2nd Grade Math
Curriculum Mapping
2019-2020
Stacey Hosman

Unit: *Number Concepts*	Time: *August-September 2019*

Standards Taught		
2.OA.C.3 Work with equal groups of objects to gain foundations for multiplication. 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.NBT.A.2 Understand place value**. Count within 1000; skip-count by 5s, 10s, and 100s, starting from any number in its skip counting sequence **2.NBT.A.3 Understand place value**. Read and write numbers to 1000 using base-ten numerals (standard form), number names (word form), and expanded form.		

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	Vocabulary	Assessments
Students need these skills to build a foundation for multi-digit numbers.	*Digits* *Even Numbers* *Odd Numbers*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How are even numbers and odd numbers different?*
- *Why can an even number be shown as the sum of two equal addends?*
- *How do you know the value of a digit?*
- *How do you describe a 2-Digit number as tens and ones?*
- *What are different ways to write a 2-digit number?*
- *How can you show the value of a number in different ways?*
- *How does finding a pattern help you find all the ways to show a number with tens and ones?*
- *How do you count by 1s,5s, and 10s with numbers less than 100?*
- *How do you count by 1s,5s,10s, and 100s with numbers less than 1,000?*

Unit: *Numbers to 1,000*	Time: *September 2019*

Standards Taught

- **2.NBT. A.1a Understand place value.** 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."
- **2.NBT.A.1b Understand place value**. 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. 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.
- **2.NBT.A.3 Understand place value**. Read and write numbers to 1000 using base-ten numerals (standard form), number names (word form), and expanded form.
- **2.NBT.A.4 Understand place value** 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.B.8 Use value understanding and properties of operations to add and subtract place** Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	Vocabulary	Assessments
Students will use understanding of place value to add and subtract within 1,000, multiply and divide within 100, and solve problems using the four operations.	*Compare* *Hundred* *Is greater than* *Is less than* *Is equal to* *thousand*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:

- *How do you group tens and hundreds?*
- *How do you write a 3-digit number for a group of tens?*
- *How do you show a 3-digit number using blocks?*
- *How do you write a 3-digit number that is shown by a set of blocks?*
- *How do you know the values of the digits in numbers?*
- *How do you write 3-digit numbers using words?*
- *What are three ways to write a 3-digit number?*
- *How can you use blocks or quick pictures to show the value of a number in different ways?*
- *How do you use place value to find 10 more, 10 less, 100 more, or 100 less than a 3-digit number?*
- *How does place value help you identify and extend counting patterns?*
- *How can you make a model to solve a problem about comparing numbers?*
- *How do you compare 3-digit numbers?*

Unit: *Basic Facts and Relationships*	Time: *October 2019*

Standards Taught

- **2.OA.A.1 Represent and solve problems involving addition and subtraction** 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

- **2.OA.B.2 Add and subtract within 20** a.Fluently add and subtract within 20 using mental strategies. (See standard 1.OA.6 for a list of mental strategies.) b.By end of Grade 2, know from memory all sums of two one-digit numbers.

- **2.OA.C.4 Work with equal groups of objects to gain foundations for multiplication.** 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

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	Vocabulary	Assessments
Students will learn patterns in repeated addition and subtraction and they can be used to explain the operations of multiplication and division.	*Sums* *Addends* *Differences*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How can you use doubles facts to find sums for near doubles facts?*
- *What are some ways to remember sums?*
- *How is the make a ten strategy used to find sums?*
- *How do you add three numbers?*
- *How are addition and subtraction related?*
- *What are some ways to remember differences?*
- *How does getting to 10 in subtraction help when finding differences?*
- *How are bar models used to show addition and subtraction problems?*
- *How are numbers sentences used to show addition and subtraction situations?*
- *How can acting it out help with solving a problem about equal groups?*
- *How can you write an addition sentence for problems with equal groups?*

Unit: *2-digit Addition*	**Time:** *October 2019*

Standards Taught

- **2.NBT.B.5 Use place value understanding and properties of operations to add and subtract.** 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 Use place value understanding and properties of operations to add and subtract.** Add up to four two-digit numbers using strategies based on place value and properties of operations.
- **2.OA.A.1 Represent and solve problems involving addition and subtraction.** 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.
- **2.NBT.B.9 Use place value understanding and properties of operations to add and subtract.** Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by words, drawings or objects.)

