

**MATHEMATICAL IDEAS & CONCEPTS:**

- Continue to use place value understanding to add/subtract within 100
- Continue to explain why addition/subtraction strategies work
- Continue to work towards addition and subtraction fluency within 20
- Continue to build place value understanding within 1000
- Measure and estimate lengths with non-standard units *new this quarter*
- Represent and interpret data using picture and bar graphs *new this quarter*
- Continue to reason with shapes and attributes

**ESSENTIAL QUESTIONS:**

1. *What strategies can I use when I solve problems and how can I notate my thinking?*
2. *How can I use mental strategies to help me add and subtract?*
3. *How can I represent three-digit numbers in more than one way?*
4. *What are the important things to remember when I measure?*
5. *How can attributes help me classify and draw shapes?*

**STANDARDS:**

Aligned to Essential Questions; Big Idea/Concept Standard (★) with supporting standards (→) connected below

*Notes in gray font are from the AR Mathematics standards; RPS instructional pacing notes are in red font*

**EQ 1: What strategies can I use when I solve problems and how can I notate my thinking?****Numbers within 100****★ 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
- Represent a strategy with a related equation including a symbol for the unknown number

**★ 2.NBT.B.5** Add and subtract within 100 with *computational fluency* using strategies based on *place value*, properties of operations, and the relationship between addition and subtraction *Q2 Focus: Use concrete models or drawings and relate the strategy used to a written notation*

→ **2.NBT.B.6** Add up to four two-digit numbers using strategies based on *place value* and properties of operations

→ **2.MD.C.8** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.

*For example: A student has 2 dimes and 3 pennies; how many cents does he have? new this quarter*

**★ 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 solve addition and subtraction problems within 100 on the *number line diagram*

*Students should use number lines as a tool in solving addition/subtraction problems within 100.*

**★ 2.NBT.B.9** Explain why addition and subtraction strategies work, using *place value* and the properties of operations

*Note: 2.NBT.B.9 Explanations could be supported by drawings or objects.*



## EQ 2: How can I use mental strategies to help me add and subtract?

- ★ **2.OA.B.2** *Q2 Focus: Working with mental strategies to add and subtract.*
  - Fluently add and subtract within 20 using mental strategies
  - By the end of Grade 2, know from memory all *sums* of two one-digit numbers

*Note: 2.OA.B.2 Fact fluency means that students should have automaticity when recalling these facts.*

## EQ 3: How can I represent three-digit numbers in more than one way?

- ★ **2.NBT.A.1** *Q1 and Q2: build a foundational place value understanding of three-digit numbers in order to add/subtract these numbers in third and fourth quarter.*
  - Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 726 equals 7 hundreds, 2 tens, and 6 ones
  - Understand that 100 can be thought of as a group of ten tens — called a "hundred"
  - Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine groups of 100
- **2.NBT.A.2**
  - Count within 1000
  - Skip-count by 5s, 10s, and 100s beginning at zero
- **2.NBT.A.3**
  - Read and write numbers to 1000 using base-ten numerals, number names, and a variety of *expanded forms*
  - Model and describe numbers within 1000 as groups of 10 in a variety of ways

## EQ 4: What are the important things to remember when I measure?

*Measurement ideas in 2nd quarter focus on **non-standard units**. Measurement standards are not formally assessed until 3rd quarter.*

- ★ **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 *new this quarter; Q2: students are exploring the use of different measurement tools (no gaps/overlaps; iteration of units, etc) - not necessarily the standard unit of each tool*
- **2.MD.A.2** *new this quarter*
  - Measure the length of an object twice with two different length units
  - Describe how the two measurements relate to the size of the unit chosen  
*For example: A desktop is measured in both centimeters and inches. Student compares the size of the unit of measure and the number of those units*
- **2.MD.A.3** Estimate lengths using units of inches, feet, centimeters, and meters *new this quarter*
- **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 *new this quarter*



### ***EQ 5: How can attributes help me classify and draw shapes?***

★ **2.G.A.1** *Note: 2.G.A.1 Sizes are compared directly or visually, not compared by measuring.*

- Recognize and draw shapes having specified *attributes* (e.g., number of angles, number of sides, or a given number of equal faces)
- Identify triangles, quadrilaterals, pentagons, hexagons, and cubes

#### ***Additional Standards:***

→ **2.MD.D.10** *new this quarter*

- 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