| **Unit 1** | **Unit 2** | **Unit 3** | | **Unit 4** | **Unit 5** | | **Unit 6** | **Unit 7** |
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| **Mastery of Sums and Differences to 20 and Word Problems to 100** | **Addition and Subtraction with Length and Time Measurements** | **Place Value, Counting, and Comparison of Numbers to 1000** | | **Addition and Subtraction of Numbers to 1000** | **Comparison, Addition and Subtraction with Length and Money** | | **Preparation for Multiplication and Division Facts** | **Recognizing Angles, Faces, and Vertices of Shapes, Parts of Shapes** |
| **3 weeks** | **5 weeks** | **6 weeks** | | **7 weeks** | **6 weeks** | | **5 weeks** | **4 weeks** |
| 2.OA.A.1 | 2.MD.A.1 | 2.NBT.A.1 | | 2.OA.A.1 | 2.MD.A.1 | | 2.OA.C.3 | 2.G.A.1 |
| 2.OA.B.2 | 2.MD.A.2 | 2.NBT.A.2 | | 2.NBT.B.5 | 2.MD.A.2 | | 2.OA.C.4 | 2.G.A.3 |
| 2.NBT.B.5 | 2.MD.A.3 | 2.NBT.A.3 | | 2.NBT.B.6 | 2.MD.A.3 | | 2.G.A.2 |  |
|  | 2.MD.A.4 | 2.NBT.A.4 | | 2.NBT.B.7 | 2.MD.A.4 | |  |  |
|  | 2.MD.B.5 | 2.MD.C.8 | | 2.NBT.B.8 | 2.MD.B.5 | |  |  |
|  | 2.MD.B.6 |  | | 2.NBT.B.9 | 2.MD.B.6 | |  |  |
|  | 2.MD.C.7 |  | | 2.MD.D.10 | 2.MD.C.8 | |  |  |
|  |  |  | |  | 2.MD.D.9 | |  |  |
|  |  |  | |  | 2.MD.D.10 | |  |  |
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| **Major Clusters** | | | **Supporting Clusters** | | | **Additional Clusters** | | |
| **OA –** Operations and Algebraic Thinking  (1, 2)  **NBT** – Number and Operation in Base Ten  (1, 2, 3, 4, 5, 6, 7, 8, 9)  **MD** – Measurement and Data  (1, 2, 3, 4, 5, 6) | | | **OA –** Operations and Algebraic Thinking  (3, 4)  **MD** – Measurement and Data  (7, 8, 9, 10) | | | **G** – Geometry  (1, 2, 3) | | |

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| **Summary of Year for Grade 2 Mathematics** |
| In grade 2, students should be given the opportunity for focused learning experiences in four critical areas:  (1) extending understanding of base-ten notation;  (2) building fluency with addition and subtraction;  (3) using standard units of measure; and  (4) describing and analyzing shapes.  As the focus of the K-2 grade band, students will continue to build their understanding of the concepts, skills, and problem solving as they relate to addition and subtraction. The work students complete in Grade 2 with addition and subtraction will set the foundation for the work to come in grades 3-5 with fractions. |
| **Standards Clarification for Grade 2 Mathematics** |
| Some standards are included in multiple units to provide students with multiple opportunities to engage with the content. In the tables that follow, suggested focus areas and possible benchmarks for repeated standards are identified in the column labeled Standards Clarification. |
| **Fluency Requirements for Grade 2 Mathematics** |
| 2.OA.B.2  Fluently add and subtract within 20 using mental strategies.[[1]](#footnote-1) By the end of Grade 2, know from memory all sums of two one-digit numbers.  2.NBT.B.5  Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. |

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| **Unit 1: Mastery of Sums and Differences to 20 and Word Problems 100** | **Possible time frame**:  3 weeks |
| Students will enter Grade 2 with a deep understanding of numbers through 10 from their work in Grade 1. This unit provides students an opportunity to apply those experiences in order to develop fluency with the sums and differences within 20. Students should be provided with enough practice so they will be able to achieve mastery of the fluencies by the end of the year. Students will learn to represent and solve problems using addition and subtraction, another practice that will continue throughout the year. | |
| **Major Cluster Standards** | **Standards Clarification** |
| **Represent and solve problems involving addition and subtraction.**  2.OA.A.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*.*  **Add and subtract within 20.**  2.OA.B.2\* Fluently add and subtract within 20 using mental strategies.[[2]](#footnote-2) By end of Grade 2, know from memory all sums of two one-digit numbers.  **Use place value understanding and properties of operations to add and subtract.**  2.NBT.B.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.OA.A.1: Problems should focus primarily on result unknown and change unknown situations from CCSSM Glossary, Table 1 (page 88).  \*2.OA.B.2: From this point forward, fluency practice with sums and differences within 20 should be a part of the ongoing work. |

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| **Unit 2: Addition and Subtraction with Length and Time Measurements** | **Possible time frame**:  5 weeks |
| Students learn to measure and estimate using standard units for length and solve measurement word problems involving addition and subtractions of length. A major focus of the unit is for students to use standard measurement tools and to understand that a linear measure is an iteration of units. Students should also understand that the smaller the unit, the more iterations they need to cover a given length. The work students engage in with various measurement units will create a foundation for working with base-ten units throughout the year. Students will also be introduced to time to support the work of skip-counting and place value in future units. | |
| **Major Cluster Standards** | **Standards Clarification** |
| **Measure and estimate lengths in standard units.\***  2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.  2.MD.A.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.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.  2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.  **Relate addition and subtraction to length.**  2.MD.B.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.  2.MD.B.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. | \*Focus on meters and centimeters in preparation for upcoming place value work. |
| **Supporting Cluster Standards** | **Standards Clarification** |
| **Work with time and money.**  2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. |  |

