Ganado Unified School District
(MATH/3rd Grade) 1st Quarter

PACING Guide SY 2022-2023

RESOURCES	ASSESSMENTS
Foldable Graphic Organizer Work Mat 1/2 Base-ten blocks Number cubes Newspapers/magazine Scissors, Tape, Glue Construction paper Online presentation Academic vocabulary cards	Are You Ready Quiz Check My Progress Quiz Chapter Test

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary
1st QUARTER Week 1 August 2-5 **CHAPTER 1** Lesson 1: PLACE VALUE THROUGH THOUSANDS Lesson 2: COMPARE NUMBERS Lesson 3: ORDER NUMBERS CHECK MY PROGRESS QUIZ	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100	• How can numbers be **expressed**? • How many ways can you write a number? • How can numbers be **compared**? • How can numbers be **ordered**? • How do you use a place value chart? • How can you use place value to write different forms of numbers? • How do I tell the value of each digit in a number?	I will be able to: * **read** place value of whole numbers through thousands. * **write** place value of whole numbers through thousands * **identify** place value of whole numbers through thousands. * use place value to compare numbers. * Use a number line to order numbers through thousands. * Use place value to order numbers through thousands.	**LESSON 1** digit place value standard form expanded form word form ones tens hundreds thousands **LESSON 2** < less than >greater than = equal to **LESSON 3** least greatest

				digit place value
1st QUARTER Week 2 August 8 - 12 **CHAPTER 1** Lesson 4: ROUND TO THE NEAREST TEN Lesson 5: ROUND TO THE NEAREST HUNDRED Lesson 6: PROBLEM-SOLVING CHAPTER 1 TEST	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100	• How do you change the value of a number? • What should you do to round a number that ends in 5, which is exactly halfway between two numbers? • Is it possible for a number to be rounded to the nearest ten and hundred and result in the same rounded number? • What facts do you know? • What do you need to find? • What strategy might be used to solve this problem? • Does your answer make sense?	I will be able to: * round numbers to the nearest ten * round numbers to the nearest hundred * use the four-step plan (UNDERSTAND, PLAN, SOLVE, AND CHECK) to solve problems	**LESSON 4** Round **LESSON 5** Place value Ones Tens hundreds **LESSON 6** Understand Plan Solve Check Number Line Magic # Helper Nearest
1st QUARTER Week 3 August 15-19 **CHAPTER 2** Lesson 1: ADDITION PROPERTIES Lesson 2: PATTERNS IN THE ADDITION TABLE Lesson 3: ADDITION PATTERNS Lesson 4: ADD MENTALLY	3.NBT.2 **Fluently add** and subtract **within 1000 using strategies** and algorithms **based on** place value; **properties of operations**, and/or relationship between addition and subtraction. 3.OA.D.9 **Identify arithmetic patterns (including patterns in the addition table** or multiplication table), and **explain them using properties of operations.** Note: ***ADDITION ONLY***	• What do the numbers have in common? • How do you find patterns in numbers? • How do we use place value charts in math? • How can writing a number sentence help you solve a problem?	I will be able to: * Use addition properties to add whole numbers. * Identify patterns in the addition table. * Use place value to identify addition patterns * Use mental math addition strategies	**LESSON 1-4** Associative Property Commutative Property Identity Property Mental math Parentheses Regroup Pattern Place Value Estimate Reasonable Regroup Hundreds Ones Tens

1st QUARTER Week 4 August 22-26 **CHAPTER 2** CHECK MY PROGRESS QUIZ Lesson 5: ESTIMATE SUMS Lesson 6: HANDS-ON: USE MODELS TO ADD Lesson 7: ADD THREE-DIGIT NUMBERS	3.NBT.2 **Fluently add** and subtract **within 1000 using strategies** and algorithms **based on** place value; **properties of operations**, and/or relationship between addition and subtraction.	• Why is it important to check for reasonableness? • How can we estimate? • How do we use place value to explore three-digit numbers? • Why we use estimation?	I will be able to: • Estimate sums using rounding. • Use models to explore addition three-digit numbers. • Add three-digit numbers and use estimation to check my answer.	**LESSON 5** estimate addends addition sentence sum **LESSON 6-7** Reasonable Regroup Unknown
1st QUARTER Week 5 Aug. 29 – Sept. 2 **CHAPTER 2** CHECK MY PROGRESS QUIZ Lesson 8: ADD FOUR-DIGIT NUMBERS Lesson 9: PROBLEM-SOLVING INVESTIGATION: Reasonable Answers FREQUENCY PRACTICE	3.NBT.2 **Fluently add** and subtract **within 1000 using strategies** and algorithms **based on** place value; **properties of operations**, and/or relationship between addition and subtraction. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Note: ***ADDITION ONLY***	• How do we regroup four-digit numbers? • Why do we check our answers? • What's a strategy? • Why do we use visual aides?	I will be able to: • Add four-digit numbers with regrouping • Check my answers for reasonableness • Use visual aides to determine my answer • Use a strategy	**LESSON 8** Bar diagram
1st QUARTER Week 6 September 6-9 **CHAPTER 2** CHAPTER TEST	3.NBT.2 **Fluently** add and **subtract within 1000 using strategies** and algorithms **based on** place value; **properties of operations**, and/or relationship between addition and subtraction.	• How can we use strategies to subtract mentally? • When do we use estimation in rounding?	I will be able to: • Use strategies to subtract mentally • Estimate differences using rounding to the nearest ten or hundred	**LESSON 1** Difference Subtract **LESSON 2** Estimate

