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1st Quarter Mathematics- (Operations and Algebraic Thinking (OA)				
Timeline & Resources	**Arizona Mathematics Standards**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary (Content/Academic)**
1st Quarter My Math Chapter 1 Chapter 2	**1.OA.A.1 Use addition and subtraction within 20 to solve word problems with unknowns in all positions (e.g., by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem).** *See Table 1.* 1.MP.1 Make sense of problems and persevere in solving them. 1.MP.2 Reason abstractly and quantitatively. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.Mp.4 Model with mathematics. 1.MP.5 Use appropriate tools strategically. 1.MP.8 Look for and express regularity in repeated reasoning.	Chapter 1: How do you add numbers? What are the parts?/addends What is the whole?/sum	Identify the information given in a story problem. Identify the question being asked in a story problem. Determine what operation a story problem is asking to solve. Determine if a story problem is adding to, taking from, putting together, taking apart, or comparing. Solve a story problem using the correct operation.	Add Join Plus Addends Sum Part Whole Value Subtract Minus Difference Number bond Strategy(ies)
1st Quarter My Math Chapter 1 Chapter 2	**1.OA.B.3 Apply properties of operations (commutative and associative properties of addition) as strategies to add and subtract within 20. (Students need not use formal terms for these properties).** 1.MP.2 Reason abstractly and quantitatively 1.MP.7 Look for and make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	Explain the Commutative property of… Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative 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. (Associative property of addition).	Apply the associative property to find equivalent addends. Show or write a commutative and associative property by writing an addition number sentence.	Add Join Subtract Compare Properties Operations Commutative Property Associative Property

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1st Quarter My Math Chapter 2	**1.OA.B.4 Understand subtraction as an unknown-addend problem within 20. (e.g., subtract 10 – 8 by finding the number that makes 10 when added to 8.** 1.MP.2 Reason abstractly and quantitatively 1.MP.7 Look for and make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	How are adding and subtracting similar and different? What equation matches a given problem or story? Subtraction equation or addition equation? Sara said 10-4=6 because 4+6=10. Is her reasoning correct? Explain.	Use adding to subtract. If you know the whole (sum or difference), and 1 part, then what is the missing part. Write an equation to go with a model. Create a model to match an equation. Write a story problem about a model.	Minus Subtract Missing part Unknown addend
1st Quarter My Math Chapter 1 Chapter 2	**1.OA.C.6 Fluently add and subtract within 10.** *1.MP.2 Reason abstractly and quantitatively* *1.MP.7 Look for and make use of structure.* *1.MP.8 Look for and express regularity in repeated reasoning.*	What happens to a number when you are counting on? When counting on, why don't you start with 1? (i.e. starting with a group, 5+3…5, 6, 7, 8) * Use strategies such a **counting on**; *** making ten** (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14);	Make a 10 to add and subtract. Use doubles and near doubles to add and subtract. Identify or explain the strategy used to solve the problem. Decompose a number to make a 10 to add and subtract.	Add Subtract Near Double Doubles Counting on Making ten Double & 1 more Double & 2 more Strategy Equal Increase Decrease Compose/decompose

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1st Quarter My Math Chapter 2	**1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? 6+1=6-1, 7=8-1, 5+2 = 2+5, 4+1=5+2).** 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.6 Attend to precision 1.MP.7 Look for and make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	Show and understand that equal means, "the same as" with single digits and relate to an addition sentence or a combination of addition and subtraction.	To understand by showing or telling that different addition or subtraction sentences can be equal. (showing "same as")	Equal Same as Addition Subtraction Left side Right side

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2nd Quarter Mathematics – Number and Operations in Base Ten (NBT)				
Timeline & Resources	**Arizona Mathematics Standards**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary (Content/Academic)**
2nd Quarter My Math Chapter 5 Chapter 6	**1.NBT.A.1 Count to 120**, **by 1's, 2's, and 10's** starting at any number less than **100.** In this range, **read and write numerals** and **represent a number of objects with a written numeral.** (Oral counting – rote) 1.MP.2 Reason abstractly and quantitatively. 1.MP.7 Look for and make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	How can I use place value? Can you build a model to represent a given number? What happens to a number when you count forward and backward? Do numbers have a pattern? Explain.	Count forwards and backward from a given number. Write numerals forward and backward from a given number. Write two-digit numbers. Read number words. Represent a number of objects with a numeral. The face of the clock always begins at 12.	Numeral (s) Digit More than Less than Tens Ones Place value Hundreds Forward (up) Backward (down) Ten frame

