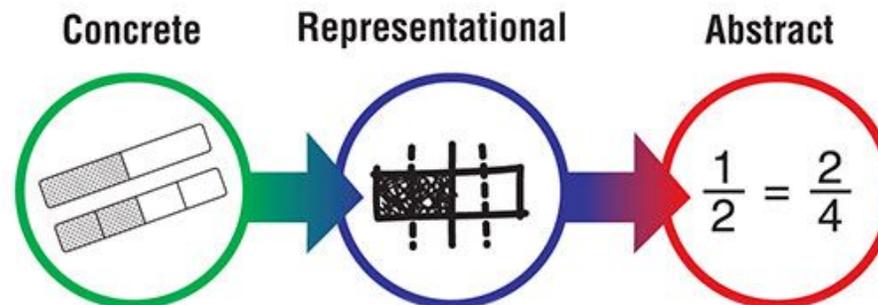Glendale Elementary School District
Mathematics Pacing Guide
2020-2021

1ˢᵗ Grade

By the end of first grade, students will be able to...

➤ **Develop understanding of addition, subtraction, and strategies for addition and subtraction within 20.**
  ○ Students develop strategies for adding and subtracting whole numbers. They use a variety of models to represent add-to, take-from, put together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction (Table 1). Students understand connections between counting and addition and subtraction. They use properties of addition with whole numbers to solve addition and subtraction problems through 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

➤ **Develop competency of whole number relationships and place value, including grouping in tens and ones through 100.**
  ○ Students work with whole numbers between 10 and 100 in terms of tens and ones. Through activities that build number sense and place value, they understand the order of the counting sequence, compare whole numbers through 100, and model addition and subtraction situations. Students develop, discuss, and use efficient, accurate, and flexible strategies to add within 100 and subtract multiples of 10.

➤ **Develop understanding of linear measurement.**
  ○ Students develop an understanding of the meaning and processes of measurement, including iteration (finding the length of an object with repeated equal-sized units) and for indirect measurement (comparing the length of two objects using a third object).

➤ **Fluently add and subtract within 10.**

Concrete → Representational → Abstract

$$\frac{1}{2} = \frac{2}{4}$$

The GESD Pacing Guides were created by a panel of Teachers and Achievement Advisors with the additional input and guidance from Principals and Assistant Principals. The GESD Pacing Guides are revised yearly through feedback and committee work. Thank you for all input and support.

Arizona Mathematics Standards (adopted December 2016)
What the Arizona Mathematics Standards Are
The Arizona Mathematics Standards define the knowledge, understanding, and skills that need to be taught and learned so all students are ready to succeed in credit-bearing, college-entry courses and/or in the workplace. The Arizona Mathematics Standards are the foundation to guide the construction and evaluation of mathematics programs in Arizona K-12 schools and the broader Arizona community.
   • Focused in coherent progressions across grades K-12
   • Aligned with college and workforce expectations
   • Inclusive of rigorous content and applications of knowledge through higher-order thinking
   • Research- and evidence-based
Understanding in Mathematics
When a student understands a mathematical concept, they move fluidly between the concrete and abstract. There is evidence they are able to make sense of and justify mathematical connections. Evidence of understanding includes connections among:
   ● Verbal or written reasoning
   ● Pictorial representations
   ● Real-world application
   ● Procedures/Computation

Critical Areas
In first grade, instructional time should focus on three critical areas:
1. Develop understanding of addition, subtraction, and strategies for addition and subtraction within 20.
2. Develop competency of whole number relationships and place value, including grouping in tens and ones.
3. Develop understanding of linear measurement.

More learning time in 1st Grade should be devoted to working with whole numbers than to other topics.

(1) Students develop strategies for adding and subtracting whole numbers. They use a variety of models to represent add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction (*Table 1*). Students understand connections between counting and addition and subtraction. They use properties of addition to add whole numbers to solve addition and subtraction problems through 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

(2) Students work with whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense and place value, they understand the order of the counting sequence, compare whole numbers through 100, and model addition and subtraction situations. Students develop, discuss, and use efficient, accurate, and flexible strategies to add within 100 and subtract multiples of 10.

(3) Students develop an understanding of the meaning and processes of measurement, including iteration (finding the length of an object with repeated equal-sized units) and for indirect measurement (comparing the length of two objects using a third object).

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Table 1: Common Addition and Subtraction Problem Types/Situations.[1]

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $$2 + 3 = ?$$	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $$2 + ? = 5$$	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $$? + 3 = 5$$
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? $$5 - 2 = ?$$	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $$5 - ? = 3$$	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $$? - 2 = 3$$
	Total Unknown	**Addend Unknown**	**Both Addends Unknown[2]**
Put Together / Take Apart[3]	Three red apples and two green apples are on the table. How many apples are on the table? $$3 + 2 = ?$$	Five apples are on the table. Three are red and the rest are green. How many apples are green? $$3 + ? = 5, 5 - 3 = ?$$	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $$5 = 0 + 5, 5 = 5 + 0$$ $$5 = 1 + 4, 5 = 4 + 1$$ $$5 = 2 + 3, 5 = 3 + 2$$
	Difference Unknown	**Bigger Unknown**	**Smaller Unknown**
Compare	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $$2 + ? = 5, 5 - 2 = ?$$	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $$2 + 3 = ?, 3 + 2 = ?$$	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $$5 - 3 = ?, ? + 3 = 5$$

[1]Adapted from Box 2-4 of Mathematics Learning in Early Childhood, National Research Council (2009, pp. 32, 33).