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills when writing equations using a symbol for an unknown addend or sum and finding sums for two, three, and four addends.	*Regroup* *Column*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How does breaking apart a number make it easier to add?*
- *How can you make an addend a ten to help solve an addition problem?*
- *How do you break apart addends to add tens and then add one?*
- *When do you regroup in addition?*
- *How do you record 2-digit addition?*
- *How do you record the steps when adding 2-digit numbers?*
- *What are two different ways to write addition problems?*
- *How can using a model help when solving addition problems?*
- *How do you write a number sentence to represent a problem?*
- *What are some ways to add 3 numbers?*
- *What are some ways to add 4 numbers?*

Unit: *2-Digit Subtraction*	Time: *November 2019*

Standards Taught

- **2.NBT.B.5 Use place value understanding and properties of operations to add and subtract.** 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 Represent and solve problems involving addition and subtraction**. 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.

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	Vocabulary	Assessments
Students will apply these strategies and skills to draw diagrams and write equations to solve multistep subtraction word problems.	*Difference* *Regroup* *Tens* *Ones* *digits*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How does breaking apart a number make subtracting easier?*
- *When do you regroup in subtraction?*
- *How do you record 2-digit subtraction?*
- *How do you record the steps when subtracting 2-digit numbers?*
- *What are two different ways to write subtraction problems?*
- *How can you use addition to solve subtraction problems?*
- *How can drawing a diagram help when solving subtraction problems?*
- *How do you write a number sentence to represent a problem?*
- *How do you decide what steps to do to solve a problem?*

Unit: *3-digit Addition and Subtraction*		**Time:** *December 2019*
Standards Taught		
2.NBT.B.7 Use place value understanding and properties of operations to add and subtract. 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.9 Use place value understanding and properties of operations to add and subtract**. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by words, drawings or objects.)		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* *Practice Sheets* *Assessments* *Math Centers*
Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills to solve problems involving multi-digit arithmetic.	*Addends* *Difference* *Regroup* *Sum*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How do you draw quick pictures to show adding 3-digit numbers?*
- *How do you break apart addends to add hundreds, tens, and then ones?*
- *When do you regroup ones in addition?*
- *When do regroup tens in addition?*
- *How do you know when to regroup in addition?*
- *How can making a model help when solving subtraction problems?*
- *When do you regroup tens in subtraction?*
- *When do you regroup hundreds in subtraction?*
- *How do you know when to regroup in subtraction?*
- *How do you regroup when there are zeroes in the number you start with?*

Unit: *Money and Time*		**Time:** *January 2020*
Standards Taught		

- **2.MD.C.7 Work with time and money**. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- **2.MD.C.8 Work with time and money**. Identify and count coins and bills and apply that understanding to solve word problems. a.Recognize and know the value of coins up to one dollar. b.Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*
Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills to as they add and subtract money amounts and solve problems involving measurement and estimations of intervals of time.	*a.m, p.m* *cent sign* *decimal point* *dime* *dollar* *dollar sign* *hour* *midnight* *minute* *noon* *nickel* *penny* *quarter* *quarter past*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How do you find the total value of a group of dimes, nickels, and pennies?*
- *How do you find the total value of a group of coins?*
- *How do you order coins to help find the total value of a group of coins?*
- *How do you choose coins to show a money amount in different ways?*
- *How can you show the value of one dollar with coins?*
- *How do you show money amounts greater than one dollar?*
- *How does acting it out help when solving problems about money?*
- *How do you tell time to the hour and half hour on a clock?*
- *How do you tell and show time to five minutes?*
- *What are the different ways you read the time on a clock?*
- *How do you use a.m. and p.m. to describe times?*

Unit: *Length in Customary Units*	**Time:** *February 2020*

Standards Taught

- **2.MD.A Measure and estimate lengths in standard units.**
  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.

