Ganado Unified School District
Mathematics/4th Grade PACING Guide SY 2019 – 2020

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
Quarter 1 July 31 - October 3, 2019	Domain: **Number and Operations in Base Ten** Chapter 1 Place Value Chapter 2 Add and Subtract Whole Numbers Chapter 3 Understand Multiplication and Division		Domain: **Number and Operations in Base Ten** Chapter 4 Multiply with One-Digit Numbers Chapter 5 Multiply with Two-Digit Numbers Chapter 6 Divide by a One-Digit Number	
	Chapter 1 Place Value **Lesson 1**: Place Value	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.	How does place value help represent the value of numbers?	Students will identify the place value of digits in multi-digit numbers.	Academic/Content ○ digit ○ place value
	Lesson 2 Read and Write Multi-Digit Numbers			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Mathematical Practices** ○ Make sense of problems and	How does place value help represent the value of numbers?	Students will read and write multi-digit whole numbers.	Academic/Content ○ period ○ standard form ○ expanded form ○ word form

	persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 3 Compare Numbers			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How does place value help represent the value of numbers?	Students will compare numbers using a number line and a place-value chart.	Academic /Content ○ is equal to (=) ○ number line ○ is greater than (>) ○ is less than (<)
	Lesson 4 Order Numbers			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively.	How does place value help represent the value of numbers?	Students will order numbers by using a place-value chart and comparing the digit values.	Academic/Content ○ order

	○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 5 Use Place Value to Round			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.	How does place value help represent the value of numbers?	Students will estimate numbers by rounding.	Academic/Content ○ number line ○ round
	Lesson 6 Problem-Solving Investigation: Use the Four-Step Plan			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How does place value help represent the value of numbers?	Students will use the four-step plan to solve problems.	Academic/Content ○ multi-digit ○ Base Ten numerals ○ symbols ○ record results
	Chapter 2 Add and Subtract Whole Numbers **Lesson 1**	**Essential Question**	**Learning Objectives**	**Vocabulary**

	Addition Properties & Subtraction Rules			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	What strategies can I use to add or subtract?	Students will use addition properties and subtraction rules to add and subtract.	Academic/Content ○ Associative Property of Addition ○ Commutative Property of Addition ○ Identity Property of Addition ○ unknown
	Lesson 2 Addition & Subtraction Patterns			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	What strategies can I use to add or subtract?	Students will use patterns to solve addition and subtraction problems.	Academic/Content ○ pattern
	Lesson 3 Add and Subtract Mentally			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others	What strategies can I use to add or subtract?	Students will use mental math to add and subtract.	Academic / Content ○ hundreds ○ tens ○ thousands

	○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 4 Estimate Sums and Differences			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.3** Use place value understanding for multi-digit whole numbers. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision.	What strategies can I use to add or subtract?	Students will estimate sums and differences of multi-digit numbers.	Academic/Content ○ estimate ○ difference
	Lesson 5 Add Whole Numbers			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Attend to precision.	What strategies can I use to add or subtract?	Students will add multi-digit whole numbers.	Academic/Content ○ regroup
	Lesson 6 Subtract Whole Numbers			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision.	What strategies can I use to add or subtract?	Students will subtract multi-digit whole numbers.	Academic / Content ○ minuend ○ subtrahend

	○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.			
	Lesson 7 Subtract Across Zeros			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	What strategies can I use to add or subtract?	Students will subtract multi-digit numbers when some digits are zero.	Academic/Content ○ minuend ○ regroup ○ subtrahend
	Lesson 8 Problem-Solving Investigation: Draw a Diagram			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically.	What strategies can I use to add or subtract?	Students will solve problems by drawing a diagram.	Academic/Content ○ add ○ subtract ○ standard algorithm ○ multi-digit
	Lesson 9 Solve Multi-Step Word Problems			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.OA.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the	What strategies can I use to add or subtract?	Students will solve multi-step word problems using addition and subtraction.	Academic/Content ○ equation ○ variable

	reasonableness of answers using mental computation and estimation strategies including rounding. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.			
	Chapter 3 Understand Multiplication and Division **Lesson 1** Relate Multiplication and Division	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How are multiplication and division related?	Students will understand how multiplication and division are related.	Academic/Content ○ dividend ○ divisor ○ factor ○ product ○ quotient ○ fact family
	Lesson 2 Relate Division and Subtraction			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.6** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations,	How are multiplication and division related?	Students will relate division and subtraction.	Academic/Content ○ repeated subtraction