[2]These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean *makes* or *results* in but always does mean *is the same quantity as*.

[3]Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

Comprehensive Mathematics Block (90 minutes)

Students are developing fluency in representation, connections, reasoning & proof, problem solving, and communication of mathematics. Math Attitude is developed and reinforced in every lesson, ensuring that students make sense of mathematics and persevere.				

		Teacher Actions	Student Actions	Resources Utilized
FLUENCY (15 minutes) *Purpose: Students increase flexibility, efficiency, and accuracy in computation and procedures. Conceptual understanding and strategies are the foundations on which fluency is built.*		• Model mental math strategies • Think aloud math strategies • Question using a variety of DOK levels • Explicitly teach appropriate mathematical strategies and formulas • Provide feedback on progress	• Utilize mental math strategies • Write out strategies to show procedural knowledge • Answer a variety of DOK 1-4 questions • Share mathematical strategies and thinking • Use feedback to set goals for improvement	• Number Talks • Go Math! (K-5) • Socratic Seminar • Turnaround Problem (answer given, students come up with question)
WHOLE GROUP INSTRUCTION (25 minutes)	**Conceptual Understanding** *Purpose: Students develop mathematical understanding (Instructional Continuum).*	• Explicitly teach academic vocabulary • Explicitly model the thinking and strategy used • Guide students through practicing the use of the strategy and offer specific feedback • Guide students through independent practice with appropriate tools • Ask a variety of DOK 1-4 questions throughout instruction	• Use strategies to learn the academic vocabulary and use it in discussions • Utilize the appropriate strategy to solve the problem • Use feedback to redirect actions as needed • Practice the strategies and skills using the appropriate tools • Answer a variety of DOK 1-4 questions • Utilize strategies to check for reasonableness of solution (i.e. UPS-Check)	• Go Math! (K-5) • Holt Math (6-8) • Mathematical Practice standards (as appropriate for lesson)
	Problem Solving *Purpose: Students utilize mathematical knowledge to solve real-life problems and investigate mathematics.*	• Pose problem/situation • Scaffold independent practice with think-alouds • Label strategies used	• Read and understand the problem/situation • Utilize knowledge of appropriate strategies and skills to determine next steps • Label strategies used • Utilize strategies to check for reasonableness of solution (i.e. UPS-Check)	• Go Math! (K-5) • Holt Math (6-8) • Van de Walle
SMALL GROUP INSTRUCTION (40 minutes) *Purpose: Students practice mathematical skills, concepts and/or strategies with strategic support or with enrichment.*		• Identify skill gaps of students using ongoing assessments • Prompt and reinforce mathematical behaviors • Model math strategies and the flexibility to choose between strategies • Create groups by Skill, Concept, or Strategy	• Practice foundational math skills • Monitor comprehension and select strategies to increase understanding • Extend grade level understanding and link to upcoming standards	• Go Math! supplements • Holt Math supplements • Van de Walle • Do the Math • Do the Math Now
COGNITIVE CLOSURE (10 minutes) *Purpose: Students cognitively process learning in order to focus on what was learned, whether it made sense, and if it had meaning.*		• Summarize and synthesize the learning process and skills obtained • Connect the concepts, skills, or strategies to a real world application • Connect the concepts, skills, or strategies to other learning through transfer • Give an End-of-Lesson Assessment (i.e. Exit Ticket, Journal-Writing, etc.)	• Summarize and synthesize the learning process and skills obtained • Reflect on the learning process and connect the learning to a real world application • Complete an End-of-Lesson Assessment	• Exit tickets • Math Journals • Common Formative Assessments

Year-Long Standards Overview

Mathematical Practices – To be embedded into every lesson		
1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics.	5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	Key: ➡ **Grade-Level Guaranteed Standards** **Essential Standards** Supporting Standards Previously Presented Materials

Yearlong Fluency Standards – To be taught and revisited continually throughout the year

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). (0-10 to be assessed in Quarter 1; 0-20 to be assessed in Quarters 2 and 3).

➡**1.OA.C.6 Fluently add and subtract within 10.**

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.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. (0-50 to be assessed in Quarter 1; 0-100 to be assessed in Quarter 2; 0-120 to be assessed in Quarter 3).

1.NBT.B.2 Understand that the two digits of a two digit number represent groups of tens and ones.