CHAPTER 3 Lesson 1: SUBTRACT MENTALLY Lesson 2: ESTIMATE DIFFERENCES Lesson 3: PROBLEM-SOLVING INVESTIGATIONS: Estimate or Exact Answer		• How can we determine an estimate or an exact answer is needed to solve a problem?	• Determine whether an estimate or an exact answer is needed to solve a problem • Understand what facts I need to know • Plan the approach to solve a word problem • Solve a problem to find an estimate or right answer • Check my problem to make sure the answer first the facts given	Break apart Add Difference Equal sign Minus sign Subtract Sum addend Equal Estimate Plus sign Subtraction sentence
1st QUARTER Week 7 September 12-16 **CHAPTER 3** CHECK MY PROGRESS Lesson 4: HANDS ON: SUBSTRACT WITH REGROUPING Lesson 5: SUBTRACT THREE-DIGIT NUMBERS Lesson 6: SUBTRACT FOUR-DIGIT NUMBERS	3.NBT.2 **Fluently** add and **subtract within 1000 using strategies** and algorithms **based on** place value; **properties of operations**, and/or relationship between addition and subtraction. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Note: ***SUBTRACTION ONLY***	• How can you model subtracting with regrouping? • Who do we regroup for three-digit subtraction? • How can we regroup four-digit subtraction? • When do we subtract zero?	I will be able to: * Model subtraction with regrouping * Subtract three-digit numbers with regrouping * Subtract four-digit numbers with regrouping * Subtract across zeros * Explain the steps I took to solve the problem	**LESSON 4** Inverse operations Regroup **LESSON 5** Round **LESSON 6** Digit Hundreds Tens Thousands
1st QUARTER Week 8 September 19-23 **CHAPTER 3** Lesson 7: SUBTRACT ACROSS ZEROS	3.OA.1 Interpret products of whole numbers. (Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each). 3.OA.3 **Use multiplication** and division **within 100 to solve** word **problems in situations involving** equal groups,	• What strategy do I use to compute the sum found on an addition table? • How do I identify examples of factors and products?	I will be able to: * Use models to explore the meaning of multiplication * Relate multiplication and addition * Use arrays to explore and model multiplication * Use arrays to multiply	**LESSON 7** Regroup **LESSON 1** Equal groups Multiplication Multiplication sentence Multiply

FREQUENCY PRACTICE CHAPTER 3 TEST **CHAPTER 4** LESSON 1: HANDS ON: MODEL MULTIPLICATION	**arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem).	• Why do I use arrays to model multiplication? • How do I model arrays to multiply?		
1st QUARTER Week 9 September 26-30 **CHAPTER 4** LESSON 2: MULTIPLICAITON AS REPEATED ADDITON LESSON 3: HANDS ON: MULTIPLY WITH ARRAYS LESSON 4: ARRAYS AND MULTIPLICATION CHECK MY PROGRESS QUIZ	3.OA.3 **Use multiplication** and division **within 100 to solve word problems** in situations involving equal groups, arrays, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem).	• How do I use and make a table strategy to solve a problem? • How does a tree diagram solve the total number of combinations?	• I will be able to: • Use the make a table strategy to solve a problem • Use multiplication to find the total number of combinations that can be made	**LESSON 2** Factors Multiply Product **LESSON 3** Array Commutative Property of Multiplication **LESSON 4** Array Commutative Property of Multiplication
1st QUARTER Week 10 October 3-6 **CHAPTER 4** Lesson 5: PROBLEM-SOLVING INVESTIGATION: MAKE A TABLE Lesson 6: USE MULTIPLICATION TO FIND COMBINATIONS CHAPTER 4 TEST	3.OA.3 **Use multiplication** and division **within 100 to solve word problems** in situations involving equal groups, arrays, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem).	• How do I use and make a table strategy to solve a problem? • How does a tree diagram solve the total number of combinations?	• I will be able to: • Use the make a table strategy to solve a problem • Use multiplication to find the total number of combinations that can be made	**LESSON 5** Table **LESSON 6** Combination Tree diagram Table

