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

- **Extend place value understanding of whole number relationships and place value, including grouping in hundreds, tens and ones.**
  - Students extend their understanding of place value using the base-ten system. This includes ideas of counting by ones, fives, tens, and hundreds as well as understanding number relationships involving these units, including comparing. Students understand multi-digit numbers through 1000 written in base-ten notation recognizing that the digits in each place represent amounts of hundreds, tens, or ones.
- **Develop competency of strategies for addition and subtraction.**
  - Students use their understanding of addition to develop fluency with addition and subtraction within 20. They demonstrate understanding of addition and subtraction within 1000 with the use of models. They develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers using base-ten notation, understanding of place value, and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences.
- **Develop understanding of standard units of measure.**
  - Students develop understanding for standard units of measure (centimeter and inch), and they use rulers and other measurement tools with the understanding that linear measurement involves an iteration (repetition) of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
- **Fluently add and subtract within 20 by the end of 2nd grade, know from memory all sums of two one-digit numbers.**
- **Fluently add and subtract within 100.**

Concrete → Representational → Abstract

$$\frac{1}{2} = \frac{2}{4}$$
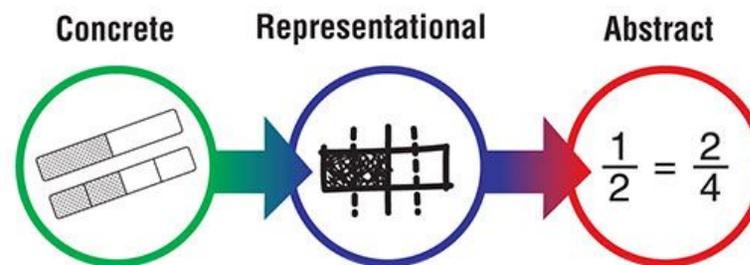
The GESD Pacing Guides were created by a panel of Teachers and Achievement Advisors with the additional input and guidance from Principals and Assistant Principals. The GESD Pacing Guides are revised yearly through feedback and committee work. Thank you for all input and support.

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 second grade, instructional time should focus on three critical areas:
1. Extend place value understanding of whole number relationships and place value, including grouping in hundreds, tens and ones.
2. Build fluency of addition, subtraction, and strategies for addition and subtraction.
3. Develop understanding of standard units of measure.

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

➡**2.OA.A.1** Use addition and subtraction within 100 to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown. *See Table 1.*

➡**2.OA.B.2** Students fluently add and subtract within 20. By the end of grade 2, know from memory all the sums of two one-digit numbers.

➡**2.NBT.A.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.

➡**2.NBT.B.5** Students fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
Represent, Solve Using Addition, Subtraction ➡ **2.OA.A.1** (within *50* to solve *1-step*) ➡**2.OA.B.2** (embed 2.MD.B.6) 2.MD.B.6 2.OA.C.3 **2.OA.C.4** (introduce arrays) **Understand Place Value with 2-digit Numbers** ➡**2.NBT.A.1** ➡**2.NBT.A.2** 2.NBT.A.3 ➡**2.NBT.B.5** **Represent, Interpret Data** 2.MD.D.10 **Reason with Shapes and their Attributes** 2.G.A.1 **2.G.A.3** (embed 2.MD.C.7) 2.MD.C.7 (to half-hour)	**Represent, Solve Using Addition, Subtraction** ➡**2.OA.A.1** (within *100* to solve *1-step*) 2.NBT.B.9 (embed within **2.OA.1**) ➡**2.OA.B.2** (continue with fluency) **Understand Place Value with 2-digit numbers** ➡**2.NBT.A.1** (continue with fluency) ➡**2.NBT.A.2** 2.NBT.A.3 ➡**2.NBT.A.4** ➡**2.NBT.B.5** (continue with fluency) 2.NBT.B.8 **Relate Addition, Subtraction to Length** ➡**2.MD.A.1** 2.MD.A.2 2.MD.A.3 2.MD.A.4 **Measure/Estimate Lengths** 2.MD.C.7 (to 15-minute)	**Represent, Solve Using Addition, Subtraction** ➡**2.OA.A.1** (within *100* to solve *2-step,* embed 2.MD.B.5, 2.NBT.B.8, 2.NBT.B.9, 2.MD.C.8) ➡**2.OA.B.2** (continue with fluency) **Use Place Value to Add, Subtract with 3-digit Numbers** ➡**2.NBT.A.1** ➡**2.NBT.A.2** (embed 2.MD.C.8 revisit skip-counting using coins) 2.NBT.A.3 ➡**2.NBT.A.4** **Use Place Value to Add and Subtract** ➡**2.NBT.B.5** (continue with fluency) ➡**2.NBT.B.7** 2.NBT.B.8 **Measure/Estimate Lengths** 2.MD.C.7(to 10-minute)	**Represent, Solve Using Addition, Subtraction** ➡ **2.OA.A.1** (within *100* to solve *2-step*) ➡**2.OA.B.2** (continue with fluency) **2.OA.C.4** (embed 2.G.A.2) 2.G.A.2 **Use Place Value to Add, Subtract** (embed ➡**2.NBT.A.1**) ➡**2.NBT.B.5** (continue with fluency) 2.NBT.B.6 ➡**2.NBT.B.7** **Measure/Estimate Lengths** 2.MD.C.7 (to 5-minute) 2.MD.D.9 Use any remaining time in the year to reteach standards to which students did not reach mastery and to pre-teach 3rd grade concepts through project-based learning activities.

