

## Lesson Plans

#7

**CONCEPTS: Rotary Cutting 101**

**OBJECTIVE: After the demonstration, students will apply the use of the rotary cutter by cutting a 4" X 4" finished square. Students will also understand the parts of the fabric.**

**SUPPLIES:**

- Pizza cutter and a pizza pan**
- Rotary cutters**
- Mats**
- Rulers**
- Scissors**
- Templates**
- Rotary Cutting 101 worksheet for each student.**

**INTRODUCTION AND MOTIVATOR: Hold up the pizza cutter. What is this used for? Most should answer – to cut a pizza.**

**Hold up a pizza pan. What is this used for? Most should answer – make a pizza on and put into the oven.**

**Hold up the rotary cutter and ask what is this used for?**

**Then hold up a mat and ask what is this used for?**

**Rotary cutters and mat are used to cut fabric and make quilts. Just like the pizza cutter and pizza pan is used to cut and make pizza.**

**Quilt makers have been using scissors and templates to cut quilt pieces for centuries. (Show scissors and some templates)**

**When the rotary cutter was introduced to quilting in the early 1980's, cutting and piecing quilt changed radically and quickly.**

ACTIVITY	PROCEDURE	TIME
Safety first	<p><i>Each student will take notes on the worksheet and draw and label the parts of the fabric. (individual)</i></p> <p>A lecture/demo will be given on the rotary cutter, mat and rulers.            Safety first:</p> <ol style="list-style-type: none"> <li>1. Keep the rotary cutter safety shield on when not in use.</li> <li>2. Roll the cutter <i>away</i> from yourself. Plan the cutting so your fingers, hands, and arms are never at risk.</li> <li>3. Keep the cutter out of the reach of children.</li> <li>4. Dispose of used blades in a responsible manner. Wrap and tape cardboard around them before placing them in the garbage, or better yet, recycle them. There are tools that you can buy to sharpen the blades.</li> </ol>	20 min.
Get ready to cut	<p>Always stand to cut. You will have more control than if you are sitting. Assume a comfortable stance with you head and body centered over the cutting area. Many quilters find it is more comfortable and they can work longer if the table is higher than a normal sewing table. They don't have to bend over as they cut.</p> <p>When making the cuts, place the fabric to your right and the ruler to your left. This is opposite if you are left handed.</p>	10 min.
Importance of the fabric grain line.	<p>Each student will draw the parts of the fabric and identify each part.</p> <p>Fabric is made of threads woven together at right angles. The threads that run the length of the fabric, parallel to the selvage, are called <b><i>the lengthwise grain.</i></b></p> <p>The threads that run across the fabric width, from selvage to selvage, are called the <b><i>crosswise grain.</i></b></p> <p>All other grains are called the <b><i>bias.</i></b> <b><i>A true bias</i></b> runs at a 45-degree angle across the intersection of the two straight grains. (Overhead of fabric grain lines)</p> <p>For all small pieces in a patchwork quilt, both types of straight grain are considered equal. For long strips for border, and lattice or sashing, it is best to use the lengthwise grain because it is more stable. Sometimes quilters prefer to cut on the cross grain for these strips because it require less yardage.</p> <p>Remember that BIAS stretches and STRAIGHT grain holds its shape. When possible cut fabric pieces with one or more edges aligned with the straight grain.</p> <p><b>NOTE:</b> The straight grain of the fabric should fall on the outside edge of any pieced unit.</p> <p><b>Demo:</b> show students how to cut straight strips using the rotary cutter, ruler, and mat.            Show students how to cut a perfect square – 4” X 4”</p>	20 min.

