RIO VALLEY CHARTER SCHOOL

A PACIFIC CHARTER INSTITUTE SCHOOL

Mathematics Arts State Standards Grade 1

First grade students develop strategies for adding and subtracting numbers. They think of numbers between 10 and 100 in terms of tens and ones. Students understand the meaning and process of measurement. They explain their math reasoning with objects and words, recognize math in everyday life, and describe how shapes are organized as parts and wholes.

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
- ☐ solve addition and subtraction word problems (e.g., adding to, putting together, taking apart, comparing) by using objects, drawings & equations with a symbol for the unknown number. 1.OA.1
- ☐ solve word problems that require adding 3 numbers (with the sum being 20 or less). 1.OA.2
- ☐ use the commutative property of addition as a strategy (e.g., If 8+3=11, then 3+8=11). 1.OA.3
- ☐ use the associative property of addition as a strategy (e.g., 2 + 6 + 4 = 2 + 10 = 12). 1.OA.3
- ☐ use addition to help answer a subtraction problem (e.g., Subtract 10-8 by finding 8+ =10). 1.OA.4

- ☐ relate counting to addition and subtraction (e.g., counting on by 2 to add 2). 1.OA.5
- ☐ add and subtract within 20, using strategies like counting on, making ten, relating addition and subtraction, and creating easier equivalent sums (e.g., 6 + 7 = 6 + 6 + 1 = 12 + 1 = 13). 1.OA.6 add and subtract within 10 automatically and accurately. 1.OA.6
- ☐ explain the meaning of the equal sign. 1.OA.7
- ☐ determine if addition and subtraction equations are true or false. 1.OA.7
- ☐ determine the missing number in an addition or subtraction problem (e.g., 8+?=11; 5⊜ - 3). 1.OA.8

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

- ☐ count to 120, starting at any number less than 120. 1.NBT.1
- ☐ read and write numbers and represent a number of objects with a written numeral. 1.NBT.1
- ☐ tell how many tens and how many ones are in a two-digit number.
    - NBT.2
- ☐ understand that 10 can be thought of as a bundle of ten ones – called a "ten". 1.NBT.2
- ☐ compare two two-digit numbers based on meanings of the tens and ones digits. 1.NBT.3
- ☐ compare two-digit numbers using <, =, and >. 1.NBT.3
- ☐ add numbers within 100, including adding a two-digit number and a one- digit number (e.g., 27+2) and adding a two-digit number and a multiple of ten (e.g., 46+30). 1.NBT.4
- ☐ when adding within 100, use objects, drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction. 1.NBT.4
- ☐ mentally figure out 10 more or 10 less than a two-digit number without having to count. 1.NBT.5
- ☐ subtract multiples of 10 from 10, 20, 30, 40, 50, 60, 70, 80, or 90. 1.NBT.6
- ☐ when subtracting multiples of 10, use objects, drawings, and strategies based on place value, properties of operations and/or the relationship between addition and subtraction. 1.NBT.6 explain his/her reasoning when choosing a certain strategy to add or subtract. 1.NBT.4 & 1.NBT.6

Measurement and Data My student can:

- ☐ put three objects in order by length. 1.MD.1
- ☐ tell the length of an object using whole numbers. 1.MD.2
- ☐ understand that length is measured by laying a shorter object (length unit) end to end with no gaps or overlaps. 1.MD.2
- ☐ tell and write time in hours and half-hours using analog and digital clocks. 1.MD.3
- ☐ organize, represent and understand data with up to three categories (e.g., picture graph). 1.MD.4

☐ ask and answer questions about data on a picture graph (e.g., how many in each category; how many more or less in one category than in another). 1.MD.4

Geometry

My student can:

☐ distinguish between essential attributes (e.g., triangles are closed and threesided) and non-essential attributes (e.g., color, position, size) of shapes. 1.G.1

☐ build and draw shapes so that they have the shapes' essential attributes.

☐ 1.G.1

☐ make two-dimensional shapes (rectangles, squares, trapezoids, triangles, circles, half-circles, quarter circles). 1.G.2

☐ make three-dimensional shapes (cubes, rectangular prisms, circular cones, circular cylinders). 1.G.2

☐ combine shapes to make composite shapes. 1.G.2

☐ divide shapes into two or four equal parts; describe the equal parts using the words halves, fourths, and quarters or the phrases half of, fourth of, and quarter of. 1.G.3

☐ understand that dividing a shape into more equal parts creates smaller parts. 1.G.3