Quarter 1	Quarter 2	Quarter 3	Quarter 4
Sums & Differences to 10 **1.OA.A.1** 1.OA.C.5 ➡**1.OA.C.6** 1.OA.D.7 **1.OA.D.8**	**Sums & Differences to 20** **1.OA.A.1** ➡**1.OA.B.3** 1.OA.C.5 ➡**1.OA.C.6** 1.OA.D.7 **1.OA.D.8**	**Sums & Differences to 50** **1.OA.A.1** 1.OA.A.2 ➡**1.OA.B.3** 1.OA.B.4 1.OA.C.5 ➡**1.OA.C.6** 1.OA.D.7 **1.OA.D.8**	**Sums and Differences to 100** **1.OA.A.1** 1.OA.B.4 ➡**1.OA.C.6** 1.OA.D.7 **1.OA.D.8**
Counting & Understanding Place Value **1.NBT.A.1** **1.NBT.B.2**	**Place Value & Comparison** **1.NBT.A.1** **1.NBT.B.2** **1.NBT.B.3** ➡**1.NBT.C.4** **1.NBT.C.5**		**Place Value, Comparison, Addition & Subtraction Within 120** **1.NBT.A.1** **1.NBT.B.2** ➡**1.NBT.C.4** **1.NBT.C.5** ➡**1.NBT.C.6**
Define Attributes of Shapes 1.G.A.1	**Represent & Interpret Data** 1.MD.C.4	**Place Value, Comparison, Addition & Subtraction Within 100** **1.NBT.A.1** **1.NBT.B.2** **1.NBT.B.3** ➡**1.NBT.C.4** **1.NBT.C.5** ➡**1.NBT.C.6**	**Ordering & Comparing Length** 1.MD.A.1 ➡1.MD.A.2
	Compose & Decompose Shapes 1.G.A.2	**Partition Shapes** **1.G.A.3**	**Time & Money** 1.MD.B.3a 1.MD.B.3b
			Partition Shapes **1.G.A.3**
			Use any remaining time in the year to reteach standards to which students did not reach mastery and to pre-teach 2nd grade concepts through project-based learning activities.

	Quarter 1		
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource Mathematical Practices**	**Key Vocabulary**
Sums and Differences to 10			
By the end of this unit of study, students will represent and solve problems involving addition and subtraction, add and subtract within 20, and work with addition and subtraction equations.			
1.OA.A.1 **Use addition and subtraction ~~within 20~~ *within 10* 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.***	o Use a symbol for an unknown number in an addition/subtraction problem within 10 o Determine appropriate representations for solving word problems involving different situations using addition and subtraction within 10	Go Math! 1.1, 1.2, 1.3, 1.4, 2.1, 2.3, 2.4, 4.6 Mathematical Practices: 1, 2, 3, 4, 5, 6 Flipbook: Pg. 4 *Supplement with:* *Investigations "Building Number Sense"* *Investigation 4* *Number Games and Story Problems* *Investigation 3*	Word problem, Number sentence, Plus, Plus sign, Add, Addition, Addend, Sum, Total, Equal, Equal sign, Minus, Difference, Subtract, Subtraction, Take away, Strategy, Solve
1.OA.C.5 Relate counting to addition and subtraction (e.g., by using counting on 2 to add 2).	o Count on and how to count back	Go Math! 3.2, 4.1 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 12	Count, Count on, Count up
➡1.OA.C.6 **Fluently add and subtract within 10.**	o Apply strategies to add and subtract within 10 o Add fluently within 10	Go Math! 1.5, 1.7, 1.8, 2.7, 2.8, 2.9 Mathematical Practices: 7, 8 Flipbook: Pg. 14 *Supplement with:* *Developing Number Concepts Kathy Richardson* *Activities to 10* *3-1 to 3-27 Pg. 112-150*	Number sentence, Equation, Equal to, Add, Subtract, Minus, Take away, Put together
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? $6 + 1 = 6 - 1$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$).	o Explain the meaning of an equal sign (the quantity on each side of the equality symbol is the same)	Go Math! 5.9 Mathematical Practices: 2, 3, 6, 7 Flipbook: Pg. 15 *Supplement with* *Teaching Student-Centered Mathematics* *Van De Walle Pgs. 272, 278, 282; 13.3, 13.4, 13.5, 13.8, 13.9*	Equal sign, Equal, Same as
1.OA.D.8 **Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations $8 + \square = 11$, $5 = \square - 3$, $6 + 6 = \square$).**	o Use part-part-whole relationships of addition and subtraction equations	Go Math! 2.5, 2.6, 2.7, 3.2 Mathematical Practices: 2, 6, 8 Flipbook: Pg. 17	Part-part-whole, Addition, Subtraction

Counting and Understanding Place Value			
By the end of this unit of study, students will extend the counting sequence and use place value.			
1.NBT.A.1 **Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this set, read and write numerals and represent a number of objects with a written numeral.**	o Recall and represent numbers and numerals up to 50 o Count to 50 starting at any number less than 50 o Read and write numerals up to 50	Go Math! 6.2, 6.9, 6.10 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 18	Counting, Number, Digit, Two-digit number
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:** **a. 10 can be thought of as a group of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **c. 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).**	o Define a bundle of 10 ones as a "ten"	Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 20 *Supplement with* *Teaching Student-Centered Mathematics* *Van De Walle* *Pg. 214* *11.1, 11.2*	Bundle, Group of 10, Ones, Place value
Define Attributes of Shapes			
By the end of this unit of study, students will reason with shapes and their attributes.			
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 that possess defining attributes.	o Identify defining and non-defining attributes of shapes o Compare and contrast defining and non-defining attributes of shapes o Draw and build shapes to show defining attributes	Go Math! 11.5, 12.1, 12.2 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7 Flipbook: Pg. 36 *Supplement with Investigations "Survey Questions and Secret Rules" Sorting Shapes Pg. 4, Sorting Pg. 14, Center Pg. 120* *"Quilt Squares and Block Towns" Sorting 2-D Shapes Pg. 43*	2-D shape, Attribute, Circle, Rectangle, Square, Triangle, Side, Hexagon, Trapezoid, Vertex/Vertices, ~~Corner~~* *Refer to "corner" sparingly; utilize the term "vertex" (or "vertices") whenever possible

