

Walton Academy
2nd Grade Mathematics
Goals and Objectives

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction.

- Represent and solve addition and subtraction word problems, within 100, with unknowns in all positions, by using representations and equations with a symbol for the unknown number to represent the problem, when solving one-step problems.
- Two-Step problems involving single digits:
- Add and subtract within 100.
- Demonstrate fluency with addition and subtraction, within 100, using mental strategies.
- Work with equal groups.
- Determine whether a group of objects, within 100, has an odd or even number of members by pairing objects, then counting them by 2s.
- Determining whether objects can be placed into two equal groups.
- Writing an equation to express an even number as a sum of two equal addends.
- 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.

Number and Operations in Base 10

Understand Place Value

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
- Unitize by making a hundred from a collection of ten tens.
- Demonstrate that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds with 0 tens and 0 ones.
- Compose and decompose numbers using various groupings of hundreds, tens, and ones.

Use place value understanding and properties of operations.

- Demonstrate fluency with addition and subtraction, within 100.
- Flexibly using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Comparing addition and subtraction strategies and explaining why they work. Selecting an appropriate strategy in order to efficiently compute sums and differences.

Add up to three two-digit numbers using strategies based on place value and properties of operations.

Add and subtract, within 1,000, relating the strategy to a written method, using.

- Concrete models or drawings
- Strategies based on place value
- Properties of operations
- Relationship between addition and subtraction

Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Measurement and Data

Measure and estimate lengths.

- Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Measure the length of an object twice, using length units of different lengths for the two measurements;

describe how the two measurements relate to the size of the unit chosen.

- Estimate lengths in using standard units of inches, feet, yards, centimeters, and meters.
- Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Relate addition and subtraction to length.

- Use addition and subtraction, within 100, to solve word problems involving lengths that are given in the same units, using equations with a symbol for the unknown number to represent the problem.
- Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points and represent whole-number sums and differences, within 100, on a number line.

Build understanding of time and money.

- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- Solve word problems involving: Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.
- Whole dollar amounts, using the \$ symbol appropriately.

Represent and Interpret Data

- Organize, represent, and interpret data with up to four categories.
- Draw a picture graph and a bar graph with a single-unit scale to represent a data set.
- Solve simple put-together, take-apart, and compare problems using information presented in a picture and a bar graph.

Geometry

Reason with shapes and their attributes.

- Recognize and draw triangles, quadrilaterals, pentagons, and hexagons, having specified attributes; recognize and describe attributes of rectangular prisms and cubes.
- Partition circles and rectangles into two, three, or four equal shares.
- Describe the shares using the words halves, thirds, half of, a third of, fourths, fourth of, quarter of.
- Describe the whole as two halves, three thirds, four fourths.
- Explain that equal shares of identical wholes need not have the same shape

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Supplementary Books and Materials:

- Steck-Vaughn
- Math Seeds
- Math Manipulatives (Hand2Mind, EAI Education)
- Math Games
- Teacher Created Materials