- **2.MD.B Relate addition and subtraction to length**.
  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

- **2.MD.D Represent and interpret data.**
  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.

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*

Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills to solve problems involving measuring length to the nearest half and quarter inch.	*Foot* *Inch* *Line plot* *Measuring tape* *yardstick*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How can you use inch models to measure length?*
- *Why is using a ruler similar to using a row of color tiles to measure length?*
- *How do you estimate the lengths of objects in inches?*
- *How do you use inch rulers to measure length?*
- *How can drawing a diagram help when solving problems about length?*
- *Why is measuring in feet different from measuring in inches?*
- *How do you estimate the lengths of objects in feet?*
- *How do you choose a tool to use when measuring lengths?*
- *How can a line plot be used to show measurement data?*

Unit: *Length in Metric Units*	**Time:** *March 2020*

Standards Taught	

- **2.MD.A Measure and estimate lengths in standard units.**
  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

- **2.MD.B Relate addition and subtraction to length**.
  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

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*
Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills to solve problems involving measuring lengths in meters and centimeters.	*Centimeter* *Meter*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How do you use a centimeter model to measure lengths of objects?*
- *How do you use known lengths to estimate unknown lengths?*
- *How do you use a centimeter ruler to measure lengths?*
- *How can drawing a diagram help when solving problems about lengths?*
- *How is measuring in meters different from measuring in centimeters?*
- *How do you estimate the lengths of objects in meters?*
- *How do you find the difference between the lengths of two objects?*

Unit: *Data*	Time: *April 2020*

Standards Taught

- **2.MD.D Represent and interpret data.**
  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.

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* - *Practice Sheets* - *Assessments* - *Math Centers*
Relevance	**Vocabulary**	**Assessments**
Students will apply these strategies and skills to expand their understanding of bar graphs by solving one- and two-steps problems.	*Bar graph* *Data* *Key* *Picture graph* *Survey*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *How do you use a tally chart to record date from a survey?*
- *How do you use a picture graph to show data?*
- *How do you make a picture graph to show data in a tally chart?*
- *How is a bar graph used to show data?*
- *How does making a bar graph help when solving problems about data?*

Unit: *Data*		Time: *April/May 2020*
Standards Taught		

- **2.G.A Reason with shapes and their attributes.**
  1. Recognize, identify, and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces; to include triangles, quadrilaterals, pentagons, hexagons, and cubes. (Sizes are compared directly or visually, not compared by measuring.)
  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

Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Math Centers*
Relevance	**Vocabulary**	**Assessments**
Students will extend their skills with two- and three-dimensional shapes. They will also partition shapes.	*Cone* *Angle* *Cube* *Cylinder* *Edge* *Face* *Fourths* *Halves* *Hexagon* *Pentagon* *Quadrilateral* *Rectangular prism* *Side* *Vertex* *Thirds*	*- Daily workbook sheets* *-Teacher observation* *- Chapter Tests* *- DIBELS* *- Class Discussion*

Essential Questions:
- *What objects match three-dimensional shapes?*
- *How would you describe the faces of a rectangular prism and the faces of a cube?*
- *How can you build a rectangular prism?*
- *What shapes can you name just by knowing the number of sides and vertices?*
- *How do you find and count angles in two-dimensional shapes?*
- *How do you use the number of sides and angles to sort two-dimensional shapes?*
- *How do you find the total number of same-size squares that will cover a rectangle?*
- *What are halves, thirds, and fourths of a whole?*
- *How do you know if a shape shows halves, thirds, or fourths?*
- *How do you find a half of , a third of, or a fourth of a whole?*

- *How can drawing a diagram help when solving problems about equal shares?*