Quarter 1			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource Mathematical Practices**	**Key Vocabulary**
Represent and Solve Problems Involving Addition and Subtraction			
By the end of this unit of study, students will add and subtract within 20 fluently, add and subtract within 50 with 1-step word problems, work with equal groups of objects to gain foundations for multiplication, and measure and estimate lengths in standard units.			
➡️**2.OA.A.1** **Use addition and subtraction *within 100 50* to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown.** ***See Table 1.***	o Identify the unknown in an addition or subtraction word problem within 50 o Determine the appropriate operations needed to solve addition and subtraction problems in situations including add to, take from, put together, take apart, and compare o Use drawings or equations to represent one-step word problems o Add and subtract within 50 to solve one-step word problems with unknowns in any positions o Write an addition and subtraction equation with a symbol for the unknown	Go Math! 3.8, 3.9 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 4 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 156-159 9.1, 9.3, 9.4* *Developing Number Concepts Book 2* *Kathy Richardson Acting Out Stories Pgs. 19-25*	Sum, Addend, Difference, Equation, Operation
➡️**2.OA.B.2** **Fluently add and subtract within 20.** ~~By the end of Grade 2, know from memory all the sums of two one-digit numbers.~~	o Use mental strategies for addition and subtraction ~~o Recite from memory all sums of two one-digit numbers~~ o Apply mental strategies to add and subtract fluently within 20 o Fluently add and subtract within 20	Go Math! 3.6, 3.7 Mathematical Practices: 3, 6, 7 Flipbook: Pg. 7 *Supplement with* *Developing Number Concepts Kathy Richardson* *Number Combinations to 20 Pgs. 151-166*	Sum, Addend, Difference, Operation
2.MD.B.6 (embed within ➡️2.OA.A.1) Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, …, and represent whole-number sums and differences within 100 on a number line diagram.	o Represent whole numbers from 0 on a number line with equally spaced points o Explain length as the distance between 0 and another mark on the number line diagram o Use a number line to represent the solution of whole-number sums and differences related to length within 100	Go Math! 8.5, 9.4 Mathematical Practices: 2, 3, 4, 5, 6 Flipbook: Pg. 34	Number line, Sum, Difference, Solution
2.OA.C.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's.	o Explain that in groups of even numbers objects will pair up evenly o Recognize that in groups of odd numbers objects will not pair up evenly o Determine whether a group of objects is odd or even, using a variety of strategies	Go Math! 1.1, 1.2 Mathematical Practices: 2, 3, 4, 6, 7, 8 Flipbook: Pg. 9	Digit, Even number, Odd number, Addend, Sum, Equation, Equal

	o Generalize the fact that all even numbers can be formed from the addition of 2 equal addends o Count a group of objects up to 20 by 2s		
2.OA.C.4 **Use addition to find the total number of objects arranged in rectangular arrays (with up to 5 rows and up to 5 columns).** ~~Write an equation to express the total as a sum of equal addends.~~	o Generalize the fact that arrays can be written as repeated addition problems o Introduce solving ~~Solve~~ repeated addition problems to find the number of objects using rectangular arrays ~~o Write an equation with repeated equal addends from an array~~	Go Math! 3.10, 3.11 Mathematical Practices: 2, 3, 7, 8 Flipbook: Pg. 11 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 166, 299; 9.7, 13.20*	Array, Sum, Addend, Difference, Equation, Rows, Columns
Understanding Place Value with 2-digit Numbers **By the end of this unit of study, students will understand 10 ones as ten, count in various ways within 1000, read/write numbers and perform addition and subtraction with numerals, expanded notation, and base-ten numerals, and add/subtract within 100.**

➡**2.NBT.A.1**
Understand that the ~~three digits~~ *two digit* **of a** ~~three-digit~~ *two-digit* **number represent groups of** ~~hundreds,~~ **tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). Understand the following as special cases:**
   a. **100 can be thought of as a group of ten tens – called a "hundred."**
   ~~b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).~~
 	
         (part b not assessed until Q3)
	o Explain the value of each digit in a two-digit number
	o Identify a bundle of 10 ones as a "ten"
	o Represent a two-digit number with tens ~~and ones~~
		Go Math! 2.1, 2.2, 2.3, 2.4, 2.5
		Mathematical Practices: 2, 4, 5, 6
		Flipbook: Pg. 13
		
		Supplement with
		Teaching Student-Centered Mathematics
		Van de Walle Pgs. 217-218
		11.4, 11.7
			Hundreds, Tens, Ones, Digit

➡**2.NBT.A.2** **Count within 1000** *within 100*; **skip-count by 5s, 10s, and 100s.**	o Count ~~within 1000~~ *within 100* o Skip-count by 5s ~~to 1000~~ *to 100* o Skip-count by 10's ~~to 1000~~ *to 100* o Skip count 100s to 1000 forwards and backwards; from different starting points	Go Math! 1.8, 1.9, 2.9 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 15 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 169, 227; 9.8, 11.13*	Digit, Hundreds, Tens, Ones
2.NBT.A.3 Read and write numbers up ~~to 1000~~ *to 100* using base-ten numerals, number names, and expanded form.	o Define expanded form o Explain how the digits in each place represent amounts of ~~thousands~~, hundreds, tens, or ones o Read numbers to 100 using base ten numerals	Go Math! 1.4, 1.5, 1.6, 1.7, 2.7, 2.8, 2.9, 2.10 Mathematical Practices: 2, 4, 6, 7, 8 Flipbook: Pg. 16	Thousands, Hundreds, Tens, Ones, Expanded form, Standard form, Word form, Base ten, Digit

