# Grade 2 Mathematics Curriculum Map

| 1st Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 1A: Understand Place Value<br><br>*2.NBT.2 is repeated in Units 2 and 3, each time extending the skill. The skill focused on in this unit is bolded in the Scope and Sequence and S.L.O. | 2.NBT.1 Understand that the 3 digits of a 3-digit number represent 100s, 10s, and 1s.<br>   a. 100 can be thought of as a bundle of 10s.<br>   b. Multiples of 100 can be thought of as - - 300 = 3 hundreds, 0 tens, and 0 ones.<br><br>2.NBT.2 Count within 1,000; skip count by 5s, 10s, and 100s.<br><br>2.NBT.3 Read and write numbers to 1,000 using base 10 materials, number names, and expanded form.<br><br>2.NBT.4 Compare two 3-digit numbers using >, <, and = symbols to record results. | * How are place value patterns repeated in larger numbers?<br><br>* What are different ways to count?<br><br>* When might you need to compare numbers?<br><br>* Why is the number zero important? | *Grouping 10 tens into a 100.<br><br>*Bundle 100s to show 300, 400, 500…<br><br>*Skip count by **5s and 10s to 100** beginning at any multiple of 5.<br><br>*Read and Write numbers to 1,000 (in expanded form and base 10).<br><br>*Compare 2-digit and 3-digit numbers. | **\*Identify ten 10s as 100 and represent two hundred, three hundred,.. , nine hundred with 2, 3, …, 9 hundred bundles (with zero tens and zero ones.<br>**\*Skip count by **5s and 10s up to 100** … beginning at any multiple of 5.<br>**\*Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.<br>**\*Represent a 3-digit number as specific amounts of 100s, 10s, and 1s.<br>**\*Use symbols >, =, <, to record results of comparing two 3-digit numbers by decomposing the number into a # of 100s, 10s, and 1s. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 1 |

# Grade 2 Mathematics Curriculum Map

| 1<sup>st</sup> Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 1B: Represent and Solve Problems Involving Addition and Subtraction<br><br>*2.OA.1 is repeated in Units 2 and 3, each time extending the skill. The skill focused on in this unit is bolded in the Scope and Sequence and S.L.O. | 2.OA.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 | * How do you use math in your daily life?<br><br>* What strategies work best for you to solve word problems?<br><br>* What helps you decide whether to add or subtract when solving word problems? | * Add and subtract **within 20.**<br><br>*Use strategies to solve word problems with the missing number in any place. | **Add and subtract **within 20** to solve 1- and 2-step word problems with unknowns in any position. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 1 |

# Grade 2 Mathematics Curriculum Map

| 1st Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 2A: Add and Subtract Within 20

*2.OA.2 is repeated in Units 3, 4, and 5, each time extending the skill. The skill focused on in this unit is bolded in the Scope and Sequence and S.L.O. | 2.OA.2  Fluently add and subtract within 20 using mental strategies.

**By end of Grade 2, know from memory all sums of two 1-digit numbers.** | * How can memorizing the addition facts make your life easier?

* How are addition and subtraction related? | * Addition and subtraction facts <u>within 10</u> using rote memory. | **\***Add and subtract fluently <u>**within 10**</u> using mental strategies (within 10). | *Slate Drills

*Performance Assessments

*Teacher Observation

*Paper/Pencil quizes/check ups

*Benchmark Test 1 |

# Grade 2 Mathematics Curriculum Map

| 1st Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 2B: Use Place Value Understanding and Properties of Operations to Add and Subtract – Part 1<br><br>*2.NBT.5 is repeated in Units 3, 4, and 5, each time extending the skill. The skill focused on in this unit is bolded in the Scope and Sequence and S.L.O. | 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.<br><br>2.NBT.6 Add up to four 2-digit numbers.<br><br>**Standards extended in this unit:**<br><br>2.NBT.2 Count within 1,000; skip count by 5s, 10s, and 100s. | *How does knowing place value help you add and subtract?<br><br>*What strategies could you use to add and subtract mentally?<br><br>*How are addition and subtraction related? | *Adding and subtracting **within 50** using a variety of strategies.<br><br>*Review adding 4 1-digit numbers.<br><br>*Add four 2-digit numbers.<br><br>* Count by 1s, 5s, 10s, and 100s starting at any multiple of 1, 5, 10, and 100 **up to 1,000.** | *Use a variety of strategies (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract **within 50**.<br><br>*Add up to four two-digit numbers based on place value and properties of operations.<br><br>*Count **within 1000** by 1s, 5s, 10s, and 100s beginning at any multiple of 1, 5, 10 or 100 (e.g., begin at 505 and skip count by 5 up to 605, or begin at 600 and skip count by 100 up to 1000). | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 2 |