	and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.			
	Lesson 3 Multiplication as Comparison			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.OA.1** Interpret a multiplication equation as a comparison, e.g., interpret 35=5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and express regularity in repeated reasoning.	How are multiplication and division related?	Students will recognize the comparison of two groups as another strategy to use when multiplying.	Academic/Content ○ bar diagram
	Lesson 4 Compare to Solve Problems			
McGraw-Hill My Math:	**4.OA.2** Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol	How are multiplication and division related?	Students will use comparison to solve problems.	Academic / Content ○ divide ○ multiply

Go Digital at connected.mcgraw-hill.com	for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.			○ add ○ compare ○ subtract
	Lesson 5 Multiplication Properties and Division Rules			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How are multiplication and division related?	Students will use multiplication properties and division rules.	Academic/Content ○ Commutative Property of Multiplication ○ Identity Property of Multiplication ○ Zero Property of Multiplication
	Lesson 6 Associative Property of Multiplication			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of	How are multiplication and division related?	Students will use the Associative Property of Multiplication to solve problems.	Academic/Content ○ Associative Property of Multiplication

	operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure.			
	Lesson 7 Factors and Multiples			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.OA.4** Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Look for and make use of structure. Look for and express regularity in repeated reasoning.	How are multiplication and division related?	Students will find factors and multiples of whole numbers.	Academic / Content ○ decompose ○ multiple
	Lesson 8 Problem-Solving Investigation			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.OA.2** Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the	How are multiplication and division related?	Students will check answers for reasonableness.	Academic/Content ○ multiply ○ divide ○ compare

	problem, distinguishing multiplicative comparison from additive comparison. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically.			○ equation ○ addition ○ symbol
	Chapter 4 Multiply with One-Digit Numbers **Lesson 1** Multiples of 10, 100, and 1,000	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can I communicate multiplication?	Students will multiply multiples of 10, 100, and 1,000 using basic facts and patterns.	Academic / Content ○ multiples ○ patterns
	Lesson 2 Round to Estimate Products			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.3** Use place value understanding to round multi-digit whole numbers to any place. **Mathematical Practices** ○ Make sense of problems and persevere in solving them.	How can I communicate multiplication?	Students will estimate products by rounding.	Academic / Content ○ place value ○ round

	○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Use appropriate tools strategically. ○ Look for and make use of structure.			
	Lesson 3 – Hands On: Use Place Value to Multiply			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics.	How can I communicate multiplication?	Students will explore multiplication using models.	Academic / Content ○ multiply ○ digit ○ properties ○ equation ○ operations ○ array ○ models
	Lesson 4 - Hands On: Use Models to Multiply			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Make sense of problems and persevere in solving them.	How can I communicate multiplication?	Students will explore multiplication using area models and partial products.	Academic / Content ○ Partial products

	○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 5 Multiply by a Two-Digit Number			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can I communicate multiplication?	Students will multiply a two-digit number by a one-digit number.	Academic / Content ○ multiply ○ digit ○ properties ○ equation ○ operations ○ array ○ models
	Lesson 6 Hands-On: Model Regrouping			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices**	How can I communicate multiplication?	Students will explore multiplication with regrouping using models.	Academic/Content ○ regroup

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.			
	Lesson 7 The Distributive Property			
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can I communicate multiplication?	Students will use the Distributive Property to make multiplication easier.	Academic/Content ○ Distributive Property
	Lesson 8 Multiply with Regrouping			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices**	How can I communicate multiplication?	Students will multiply a two-digit number by a one-digit number.	Academic/Content ○ factor ○ product ○ regroup

	○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 9 Multiply by a Multi-Digit Number			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can I communicate multiplication?	Students will multiply a multi-digit number by a one-digit number.	Academic/Content ○ partial products
	Lesson 10 Problem-Solving Investigation: Estimate or Exact Answer			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	How can I communicate multiplication?	Students will determine if a problem needs an estimate or an exact answer.	Academic/Content ○ four-step plan ○ estimate ○ exact

