Unit 4
Multiplication and Area

Grade 3
Math

Description: Students explore properties of operations and investigate area. Students measure the area of a shape by finding the total number of same-size units of area, e.g. tiles, required to cover the shape without gaps or overlaps. Connections are made to multiplication while solving problems involving area.

Louisiana Student Standards for Mathematics (LSSM)
Instructional Outcomes

Measurement and Data	
3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement: a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
3.MD.7	Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.

Enduring Understandings: **Essential Questions:**

- The space inside a rectangle or square can be measured in square units.
- There are several strategies that we can use for finding area:
  - Multiply side lengths
  - Break apart and distribute
- It is important to know the best strategy to use for the problem.

- What is the area?
- Why is it important to know area in real life?
- What strategies can I use to determine the area of an object?
- How is area used in the world?