Mathematics, Grade 7

Display: **Geometry of Stained Glass**



This activity will involve writing instructions to duplicate a stained glass design. Review the concepts of symmetry.

Begin with a large square of paper with one side between 18 and 36 inches. Fold the paper along one diagonal line of symmetry, making a triangle. Fold this triangle along its line of symmetry. Draw geometric shapes on this folded triangle and cut out the shapes. Make sure they don't overlap or you will end up with one big hole. The idea is to create a pattern with the geometric shapes. Cover these holes with colored tissue paper to make a "stained glass". Name the shapes created.

Write a detailed set of directions to duplicate this specific design. Do not include any diagrams. Use terms relative to your figure in your directions such as line segment, midpoint, vertex, baseline altitude, radius, and arc.

Have someone attempt to duplicate your design from your written instructions only. Evaluate your instructions based on the results of the trial duplication. Write edited versions of the instructions until they give the desired results.

Display both designs along with the instructions that created the duplicate.

FORTE: Mathematics, Grade 7 – Unit VII: Lesson 4