ATLANTA PUBLIC SCHOOLS
Making A Difference

"I Can" Help My Student	Important Understandings and Concepts

"I Can" Help My Student

- I can use addition, subtraction, multiplication and division to solve all kinds of word problems and then use mental math to decide if my answers are reasonable. (OA.8)
- I can write equations using a letter for the unknown number. (OA.8)
- I can decide if my answers are reasonable using mental math and estimation strategies including rounding. (OA.8)
- I can identify and describe arithmetic patterns in number charts, addition tables, and multiplication tables. (OA.9)
- I can measure area by counting unit squares. (MD.5)
- I can explain the relationship between tiling and multiplying side lengths to find the area of rectangles. (MD.7)
- I can use area models to explain the distributive property. (MD.7)

Key Words to Know

- **Pattern**: A pattern is a numerical sequence that follows a certain rule for getting from one number to the next.
- **Rule**: A mathematical expression that describes a pattern or relationship, or is a written description of a pattern or relationship.
- **Skip counting:** Count by a given whole number greater than 1.
- **Area:** The space inside a shape measured by the number of square units that covers the shape.
- **Decompose:** to take apart
- **Distributive Property:** The distributive property states that multiplying a sum by a number gives the same result as multiplying each addend by the number and then adding the products together.
- **Scale:** The intervals with which the graph is measured. In 3rd grade the scale for both a bar graph and a picture graph should be greater than one.
- **Line Plot:** A line plot is a graphical display of a set of data where each separate piece of data is shown as a dot or mark above a number line.
- **Equation:** An equation is a mathematical statement in which two sides are equal, one on each side of an equal sign.
- **Unknown:** An unknown is the value that will be discovered by solving an equation.

Important Understandings and Concepts

What should my student already know before I begin…

- Able to add and subtract three digit numbers.
- Able to multiply a two-digit number by a one-digit number.
- Able to recite multiplication facts with fluency.
- Able to count the number of square units

Learning at a Glance

Students will be exploring patterns with addition and multiplication by looking at addition tables.

For example, across the diagonals going from right to left, you have the same sum represented in different ways. And, across the diagonals left to right, you can see the "doubles."

Students will be measuring the area of rectangles by counting the number of square units in the shape.

Length = 3 units
Width = 2 units
Area = 6 sq. units
A = L × W
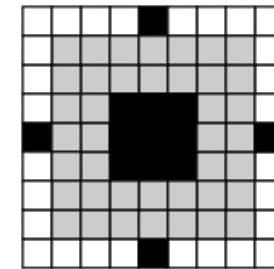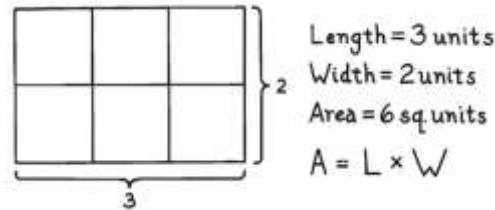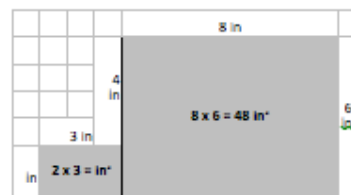
Students will be decomposing large shapes into smaller shapes to find the area of the total shape.

8 in
8 x 6 = 48 in²
3 in
2 x 3 = in²

☐ = 1 square inch

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**Math Grade 3 Unit 4
Patterns in Addition and
Multiplication**

Parent Guide

What your student should know & do at home

Sample Problems	**How Can You Help Your Student?**

Sample Problems

The sales numbers at a craft show are listed.

Craft Show Sales

Child	Number Sold
Malcolm	9
Jessie	8

Malcolm sold his crafts for $8 each, and Jessie sold her crafts for $7 each.

Part A
Write an equation to show how much money Malcolm and Jessie made altogether. Use M for the missing amount. Find the value of M.

Part B
Jessie said she could make at least $500 during the summer if she sold 90 crafts for $6 each. Malcolm said Jessie only needs to sell 80 crafts for $6 each. Use what you know about numbers to explain which friend is correct.

Part C
Malcolm and Jessie made a square sign with the price of their crafts.

In square inches, what is the area of the sign? Show your work.

9 inches

Recommended Children's Literature

The Lion's Share	**Ordinary Mary's Extraordinary Deed**
By: Matthew McElligott	*By: Emily Pearson*

How Can You Help Your Student?

Interactive Learning Lessons

LearnZillion:
- Solving word problems: http://learnzillion.com/lessonsets/318
- Identifying patterns: http://learnzillion.com/lessonsets/258
- Finding area: http://learnzillion.com/lessonsets/106
- Measuring area by counting square units: http://learnzillion.com/lessonsets/113
- Relating Multiplication and Division: http://learnzillion.com/lessonsets/266
- Area and arrays: http://learnzillion.com/lessonsets/58

Interactive Learning Games
- Finding area and perimeter game:
  http://www.mathplayground.com/area_perimeter.html
- Solving word problems games:
  http://www.mathplayground.com/wordproblems.html
- Addition Adventure:
  http://www.multiplication.com/games/play/addition-adventure
- Math Baseball:
  http://www.funbrain.com/math/
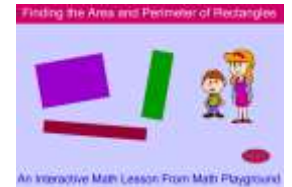
- Playing games is a wonderful way to practice skills at home in a fun environment. *Stack-n-Pack* books contain several math games covering math concepts from Kindergarten through High School. *Stack-n-Pack* card games may be checked out from your school (contact your school's Parent Liaison) or purchased online: Stack-n-Pack Mathematics Card Games for K-HS .
- *Stack-n-Pack Grades 3-5:*
  Addition & Multiplication Properties Game