**Grade 2**

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| **Operations and Algebraic Thinking** | **2.OA** |

**Represent and solve problems involving addition and subtraction.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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*.* | 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*.* | None | \*the activities below support underlying knowledge necessary to solving multi-step word problems within 100, but MR and AVMR do not have specific activities to support word problems.  Green Book:  9.2.1 Adding tens to 2-digit numbers  9.2.2 Adding 2 two-digit numbers without regrouping  9.2.3 Adding 2 two-digit numbers with regrouping  9.2.4 Subtracting tens from a 2-digit number  9.2.5 Subtracting involving 2 two-digit numbers without regrouping  9.2.6 Subtracting involving 2 two-digit numbers with regrouping  9.2.7 Missing addend task involving 2 two-digit numbers  9.3.1 Two digit numbers in canonical form  9.3.2 Two digit numbers in non-canonical form  9.4.2 Adding two 2-digit numbers using screened collections  9.4.4 Missing addend tasks using screened collections  9.4.6 Subtraction using screened collections | P |

**\*F is Full; P is Partial; N is None**

**Add and subtract within 20.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 2. Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers. | Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers. | Structuring  5 | Green Book:  8.5.1 Building Numbers 6-10  8.5.2 Doubles 3+3, 4+4, 5+5  8.5.3 Building Numbers 11-20  8.5.4 Doubles 6+6 to 10+10  8.5.5 Doubles plus or minus 1  8.5.6 Addition by going through 10  8.5.7 Commutativity of addition  8.5.8 Addition by compensation  8.5.9 Subtraction by going through 10 | F |

**\*F is Full; P is Partial; N is Non**

**Work with equal groups of objects to gain foundations for multiplication.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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 express an even number as a sum of two equal addends. | 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 express an even number as a sum of two equal addends. | None | Green Book:  8.5.2 Doubles 3+3, 4+4, 5+5  8.5.3 Building Numbers 11-20  8.5.4 Doubles 6+6 to 10+10  8.5.5 Doubles plus or minus 1  Purple Book:  A7.6 Addition using doubles, fives, and tens addends less than 11  A7.7 Subtraction using doubles, fives, and tens (subtrahend and difference less than 11)  IA7.8 Double ten frame facts | P |
| 4. Use 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. | Use 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. | M/D  2-5 | Purple Book:  A10.1 Counting by 2s, 5s, 10s, and 3s  A10.2 Repeated equal groups-visible  A10.3 Repeated equal groups-items screened and groups visible  A10.4 Repeated equal groups—groups screened and items screened  A10.5 Multiplication and division using arrays  A10.6 Word Problems  IA10.1 Count Around-multiples | P |

**\*F is Full; P is Partial; N is None**

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| **Number and Operations in Base Ten** | **2.NBT** |

**Understand place value.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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). | 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). | P/V  none | Green Book:  9.1.2 Counting by 100s to 1,000  9.1.3 Counting by 10s beyond 100  9.1.4 Counting by 100s off the hundred  9.1.5 Counting by 100s off the hundred and off the decade  9.1.6 Counting by 10s beyond 100 off the decade  9.3.3 Three digit numbers in canonical form  9.3.4 Three digit numbers in non-canonical forms: hundreds and tens  9.3.5 Three digit numbers in non-canonical forms: hundreds, tens, and ones  Purple Book:  IA3.6 Make and Break Numbers | F |
| 2. Count within 1000; skip-count by 5s, 10s, and 100s. | Count within 1000; skip-count by 5s, 10s, and 100s. | none | Green Book:  7.6.1 Combining and Counting Equal Groups  7.6.5 Building Visible Arrays  7.6.6 Determining the number of dots on visible arrays  Purple Book:  A10.1 Counting by 2s, 5s, 10s, and 3s  A10.2 Repeated equal groups-visible  IA10.1 Count Around Multiples  IA10.2 Trios for multiples  IA10.3 Quick Draw Multiples | F |
| 3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. | Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. | NID  5 | Green Book:  8.2.1 Sequencing and naming 100s cards  8.2.2 Naming 3-digit numerals using arrow cards  8.2.3 Naming 3-digit numerals using digit cards  8.2.4 Sequencing and naming decade numerals beyond 100  9.1.2 Counting by 100s to 1,000  9.1.3 Counting by 10s beyond 100  9.1.4 Counting by 100s off the hundred  9.1.5 Counting by 100s off the hundred and off the decade  9.1.6 Counting by 10s beyond 100 off the decade  9.3.3 Three digit numbers in canonical form  9.3.4 Three digit numbers in non-canonical forms: hundreds and tens  9.3.5 Three digit numbers in non-canonical forms: hundreds, tens, and ones  Purple Book:  IA3.6 Make and Break Numbers | F |
| 4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. | Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. | none | Green Book:  8.2.5 Sequencing two-digit numerals  8.2.6 Ordering 3-digit numerals  Purple Book:  IA3.2 Numbers on the Line  IA3.3 Stand in Line  IA3.4 Secret Number | P |

