First Grade Mathematics Planning Map
SY 2016-2017

Suggested Instructional Timeline	
Unit 1	9/6/16 – 11/3/16 (9 WEEKS)

First Grade Mathematics	**Quarter 1 – Unit 1**
Common Core Domains and Clusters:	**Operations & Algebraic Thinking (OA)** - Represent and solve problems involving addition and subtraction - Understand and apply properties of operation and the relationship between addition and subtraction. - Add and subtract within 20 - Work with addition and subtraction equations
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:** **SMP 1** – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **1.OA.6 -** Fluently add and subtract within 10

Common Core Standards		**Skill Focus: Students will understand how to…**
WEEKS ONE – NINE (9/6/16 – 11/3/16)		
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for	• **Count on from one embedded number or part to totals of 6, 7, 8, 9 , 10** • **Represent all the number pairs of 10 from a given**

	the unknown number to represent the problem.	**scenario, and generate all expressions equal to 10** • **Solve *put together with result unknown* math stories** • **Solve *add to with change unknown* math stories as a context for counting on by drawing, writing equations, and making statements of the solution.** • **Solve put together with result unknown math stories.** • **Solve add to with change unknown math stories.** • **Tell put together with result unknown, add to with result unknown, and add to with change unknown stories from equations.** • **Count on to find the unknown part in missing addend equations.** • **Solve *take from with result unknown* math stories** • **Solve *take apart with addend unknown* math stories** • **Analyze the addition chart to create sets of related addition and subtraction facts** • **Understand the meaning of the equal sign by pairing equivalent expressions and constructing true number sentences.** • **Look for and make repeated reasoning on the addition chart by solving and analyzing problems with common addends.**
1.OA.3	Apply properties of operations as strategies to add and subtract.**2** *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*	
1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract*	
1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 +4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 +1 = 12 + 1 = 13). **(1st Grade Fluency Standard)**	
1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2= 2 + 5, 4 + 1 = 5 + 2.	
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.	
Unpacking: What do these standards mean a child will know and be able to do?		
1.OA.1	First grade students extend their experiences in Kindergarten by working with numbers to 20 to solve a new type of problem situation: In a Compare situation, two amounts are compared to find “How many more” or “How many less”. Compare problems are more complex than those introduced in Kindergarten. In order to solve compare problem types, First graders must think about a quantity that is not physically present and must conceptualize that amount. In addition, the language of “how many more” often becomes lost or not heard with the language of ‘who has more’. With rich experiences that encourage students to match problems with objects and drawings can help students master these challenges. First graders also extend the sophistication of the methods they used in Kindergarten (counting) to add and subtract within this larger range. Now,	

	First grade students use the methods of counting on, making ten, and doubles +/- 1 or +/- 2 to solve problems. In order for students to read and use equations to represent their thinking, they need extensive experiences with addition and subtraction situations in order to connect the experiences with symbols (+, -, =) and equations (5 = 3+ 2). In Kindergarten, students demonstrated the understanding of how objects can be joined (addition) and separated (subtraction) by representing addition and subtraction situations using objects, pictures and words. In First grade, students extend this understanding of addition and subtraction situations to use the addition symbol (+) to represent joining situations, the subtraction symbol (-) to represent separating situations, and the equal sign (=) to represent a relationship regarding quantity between one side of the equation and the other.
1.OA.3	Elementary students often believe that there are hundreds of isolated addition and subtraction facts to be mastered. However, when students understand the commutative and associative properties, they are able to use relationships between and among numbers to solve problems. First grade students apply properties of operations as strategies to add and subtract. Students do not use the formal terms "commutative" and "associative". Rather, they use the understandings of the commutative and associative property to solve problems.
1.OA.4	First graders often find subtraction facts more difficult to learn than addition facts. By understanding the relationship between addition and subtraction, First graders are able to use various strategies described below to solve subtraction problems. **For Sums to 10 -** Think-Addition: Think-Addition uses known addition facts to solve for the unknown part or quantity within a problem. When students use this strategy, they think, "What goes with this part to make the total?" The think-addition strategy is particularly helpful for subtraction facts with sums of 10 or less and can be used for sixty-four of the 100 subtraction facts. Therefore, in order for think-addition to be an effective strategy, students must have mastered addition facts first. For example, when working with the problem 9 - 5 = ⍰, First graders think "Five and what makes nine?", rather than relying on a counting approach in which the student counts 9, counts off 5, and then counts what's left. When subtraction is presented in a way that encourages students to think using addition, they use known addition facts to solve a problem **For Sums Greater than 10** The 36 facts that have sums greater than 10 are often considered the most difficult for students to master. Many students will solve these particular facts with Think-Addition (described above), while other students may use other strategies described below, depending on the fact. Regardless of the strategy used, all strategies focus on the relationship between addition and subtraction and often use 10 as a benchmark number. **Build Up Through 10:** This strategy is particularly helpful when one of the numbers to be subtracted is 8 or 9. Using 10 as a bridge, either 1 or 2 are added to make 10, and then the remaining amount is added for the final sum. **Back Down Through 10** This strategy uses take-away and 10 as a bridge. Students take away an amount to make 10, and then take away the rest. It is helpful for facts where the ones digit of the two-digit number is close to the number being subtracted.
1.OA.5	When solving addition and subtraction problems to 20, First graders often use counting strategies, such as counting all, counting on, and counting back, before fully developing the essential strategy of using 10 as a benchmark number. Once students have developed counting strategies to solve addition and subtraction problems, it is very important to move students toward strategies that focus on composing and decomposing number using ten as a benchmark number, as discussed in 1.OA.6, particularly since counting becomes a hindrance when working with larger numbers. By the end of First grade, students are expected to use the strategy of 10 to solve problems. Counting All: Students count all objects to determine the

