**Grade 2**

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 numbers9.2.2 Adding 2 two-digit numbers without regrouping9.2.3 Adding 2 two-digit numbers with regrouping9.2.4 Subtracting tens from a 2-digit number9.2.5 Subtracting involving 2 two-digit numbers without regrouping9.2.6 Subtracting involving 2 two-digit numbers with regrouping9.2.7 Missing addend task involving 2 two-digit numbers9.3.1 Two digit numbers in canonical form9.3.2 Two digit numbers in non-canonical form9.4.2 Adding two 2-digit numbers using screened collections9.4.4 Missing addend tasks using screened collections9.4.6 Subtraction using screened collections | P |

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

**Add and subtract within 20.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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. | Structuring5 | Green Book:8.5.1 Building Numbers 6-108.5.2 Doubles 3+3, 4+4, 5+58.5.3 Building Numbers 11-20 8.5.4 Doubles 6+6 to 10+108.5.5 Doubles plus or minus 18.5.6 Addition by going through 108.5.7 Commutativity of addition8.5.8 Addition by compensation8.5.9 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.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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+58.5.3 Building Numbers 11-20 8.5.4 Doubles 6+6 to 10+108.5.5 Doubles plus or minus 1Purple Book:A7.6 Addition using doubles, fives, and tens addends less than 11A7.7 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/D2-5 | Purple Book:A10.1 Counting by 2s, 5s, 10s, and 3sA10.2 Repeated equal groups-visibleA10.3 Repeated equal groups-items screened and groups visibleA10.4 Repeated equal groups—groups screened and items screenedA10.5 Multiplication and division using arraysA10.6 Word ProblemsIA10.1 Count Around-multiples | P |

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

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

**Understand place value.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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/Vnone | Green Book:9.1.2 Counting by 100s to 1,0009.1.3 Counting by 10s beyond 1009.1.4 Counting by 100s off the hundred9.1.5 Counting by 100s off the hundred and off the decade9.1.6 Counting by 10s beyond 100 off the decade9.3.3 Three digit numbers in canonical form9.3.4 Three digit numbers in non-canonical forms: hundreds and tens9.3.5 Three digit numbers in non-canonical forms: hundreds, tens, and onesPurple 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 Groups7.6.5 Building Visible Arrays7.6.6 Determining the number of dots on visible arraysPurple Book:A10.1 Counting by 2s, 5s, 10s, and 3sA10.2 Repeated equal groups-visibleIA10.1 Count Around MultiplesIA10.2 Trios for multiplesIA10.3 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. | NID5 | Green Book:8.2.1 Sequencing and naming 100s cards8.2.2 Naming 3-digit numerals using arrow cards8.2.3 Naming 3-digit numerals using digit cards8.2.4 Sequencing and naming decade numerals beyond 1009.1.2 Counting by 100s to 1,0009.1.3 Counting by 10s beyond 1009.1.4 Counting by 100s off the hundred9.1.5 Counting by 100s off the hundred and off the decade9.1.6 Counting by 10s beyond 100 off the decade9.3.3 Three digit numbers in canonical form9.3.4 Three digit numbers in non-canonical forms: hundreds and tens9.3.5 Three digit numbers in non-canonical forms: hundreds, tens, and onesPurple 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 numerals8.2.6 Ordering 3-digit numeralsPurple Book:IA3.2 Numbers on the LineIA3.3 Stand in LineIA3.4 Secret Number | P |