# Grade 2 Mathematics Curriculum Map

| 2<sup>nd</sup> Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 2C: Working With Equal Groups of Objects to Gain Foundations of Multiplication | 2.OA.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 2's, write and equation to express an even number as a sum of two equal addends.<br><br>2.OA.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. | * What do you think repeated addition means?<br><br>* How can you organize objects to make them easier to count?<br><br>* How could you determine if a number is even or odd? | * If a number is even or odd.<br><br>*The sum of a double makes an even number.<br><br>* What an array is and how to make one.<br><br>* The relationship between addition and multiplication.<br><br>*Create an array up to 5 rows and columns and use repeated addition to find the total. | **Recognize that in groups of even numbers objects can be counted by 2s and that in groups of odd numbers objects will not pair up evenly.<br>**Write an equation to illustrate that all even numbers can be formed from the addition of two equal addends.<br>**Write an addition equation with repeated equal addends from a rectangular array with up to 5 rows and 5 columns and solve to find the total number. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 1 |

# Grade 2 Mathematics Curriculum Map

| 2<sup>nd</sup> Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 3A: 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.<br><br>2.MD.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.<br><br>2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.<br><br>2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. | *How do you use measurement in your life?<br><br>*Why might you measure the length of something?<br><br>*How can we measure an object and all get the same answer?<br><br>*When would it be useful to estimate the length of an object? | * Estimate, measure, and compare objects using appropriate tools.<br><br>*Use inches, feet, centimeters, and meters.<br><br>*Compare the length of 2 objects and determine the difference in length. | **Estimate or measure lengths of objects using appropriate tools (inches, centimeters, feet, and meters<br><br>**Compare measurements of an object taken with two different units of measure and explain that the difference is related to the size of unit chosen<br><br>**Compare lengths of two objects and determine how much longer one object is than another using the same standard of measure | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 3 |

# Grade 2 Mathematics Curriculum Map

| 2nd Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 3B:<br><br>**Extending Standards from Units 1 and 2** | **Standards extended in this unit:**<br><br>2.NBT.2 Count within 1,000; skip count by 5s, 10s, and 1s.<br><br>2.OA.2 Fluently add and subtract within 20 using mental strategies.<br><br>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. | | *Orally skip count by 5s, 10s, and 100s to **1,000**.<br><br>* Addition and subtraction facts **within 20** using rote memory.<br><br>*Adding and subtracting **within 100** using a variety of strategies. | *Orally count within 1000 including skip-counting by 5s, 10s, and 100s.<br><br>*Add fluently **within 20 using mental strategies,** such as decomposing and composing numbers using the ten as a benchmark number.<br><br>***Choose a strategy** (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract **within 100.** | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizes/check ups<br><br>*Benchmark Test 3 |

# Grade 2 Mathematics Curriculum Map

| 2<sup>nd</sup> Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 4A: Relate Addition and Subtraction to Length | 2.MD.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 the symbol for the unknown number to represent the problem.<br><br>2.MD.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.<br><br>**Standards extended in this unit:**<br><br>2.OA.2 Fluently add and subtract within 20 using mental strategies.<br>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. | * Why do you think the numbers on a ruler are placed an equal distance apart?<br><br>*What are some uses for a number line? | *Review how to use measuring instruments.<br><br>*Part-part-total<br><br>*Use a number line to solve missing number problems. | *Add and subtract within 100 in word problems involving lengths using a symbol to represent the unknown number. *For example, if Angela needs 30 feet of ribbon for gifts, but she only has 17 feet, equations $17 + x = 30$ & $30 - x = 17$ both represent the feet she still needs.*<br>*Use a number line to represent the solution of whole number sums and differences related to length within 100 by using equally spaced points.<br><br><br>*Add and subtract **within 100** to solve 1- or 2-step word problems with unknowns in any position.<br>*Add **and subtract** fluently within 20 using mental strategies, such as decomposing & composing numbers using the ten as a benchmark number. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 4 |

