

**MATHEMATICAL IDEAS & CONCEPTS:**

- Use place value understanding to add and subtract within 100
- Explain why addition/subtraction strategies work
- Work towards addition and subtraction fluency within 20
- Build place value understanding within 1000
- Reason with shapes and attributes

**ESSENTIAL QUESTIONS:**

1. *How can I decompose (break apart) numbers to help me add and subtract?*
2. *How can I use facts I know to help me solve facts I don't know?*
3. *How can I build three-digit numbers in more than one way?*
4. *How can attributes help me identify 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: How can I decompose (break apart) numbers to help me add and subtract?****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 *The subtraction standard in 1st grade was limited to subtracting with multiples of 10. Concrete models and drawings should be encouraged as students extend their reasoning with addition and subtraction within 100.*

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

- ★ **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 facts I know to help me solve facts I don't know?**

- ★ **2.OA.B.2** *Q1 Focus: Maintain computational fluency within 10 (from 1st Grade). Students should be using a variety of strategies to add and subtract within 20. Strategies could include: counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums.*

- 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 build 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: How can attributes help me identify 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