

Springfield Public Schools
KINDERGARTEN

The intent of the Springfield R-12 Elementary mathematics Program is to explore, investigate, and understand the importance of mathematics through real-world experiences. In mathematics, students will acquire the knowledge and skills to solve problems, communicate, reason, create models, and make connections.

The student will:

1. Understand concepts of **Numbers and Operations** including:
 - a. Rote counts to 100. (MA1, MA6 1.6, 1.10)
 - b. Compare sets to determine, more, less, greater, fewer. (MA1, MA6 1.6, 1.10)
 - c. Write and compare numbers 0 to 31. (MA1, MA6 1.6, 1.10)
 - d. Recognize $\frac{1}{2}$ and whole of a shape. (MA1 1.10)
 - e. Connect number words (orally) and quantities they represent. (MA1 1.10)
 - f. Skip count by 5's and 10's to 100. (MA1 1.10)
 - g. Represent a given situation involving addition or subtraction. (MA1 1.6, 1.10)
 - h. Recognize numerals to 31. (MA1 1.6, 1.10)
 - i. Develop fluency with basic number relationships of addition and subtraction for sums up to 10. (MA1 1.6)

2. Understand and use the concepts of **Algebraic Relationships** including:
 - a. Recognize or repeat sequences of sounds or shapes. (MA4 1.6)
 - b. Extend patterns of sound, shape, motion or a simple numeric pattern. (MA 4 1.6)
 - c. Create and continue patterns. (MA4 1.6)
 - d. Sort objects by size or other attributes. (MA2 1.8)
 - e. Represent a mathematical situation as an expression or number sentence. (MA4 1.6, 3.1)
 - f. Model situations that involve whole numbers, using pictures, objects or symbols. (MA1, MA4 1.6, 3.6)
 - g. Describe qualitative change, such as students growing taller. (MA4 4.1)

3. Describe, analyze and apply the concepts of **Geometric and Spatial Relationships** including:
 - a. Sort 2- and 3-dimensional shapes using physical models (circle, square, rectangle, triangle, sphere, rectangular prism, cylinder, pyramid, cube, cone). (MA2 1.6)

- b. Describe, name, and interpret relative positions in space (above, below, front, behind, beside, over, under, on, left, right). (MA2 3.3, 4.1)
 - c. Determine ordinal position of an object (first through tenth). (MA2 3.3, 4.1)
 - d. Recognize shapes that have symmetry. (MA2 1.10)
 - e. Recognize geometric shapes in the students environment. (MA2 3.3)
4. Understand and apply the concepts of **Measurement** including:
- a. Compare and order objects according to their size or weight (MA2 1.8)
 - b. Identify objects that are equal in length or weight. (MA2 1.4, 3.7)
 - c. Describe passage of time using terms such as today, yesterday, tomorrow. (MA2 3.3)
 - d. Recite the days of the week and months of the year. (MA2 3.3)
 - e. Identify and know the value of a penny, nickel, dime, and quarter (
 - f. Measure with multiple copies of a unit of the same size (e.g., paper clips laid end to end). (MA2 3.3)
5. Recognize and understand the concepts of **Data and Probability** including:
- a. Pose questions and gather data about themselves and their surroundings. (MA 3 1.2)
 - b. Sort and classify items according to their attributes. (MA2 1.8)
 - c. Represent data using physical objects. (MA3 1.8)
 - d. Represent and interpret data using pictures and bar graphs. (MA3 1.8)