Grade 1 Mathematics
Essential Curriculum

Standards for Mathematical Practice emphasized throughout the year:

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

Number and Operations in Base Ten

- Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (1.NBT.1)

- Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: (1.NBT.2)
    a. 10 can be thought of as a bundle of ten ones — called a "ten."
    b. The numbers from 11 to 20 are composed of a ten and a one, two, three, four, five, six, seven, eight, or nine ones.
    c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three four, five, six, seven, eight, or nine tens (and 0 ones).

- Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (1.NBT.3)

- Add within 100. Relate the strategy to a written method and explain the reasoning used. Including: (1.NBT.4)
    a. Adding a two-digit number and a one-digit number, within 100.
    b. Adding a two-digit number and a multiple of 10, using: concrete models drawings strategies based on place value properties of operations the relationship between addition and subtraction
    c. Understand that in adding two-digit numbers, it requires adding tens and tens, ones and ones; and sometimes it is necessary to compose a ten (without standard algorithm)

- Given a two-digit number, mentally find 10 more or 10 less than the number, **with counting;** explain the reasoning used. (1.NBT.5)

- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences). Relate the strategy to a written method and explain the reasoning used. Use concrete models, drawings, strategies based on place value, properties of operations, and the relationship between addition and subtraction (without standard algorithm). (1.NBT.6)

Operations and Algebraic Thinking

- Use addition and subtraction within 10 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing. (1.OA.1)

- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using: objects to represent the problem, drawings to represent the problem, equations with a symbol for the unknown number to represent the problem. (1.OA.2)

- Apply properties of operations as strategies to add and subtract. If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 10 = 12 (Associative property of addition). (1.OA.3)

- Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. (missing addend)* (1.OA.4)

- Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). (1.OA.5)

- Add and subtract within 20, <u>developing</u> fluency for addition and subtraction within 10. (1.OA.6) Add and subtract within 20 using strategies such as:
    - Counting on (+/- 1 and 2)
    - Make 10 / Subtract from 10 (6 + 4 = 10, 10 – 3 = 7)
    - Doubles (4 + 4 = 8, 6 – 3 = 3)
    - Add 10 (5 + 10 = 15)

- Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false?* (Use 3 + 4 = 7, 6 = 6, 7 = 8 – 2 structures) (1.OA.7)

- Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? – 3, 6 + 6 = ?.* (1.OA.8)

Geometry

- Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Build and draw shapes to possess defining attributes. (1.G.1)

- Compose two-dimensional (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape. (1.G.2)

- Partition circles and rectangles into two and four equal shares. Describe the shares using the words halves, fourths, and quarters. (1.G.3)

Measurement and Data

- Order and compare objects by length. (1.MD.1)

- Express length and understand what the length of an object represents. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. (1.MD.2)

- Tell and write time in hours and half-hours using analog and digital clocks. (1.MD.3)

- Organize and represent data with up to three categories and Interpret data with up to three categories. Ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another (1.MD.4)