**\*F is Full; P is Partial; N is None**

**Use place value understanding and properties of operations to add and subtract.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | P/V  5 | Purple Book:  A8.1 Forward and backward number word sequences by 10s, on and off the decade  A8.2 Adding from a decade and subtracting to a decade  A8.3 Adding to a decade and subtracting from a decade  A8.4 Incrementing and decrementing by 10s on and off the decade  A8.5 Incrementing flexibly by 10s and ones  A8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit number  A8.7 Adding two 2-digit numbers without and with regrouping  A8.8 Subtraction involving two 2-digit numbers without and with regrouping  A8.9 Addition and subtraction using transforming, compensating, and other strategies  A9.1 Higher decade addition and subtraction without and with bridging the decade  A9.2 Partitioning and combining involving 2-digit numbers  A9.3 Combining and partitioning involving non-canonical forms  A9.4 Addition involving two 2-digit numbers without and with regrouping  A9.5 Subtraction involving two 2-digit numbers without and with regrouping  IA8.1 Leap Frog  IA8.2 Bead String with Ten Catcher  IA8.3 Add or Subtract 11  IA8.4 Add to or Subtract from 49  IA8.5 Calculator Challenge  IA8.6 Jump to 100  IA8.7 Jump from 100  IA8.8 Target Number  IA8.9 Walk-about Sequences  IA8.10 Non-standard Measurement Plan  IA9.1 Follow the Pattern  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens | F |
| 6. Add up to four two-digit numbers using strategies based on place value and properties of operations. | Add up to four two-digit numbers using strategies based on place value and properties of operations. | P/V  5 | Purple Book:  A8.1 Forward and backward number word sequences by 10s, on and off the decade  A8.2 Adding from a decade and subtracting to a decade  A8.3 Adding to a decade and subtracting from a decade  A8.4 Incrementing and decrementing by 10s on and off the decade  A8.5 Incrementing flexibly by 10s and ones  A8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit number  A8.7 Adding two 2-digit numbers without and with regrouping  A8.8 Subtraction involving two 2-digit numbers without and with regrouping  A8.9 Addition and subtraction using transforming, compensating, and other strategies  A9.1 Higher decade addition and subtraction without and with bridging the decade  A9.2 Partitioning and combining involving 2-digit numbers  A9.3 Combining and partitioning involving non-canonical forms  A9.4 Addition involving two 2-digit numbers without and with regrouping  A9.5 Subtraction involving two 2-digit numbers without and with regrouping  IA8.1 Leap Frog  IA8.2 Bead String with Ten Catcher  IA8.3 Add or Subtract 11  IA8.4 Add to or Subtract from 49  IA8.5 Calculator Challenge  IA8.6 Jump to 100  IA8.7 Jump from 100  IA8.8 Target Number  IA8.9 Walk-about Sequences  IA8.10 Non-standard Measurement Plan  IA9.1 Follow the Pattern  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens | F |
| 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. | 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. | P/V  5 | Purple Book:  A8.1 Forward and backward number word sequences by 10s, on and off the decade  A8.2 Adding from a decade and subtracting to a decade  A8.3 Adding to a decade and subtracting from a decade  A8.4 Incrementing and decrementing by 10s on and off the decade  A8.5 Incrementing flexibly by 10s and ones  A8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit number  A8.7 Adding two 2-digit numbers without and with regrouping  A8.8 Subtraction involving two 2-digit numbers without and with regrouping  A8.9 Addition and subtraction using transforming, compensating, and other strategies  A9.1 Higher decade addition and subtraction without and with bridging the decade  A9.2 Partitioning and combining involving 2-digit numbers  A9.3 Combining and partitioning involving non-canonical forms  A9.4 Addition involving two 2-digit numbers without and with regrouping  A9.5 Subtraction involving two 2-digit numbers without and with regrouping  IA8.1 Leap Frog  IA8.2 Bead String with Ten Catcher  IA8.3 Add or Subtract 11  IA8.4 Add to or Subtract from 49  IA8.5 Calculator Challenge  IA8.6 Jump to 100  IA8.7 Jump from 100  IA8.8 Target Number  IA8.9 Walk-about Sequences  IA8.10 Non-standard Measurement Plan  IA9.1 Follow the Pattern  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens | F |