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| **Unit 3: Place Value, Counting, and Comparison of Numbers to 1000** | **Possible time frame**:  6 weeks |
| In Unit 3, students will extend their understanding of place value to hundreds. They will extend their understanding of base-ten notation and apply their understanding of place value to count and compare numbers to 1000. Students will also begin to set the foundations for multiplication as they learn to skip count by 5s, 10s, and 100s. Skip-counting is not true multiplication yet as students are not keeping track of the number of groups they have counted. Students will also use money, specifically one-, five-, ten-, and hundred-dollar bills to support the work of place value and skip counting. | |
| **Major Cluster Standards** | **Standards Clarification** |
| **Understand place value.**  2.NBT.A.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:   1. 100 can be thought of as a bundle of ten tens — called a “hundred.” 2. 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.NBT.A.2\* Count within 1000; skip-count by 5s, 10s, and 100s.  2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.  2.NBT.A.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. | \*2.NBT.A.2: Continue to practice with time by using an analog clock to skip-count by 5s. |
| **Supporting Cluster Standards** | **Standards Clarification** |
| **Work with time and money.**  2.MD.C.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?* | \*2.MD.C.8: Use one-, ten-, and hundred-dollar bills to build place value understanding. Five-dollar bills can be used for skip counting. |

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| **Unit 4: Addition and Subtraction of Numbers to 1000** | **Possible time frame**:  7 weeks |
| In Unit 4, students will continue to work with place value to build understanding with addition and subtraction of numbers up to 1000. This work will deepen students’ understanding of base-ten, place value, and properties of operations. Students will also be challenged to apply their knowledge to one-step and two-step word problems. Development of fluencies with addition and subtraction within 100 will also be continued in this unit. The use of data in graph form will support student work with addition and subtraction. | |
| **Major Cluster Standards** | **Standards Clarification** |
| **Represent and solve problems involving addition and subtraction.**  2.OA.A.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 place value understanding and properties of operations to add and subtract.**  2.NBT.B.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.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.  2.NBT.B.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.  2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.  2.NBT.B.9\* Explain why addition and subtraction strategies work, using place value and the properties of operations. | \*2.OA.A.1: Problems should include unknowns in all position from the CCSSM Glossary, Table 1 (page 88).  \*2.NBT.B.9: Explanations may be supported by drawings or objects. |
| **Supporting Cluster Standards** | **Standards Clarification** |
| **Represent and interpret data.**  2.MD.D.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 using information presented in a bar graph. | \*2.MD.D.10: Problems should include unknowns in all position from the CCSSM Glossary, Table 1 (page 88). |

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| **Unit 5: Comparison, Addition and Subtraction with Length and Money** | **Possible time frame**:  6 weeks |
| Unit 5 provides additional opportunities for students to practice operations and problem solving skills with the money. Measuring and estimating length is revisited in this unit as students will focus both customary and metric units of measure. As students study money and length, they will represent data given in measurements and money data by using picture graphs and bar graphs. Students will also solve problems related to the data in the graphs they create requiring them to apply their understanding of operations developed over the course of the year. | |
| **Major Cluster Standards** | **Standards Clarification** |
| **Measure and estimate lengths in standard units.**  2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.  2.MD.A.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.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.  2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.  **Relate addition and subtraction to length.**  2.MD.B.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.  2.MD.B.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. |  |
| **Supporting Cluster Standards** | **Standards Clarification** |
| **Work with time and money.**  2.MD.C.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?*  **Represent and interpret data.**  2.MD.D.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.MD.D.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[[3]](#footnote-3) using information presented in a bar graph. | \*2.MD.D.10: Problems should include unknowns in all position from the CCSSM Glossary, Table 1 (page 88). |

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| **Unit 6: Preparation for Multiplication and Division Facts** | **Possible time frame**:  5 weeks |
| Students will extend their understanding of a unit to build the foundation for multiplication and division. Specifically, students will work with equal groups in arrays and as they understand the difference between even and odd numbers. This will prepare students for more complex work and the formal introduction of multiplication and division in Grade 3. | |
| **Supporting Cluster Standards** | **Standards Clarification** |
| **Work with equal groups of objects to gain foundations for multiplication.**  2.OA.C.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.  2.OA.C.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. |  |
| **Additional Cluster Standards** | **Standards Clarification** |
| **Reason with shapes and their attributes.**  2.G.A.2\* Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. | \*2.G.A.2 is taught before 2.G.A.1 and 2.G.A.3 because the array model is important to the foundation of multiplication. |

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| **Unit 7: Recognizing Angles, Faces, and Vertices of Shapes, Parts of Shapes** | **Possible time frame**:  4 weeks |
| Students will complete the year by describing and analyzing shapes in terms of their sides and angles. In Unit 7, students investigate, describe, and reason about out how shapes are composed or can be partitioned to form other shapes. Students will set the foundation for their work with fractions in future grades by beginning to speak about shapes divided into halves, thirds, and fourths, although the formal introduction of the numerical representation of the words will not occur until Grade 3. | |
| **Additional Cluster Standards** | **Standards Clarification** |
| **Reason with shapes and their attributes.**  2.G.A.1\* Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.  2.G.A.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. | \*2.G.A.1: Sizes are compared directly or visually, not compared by measuring.  \*2.G.A.3: Time is revisited here using an analog clock as clock faces provide an opportunity to apply partitioning a whole into halves, etc. |

1. See standard 1.OA.6 for a list of mental strategies. [↑](#footnote-ref-1)
2. See standard 1.OA.6 for a list of mental strategies. [↑](#footnote-ref-2)
3. See Glossary, Table 1 in Common Core State Standards for Mathematics, page 88. [↑](#footnote-ref-3)