

# 2017-2018 CSISD Mathematics Year At A Glance for Kindergarten

## Big Ideas and Topics in Kindergarten Mathematics

The big ideas and topics in Kindergarten are understanding counting and cardinality, understanding addition as joining and subtraction as separating, and comparing objects by measurable attributes.

- Students develop number and operations through several fundamental concepts. Students know number names and the counting sequence. Counting and cardinality lay a solid foundation for number. Students apply the principles of counting to make the connection between numbers and quantities.
- Students use meanings of numbers to create strategies for solving problems and responding to practical situations involving addition and subtraction.

For additional information about the Kindergarten mathematics standards , please visit [the Texas Education Agency \(TEA\) website](#).

Fall Semester	
1st Nine Weeks August 28 – October 20	2nd Nine Weeks October 23 – December 22
<p><b><u>Bundle 1: Count and Represent Quantities to 5</u></b> Students will be able to read, write, and represent numbers 0-5 with and without objects and pictures. Students will be able to count forward and backward within 5.</p> <ul style="list-style-type: none"> <li>• Orally count forward and backward to 5 with and without objects.</li> <li>• Read, write, and represent whole numbers from 0 to 5 with and without objects and pictures.</li> <li>• Understand that the last number counted represents the total number of objects.</li> <li>• Recite numbers up to at least 100 by ones beginning with any given number.</li> </ul> <p><b><u>Bundle 2: Identify and Use Attributes to Sort 2-D Shapes</u></b> Students will be able to name, describe, and sort 2-D shapes.</p> <ul style="list-style-type: none"> <li>• Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles.</li> <li>• Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.</li> <li>• Classify and sort a variety of regular and irregular two-dimensional figures regardless of orientation or size.</li> <li>• Create two-dimensional shapes using a variety of materials and drawings.</li> </ul> <p><b><u>Bundle 3: Count, Represent, and Sort Objects to 10</u></b> Students will be able to read, write, and represent numbers 0-10 with and without objects and pictures. Students will be able to count forward and backward within 10.</p> <ul style="list-style-type: none"> <li>• Orally count forward and backward to 10 with and without objects.</li> <li>• Read, write, and represent whole numbers from 0 to 10 with and without objects and pictures.</li> <li>• Understand that the last number counted represents the total number of objects.</li> <li>• Sort and organize data in up to 2 categories.</li> </ul>	<p><b><u>Bundle 4: Identify and Use Attributes to Sort 2-D and 3-D Shapes</u></b> Students will be able to identify the 2-D shapes that compose 3-D shapes as well as identify and sort 3-D shapes.</p> <ul style="list-style-type: none"> <li>• Identify three-dimensional solids, including cylinders, cones, spheres, and cubes, in the real world.</li> <li>• Identify two-dimensional components of three-dimensional objects. (For example, students will recognize that the faces of a cube are squares.)</li> <li>• Classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size.</li> </ul> <p><b><u>Bundle 5: Count, Represent, and Compare Sets of Objects to 20</u></b> Students will be able to read, write, represent, and compare numbers 0-20 with and without objects and pictures. Students will be able to count forward and backward within 20.</p> <ul style="list-style-type: none"> <li>• Orally count forward and backward to 20 with and without objects.</li> <li>• Read, write, and represent whole numbers from 0 to 20 with and without objects and pictures.</li> <li>• Understand that the last number counted represents the total number of objects.</li> <li>• Recognize instantly the quantity of a group of up to 10 objects both in organized and random arrangements.</li> <li>• Create a set of objects or pictures that is more than, less than, or equal to a given number up to 20.</li> <li>• Using language such as “more than”, “less than”, or “equal to” to compare sets of objects up to 20.</li> <li>• Understand that a set of objects or pictures can be joined together to make a larger group up to 10.</li> <li>• Understand that a set of objects or pictures within 10 can be separated to make smaller sub-sets.</li> <li>• Recite numbers up to at least 100 by ones beginning with any given number.</li> </ul> <p><b><u>Bundle 6: Identify and Use Measurable Attributes of Objects</u></b> Students will be able to compare objects by length, weight, and capacity.</p> <ul style="list-style-type: none"> <li>• Give an example of a measurable attribute of a given object, including length, capacity, and weight.</li> <li>• Compare two objects with common measurable attributes such as length, capacity, or weight to see which object has more of/less of the</li> </ul>

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- attribute and describe the difference.
- Recognize instantly the quantity of a group of up to 10 objects both in organized and random arrangements.