	o Read numbers to 100 using number names o Read numbers to 100 using expanded form o Write numbers to 100 using base ten numerals o Write numbers to 100 using number names o Write numbers to 100 using expanded form		
➡**2.NBT.B.5** **Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.**	o Use strategies for adding and subtracting based on place value o Use strategies for adding and subtracting based on properties of operations o Use strategies for adding and subtracting based on the relationship between addition and subtraction o Choose a strategy (place value, properties of operations, and/or the relationship between addition and subtraction) to fluently add and subtract within 100 o Fluently add and subtract within 100	Go Math! 4.1, 4.2, 4.3, 5.1, 5.2 Mathematical Practices: 2, 4, 5, 6, 7, 8 Flipbook: Pg. 18 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 231-232; 11.20, 11.21, 11.23*	Sum, Addend, Difference, Digit, Regroup, Tens, Ones
Represent And Interpret Data
By the end of this unit of study, students will be able to work with time to half an hour and reason with shapes and their attributes including fractions of shapes.
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple "put-together", "take-apart", and "compare" problems using information presented in the graph. *See Table 1*	o Identify picture graphs and bar graphs o Identify and label the components of a picture graph and bar graph o Make comparisons between categories in the graph using more than, less than, etc. o Solve problems relating to data in graphs by using addition and subtraction o Draw a single-unit scale picture graph to represent a given set of data with up to four categories o Draw a single-unit scale bar graph to represent a given set of data with up to four categories	Go Math! 10.2, 10.3, 10.4, 10.5, 10.6 Mathematical Practices: 1, 2, 4, 5, 6 Flipbook: Pg. 40	Pictograph/Picture, graph, Bar graph, Data, Survey, Line plot
2.G.A.1 Identify and describe specified attributes of two-dimensional and three-dimensional shapes, according to the number and shape of faces, number of angles, and the number of sides and/or vertices. Draw two-dimensional shapes based on the specified attributes (e.g., triangles, quadrilaterals, pentagons, and hexagons).	o Identify the attributes of triangles, quadrilaterals, pentagons, hexagons, and cubes (e.g., faces, angles, sides, vertices, etc.) o Identify triangles, quadrilaterals, pentagons, hexagons, and cubes based on the given attributes o Describe and analyze shapes by examining their sides and angles, not by measuring	Go Math! 11.1, 11.2, 11.3, 11.4, 11.5 Mathematical Practices: 2, 3, 4, 6, 7, 8 Flipbook: Pg. 44	Triangle, Quadrilateral, Pentagon, Hexagon, Cube, Cylinder, Cone, Rectangle, Rectangular prism, Sphere, Angle, Vertex/Vertices, Side, Face, Edge

Arizona State Standards	GESD Suggested Learning Targets	Curricular Resource Mathematical Practices	Key Vocabulary
	o Compare shapes by their attributes (e.g., faces, angles) o Draw shapes with specified attributes		
2.G.A.3 **Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, fourths, half of, third of, fourth of, and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.**	o Identify two, three, and four equal shares of a whole o Describe equal shares using vocabulary: halves, thirds, fourths, half of, third of, fourth of, etc. o Describe the whole as two halves, three thirds, or four fourths o Justify why equal shares of identical wholes need not have the same shape	Go Math! 11.7, 11.8, 11.9, 11.10 Mathematical Practices: 2, 3, 6, 8 Flipbook: Pg. 47 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 309, 319, 381;* 14.3, 14.7, 16.14	Halves (half of), Thirds (third of), Fourths (fourth of), Equal shares, Whole, Partition
2.MD.C.7 (embed within **2.G.A.3**) Tell and write time from analog and digital clocks ~~to the nearest five minutes~~ *half hour*, using a.m. and p.m. *Work with time to the half hour to coincide with 2.G.A.3 halves.*	o Look for and make use of structure o Determine what time is represented by the combination of the number on the clock face and the position of the hands o Tell time using analog clocks to the half hour o ~~Tell time using digital clocks to the nearest 5 minutes~~ o Write time using analog clocks ~~and digital clocks~~ o Identify the hour and minute hand on an analog clock o Identify and label when a.m. and p.m. occur	Go Math! 7.8, 7.9, 7.10, 7.11 Mathematical Practices: 5, 6 Flipbook: Pg. 35	a.m., p.m., Midnight, Noon, Half past, Hour, Minute, ~~Quarter past, Quarter 'til~~
Quarter 2				

Arizona State Standards	GESD Suggested Learning Targets	Curricular Resource Mathematical Practices	Key Vocabulary
Represent And Solve Problems Involving Addition And Subtraction. **By the end of this unit of study, students will understand place value and fluently add and subtract within 20 and add and subtract within 100 with 1-step word problems.**			
➡️**2.OA.A.1** **Use addition and subtraction within 100 to solve one- ~~and two-step~~ word problems. Represent a word problem as an equation with a symbol for the unknown.** ***See Table 1.***	o Identify the unknown in an addition or subtraction word problem within 100 o Determine the appropriate operations needed to solve addition and subtraction problems in situations including add to, take from, put together, take apart, and compare o Use drawings or equations to represent one-step word problems o Add and subtract within 100 to solve one-step word problems with unknowns in any position o Write an addition and subtraction equation with a symbol for the unknown	Go Math! 4.9, 4.10 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 4 *Supplement with* *Developing Number Concepts Book 3* *Kathy Richardson Solving Story Problems Pg. 131*	Sum, Addend, Difference, Equation, Operation

