

# RIO VALLEY CHARTER SCHOOL

A PACIFIC CHARTER INSTITUTE SCHOOL

## ***Mathematics Arts State Standards Grade 2***

Second grade students extend their understanding of the base-ten number system. They develop fluency with addition and subtraction within 100. Students use standard units of measure (centimeter and inch), and they describe the sides and angles of shapes. Second graders explain their math reasoning, use tools to solve math problems, and work with equal groups of objects to gain foundations for multiplication.

### ***Standards for Mathematical Practice – “HOW” My student can:***

- explain a math problem, create & use a plan to solve it, and check  if the answer makes sense.
- make sense of and flexibly use math symbols, numbers, and operations.
- use objects, drawings, diagrams, actions and words to explain his/her approach to a math problem and decide if others' strategies make sense.
- recognize math in everyday life and use math to solve real problems.
- use tools (e.g., ruler, concrete models, paper/pencil) to solve problems and deepen understanding. calculate accurately, use precise math vocabulary, and explain problems/solutions clearly. describe how numbers and shapes are organized as parts and wholes.
- notice when calculations are repeated, and look for general “rules” and shortcuts.

### ***Math Content Standards – “WHAT” Addition and Subtraction (Operations and Algebraic Thinking) My student can:***

- use addition and subtraction within 20 to solve word problems. 1.OA.1
- use addition and subtraction within 100 to solve one- and two-step word problems. 2.OA.1
- use strategies (e.g., drawings, equations with a symbol for the unknown number) to solve addition and subtraction word problems with unknowns in all positions (e.g.,  $\_ + 24 = 48$ ;  $57 - \_ = 29$ ). 2.OA.1
- fluently add and subtract within 20 using mental strategies (e.g., making ten, counting on). 2.OA.2
- memorize all addition facts of two one-digit numbers (e.g.,  $2 + 5 = 7$ ;  $4 + 4 = 8$ ). 2.OA.2
- group objects to tell if the total number is odd or even (e.g., pair objects, count by 2s). 2.OA.3

- use repeated addition of objects (up to 5 rows and 5 columns) to show basic understanding of multiplication. 2.OA.4

***Number Sense and Place Value (Number and Operations in Base Ten) My student can:***

- tell how many hundreds, tens and ones are in a three-digit number. NBT.1
- understand that 100 can be thought of as a bundle of ten tens – called a “hundred”. 2.NBT.1
- count to 1000, starting at any number; skip-count to 1000 by 2s, 5s, 10s and 100s. 2.NBT.2
- read and write numbers to 1000 using base-ten numerals (643 = 6 hundreds, 4 tens, 3 ones), number names (643 = six hundred forty-three) and expanded form (643 = 600 + 40 + 3). 2.NBT.3
- compare three-digit numbers using  $<$ ,  $=$ , and  $>$  (e.g.,  $243 < 512$ ). 2.NBT.4
- add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. 2.NBT.5
- add up to four two-digit number (e.g.,  $24 + 14 + 32 + 47 = \underline{\quad}$ ) using strategies based on place value and properties of operations. 2.NBT.6
- add and subtract within 1000 using regrouping. 2.NBT.7
- mentally add and subtract 10 or 100 to a given number between 100-900. NBT.8
- explain why addition and subtraction strategies work (e.g., regrouping, mentally adding ten). 2.NBT.9

***Measurement and Data My student can:***

- select the appropriate tool (e.g., ruler, yardstick) to measure the length of an object. 2.MD.1
- measure the length of an object twice using two different units of measurement (e.g., inches vs. centimeters); compare measurements. 2.MD.2  estimate the lengths of objects using inches, feet, centimeters, and meters. 2.MD.3
- compare the lengths of two different objects, expressing the difference in inches, centimeters, feet or meters. 2.MD.4
- use addition and subtraction to solve word problems involving the lengths of objects. 2.MD.5
- use a number line to show addition and subtraction within 100. 2.MD.6
- tell and write time to the nearest five minutes, using a.m. and p.m. 2.MD.7  solve word problems involving dollar bills, quarters, dimes, nickels & pennies (e.g., If you have 2 dimes and 3 pennies, how many cents do you have?). 2.MD.8
- use \$ and ¢ symbols appropriately to write money amounts. 2.MD.8
- make a table to organize data. 2.MD.9
- use measurement data (e.g., lengths of several objects to the nearest whole

- unit) to make a line plot. 2.MD.9
- draw a picture graph and a bar graph to represent data with up to four categories. 2.MD.10
  - solve simple put-together, take-apart, & compare problems using information on a bar graph. 2.MD.10

## ***Geometry***

### ***My student can:***

- name & draw shapes having specific attributes (e.g., a specific number of angles or equal faces). 2.G.1
- identify triangles, quadrilaterals, pentagons, hexagons, and cubes. 2.G.1 divide a rectangle into equal rows and columns; count to find the total number of same-size squares created. 2.G.2
- divide circles and rectangles into two, three or four equal parts; describe the parts using the words halves, thirds, half of, a fourth of, etc.; describe the whole circle or rectangle as two halves, three thirds, or four fourths. 2.G.3