## LESSON 16 LEVEL B GEOMETRIC SHAPES

WHAT YOU WILL LEARN: using only squares and triangles to make patterns

WHAT YOU WILL NEED: white construction paper, 30 x 30 cm (12" x 12"); two or more colored papers, any color, 15 x 15 cm (6" x 6"); pencil; scissors; straight edge ruler; paste or glue

"TIPS": Look at a variety of quilt patterns that use only squares and triangles to make designs and patterns. Figure out how each block or pattern was made. If you see a parallelogram, perhaps it was made by two triangles. Look carefully.

## **WORDS TO LEARN:**

parallelogram a 4-sided shape

whose opposite sides are parallel and equal



## GEOMETRIC QUILT BLOCKS



Typical Amish Quilt

**Getting Started:** Patchwork quilts have been made by people of many cultures. It is a thrifty way to use... or reuse...small pieces of cloth to make a useful household object. Some of these quilts are actually beautiful works of art as well as being useful blankets. Many

are made by repeating blocks of the same pattern, over and over. The blocks are sewn together and given a border of another fabric. Then another piece of cloth and padding between is added.. The final step is to stitch or tie the "sandwich" together in still another decorative way. You will do the first part of making a geometric patchwork quilt, a pattern block design.

1. Fold the large square of white paper in half. Bring the fold up even with the top edge and crease it again. Unfold and smooth the paper (see diagram a.)



2. Give the paper a quarter turn and repeat what you just did to make the paper look like diagram b., 16 small squares. Set the white paper aside.



3. Fold the smaller colored paper in half; unfold it. Make a quarter turn, fold it in half, and unfold it.

4. Now, use a ruler or other straight edge and a pencil to draw straight lines from one corner to the opposite corner of each triangle. Each square should make two triangles. (If your design needs more than 8 triangles, you will need to use another piece of the smaller square paper, cut the same way.)

5. Play with these triangles to make a pattern on the white paper. Arrange them one way, then another; then, a third way, each a different pattern.

6. When you find a pattern you like best, fasten the triangles down, one at a time, with a tiny dab of glue.





Teacher Examples



**CLEAN UP:** Are your fingers sticky? Then wash them. And guess what? Put away your materials. You're right!

**TALK ABOUT IT:** You tried out several patterns. How many more could you make with just the white and one color of paper? How would your design look with three more big blocks to make a much bigger quilt ? What if you could use two colors on the white background?

**MORE IDEAS:** Make another set of triangles and arrange them to make a different design. This time, use a colored paper for the background and a patterned paper (gift wrap, magazine, or wall paper) for the triangles.

**CONNECTIONS:** Find the next number series by discovering the pattern that follows, for example: 1, 4, 7, 10 \_\_\_\_\_ or 5, 10, 20, 40 \_\_\_\_\_. Make a series pattern for a friend to solve.

Read *My Grandmother's Patchwork Quilt* by Jane Bolton; *Tar Beach* by Faith Gold; *Luka's Quilt* by Georgia Gubak or *The Quilt Story* by Tony Johnson and Tomie de Paola.

