

Diocese of Phoenix Math Standards
First Grade

Operations and Algebraic Thinking (OA) Represent and solve problems involving addition and subtraction	
2021	Standard
1.OA.1	Use addition and subtraction within 20 to solve word problems. □ Unknown in all positions. □ Adding to, taking from, putting together, taking apart, and comparing. □ Use objects, drawings, and equations with a symbol for the unknown number to represent the problem. DG1-S3-C3-PO1 Use variables in contextual situations. DG1-S1-C2-PO6 Select the grade level appropriate operation to solve word problems.
1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. □ Unknown in all positions. □ Adding to, taking from, putting together, taking apart, and comparing. □ Use objects, drawings, and equations with a symbol for the unknown number to represent the problem.
1.OA.3	Apply properties of operations as strategies to add and subtract. □ Commutative property of addition: if $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. □ Associative property of addition: to add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. DG1-S1-C2-PO10 Demonstrate the identity and commutative properties of addition through 18.
1.OA.4	Understand subtraction as an unknown-addend problem. DG1-S3-C3- DPO1 Find the missing elements in number sentences.

Diocese of Phoenix Math Standards First Grade

1.OA.5	Relate counting to addition and subtraction. DG1-S1-C2-PO8 Count by multiples to show the process of multiplication (2's, 5's, and 10's).
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. □ Counting on. □ Making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$). □ Decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$). □ Using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$). □ Creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). DG1-S1-C2-PO1 Demonstrate the process of addition through sums of 20 using manipulatives. DG1-S1-C2-PO2 Demonstrate the process of subtraction with minuends of 20 using manipulatives. DG1-S1-C2-PO3 State addition facts for sums through 18 and subtraction for differences with minuends through 9 or less. DG1-S1-C2-PO4 Add one and two digit whole numbers without regrouping. DG1-S1-C2-PO5 Subtract one and two digit whole numbers without regrouping.
1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. DG1-S1-C2-PO12 Apply the symbols: +, -, =.
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

Diocese of Phoenix Math Standards
First Grade

	DG1-S3-C3- PO1, DPO1 Use variables in contextual situations; Find the missing elements in number sentences.
--	--

Number and Operation in Base Ten (NBT) Extend the Counting Sequence	
2021	Standard
1.NBT.1	Count to 120, starting at any number less than 120. □ Read and write numerals. □ Represent a number of objects with a written numeral. DG1-S1-C1- PO2 Identify a whole number represented by a model with a word name and symbol 0 to 120. DG1-S1-C1-PO3 Count aloud forward or backward in consecutive order (0 through 120). DG1-S1-C1-PO4 Identify whole numbers through 120 in or out of order. DG1-S1-C1-PO5 Write whole numbers through 120 in or out of order.
1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: □ 10 can be thought of as a bundle of ten ones — called a “ten.” □ The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. □ The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

Diocese of Phoenix Math Standards First Grade

	DG1-S1-C1- DPO3 Name digits in ones and tens place. DG1-S1-C1- DPO4 Round numbers to nearest ten. DG1-S1-C1- DPO5 Write whole numbers in expanded notation. DG1-S1-C1- DPO8 Construct models to represent place value concepts for the ones and tens places. DG1-S1-C1- DPO9 Apply expanded notation to model place value through 99.
1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$. DG1-S1-C1-PO11 Compare two whole numbers through 100. DG1-S1-C2-DPO2 Use the symbols $>$, $=$, and $<$ to compare whole numbers.
1.NBT.4	Add within 100, including ☐ Adding a two-digit number and a one-digit number. ☐ Adding a two-digit number and a multiple of 10. ☐ Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. ☐ Relate the strategy to a written method and explain the reasoning used. ☐ Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
1.NBT.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count and explain the reasoning used.

Diocese of Phoenix Math Standards
First Grade

1.NBT.6	Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences). □ Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. □ Relate the strategy to a written method and explain the reasoning used.
---------	--

Measurement and Data (MD) Measure Lengths Indirectly and by Iterating Length Units	
2021	Standard
1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object. DG1-S4- C4- DPO1 Measure a given characteristic of an object using non-standard units of measure.
1.MD.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end. □ Understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. □ Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.
1.MD.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points.

Diocese of Phoenix Math Standards First Grade

- ☐ How many in each category?
- ☐ How many more or less are in one category than in another?

DG1-S2-C1-PO1 Formulate questions to collect data in contextual situations.

DG1-S2-C1-PO2 Make a simple pictograph or tally chart with appropriate labels from organized data.

DG1-S2-C1-PO3 Interpret pictographs using terms such as most, least, equal, more than, less than, and greatest.

DG1-S2-C1-PO4 Answer questions about pictographs using terms such as most, least, equal, more than, less than, and greatest.

DG1-S2-C1-PO5 Formulate questions based on graphs, charts, and tables.

DG1-S2-C1-PO6 Solve problems using graphs, charts, and tables.

DG1-S2-C1-DPO1 Collect and record data from surveys or experiments.

DG1-S2-C1-DPO2 Organize information from surveys or experiments, write a title to represent the main idea of a graph.

DG1-S2-C1-DPO3 Locate points on a line graph using ordered pairs.

DG1-S2-C1-DPO4 Draw conclusions from graphed data.

Diocese of Phoenix Math Standards
First Grade

Geometry (G) Reason with Shapes and their attributes	
2021	Standard
1.G.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. DG1-S4-C1-PO1 Use the words vertex and side when describing simple 2- dimensional geometric shapes. DG1-S4-C1-PO2 Identify 2-dimensional shapes by attribute. DG1-S4-C1-DPO1 Identify 3- dimensional figures by name or attributes. DG1-S4-C1-DPO2 Compare attributes of 2-dimensional shapes.
1.G.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism.”) DG1-S4-C1-PO5 Draw 2-dimensional shapes
1.G.3	Partition circles and rectangles into two and four equal shares, □ Describe the shares using the words halves, fourths, and quarters. □ Use the phrases half of, fourth of, and quarter of. □ Describe the whole as two of, or four of the shares. □ Understand for these examples that decomposing into more equal shares creates smaller shares. DG1-S1-C1-DPO1,DPO2 Make models that represent given fractions. (halves, thirds, fourths, eighths and tenths).

Diocese of Phoenix Math Standards
First Grade

Computation Students demonstrate the meaning of addition and subtraction and use these operations to solve problems.	
2021	Standard
1.C.1	Show the meaning of addition (putting together, increasing) using objects.
1.C.2	Show the meaning of subtraction (taking away, comparing, finding the difference) using objects.
1.C.3	Show equivalent forms of the same number (up to 20) using objects, diagrams, and numbers.
1.C.4	Demonstrate mastery of the addition facts (for totals up to 20) and the corresponding subtraction facts.
1.C.5	Understand the meaning of the symbols +, -, and =.
1.C.6	Understand the role of zero in addition and subtraction.
1.C.7	Understand and use the inverse relationship between addition and subtraction facts (such as $4 + 2 = 6$, $6 - 2 = 4$, etc.) to solve simple problems.