	total amount. Counting On & Counting Back: Students hold a "start number" in their head and count on/back from that number.
1.OA.6	In First grade, students learn about and use various strategies to solve addition and subtraction problems. When students repeatedly use strategies that make sense to them, they internalize facts and develop fluency for addition and subtraction within 10. When students are able to demonstrate fluency within 10, they are accurate, efficient, and flexible. First graders then apply similar strategies for solving problems within 20, building the foundation for fluency to 20 in Second Grade.
1.OA.7	In order to determine whether an equation is true or false, First grade students must first understand the meaning of the equal sign. This is developed as students in Kindergarten and First grade solve numerous joining and separating situations with mathematical tools, rather than symbols. Once the concepts of joining, separating, and "the same amount/quantity as" are developed concretely, First graders are ready to connect these experiences to the corresponding symbols (+, -, =). Thus, students learn that the equal sign does not mean "the answer comes next", but that the symbol signifies an equivalent relationship that the left side 'has the same value as' the right side of the equation. When students understand that an equation needs to "balance", with equal quantities on both sides of the equal sign, they understand various representations of equations, such as: • an operation on the left side of the equal sign and the answer on the right side (5 + 8 = 13) • an operation on the right side of the equal sign and the answer on the left side (13 = 5 + 8) • numbers on both sides of the equal sign (6 = 6) • operations on both sides of the equal sign (5 + 2 = 4 + 3). Once students understand the meaning of the equal sign, they are able to determine if an equation is true (9 = 9) or false (9 = 8).
1.OA.8	First graders use their understanding of and strategies related to addition and subtraction as described in 1.OA.4 and 1.OA.6 to solve equations with an unknown. Rather than symbols, the unknown symbols are boxes or pictures. Example: **Five cookies were on the table. I ate some cookies. Then there were 3 cookies. How many cookies did I eat?** **Student A:** What goes with 3 to make 5? 3 and 2 is 5. So, 2 cookies were eaten. **Student B**: Fiiivee, four, three (*holding up 1 finger for each count*). 2 cookies were eaten (*showing 2 fingers*). **Student C**: We ended with 3 cookies. Three, four, five (*holding up 1 finger for each count*). 2 cookies were eaten (*showing 2 fingers*). Example: **Determine the unknown number that makes the equation true. 5 - □ = 2** **Student**: 5 minus something is the same amount as 2. Hmmm. 2 and what makes 5? 3! So, 5 minus 3 equals 2. Now it's true!

First Grade Mathematics Planning Map
SY 2016-2017

Suggested Instructional Timeline: Quarter 2	
Unit 1	11/7/16 – 12/23/16 (6 WEEKS)
Unit 2	1/9/17 – 2/2/17 (4 WEEKS)

First Grade Mathematics	**Quarter 2 – Unit 1**
Common Core Domains and Clusters:	**Operations & Algebraic Thinking (OA)** - Represent and solve problems involving addition and subtraction - Understand and apply properties of operation and the relationship between addition and subtraction. - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 **Number and Operations in Base Ten (NBT)** - Understand place value
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:** **SMP 1** – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **K.OA.5 -** Fluently add and subtract within 5

Common Core Standards		**Skill Focus: Students will understand how to…**
WEEKS ONE – SIX (11/7/16 – 12/23/16)		
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and	• **Solve word problems with three addends, two of which**

	comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem	**make ten.** • **Solve problems with addends of 7, 8, 9** • **Share and critique peer solution strategies for put together with total unknown word problems.** • **Model subtraction of 9 from teen numbers.** • **Relate counting on to making ten and taking from ten.** • **Subtract 7, 8, 9 from teen numbers.** • **Share and critique peer solution strategies for take from with result unknown and take apart with addend unknown word problems from the teen numbers.** • **Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.** • **Solve addition problems using ten as a unit, and write two-step solutions.** • **Solve subtraction problems using ten as a unit, and write two-step solutions.** • **Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.** • **Solve addition problems using ten as a unit, and write two-step solutions.** • **Solve subtraction problems using ten as a unit, and write two-step solutions.**
1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	
1.OA.3	Apply properties of operations as strategies to add and subtract.**2** *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*	
1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within20.*	
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten(e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 +4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 +1 = 12 + 1 = 13). **(1st Grade Fluency Standard)**	
1.NBT.2a	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones – called a “ten.”	
1.NBT.2b	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	
Unpacking: What do these standards mean a child will know and be able to do?		
1.OA.1	First grade students extend their experiences in Kindergarten by working with numbers to 20 to solve a new type of problem situation. In a Compare situation, two amounts are compared to find “How many more” or “How many less”. Compare problems are more complex than those	

