

2nd Grade Math Pacing Guide 2016-2017

| Domain | Cluster | Standards | 1st | 2nd | 3rd | 4th |
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| Operations and Algebraic Thinking | Represent and solve problems involving addition and subtraction. | <p>2.OA.1 Use addition and subtraction within 100 to solve one- and two-step contextual problems, with unknowns in all positions, involving situations of add to, take from, put together/take apart, and compare. Use objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>(See Table 1 – Addition and Subtraction Situations)</p> | <p>Review (K) 4 situations</p> <p>Review (1st) 7 Situations</p> | Add to /take from with the start unknown | <p>Compare with bigger unknown</p> <p>Compare with smaller unknown</p> | Reinforce all addition and subtraction situations |
| | Add and subtract within 20. | <p>2.OA.2 Fluently add and subtract within 30 using mental strategies. By end of 2nd grade know from memory all sums of two one-digit numbers and related subtraction facts.</p> | (+,-) Math Facts 10 | (+,-) Math Facts 20 | (+,-) Math Facts 30 | <p>Fluent +/ - to 30</p> <p>Memory all – 2 1 digit sums and difference facts</p> |
| | Work with equal groups of objects to gain foundations for multiplication. | <p>2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members by pairing objects or counting them by 2s. Write an equation to express an even number as a sum of two equal addends.</p> | Introduce and practice | Continue practice | Continue practice | Mastery |
| | | <p>2.OA.4 Use repeated addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</p> | | | Show examples of arrays and introduce vocabulary such as rows and columns | <p>Construct an array with up to 5 rows and 5 columns; write an equation to the total as a sum of equal addends</p> <p>Mastery</p> |

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| Number and Operations in base ten. | Understand place value | 2.NBT.1 Know that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (e.g., 706 can be represented in multiple ways as 7 hundreds, 0 tens, and 6 ones; 706 ones; or 70 tens and 6 ones). | Understand place value in the ones place | Understand place value in the ones, and tens place | Understand place value in the ones, tens, and hundreds place | Mastery |
| | | 2.NBT.2 Count within 1000. Skip-count within 1000 by 5s, 10s, and 100s, starting from any number in its skip counting sequence. | Count by 1's, 5's, and 10's to 100. | Count by 1's, 5's, 10's, and 100's to 500. | Count by 1's, 5's, 10's, and 100's to 1,000. | Mastery |
| | | 2.NBT.3 Read and write numbers to 1000 using standard form, word form, and expanded form. | Read, write, and represent numbers using standard form | Read, write and represent numbers using word form | Read, write and represent numbers using expanded form | Reinforce all three types with place value Mastery |
| | | 2.NBT.4 Compare two three-digit numbers based on the meanings of the digits in each place and use $>$, $=$, and $<$ to show the relationship. | Compare 1 and 2 digit numbers | Compare 3 digit numbers | Continue practice | Mastery |
| | 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. | Add/Subtract composing/decomposing to 20 | Add/Subtract composing/decomposing to 50 | Add/Subtract composing/decomposing to 75 | Add/Subtract composing/decomposing to 100 Mastery | |
| | 2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations. | | Add two 2 digit numbers | Add three 2 digit numbers | Add four 2 digit numbers Mastery | |

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| Use place value understanding and properties of operations to add and subtract | 2.NBT.7 Add and subtract within 1000, using concrete models, drawings, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction to explain the reasoning. | | Explain addition/ subtraction without regrouping(2 digits) using manipulatives | Explain addition/ subtraction with and without regrouping(3 digits) using manipulatives | Mastery |
| | 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. | | | Add and subtract 10 to a given number 10-100 | Add and subtract 10 and 100 to a given number 100-900 Mastery |
| | 2.NBT.9 Explain why addition and subtraction strategies work using place value and properties of operations. (Explanations may include words, drawing or objects.) (See table 3 – Properties of Operations) | Understand place value in the ones place | Understand place value in the ones and tens place | Understand place value in the ones, tens, and hundreds place | Mastery |
| Measure and estimate lengths in standard units | 2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. | | | Measure the length of objects using rulers, yardstick, and meter stick according to inches and centimeters | Measure the length of objects using all and add measuring tape according to inches and centimeters Mastery |
| | 2.MD.2 Measure the length of an object using two different units of measure and describe how the two measurements relate to the size of the unit chosen. | | | Compare 2 objects using inches and centimeters and discuss their differences | Compare 2 objects using inches and feet and discuss their differences Mastery |
| | 2.MD.3 Estimate lengths using units of inches, feet, yards, centimeters, and meters. | | | Estimate lengths using units of inches and centimeters | Estimate lengths using units of feet and meters Mastery |

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| Measurement and Data | | 2.MD.4 Measure to determine how much longer one object is than another and express the difference in terms of a standard unit of length. | | | Measure 2 objects using inches to determine how much longer one object is than another | Measure 2 objects using centimeters to determine how much longer one object is than another Mastery |
| | Relate addition and subtraction to length. | 2.MD.5 Add and subtract within 100 to solve contextual problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown number to represent the problem. | | | Add and subtract within word problems involving length | Add and subtract within word problems involving length Mastery |
| | | 2.MD.6 Represent whole numbers as lengths from 0 on a number line and know that the points corresponding to the numbers on the number line are equally spaced. Use a number line to represent whole number sums and differences of lengths within 100. | | 1 to 20 on number line diagram emphasizing equally spaced points | 1 to 50 on number line diagram emphasizing equally spaced points | 1 to 100 on number line diagram emphasizing equally spaced points Mastery |
| | Work with time and money. | 2MD.7 Tell and write time in quarter hours and to the nearest five minutes (in a.m. and p.m.) using analog and digital clocks. | | | Review to hour and half Intro nearest 5 minutes | Tell time to 5 minutes and quarter hour Mastery |
| | | 2MD.8 Solve contextual problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. | | Identify coins and their values | Counting combinations of coins (up to \$1.00) | Solve word problems using money Mastery |
| | Represent and interpret data. | 2MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. | | | Create a line plot with whole number units | Create line plots with whole number units Mastery |
| | | 2.MD.10 Draw a picture graph and a bar graph (with intervals of one) to represent a data set with up to four categories. Solve addition and subtraction problems related to the data in a graph. | | Create a picture graph | Create a bar graph | Create bar graphs, picture graphs, use the creation to solve simple addition and subtraction problems Mastery |

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| Geometry | Reason with shapes. | 2.G.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Draw two-dimensional shapes having specified attributes (as determined directly or visually, not by measuring), such as a given number of angles or a given number of sides of equal length. | | | | Identify, describe, and create shapes using number of angles and faces. Mastery |
| | | 2.G.2 Partition a rectangle into rows and columns of same-size squares and find the total number of squares. | | | | Understand repeated addition up to 5 rows and 5 columns using arrays. Mastery |
| | | 2.G.3 Partition circles and rectangles into two, three, and four equal shares, describe the shares using the words halves, thirds, fourths, half of, a third of, and a fourth of, and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. | | | | Divide circles and rectangles into 2, 3, or 4 equal shares. Mastery |

MAJOR CONTENT OF THE GRADE IS INDICATED BY THE SHADING OF THE CLUSTER HEADINGS.

THE NON-SHADED ARE THE SUPPORTING CONTENT STANDARDS.