Quarter 2			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource** **Mathematical Practices**	**Key Vocabulary**
Sums and Differences to 20			
By the end of this unit of study, students will represent and solve problems involving addition and subtraction, understand and apply properties of operations and the relationship between addition and subtraction, add and subtract within 20, and work with addition and subtraction equations.			
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,**	o Use a symbol for an unknown number in an addition/subtraction problem within 20 o Interpret and solve situations to solve word problems in change and addend unknown.	Mathematical Practices: 1, 2, 3, 4, 5, 6, 8 Flipbook: Pg. 4 *Supplement with*	Word problem, Number sentence, Plus, Plus sign, Add, Addition, Addend, Put together, Sum, Total, Equal

and/or equations with a symbol for the unknown number to represent the problem). ***See Table 1.***	(See Table 2 in the Grade 1 Flipbook for further clarification) o Determine appropriate representations for solving word problems involving different situations using addition and subtraction within 20	*Investigations* *"Building Number Sense" Investigation 4* *"Number Games and Story Problems"* *Investigation 3*	to, Equal sign, Minus, Difference, Subtract, Subtraction, Take away, Strategy, Solve
➡️**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 on their own, but should be familiar with them when teachers refer to them).**	o Define and apply the Commutative Property to solve addition and subtraction problems (When adding two or more whole numbers order does not matter e.g. 4 + 5 = 5 + 4) o Define and apply the Associative Property to solve addition and subtraction problems (When adding a string of numbers you can add any two numbers first. e.g. 3 + 9 + 1 = 3 + 10 = 13)	Go Math! 1.8, 2.9, 3.1, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 8 *Supplement with* *Investigations "Building Number Sense"* *3 Towers Pg. 75*	Add, Addend, Associative Property of Addition, Commutative Property of Addition
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	o Count on and how to count back	Go Math! 3.2, 4.1 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 12	Count, Count on, Count up
➡️**1.OA.C.6** **Fluently add and subtract within 10.**	o Apply strategies to add and subtract within 10 o Add and subtract fluently within 10	Go Math! 4.1, 4.4, 4.5 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 14 *Supplement with* *Developing Number Concepts Kathy Richardson Number Combinations to 20 3-28 to 3-37, Pgs. 151-172*	Number sentence, Equation, Equal to, Add, Subtract, Minus, Take away, Put together, Put together
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).	o Compare the values on each side of an equal sign and determine if an equation is true or false	Go Math! 5.9 Mathematical Practices: 2, 3, 6, 7 Flipbook: Pg. 15	Equal sign, Equal, Same as, True/false
1.OA.D.8 **Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations 8 + □ = 11, 5 = □ − 3, 6 + 6 = □).**	o Use part-part-whole relationships of addition and subtraction equations	Go Math! Mathematical Practices: 2, 6, 8 Flipbook: Pg. 17 *Supplement with* *Developing Number Concepts Book 2 Kathy Richardson What Do You Think? Pg. 124-128 What Numbers Can You Make? Pg. 139 Using the Magic Box Pg. 165-166*	Part-part-whole, Addition, Subtraction

Place Value & Comparison			
By the end of this unit of study, students will extend the counting sequence, understand place value, then use place value understanding and properties of operations to add and subtract.			
1.NBT.A.1 **Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this set, read and write numerals and represent a number of objects with a written numeral.**	o Recall and represent numbers and numerals up to 120 o Count to 120 starting at any number less than 120 o Read and write numerals up to 120	Go Math! 6.1 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 18 *Supplement with* *Investigations "Quilt Squares and Block Towns" Pg. 127* *"Number Games and Story Problems"* *Investigation 2* *"Building Number Sense"* *Counting Stories Pg. 110* *Counting Strips Pg. 86*	Counting, Number, Digit, Two-digit number, Count on
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:** a. **10 can be thought of as a group of ten ones — called a "ten."** b. **The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** c. **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).**	o Explain what each digit of a two-digit number represents o Represent numbers 11-19 as composed as a ten and correct number of ones	Go Math! 6.3, 6.4, 6.5, 6.6, 6.7 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 20	Bundle, Group of 10, Place value, Tens, Ones, Two-digit number, One-digit number, Compose
1.NBT.B.3 **Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.**	o Identify the value of each digit represented in a 2-digit number o Show that each symbol represents >, <, and = o Compare two two-digit numbers based on meanings of the ten and ones digits o Use >, =, and < symbols to record the results of comparisons	Go Math! 6.8, 7.1, 7.2, 7.3, 7.4 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 22	Compare, Greater than (>), Less than (<), Equal to (=), Tens & ones, More
➡**1.NBT.C.4** **Demonstrate understanding of addition within 100, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.**	o Identify the value of each digit of a number within 100 o Decompose any number within 100 into tens and ones o Choose an appropriate strategy for solving an addition problem within 100 o Relate the chosen strategy (using concrete models or drawings and strategies based on	Go Math! 8.2, 8.4, 8.5, 8.6, 8.7 Mathematical Practices: 8, 3, 4, 7, 8 Flipbook: Pg. 23	Two-digit number, One-digit number, Place value, Tens & ones, Addition, Justify, Decompose

