

Learning Expectation	<i>Tools of the Mind</i> Activity
<b>Math</b>	
<b>Counting and Cardinality</b>	
<b>Know number names and the count sequence.</b>	
CC.PK.1 Count in sequence by 1s to 20.	Children count and identify numerals in a variety of math-focused activities including: <b>Freeze Dance—Freeze on the Number, I Have—Who Has? Numbers, Making Collections, Mystery Math—Mystery Numeral, Number Line Hopscotch, Number Follow the Leader</b> and <b>Numerals Game</b> . Children also practice these skills in the daily <b>Opening Group</b> activities <b>Timeline Calendar</b> and <b>Weather Graphing</b> . The <b>Make-Believe Play Block</b> offers many opportunities to count and to recognize numerals in the context of prop and set making and pretend play (e.g., <i>How many chocolate chip muffins should we make for the bakery? Let's count to make sure we made enough...</i> ).
CC.PK.2 Recognize and name written numerals 0-10.	
CC.PK.3 Recognize that zero represents the count of no objects.	In <b>Weather Graphing</b> children compare weather over time and how many days each has had within the month. The concept of zero meaning none is explored during this activity.
<b>Count to tell the number of objects.</b>	
CC.PK.4 Use one-to-one correspondence in counting objects and matching groups of objects.	Across the Tools day children are counting in different activities that help them understand the consistency of quantities. For example, they count the number of days to date in the month in <b>Timeline Calendar</b> and the number of days of different kinds of weather in <b>Weather Graphing</b> . In <b>Making Collections</b> , children count collections of objects on cards and in <b>Numerals Game</b> , as well as <b>Making Collections</b> , they can use different objects as counters to represent quantities (e.g., Unifix cubes, counting bears, beads). In <b>Number Follow the Leader</b> , children learn that 5 is a constant whether it is, for example, 5 claps, jumps, taps or blinks. Counting is also integrated in authentic ways in <b>Make-Believe Play</b> .
CC.PK.5 Understand the last numeral spoken, when counting aloud, tells how many total objects are in a set.	Children practice counting objects in a number of math activities including: <b>Freeze Dance—Freeze on the Number, Making Collections, Mystery Math—Mystery Numeral, Numerals Game, Timeline Calendar</b> and <b>Weather Graphing</b> . In <b>Freeze Dance—Freeze on the Number, Making Collections</b> , and <b>Mystery Math—Mystery Numeral</b> , children count objects in an array and scattered configuration. In
CC.PK.6 Understand that each successive number name refers to a quantity that is one larger.	

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CC.PK.7 Identify the number of objects, up to 10, in a row or column.	<p><b>Number Follow the Leader</b>, children learn the relationship between number and quantities by counting then using different motor actions to represent a number on a card. Children gain further experience with counting in <b>Make-Believe Play</b> scenarios (e.g., <i>The customer ordered three heart-shaped cookies and four round cookies</i>). In <b>Math Memory</b> and <b>Remember &amp; Replicate</b>, children use positional words to help them remember and plan the placement of shapes. Which item came first etc.</p>
CC.PK.8 Count up to 5 items in a scattered configuration; not in a row or column.	
CC.PK.9 Identify “first” and “last” related to order or position.	
<b>Compare numbers.</b>	
CC.PK.10 Identify whether the number of objects in one group is more, less, greater than, fewer, and/or equal to the number of objects in another group, up to 5 objects.	<p>In the partner activities <b>Making Collections</b> and <b>Numerals Game</b>, children check each other’s counting and offer feedback: <i>too many, too few, or just right</i>. In <b>Weather Graphing</b> children compare weather over time, noting if there have been the <i>same</i> number of rainy days, <i>more</i> cloudy days, <i>fewer</i> snowy days, etc. In <b>Tallying</b>, children compare whether “yes” or “no” received <i>more, less, or the same</i> number of responses. In <b>Make-Believe Play</b>, children compare groups of objects in the context of make-believe play scenarios (e.g., <i>We should stock the produce shelves. There are more apples than pears, so we need more pears!</i>). In <b>Science Eyes</b>, children compare different items in a collection, for example comparing the number of points on leaves. In <b>Remember &amp; Replicate</b>, children check and compare their play dough arrays with the original array they were working to replicate, identifying if they have <i>more, less</i> or the <i>same</i>.</p>
<b>Algebraic Reasoning</b>	
<b>Understands the concepts of addition and subtraction.</b>	
AR.PK.1 Understand addition as adding to and understand subtraction as taking away from.	<p>In Tools of the Mind®, children use <b>external mediators</b>, including manipulatives, to represent simple addition and subtraction. The <b>Make-Believe Play Block</b> provides intentional opportunities for adding and subtracting while playing out real life situations. The <b>Play Theme Planner</b> teachers use to prepare for play themes has a section for planning meaningful, authentic math experiences. Bakeries, delis, cafeterias and restaurants across multiple themes set up authentic ways children manipulate objects as they add and subtract. For example, posted recipes naturally</p>

