Lesson Title: Which is Larger?

Grade: 3rd/ 4th

Content Standard: 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. 3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.

Materials: Precut construction paper rectangles (size can be determined by need, but their dimensions should be such that the length of rectangle A > the length of rectangle B, and the width of rectangle A < the width of rectangle B. The areas of A and B should be close or the same such that their relative sizes are not apparent with a cursory glance. Rulers, scissors, tape, unifix cubes, centimeter cubes, popsicle sticks, pipe cleaners, blank paper

Shared experience and procedure details: Divide class into small groups of 2-4 students. Give each group two construction paper rectangles, one measuring 8" x 3" (6" x 4" for 3rd grade makes it easier to cut and match with a 2" x 12"), the other 2" x 12." Pose the question: Which rectangle is larger? Provide access to the following materials for the students to use: rulers, scissors, tape, centimeter cubes, unifix cubes, popsicle sticks, pipe cleaners (or insulated connecting wire).

Note: 5" x 5" squares are also available as a challenge for faster moving groups: Is this new square larger or smaller than the first two?

Possible Picture: Pictures may show the following attempts to answer question: 1. Cutting rectangles to make them congruent. 2. Measuring sides with ruler. 3. Measuring perimeter with tape, or pipe cleaners. 4. Tiling the areas with cubes. 5. Drawing lines on rectangles to make congruent pieces.

Possible People Talk: We cut them to make them match. We measured how far around to see which was bigger. We saw how many cubes would fit in each one. We multiplied to get the answer.

Feature Talk: side, length, width, height, two dimensional, same, different, match up, shape, change, measure, tile, count, cut

Possible Symbolic Representation:

2" x 12" = 8" x 3" (or = 6" x 4")

Picture symbols of tiles and how many fit in each shape.

Boroff, Guild, Byrns, Reinthal 1/12/17