## Spring Semester

**3<sup>rd</sup> Nine Weeks**  
January 8 – March 9

**4<sup>th</sup> Nine Weeks**  
March 19 – May 31

### **Bundle 7: Count, Represent, and Compare Sets of Objects to 20**

Students will be able to read, write, represent, and compare numbers 0-20 with and without objects and pictures. Students will be able to count forward and backward within 20.

- Orally count forward and backward to 20 with and without objects.
- Read, write, and represent whole numbers from 0 to 20 with and without objects and pictures.
- Understand that the last number counted represents the total number of objects.
- Recognize instantly the quantity of a group of up to 10 objects both in organized and random arrangements.
- Create a set using objects or pictures that is more than, less than, or equal to a given number up to 20.
- Using language such as "more than", "less than", or "equal to" to compare sets of objects up to 20.
- Understand that a set of objects or pictures can be joined together to make a larger group up to 10.
- Understand that a set of objects or pictures within 10 can be separated to make smaller sub-sets.
- Recite numbers up to at least 100 by ones beginning with any given number.

### **Bundle 8: Count, Represent, Compare, and Create Graphs up to 20**

Students will be able to collect and sort data in order to create graphs and interpret and analyze data.

- Orally count forward and backward to 20 with and without objects.
- Read, write, and represent whole numbers from 0 to 20 with and without objects and pictures.
- Understand that the last number counted represents the total number of objects.
- Generate a number that is one more than or one less than another number up to at least 20.
- Using language such as "more than", "less than", or "equal to" to describe two numbers up to 20 presented as written numerals.
- Collect, sort and organize data in up to 3 categories.
- Use data to create real-object and picture graphs and draw conclusions from the graphs.

### **Bundle 9: Identify Coins and Apply Financial Literacy**

Students will be able to identify the name of U.S. coins. Students will be able to identify ways to earn income and differentiate earned money from money as gifts.

- Identify U.S. coins by name, including pennies, nickels, dimes, and quarters.
- Identify ways to earn income.

### **Bundle 10: Model Addition and Subtraction (Concrete)**

Students will be able to show sums (joining) and differences (separating) up to 10 using objects and will be able to explain their thinking.

- Model the action of joining to represent addition and the action of separating to represent subtraction.
- Solve word problems stated orally using objects to find sums up to 10 and differences within 10.
- Explain how to solve problems involving adding and subtracting within 10 using spoken words and objects.

### **Bundle 11: Strategies to Solve Addition and Subtraction (Representational)**

Students will be able to show sums (joining) and differences (separating) up to 10 using pictures and will be able to explain their thinking.

- Model the action of joining to represent addition and the action of separating to represent subtraction.
- Solve word problems using objects and drawings to find sums up to 10 and differences within 10.
- Explain how to solve problems involving adding and subtracting within 10 using spoken words, objects and pictures.
- Recite numbers up to at least 100 by ones and tens beginning with any given number.

### **Bundle 12: Use Multiple Strategies to Solve Problems (Abstract)**

Students will be able to show sums (joining) and differences (separating) up to 10 and will be able to explain their thinking.

- Model the action of joining to represent addition and the action of separating to represent subtraction.
- Solve word problems using objects and drawings to find sums up to 10 and differences within 10.
- Explain how to solve problems involving adding and subtracting within 10 using spoken words, objects, pictures and number sentences.

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<ul style="list-style-type: none"><li>• Differentiate between money received as income and money received as gifts.</li><li>• List simple skills required for jobs.</li><li>• Distinguish between wants and needs and identify income as a source to meet one's wants and needs.</li></ul>	
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