MATH NEWS

3rd Grade Math

Module 4: Multiplication and Area

Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 4 of Eureka Math (Engage New York) covers understanding concepts of area and relating area to multiplication and addition. This newsletter will discuss Module 4, Topic B.

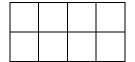Topic B: Concepts of Area Measurement

Vocabulary Words

- array
- area
- area model
- attribute
- commutative property
- length
- rows and columns
- square unit
- tile
- unit square
- unknown

Things to Remember!!
When we are "tiling" we want to make sure there are no gaps or overlaps. We are also looking for the space INSIDE the polygon. The units for AREA are ALWAYS square units (square inches, square centimeters, etc.)
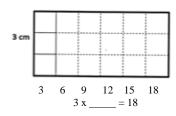

OBJECTIVE OF TOPIC B

1 Form rectangles by tiling with unit squares to make arrays.

2 Draw rows and columns to determine the area of a rectangle, given an incomplete array.

3 Interpret area models to form rectangular arrays.

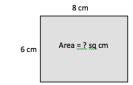*4* Find the area of a rectangle through multiplication of the side lengths.

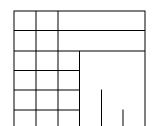## Focus Area– Topic B

Concepts of Area Measurement

In **Lesson 5**, students will build rectangles using unit square tiles to make arrays. For example: students may be told that there are 24 tiles inside the rectangle and that one side of the rectangle is covered with 4 tiles. Students may start building one column of the array to represent the length of 4 units. This process will continue until they reach 24 tiles, by skip-counting by fours. They would then physically push the columns together to make an array. When they count the number of fours, the process connects to unknown factor problems.

Area= 18 square centimeters

3   6   9   12   15   18
3 x _____ = 18

In **Lesson 6,** students find the area of an incomplete array. Example: Amy skip-counts by sixes to find the total square units in the rectangle below. She says there are 36 square units. Is she correct? Explain your answer.

Yes, Amy is correct because 6 units x 6 units= 36 square units.

She can also skip count by sixes: 6, 12, 18, 24, 30, 36

In **Lesson 8**, students recognize that side lengths are an important part in determining the area of a rectangle. Multiplying the number of square units in a row by the number of rows produces the same result as skip-counting the squares within the array. Given the area and one side length, students realize that they can use multiplication with an unknown factor or division to find the unknown side length.