Ganado Unified School District
(MATH/3rd Grade) 2ND QUARTER

PACING Guide SY 2022-2023

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary
2nd QUARTER Week 11 October 11-14 **CHAPTER 5** Lesson 1: HANDS ON- MODEL DIVISION Lesson 2: DIVISION AS EQUAL SHARING Lesson 3: RELATE DIVISION AND SUBTRACTION CHECK MY PROGRESS QUIZ	3.OA.2 Interpret whole numbers quotients of whole numbers (interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.	• What does division mean? • How can we explore the meaning of division? • When do we model division as equal sharing? • How do we relate subtraction to division?	I will be able to: * Explore two meanings of division * Model division as equal sharing * Use models to relate division and subtraction	**LESSON 1** Division Divide Partition Division sentence **LESSON 2** Divide Division sentence **LESSON 3** Repeated subtraction
2nd QUARTER Week 12 October 17-21 **CHAPTER 5** Lesson 4: HANDS ON: RELATION DIVISION AND MULTIPLICATION Lesson 5: INVERSE OPERATIONS	3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (knowing that 8 x 5=40, one knows that 40 ÷ 5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• How can we explore the relationship of division and multiplication? • What facts can we use to solve division? • When do we use models to solve problems?	I will be able to: * Explore how division and multiplication are related * Divide related multiplication facts * Use models to solve problems	**LESSON 4** Dividend Divisor quotient **LESSON 5** Inverse operations Related facts Fact family Dividend Divisor Quotient

Lesson 6: PROBLEM-SOLVING INVESTIGATIONS: USE MODELS CHAPTER 5 TEST				
2nd QUARTER Week 13 October 24-28 **<u>CHAPTER 6</u>** Lesson 1: PATTERNS IN THE MULTIPLICATION TABLE Lesson 2: MULTIPLY BY 2 Lesson3: DIVIDE BY 2 Lesson 4: MULTIPLY BY 5	3.OA.9 **Identify** arithmetic patterns (including **patterns in the** addition table or **multiplication table**), and explain them using properties of operations. 3.OA.3 **Use multiplication** and division **within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.4 **Determine the unknown** whole number in a multiplication or **division equation** relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 x ? =48, 5=? ÷ 3, 6 x 6=? 3.OA.7 Fluently multiply and **divide** within 100, **using strategies such as the relationship between multiplication and division** (knowing that 8 x 5=40, one knows that 40 ÷ 5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• What is the importance of patterns in learning multiplication and division? • How can we identify and explain patterns in the multiplication table? • What models can we use to multiply be 2? • How can we relate models to multiplication facts divided by 2?	I will be able to: * Identify and explain patterns in the multiplication table * Use arrays and drawings, such as bar diagrams, to multiply by 2 * Use models and relation multiplication facts to divide by 2 * Use different strategies, including patters, to multiply by 5 * Use different strategies, including related multiplication facts to divide by 5 *	**<u>LESSON 1</u>** Columns Rows Multiplication table Pattern **<u>LESSON 2</u>** Multiply **<u>LESSON 3</u>** Partition **<u>LESSON 4</u>** Skip Count
2nd QUARTER Week 14 Oct. 31 – Nov. 4 **<u>CHAPTER 6</u>**	3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and explain them using properties of	• How can we solve problems by using a patterns?	I will be able to: * Solve problems by looking for a pattern	**<u>LESSON 5</u>** Inverse Operations **<u>LESSON 6</u>**

Lesson 5: DIVIDE BY 5 CHECK MY PROGRESS QUIZ Lesson 6: PROBLEM-SOLVING INVESTIGATION: LOOK FOR A PATTERN Lesson 7: MULTIPLY BY 10	operations. 3.NBT.3 **Multiply** one-digit-whole **numbers by multiples of 10** in the range 10-90 (9 x 80, 5 x 60) **using** strategies based on **place value and properties of operations** 3.OA.7 Fluently multiply and **divide** within 100, **using strategies such as the relationship between multiplication and division** (knowing that 8 x 5=40, one knows that 40 ÷ 5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• What strategies do we use when multiplying by 10? • How can knowing 5's facts help you with your 10's facts? When you divide by 10, what do you notice about the quotient and the dividend?	* Use different strategies including patterns to multiply by 10 * Use basic facts, and patterns to multiply a number by a multiple of 10 Use different strategies including related multiplication facts to divide by 10	**<u>LESSON 7</u>** Dime
2nd QUARTER Week 15 November 7 - 10 **<u>CHAPTER 6</u>** Lesson 8: MULTIPLES OF 10 Lesson 9" DIVIDE BY 10 FLUENCY PRACTICE CHAPTER 6 TEST	3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and explain them using properties of operations. 3.NBT.3 **Multiply** one-digit-whole **numbers by multiples of 10** in the range 10-90 (9 x 80, 5 x 60) **using** strategies based on **place value and properties of operations** 3.OA.7 Fluently multiply and **divide** within 100, **using strategies such as the relationship between multiplication and division** (knowing that 8 x 5=40, one knows that 40 ÷ 5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• How can we solve problems by using a patterns? • What strategies do we use when multiplying by 10? • How can knowing 5's facts help you with your 10's facts? • When you divide by 10, what do you notice about the quotient and the dividend?	I will be able to: * Solve problems by looking for a pattern * Use different strategies including patterns to multiply by 10 * Use basic facts, and patterns to multiply a number by a multiple of 10 * Use different strategies including related multiplication facts to divide by 10	**<u>LESSON 8</u>** multiple **<u>LESSON 9</u>** unknown
2nd QUARTER Week 16 November 14-18	3.OA.3 **Use multiplication and division within 100 to solve** word **problems**	• What strategies can be used to learn	I will be able to:	**<u>LESSON 1</u>** Commutative Property