Arizona State Standards	GESD Suggested Learning Targets	Curricular Resources Mathematical Practices	Key Vocabulary
See Table 1.	place value, properties of operations, and/or the relationship between addition and subtraction) to a written method (equation) and explain the reasoning used		
1.NBT.C.5 **Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.**	o Identify the value of each digit in a number within 100 o Apply knowledge of place value to add 10 or subtract 10 to/from a given two-digit number	Go Math! 7.5 Mathematical Practices: 2, 3, 7, 8 Flipbook: Pg. 26	10 more, 10 less, Two-digit number, Tens, Ones, Place value
Represent & Interpret Data			
By the end of this unit of study, students will represent and interpret data.			
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	o Use different methods to organize and represent data o Organize and represent data with up to 3 categories o Interpret data representation by asking and answering questions about the data	Go Math! 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7 Mathematical Practices: 2, 3, 4, 5, 6 Flipbook: Pg. 33	Graphing, Graph, Data, Category, Bar graph, Tally chart, Tally mark, Pictograph, Organize
Compose & Decompose Shapes			
By the end of this unit of study, students will reason with shapes and their attributes.			
1.G.A.2 Compose two-dimensional shapes or three-dimensional shapes to create a composite shape.	o Decompose shapes to create composite shapes o Describe properties of original, decomposed and composite shapes o Determine how the original and created composite shapes are alike and different o Create composite shapes o Compose new shapes from a composite shape	Go Math! 11.1, 11.2, 11.3, 11.4, 12.3, 12.4, 12.5, 12.6, 12.7 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7 Flipbook: Pg. 39 *Supplement with* *<u>Investigations</u> "Quilt Squares, Block Towns"* *Investigation 1, Investigation 2*	2-D shape, 3-D shape, Cone, Sphere, Cube, Cylinder, Rectangular prism, Curved surface, Flat surface, Face, Edge, Side, Compose
Quarter 3			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resources Mathematical Practices**	**Key Vocabulary**
Sums & Differences to 50			
By the end of this unit of study, students will represent and solve problems involving addition and subtraction, understand and apply properties of operations and the relationship between addition and subtraction, add and subtract within 20, then work with addition and subtraction equations.			
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.*	o Use a symbol for an unknown number in an addition/subtraction problem within 20 (extend to within 50 as students are ready) o Interpret and solve situations to solve word problems in change and addend unknown. (See Table 2 in the Grade 1 FlipBook for further clarification) o Determine appropriate representations for	Go Math! 5.1, 5.7, 8.8 Mathematical Practices: 1, 2, 3, 4, 5, 6, 8 Flipbook: Pg. 4 *Supplement with* *<u>Investigations</u> "Building Number Sense"* *Investigation 4*	Word problem, Number sentence, Plus, Plus sign, Add, Addition, Addend, Sum, Total, Equal, Equal sign, Minus, Difference, Subtract, Subtraction, Take away, Strategy, Solve

	solving word problems involving different situations using addition and subtraction within 20	"Number Games and Story Problems" Investigation 3	
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem). *See Table 1.*	o Add three whole numbers whose sum is less than or equal to 20 o Solve word problems that call for addition of three whole numbers whose sum is equal or less than 20	Go Math! 3.9, 3.10, 3.11, 3.12 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 6	Addition, Addend, Sum, Strategy, (Making ten Doubles, Doubles +1, Doubles -1)
➡**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 on their own, but should be familiar with them when teachers refer to them.)**	o Define and apply properties of operations as strategies to solve addition and subtraction problems	Go Math! 4.4, 4.5, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 8 *Supplement with* *Investigations "Building Number Sense"* *3 Towers Pg. 75*	Fact family, Add, Subtract, Missing addend, Related facts, Associative Property of Addition, Commutative Property of Addition
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).	o Identify the unknown in a subtraction problem o Solve subtraction problems to find the missing addend o Explain the relationship between addition and subtraction	Go Math! 4.2, 4.3, 4.4 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 10 *Supplement with* *Developing Number Concepts Book 2 Kathy Richardson, Activity 1-11, Pgs. 31-33* *Activities 2-5, 2-6 Pgs. 61-62* *Activity 3-8 Pg. 127* *Teaching Student-Centered Mathematics Van De Walle, Pg. 158 9.3*	Missing addend, Fact family, Related facts, Addition, Subtraction
1.OA.C.5 Relate counting to addition and subtraction (e.g., by using counting on 2 to add 2).	o Explain how counting on and counting back relate to addition and subtraction	Mathematical Practices: 2, 7, 8 Flipbook: Pg. 12 *Supplement with* *Developing Number Concepts Book 2 Kathy Richardson* *Activities 3-28 – 3-32* *Pgs. 151-167* *Teaching Student-Centered Mathematics Van De Walle, Pg. 169 9.8*	Count on, Count back, Addition, Subtraction
➡**1.OA.C.6** **Fluently add and subtract within 10.**	o Apply strategies to add and subtract within 10 o Add and subtract fluently within 10	Mathematical Practices: 2, 7, 8 Flipbook: Pg. 14	Number sentence, Equation, Equal to, Add, Subtract, Minus, Take