| 8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. | Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900 | P/V  5 | Purple Book:  A8.1 Forward and backward number word sequences by 10s, on and off the decade  A8.2 Adding from a decade and subtracting to a decade  A8.3 Adding to a decade and subtracting from a decade  A8.4 Incrementing and decrementing by 10s on and off the decade  A8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit number  IA8.6 Jump to 100  IA8.7 Jump from 100  IA8.9 Walk-about Sequences  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens | F |
| 9. Explain why addition and subtraction strategies work, using place value and the properties of operations.3 | Explain why addition and subtraction strategies work, using place value and the properties of operations.3 | P/V  5 | Purple Book:  A8.1 Forward and backward number word sequences by 10s, on and off the decade  A8.2 Adding from a decade and subtracting to a decade  A8.3 Adding to a decade and subtracting from a decade  A8.4 Incrementing and decrementing by 10s on and off the decade  A8.5 Incrementing flexibly by 10s and ones  A8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit number  A8.7 Adding two 2-digit numbers without and with regrouping  A8.8 Subtraction involving two 2-digit numbers without and with regrouping  A8.9 Addition and subtraction using transforming, compensating, and other strategies  A9.1 Higher decade addition and subtraction without and with bridging the decade  A9.2 Partitioning and combining involving 2-digit numbers  A9.3 Combining and partitioning involving non-canonical forms  A9.4 Addition involving two 2-digit numbers without and with regrouping  A9.5 Subtraction involving two 2-digit numbers without and with regrouping  IA8.1 Leap Frog  IA8.2 Bead String with Ten Catcher  IA8.3 Add or Subtract 11  IA8.4 Add to or Subtract from 49  IA8.5 Calculator Challenge  IA8.6 Jump to 100  IA8.7 Jump from 100  IA8.8 Target Number  IA8.9 Walk-about Sequences  IA8.10 Non-standard Measurement Plan  IA9.1 Follow the Pattern  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens | P |

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| **Measurement and Data** | **2.MD** |

**Measure and estimate lengths in standard units.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. |  |  |  |  |
| 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. |  |  |  |  |
| 3. Estimate lengths using units of inches, feet, centimeters, and meters. |  |  |  |  |
| 4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. |  |  |  |  |

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**Relate addition and subtraction to length.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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. |  |  |  |  |
| 6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram. |  |  |  |  |

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**Work with time and money.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 7. Tell and write time from analog and digital clocks to the nearest five  minutes, using a.m. and p.m. |  |  |  |  |
| 8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2* *dimes and 3 pennies, how many cents do you have?* |  |  |  |  |

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**Represent and interpret data.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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. |  |  |  |  |
| 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 problems4 using information presented in a bar graph. |  |  |  |  |

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| **Geometry** | **2.G** |

**Reason with shapes and their attributes.**

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| **Common Core Standard** | **Components of the standard** | **Teaching Towards Construct / Level** | **Activities that Support the Standard** | **AVMR**  **Support**  **F/P/N\*** |
| 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. |  |  |  |  |
| 2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. |  |  |  |  |
| 3. Partition circles and rectangles into two, three, or four equal shares,  describe the shares using the words *halves*, *thirds*, *half of*, *a 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. |  |  |  |  |

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