CHAPTER 7 Lesson 1: MULTIPLY BY 3 Lesson 2: DIVIDE BY 3 Lesson 3: HANDS ON: DOUBLE A KNOWN FACT Lesson 4: MULITPLY BY 4	**in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.4 **Determine the unknown** whole number in a multiplication or **division equation** relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 x ? =48, 5=? ÷ 3, 6 x 6=?	multiplication and division facts? • How do we use strategies to multiply and divide by 3? • When do we double a known fact?	* Use different strategies such as arrays, equal groups, and properties to multiply by 3 * Use different strategies including related multiplication facts to divide by 3 * Explore how to double a known fact in order to multiply * Double a known fact to multiply by 4 * Use different strategies including related multiplication facts to divide by 4	**LESSON 2** Quotient **LESSON 3** Known fact Decompose **LESSON 4** Decompose Known Fact
2nd QUARTER Week 17 Nov. 28 – Dec. 2 **CHAPTER 7** Lesson 5: DIVIDE BY 4 CHECK MY PROGRESS QUIZ Lesson 6: PROBLEM-SOLVING INVESTIGATIONS EXTRA OR MISSING INFORMATION Lesson 7: MULTIPLY BY 0 AND 1	3.OA.3 **Use multiplication and division within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and explain them using properties of operations. 3.OA.2 **Interpret whole numbers quotients of whole numbers** (interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned **into equal shares** of 8 objects each.	• How can we solve a problem with missing information? • What strategies do we use to multiply by 0 and 1? • What are the rules for dividing 0 and 1? • How do you know you can divide any number by 1 or itself?	I will be able to: * Solve a problem by identifying extra or missing information * Use different strategies such as equal groups, patterns, and properties to multiply by 0 and 1 * Use division rules to divide with 0 and 1	**LESSON 5** Equal Groups **LESSON 7** Identify property of multiplication Zero property of Multiplication
2nd QUARTER	3.OA.3 **Use multiplication** and division	• How can multiplication and	I will be able to:	**LESSON 8** Dividend

Week 18 December 5-9 **<u>CHAPTER 8</u>** Lesson 8: DIVIDE WITH 0 AND 1 FLUENCY PRACTICE CHAPTER 8 TEST Lesson 1: MULITPLY BY 6	**within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and **explain them using properties** of operations. 3.OA.7 Fluently multiply and **divide** within 100, **using strategies such as the relationship between multiplication and division** (knowing that 8 x 5=40, one knows that 40 ÷ 5=8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	division facts, with smaller numbers be applied to larger numbers? • How can we use a strategy for multiplying by 6? • How can we use different strategies to multiply and divide by 6 and 7?	* Use different strategies including doubling a known fact to multiply by 6 * Use different strategies such as properties, arrays, and decomposing factors to multiply by 7 * Use different strategies including arrays and repeated subtraction to divide by 6 and 7	Divisor **<u>LESSON 1</u>** Decompose
2nd QUARTER Week 19 December 12-16 **<u>CHAPTER 8</u>** Lesson 2: MULTIPLY BY 7 Lesson 3: DIVIDE WITH 6 AND 7 CHECK MY PROGRESS QUIZ	3.OA.3 Use multiplication and **division within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and **explain them using properties** of operations.	• What model can we use to solve known facts of 8? • Why do we use a strategy to multiply and divide by 8 and 9?	I will be able to: * Use different strategies such as arrays, drawings, and known facts to multiply by 8 * Use different strategies such as properties, known facts, or patterns to multiply by 9 * Use different strategies such as equal groups, repeated subtraction, and related multiplication facts to divide by 8 and 9	**<u>LESSON 2</u>** Commutative property **<u>LESSON 3</u>** Repeated Subtraction Equal Groups

