

Kindergarten Numeracy Blueprint

	Mathematical Process Standards	Whole Numbers	Addition and Subtraction	Measuring Length	Shapes, Solids, and Early Fraction Concepts
By the end of the year, the student will be able to:	<ul style="list-style-type: none"> Apply mathematics to problems arising in everyday life, society, and the workplace Use a problem-solving model Select tools, technology, and techniques to solve problems Communicate mathematical ideas, reasoning, and their implications using multiple representations Create and use representations to organize, record, and communicate mathematical ideas Analyze mathematical relationships to connect and communicate ideas Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written and oral communication 	<ul style="list-style-type: none"> Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures Use comparative language to describe two numbers up to 20 presented as written numerals 	<ul style="list-style-type: none"> Compose and decompose numbers up to 10 with objects and pictures Solve word problems using objects and drawings to find sums up to 10 and differences within 10 	<ul style="list-style-type: none"> Classify and sort a variety of regular and irregular two- and three- dimensional figures regardless of orientation or size Compare two objects with a common measurable attribute to see which object has more or less of the attribute and describe the difference object, including length, capacity, and weight 	<ul style="list-style-type: none"> Apply mathematics to problems arising in everyday life, society, and the workplace Use a problem-solving model Select tools, technology, and techniques to solve problems Communicate mathematical ideas, reasoning, and their implications using multiple representations Create and use representations to organize, record, and communicate mathematical ideas Analyze mathematical relationships to connect and communicate ideas Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written and oral communication
The teacher will:	<ul style="list-style-type: none"> Provide opportunities for students to communicate and justify solutions to problems orally and in written form Provide opportunities for students to organize and solve problems Provide opportunities for students to solve problems individually, in pairs, and in small groups Provide opportunities to use mathematical vocabulary Provide opportunities to use technology to solve problems 	<ul style="list-style-type: none"> Provide opportunities counting in sequence while matching each word with a concrete object Provide experiences using a variety of counting activities, strategies, and tools such as a hundreds chart, ten-frame, or dot cards Provide opportunities to demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order Provide opportunities to identify the quantity of a small group of objects in organized and random arrangements Provide experiences to generate models that represent a number that is more than, less than, and equal to a given number up to 20. Provide opportunities to compare sets of objects up to at least 20 in each set using comparative language Provide opportunities to recite numbers up to at least 100 by ones and tens beginning with any given number 	<ul style="list-style-type: none"> Provide experiences in taking numbers apart and putting them back together in a variety of ways Provide opportunities to develop strategies to solve basic addition and subtraction facts using concrete objects Provide opportunities to use mathematical vocabulary Provide experiences in modeling story problem situations with concrete objects and technology Provide opportunities to count forward and backward to at least 20 with and without objects Provide experiences to generate a number that is one more than or one less than another number up to at least 20 Provide opportunities to model the action of joining to represent addition and the action of separating to represent subtraction Provide experiences to explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences 	<ul style="list-style-type: none"> Provide opportunities for students to recognize and name real-life shapes Provide experiences describing geometric attributes of objects Provide experiences for students to create models of two-and three- dimensional shapes with materials such as sticks and clay Provide opportunities for students to draw shapes Provide experiences using a variety of different objects to identify measurable attributes Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles Identify three- dimensional solids, including cylinders, cones, spheres, and cubes, in the real world Identify two-dimensional components of three-dimensional objects Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeable Create two-dimensional shapes using a variety of materials and drawings Give an example of a measurable attribute of a given object, including length, capacity, and weight 	<ul style="list-style-type: none"> Provide opportunities for students to communicate and justify solutions to problems orally and in written form Provide opportunities for students to organize and solve problems Provide opportunities for students to solve problems individually, in pairs, and in small groups Provide opportunities to use mathematical vocabulary Provide opportunities to use technology to solve problems
Parents can:	<ul style="list-style-type: none"> Play board games that require your child to make choices Ask your child to explain what they learned in math today Read a variety of materials to your child and ask questions pertaining to the content Set aside time to do daily math homework When discussing common life situations, ask your child to give more than one solution. 	<ul style="list-style-type: none"> Count the number of steps from the bedroom to the kitchen Use everyday life experiences while shopping at the grocery store and riding in the car to count objects Sort objects into groups of ten Use your child's favorite toys/hobbies to provide opportunities for comparing or sequencing numbers 	<ul style="list-style-type: none"> Create addition and subtraction story problems about favorite television or book characters and draw pictures Use two different counters such as beans and noodles to determine all the possible combinations of the same number Play games such as "What number comes next?" or "What number is missing?" or "What's my mystery number?" 	<ul style="list-style-type: none"> Play games such as "I Spy" to identify and describe shapes Draw shapes using shaving cream on a bathroom counter or a stick with sand or dirt Build shapes made of household items or food Ask questions such as "How are these objects alike or different?" Have your child sort common household items by attributes such as heavy/light or big/small 	<ul style="list-style-type: none"> Play board games that require your child to make choices Ask your child to explain what they learned in math today Read a variety of materials to your child and ask questions pertaining to the content Set aside time to do daily math homework When discussing common life situations, ask your child to give more than one solution.