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2nd Quarter My Math Chapter 5 Chapter 6	**1.NBT.B.2 Understand that the two digits of a two-digit number represent groups of tens and ones. Understand the following as special cases:** 1. 10 can be thought of as a group of ten ones - called a "ten". 2. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 3. 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).	What is a ten? How many ones are in a ten? What two numbers can make a ten? How many tens and ones are in numbers 11 – 19? For numbers 11 – 19, do you have enough to make a ten? Do you have any more? If so, how many more do you have? What is a group of 10? How many tens are in ____? How many ones are in ____ tens? How many different ways can show the number ____?	Make a 10 and break apart a 10. Identify the sums of 10. Describe 11-19 as 10 and ones or make a 10 and some more. Represent numbers 11 - 19 on 2 ten frames /place value mats. Count numbers 11-19 as 10 & 1, 10 & 2, 10 & 3, etc. Skip count by 10's Identify word names by 10-120. Identify the number of tens in a two-digit number with no ones. Identify the value of a given number of tens.	Tens Ones Bundle Group Groups Place value Eleven = ten and one Twelve = ten two Numeral names Word names of 10-120 Skip count

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2nd Quarter My Math Chapter 6 Lesson 1, 2, 3, 4, 5	**1.NBT.C.4 <u>Demonstrate understanding of addition within 100</u>**, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, **<u>and/or the relationship between addition and subtraction</u>**. Relate the strategy to a written form. See Table 1. 1.MP.2 Reason abstractly and quantitatively. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.4 Model with mathematics. 1.MP.7 Look to make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	How can I add or subtract two-digit numbers? Did you add groups of tens, then ones? How do you know you need to regroup when adding a two-digit number to a one-digit number? Do you regroup when you are adding tens? Explain.	Identify the number of tens and ones in a two-digit number. Understand that 10, 20, 30, etc. is 1 ten, 2 tens, etc. Add a two-digit number to a one-digit number. Add multiples of 10 to a two-digit number. Use mental math to add multiples of 10 to a two-digit number.	One more Digit Ten more Place value Addition Strategy Reason Explain Zero Hundred Tens Ones Regroup
2nd Quarter My Math Chapter 5 Lesson 8 Chapter 6 Lesson 6,7,8	**1.NBT.C.6 <u>Subtract multiples of 10 in the range 10-90</u>** from multiples of 10 in the range 10-90 (positive or zero differences), using 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. 1.MP.2 Reason abstractly and quantitatively. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.4 Model with mathematics. 1.MP.5 Use appropriate tools strategically. 1.MP.7 Look for and make use of structure. 1.MP.8 Look for and express regularity in repeated reasoning.	How can I add and subtract two-digit numbers? How can you use one-digit adding and subtracting facts to subtract tens from tens?	Subtract the number of tens in a two-digit number. Subtract multiples of ten from a two-digit number in the range from 10-90 using objects, concrete, and/or models Use single-digit addition and subtraction math facts to subtract multiples of ten from multiples of ten (i.e., 80-20 is the same as 8 tens – 2 tens using 8-2=6 to find that 8 tens – 2 tens = 6 tens therefore 80-20=60. Use of methods and explain the reasoning used to subtract a two-digit number.	Subtract Tens Groups Zero Place value Model

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3rd Quarter Mathematics – Measurement and Data (MD)				
Timeline & Resources	**Arizona Mathematics Standards**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary (/Academic)**
3rd Quarter My Math Chapter 7 Chapter 8	**1.MD.A.1 Order three objects by length. Compare the lengths** of two objects indirectly by using a third object. 1.MP.6 Attend to precision. 1.MP.7 Look for and make use of structure.	How do I determine length and time? How do you know an object is the longest? How do you know an object is the shortest? How can you use a third object to measure and find the shortest/longest object?	Arrange objects by length from shortest to longest and longest to shortest. Arrange objects by height from shortest to tallest and tallest to shortest. Compare lengths and heights of objects. Measure indirectly using a third object.	Order Sequence Compare Length Longest Shortest Tallest Height Weight Direct Indirect Measure Estimate About – Close to
3rd Quarter My Math Chapter 8 Measurement and Time Lesson 5-9	**1.MD.B.3a tell and write time in the hours and half-hours using analog and digital clocks.** 1.MP.5 Use appropriate tools strategically. 1.MP.6 Attend to precision 1.MP.7 look for and make use of structure.	What time is it (to the hour?); (to the half-hour?) Where does the hour/minute hand point to at the hour/half hour? How many in an hour? And show how you know.	Tell time to the hour using the hour and minute hand. Write the time to the hour/half. (Hour: minute). Read/tell time on an analog/digital clock. Tell how many minutes in an hour/half hour.	Hour hand Minute hand Face Analog Digital Hour Minutes O'clock Half hour Clockwise (direction)

