Megan Chapman February 9, 2009 Mrs. Henke-3rd grade Math Lesson

STANDARDS:

Geometry 3.4.8 Identify & draw lines of symmetry in geometric shapes (by hand or using technology). Geomentry 3.4.9 Sketch the mirror image reflections of shapes.

OBJECTIVES:

- 1. Students will review the properties of symmetric shapes during class discussion.
- 2. Students will construct a symmetric shape.

ASSESSMENTS:

- 1. Teacher will listen for appropriate responses during the class discussion.
- 2. Teacher will look for accurate lines of symmetry on the students' Valentine hearts.

MATERIALS:

10 pieces of red construction paper 9 pieces of white construction paper 10 pieces of pink construction paper Pencil Scissors Straight-edge

DESCRIPTION OF LEARNING ACTIVITY

2 for 2 (one addition, one subtraction problem) Daily word problem There will be no homework to check.

Motivational/Visual activity: I will tell the students I need their help finishing a really big project... creating our Valentines Day bulletin board!

Teach:

I will explain the importance of our hearts being perfect, and how I would like them to first practice on a different shape. I will ask the students what kind of figure the cutout piece is (A kite). I will tell them that it is a symmetric shape and ask them to explain what makes the kite symmetric, or how it has symmetry. I will ask the children to connect the dots on their kite and then draw the other half of the symmetric kite on the other (left) side. I will ask them to describe what they see. I will tell them that they pattern they have drawn is called the mirror image of the existing pattern. I will ask, "How are they alike?" (They are the same size and have the same shape). I will then ask, "How are they different?" (They face in opposite directions). The students will use their ruler to connect a pair of matching points (point B on the right side to point B on the left side). For each pair, I will have the students measure the distance (in cm) from each point to the fold line. I will ask what they can observe (The distance from one point to the fold line is the same as the distance from its matching point to the fold line). To conclude this discussion, I will remind the students that a shape is symmetric if it can be folded in half so that the two halves match, the fold line is called the line of symmetry, and that the mirror image of a design is the same size and shape as the design, but it faces in the opposite direction.

Practice: I will ask the students to open their Math Journal to page 147 where they will practice drawing the missing halves of symmetric figures. When they are through, I will ask them to raise their hand. When I come to check their completion, I want them to explain how they got arrived at their answer for problem 9. The student may then begin working their symmetric heart to put on the bulletin board. On their symmetric hearts, I want the students to draw the line of symmetry by using a black marker.

Apply: The students will begin working on Math Boxes 6.9. Before they begin, I will prepare them for any difficult problems or easily misunderstood questions on the page.

Closure: I will ask the students to give me example(S) of letters in the alphabet that have a line of symmetry. If we have time, I will have them come up to the board to draw the letter and show the line of symmetry. I will then ask them, "Which letters do not have a line of symmetry?" Assign homework: Home Link 6.9 (p. 287)