

## Kindergarten Mathematics Curriculum

Kindergarten mathematics is about (1) representing, relating, and operating on whole numbers, initially with sets of objects; and (2) describing shapes and space.

### Module 1: Numbers to 10

Kindergarten starts out with solidifying the meaning of numbers to 10 with a focus on embedded numbers and relationships to 5 using fingers, cubes, drawings, 5 groups and the Rekenrek. Students then investigate patterns of “1 more” and “1 less” using models such as the number stairs. Because fluency with addition and subtraction within 5 is a Kindergarten goal, addition within 5 is begun in Module 1 as another representation of the decomposition of numbers.

### Module 2: Two-Dimensional and Three-Dimensional Shapes

In Module 2, Students learn to identify and describe squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres. During this module students also practice their fluency with numbers to 10.

### Module 3: Comparison of Length, Weight, Capacity, and Numbers to 10

In Module 3, students begin to experiment with comparison of length, weight and capacity. Students first learn to identify the attribute being compared, moving away from non-specific language such as “bigger” to “longer than,” “heavier than,” or “more than.” Comparison begins with developing the meaning of the word “than” in the context of “taller than,” “shorter than,” “heavier than,” “longer than,” etc. The terms “more” and “less” become increasingly abstract later in Kindergarten. “7 is 2 more than 5” is more abstract than “Jim is taller than John.”

### Module 4: Number Pairs, Addition and Subtraction to 10

In Module 4, number comparison leads to a further study of embedded numbers (e.g., “3 is less than 7” leads to, “3 and 4 make 7,” and  $3 + 4 = 7$ ), “1 more, 2 more, 3 more” lead into addition (+1, +2, +3). Students now represent stories with blocks, drawings, and equations.

### Module 5: Numbers 10–20 and Counting to 100

After students have a meaningful experience of addition and subtraction within 10 in Module 4, they progress to exploration of numbers 10-20. They apply their skill with and understanding of numbers within 10 to teen numbers, which are decomposed as “10 ones and some ones.” For example, “12 is 2 more than 10.” The number 10 is special; it is the anchor that will eventually become the “ten” unit in the place value system in Grade 1.

### Module 6: Analyzing, Comparing, and Composing Shapes

Module 6 rounds out the year with an exploration of shapes. Students build shapes from components, analyze and compare them, and discover that they can be composed of smaller shapes, just as larger numbers are composed of smaller numbers.