ACTIVITY	PROCEDURE	TIME
<p>Finished block vs. a cut block</p>	<p>A finished block is the size of the block after it is sewn into the quilt. You must always remember to include the seam allowance to the block. If you make a finished 4" X 4", you must remember to add the ¼" seam allowance on each side. Therefore, the block would be cut 4 ½" X 4 ½".</p> <p>Each student will select a ruler, a mat, and cut a 4" X 4" <b>finished</b> block. The students will have a hand out with an exact 4 ½" X 4 ½" block outline on it so the students can compare their square. <i>(individual)</i></p>	<p>20 min</p>
<p>Square rulers and the corner to corner line.</p>	<p>Students will pair up and each group will take a square ruler. What is the diagonal line for that goes from corner to corner?</p> <p>Let pairs respond to the question.</p> <p>The diagonal line from corner to corner will help you to line up a perfect square to cut it in half. Each pair of students will cut a perfect square and then cut it in half using the diagonal line on ruler. <i>(group)</i></p>	<p>20 min.</p>

**SUMMARY:** Review the safety rules of using the rotary cutter. The introduction of the rotary cutter in the early 1980's has made it much easier, faster, and more accurate to make a quilt.

**EVALUATION:** Students will turn in their 4" X 4" finished square. Students will turn in worksheet on Rotary Cutting 101.

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**PROCESS QUESTIONS:**

**Why do you need to use a cutting mat with a rotary cutter?**

A rotary cutter has a very sharp blade. It will damage any surface it cut into. A special mat is designed to repair itself and not dull the knife edge on the rotary cutter.

**How much seam allowance is added to each side?**

$\frac{1}{4}$ " seam allowance is added to each side of a finished block measurement.

**What is a normal seam allowance used in making a quilt block?**

A normal seam allowance used in quilting is  $\frac{1}{4}$ ".

# Rotary Cutting 101

Name: \_\_\_\_\_

Period: \_\_\_\_\_

1. Quilters have been using \_\_\_\_\_ and \_\_\_\_\_ to cut quilt pieces for centuries.
2. Speed piecing was introduced by \_\_\_\_\_ in the late 1970's.
3. Speed piecing became more and more popular because the strips were much easier to cut with a \_\_\_\_\_.
4. Name the three tools you need to do speed piecing:
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
5. **SAFETY FIRST!!!!!!!!!!!!!!!!!!!!!!!!!!!!**
  - A. The rotary cutter has a very \_\_\_\_\_.
  - B. You can \_\_\_\_\_ with just one quick unsafe move.
  - C. If you are not \_\_\_\_\_ careful, you can cut other people or objects that you had \_\_\_\_\_ intension of \_\_\_\_\_.
6. Before you begin:
  - A. Keep the rotary cutter safety \_\_\_\_\_ on when \_\_\_\_\_ in use.
  - B. Roll the cutter \_\_\_\_\_ from \_\_\_\_\_. Plan the cutting so your \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ are never at risk.
  - C. Keep the cutter out of reach of \_\_\_\_\_.
  - D. \_\_\_\_\_ of used \_\_\_\_\_ in a responsible manner. \_\_\_\_\_ and \_\_\_\_\_ cardboard around the blade before placing it in the \_\_\_\_\_. **OR RECYCLE THEM.** There are also sharpening tools available to \_\_\_\_\_.

# KEY:

## Rotary Cutting 101

Name: \_\_\_\_\_

Period: \_\_\_\_\_

1. Quilters have been using scissors and templates to cut quilt blocks for centuries.
2. Speed piecing was introduced by Barbara Johanna in the late 1970's.
3. Speed piecing became more and more popular because the strips were much easier to cut with a rotary cutter.
4. Name the three tools you need to do speed piecing:
  1. Rotary cutter
  2. Cutting mat
  3. Acrylic ruler
5. **SAFETY FIRST!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!**
  - A. The rotary cutter has a very sharp blade.
  - B. You can cut yourself with just one quick unsafe move.
  - C. If you are not extremely careful, you can cut other people or objects that you had NO intension of slicing.
6. Before you begin:
  - A. Keep the rotary cutter safety shield or cover on when not in use.
  - B. Roll the cutter away from yourself. Plan the cutting so your fingers, hands, and arms are never at risk.
  - C. Keep the cutter out of reach of children.
  - D. Dispose of used blades in a responsible manner. wrap and tape cardboard around the blade before placing it in the garbage.  
**OR RECYCLE THEM.** There are also sharpening tools available to buy.