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

Standards for Mathematical Practice	
Makes sense of problems and perseveres in solving them	Examine problems (tasks), makesense of the meaning of the task and find an entry point or a way to start the task. Develop a foundation for problem solving strategies and becoming independently proficient on using those strategies to solve new tasks. Use concrete manipulatives and pictorial representations. (The exception is when the CCSS uses to the word fluently, which denotes mental mathematics and computational procedures.). 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. Ask the question, "Does my answer make sense?"
Shares problem solving strategies and discusses the reasonableness of strategies.	Accurate use of 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. After solving problems, shares problem solving strategies and discussing the reasonableness of classmates' strategies.
Attends to precision in communication, calculations and measurements	Precise communication, calculations, and measurements. 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. During tasks involving number sense, check work to ensure the accuracy and reasonableness of solutions.

Operations and Algebraic Thinking	
Represents and solves word problems involving addition and subtraction	Create models to make sense of a problem. Connect models to pictures, number lines, and other representations to determine what is happening in the problem and then connect it to the mathematical notation of +, - and =. Begin to develop efficient strategies to add or subtract the numbers in the problem including counting on, counting back, making groups of 10, and finding missing parts/addends. Begin to write equations to represent their thinking.
Understands and applies properties of operations and the relationship between addition and subtraction	Describe patterns and make generalizations about specific situations or mathematical properties such as changing the order of the addends, adding 0, adding 1, or looking for tens when adding more than two numbers. Use the relationship between addition and subtraction to solve basic facts.
Adds and subtracts within 20	Explain their strategy for finding the answer to an addition or subtraction fact with sums to 10 using objects, pictures, words and/or numbers. Demonstrate flexibility, efficiency and accuracy (fluency) for addition and subtraction facts with sums to 10*. Extend use of strategies to facts with sums to 20, using concrete, pictorial and symbolic representations**. * *Students receive extensive experiences with physical counters and ten frames to develop conceptual understanding of strategies prior to skill drill and practice. Premature drill and practice does not produce fluency.* ***Fluency with addition and subtraction facts with sums to 20 is the expectation for Grade 2. Students will be exposed to a variety of experiences working with extended facts in preparation for Grade 2.*
Works with addition and subtraction equations	Have deep understanding of the operations of addition and subtraction, solve problems in various contexts, and develop strategies for efficient approaches to learning facts. Use mathematical symbols including numerals, operations symbols (+, -) and the equal sign (=) to write and solve equations with unknowns in all orientations. Given a variety of correct and incorrect equations, identify which are true and which are false and justify thinking using manipulatives or words.

Numbers in Base Ten	
Extends the counting sequence (to 120)	Count on from any number less than 120 forward and backward. Count a quantity with up to or less than 120 objects, generalizing that counting by groups of ten is more efficient than by ones. Recognize and explain patterns with numerals (e.g. *the 1-9 pattern in the ones place when counting over a decade).* Understand that the place of a digit determines its value (e.g. *24 is different from and less than 42*). Read and write numerals to 120.
Understands place value (of two-digit numbers)	Think of whole numbers in terms of the value of their digits (tens and ones) and describe them as such. Recognize that a digit in the tens place represents that many groups of 10, and a digit in the ones place represents that many ones. Connect words to the written numeral (e.g. *3 tens and 2 ones is written as 32).* Compare two 2-digit numbers written as numerals using the mathematical symbols <, >, and =, and justify their reasoning using place value understanding (e.g. *I know that 45 > 42 because they both have 4 tens, but 5 ones in 45 is more than 2 ones in 42).*
Applies place value understandings and properties of operations to add and subtract	Model addition with sums to 100 using concrete materials, pictures, numerals and lastly equations. Generalize and develop own strategies for adding one- and two-digit numbers. Record addition examples accurately both horizontally and vertically. Develop mental strategies for finding 10 more or 10 less than any number up to 100, explaining their reasoning using place value understanding. Subtract multiples of 10 from greater multiples of 10, using understanding of subtraction and a variety of strategies including place value reasoning.

First Grade End of Year Expectations
NUMERACY

Measurement and Data	
Measures lengths indirectly and by iterating (repeatedly applying) length units	Estimate, describe and compare measureable attributes (e.g. length). Measure items with different sizes of nonstandard units accurately. Understand that the smaller the unit of measurement, the more units that will be needed to measure the object.
Tells and writes time to the hour and half hour	Tell and write time to the hour and half hour using both analog and digital clocks. Understand that 60 minutes equals 1 hour.
Represents and interprets data	Formulate a question, collect and organize the data in a chart or table, and interpret the results to answer a question. Summarize data with up to 3 categories using measurement language such as *most, least, more than, less than* and similar comparison words.
Geometry	
Reasons with shapes and attributes	Build and draw two-dimensional shapes and describe the attributes of shapes (e.g. *I know this is a square because my square's 4 sides are the same length; it has four corners; it is a closed figure*). Combine known shapes to create a new shape or figure, name the new shape or figure and identify the names of each shape that formed it. Relate geometric figures to equal parts and name the parts as halves and fourths/quarters (i.e. visually notice that a rectangle can be partitioned into two equal triangles and that the same triangles can be recomposed to form the original rectangle).