			away, Put together, Strategy
		Supplement with: Teaching Student-Centered Mathematics Van de Walle, Pgs. 131-133, 135, 8.23, 8.24, 8.28	
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).	o Compare the values on each side of an equal sign and determine if an equation is true or false	Go Math! 5.9 Mathematical Practices: 2, 3, 6, 7 Flipbook: Pg. 15	Equal sign, Equal, Same as, True/false
1.OA.D.8 **Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations 8 + ☐ = 11, 5 = ☐ – 3, 6 + 6 = ☐)**	o Determine the unknown whole number in an addition and subtraction equation with three whole numbers	Mathematical Practices: 2, 7, 8 Flipbook: Pg. 17 *Supplement with Investigations "Number Games and Story Problems" Combining w/Unknown Change Pg. 138*	Part-part-whole, Addition, Subtraction, missing addend
Place Value, Comparison, Addition and Subtraction within 100			
By the end of this unit of study, students will extend the counting sequence, understand place value with two-digit numbers, use place value understanding and properties of operations to add and subtract within 100.			
1.NBT.A.1 **Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this set, read and write numerals and represent a number of objects with a written numeral.**	o Recall and represent numbers and numerals up to 120 o Count to 120 starting at any number less than 120 o Read and write numerals up to 120	Go Math! Mathematical Practices: 2, 7, 8 Flipbook: Pg. 18 *Supplement with Investigations "Quilt Squares and Block Towns" Pg. 127 "Number Games and Story Problems" Investigation 2*	Counting, Number, Digit, Two-digit number, Count on
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:** **a. 10 can be thought of as a group of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **c. 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).**	o Explain what each digit of a two-digit number represents o Represent numbers 1-99 composed as a ten and correct number of ones o Represent the numbers 20, 30, 40, 50, 60, 70, 80 and 90 as composed of the correct number of tens	Go Math! 6.3, 6.4, 6.5, 6.6, 6.7, 6.8 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 20	Bundle, Group of 10, Place value, Tens, Ones, Two-digit number, One-digit number, Compose, Decompose

1.NBT.B.3 **Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.**	o Identify the value of each digit represented in a 2-digit number o Show that each symbol represents >, < and = o Compare two two-digit numbers based on meanings of the ten and ones digits o Use >, = and < symbols to record the results of comparisons	Go Math! Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 22 *Supplement with* *Investigations "Number Sense - Which Holds More?" Pg. 92*	Compare, Greater than (>), Less than (<), Equal to (=), Tens & ones, More
➡1.NBT.C.4 **Demonstrate understanding of addition within 100, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.** ***See Table 1.***	o Identify the value of each digit of a number within 100 o Decompose any number within 100 into tens and ones o Choose an appropriate strategy for solving an addition problem within 100 o Relate the chosen strategy (using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) to a written method (equation) and explain the reasoning used	Go Math! Mathematical Practices: 2, 3, 4, 7, 8 Flipbook: Pg. 23 *Supplement with* *Developing Number Concepts Book 2* *Kathy Richardson* *Addition and Subtraction of 2-digit Numbers Pgs. 109-131*	Two-digit number, One-digit number, Place value, Tens, Ones, Addition, Justify, Decompose
1.NBT.C.5 **Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.**	o Identify the value of each digit in a number within 100 o Apply knowledge of place value to add 10 or subtract 10 to/from a given two-digit number	Go Math! 7.5 Mathematical Practices: 2, 3, 7, 8 Flipbook: Pg. 26	10 more, 10 less, Two-digit number, Tens, Ones, Place value
➡1.NBT.C.6 **Subtract multiples of 10 in numbers between 10 and 90 (positive or zero differences), using objects 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 form.**	o Identify the value of each digit of a number within 100 o Subtract multiples of 10 in the range of 10-90 from multiples of 10 in the range of 10-90 (positive or zero difference) o Choose appropriate strategy (concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) for solving subtraction problems with multiples of 10 o Relate the chosen strategy to a written method (equation) and explain the reasoning being used	Go Math! 8.3 Mathematical Practices: 2, 3, 4, 5, 7, 8 Flipbook: Pg. 27	Subtract, Groups of ten, Place value, Strategy, Justify
Partition Shapes			
By the end of this unit of study, students will partition shapes and begin the concept of fractions.			
1.G.A.3 **Partition circles and rectangles into two and four equal shares, describe the shares using**	o Partition circles and squares into two and four equal shares o Identify when shares are equal	Go Math! 12.7, 12.8, 12.9, 12.10 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7 Flipbook: Pg. 40	Partition, Equal parts, Equal shares, Unequal shares, Fourth of/Fourths,

the words halves, fourths, and quarters. Describe the whole as "two of" or "four of" the shares. Understand that decomposing into more equal shares creates smaller shares.	o Describe equal shares using vocabulary: halves, fourths and quarters, half of, fourth of, and quarter of o Describe the whole as two of two or four of four equal shares o Analyze that dividing a circle or rectangle into equal pieces creates smaller shares		Quarter of/ Quarters, Unequal parts, Half of Halves, Vertex/Vertice, Side, Whole, Fraction