# Grade 2 Mathematics Curriculum Map

| 3rd Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 4B: Work With Time | 2.MD.7 Tell and write time from analog and digital clocks to the nearest 5 minutes using AM and PM. | * Why is telling time important? * When during the day do you use time? * What are activities you do in the AM and in the PM? * What would happen if we could not keep track of time? | *Clock parts *Skip count by 5s. *Use Judy clocks. *Read and record several different times. | *Tell and write time using analog and digital clocks to the nearest five minutes using AM and PM. | *Slate Drills *Performance Assessments *Teacher Observation *Paper/Pencil quizes/check ups *Benchmark Test 4 |
| Unit 4C: Work With Money | 2.MD.8  Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies using dollar sign and the cents symbols appropriately.  Example:  If you have 2 dimes and 3 pennies, how much money do you have? | * Why is it important to understand the values of coins? * When do you use money? * What are ways for you to get money? | *Identify and know the value of dollars, quarters, dimes, nickels, and pennies. *Count mixed sets of coins. *Word problems involving money. | *Identify, recognize, and solve word problems with dollar bills, quarters, dimes, nickels, and pennies using the $ and ¢ symbol appropriately. | *Slate Drills *Performance Assessments *Teacher Observation *Paper/Pencil quizes/check ups *Benchmark Test 4 |

# Grade 2 Mathematics Curriculum Map

| 3rd Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 4D: Use Place Value Understanding and Properties of Operations to Add and Subtract –Part 2<br><br><br><br><br>Unit 5A:<br><br>**Extending Standards from Unit 2** | 2.NBT.8 Mentally add and subtract 10 or 100 to a given number 100-900.<br><br>2. NBT.9 Explain why addition and subtraction strategies work using place value and the properties of operations. Explanations can be supported by drawings or objects.<br><br>2.NBT.7 Add and subtract within 1,000.  Use: concrete models/drawings; place value; properties of operations and/or relationship between addition and subtraction; relate strategy to a written method. Understand when adding and subtracting 3-digit numbers one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and sometimes it is necessary to compose and decompose tens and hundreds.<br><br>**Standards extended in this unit:**<br>2.OA.2 Fluently add and subtract within 20 using mental strategies.<br><br>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. | *When would you need to add or subtract larger numbers?<br><br>*How does knowing place value help you add and subtract?<br><br>*What strategies could you use to add and subtract mentally? | *Add and subtract using strategies of place value and properties of operations.<br>*Explain why different strategies work when adding and subtracting<br>* Use place value relationships to add and subtract numbers within 1,000; using concrete models or drawings.<br>*Compose and decompose numbers when adding and subtracting. | *Apply properties of place value to mentally add or subtract 10 or 100 to/from a given number within 100-900.<br>*Apply addition and subtraction strategies based on place value and the properties of operations and explain why these strategies work using drawings or objects. *For example, 37 + 12 = 49 because 37 +12 equals 30 + 7 + 10 + 2 (place value) which equals 30 + 10 + 7 + 2 (property of operations).*<br>*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.<br>*Know math facts to 20<br>*Add/subtract within 100 | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizes/check ups<br><br><br>*Benchmark Test 4<br><br>*Benchmark Test 5 |

| 3rd Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 5B: Reason With Shapes and Their Attributes | 2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.<br><br>2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.<br><br>2.G.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. | * Where can we find shapes?<br><br>* How can we put shapes together and take them apart to form other shapes?<br><br>* How can we divide things so we all get the same amount? | * Identify shapes and their attributes.<br>* Divide shapes into equal parts (halves, thirds, and fourths).<br>* Concretely find the area of a rectangle using rows and columns of squares.<br>* Build shapes using different shapes (example: 6 triangles can make a hexagon). | *Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared visually or directly, not by measuring.) Identify triangles, pentagons, quadrilaterals, hexagons, and cubes.<br>*Partition a rectangle into rows & columns of same-size squares & count to find the total number.<br>* Partition circles and rectangles into 2, 3, or 4 equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as 2 halves, 3 thirds, 4 fourths. Recognize that equal shares of identical wholes need not have the same shape. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 5 |

| 3<sup>rd</sup> Trimester | Standards | Essential Questions | Scope and Sequence | Student Learning Objectives | Assessment |
|---|---|---|---|---|---|
| Unit 5C: Represent and Interpret Data | 2.MD.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 numbers.<br><br>2.MD.10 Draw a picture graph and a bar graph (with a single unit scaled) 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. | * How can we collect data to learn about each other?<br><br>* Why is collecting and organizing data helpful?<br><br>* What are different ways to display information? | * Gather measurement information and organize it into a line plot.<br>* Use tally marks to take surveys.<br>* Create picture graphs and bar graphs from the information collected.<br>* Use the information in the graph to solve simple put-together, take-apart, and compare problems. | *Use tools of measurement to measure lengths of several objects to the nearest whole unit and represent the data on a line plot with appropriate whole number units on the horizontal scale.<br>*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 the graph. | *Slate Drills<br><br>*Performance Assessments<br><br>*Teacher Observation<br><br>*Paper/Pencil quizzes/check ups<br><br>*Benchmark Test 5 |