

Standards for Math

End of Toddler Guidelines – 36 months/3 years		End of Preschool Standards – 60 months/5 years	Common Core- End of Kindergarten Standards
<p>Counts to two or three</p> <p>Imitates counting rhymes</p> <p>Uses some number words during play or activity</p>	<p>COUNTING AND CARDINALITY CLUSTER</p> <p>Rote Count to 10 and beyond by ones.</p> <p>Recognize and name written numerals 0-5.</p> <p>Subitize to determine how many: immediate recognition of small quantities up to 5.</p> <p>Understand the relationship between numbers and quantities: connect counting to cardinality (0-5).</p> <p>Understand that the last number name spoken tells the number of objects counted up to 5. The number of objects is the same regardless of their arrangement or the order in which they were counted.</p>	<p>COUNTING AND CARDINALITY CLUSTER</p> <p>Rote counts to 20 and beyond by ones</p> <p>Recognizes and names written numerals 0 -10</p> <p>Subitizes to determine how many: immediate recognition of small quantities up to 10</p> <p>Understands the relationship between numbers and quantities: connect counting to cardinality (0-10)</p> <p>Understands that the last number name spoken tells the number of objects counted up to 10 (cardinality)</p> <p>Begins to write number symbols 0-5</p> <p>Identifies whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group up to 10</p>	<p>COUNTING AND CARDINALITY CLUSTER</p> <p>Know number names and the count sequence Count to 100 by ones and by tens</p> <p>Count forward beginning from a given number within the known sequence (instead of having to begin at 1)</p> <p>Write numbers from 0 to 20 with written numeral 0-20 (with 0 representing a count of no objects)</p> <p>Count to tell the number of objects Count to answer “how many?” questions as many as 10 things arranged in a line, rectangular array, or a circle, or as many as 5 things in a scattered configuration; given a number from 1-10, count out that many objects.</p> <p>Compare numbers Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group up to 10.</p>

<p>Begins to solve simple problems in his or her head</p> <p>Uses objects for other than their intended purpose</p> <p>Shows interest in patterns and sequences</p>	<p>OPERATIONS AND ALGEBRAIC THINKING</p> <p>Respond with number words and/or counting strategy, when asked the question, How many?</p> <p>Transition from rote counting with 1:1 correspondence</p> <p>Count to 10 and beyond by 1s</p>	<p>OPERATIONS AND ALGEBRAIC THINKING</p> <p>Represents addition and subtraction with fingers, drawing, acting out situations and verbal explanation</p> <p>Uses concrete objects to model real-world addition (putting together) and subtraction (taking away) up to 5</p> <p>Acts out and solves story problems using sets of up to ten objects</p>	<p>OPERATIONS AND ALGEBRAIC THINKING</p> <p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p> <p>Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p>Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).</p>
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End of Toddler Guidelines – 36 months/3 years		End of Preschool Standards – 60 months/5 years	Common Core - End of Kindergarten Standards
<p>Matches simple shapes: using puzzles- circle, square, triangle</p>	<p>GEOMETRY</p> <p>Recognizes and names/describes simple shapes</p> <p>Matches similar shapes</p> <p>Explores 3-D and 2-D shapes in the environment</p> <p>Uses puzzles and other learning materials to demonstrate beginning part/whole and shape concepts</p> <p>Uses physical movement to gain understanding of orientation and directionality.</p> <p>Manipulates the orientation of toys and other objects to solve problems</p> <p>Responds to words indicating directionality through physical movement</p>	<p>GEOMETRY</p> <p>Describes, sorts and classifies shapes using some attributes such as size, sides, and other properties</p> <p>Discovers connections between formal geometric shapes and the surrounding environment</p> <p>Combines materials to make 3-D and 2-D shapes</p> <p>Breaks down shapes into parts and wholes</p> <p>Initiates activities that indicate understanding of directionality</p> <p>Uses orientation and directionally words such as slides, flips and turns as shapes are manipulated</p> <p>Uses symbols and/or objects to indicate beginning understanding of relative positions in space (i.e. creates simple maps; follows directions during nature walks)</p> <p>Demonstrates understanding of terms: near, far, close to, beside, etc. through physical movement and manipulation of objects</p>	<p>GEOMETRY</p> <p>Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cones, cylinders and spheres)</p> <p>Describe objects in the environment using names of shapes</p> <p>Correctly name shapes regardless of their orientations or overall size.</p> <p>Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”)</p> <p>Analyze, compare, create and compose shapes</p> <p>Analyze and compare two-and three dimensional shapes, in different sizes and orientation, using informal language to describe their similarities, differences, parts (e.g. number of sides and vertices/”corners”) and other attributes (e.g., having sides of equal length).</p> <p>Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p> <p>Compose simple shapes to form larger shapes. <i>For example, Can you join these two triangles with full sides touching to make a rectangle?’</i></p>