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary
2nd QUARTER **Week 20 December 19-20** **CHAPTER 8** Lesson 4: MULITPLY BY 8 Lesson 5: MULTIPLY BY 9 Lesson 6: DIVIDE WITH 8 AND 9	3.OA.3 Use multiplication and **division within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.9 **Identify arithmetic patterns** (including patterns in the addition table or multiplication table), and **explain them using properties** of operations.	• What model can we use to solve known facts of 8? • Why do we use a strategy to multiply and divide by 8 and 9?	I will be able to: * Use different strategies such as arrays, drawings, and known facts to multiply by 8 * Use different strategies such as properties, known facts, or patterns to multiply by 9 * Use different strategies such as equal groups, repeated subtraction, and related multiplication facts to divide by 8 and 9	**LESSON 4** Known Fact **LESSON 5** Pattern **LESSON 6** Inverse Operations
3rd QUARTER **Week 21 January 4-6** **CHAPTER 8** CHECK MY PROGRESS QUIZ Lesson 7: PROBLEM-SOLVING INVESTIGATION: MAKE AN ORGANIZED LIST Lesson 8: MULTIPLY BY 11 and 12	3.OA.3 **Use multiplication and division within 100 to solve** word **problems in situations involving equal groups, arrays**, and measurement quantities (by using drawings and equations with a symbol for the unknown number to represent the problem). 3.OA.1 **Interpret products of whole numbers**. (Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each). 3.OA.2 **Interpret whole numbers quotients of whole numbers** (interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned **into equal shares** of 8 objects each.	• How to create an organized list? • What can we do to solve larger numbers like 11 and 12?	I will be able to: * Make an organized list to solve problems * Use different strategies such as patterns, models, and arrays to multiply by 11 and 12 * Use different strategies such as equal groups, repeated subtraction, and related facts, to divide by 11 and 12	**LESSON 7** Understand Plan Solve Check **LESSON 8** Decompose

3RD QUARTER **Week 22 January 9-13** **<u>CHAPTER 8</u>** Lesson 9: DIVIDE WITH 11 AND 12 FLUENCY PRACTICE CHAPTER 8 TEST **<u>CHAPTER 9</u>** Lesson 1: HANDS ON: TAKE APART TO MULTIPLY	3.OA.5 **Apply properties of operations as strategies to multiply** and divide	* How are properties and equations used to group numbers? * Explain what it means to decompose a number? * Explain how the Associative Property of Multiplication can help you find missing factors?	I will be able to: * Explore how to take apart factors to multiply * Apply the distributive property of multiplication to find products * Explore how to find the product of three factors * Apply the associative property of multiplication to find products	**<u>LESSON 9</u>** Dividend Divisor quotient **<u>LESSON 1</u>** Take apart Decompose
3RD QUARTER **Week 23 January 17-20** **<u>CHAPTER 9</u>** Lesson 2: THE DISTRIBUTIVE PROPERTY Lesson 3: HANDS ON: MULITPLY THREE FACTORS Lesson 4: THE ASSOCIATIVE PROPERTY <u>CHECK MY PROGRESS QUIZ</u>	3.OA.5 **Apply properties of operations as strategies to multiply** and divide 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	* How do you know what operations to use in solving an expression? * What is the difference between an expression and an equation?	I will be able to: * Write expressions using the four operations * Write, then find the value of expressions * Represent one and two-step word problems using equations with a variable	**<u>LESSON 2</u>** Distributive property **<u>LESSON 3</u>** **<u>LESSON 4</u>** Associative property of Multiplication
3RD QUARTER **Week 24 January 23-27**	3.OA.5 **Apply properties of operations as strategies to multiply** and divide	* How could you check an equation for reasonableness?	I will be able to: * Represent and solve two-step word problems using equations with a variable	**<u>LESSON 5</u>** Expressions Operations

CHAPTER 9 Lesson 5: WRITE EXPRESSIONS Lesson 6: EVALUATE EXPRESSIONS Lesson 7: WRITE EQUATIONS Lesson 8: SOLVE TWO-STEP WORD PROBLEMS	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram a. represent a fraction *1/b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size *1/b* and that the endpoint of the part based at 0 locates the number *1/b* on the number line. b. Represent a fraction *a/b* on a number line diagram by marking of a lengths *1/b* from 0. Recognize that the resulting interval has size *a/b* and that is endpoint locates the number *a/b* on the number line.	* What steps do I take to solve two-step word problems?	* Use logical reasoning to solve problems	**LESSON 6** Evaluate Variable **LESSON 7** Equation Number Sentence **LESSON 8** Estimate
3RD QUARTER **Week 25 Jan. 30 – Feb. 3** **CHAPTER 9** Lesson 9: PROBLEM-SOLVING INVESTIGATIONS: USE LOGICAL REASONING CHAPTER 9 TEST **CHAPTER 10**	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 3.NF.1 Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts;	* How could you check an equation for reasonableness? * What steps do I take to solve two-step word problems? * How can fractions be used to represent numbers and their parts? * How do I write a fraction as part of a whole?	I will be able to: * Represent and solve two-step word problems using equations with a variable * Use logical reasoning to solve problems * use fractions to represent numbers and their parts. * write fractions as part of a whole. * write fractions as part of a set.	**LESSON 9** Pattern Table **LESSON 1** Fraction Unit Fraction **LESSON 2** Numerator Denominator Equal part

