



# Kindergarten End of Year Expectations

## NUMERACY

*By the end of the year students meeting grade level expectation will be able to:*

<b>Standards for Mathematical Practice</b>	
<b>Makes sense of problems and perseveres in solving them</b>	<p>Examine problems (tasks), making sense of the meaning of the task and finding an entry point or a way to start the task.</p> <p>Develop a foundation for problem solving strategies and becoming independently proficient on using those strategies to solve new tasks.</p> <p>Use manipulatives and pictorial representations. The exception is when the CCSS uses to the word fluently, which denotes mental mathematics and computational procedures.</p> <p>Persevere while solving tasks; that is, if students reach a point in which they are stuck, they can reexamine the task in a different way and continue to solve the task.</p> <p>Ask self the question, "Does my answer make sense?"</p>
<b>Shares problem solving strategies and discusses the reasonableness of strategies</b>	<p>Accurately use definitions and previously established answers to construct viable arguments about mathematics. For example, while solving the task, "There are 15 books on the shelf. If you take some books off the shelf and there are now 7 left, how many books did you take off the shelf?" students will use a variety of strategies to solve the task.</p> <p>After solving problems, share problem solving strategies and discussing the reasonableness of classmates' strategies.</p>
<b>Attends to precision in communication, calculations and measurements</b>	<p>Precise communication, calculations, and measurements.</p> <p>Describe actions and strategies clearly, using grade-level appropriate vocabulary accurately as well as giving precise explanations and reasoning regarding their process of finding solutions. For example, while measuring objects iteratively (repetitively), students check to make sure that there are no gaps or overlaps.</p> <p>During tasks involving number sense, check work to ensure the accuracy and reasonableness of solutions.</p>



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### Counting and Cardinality

#### Knows number names and the count sequence

Count to 100 by ones and 10s. Recognize the pattern for the digits 0 through 9 in the written and spoken numerals.

Match number names with numerals (to 20), and write numerals from 1 to 20.

#### Counts to tell the numbers of objects

Connect the physical objects in a quantity with the oral number word and the numeral (to 20).

Say the number names in consecutive order as they touch each object, no matter the arrangement.

Given a written or spoken numeral, count out or draw that many items from a collection of items.

#### Compares numbers

Use the words "greater than/more than" and "less than/fewer than" to compare the number of items in two sets, and explain reasoning.

Identify how many more or how many fewer items one set has than another.

Recognize that two sets that have the same number of items using the description "same as".

Make connections between numbers of items in each set to be compared with number names and numerals.

### Operations and Algebraic Thinking

#### Understands addition and subtraction

Solve problems using objects and drawings and explain their thinking.

Understand addition as joining two sets or adding on to a set.

Use manipulatives to show different ways that a given number (up to 10) can be broken (decomposed) into two sets in multiple ways.

Understand subtraction as taking items from a set or taking apart a set.

Are familiar with expression and equation notation, and can match these to models, but may not be using them to independently represent addition or subtraction situations.

Recognize facts through sums to 5 written by the teacher as expressions or equations. Complete the expressions with a correct sum or difference either orally or in writing.



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Numbers in Base Ten	
<b>Works with numbers 11-19 to gain foundations for place value understanding</b>	<p>Compose and decompose numbers from 11 to 19 into 10 ones and some more ones.</p> <p>Use manipulatives and drawings to represent and explain their thinking.</p>
Measurement and Data	
<b>Describes and compare measurable attributes</b>	<p>Understand that an object has different attributes that can be measured, like the length of paper or the height of a student.</p> <p>Measure attributes of a variety of objects using non-standard units and a variety of tools.</p> <p>Describe and compare the objects measured with vocabulary terms such as <i>more than</i>, <i>less than</i>, <i>taller</i>, <i>longer</i>, <i>shorter</i>, <i>heavier</i>, <i>lighter</i> and similar descriptive terms.</p>
<b>Classifies objects and counts the number of objects in each category</b>	<p>Sort collections of objects possibly with more than one way to sort.</p> <p>Describe how collections have been sorted using attribute language or characteristics (things that may change such as color) of the items.</p>
Geometry	
<b>Identifies and describes shapes</b>	<p>Using attributes, students identify and define squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres, regardless of size or orientation.</p> <p>Recognize, compare and sort shapes based on geometric attributes.</p> <p>Describe locations of shapes using positional words (e.g. <i>the rectangle bulletin board is above the light switch</i>).</p>
<b>Analyzes, compares, creates, and composes shapes</b>	<p>Understand that specific attributes (number of sides, angles, etc) define what a shape's name is and other characteristics do not (size, color, orientation).</p> <p>Identify and describe what shapes look like such as cubes, cones, cylinders and spheres.</p> <p>Sort two-dimensional and three-dimensional objects and explain how the objects were sorted.</p> <p>Draw triangles, rectangles, and circles, and build cubes, cones, spheres, and similar shapes.</p> <p>Compose new shapes from two or more other shapes, and identify and describe the shapes they have composed.</p>