

## Year at a Glance - Kindergarten Mathematics

### What Students Learn

The start of the school year focuses on the development of students' understanding of how to count and what to count. One of the first major concepts in a student's mathematical development is cardinality. Cardinality means *knowing that the number word spoken tells the quantity and that the number on which a person ends when counting represents the entire amount counted*. Students learn that numbers represent an amount, and no matter how one arranges and rearranges the items, the amount is the same.

During the first trimester, students engage in lessons supporting one-to-one correspondence as they experience counting objects and sequencing numbers to 20. As the school year progresses, students move from counting by ones to 10 and 100, to skip counting by tens to 100. These early skills help develop students' ability to "count-on" in a number sequence from a number other than 1, identify, compare and represent a quantity using both numerals and words, and understand the concept of "more" and "less."

As the year progresses, kindergarten students add, subtract, and solve word problems within 10 and build fluency with addition and subtraction within 5. Students compose and decompose the numbers 1-10 and 11-19 for place value understanding. They connect counting and ordering skills to help classify objects into categories, count the numbers of objects in each category, and sort the categories by count. They complete these activities with numbers as high as 100.

Students then identify, describe, and compose 2-D shapes. They then learn to describe the measurable attributes of objects and directly compare two objects by these attributes (more/less, taller/shorter). The year ends with students studying 3-D shapes, understanding how they differ from flat shapes (2-D shapes) and composing complex shapes from basic 2-D shapes.

Unit Numbers and Titles	Overview of Depth of Mastery
0. Introductory Week (2 Weeks)	<p><u>Kindergarten students should <b>master</b>:</u></p> <ul style="list-style-type: none"> <li>Counting to 100 by ones and tens</li> <li>Writing numbers from 0-20</li> <li>Counting, 1:1 correspondence</li> <li>Composing and decomposing numbers to 10</li> <li>Fluently adding and subtracting within 5</li> <li>Place Value 11-19</li> </ul> <p><u>Kindergarten students <b>work towards fluency in</b>:</u></p> <ul style="list-style-type: none"> <li>Addition and subtraction strategies within 10</li> <li>Comparing numbers and objects using greater than, less than, or equal to</li> </ul> <p><u>Kindergarten students are <b>introduced to</b>:</u></p> <ul style="list-style-type: none"> <li>Addition and subtraction word problems</li> <li>Measurable attributes, such as length or weight</li> <li>Classifying objects into categories</li> <li>2-D (flat) and 3-D (solid) shapes</li> <li>Comparing, creating, and composing shapes</li> </ul>
1. Counting, Numerals, and Cardinality 0 to 10 (5 Weeks)	
2. Counting Strategies and Application of Numbers 0 to 100 (5 Weeks)	
3. Addition and Subtraction within 10 (12 Weeks)	
4. Place Value 11-19 (5 Weeks)	
5. Sorting and Classifying (1.5 Weeks)	
6. Measuring and Attributes (1.5 Weeks)	
7. 2-D Geometric Shapes (All Shapes) (2 Weeks)	
8. 3-D Geometric Shapes (All Shapes) (2 Weeks)	