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	<p>engage children in adding; in one center the recipe for a pizza is to top with 3 red cubes (tomatoes) and 2 green cubes (peppers); in another center, children add 1 red counting bear (a raspberry) and 4 blue counting bears (blueberries) to fill individual play dough berry pies. <b>Story Problem Cards</b> also engage children in natural addition and subtraction while manipulating objects (e.g., Oh no! There were four cookies for dessert, one for each person, but now there are only three! How many more do we need to make?). In <b>Make-Believe Play</b>, children also pay “money” using pieces of paper representing single dollars, counting out a dollar for each item they purchased, and checking to see how much they have left before deciding what else to buy. In <b>Remember &amp; Replicate</b>, teachers create arrays that engage children in understanding numerical operations as the challenge level of the activity increases. In the teacher-led activity <b>Tallying</b>, children add marks that represent their own and peers’ preferences on a chart (e.g., <i>Which do you like more, drawing or painting?</i>) and learn to count groups of five, add on, and represent the total with an equal sign and numeral. In <b>Weather Graphing</b>, children engage in numerical operations by adding (e.g., <i>How many days have we had of rainy and cloudy weather?</i>).</p>
<b>Understands simple patterns.</b>	
AR.PK.2 Recognize, duplicate, and extend repeating patterns involving manipulatives, sound, movement, and other contexts.	In <b>Mystery Pattern</b> , children compare pattern strips composed of different shapes, naming the shapes as they compare whether the patterns are the same or different; later, children extend patterns by adding 1 or 2 additional shapes. In <b>Pattern Movement</b> , teachers and children name shapes in a pattern and choose a movement that will go with each.
<b>Measurement and Data</b>	
<b>Describe and compare measurable attributes.</b>	
MD.PK.1 Measure objects by their various attributes using standard (rulers) and non-standard (hands, string) measurement.	In the <b>Attribute Game</b> , children work with teacher guidance and later independently in pairs to sort a set of shapes by color, shape, size or number of sides. In <b>Making Collections—Categories</b> , children consider which items do and don’t belong to a given category and discuss why. In <b>Puzzles, Manipulatives &amp; Blocks</b> , children use manipulatives and play dough to make patterns and to build, talking about length and height while using words like <i>long, short, tall</i> . In <b>Science Eyes</b> and <b>Science Eyes—Experiments</b> , children compare objects in collections, using vocabulary to describe
MD.PK.2 Identify measurable attributes of objects. Describe them as little, big, long, short, tall, heavy, light, or other age appropriate vocabulary.	

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MD.PK.3 Compare two objects with a common measurable attribute using words such as longer/shorter; heavier/lighter; or taller/shorter.	measurable attributes. The vocabulary of measurement and attributes is also explored in <b>Story Lab—Vocabulary</b> read alouds. <b>Make-Believe Play</b> provides many opportunities to practice sorting, classifying, comparing and measuring in authentic situations. For example, children might sort dog collars by color or length at the <b>Pet/Vet Theme</b> Pet Store, or sort medicine (counting cubes) by type (blue, red, yellow, green) for the doctor to prescribe in the <b>Medical Theme</b> . Children explore measurement as they measure babies, weigh produce or take a patient’s pulse. The availability of containers in different sizes across play themes sets children up to compare volume and capacity. For example, two sizes of pizza boxes are available for pizza orders at the Pizza Shop, cups of different sizes are available for different family members to drink from in the Kitchen.
<b>Sort objects.</b>	
MD.PK.4 Sort and group up to 5 objects into a set based upon characteristics such as color, size, and shape and explain verbally what the objects have in common.	In the <b>Attribute Game</b> , children work with teacher guidance and later independently in pairs to sort a set of shapes by color, shape, size or number of sides. In <b>Making Collections—Categories</b> , children consider which items do and don’t belong to a given category and discuss why. <b>Make-Believe Play</b> provides many opportunities to practice sorting, classifying, comparing and measuring in authentic situations. For example, children might sort dog collars by color or length at the <b>Pet/Vet Theme</b> Pet Store, or sort medicine (counting cubes) by type (blue, red, yellow, green) for the doctor to prescribe in the <b>Medical Theme</b> . Children explore measurement as they measure babies, weigh produce or take a patient’s pulse. The availability of containers in different sizes across play themes sets children up to compare volume and capacity. For example, two sizes of pizza boxes are available for pizza orders at the Pizza Shop, cups of different sizes are available for different family members to drink from in the Kitchen.
MD.PK.5 Sort objects into sets by one or more attributes.	