	introduced in Kindergarten. In order to solve compare problem types, First graders must think about a quantity that is not physically present and must conceptualize that amount. In addition, the language of "how many more" often becomes lost or not heard with the language of 'who has more'. With rich experiences that encourage students to match problems with objects and drawings can help students master these challenges. First graders also extend the sophistication of the methods they used in Kindergarten (counting) to add and subtract within this larger range. Now, First grade students use the methods of counting on, making ten, and doubles +/- 1 or +/- 2 to solve problems. In order for students to read and use equations to represent their thinking, they need extensive experiences with addition and subtraction situations in order to connect the experiences with symbols (+, -, =) and equations (5 = 3+ 2). In Kindergarten, students demonstrated the understanding of how objects can be joined (addition) and separated (subtraction) by representing addition and subtraction situations using objects, pictures and words. In First grade, students extend this understanding of addition and subtraction situations to use the addition symbol (+) to represent joining situations, the subtraction symbol (-) to represent separating situations, and the equal sign (=) to represent a relationship regarding quantity between one side of the equation and the other.
1.OA.2	First grade students solve multi-step word problems by adding (joining) three numbers whose sum is less than or equal to 20, using a variety of mathematical representations.
1.OA.3	Elementary students often believe that there are hundreds of isolated addition and subtraction facts to be mastered. However, when students understand the commutative and associative properties, they are able to use relationships between and among numbers to solve problems. First grade students apply properties of operations as strategies to add and subtract. Students do not use the formal terms "commutative" and "associative". Rather, they use the understandings of the commutative and associative property to solve problems.
1.OA.4	First graders often find subtraction facts more difficult to learn than addition facts. By understanding the relationship between addition and subtraction, First graders are able to use various strategies described below to solve subtraction problems. **For Sums to 10 -** Think-Addition: Think-Addition uses known addition facts to solve for the unknown part or quantity within a problem. When students use this strategy, they think, "What goes with this part to make the total?" The think-addition strategy is particularly helpful for subtraction facts with sums of 10 or less and can be used for sixty-four of the 100 subtraction facts. Therefore, in order for think-addition to be an effective strategy, students must have mastered addition facts first. For example, when working with the problem 9 - 5 = □, First graders think "Five and what makes nine?", rather than relying on a counting approach in which the student counts 9, counts off 5, and then counts what's left. When subtraction is presented in a way that encourages students to think using addition, they use known addition facts to solve a problem **For Sums Greater than 10** The 36 facts that have sums greater than 10 are often considered the most difficult for students to master. Many students will solve these particular facts with Think-Addition (described above), while other students may use other strategies described below, depending on the fact. Regardless of the strategy used, all strategies focus on the relationship between addition and subtraction and often use 10 as a benchmark number. **Build Up Through 10:** This strategy is particularly helpful when one of the numbers to be subtracted is 8 or 9. Using 10 as a bridge, either 1 or 2 are added to make 10, and then the remaining amount is added for the final sum.

	Back Down Through 10 This strategy uses take-away and 10 as a bridge. Students take away an amount to make 10, and then take away the rest. It is helpful for facts where the ones digit of the two-digit number is close to the number being subtracted.
1.OA.6	In First grade, students learn about and use various strategies to solve addition and subtraction problems. When students repeatedly use strategies that make sense to them, they internalize facts and develop fluency for addition and subtraction within 10. When students are able to demonstrate fluency within 10, they are accurate, efficient, and flexible. First graders then apply similar strategies for solving problems within 20, building the foundation for fluency to 20 in Second Grade.
1.NBT.2a	First grade students are introduced to the idea that a bundle of ten ones is called "a ten". This is known as unitizing. When First grade students unitize a group of ten ones as a whole unit ("a ten"), they are able to count groups as though they were individual objects. For example, 4 trains of ten cubes each have a value of 10 and would be counted as 40 rather than as 4. This is a monumental shift in thinking, and can often be challenging for young children to consider a group of something as "one" when all previous experiences have been counting single objects. This is the foundation of the place value system and requires time and rich experiences with concrete manipulatives to develop. A student's ability to conserve a number is an important aspect of this standard. It is not obvious to young children that 42 cubes is the same amount as 4 tens and 2 left-overs. It is also not obvious that 42 could also be composed of 2 groups of 10 and 22 leftovers. Therefore, first graders require ample time grouping proportional objects (e.g., cubes, beans, beads, ten-frames) to make groups of ten, rather than using pre-grouped materials (e.g., base ten blocks, pre-made bean sticks) that have to be "traded" or are non-proportional (e.g., money). As children build this understanding of grouping, they move through several stages: **Counting By Ones; Counting by Groups & Singles;** and **Counting by Tens and Ones**. **Counting By Ones:** At first, even though First graders will have grouped objects into tens and left-overs, they rely on counting all of the individual cubes by ones to determine the final amount. It is seen as the only way to determine how many. **Counting By Groups and Singles:** While students are able to group objects into collections of ten and now tell how many groups of tens and left-overs there are, they still rely on counting by ones to determine the final amount. They are unable to use the groups and left-overs to determine how many. **Counting by Tens & Ones**: Students are able to group objects into ten and ones, tell how many groups and leftovers there are, and now use that information to tell how many. Ex: "I have 3 groups of ten and 4 left-overs. That means that there are 34 cubes in all." Occasionally, as this stage is becoming fully developed, first graders rely on counting by ones to "really" know that there are 34, even though they may have just counted the total by groups and left-overs. **Base Ten Materials:** Ample experiences with a variety of materials that are proportional (e.g., cubes, links, beans, beads) and ten frames allow students opportunities to create tens and break apart tens, rather than "trade" one for another. Since students first learning about place value concepts primarily rely on counting, the physical opportunity to build tens helps them to "see" that a "ten stick" has "ten items" within it. Pre-grouped materials (e.g., base ten blocks, bean sticks) are not introduced or used until a student has a firm understanding of composing and decomposing tens.
1.NBT.2b	First grade students extend their work from Kindergarten when they composed and decomposed numbers from 11 to 19 into ten ones and some further ones. In Kindergarten, everything was thought of as individual units: "ones". In First grade, students are asked to unitize those ten

