63½	Inches
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Back length from normal neckline

Robe A	56	56½	57	57½	58	Inches
Robe B	40	40½	41	41½	42	Inches

PATTERN LAYOUT

Layout the pattern very carefully.



MARKING A PATTERN

After laying out the pattern, you have to mark the pieces.



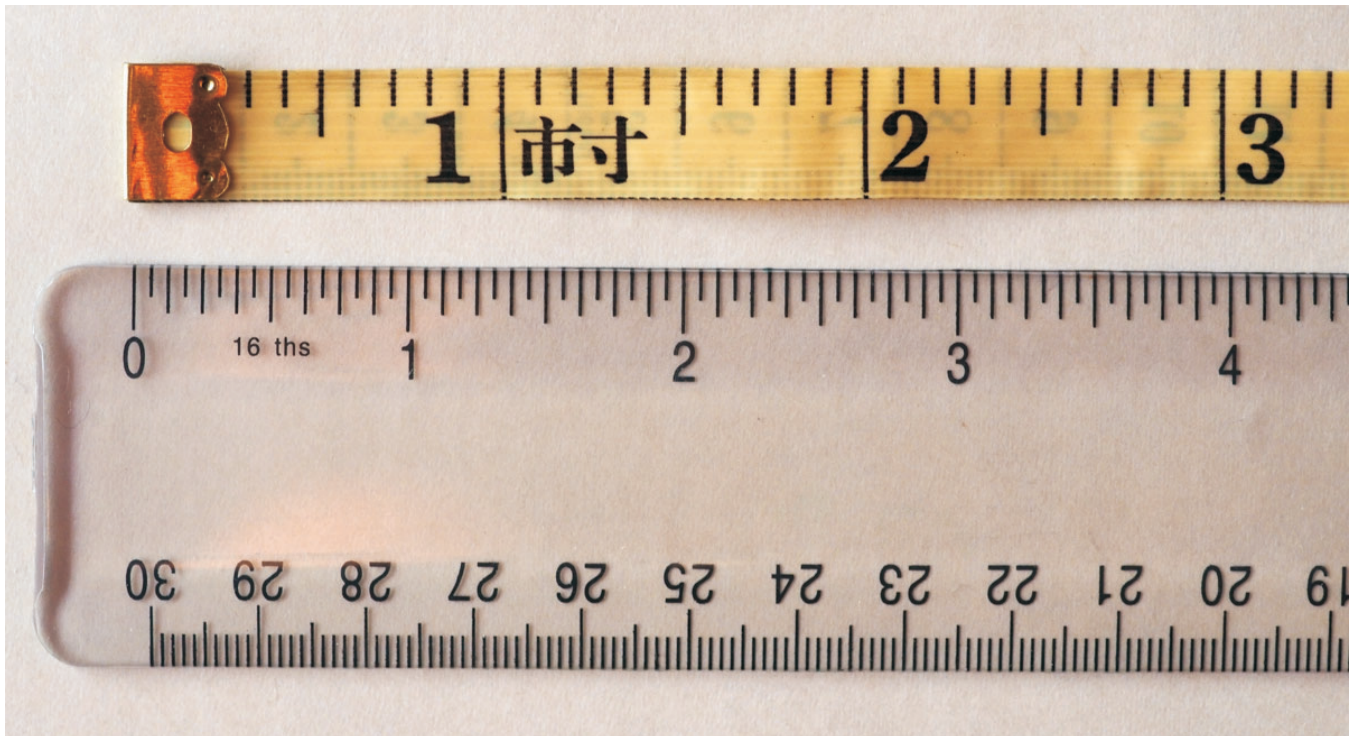
BUTTONHOLES MARKINGS

Buttonholes need to be marked on your fabric pieces.



COMPARING INCHES AND CENTIMETERS

Rulers and tape measures often have both inches and centimeters.



Math for Patterns

Purpose

The purpose of this activity is to practice math skills for patterns

Objective

Identify the correct answers for the problems

Materials

- ◆ lab sheet
- ◆ notes
- ◆ pencil

Procedure

1. Answer the questions
2. Turn the sheet in to the instructor.

English-Length-Math

1. 3 yards = _____ feet
2. 36 inches = _____ feet
3. 36 inches = _____ yard
4. 48 inches = _____ yards
5. 60 inches = _____ feet



6. 18 inches = _____ yard
7. 6 inches = _____ foot
8. 9 inches = _____ yard
9. 56 inches = _____ yards
10. 72 inches = _____ feet
11. Which is longer a meter or a yard?

12. Which is longer a centimeter or an inch?

Math for Patterns

1. 1
2. 3
3. 1
4. $11/3$
5. 5
6. $1/2$
7. $1/2$
8. $1/4$
9. $1\ 1/2$
10. 6
11. meter
12. inch