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			The face of the clock always begins at 12.	
3rd Quarter Chapter 7 Chapter 8	**1.MD.C.4 <u>Organize, represent, and interpret data with up to three categories</u>; <u>ask and answer questions</u> about the <u>total number</u> of data points, <u>how many</u> in each category, and how <u>many more or less</u> are in one category than in another.** 1.MP.2 Reason abstractly and quantitatively. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.4 Model with mathematics. 1.MP.5 Use appropriate tools strategically. 1.MP.6. Attend to precision.	What are the parts of a graph? What do I need to make a graph? What information is the graph give? What category has the most and the least? Which categories are equal? If you compare two/three categories, how many more, less, or equal is in one category than another?	Identify the categories on a graph. Identify the title of a graph. Identify the information given on a graph. Determine the quantities of each category. Create a bar graph, picture graph, and real graph with data points and categories accurately organized. Tell how many more or less are in one category than in another.	Interpret Data Data points Title Category Categories Total number How many More Fewer Less Equal Picture Graph Bar Graph Real Graph Tally Mark Table Rows Columns

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4th Quarter Mathematics – Geometry – 3 Standards				
Timeline & Resources	**Arizona Mathematics Standards**	**Essential Question (HESS Matrix)**	**Learning Goal**	**Vocabulary (Content/Academic)**
4th Quarter May Math Chapter 9: Lessons1-4 Chapter 10: Lessons 1-3 2 and 3 Dimensional	**1.G.A.1. Distinguish between defining attributes (triangles are closed and 3 sided) versus non-defining attributes (color, orientation, overall size); for two-dimensional shapes; build and draw shapes to possess defining attributes.** 1.MP.1 makes sense of problems and persevere in solving them. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.4 Model with mathematics. 1.MP.7 Look for and make use of structure.	How can I identify three-dimensional shapes? What are plane shapes? What are solid figures? How is a ____ (shape) similar to a ____ (shape)? How is a _____ (shape) different than a _____ (shape)?	Compare and contrast two shapes and define attributes. Identify the plane shapes. Identify the solid figures. Tell how many sides, faces, and vertices each shape is composed of. Tell the difference between two shapes using attributes.	All plane shape names: triangle, rectangle, square, circle, oval, trapezoid Solid Figures: cube, cylinder, pyramid, sphere, rectangular prism, cone Attributes: sides, vertex, vertices, thick, think, larger, smaller, faces, equal, compare, contrast, same, different, surface(s)

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4th Quarter Chapter 9 Chapter 10	**1.G.A.2 <u>Compose two-dimensional shapes</u> or <u>three-dimensional shapes</u> to create a composite shape.** 1.MP.1 Make sense of problems and persevere in solving them, 1.MP.4 Model with mathematics. 1.MP.7 Look for and make use of structure.	What two shapes would you use to make a _____? What two shapes did you use to make a _____? What shape did you create? To create a composite shape, would you flip, turn, or slide a shape? Why? What new shapes can you create by sliding, turning, and flipping multiple shapes?	Compare and contrast 2 2-dimensional shapes using defining attributes. Compare and contrast 2 3-dimensional shapes using defining attributes. Identify the two-dimensional and three-dimensional shapes. Tell how many faces and vertices each shape has. Build a new shape from two shapes and from three shapes.	Compose Two-dimensional shapes Three-dimensional shapes Solid figures: Rectangles, squares, trapezoids, half-circles, quarter-circles. Solid shapes: cubes, right rectangular prisms, right circular cones, Right circular cylinders Composite shape New shape

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4th Quarter Chapter 9 Chapter 10	**1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters. and use the phrases half of, fourth of, and a quarter of. Describe the whole as two of, or four of the shares. Understand that decomposing into more equal shares creates smaller shares.** 1.MP.2 Reason abstractly and quantitatively. 1.MP.3 Construct viable arguments and critique the reasoning of others. 1.MP.6 Attend to precision. 1.MP.7 Look for and make use of structure.	Are the parts equal? How can I recognize equal shares of a whole? How many equal parts are in halves and fourths of a shape? What part of the shape is shaded? How many equal shares make a whole? (halves, fourths) Could you divide a star (other shapes) into equal parts?	Distinguish between equal shares and not equal share? Divide shapes into 2 equal shares and 4 equal shares. Describe a fraction in multiple ways (i.e., one fourth, one out of four, one quarter, a quarter of, a fourth of). Understand that dividing a shape into more equal parts makes the shares into smaller shares.	Fraction Circle Rectangles Whole Equal shares Shaded Half Halves Fourths Quarters