	individual ones as a whole unit: "*one ten*". Students in first grade explore the idea that the teen numbers (11 to 19) can be expressed as *one* ten and some leftover ones. Ample experiences with a variety of materials that are proportional (e.g., cubes, links, beans, beads) and ten frames help students develop this concept. In addition, when learning about forming groups of 10, First grade students learn that a numeral can stand for many different amounts, depending on its position or place in a number. This is an important realization as young children begin to work through reversals of digits, particularly in the teen numbers.

First Grade Mathematics		**Quarter 2 – Unit 2**
Common Core Domains and Clusters:	**Operations & Algebraic Thinking (OA)** - Represent and solve problems involving addition and subtraction **Measurement and Data (MD)** - Measure lengths Indirectly and by iterating length units - Represent and interpret data	
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:** **SMP 1** – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**	
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **1.OA.6 -** Fluently add and subtract within 10	
Common Core Standards		**Skill Focus: Students will understand how to..**
WEEKS SEVEN - TEN (1/9/17 – 2/2/17)		
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and	• **Answer compare with difference unknown problems about**

	comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**length of two different objects measured in centimeters.** • **Collect, sort, and organize data, then ask answer questions about the number of data points.** • **Compare lengths directly and consider importance of aligning endpoints.** • **Order, measure, and compare length of objects before and after measuring with centimeter cubes, solving compare with difference unknown word problems.**
1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object	
1.MD.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	
1.MD.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another	
Unpacking: What do these standards mean a child will know and be able to do?		
1.OA.1	First grade students extend their experiences in Kindergarten by working with numbers to 20 to solve a new type of problem situation. In a Compare situation, two amounts are compared to find "How many more" or "How many less". Compare problems are more complex than those introduced in Kindergarten. In order to solve compare problem types, First graders must think about a quantity that is not physically present and must conceptualize that amount. In addition, the language of "how many more" often becomes lost or not heard with the language of 'who has more'. With rich experiences that encourage students to match problems with objects and drawings can help students master these challenges. First graders also extend the sophistication of the methods they used in Kindergarten (counting) to add and subtract within this larger range. Now, First grade students use the methods of counting on, making ten, and doubles +/- 1 or +/- 2 to solve problems. In order for students to read and use equations to represent their thinking, they need extensive experiences with addition and subtraction situations in order to connect the experiences with symbols (+, -, =) and equations (5 = 3+ 2). In Kindergarten, students demonstrated the understanding of how objects can be joined (addition) and separated (subtraction) by representing addition and subtraction situations using objects, pictures and words. In First grade, students extend this understanding of addition and subtraction situations to use the addition symbol (+) to represent joining situations, the subtraction symbol (-) to represent separating situations, and the equal sign (=) to represent a relationship regarding quantity between one side of the equation and the other.	
1.MD.1	First grade students continue to use direct comparison to compare lengths. *Direct* comparison means that students compare the amount of an attribute in two objects without measurement. Sometimes, a third object can be used as an intermediary, allowing *indirect* comparison. For example, if we know that Aleisha is taller than Barbara and that Barbara is taller than Callie, then we know (due to the transitivity of "taller than') that Aleisha is taller than Callie, even if Aleisha and Callie never stand back to back. This concept is referred to as the transitivity principle for	