	Mathematical Practices ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Look for and express regularity in repeated reasoning.			
	Lesson 11 Multiply Across Zeros			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can I communicate multiplication?	Students will multiply multi-digit numbers with zeros by a one-digit number.	Academic/Content ○ Distributive Property ○ estimate ○ multiply ○ partial products
	Chapter 5 Multiply With Two-Digit Numbers **Lesson 1** Multiply by Tens	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at connected.mcgraw-hill.com	**4.NBT.5** Multiply a whole number of up to four digits by a one-digit whole number and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equation, rectangular arrays, and /or area models.	How can I multiply by a two-digit number?	Students will use properties and algorithms to multiply by tens.	Academic/Content ○ multiply ○ digit ○ place value

	Mathematical Practices ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 2 Estimate Products			
	4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place value. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How can I multiply by a two-digit number?	Students will estimate products by rounding.	Academic/Content ○ estimate ○ digit
	Lesson 3 Hands On: Use the Distributive Property to Multiply			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by	How can I multiply by a two-digit number?	Students will explore multiplying by two-digit numbers.	Academic/Content ○ multiply ○ digit ○ operations ○ equation ○ arrays

	using equation, rectangular arrays, and /or area models. **Mathematical Practices:** ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Look for and make use of structure.			○ model
	Lesson 4 Multiply by a Two-Digit Number			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equation, rectangular arrays, and /or area models. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and make use of structure.	How can I multiply by a two-digit number?	Students will multiply two, two-digit numbers.	Academic/Content ○ multiply ○ digit ○ operations ○ equation ○ arrays ○ model
	Lesson 5 Solve Multi-Step Word Problems			
	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainder must be interpreted, Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	How can I multiply by a two-digit number?	Students will use multiplication two solve multi-step word problems.	Academic/Content ○ multistep ○ multiply ○ divide ○ addition ○ subtraction ○ operations

	Mathematical Practices ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 6 Problem Solving Investigation: Make a Table			
	4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equation, rectangular arrays, and /or area models. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure. ○ Look for express regularity in repeated reasoning.	How can I multiply by a two-digit number?	Students will solve problems by making a table.	Academic/Content ○ multiply ○ digit ○ Place Value ○ operations ○ equation ○ arrays ○ model
	Chapter 6 Divide by a One-Digit Number **Lesson 1** Divide Multiples of 10, 100, and 1,000.	**Essential Question**	**Learning Objectives**	**Vocabulary**
	4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten	How does division affect numbers?	Students will use basic facts and patterns to divide mentally.	Academic/Content ○ multi-digit ○ represent

	times what it represents in the place to its right. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			○ place value
	Lesson 2 Estimate Quotients			
	4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place value. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for express regularity in repeated reasoning.	How does division affect numbers?	Students will estimate quotients, using compatible numbers, basic facts, and place value.	Academic / Content ○ compatible numbers ○ multi-Digit ○ place Value
	Lesson 3 Hands On: Use Place Value to Divide			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between	How does division affect numbers?	Students will use place value and models to explore dividing by one digit numbers.	Academic / Content ○ remainder ○ multi-digit ○ dividends ○ divisor

	multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure.			○ operations ○ division ○ properties ○ equation ○ arrays ○ models
	Lesson 4 Problem-Solving Investigation: Make a Model			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure.	How does division affect numbers?	Students will solve problems by making a model.	Academic/Content ○ quotients ○ remainder ○ dividends ○ divisors ○ properties ○ multiplication ○ division ○ equation ○ arrays ○ models
	Lesson 5 Divide with Remainders			

	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure.	How does division affect numbers?	Students will divide with remainders and check using multiplication and addition.	Academic/Content ○ quotients ○ remainder ○ dividends ○ divisors ○ properties ○ multiplication ○ division ○ equation ○ arrays ○ models
	Lesson 6 Interpret Remainders			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure.	How does division affect numbers?	Students will interpret what the remainder means in the context of a division problem.	Academic/Content ○ quotients ○ remainder ○ dividends ○ divisors ○ properties ○ multiplication ○ division ○ equation ○ arrays ○ models

	Lesson 7 Place the First Digit			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for express regularity in repeated reasoning.	How does division affect numbers?	Students will determine where to place the first digit when dividing.	Academic/Content ○ quotients ○ remainder ○ dividends ○ divisors ○ properties ○ multiplication ○ division ○ equation ○ arrays ○ models
	Lesson 8 Hands On: Distributive Property and Partial Quotients			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices:**	How does division affect numbers?	Students will use the Distributive Property and partial quotients to divide.	Academic/Content ○ partial quotients ○ quotients ○ remainder ○ dividends ○ divisors ○ properties ○ multiplication ○ division ○ equation ○ arrays