Quarter 4			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource Mathematical Practices**	**Key Vocabulary**
Sums & Differences to 100			
By the end of this unit of study, students will represent and solve problems involving addition and subtraction, understand and apply properties of operations and the relationship between addition and subtraction, and fluently add and subtract within 20.			
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.* *Start to push students' thinking with numbers to 100 (in order to align with NBT standards).	o Use a symbol for an unknown number in an addition/subtraction problem within 20 (extend to within 100 as students are ready) o Interpret and solve situations to solve word problems in compare: difference unknown, bigger unknown and smaller unknown and start unknown. (See Table 2 in the Grade 1 Flipbook for further clarification) o Determine appropriate representations for solving word problems involving different situations using addition and subtraction within 20 (extend to within 100 as students are ready)	Go Math! 2.5, 2.6, 7.4 Mathematical Practices: 1, 3, 4, 5, 6, 8 Flipbook: Pg. 4 *Supplement with* *Investigations "Building Number Sense"* *Investigation 4* *"Number Games and Story Problems"* *Investigation 3*	Word problem, Number sentence, Plus, Plus sign, Add, Addition, Addend, Sum, Total, Equal, Equal sign, Minus, Difference, Subtract, Subtraction, Take away, Strategy, Solve
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).	o Identify the unknown in a subtraction problem o Solve subtraction problems to find the missing addend o Explain the relationship between addition and subtraction	Go Math! 5.4, 5.5, 5.6 Mathematical Practices: 2, 7, 8 Flipbook: Pg. 10 *Supplement with:* *Developing Number Concepts Book 2* *Kathy Richardson* *Activity 3-16 Pg. 136, Activity 3-22 Pg. 145,* *Activities 3-25, 3-26 Pgs. 148-149*	Justify, Missing addend, Fact family, Related facts, Addition, Subtraction
➡**1.OA.C.6** **Fluently add and subtract within 10.**	o Apply strategies to add and subtract within 20 (extend to within 100 as students are ready) o Add and subtract fluently within 10 (extend to within 100 as students are ready)		
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and	o Compare the values on each side of an equal sign and determine if an equation is true or false	Go Math! Mathematical Practices: 2, 7, 8 Flipbook: Pg. 14	Number sentence, Equation, Equal to, Add, Subtract, Minus, Take

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).		*Supplement with* *Investigations "Building Number Sense"* *Dot Card Activities Pg. 52, Double Compare Pg. 53, Towers of 10 Pg. 68, Introducing Strategies Pg. 116*	away, Put together, Put together
1.OA.D.8 **Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations 8 + □ = 11, 5 = □ − 3, 6 + 6 = □)**	o Determine the unknown whole number in an addition and subtraction equation with three whole numbers	Mathematical Practices: 2, 7, 8 Flipbook: Pg. 17 *Supplement with* *Investigations* "Number Games and Story Problems" Combining w/Unknown Change Pg. 138	Part-part-whole, Addition, Subtraction, missing addend
Place Value, Comparison, Addition and Subtraction within 120 **By the end of this unit of study, students will extend the counting sequence, understand place value to 120, use place value understanding and properties of operations to add and subtract within 120**
1.NBT.A.1 **Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this set, read and write numerals and represent a number of objects with a written numeral.**	o Recall and represent numbers and numerals up to 120 o Count to 120 starting at any number less than 120 o Read and write numerals up to 120	Mathematical Practices: 2, 7, 8 Flipbook: Pg. 18 *Supplement with* *Investigations "Building Number Sense"* *Counting Stories Pg. 110* *Counting Strips Pg. 86*	Counting, Number, Digit, Two-digit number, Count on
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:** **a. 10 can be thought of as a group of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **c. 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).**	o Explain what each digit of a two-digit number represents o Represent numbers 1-99 as composed of a ten and correct number of ones o Represent the numbers 20, 30, 40, 50, 60, 70, 80 and 90 as composed of the correct number of tens	Go Math! 6.8 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 20	Bundle, Group of 10, Place value, Tens, Ones, Two-digit number, One-digit number, Compose, Decompose
➡1.NBT.C.4 **Demonstrate understanding of addition within 100, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.**	o Identify the value of each digit of a number within 100 o Decompose any number within 100 into tens and ones o Choose an appropriate strategy for solving an addition problem within 100 o Relate the chosen strategy (using concrete models or drawings and strategies based on	Go Math! Mathematical Practices: 2, 3, 4, 7, 8 Flipbook: Pg. 23 *Supplement with* *Teaching Student-Centered Mathematics Van de Walle*	Two-digit number, One-digit number, Place value, Tens, Ones, Addition, Justify, Decompose

See Table 1.	place value, properties of operations, and/or the relationship between addition and subtraction) to a written method (equation) and explain the reasoning used o Use composition of tens when necessary to add within 100	*Pgs. 195-196 10.12-10.13* *Pgs. 230-231 11.19-11.21*	
1.NBT.C.5 **Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.**	o Identify the value of each digit in a number within 100 o Explain how to mentally find 10 more or 10 less than a given two-digit number o Apply knowledge of place value to mentally add 10 or subtract 10 to/from a given two-digit number	Mathematical Practices: 2, 3, 7, 8 Flipbook: Pg. 26 *Supplement with* *Teaching Student-Centered Mathematics Van de Walle* *Pgs. 139, 227 8.32, 11.13*	10 more, 10 less, Two-digit number, Tens, Ones, Place value
➡1.NBT.C.6 **Subtract multiples of 10 in numbers between 10 and 90 (positive or zero differences), using objects 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 form.**	o Identify the value of each digit of a number within 100 o Subtract multiples of 10 in the range of 10-90 from multiples of 10 in the range of 10-90 (positive or zero difference) o Choose appropriate strategy (concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction) for solving subtraction problems with multiples of 10 o Relate the chosen strategy to a written method (equation) and explain the reasoning being used	Go Math! 8.9 Mathematical Practices: 2, 3, 4, 5, 7, 8 Flipbook: Pg. 27	Subtract, Groups of ten, Place value, Strategy, Justify
Ordering/Comparing Lengths, Time, Money **By the end of this unit of study, students will measure lengths indirectly and by iterating length units and tell and write time.**			
1.MD.A.1 Order three objects by length. Compare the lengths of two objects indirectly by using a third object.	o Identify the measurement known as length of an object o Directly compare the length of three objects o Order three objects by length o Compare the lengths of two objects indirectly by using a third object (e.g. if the length of object A is greater than the length of object B, and the length of object B is greater than the length of object C, than the length of object A is greater than the length of object C)	Go Math! 9.1, 9.2 Mathematical Practices: 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 28 *Supplement with* *Investigations "Bigger, Taller, Heavier, Smaller"* *Investigation1, Investigation 2, Investigation 3*	Measure, Longest, Shortest, Length, Compare, Greater than
➡1.MD.A.2 Express the length of an object as a whole	o Use the same size non-standard object as repeating units	Go Math! 9.3, 9.4, 9.5	Measure, Size, Length,