	indirect measurement. NOTE: The Transitivity Principle ("transitivity")1: If the length of object A is greater than the length of object B, and the length of object B is greater than the length of object C, then the length of object A is greater than the length of object C. This principle applies to measurement of other quantities as well. Another important set of skills and understandings is ordering a set of objects by length. Such sequencing requires multiple comparisons (no more than 6 objects). Students need to understand that each object is larger than those that come before it, and shorter than those that come after.
1.MD.2	First graders use objects to measure items to help students focus on the attribute being measured. Objects also lend itself to future discussions regarding the need for a standard unit. First grade students use multiple copies of one object to measure the length larger object. They learn to lay physical units such as centimeter or inch manipulatives end-to-end and count them to measure a length. Through numerous experiences and careful questioning by the teacher, students will recognize the importance of careful measuring so that there are not any gaps or overlaps in order to get an accurate measurement. This concept is a foundational building block for the concept of area in 3rd Grade. When students use different sized units to measure the same object, they learn that the sizes of the units must be considered, rather than relying solely on the amount of objects counted. In addition, understanding that the results of measurement and direct comparison have the same results encourages children to use measurement strategies.
1.MD.4	First grade students collect and use categorical data (e.g., eye color, shoe size, age) to answer a question. The data collected are often organized in a chart or table. Once the data are collected, First graders interpret the data to determine the answer to the question posed. They also describe the data noting particular aspects such as the total number of answers, which category had the most/least responses, and interesting differences/similarities between the categories. As the teacher provides numerous opportunities for students to create questions, determine up to 3 categories of possible responses, collect data, organize data, and interpret the results, First graders build a solid foundation for future data representations (picture and bar graphs) in Second Grade.

First Grade Mathematics Planning Map
SY 2016-2017

Suggested Instructional Timeline: Quarter 3	
Unit 1	2/6/17 – 3/17/17 (6 WEEKS)
Unit 2	3/20/16 – 4/6/16 (3 WEEKS)

First Grade Mathematics	**Quarter 3 – Unit 1**
Common Core Domains and Clusters:	**Operations & Algebraic Thinking (OA)** - Represent and solve problems involving addition and subtraction **Number and Operations in Base Ten (NBT)** - Extend the counting sequence - Understand place value - Use place value understanding and properties of operation to add and subtract
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:** **SMP 1** – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **1.OA.6 -** Fluently add and subtract within 10

Common Core Standards		**Skill Focus: Students will understand how to..**
WEEKS ONE - SIX (2/6/17 – 3/17/17)		
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and	• **Solve put together/take apart with total unknown and add**

	comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**to with results unknown** • **Write word problems of varied types.** • **Interpret two-digit numbers as either tens and some ones or as all ones.** • **Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number.** • **Compare two quantities, and identify the greater or lesser of the two given numerals.** • **Compare quantities and numerals from left to right.** • **Add and subtract tens from a multiple of 10** • **Add tens to a two-digit number.** • **Share and critique peer strategies for adding two-digit numbers.** • **Add a pair of two –digit numbers when the ones digits have a sum greater than 10.** • **Use place value chart to record and name tens and ones within a two-digit number.** • **Use the symbols >, =. and < to compare quantities and numerals.** • **Use counting on and the make ten strategy when adding across a ten.**
1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	
1.NBT.2a	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a “ten.”	
1.NBT.2c	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	
1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	
1.NBT.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten	
1.NBT.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	
1.NBT.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between and explain the reasoning used. addition and subtraction; relate the strategy to a written method	
Unpacking: What do these standards mean a child will know and be able to do?		
1.OA.1	First grade students extend their experiences in Kindergarten by working with numbers to 20 to solve a new type of problem situation: Compare (See **Table 1** at end of document for examples of all problem types). In a Compare situation, two amounts are compared to find “How many more” or “How many less”. Compare problems are more complex than those introduced in Kindergarten. In order to solve compare problem types, First graders must think about a quantity that is not physically present and must conceptualize that amount. In addition, the language of	

	"how many more" often becomes lost or not heard with the language of 'who has more'. With rich experiences that encourage students to match problems with objects and drawings can help students master these challenges. First graders also extend the sophistication of the methods they used in Kindergarten (counting) to add and subtract within this larger range. Now, First grade students use the methods of counting on, making ten, and doubles +/- 1 or +/- 2 to solve problems. In order for students to read and use equations to represent their thinking, they need extensive experiences with addition and subtraction situations in order to connect the experiences with symbols (+, -, =) and equations (5 = 3+ 2). In Kindergarten, students demonstrated the understanding of how objects can be joined (addition) and separated (subtraction) by representing addition and subtraction situations using objects, pictures and words. In First grade, students extend this understanding of addition and subtraction situations to use the addition symbol (+) to represent joining situations, the subtraction symbol (-) to represent separating situations, and the equal sign (=) to represent a relationship regarding quantity between one side of the equation and the other.
1.NBT.1	First grade students' rote count forward to 120 by counting on from any number less than 120. First graders develop accurate counting strategies that build on the understanding of how the numbers in the counting sequence are related—each number is one more (or one less) than the number before (or after). In addition, first grade students read and write numerals to represent a given amount. As first graders learn to understand that the position of each digit in a number impacts the quantity of the number, they become more aware of the order of the digits when they write numbers. For example, a student may write"17" and mean "71". Through teacher demonstration, opportunities to "find mistakes", and questioning by the teacher ("I am reading this and it says seventeen. Did you mean seventeen or seventy-one? How can you change the number so that it reads seventy-one?"), students become precise as they write numbers to 120.
1.NBT.2a	First grade students are introduced to the idea that a bundle of ten ones is called "a ten". This is known as unitizing. When First grade students unitize a group of ten ones as a whole unit ("a ten"), they are able to count groups as though they were individual objects. For example, 4 trains of ten cubes each have a value of 10 and would be counted as 40 rather than as 4. This is a monumental shift in thinking, and can often be challenging for young children to consider a group of something as "one" when all previous experiences have been counting single objects. This is the foundation of the place value system and requires time and rich experiences with concrete manipulatives to develop. A student's ability to conserve a number is an important aspect of this standard. It is not obvious to young children that 42 cubes is the same amount as 4 tens and 2 left-overs. It is also not obvious that 42 could also be composed of 2 groups of 10 and 22 leftovers. Therefore, first graders require ample time grouping proportional objects (e.g., cubes, beans, beads, ten-frames) to make groups of ten, rather than using pre-grouped materials (e.g., base ten blocks, pre-made bean sticks) that have to be "traded" or are non-proportional (e.g., money). As children build this understanding of grouping, they move through several stages: **Counting By Ones; Counting by Groups & Singles;** and **Counting by Tens and Ones**. **Counting By Ones:** At first, even though First graders will have grouped objects into tens and left-overs, they rely on counting all of the individual cubes by ones to determine the final amount. It is seen as the only way to determine how many. **Counting By Groups and Singles:** While students are able to group objects into collections of ten and now tell how many groups of tens and left-overs there are, they still rely on counting by ones to determine the final amount. They are unable to use the groups and left-overs to determine how many. **Counting by Tens & Ones**: Students are able to group objects into ten and ones, tell how many groups and leftovers there are, and now use that