			<p>Describe relative positions of objects in the environment using terms such as above, below, beside, in front of, behind and next to</p>
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End of Toddler Guidelines – 36 months/3 years		End of Preschool Standards – 60 months/5 years	Common Core- End of Kindergarten Standards MEASUREMENT AND DATA
<p>Classifies, labels and sorts objects by characteristics</p> <p>Arranges objects in lines</p> <p>Shows interest in patterns and sequences</p> <p>Shows some understanding of daily time sequence</p>	<p>MEASUREMENT AND DATA</p> <p>Matches and groups similar objects</p> <p>Recognize measurable attributes of objects, such as length, weight and capacity of everyday objects (e.g., long, short, tall, heavy, light, big, small, full, empty).</p> <p>Sorts, orders and classifies familiar objects by a single attribute (size, shape, color, texture, orientation, and position) and explain the reason.</p> <p>Uses seriation as a strategy for organizing materials</p> <p>Recognize and duplicates simple patterns in the environment, including sound and movement patterns.</p> <p>Demonstrates an understanding of time periods (a short time /a long time, “five more minutes”, morning, afternoon, night).</p>	<p>MEASUREMENT AND DATA</p> <p>Describes, sorts and classifies groups of objects</p> <p>Sorts objects into given categories based on one attribute; counts the number of objects in each category and sort sthe categories by count</p> <p>Identifies measurable attributes of objects, such as length, weight , and capacity of everyday objects using appropriate vocabulary (e.g., long, short, tall heavy, light, big, small, full, empty).</p> <p>Compares the attributes of length, weight, and capacity of everyday objects, including longer/shorter, same length; heavier/lighter, same weight; holds more/less, holds the same amount</p> <p>Identifies “first” and “last” related to order or position</p> <p>Recognizes and duplicates, creates, and extends simple patterns using objects</p> <p>Uses past and future tenses and time words appropriately. Begins to understand concepts: yesterday, today, and tomorrow. Associates events with</p>	<p>Describe and compare measurable attributes.</p> <p>Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>Classify objects and count the number of objects in each category.</p> <p>Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p>

	<p>Relates concepts of past, present and future to daily activities</p> <p>Participates in data collection activities</p> <p>Uses three dimensional objects on a floor chart, to represent collected data. Helps count out data collected.</p> <p>Explores and begins to use measurement tools</p>	<p>time- related concepts</p> <p>Continues to use three dimensional charts and with help, can transfer data to a two-dimensional graph and chart that also represents data collected</p> <p>Responds to questions that can be answered through data analysis</p> <p>Uses non-standard units of measurement to measure objects; notices similarities and differences.</p> <p>Connects measurement terms and concepts in everyday life</p>	
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		Common Core - Mathematical Practices Apply to All Age Groups	
		End of Preschool Standards – 60 months/5 years	MATHEMATICAL PRACTICES
End of Toddler Guidelines – 36 months/3 years	MATHEMATICAL PRACTICES	MATHEMATICAL PRACTICES	MATHEMATICAL PRACTICES
Independently explores the immediate environment to investigate what is there	Develop positive attitudes about math	Approaches math with enthusiasm:	Make sense of problems and persevere in solving them
Tries new activities, materials and equipment	Participates in whole group and small group math-focused activities	Associates math with engaging classroom materials and activities	Reason abstractly and quantitatively
	Recognizes the idea of a “problem” and “problem solving” in the physical and social world.	Recognizes the usefulness of math in everyday tasks	Construct viable arguments and critique the reasoning of others
	Communicates math ideas verbally and non-verbally	Uses math to solve problems in the context of classroom and home experiences	Model with mathematics
		Represents mathematical concepts using manipulatives	Uses appropriate tools strategically
		Uses math-related skills, such as sorting, counting, and matching in the course of everyday classroom experiences.	Attend to precision
		Uses math terms in the course of everyday conversations	Look for and make use of structure
			Look for and express regularity in repeated reasoning