Lesson Name: Making Sense of Area

Objective: Students will be able to use their knowledge of area to solve a multi-step problem.

Warm-up: (10 min)

-To begin, have each student use their white boards to draw 4 rectangles. On each rectangle, have students label the length and the width, which will be provided by you.

-Next, partner students up to solve the area of each rectangle.

-Go over examples to make sure that everyone remembers the fundamental concept of length x width.

Presentation: (10 min)

-First, present each student with graph paper so they can work along with you.

-Draw several patterns on the grid paper that are not rectangles

-Give a few minutes for the students to explore how to find the area of shapes that do not have a defined/clear length and width

-Have students share their solutions to the drawings with the class. Make sure you pick students that used different strategies. Remind students that they get demonstrate their knowledge is many different ways.

Controlled Practice: (10 min)

-Now, with partners, have students create their own shapes and have them find the area. Switch papers with their partners and check for accuracy. If partners do not agree, have them dialogue together until they agree on a solution.

Free Practice: (30 min)

-At this time, present the students with the following questions. The questions begin easier, and gradually increase in difficulty. Encourage students to work together to solve the problems and to get through as many as they can in the time allowed. Remind students that accuracy is more important than speed.

1. If a rectangle has an area of 24 square inches, and the length is 6 inches, what is the width? How can you prove it?

2. If a square has a length of 12 meters, what would the area of the square be? How do you know? Explain.

3. How many rectangles can you draw with an area of 36 square meters? What are the dimensions of each rectangle? Draw them and explain how each one has the same area.

4. Look at all of the examples you drew in problem #3. If you were going to design a backyard, which rectangle would you draw? Why would you choose that particular one?

5. Look at your rectangles again. If you know that one meter of wood costs $20, how much would it cost to build each rectangle that you drew? Explain how you decided on your answer.