	information to tell how many. Ex: "I have 3 groups of ten and 4 left-overs. That means that there are 34 cubes in all." Occasionally, as this stage is becoming fully developed, first graders rely on counting by ones to "really" know that there are 34, even though they may have just counted the total by groups and left-overs. **Base Ten Materials:** Ample experiences with a variety of materials that are proportional (e.g., cubes, links, beans, beads) and ten frames allow students opportunities to create tens and break apart tens, rather than "trade" one for another. Since students first learning about place value concepts primarily rely on counting, the physical opportunity to build tens helps them to "see" that a "ten stick" has "ten items" within it. Pre-grouped materials (e.g., base ten blocks, bean sticks) are not introduced or used until a student has a firm understanding of composing and decomposing tens.
1.NBT.2c	First grade students apply their understanding of groups of ten as stated in 1.NBT.2b to decade numbers (e.g. 10, 20, 30, 40). As they work with objects, first grade students understand that 10, 20, 30…80, 90 are comprised of a certain amount of groups of tens with none left-over.
1.NBT.3	First grade students use their understanding of groups and order of digits to compare two numbers by examining the amount of tens and ones in each number. After numerous experiences verbally comparing two sets of objects using comparison vocabulary (e.g., 42 is more than 31. 23 is less than 52, 61 is the same amount as 61.), first grade students connect the vocabulary to the symbols: greater than (>), less than (<), equal to (=).
1.NBT.4	First grade students use concrete materials, models, drawings and place value strategies to add within 100. They do so by being flexible with numbers as they use the base-ten system to solve problems. The standard algorithm of carrying or borrowing is neither an expectation nor a focus in First grade. Students use strategies for addition and subtraction in Grades K-3. By the end of third grade students use a range of algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction to fluently add and subtract within 1000. Students are expected to fluently add and subtract multi-digit whole numbers using the standard algorithm by the end of Grade 4.
1.NBT.5	First graders build on their counting by tens work in Kindergarten by mentally adding ten more and ten less than any number less than 100. First graders are not expected to compute differences of two-digit numbers other than multiples of ten. Ample experiences with ten frames and the number line provide students with opportunities to think about groups of ten, moving them beyond simply rote counting by tens on and off the decade. Such representations lead to solving such problems mentally.
1.NBT.6	First grade students use concrete models, drawings and place value strategies to subtract multiples of 10 from decade numbers (e.g., 30, 40, 50). They often use similar strategies as discussed in 1.OA.4.

First Grade Mathematics	**Quarter 3 – Unit 2**
Common Core Domains and Clusters:	**Measurement and Data (MD)** - Tell and write time **Geometry (G)** - Reason with shapes and their attributes
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:**

	SMP 1 – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **1.OA.6 -** Fluently add and subtract within 10

Common Core Standards		**Skill Focus: Students will understand how to...**
WEEKS SEVEN - NINE (3/20/16 – 4/6/16)		
1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.	• **Classify shapes based on defining attributes** • **Find and name three-dimensional shapes based on defining attributes** • **Create a composite shape from two and three-dimensional shapes and describe the composite shape using shape names and positions.** • **Partician shapes and identify halves and quarters of circles and rectangles** • **Recognize halves within a circular clock face and tell time to the half hour and hour.**
1.G.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.	
1.G.2	Compose two dimensional shapes(rectangles, squares, trapezoids, triangles, half circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	
1.G.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	
Unpacking: What do these standards mean a child will know and be able to do?		
1.MD.3	For young children, reading a clock can be a difficult skill to learn. In particular, they must understand the differences between the two hands on the clock and the functions of these hands. By carefully watching and talking about a clock with only the hour hand, First graders notice when the	

