

Unit 6

Foundations of Multiplication and Division

Grade 2 Math

Description: Students will develop conceptual understanding for multiplication and division by initially making equal groups with concrete materials. Progression is made by drawing pictorial representations to illustrate a corresponding repeated addition equation. Students use repeated addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. They will also write an equation to express the total as a sum of equal addends.

Louisiana Student Standards for Mathematics (LSSM) Instructional Outcomes

Operations and Algebraic Thinking	
2.OA.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
Geometry	
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

Enduring Understandings:

- There are similarities between skip counting and repeated addition.
- Repeatedly adding the same quantity, using a grouping picture, or forming a rectangular array are strategies for representing repeated addition equations.
- One way of representing both repeated addition and skip counting is using arrays.
- Even and odd numbers can be explained using manipulatives.
- An even number can be decomposed into two equal addends.
- Double addition facts assist in recognizing even numbers.

Essential Questions:

- How are odd and even number lines identified on the number line?
- How do I determine if a number is odd or even?
- What strategies can I use to tell if a number is odd or even?
- How are arrays and repeated addition related?
- How can rectangular arrays help us with repeated addition?
- How can we model repeated addition on the number line?
- How can we model repeated addition equation with an array?

- How does skip counting help us solve repeated addition problems?
- What is an array?
- What is repeated addition?