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision. ○ . Look for express regularity in repeated reasoning.			○ models
	Lesson 9 Divide Greater Numbers			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ . Look for express regularity in repeated reasoning.	How does division affect numbers?	Students will solve division problems with greater numbers.	Academic/Content ○ hundreds ○ ones ○ tens ○ thousands
	Lesson 10 Quotients with Zeros			
	4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies base	How does division affect numbers?	Students will solve division problems results in quotients that have zeros,	Academic/Content ○ dividend ○ divisor

	on place value, the properties of operations, and/or the relationship between multiplication and division, illustrate and explain the calculation by using equations, rectangular arrays, and/or are a models **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision.			○ quotient ○ remainder
	Lesson 11 Solve Multi-Step Word Problems			
	4.OA.3 Solve multistep word problems posed with whole numbers having whole-number answers using the four operations, including problems in which remainder must be interpreted. Represent these problems using equations using letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision.	How does division affect numbers?	Students will solve multi-step word problems using more than one operation.	Academic/Content ○ equation ○ parentheses
Quarter 2 October 8 – December 20,	Domain: **Operations and Algebraic Thinking** ○ Chapter 7 Patterns and Sequences		Domain: **Number and Operations - Fractions** ○ Chapter 8 Fractions ○ Chapter 9 Operations with Fractions	

2019			○ Chapter 10 Fractions and Decimals	
	Chapter 7 Patterns and Sequences **Lesson 1** Pattern & Non-Numeric Patterns	**Essential Question**	**Learning Objectives**	**Vocabulary**
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and make use of structure. ○ . Look for express regularity in repeated reasoning.	How are patterns used in mathematics?	Students will describe non-numeric growing and repeating patterns.	Academic/Content ○ non-numeric pattern ○ pattern
	Lesson 2 Numeric Patterns			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Attend to precision. ○ Look for and make use of structure.	How are patterns used in mathematics?	Students will identify, describe, and extend numeric patterns.	Academic/Content ○ non-numeric pattern ○ rule
	Lesson 3 Sequences			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent	How are patterns used in mathematics?	Students will extend patterns and write observations about the pattern.	Academic/Content ○ sequence

	features of the pattern that were not explicit in rule itself. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.			○ term
	Lesson 4 Problem-Solve Investigation for a pattern			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	How are patterns used in mathematics?	Students will look for a pattern to solve problems.	Academic/Content ○ patterns ○ rule
	Lesson 5 Addition and Subtraction Rules			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself.	How are patterns used in mathematics?	Students will find and use rules to write addition and subtraction equations.	Academic/Content ○ input ○ output

	Mathematical Practices: ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 6 Multiplication and Division Rules			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How are patterns used in mathematics?	Students will find and use rules to write multiplication and division equations.	Academic/Content ○ division ○ multiplication
	Lesson 7 Order of Operation			
	4.OA.3 Solve multistep word problems posed with whole numbers having whole-number answers using the four operations, including problems in which remainder must be interpreted. Represent these problems using equations using letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Mathematical Practices:**	How are patterns used in mathematics?	Students will use the order of operations to solve problems.	Academic/Content ○ order of operations ○ parentheses

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with Mathematics. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 8 Hands On: Equations with Two Operations			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with Mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.	How are patterns used in mathematics?	Students will explore equations with two operations.	Academic/Content ○ equation ○ operation
	Lesson 9 Equations with Multiple Operations			
	4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in rule itself. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others.	How are patterns used in mathematics?	Students will use tables to recognize and write equations with two or more operations.	Academic/Content ○ equation ○ operation

	○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.			