2.NBT.B.9 (embed within **2.OA.A.1**) Explain why addition and subtraction strategies work, using place value and the properties of operations (explanations may be supported by drawings or objects).	o Use addition and subtraction strategies using place value and properties of operations related to addition and subtraction o Explain why addition and subtraction strategies based on place value and properties of operations work	Go Math! 4.4, 4.5, 4.6, 5.4, 5.5 Mathematical Practices: 3, 4, 6, 7 Flipbook: Pg. 23	Sum, Addend, Difference, Digit, Regroup, Tens, Ones
➡️**2.OA.B.2** **Fluently add and subtract within 20.** ~~By the end of Grade 2, know from memory all the sums of two one-digit numbers.~~	o Use mental strategies for addition and subtraction o ~~Recite from memory all sums of two one-digit numbers~~ o Apply mental strategies to add and subtract fluently within 20 o Fluently add within 20 o Fluently subtract within 20	Mathematical Practices: 3, 6, 7 Flipbook: Pg. 7 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 191-195; 10.7, 10.11, 10.12*	Sum, Addend, Difference, Operation

➡️**2.NBT.A.1**
 Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). Understand the following as special cases:
    a. **100 can be thought of as a group of ten tens – called a "hundred."**
    b. **The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).** (part b not assessed until Q3)
	o Explain the value of each digit in a two-digit number
	 o Identify a bundle of 10 ones as a "ten "
	 o Represent a two-digit number with tens and ones
		Go Math! 2.1, 2.2, 2.3, 2.4, 2.5
		 Mathematical Practices: 2, 4, 5, 6
		 Flipbook: Pg. 13
		
		 Supplement with
		 Teaching Student-Centered Mathematics
		 Van de Walle Pgs. 228-229; 11.6, 11.7, 11.8
			Hundreds, Tens, Ones, Digit

➡️**2.NBT.A.2** **Count** ~~within 1000~~ *within 100*; **skip-count by 5s, 10s,** ~~and 100s.~~	o Count ~~within 1000~~ *within 100* o Skip-count by 5s ~~to 1000~~ *to 100* o Skip-count by 10 s ~~to 1000~~ *to 100*	Go Math! 1.8, 1.9, 2.9 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 15	Digit, Hundreds, Tens, Ones
2.NBT.A.3 Read and write numbers up ~~to 1000~~ *to 100* using base-ten numerals, number names, and expanded form.	o Define expanded form o Explain how the digits in each place represent amounts of thousands, hundreds, tens, or ones o Read numbers to 100 using base ten numerals o Read numbers to 100 using number names o Read numbers to 100 using expanded form o Write numbers to 100 using base ten numerals o Write numbers to 100 using number names	Go Math! 1.4, 1.5, 1.6, 1.7, 2.7, 2.8, 2.9, 2.10 Mathematical Practices: 2, 4, 6, 7, 8 Flipbook: Pg. 16	Thousands, Hundreds, Tens, Ones, Expanded form, Standard form, Word form, Base ten, Digit

	o Write numbers to 100 using expanded form		
➡️2.NBT.A.4 Compare two ~~three-digit~~ *two-digit* numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	o Identify the value of each digit represented in a two-digit number o Use >, =, < symbols to record the results of comparisons o Compare two two-digit numbers based on place value of each digit o Use >, =, and < symbols to record the results of comparisons	Go Math! 2.11, 2.12 Mathematical Practices: 2, 4, 6, 7, 8 Flipbook: Pg. 17	Compare, Greater than (>), Less than (<), Equal to (=), Digit, Hundreds, Tens, Ones
➡️**2.NBT.B.5** **Students fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.**	o Use strategies for adding and subtracting based on place value o Use strategies for adding and subtracting based on properties of operations o Use strategies for adding and subtracting based on the relationship between addition and subtraction o Choose a strategy (place value, properties of operations, and/or the relationship between addition and subtraction) to fluently add and subtract within 100	Go Math! 4.1, 4.2, 4.3, 5.1, 5.2 Mathematical Practices: Flipbook: Pg. 18 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pg. 234 11.25, 11.26*	Sum, Addend, Difference, Digit, Regroup, Tens, Ones
2.NBT.B.8 Mentally add 10 or 100 to a given number between 100 and 900, and mentally subtract 10 or 100 from a given number between 100 and 900.	o Describe place value within 1000 o Apply knowledge of place value to mentally add or subtract 10 or 100 to/from a given number 100-900	Go Math! 2.10 Mathematical Practices: 6, 7, 8 Flipbook: Pg. 22 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 223, 228; 11.12, 11.15*	Thousands, Hundreds, Tens, Ones, Digit, Greater than, Less than
Relate Addition And Subtraction To Length **By the end of this unit of study, students will be able to estimate and then measure objects of different lengths utilizing appropriate standard units and use appropriate tools to measure.**
➡️2.MD.A.1 Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).	o Identify tools that can be used to measure length o Identify the unit of length for the tool used (inches, centimeters, feet, meters) o Determine which tool is most appropriate to use to measure the length of an object o Measure the length of objects, using appropriate tools	Go Math! 8.1, 8.2, 8.8, 9.1, 9.3 Mathematical Practices: 2, 4, 5, 6 Flipbook: Pg. 26 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 336-337; 15.2, 15.3*	Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter
2.MD.A.2 Measure the length of an object twice, using different standard length units for the two measurements; describe how the two	o Measure the length of objects with different units o Compare measurements of an object taken with two different units	Go Math! 8.6, 9.5 Mathematical Practices: 2, 3, 5, 6, 7 Flipbook: Pg. 28	Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter

Arizona State Standards	GESD Suggested Learning Targets	Curricular Resource Mathematical Practices	Key Vocabulary
measurements relate to the size of the unit chosen. Understand that depending on the size of the unit, the number of units for the same length varies.	o Describe why the measurements of an object taken with two different units are different o Explain the length of an object in relation to the size of the units used to measure it	*Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pg. 342 15.7, 15.8*	
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.	o Use strategies for estimating length o Identify the size of inches, feet, centimeters, and meters o Determine if an estimate is reasonable o Estimate lengths in units of inches, feet, centimeters, and meters	Go Math! 8.3, 8.7, 9.2, 9.6 Mathematical Practices: 2, 5, 6 Flipbook: Pg. 29 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 142, 264 8.34, 8.35, 12.10*	Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter, Estimate
2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	o Name standard length units o Compare lengths of two objects o Determine how much longer one object is than another in standard length units	Go Math! 9.7 Mathematical Practices: 2, 4, 6 Flipbook: Pg. 30	Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter
Measure and Estimating Lengths			
By the end of this unit of study, students will be able to work with time in 15-minute intervals.			
2.MD.C.7 (embed within **2.G.A.3**) Tell and write time from analog and digital clocks ~~to the nearest five minutes~~ *15-minutes*, using a.m. and p.m. *Work with time to the half hour to coincide with 2.G.A.3 halves.*	o Look for and make use of structure o Determine what time is represented by the combination of the numbers on the clock face and the position of the hands o Tell time using analog clocks to the half hour o ~~Tell time using digital clocks to the nearest 5 minutes~~ o Write time using analog clocks ~~and digital clocks~~ o Identify the hour and minute hand on an analog clock o Identify and label when a.m. and p.m. occur	Go Math! 7.8, 7.9, 7.10, 7.11 Mathematical Practices: 5, 6 Flipbook: Pg. 35	a.m., p.m., Midnight, Noon, Half past, Hour, Minute, Quarter past, Quarter 'til
Quarter 3			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource Mathematical Practices**	**Key Vocabulary**
Represent And Solve Problems Involving Addition And Subtraction			
By the end of this unit of study, students will be able to understand place value, use place value understanding and properties of operations to add and subtract within 100 with 2-step word problems, add and subtract within 20 fluently, and relate addition and subtraction to length.			
➡**2.OA.A.1** **Use addition and subtraction within 100 to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown.**	o Identify the unknown in an addition or subtraction word problem within 100 o Determine the appropriate operations needed to solve addition and subtraction	Go Math! 5.9, 5.10, 5.11 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 4	Sum, Addend, Difference, Equation, Operation, Solution

See Table 1.	problems in situations including add to, take from, put together, take apart, and compare o Use drawings or equations to represent one- and two-step word problems o Add and subtract within 100 to solve one- and two-step word problems with unknowns in any position o Write an addition and subtraction equation with a symbol for the unknown	*Supplement with* *About Teaching Mathematics* *Marilyn Burns Use of Variables Pgs. 147-156, Pgs. 171-173*	
2.MD.B.5 (embed within **2.OA.A.1**) Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same unit. *See Table 1.*	o Add and subtract lengths within 100 o Solve word problems involving lengths that are given in the same units o Solve word problems involving length that have equations with a symbol for the unknown number	Go Math! 8.5, 9.4 Mathematical Practices: 1, 2, 4, 5, 6, 8 Flipbook: Pg. 31	Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter, Equation
2.NBT.B.8 (embed within **2.OA.A.1**) Mentally add 10 or 100 to a given number between 100 and 900, and mentally subtract 10 or 100 from a given number between 100 and 900.	o Describe place value within 1000 o Apply knowledge of place value to mentally add or subtract 10 or 100 to/from a given number 100-900	Go Math! 2.10 Mathematical Practices: 6, 7, 8 Flipbook: Pg. 37	Thousands, Hundreds, Tens, Ones, Digit, Greater than, Less than
2.NBT.B.9 (embed within **2.OA.A.1**) Explain why addition and subtraction strategies work, using place value and the properties of operations (explanations may be supported by drawings or objects).	o Use addition and subtraction strategies using place value and properties of operations related to addition and subtraction o Explain why addition and subtraction strategies based on place value and properties of operations work	Go Math! 4.4, 4.5, 4.6, 5.4, 5.5 Mathematical Practices: 3, 4, 6, 7 Flipbook: Pg. 23	Sum, Addend, Difference, Digit, Regroup, Tens, Ones
2.MD.C.8 (embed within **2.OA.A.1**) Solve word problems involving collections of money, including dollar bills, quarters, dimes, nickels, and pennies. Record the total using $ and ¢ appropriately. *See Table 1.*	o Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies o Use $ and ¢ symbols appropriately	Go Math! 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 Mathematical Practices: 1, 2, 4, 5, 6, 8 Flipbook: Pg. 37	Cent sign (¢), Cent, Dollar sign ($), Dollar, Quarter, Dime, Nickel, Penny, Decimal point
➡**2.OA.B.2** **Fluently add and subtract within 20.** ~~By the end of grade 2, know from memory all the sums of two one-digit numbers.~~	o Use mental strategies for addition and subtraction ~~o Recite from memory all sums of two one-digit numbers~~ o Apply mental strategies to add and subtract fluently within 20 o Fluently add within 20 o Fluently subtract within 20	Go Math! Mathematical Practices: 3, 6, 7 Flipbook: Pg. 7 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 187-188; 10.1, 10.2, 10.3*	Sum, Addend, Difference Operation
Using Place Value to Add, Subtract with 3-Digit Numbers			

By the end of this unit of study, students will understand place value and use place value understanding and properties of operations to add and subtract.			