	hour hand is directly pointing at a number, or when it is slightly ahead/behind a number. In addition, using language, such as "about 5 o'clock" and "a little bit past 6 o'clock", and "almost 8 o'clock" helps children begin to read an hour clock with some accuracy. Through rich experiences, First grade students read both analog (numbers and hands) and digital clocks, orally tell the time, and write the time to the hour and half-hour.
1.G.1	First grade students use their beginning knowledge of defining and non-defining attributes of shapes to identify, name, build and draw shapes (including triangles, squares, rectangles, and trapezoids). They understand that defining attributes are always present features that classify a particular object (e.g., number of sides, angles, etc.). They also understand that non-defining attributes are features that may be present, but do not identify what the shape is called (e.g., color, size, orientation, etc.).
1.G.2	As first graders create composite shapes, a figure made up of two or more geometric shapes, they begin to see how shapes fit together to create different shapes. They also begin to notice shapes within an already existing shape. They may use such tools as pattern blocks, tangrams, attribute blocks, or virtual shapes to compose different shapes. First graders learn to perceive a combination of shapes as a single new shape (e.g., recognizing that two isosceles triangles can be combined to make a rhombus, and simultaneously seeing the rhombus and the two triangles). Thus, they develop competencies that include: • Solving shape puzzles • Constructing designs with shapes • Creating and maintaining a shape as a unit As students combine shapes, they continue to develop their sophistication in describing geometric attributes and properties and determining how shapes are alike and different, building foundations for measurement and initial understandings of properties such as congruence and symmetry.
1.G.3	First graders begin to partition regions into equal shares using a context (e.g., cookies, pies, pizza). This is a foundational building block of fractions, which will be extended in future grades. Through ample experiences with multiple representations, students use the words, *halves, fourths,* and *quarters*, and the phrases *half of, fourth of,* and *quarter of* to describe their thinking and solutions. Working with the "the whole", students understand that "the whole" is composed of two halves, or four fourths or four quarters.

First Grade Mathematics Planning Map
SY 2016-2017

Suggested Instructional Timeline: Quarter 4	
Unit 1	4/17/17 – 6/16/17 (9 WEEKS)

First Grade Mathematics	**Quarter 4 – Unit 1**
Common Core Domains and Clusters:	**Operations & Algebraic Thinking (OA)** - Represent and solve problems involving addition and subtraction **Number and Operations in Base Ten (NBT)** - Extend the counting sequence - Understand place value - Use place value understanding and properties of operation to add and subtract **Measurement and Data (MD)** - Tell time and write
Standards for Mathematical Practice (SMP):	**The following highlighted practices are the minimally required practices students must demonstrate throughout the instructional unit:** **SMP 1** – Making sense of problems and persevere in solving them ***** **SMP 2** – Reason Abstractly and quantitatively **SMP 3** – Constructing viable arguments and critique the reasoning of others ***** **SMP 4** – Model with Mathematics **SMP 5** – Use appropriate tools strategically **SMP 6** – Attend to precision ***** **SMP 7** –Look for and make use of structure **SMP 8** – Look for and express regularity in repeated reasoning *** The District's required SMPs**
Fluency Standard(s):	**Students must fluently demonstrate mastery within the following standard by the end of the year:** **1.OA.6 -** Fluently add and subtract within 10

Common Core Standards		**Skill Focus: Students will understand how to...**
WEEKS ONE - NINE (4/17/17 – 6/16/17)		
1.OA.1	Use addition and subtraction within 20 to solve word problems	• **Solve and compare with difference unknown problem types**

	involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	• **Write and interpret two-digit numbers to 100 as addition sentence that combine tens and ones.** • **Use the symbols >, =, and < to compare quantities and numerals to 100.** • **Count and write numbers to 120.** • **Add a multiple of 10 to any two-digit number within 100.** • **Add a pair of two-digit numbers when the ones digits have a sum greater than 10** • **Identify pennies, nickels, dimes, and quarters by their image, name, or value.** • **Share and critique peer strategies for solving problems of varied types.** • **Use the place value chart to record and name tens and ones within a two-digit number up to 100.** • **Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number within 100.** • **Add and subtract multiples of 10 from multiples of 10 o 100.**
1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	
1.NBT.2a	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten."	
1.NBT.2c	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	
1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	
1.NBT.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	
1.NBT.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	
1.NBT.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	