Lesson 1: UNIT FRACTIONS Lesson 2: PART OF A WHOLE	understand a fraction a/b/ as the quantity formed by a parts of size *1/b*	* How do I write a fraction as part of a set?		
3RD QUARTER **Week 26 February 6-10** **<u>CHAPTER 10</u>** Lesson 3: PART OF A SET Lesson 4: PROBLEM-SOLVING INVESTIGATION: DRAW A DIAGRAM CHECK MY PROGRESS QUIZ Lesson 5: HANDS ON: FRACTIONS ON A NUMBER LINE	3.NF.1 a. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b/ as the quantity formed by a parts of size *1/b* 3.NF.3 Explain equivalence of fractions in special cases, and compares fractions by reasoning about their size a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line b. Recognize and generate simple equivalent fractions (½ = 2/4, 4/6=2/3). Explain why the fractions are equivalent by using a visual fraction model.	* How can fractions be used to represent numbers and their parts? * How do I write a fraction as part of a whole? * How do I write a fraction as part of a set?	I will be able to: * use fractions to represent numbers and their parts. * write fractions as part of a whole. * write fractions as part of a set.	**<u>LESSON 3</u>** Fractional part of a set **<u>LESSON 4</u>** Draw a Diagram **<u>LESSON 5</u>** Fraction part of a Number Line Halves Thirds Fourths Fifths Sixths Sevenths Eighths
3RD QUARTER **Week 27 February 13-17** **<u>CHAPTER 10</u>** Lesson 6: EQUIVALENT FRACTIONS Lesson 7: FRACTIONS AS ONE WHOLE	3.NF.1 Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b/ as the quantity formed by a parts of size *1/b* 3.NF.3 Explain equivalence of fractions in special cases, and compares fractions by reasoning about their size e. Express whole numbers as fractions, and recognize	* How do I write a fraction as part of a number line? * What is an equivalent fraction? * How do I relate fraction to whole numbers? * Why do we compare fractions?	I will be able to: * write a fraction part of a number line. * compare equivalent fractions. * relate fractions to whole numbers. * compare fractions	**<u>LESSON 6</u>** Equivalent fractions Whole Equal size Same value **<u>LESSON 7</u>** Fraction as One Whole Equal part of a whole **<u>LESSON 8</u>** Denominator Is equal to (=)

Lesson 8: COMPARE FRACTIONS CHAPTER 10 TEST	fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3=3/1; recognize that 6/1=6; locate 4/4 and 1 at the same point of a number line diagram f. Compare two fractions with the same numerator of the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions by using a visual fraction model.			Is greater than (>) Is Less Than (<) Numerator Equal part inequality
3RD QUARTER **Week 28 February 21-24** **<u>CHAPTER 11</u>** Lesson 1: HANDS ON: ESTIMATE AND MEASURE CAPACITY Lesson 2: SOLVE CAPACITY PROBLEMS Lesson 3: HANDS ON: ESTIMATE AND MEASURE MASS Lesson 4: SOLVE MASS PROBLEMS	3.MD.2 a. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units by using drawings to represent the problem.	* Why do we measure? * How do you estimate and measure capacity? • What measurement tools are used for capacity? • How can I estimate and measure mass? * How do I use mass measurement vocabulary?	I will be able to: * estimate capacity * measure capacity * use measurement tools for measuring capacity * estimate and measure mass * use mass measurement vocabulary	**<u>LESSON 1</u>** Capacity Mass Liquid Measurement Time Volume Milliliters Liters Estimate **<u>LESSON 2</u>** Capacity Liquid volume Liter Milliliter Unit **<u>LESSON 3</u>** Estimate Mass Measure Greater mass Lesser mass Matter

				Material **LESSON 4** Gram Kilogram Mass
3RD QUARTER **Week 29 Feb. 27- March 3** **CHAPTER 11** CHECK MY PROGRESS Lesson 5: TELL TIME TO THE MINUTE Lesson 6: TIME INTERVALS	3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a number line diagram. 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units by using drawings to represent the problem.	• How do we tell time using digital and analog clock? • What is time intervals? How can it be explained? * Why do we work backward?	I will be able to: * tell time to the minute using digital and analog clock * understand time intervals * problem solve by working backward	**LESSON 5** Clock Hour hand Minute hand Analog clock Digital clock **LESSON 6** Time Interval Start time End time Count back One hour