➡️**2.NBT.A.1**
Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). Understand the following as special cases:
  a. **100 can be thought of as a group of ten tens – called a "hundred."**
  b. **The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).**
	o Explain the value of each digit in a three-digit number
	o Identify a bundle of 10 tens as a "hundred "
	o Represent a three-digit number with hundreds, tens, and ones
	o Represent 100, 200, 300, 400, 500, 600, 700, 800, 900 with one, two, three, four, five, six, seven, eight, or nine hundreds and 0 tens and 0 ones
		Go Math!
		Mathematical Practices: 2, 4, 5, 6
		Flipbook: Pg. 13
		
		Supplement with
		Teaching Student-Centered Mathematics
		Van de Walle Pgs. 228, 229; 11.5, 11.8
			Hundreds, Tens, Ones, Digit

➡️**2.NBT.A.2** (embed 2.MD.C.8 using coins) **Count within 1000; skip-count by 5s, 10s, and 100s.**	o Count within 1000 o Skip-count by 5s to 1000 o Skip-count by 10 s to 1000 o Skip-count by 100s to 1000	Go Math! 1.8, 1.9, 2.9 Mathematical Practices: 2, 6, 7, 8 Flipbook: Pg. 15	Digit, Hundreds, Tens, Ones
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	o Define expanded form o Explain how the digits in each place represent amounts of thousands, hundreds, tens, or ones o Read numbers to 1000 using base ten numerals o Read numbers to 1000 using number names o Read numbers to 1000 using expanded form o Write numbers to 1000 using base ten numerals o Write numbers to 1000 using number names o Write numbers to 1000 using expanded form	Mathematical Practices: 2, 4, 6, 7, 8 Flipbook: Pg. 16 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pg. 218; 11.6, 11.7*	Thousands, Hundreds, Tens, Ones, Expanded form, Standard form, Word form, Base ten, Digit
➡️2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	o Identify the value of each digit represented in a three-digit number o Use >, =, < symbols to record the results of comparisons o Compare three two-digit numbers based on place value of each digit o Use >, =, and < symbols to record the results of comparisons	Mathematical Practices: 2, 4, 6, 7, 8 Flipbook: Pg. 17 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 228-229; 11.16, 11.17*	Compare, Greater than (>), Less than (<), Equal to (=) Digit, Hundreds, Tens, Ones
➡️**2.NBT.B.5** **Fluently add and subtract within 100 using strategies based on place value, properties of**	o Use strategies for adding and subtracting based on place value o Use strategies for adding and subtracting based on properties of operations	Mathematical Practices: 2, 4, 5, 6, 7, 8 Flipbook: Pg. 18 *Supplement with*	Sum, Addend, Difference, Digit, Regroup, Tens, Ones

operations, and/or the relationship between addition and subtraction.	o Use strategies for adding and subtracting based on the relationship between addition and subtraction o Choose a strategy (place value, properties of operations, and/or the relationship between addition and subtraction) to fluently add and subtract within 100	*Teaching Student-Centered Mathematics* *Van de Walle Pgs. 231-232* *11.20, 11.21, 11.23*	
➡**2.NBT.B.7** **Demonstrate understanding of addition and subtraction within 1000, 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 written form.** ***See Table 1.***	o Describe place value within 1000 o Decompose any number within 1000 into hundreds, tens, and ones o Choose an appropriate strategy for solving an addition or subtraction problem within 1000 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 o Use composition and decomposition of hundreds and tens when necessary to add and subtract within 1000	Go Math! 4.7 (review), 6.1, 6.2, 6.3, 6.4, 6.5 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 21 *Supplement with* *Teaching Student-Centered Mathematics* *Van De Walle Pgs. 233, 260-261; 11.24, 12.8, 12.9*	Addend, Difference, Sum, Regroup, Thousands, Hundreds, Tens, Ones, Digit, Equation, Operation
2.NBT.B.8 Mentally add 10 or 100 to a given number between 100 and 900, and mentally subtract 10 or 100 from a given number between 100 and 900.	o Describe place value within 1000 o Apply knowledge of place value to mentally add or subtract 10 or 100 to/from a given number 100-900	Go Math! 2.10 Mathematical Practices: 6, 7, 8 Flipbook: Pg. 22	Thousands, Hundreds, Tens, Ones, Digit, Greater than, Less than
Measure and Estimate Lengths			
By the end of this unit of study, students will be able to work with time in 10-minute intervals.			
2.MD.C.7 (embed within 2.G.A.3) Tell and write time from analog and digital clocks ~~to the nearest five minutes~~ *10-minutes*, using a.m. and p.m. *Work with time to the half hour to coincide with 2.G.A.3 halves.*	o Look for and make use of structure o Determine what time is represented by the combination of the number on the clock face and the position of the hands o Tell time using analog clocks to the half hour o ~~Tell time using digital clocks to the nearest 5 minutes~~ o Write time using analog clocks ~~and digital clocks~~ o Identify the hour and minute hand on an analog clock o Identify and label when a.m. and p.m. occur	Go Math! 7.8, 7.9, 7.10, 7.11 Mathematical Practices: 5, 6 Flipbook: Pg. 35	a.m., p.m., Midnight, Noon, Half past, Hour, Minute, Quarter past, Quarter 'til

