Madison County Schools
Suggested 2nd Grade Math Pacing Guide

The following Standards have changes from the original 2015-16 MS College- and Career-Readiness Standards:

Significant Changes (ex: change in expecations, new Standards, or removed Standards)
2.NBT.2
2.MD.8

Slight Changes (slight change or clarification in wording)
none

Throughout the 2016 Mississippi College- and Career-Readiness Standards for Mathematics Grades K-5 Standards, the words fluency and fluently will appear in bold, italicized, and underlined font (for example: ***fluently***). With respect to student performance and effective in-class instruction, the expectations for mathematical fluency are explained below:

Fluency is not meant to come at the expense of understanding, but is an outcome of a progression of learning and sufficient thoughtful practice. It is important to provide the conceptual building blocks that develop understanding in tandem with skill along the way to fluency; the roots of this conceptual understanding often extend to one or more grades earlier in the standards than the grade when fluency is finally expected.

Wherever the word ***fluently*** appears in a MS CCR content standard, the word means quickly and accurately. It is important to understand that this is not explicitly tied to assessment purposes, but means more or less the same as when someone is said to be fluent in a foreign language. To be fluent is to flow: Fluent isn't halting, stumbling, or reversing oneself.

A key aspect of fluency is this sense that it is not something that happens all at once in a single grade but requires attention to student understanding along the way. It is important to ensure that sufficient practice and extra support are provided at each grade to allow all students to meet the standards that call explicitly for fluency.

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Domain	Abbreviation
Operations and Algebraic Thinking	**OA**
Number and Operations in Base Ten	**NBT**
Measurement and Data	**MD**
Geometry	**G**

* Builds directly off of 1st Grade Standards

1st 9 Weeks		Introduce	"Assess"
***2.NBT.2**	Count within 1000; skip-count by 5s starting at any number ending in 5 or 0. Skip-count by 10s and 100s starting at any number.	**1**	**2**
***2.MD.7**	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	**1**	**2**
***2.MD.10**	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems[4] using information presented in a bar graph. [4] See Table 1.	**1**	**1**
2.OA.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to represent an even number as a sum of two equal addends.	**1**	**1**
***2.OA.1**	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.[1] [1] See Table 1.	**1**	**2**
***2.G.1**	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[5] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. [5] Sizes are compared directly or visually, not compared by measuring.	**1**	**1**

***Note*: All Standards are year-end goals. The "Assess" column indicates it is reasonable to begin *looking for progress towards mastery* within that 9 Weeks; it does not require mastery at that time.**

2nd 9 Weeks		Introduce	"Assess"
***2.NBT.3**	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	**2**	**2**
***2.NBT.1**	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	**2**	**2**
2.MD.1	Measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes.	**2**	**2**
***2.MD.2**	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	**2**	**2**
2.MD.9	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	**2**	**2**
2.MD.6	Represent whole numbers & lengths from 0 on a number line diagram w/ equally spaced points corresponding to the numbers 0, 1, 2, … and represent whole-number sums and differences within 100 on a number line diagram.	**2**	**3**
2.NBT.5	***Fluently*** add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	**2**	**3**
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.[3] [3] Explanations may be supported by drawings or objects.	**2**	**3**
***2.MD.8a**	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ appropriately. *Example, If you have 2 dimes and 3 pennies, how many cents do you have?*	**2**	**3**

***Note*: All Standards are year-end goals. The "Assess" column indicates it is reasonable to begin *looking for progress towards mastery* within that 9 Weeks; it does not require mastery at that time.**

3rd 9 Weeks		Introduce	"Assess"
***2.NBT.4**	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of the comparisons.	**3**	**3**
2.MD.4	Measure to determine how much longer one object is than the other, expressing the length difference in terms of a standard length unit.	**3**	**3**
2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.	**3**	**3**
2.MD.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	**3**	**3**
***2.NBT.7**	Add and subtract within 1000, 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	**3**	**4**
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	**3**	**3**
2.OA.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and 5 columns; write an equation to express the total as a sum of equal addends.	**3**	**3**

***Note*: All Standards are year-end goals. The "Assess" column indicates it is reasonable to begin *looking for progress towards mastery* within that 9 Weeks; it does not require mastery at that time.**

4th 9 Weeks		Introduce	"Assess"
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	**4**	**4**
***2.NBT.8**	Mentally add 10 or 100 to a given number 100 – 900, and mentally subtract 10 or 100 from a given number 100 – 900.	**4**	**4**
***2.OA.2**	***Fluently*** add and subtract within 20 using mental strategies.[2] By the end of Grade 2, know from memory all sums of two one-digit numbers. [2] See Standard 1.OA.6 for a list of mental strategies.	**4**	**4**
2.MD.8b	***Fluently*** use a calendar to answer simple real world problems such as "How many weeks are in a year?" or "James gets a $5 allowance every 2 months, how much money will he have at the end of each year?"	**4**	**4**
***2.G.3**	Partition circles and rectangles into two, three, or four equal shares; describe the shares using the words *halves*, *thirds*, *half of*, *third of*, etc.; and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	**4**	**4**

***Note*: All Standards are year-end goals. The "Assess" column indicates it is reasonable to begin *looking for progress towards mastery* within that 9 Weeks; it does not require mastery at that time.**

[2] For reference, strategies described in Standard 1.OA.6:

- **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 = 0 – 1 = 9)
- **using the relationships between addition and subtraction** (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4)
- **creating equivalent but easier or known sums** (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13)

Table 1	Result Unknown	Change Unknown	Start Unknown
Add To	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ? (K)	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? 2 + ? = 5 (1st)	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? ? + 3 = 5 One-Step Problem (2nd)
Take From	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ? (K)	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 – ? = 3 (1st)	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? ? – 2 = 3 One-Step Problem (2nd)
	Total Unknown	Addend Unknown	Both Addends Unknown
Put Together/Take Apart	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ? (K)	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5 or 5 – 3 = ? (1st)	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2 (K)
	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? (1st)	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? One-Step Problem (1st)	(Version with "more"): Julie has 3 more apples than Lucy. Julie has five apples. How many apples does Lucy have? 5 – 3 = ? or ? + 3 = 5 One-Step Problem (2nd)
	("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? 2 + ? = 5 or 5 – 2 = ? (1st)	(Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ? or 3 + 2 = ? One-Step Problem (2nd)	(Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5 One-Step Problem (1st)

K: Problem types to be mastered by the end of the Kindergarten year. **1st**: Problem types to be mastered by the end of the First Grade year, including problem types from the previous year. However, First Grade students should have experiences with all 12 problem types. **2nd**: Problem types to be mastered by the end of the Second Grade year, including problem types from the previous years.