Ganado Unified School District
(MATH/3rd Grade) 4TH QUARTER

PACING Guide SY 2022-2023

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary
3rd QUARTER Week 30 March 6-10 **CHAPTER 11** Lesson 7: PROBLEM-SOLVING INVESTIGATION: WORK BACKWWARD CHAPTER 11 TEST **CHAPTER 12** Lesson 1: COLLECT AND RECORD DATA	3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a number line diagram. 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units by using drawings to represent the problem. 3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs (draw a bar graph in which each square in the bar graph might represent 5 pets).	• How do we tell time using digital and analog clock? • What is time intervals? How can it be explained? • Why do we work backward? • How do we obtain useful information from a set of data? • Why do we use scaled picture graphs? • How can we relate bar graphs to scaled picture graphs?	I will be able to: * tell time to the minute using digital and analog clock * understand time intervals * problem solve by working backward * interpret data that is collected and recorded * use pictographs * use scaled graphs * use bar graphs to relate to scaled picture graphs	**LESSON 7** Backward Undo **LESSON 1** Collect Record Data Table Graphs Frequency table Tally chart Tally marks Survey Question Numbers
4th QUARTER **Week 31 March 20-24** **CHAPTER 12**	3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and	• How do we obtain useful information from a set of data?	I will be able to: * interpret data that is collected and recorded * use pictographs * use scaled graphs	**LESSON 2** Pictograph Compares Pictures

Lesson 2: DRAW SCALED PICTURE GRAPHS Lesson 3: DRAW SCALED BAR GRAPHS Lesson 4: DRAW AND ANALYZE LINE PLOTS	two-step "how many more" and "how many less" problems using information presented in scaled bar graphs (draw a bar graph in which each square in the bar graph might represent 5 pets).	• Why do we use scaled picture graphs? • How can we relate bar graphs to scaled picture graphs?	* use bar graphs to relate to scaled picture graphs	Symbols Scaled picture key **LESSON 3** Bar graph Lengths Heights Value Scale Horizontal vertical **LESSON 4** Bar graph Analyze Pictograph Key Scale
4TH QUARTER **Week 32 March 27-31** **CHAPTER 12** Lesson 5: DRAW AND ANALYZE LINE PLOTS CHECK MY PROGRESS QUIZ Lesson 6: HANDS ON: MEASURE TO HALVES AND FOURTHS OF AN INCH Lesson 7: COLLECT AND DISPLAY MEASUREMENT DATA	3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs (draw a bar graph in which each square in the bar graph might represent 5 pets). 3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units-whole numbers, halves, or quarters.	• How do we obtain useful information from a set of data? • Why do we use scaled picture graphs? • How can we relate bar graphs to scaled picture graphs? • How can I draw and analyze line plots? • How do you measure to halves and fourths of an inch? •	I will be able to: * interpret data that is collected and recorded * use pictographs * use scaled graphs * use bar graphs to relate to scaled picture graphs * draw and analyze line plots * measure to halves and fourths of an inch * collect and display measurement data *	**LESSON 5** Data Value Analyze Line graph **LESSON 6** Fraction Half Half inch Quarter Quarter inch Rule Whole **LESSON 7** Data Half inch Line plot Quarter inch Tally chart

4TH QUARTER **Week 33 April 3-6** **<u>CHAPTER 12</u>** Lesson 8: PROBLEM-SOLVING INVESTIGATION: SOLVE A SIMPLER PROBLEM CHAPTER 12 TEST **<u>CHAPTER 13</u>** Lesson 1: HANDS ON: FIND PERIMETER Lesson 2: PERIMETER	3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs (draw a bar graph in which each square in the bar graph might represent 5 pets). 3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units-whole numbers, halves, or quarters. 3.MD.8 Solve real world and mathematical problems involving perimeters of polygons; including finding the perimeter given the side lengths, find an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters	• Why do we collect and display measurement data? • How can we solve a big problem by solving a smaller problem • How are perimeter and area related and how are they different? • How can I find the perimeter of a shape?	I will be able to: * solve a big problem by solving a smaller problem * find the perimeter of a shape * find the area of a shape	**<u>LESSON 8</u>** Understand Plan Solve Check **<u>LESSON 1</u>** Perimeter Area Square unit Distance Outside Inches Length Side Add Centimeter **<u>LESSON 2</u>** Perimeter Length unit
4TH QUARTER **Week 34 APRIL 11-14** **<u>CHAPTER 13</u>** Lesson 3: HANDS ON: UNDERSTAND AREA Lesson 4: MEASURE AREA	3.MD.8 Solve real world and mathematical problems involving perimeters of polygons; including finding the perimeter given the side lengths, find an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters 3.MD.6 Measure arrays by counting unit	• How do you use unit squares to understand area?	I will be able to: * use unit squares to understand area	**<u>LESSON 3</u>** Figure Area Square unit Unit square **<u>LESSON 4</u>** Area Region figure Plane figure **<u>LESSON 5</u>**

