**Grade 1**

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| **Operations and Algebraic Thinking** | **1.0A** |

**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 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 the unknown number to represent the problem.2 | 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 the unknown number to represent the problem.2 | none | none | N |
| 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. | 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. | none | none | N |

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

**Understand and apply properties of operations and the relationship between 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\*** |
| 3. Apply properties of operations as strategies to add and subtract.3 *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.)* | Apply properties of operations as strategies to add and subtract.3 *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.)* | Add/Subt.  5 | Green Book:  8.5.1 Building numbers 6 to 10  8.5.2 Doubles: 3+3, 4+4, 5+5  8.5.3 Building numbers 11 to 20  8.5.4 Doubles: 6+6 to 10+10  8.5.5 Doubles plus or minus one  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  Purple Book:  A6.1 Additive tasks involving 2 screened collections  A6.2 Missing addend task involving 2 screened collections  A6.3 Removed items task involving a screened collection  A6.4 Missing subtrahend task involving a screened collection  A6.5 Comparative subtraction involving 2 screened collections  A6.6 Subtraction with bare numbers | F |
| 4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.* | Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.* | Add/Subt.  5 | Green Book:  7.3.4 Removed items tasks  Purple Book:  A6.1 Additive tasks involving 2 screened collections  A6.2 Missing addend task involving 2 screened collections  A6.3 Removed items task involving a screened collection  A6.4 Missing subtrahend task involving a screened collection  A6.5 Comparative subtraction involving 2 screened collections  A6.6 Subtraction with bare numbers | F |

**\*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\*** |
| 5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). | Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). | Add/Subt.  3 | Purple Book:  A6.1 Additive tasks involving 2 screened collections  A6.2 Missing addend task involving 2 screened collections  A6.3 Removed items task involving a screened collection  A6.4 Missing subtrahend task involving a screened collection  A6.5 Comparative subtraction involving 2 screened collections  A6.6 Subtraction with bare numbers | F |
| 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). | 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). | Structuring 3  Add/Subt.  5 | Green Book:  8.5.1 Building numbers 6 to 10  8.5.2 Doubles: 3+3, 4+4, 5+5  8.5.3 Building numbers 11 to 20  8.5.4 Doubles: 6+6 to 10+10  8.5.5 Doubles plus or minus one  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  Purple Book:  A7.1 Naming and visualizing pairwise patterns for 1 to 10  A7.2 Naming and visualizing fivewise patterns for 1 to 10  A7.3 Naming and visualizing pairwise patterns for 11 to 20  A7.4 Naming and visualizing fivewise and tenwise patterns for 11 to 14  A7.5 Naming and visualizing tenwise patterns for 15 to 20  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  A7.8 – Addition using doubles, fives and tens – one addend greater than 10  A7.9 – Subtraction using doubles, fives and tens – subtrahend or difference greater than 10  IA7.l The double decker bus flashes  IA7.2 Getting on and off the bus  IA7.3 Bus snap  IA7.4 Make combinations to twenty fish  IA7.5 Using ten plus combinations  IA7.6 Five and ten game  IA7.7 Chocolate boxes  IA7.8 Double ten frame facts  IA7.9 Bead board | F |

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

**Work with addition and subtraction equations.**

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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. 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.* | 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* | none | none | N |
| 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 =* 􀃍*.* | 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 =* 􀃍*.* | Addition and subtraction 3, 4 or 5 | Green Book:  7.3.1 Counting items in two screened collections  7.3.2 Counting items in a row with some items screened  7.3.3 Missing addend tasks  7.3.4 Removed items tasks  7.3.5 Missing subtrahend tasks  7.3.7 Subtractive tasks  Purple Book:  A6.2 Missing addend task involving 2 screened collections  A6.4 Missing subtrahend task involving a screened collection | F |

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| **Number and Operations in Base Ten** | **1.NTB** |

**Extend the counting sequence.**

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| 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. | 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. | FNWS  5  NID  5  Tens/Ones 1 or 2 | Green Book:  6.1.1 Saying Short FNWSs  \*6.1.2 Saying Short BNWSs  \*6.1.3 Saying Alternate Number Words Forwards and Backwards  6.1.4 Saying the Next One, Two or Three Number Word Forwards  \*6.1.5 Saying the Next One, Two or Three Number Word Backwards  6.1.6 Saying the Number Word After  \*6.1.7 Saying the Number Word Before  7.1.1 Saying Short FNWSs  \*7.1.2 Saying Short BNWSs  7.1.3 Saying One, Two or Three Numbers After a Given Number  \*7.1.4 Saying One, Two or Three Numbers Before a Given Number  \*7.1.5 Saying the Next One, Two or Three Number Word Backwards  Purple Book:  A3.1 Forward Number Word Sequence  A3.2 Number Word After  A3.7 Sequencing Numerals  A3.8 Ordering Numerals  IA3.1 Count Around  IA3.2 Numbers on the Line  IA3.3 Stand in Line  IA3.8 Choir Counting  Green Book:  7.2.5 Numeral recognition  7.2.6 Numeral identification  7.2.7 Numeral tracks in range 20 to 100  7.2.8 Numeral roll 1 to 100  7.2.9 Hundred square  7.2.10 \_\_Hundred square  None (need to use bundles and sticks with written numerals) | P  P  N |
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**\*F is Full; P is Partial; N is None**

**Understand place value.**

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| 2. 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.”  b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.  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). | 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.”  b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.  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). | Tens/Ones 1 or 2 | 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  IA9.5 Adding Tens and Ones Using Money  IA9.6 Screened Subtraction Tasks  IA9.7 Split the Subtrahend (Multiples of 10) | **F** |
| 3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. | Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. | none | none | N |

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

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| 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. | 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 | Tens/Ones 1 or 2 | 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  IA9.5 Adding Tens and Ones Using Money  IA9.6 Screened Subtraction Tasks  IA9.7 Split the Subtrahend (Multiples of 10) | **F** |
| 5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. | Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. | Tens/Ones 1 or 2 | 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  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens  IA9.5 Adding Tens and Ones Using Money  IA9.6 Screened Subtraction Tasks  IA9.7 Split the Subtrahend (Multiples of 10) | **F** |
| 6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (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. | Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (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 | Tens/Ones 1 or 2 | 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  IA9.2 Ten More or Ten Less  IA9.3 Counting by Tens  IA9.4 Add or Subtract Tens  IA9.5 Adding Tens and Ones Using Money  IA9.6 Screened Subtraction Tasks  IA9.7 Split the Subtrahend (Multiples of 10) | F |

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

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| **Measurement and Data** | **1.MD** |

**Measure lengths indirectly and by iterating length units.**

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| 1. Order three objects by length; compare the lengths of two objects indirectly by using a third object. |  |  |  |  |
| 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.* |  |  |  |  |

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

**Tell and write time.**

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| 3. Tell and write time in hours and half-hours using analog and digital clocks. |  |  |  |  |

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

**Represent and interpret data.**

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| 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. |  |  |  |  |

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

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| **Geometry** | **1.G** |

**Reason with shapes and their attributes.**

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| 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. |  |  |  |  |
| 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.4 |  |  |  |  |
| 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. |  |  |  |  |

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2See Glossary, Table 1.

3Students need not use formal terms for these properties.

4Students do not need to learn formal names such as “right rectangular prism.”