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 decadeA8.2 Adding from a decade and subtracting to a decadeA8.3 Adding to a decade and subtracting from a decadeA8.4 Incrementing and decrementing by 10s on and off the decadeA8.5 Incrementing flexibly by 10s and onesA8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit numberA8.7 Adding two 2-digit numbers without and with regroupingA8.8 Subtraction involving two 2-digit numbers without and with regroupingA8.9 Addition and subtraction using transforming, compensating, and other strategiesA9.1 Higher decade addition and subtraction without and with bridging the decade A9.2 Partitioning and combining involving 2-digit numbersA9.3 Combining and partitioning involving non-canonical formsA9.4 Addition involving two 2-digit numbers without and with regroupingA9.5 Subtraction involving two 2-digit numbers without and with regroupingIA8.1 Leap FrogIA8.2 Bead String with Ten CatcherIA8.3 Add or Subtract 11IA8.4 Add to or Subtract from 49IA8.5 Calculator ChallengeIA8.6 Jump to 100IA8.7 Jump from 100IA8.8 Target NumberIA8.9 Walk-about SequencesIA8.10 Non-standard Measurement PlanIA9.1 Follow the PatternIA9.2 Ten More or Ten LessIA9.3 Counting by TensIA9.4 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 decadeA8.2 Adding from a decade and subtracting to a decadeA8.3 Adding to a decade and subtracting from a decadeA8.4 Incrementing and decrementing by 10s on and off the decadeA8.5 Incrementing flexibly by 10s and onesA8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit numberA8.7 Adding two 2-digit numbers without and with regroupingA8.8 Subtraction involving two 2-digit numbers without and with regroupingA8.9 Addition and subtraction using transforming, compensating, and other strategiesA9.1 Higher decade addition and subtraction without and with bridging the decade A9.2 Partitioning and combining involving 2-digit numbersA9.3 Combining and partitioning involving non-canonical formsA9.4 Addition involving two 2-digit numbers without and with regroupingA9.5 Subtraction involving two 2-digit numbers without and with regroupingIA8.1 Leap FrogIA8.2 Bead String with Ten CatcherIA8.3 Add or Subtract 11IA8.4 Add to or Subtract from 49IA8.5 Calculator ChallengeIA8.6 Jump to 100IA8.7 Jump from 100IA8.8 Target NumberIA8.9 Walk-about SequencesIA8.10 Non-standard Measurement PlanIA9.1 Follow the PatternIA9.2 Ten More or Ten LessIA9.3 Counting by TensIA9.4 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/V5 | Purple Book:A8.1 Forward and backward number word sequences by 10s, on and off the decadeA8.2 Adding from a decade and subtracting to a decadeA8.3 Adding to a decade and subtracting from a decadeA8.4 Incrementing and decrementing by 10s on and off the decadeA8.5 Incrementing flexibly by 10s and onesA8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit numberA8.7 Adding two 2-digit numbers without and with regroupingA8.8 Subtraction involving two 2-digit numbers without and with regroupingA8.9 Addition and subtraction using transforming, compensating, and other strategiesA9.1 Higher decade addition and subtraction without and with bridging the decade A9.2 Partitioning and combining involving 2-digit numbersA9.3 Combining and partitioning involving non-canonical formsA9.4 Addition involving two 2-digit numbers without and with regroupingA9.5 Subtraction involving two 2-digit numbers without and with regroupingIA8.1 Leap FrogIA8.2 Bead String with Ten CatcherIA8.3 Add or Subtract 11IA8.4 Add to or Subtract from 49IA8.5 Calculator ChallengeIA8.6 Jump to 100IA8.7 Jump from 100IA8.8 Target NumberIA8.9 Walk-about SequencesIA8.10 Non-standard Measurement PlanIA9.1 Follow the PatternIA9.2 Ten More or Ten LessIA9.3 Counting by TensIA9.4 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/V5 | Purple Book:A8.1 Forward and backward number word sequences by 10s, on and off the decadeA8.2 Adding from a decade and subtracting to a decadeA8.3 Adding to a decade and subtracting from a decadeA8.4 Incrementing and decrementing by 10s on and off the decadeA8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit numberIA8.6 Jump to 100IA8.7 Jump from 100IA8.9 Walk-about SequencesIA9.2 Ten More or Ten LessIA9.3 Counting by TensIA9.4 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/V5 | Purple Book:A8.1 Forward and backward number word sequences by 10s, on and off the decadeA8.2 Adding from a decade and subtracting to a decadeA8.3 Adding to a decade and subtracting from a decadeA8.4 Incrementing and decrementing by 10s on and off the decadeA8.5 Incrementing flexibly by 10s and onesA8.6 Adding 10s to a 2-digit number and subtracting 10s from a 2-digit numberA8.7 Adding two 2-digit numbers without and with regroupingA8.8 Subtraction involving two 2-digit numbers without and with regroupingA8.9 Addition and subtraction using transforming, compensating, and other strategiesA9.1 Higher decade addition and subtraction without and with bridging the decade A9.2 Partitioning and combining involving 2-digit numbersA9.3 Combining and partitioning involving non-canonical formsA9.4 Addition involving two 2-digit numbers without and with regroupingA9.5 Subtraction involving two 2-digit numbers without and with regroupingIA8.1 Leap FrogIA8.2 Bead String with Ten CatcherIA8.3 Add or Subtract 11IA8.4 Add to or Subtract from 49IA8.5 Calculator ChallengeIA8.6 Jump to 100IA8.7 Jump from 100IA8.8 Target NumberIA8.9 Walk-about SequencesIA8.10 Non-standard Measurement PlanIA9.1 Follow the PatternIA9.2 Ten More or Ten LessIA9.3 Counting by TensIA9.4 Add or Subtract Tens | P |

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

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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. |  |  |  |  |

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

**Relate addition and subtraction to length.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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. |  |  |  |  |

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

**Work with time and money.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 fiveminutes, 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?* |  |  |  |  |

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

**Represent and interpret data.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 objectsto 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. |  |  |  |  |

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

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

**Reason with shapes and their attributes.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **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 thesame shape. |  |  |  |  |

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