Quarter 4			
Arizona State Standards	**GESD Suggested Learning Targets**	**Curricular Resource Mathematical Practices**	**Key Vocabulary**
Represent And Solve Problems Involving Addition And Subtraction			
By the end of this unit of study, students will be able to add and subtract within 20 fluently, use place value understanding and properties of operations to add and subtract within 100 with 2-step word problems, work with equal groups of objects to gain foundations for multiplication, and reason with shapes and their attributes.			
➡**2.OA.A.1** **Use addition and subtraction within 100 to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown.** ***See Table 1.***	o Identify the unknown in an addition or subtraction word problem within 100 o Determine the appropriate operations needed to solve addition and subtraction problems in situations including add to, take from, put together, take apart, and compare o Use drawings or equations to represent one- and two-step word problems o Add and subtract within 100 to solve one- and two-step word problems with unknowns in any position o Write an addition and subtraction equation with a symbol for the unknown	Go Math! Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 4 *Supplement with* *Teaching Student-Centered Mathematics* *Pgs. 282, 286 13.9, 13.11* *Investigations "Putting Together, Taking Apart" Investigation 1* *The Problem Solver T-13, T-15, T-18*	Sum, Addend, Difference, Equation, Operation, Solution
➡**2.OA.B.2** **Fluently add and subtract within 20. By the end of Grade 2, know from memory all the sums of two one-digit numbers.**	o Use mental strategies for addition and subtraction o Recite from memory all sums of two one-digit numbers o Apply mental strategies to add and subtract fluently within 20 o Fluently add and subtract within 20	Mathematical Practices: 3, 6, 7 Flipbook: Pg. 7 *Supplement with* *Teaching Student-Centered Mathematics* *Pgs. 196, 199-201; 10.13, 10.15, 10.16, 10.17*	Sum, Addend, Difference, Operation
2.OA.C.4 **Use addition to find the total number of objects arranged in rectangular arrays (with up to 5 rows and up to 5 columns). Write an equation to express the total as a sum of equal addends.**	o Generalize the fact that arrays can be written as repeated addition problems o Solve repeated addition problems to find the number of objects using rectangular arrays o Write an equation with repeated equal addends from an array	Go Math! 3.10, 3.11 Mathematical Practices: 2, 3, 7, 8 Flipbook: Pg. 11	Array, Sum, Addend, Difference, Equation
2.G.A.2 (embed within **2.OA.C.4**) Partition a rectangle into rows and columns of same-size rectangles and count to find the total number of rectangles.	o Define partition o Identify a row o Identify a column o Determine how to partition a rectangle into same-size squares or rectangles o Count to find the total number of same-size rectangles	Go Math! 11.6 Mathematical Practices: 2, 6, 8 Flipbook: Pg. 46	Partition, Row, Column, Rectangle, Square, Equal
Understand Place Value to Add/Subtract			
By the end of this unit of study, students will be able to use place value understanding and properties of operations to add and subtract.			

➡**2.NBT.A.1** **Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). Understand the following as special cases:** a. **100 can be thought of as a group of ten tens – called a "hundred."** b. **The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).**	o Explain the value of each digit in a three-digit number o Identify a bundle of 10 tens as a "hundred " o Represent a three-digit number with hundreds, tens, and ones o Represent 100, 200, 300, 400, 500, 600, 700, 800, 900 with one, two, three, four, five, six, seven, eight, or nine hundreds and 0 tens and 0 ones	Go Math! Mathematical Practices: 2, 4, 5, 6 Flipbook: Pg. 13 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 228, 229; 11.5, 11.8*	Hundreds, Tens, Ones, Digit
➡**2.NBT.B.5** **Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.**	o Use strategies for adding and subtracting based on place value o Use strategies for adding and subtracting based on properties of operations o Use strategies for adding and subtracting based on the relationship between addition and subtraction o Choose a strategy (place value, properties of operations, and/or the relationship between addition and subtraction) to fluently add and subtract within 100 o Fluently add and subtract within 100	Go Math! Mathematical Practices: 2, 4, 5, 6, 7, 8 Flipbook: Pg. 18 *Supplement with* *Teaching Student-Centered Mathematics* *Van de Walle Pgs. 240-261; 12.1, 12.5, 12.7, 12.9* *The Problem Solver Work Backwards T-89*	Sum, Addend, Difference, Digit, Regroup, Tens, Ones
2.NBT.B.6 Add up to three two-digit numbers using strategies based on place value and properties of operations. *Note: the standard algorithm for addition is not used until 4th grade.*	o Use strategies for adding two-digit numbers based on place value and properties of operations o Use strategies to add up to three two-digit numbers	Go Math! 4.11, 4.12 Mathematical Practices: 1, 2, 5, 6, 7 Flipbook: Pg. 20	Sum, Digit, Tens, Ones, Addend, Regroup
➡**2.NBT.B.7** **Demonstrate understanding of addition and subtraction within 1000, 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 written form.** *See Table 1.*	o Describe place value within 1000 o Decompose any number within 1000 into hundreds, tens, and ones o Choose an appropriate strategy for solving an addition or subtraction problem within 1000 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	Go Math! 6.6, 6.7, 6.8, 6.9, 6.10 Mathematical Practices: 1, 2, 3, 4, 5, 6, 7, 8 Flipbook: Pg. 21 *Supplement with* *The Problem Solver T-89*	Addend, Difference, Sum, Regroup, Thousands, Hundreds, Tens, Ones, Digit, Equation, Operation

