2.OA Operations and Algebraic Thinking

- Use addition and subtraction within 100 to solve one- and two-step word problems. (2.OA.A.1)
- Fluently add and subtract within 20 using mental strategies. (2.OA.B.2)
- Determine whether a group of objects has an odd or even number of members. (2.OA.C.3)
- Write an equation to express an even number as a sum of two equal addends. (2.OA.C.3)
- Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. (2.OA.C.4)

Essential Questions	**Enduring Understandings**
How would the world be different if we didn't have numbers? Why is it important to learn our number facts? How are whole numbers used in our daily life?	To make an estimate of a sum, it is necessary to add only the front one or two digits of the numbers involved; Showing information visually rather than in written form can make comparison easier and quicker; Not all the math we do in life requires exact numbers. Some questions can be answered with good estimates.
Suggested Activities and Resources (in addition to guided reading and leveled materials) Pantomime a short scenario relative to using math & ask students to identify the specific use(s) of math that were depicted. Then have students cite, find, or draw their own examples; Guide students to see that their addresses & classroom number are examples of the labeling use of numbers; During transition periods, have students identify which pupil is first, last, 5th on line, after the 6th person on line, before the 9th person, etc.; See the measurement area for relevant measurement number use activities; Work with students to create a simple map of the classroom & have students identify specific locations	**Suggested Assessments** Pantomime each of the uses for numbers & have students identify them; Have students order a set of 1-10 items and identify each item's ordinal position; Ask students use manipulatives and show as they count the difference between counting by 1s, 2s, 5s, & tens

2.NBT Number and Operations in Base Ten

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. (2.NBT.A.1)
- Count within 1000. (2.NBT.A.2)
- Skip-count by 5s, 10s, and 100s. (2.NBT.A.2)
- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2.NBT.A.3)
- Compare two three-digit numbers. (2.NBT.A.4)
- Fluently add and subtract within 100. (2.NBT.B.5)
- Add up to four two-digit numbers using strategies based on place value and properties of operations. (2.NBT.B.6)
- Add and subtract within 1000. (2.NBT.B.7)
- Mentally add or subtract 10 or 100 to a given number 100–900. (2.NBT.B.8)
- Explain why addition and subtraction strategies work. (2.NBT.B.9)

Essential Questions	**Enduring Understandings**
How many numbers are enough? Do we need numbers that are more than 1 million? When do all things need to be equal?	Numbers are compared by beginning with the place of greatest value, the place farthest to the left, and then moving to the right as far as is needed; Some real world-problems can be solved using known concepts, skills, and strategies; 10 tens make 100, and 10 hundreds make 1,000.
Suggested Activities and Resources (in addition to guided reading and leveled materials) Help students learn to use “ball park estimates” (i.e., change numbers in a given problem to close-but easier numbers that can be computed mentally); begin with addition of 2-digit numbers without regrouping, & ,when children seem comfortable with this, then move to subtraction of 2-digit numbers without regrouping; Play “Say it & Press It” –display a 2- or 3-digit number using base-ten materials & have students say the number then enter it on their calculators	**Suggested Assessments** Give students a set of items & have them explain their rationale for determining if an odd or even number is being represented.

2.MD Measurement and Data

- Measure the length of an object by selecting and using appropriate tools. (2.MD.A.1)
- Measure the length of an object twice, using length units of different lengths for the two measurements. (2.MD.A.2)
- Describe how the two measurements relate to the size of the unit chosen. (2.MD.A.2)
- Estimate lengths using units of inches, feet, centimeters, and meters. (2.MD.A.3)
- Measure to determine how much longer one object is than another. (2.MD.A.4)
- Use addition and subtraction within 100 to solve word problems involving lengths. (2.MD.B.5)
- Represent whole numbers as lengths from 0 on a number line diagram. (2.MD.B.6)
- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (2.MD.C.7)
- Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies. (2.MD.C.8)
- Generate measurement data by measuring lengths of several objects to the nearest whole unit. (2.MD.D.9)
- Draw a picture graph and a bar graph to represent a data. (2.MD.D.10)

Essential Questions	**Enduring Understandings**
What things are impossible to measure? Why do we need standard units of measurement? How does what we measure influence how we measure?	The length of an object can be described by comparing it to a defined unit of length, such as a paper clip; The capacity of a container can be described by comparing it to that of a defined unit of capacity; An event that is more likely to happen will occur more often than an event that is less likely to happen.
Suggested Activities and Resources (in addition to guided reading and leveled materials) Play the “Coin Collector” game – Students take turns picking cards with pictures of coins on them, name the coin, & state its value. The winner is the first students to collect one of each coin type; Engage in real-life problems so that the need for a given type of computation and numbers will emerge from the problem’s context	**Suggested Assessments** Give students a randomly ordered set of the target coins (penny nickel, dime, quarter, & a half dollar), and have them…name each one & state its value and put the set in order from least to greatest value; Show students 2 sets of numbers & have them use manipulatives to determine which set is ordered correctly from highest to lowest.

2.G Geometry	
• Recognize and draw shapes having specified attributes. (2.G.A.1) • Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. (2.G.A.2) • 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. (2.G.A.3) • Recognize that equal shares of identical wholes need not have the same shape. (2.G.A.3)	
Essential Questions What is the best shape? Why? If you created the world what shapes would you use? Why?	**Enduring Understandings** The flat surfaces on a solid figure can be "unfolded" to form a complex two-dimensional model of that figure; "Equal parts" mean that each part is the same; Solids comprise flat surfaces, vertices and edges.
Suggested Activities and Resources **(in addition to guided reading and leveled materials)** Make a *Geometry to Real-Life Connection Chart* & add items when found; Students to draw simple 2-D shapes based on the teacher's description of their orientation/direction; Pass around & discuss models of each shape, name them, then ask students to find real-life examples of them	**Suggested Assessments** Use direction/orientation vocabulary to direct students where to place the book; Have students pick a specific #D shape out of a collection