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).	o Measure length using various units o Compare a smaller unit of measurement to a larger object o Determine the length of a measured object to be the number of smaller iterated or repeated objects that equal its length o Compose the measurement of an object using non-standard unit (e.g. paper clips, Unifix cubes, etc.) by laying the units of measurement end to end with no gaps or overlaps	Mathematical Practices: 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 30 *Supplement with* *Investigations "Bigger, Taller, Heavier, Smaller"* *Investigation 3*	Smaller, Larger
1.MD.B.3a Tell and write time in hours and half-hours using analog and digital clocks.	o Explain that analog and digital clocks are objects that measure time o Identify the hour hand and minute hand and distinguish between the two o Determine where the minute hand must be when the time is to the hour (o'clock) and half hour (30) o Tell and write the time to the hour and half hour correctly using analog and digital clock	Go Math! 9.6, 9.7, 9.8, 9.9 Mathematical Practices: 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 31 *Supplement with* *Teaching Student-Centered Mathematics Van de Walle* *Pgs. 349-350 15.15, 15.16* *Investigations* *"Quilt Squares and Block Towns" Pg. 132*	Analog clock, Digital clock, Hour hand, Minute hand, To the hour, Half hour, Half past, Hour, Minute
1.MD.B.3b Identify coins by name and value (pennies, nickels, dimes, and quarters).	o Identify pennies, nickels, dimes, and quarters o Identify the value of pennies, nickels, dimes, and quarters	Mathematical Practices: 2, 3, 4, 5, 6, 7, 8 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pg. 351-354 15.17-15.20*	Pennies, Nickels, Dimes, Quarters, Cents
Partition Shapes			
By the end of this unit of study, students will reason with shapes and their attributes.			
1.G.A.3 **Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters. Describe the whole as "two of" or "four of" the shares. Understand that decomposing into more equal shares creates smaller shares.**	o Partition circle and squares into two and four equal shares o Identify when shares are equal o Describe equal shares using vocabulary: halves, fourths and quarters, half of, fourth of, and quarter of o Describe the whole as two of two or four of four equal shares o Analyze that dividing a circle or rectangle into equal pieces creates smaller shares	Go Math! 12.7, 12.8, 12.9, 12.10 Mathematical Practices: 2, 3, 4, 5, 6, 7 Flipbook: Pg. 40	Partition, Equal parts, Equal shares, Unequal shares, Fourth of/Fourths, Quarter of/ Quarter, Unequal parts, Half of Halves, Vertex/ Vertices, Side, Whole, Fraction

Quarter Taught				Essential Standards (➡Grade Level Guaranteed Standards)
1	2	3	4	**Operations and Algebraic Thinking (OA):**
X	X	X	X	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).
	X	X		➡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.)
X	X	X	X	➡1.OA.C.6 – Fluently add and subtract within 10.
X	X	X		1.OA.D.8 – Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations $8 + \square = 11$, $5 = \square - 3$, $6 + 6 = \square$).
				Number and Operations in Base Ten (NBT):
X	X	X	X	1.NBT.A.1 – Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this set, read and write numerals and represent a number of objects with a written numeral.

X	X	X	X	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:
				    a. 10 can be thought of as a group of ten ones — called a "ten".
				    b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
				    c. 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).

	X	X		1.NBT.B.3 – Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
	X	X	X	➡1.NBT.C.4 – Demonstrate understanding of addition within 100, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.
	X	X	X	1.NBT.C.5 – Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.
		X	X	➡1.NBT.C.6 – Subtract multiples of 10 in numbers between 10 and 90 (positive or zero differences), using objects 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 form.
				Geometry (G):
		X	X	1.G.A.3 – Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters. Describe the whole as "two of" or "four of" the shares. Understand that decomposing into more equal shares creates smaller shares.

Quarter Taught				Supporting Standards
1	2	3	4	**Operations and Algebraic Thinking (OA):**
		X		1.OA.A.2 – Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and/or equations with a symbol for the unknown number to represent the problem).
		X	X	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).
X	X	X		1.OA.C.5 – Relate counting to addition and subtraction (e.g., by using counting on 2 to add 2).
X	X	X	X	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).
				Measurement and Data (MD):
			X	1.MD.A.1 – Order three objects by length. Compare the lengths of two objects indirectly by using a third object.
			X	➡1.MD.A.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.)
			X	1.MD.B.3 – Work with time and money. a. Tell and write time in hours and half-hours using analog and digital clocks. b. Identify coins by name and value (pennies, nickels, dimes, and quarters).
	X			1.MD.C.4 – Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
				Geometry (G):
X				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 that possess defining attributes.
	X			1.G.A.2 – Compose two-dimensional shapes or three-dimensional shapes to create a composite shape.