1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.	
Unpacking: What do these standards mean a child will know and be able to do?		
1.OA.1	First grade students extend their experiences in Kindergarten by working with numbers to 20 to solve a new type of problem situation: Compare (See **Table 1** at end of document for examples of all problem types). In a Compare situation, two amounts are compared to find "How many more" or "How many less". Compare problems are more complex than those introduced in Kindergarten. In order to solve compare problem types, First graders must think about a quantity that is not physically present and must conceptualize that amount. In addition, the language of "how many more" often becomes lost or not heard with the language of 'who has more'. With rich experiences that encourage students to match problems with objects and drawings can help students master these challenges. First graders also extend the sophistication of the methods they used in Kindergarten (counting) to add and subtract within this larger range. Now, First grade students use the methods of counting on, making ten, and doubles +/- 1 or +/- 2 to solve problems. In order for students to read and use equations to represent their thinking, they need extensive experiences with addition and subtraction situations in order to connect the experiences with symbols (+, -, =) and equations (5 = 3+ 2). In Kindergarten, students demonstrated the understanding of how objects can be joined (addition) and separated (subtraction) by representing addition and subtraction situations using objects, pictures and words. In First grade, students extend this understanding of addition and subtraction situations to use the addition symbol (+) to represent joining situations, the subtraction symbol (-) to represent separating situations, and the equal sign (=) to represent a relationship regarding quantity between one side of the equation and the other.
1.NBT.1	First grade students' rote count forward to 120 by counting on from any number less than 120. First graders develop accurate counting strategies that build on the understanding of how the numbers in the counting sequence are related—each number is one more (or one less) than the number before (or after). In addition, first grade students read and write numerals to represent a given amount. As first graders learn to understand that the position of each digit in a number impacts the quantity of the number, they become more aware of the order of the digits when they write numbers. For example, a student may write"17" and mean "71". Through teacher demonstration, opportunities to "find mistakes", and questioning by the teacher ("I am reading this and it says seventeen. Did you mean seventeen or seventy-one? How can you change the number so that it reads seventy-one?"), students become precise as they write numbers to 120.
1.NBT.2a	First grade students are introduced to the idea that a bundle of ten ones is called "a ten". This is known as unitizing. When First grade students unitize a group of ten ones as a whole unit ("a ten"), they are able to count groups as though they were individual objects. For example, 4 trains of ten cubes each have a value of 10 and would be counted as 40 rather than as 4. This is a monumental shift in thinking, and can often be challenging for young children to consider a group of something as "one" when all previous experiences have been counting single objects. This is the foundation of the place value system and requires time and rich experiences with concrete manipulatives to develop. A student's ability to conserve a number is an important aspect of this standard. It is not obvious to young children that 42 cubes is the same amount as 4 tens and 2 left-overs. It is also not obvious that 42 could also be composed of 2 groups of 10 and 22 leftovers. Therefore, first graders require ample time grouping proportional objects (e.g., cubes, beans, beads, ten-frames) to make groups of ten, rather than using pre-grouped materials (e.g., base ten blocks, pre-made bean sticks) that have to be "traded" or are non-proportional (e.g., money). As children build this understanding of grouping, they move through several stages: **Counting By Ones; Counting by Groups & Singles;** and **Counting by Tens and Ones**.

	Counting By Ones: At first, even though First graders will have grouped objects into tens and left-overs, they rely on counting all of the individual cubes by ones to determine the final amount. It is seen as the only way to determine how many. **Counting By Groups and Singles:** While students are able to group objects into collections of ten and now tell how many groups of tens and left-overs there are, they still rely on counting by ones to determine the final amount. They are unable to use the groups and left-overs to determine how many. **Counting by Tens & Ones**: Students are able to group objects into ten and ones, tell how many groups and leftovers there are, and now use that information to tell how many. Ex: "I have 3 groups of ten and 4 left-overs. That means that there are 34 cubes in all." Occasionally, as this stage is becoming fully developed, first graders rely on counting by ones to "really" know that there are 34, even though they may have just counted the total by groups and left-overs. **Base Ten Materials:** Ample experiences with a variety of materials that are proportional (e.g., cubes, links, beans, beads) and ten frames allow students opportunities to create tens and break apart tens, rather than "trade" one for another. Since students first learning about place value concepts primarily rely on counting, the physical opportunity to build tens helps them to "see" that a "ten stick" has "ten items" within it. Pre-grouped materials (e.g., base ten blocks, bean sticks) are not introduced or used until a student has a firm understanding of composing and decomposing tens.
1.NBT.2c	First grade students apply their understanding of groups of ten as stated in 1.NBT.2b to decade numbers (e.g. 10, 20, 30, 40). As they work with objects, first grade students understand that 10, 20, 30…80, 90 are comprised of a certain amount of groups of tens with none left-over.
1.NBT.3	First grade students use their understanding of groups and order of digits to compare two numbers by examining the amount of tens and ones in each number. After numerous experiences verbally comparing two sets of objects using comparison vocabulary (e.g., 42 is more than 31. 23 is less than 52, 61 is the same amount as 61.), first grade students connect the vocabulary to the symbols: greater than (>), less than (<), equal to (=).
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1.NBT.6	First grade students use concrete models, drawings and place value strategies to subtract multiples of 10 from decade numbers (e.g., 30, 40, 50). They often use similar strategies as discussed in 1.OA.4.
1.MD.3	For young children, reading a clock can be a difficult skill to learn. In particular, they must understand the differences between the two hands on the clock and the functions of these hands. By carefully watching and talking about a clock with only the hour hand, First graders notice when the

	hour hand is directly pointing at a number, or when it is slightly ahead/behind a number. In addition, using language, such as “about 5 o’clock” and “a little bit past 6 o’clock”, and “almost 8 o’clock” helps children begin to read an hour clock with some accuracy. Through rich experiences, First grade students read both analog (numbers and hands) and digital clocks, orally tell the time, and write the time to the hour and half-hour.