Title of Book: **Sam Johnson and the Blue Ribbon Quilt**
Author: **Lisa Campbell Ernst**
Publisher/Year: **Lothrop, Lee & Shepard Books, 1983**
ISBN: **978-0-688-11505-0**

Grade Levels for Recommended Use: 3-4

TEKS:

3.6 Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to:

> (A) classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language;

> (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories;

4.6 Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to:

> (A) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines;

> (B) identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure;

> (C) apply knowledge of right angles to identify acute, right, and obtuse triangles;

> (D) classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

Brief Summary: Sam discovers that he enjoys sewing while mending an awning that covers the pig pen. He attempts to join his wife's quilting club but is met with ridicule, so he gathers the town's men and starts his own quilting club. An unfortunate event occurs causing the two quilting clubs to have to work together to mend their quilts.

Materials needed: 6 inch squares of white construction paper (1 per student), 3 inch squares of dark construction paper (2 per student), 3 inch squares of light construction paper (2 per student), scissors (1 per student), glue sticks or liquid glue, notebook paper

Suggested Activity:

1. Read *Sam Johnson and the Blue Ribbon Quilt* by Lisa Campbell Ernst.
2. Pass out the listed construction paper materials and scissors to each student.
3. Instruct students to fold each colored square on the diagonal and cut on the fold to make triangles.
4. Discuss that all of the triangles will be *congruent*. Ask student what congruent means and discuss student responses.
5. Instruct students to take all of their triangles and fit them together however they would like into the white construction paper square without any of the pieces overlapping. DO NOT glue down. Explain that it's like a puzzle and that everyone's solution may look different.
6. Once all students have created a design, group four students together. Ask them to decide who's design they like the best from their group and then have all members of the group create that same design (each <u>group</u> can have a different design).
7. Pass out the glue sticks or liquid glue. Have each group of students glue down their agreed upon design.
8. Instruct students to take the four completed squares from their group and put them together to form one large square (making a mini quilt). Tape or glue the four pieces together.
9. Ask students to share geometrical observations about the quilts they just made. For example: It has parallel lines. It has right triangles. I see lots of quadrilaterals., It has two lines of symmetry., etc.
10. Instruct each group to work together to make a list of as many geometric observations about their quilt as they can on a sheet of notebook paper.
11. Once students have finished their lists, discuss the features of a riddle. Explain to students that as a group, they will work together to name their quilt design and then write a riddle using the observations they brainstormed.
12. Once all riddles are written, collect all of the quilt patterns and display on the wall. Have each group read their riddle to the class and let students try to match the riddle to the correct quilt.

References: Lesson adapted from:

Bresser, R. (2004). *Math and literature, grades 4-6 (2nd ed.).* Sausalito, CA: Math Solutions.

Adapted by: Kimberly Jones (2018)