CHECK MY PROGRESS QUIZ Lesson 5: HANDS ON: TILE RECTANGLES TO FIND AREA	squares (cm, m, in, ft, and improvised units). 3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units 3.MD.7 Relate area to the operations of multiplication and addition.			Area Array Length Square unit Two points Inside Rows Columns Two points
4TH QUARTER **Week 35 April 17-21** **<u>CHAPTER 13</u>** Lesson 6: AREA OF RECTANGLES Lesson 7: HANDS ON: AREA AND THE DISTRIBUTIVE PROPERTY Lesson 8: AREA OF COMPOSITE FIGURES CHECK MY PROGRESS QUIZ	3.MD.6 Measure arrays by counting unit squares (cm, m, in, ft, and improvised units). 3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units 3.MD.8	• How can we use tile rectangles to find area? • How can we find the area of a rectangle? • Why do we use distributive property to find the area?	I will be able to: * use tile rectangles to find the area of a shape * use Distributive property to find the area	**<u>LESSON 6</u>** Formula Area Plane figure Quantities **<u>LESSON 7</u>** Distributive Property for Area Decompose Factor easier **<u>LESSON 8</u>** Composite figure Decompose Take apart

	Solve real world and mathematical problems involving perimeters of polygons; including finding the perimeter given the side lengths, find an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters 3.MD.7 Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole number side lengths by tiling it, and show that the areas is the same as would be found by multiplying the side lengths b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context to solving real world and mathematical problems and represent whole number products as rectangular areas in mathematical reasoning Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a x b and a x c. Use area models to represent the distributive property in mathematical reasoning			
4TH QUARTER **Week 36 April 24-28** **<u>CHAPTER 13</u>** Lesson 9: AREA AND PERIMETER Lesson 10: PROBLEM SOLVING INVESTIGATION: DRAW A DIAGRAM	3.MD.8 Solve real world and mathematical problems involving perimeters of polygons; including finding the perimeter given the side lengths, find an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters 3.MD.7	• How can we take apart and put together a composite figure? • How do you relate area and perimeter? • How can we use a diagram to solve for area and perimeter? • How can geometric shapes help me solve real-world problems?	I will be able to: * decompose a composite figure * relate area to perimeter * draw a diagram to find the area and perimeter of a shape * use geometric shapes to help solve real world problems * understand the parts of an angle	**<u>LESSON 9</u>** Area Perimeter **<u>LESSON 10</u>** Understand Solve Plan Check diagram **<u>LESSON 1</u>**

CHAPTER 13 TEST **<u>CHAPTER 14</u>** Lesson 1: HANDS ON: ANGLES	Relate area to the operations of multiplication and addition. c. Multiply side lengths to find areas of rectangles with whole number side lengths in the context to solving real world and mathematical problems and represent whole number products as rectangular areas in mathematical reasoning 3.G.1 Understand that shapes in different categories (rhombuses, rectangles, and others) may share attributes (having four sides) and that the shared attributes can define a larger category (quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories	• How do you understand parts of an angle? •	* explain the difference between a polygon and a quadrilateral	Ray Parts Angle Endpoint Vertex Right angle Greater than Less than
4TH QUARTER **Week 37 May 1-5** **<u>CHAPTER 14</u>** Lesson 2: POLYGONS Lesson 3: HANDS ON: TRIANGLES Lesson 4: QUADRILATERALS CHECK MY PROGRESS QUIZ	3.G.1 Understand that shapes in different categories (rhombuses, rectangles, and others) may share attributes (having four sides) and that the shared attributes can define a larger category (quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories	* How can geometric shapes help me solve real-world problems? * How do you understand parts of an angle? * What is the difference between a polygon and a quadrilateral?	I will be able to: * use geometric shapes to help solve real world problems * understand the parts of an angle * explain the difference between a polygon and a quadrilateral	**<u>LESSON 2</u>** Polygon Quadrilateral Side Tri- Quad- Pent- Hex- Oct- Attribute **<u>LESSON 3</u>** Ray Parts Angle Endpoint Vertex Right angle Greater than Less than **<u>LESSON 4</u>**

				Polygon Quadrilateral Side Tri- Quad- Pent- Hex- Oct- Attribute
4TH QUARTER **Week 38 May 8-12** **<u>CHAPTER 14</u>** Lesson 5: SHARED ATTRIBUTES OF QUADIRLATERALS Lesson 6: PROBLEM-SOLVING INVESTIGATION: GUESS, CHECK, AND REVISE Lesson 7: PARTITION SHAPES	3.G.1 Understand that shapes in different categories (rhombuses, rectangles, and others) may share attributes (having four sides) and that the shared attributes can define a larger category (quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories	* How can geometric shapes help me solve real-world problems? * How do you understand parts of an angle? * What is the difference between a polygon and a quadrilateral? * How can we partition shapes?	I will be able to: * use geometric shapes to help solve real world problems * understand the parts of an angle * explain the difference between a polygon and a quadrilateral * partition shapes	**<u>LESSON 5-6</u>** Polygon Quadrilateral Side Tri- Quad- Pent- Hex- Oct- Attribute **<u>LESSON 7</u>** Fraction Partition Unit fraction Break up Part Equal
4TH QUARTER Week 39 MAY 15-19 Week 40 May 22-25	CHAPTER 14 TEST STUDENTS TO WORK ON MAKE UP WORK AND MISSING ASSIGNMENTS. GRADE ARE DUE			