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<b>Geometry</b>	
<b>Identify and describe shapes.</b>	
G.PK.1 Name common shapes (squares, circles, triangles, rectangles).	<p>In the <b>Attribute Game</b>, children sort 2D objects by different rules (color, size, shape, # sides) and use math vocabulary. In <b>Math Memory</b> and <b>Remember &amp; Replicate</b>, children use positional words to help them remember and plan the placement of shapes, including 2D and 3D shapes. In <b>Venger Drawing and Collage</b>, children use shape vocabulary and integrate shapes of different sizes to create drawings and collages. In <b>I Have—Who Has? Shapes</b>, children learn shape names for 2D shapes and become fluent in naming them, and in <b>Mystery Shape</b> children manipulate shapes and identify the correct two component shapes that compose a target shape (e.g., two triangles that compose a rectangle). In <b>Mystery Pattern</b>, children compare pattern strips composed of different shapes, naming the shapes as they compare whether the patterns are the same or different; later, children extend patterns by adding 1 or 2 additional shapes. In <b>Pattern Movement</b>, teachers and children name shapes in a pattern and choose a movement that will go with each. In <b>Puzzles, Manipulatives and Blocks</b>, children explore and build with both 2D and 3D shapes and teachers engage children in using vocabulary to describe what they’re doing. During <b>Free Choice</b> and <b>Make-Believe Play</b> in the Block and Table Toys Centers, children have the opportunity to explore and build with 2D and 3D shapes. Children also develop spatial and geometric sense in <b>Make-Believe Play</b> as they create sets and props built with blocks and boxes, use pattern blocks to make “soup” in a Restaurant Theme café, or complete a puzzle in the Family Theme Living Room.</p>
G.PK.2 Describe the attributes of common shapes (straight, round, pointy).	
G.PK.3 Describe objects in the environment using names of shapes.	
G.PK.4 Create and build shapes from components (e.g., sticks, playdough).	
<b>Use spatial awareness and reasoning.</b>	
G.PK.5 Describe the relative positions of objects using gestures and terms such as top, bottom, up, down, in front of, behind, over, under, and next to.	<p>In <b>Math Memory</b> and <b>Remember &amp; Replicate</b>, children use positional words to help them remember and plan the placement of shapes. Children also develop spatial and geometric sense in <b>Make-Believe Play</b> as they create sets and props built with blocks and boxes, use pattern blocks to make “soup” in a Restaurant Theme café, or complete a puzzle in the Family Theme</p>
G.PK.6 Identify shapes regardless of size and position.	<p>In the <b>Attribute Game</b>, children sort 2D objects by different rules (color, size, shape, # sides) and use math vocabulary. In <b>Math Memory</b> and <b>Remember &amp; Replicate</b>,</p>

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<b>Collect and organize data.</b>	
G.PK.7 Collect and organize information about objects and events in the environment.	<p>In <b>Science Eyes</b> activities (<b>Science Eyes, Science Eyes with Sense Mediators, Science Eyes—Experiments</b> and <b>Science Journals</b>), children collect and organize data as they explore collections and engage in long-term investigations. In <b>Weather Graphing</b>, children learn how to represent and read data in a bar graph and use a wide range of weather-related vocabulary. In <b>Make-Believe Play</b>, for example using pretend binoculars while they look at, name and record common plants and animals on a pretend forest walk.</p>
G.PK.8 Use categorical data to create real-object graphs.	