	subtraction) to a written method (equation) and explain the reasoning used o Use composition and decomposition of hundreds and tens when necessary to add and subtract within 1000		
Measure and Estimate Lengths			
By the end of this unit of study, students will be able to measure/estimate lengths using standard units, represent and interpret data, and work with time.			
2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	o Look for and make use of structure o Determine what time is represented by the combination of the number on the clock face and the position of the hands o Tell time using analog clocks to the nearest 5 minutes o Tell time using digital clocks to the nearest 5 minutes o Write time using analog clocks and digital clocks o Identify the hour and minute hand on an analog clock o Identify and label when a.m. and p.m. occur	Go Math! 7.8, 7.9, 7.10, 7.11 Mathematical Practices: 5, 6 Flipbook: Pg. 35	a.m., p.m., Midnight, Noon, Half past, Hour, Minute, Quarter past, Quarter 'til
2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	o Read tools of measurement to the nearest unit o Represent measurement data on a line plot o Measure lengths of many objects to nearest whole unit o Measure lengths of objects by making repeated measurements of the same object o Create a line plot with a horizontal scale marked in whole numbers using measurements	Go Math! 8.9 Mathematical Practices: 4, 5, 6, 8 Flipbook: Pg. 38	Line plot, Foot, Inch, Measuring tape, Yardstick, Centimeter, Meter

Quarter Taught				**Essential Standards (➡Grade Level Guaranteed Standards)**
1	**2**	**3**	**4**	Operations and Algebraic Thinking (OA):
X	X	X	X	➡**2.OA.A.1** – Use addition and subtraction within 100 to solve one- and two-step word problems. Represent a word problem as an equation with a symbol for the unknown.
X	X	X	X	➡**2.OA.B.2** – Fluently add and subtract within 20. By the end of Grade 2, know from memory all sums of two one-digit numbers.
X			X	**2.OA.C.4** – Use addition to find the total number of objects arranged in rectangular arrays (with up to 5 rows and 5 columns). Write an equation to express the total as a sum of equal addends.
				Number and Operations in Base Ten (NBT):

X	X	X		➡**2.NBT.A.1** – Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones).
				    Understand the following as special cases:
				    a. 100 can be thought of as a group of ten tens—called a "hundred."
				    b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

X	X	X		➡**2.NBT.A.2** – Count within 1000; skip count by 5's, 10's and 100's.
X	X	X	X	➡**2.NBT.B.5** – Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
		X	X	➡**2.NBT.B.7** – Demonstrate understanding of addition and subtraction within 1000, 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.
				Geometry (G):
X				**2.G.A.3** – Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, fourths, half of, third of, fourth of, and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.

1	2	3	4	Supporting Standards
				**Operations and Algebraic Thinking (OA):**
X				2.OA.C.3 – Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by pairing objects or counting them by 2's).
				Number and Operations in Base Ten (NBT):
X	X	X		2.NBT.A.3 – Read and write numbers up to 1000 using base-ten numerals, number names, and expanded form.
	X	X		➡2.NBT.A.4 – Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
			X	2.NBT.B.6 – Add up to three two-digit numbers using strategies based on place value and properties of operations.
	X	X		2.NBT.B.8 – Mentally add 10 or 100 to a given number between 100 and 900, and mentally subtract 10 or 100 from a given number between 100 and 900.
	X	X		2.NBT.B.9 – Explain why addition and subtraction strategies work, using place value and the properties of operations (explanations may be supported by drawings or objects).
				Measurement and Data (MD):
	X			➡2.MD.A.1 – Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).
	X			2.MD.A.2 – Measure the length of an object twice, using different standard length units for the two measurements; describe how the two measurements relate to the size of the unit chosen. Understand that depending on the size of the unit, the number of units for the same length varies.
	X			2.MD.A.3 – Estimate lengths using units of inches, feet, centimeters, and meters.
	X			2.MD.A.4 – Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
		X		2.MD.B.5 – Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same unit.
X				2.MD.B.6 – Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, …, and represent whole-number sums and differences within 100 on a number line diagram.
X	X	X	X	2.MD.C.7 – Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
		X		2.MD.C.8 – Solve word problems involving collections of money, including dollar bills, quarters, dimes, nickels, and pennies. Record the total using $ and ¢ appropriately.
			X	2.MD.D.9 – Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
X				2.MD.D.10 – Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.
				Geometry (G):
X				2.G.A.1 – Identify and describe specified attributes of two-dimensional and three-dimensional shapes, according to the number and shape of faces, number of angles, and the number of sides and/or vertices. Draw two-dimensional shapes based on the specified attributes (e.g., triangles, quadrilaterals, pentagons, and hexagons).
			X	2.G.A.2 – Partition a rectangle into rows and columns of same-size rectangles and count to find the total number of rectangles.

Note: the header row above the table reads "Quarter Taught" spanning columns 1, 2, 3, 4.