	Chapter 8 Fractions **Lesson 1** Factors and Multiples	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.OA.4** Find all factor pairs for a whole number in the range of 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range of 1-100 is a multiple of a given one-digit number. Mathematical Practices: ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How can different fractions name the same amount?	Students will find factors and multiples of whole numbers.	Academic/Content ○ collaborative conversations ○ factor pairs
	Lesson 2 Prime and Composite Numbers			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.OA.4** Find all factor pairs for a whole number in the range of 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range of 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range of 1-100 is prime or composite. **Mathematical practices:**	How can different fractions name the same amount?	Students will determine if a number is prime or composite.	Academic/Content ○ composite number ○ prime number

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.			
	Lesson 3 Hands On: Model Equivalent Fractions			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.1** Explain why a fractions a/b is equivalent to a fraction (n x a)/(n x b) by using visual fractions models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and express regularity in repeated reasoning.	How can different fractions name the same amount?	Students can explore equivalent fractions.	Academic/Content ○ denominator ○ equivalent fractions ○ numerator
	Lesson 4 Equivalent Fractions			
McGraw-Hill My Math: Go Digital at:	**4.NF.1** Explain why a fractions a/b is equivalent to a fraction (n x a)/(n x b) by using visual fractions models, with attention to how the number and size of the parts differ	How can different fractions name the same amount?	Students will find equivalent fractions.	Academic / Content ○ denominator

Connected.mcgraw-hill.com	even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Look for and make use of structure. ○ Look for and express regularly in repeated reasoning.			○ equivalent fractions ○ numerator
	Lesson 5 Simplest Form			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.1** Explain why a fractions a/b is equivalent to a fraction (n x a)/(n x b) by using visual fractions models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics ○ Attend to precision. ○ Look for and make use of structure	How can different fractions name the same amount?	Students will write a fraction in simplest form.	Academic / Content ○ greatest common factor ○ simplest form
	Lesson 6 Compare and Order Fractions			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2.	How can different fractions name the same amount?	Students will compare and order fractions.	Academic / Content ○ least common multiple

	Recognize that comparisons are valid only when to two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision.			
	Lesson 7 Use Benchmark Fractions to Compare and Order			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when to two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics ○ Use appropriate tools strategically. ○ Look for and make use of structure.	How can different fractions name the same amount?	Student will use benchmark fractions to compare and order numbers.	Academic / Content ○ benchmark fractions

	Lesson 8 Problem Solving Investigation: Use Logical Reasoning			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when to two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. **Mathematical Practices:** o Make sense of problems and persevere in solving them. o Reason abstractly and quantitatively. o Construct viable arguments and critique the reasoning of others. o Use appropriate tools strategically.	How can different fractions name the same amount?	Students will use logical reasoning to solve problems.	Academic / Content
	Lesson 9 Mixed Numbers			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3b** Decompose a fraction into a sum of fractions with the same denominators in more than one way, recording each decomposition by an equation. Justify decompositions, e.g. by using a visual fraction model. **Mathematical Practices:** o Make sense of problems and persevere in solving them. o Reason abstractly and quantitatively. o Construct viable arguments and critique the reasoning of others. o Model with mathematics. o Use appropriate tools strategically. o Attend to precision.	How can different fractions name the same amount?	Students will represent mixed numbers by decomposing them into a sum of whole numbers and unit fractions.	Academic / Content o mixed numbers

	○ Look for and make use of structure.			
	Lesson 10 Mixed Numbers and Improper Fractions			
	4. NF.3 Understand a fraction a/b with a>1 as a sum of fractions 1/b. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularly in repeated reasoning.	How can different fractions name the same amount?	Students will write mixed numbers and improper fractions.	Academic / Content ○ improper fractions
	Chapter 9 Operations with Fractions **Lesson 1** Hands on: Use Models to Add Like Fractions	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3a** Understand Addition from unit of fractions by applying and extending previous understandings of operations on whole numbers. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure. ○ Look for and express regularly in repeated reasoning.	How can I use operations to model real-world fractions?	Students will use models to add like fractions.	Academic / Content ○ like fractions
	Lesson 2 Add Like Fractions			

McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3b** Decompose a fraction into a sum of fractions with the same denominators in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using visual fractions model. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How can I use operations to model real-world fractions?	Students will add like fractions.	Academic / Content ○ denominator ○ numerator ○ simplify ○ greatest common factor ○ like fractions
	Lesson 3: Hands on: Use Models to Subtract Like Fractions			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3a** Understand Addition from unit of fractions by applying and extending previous understandings of operations on whole numbers. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Look for and make use of structure. ○ Look for and express regularly in repeated reasoning.	How can I use operations to model real-world fractions?	Students will use models to subtract like fractions.	Academic / Content ○ addition ○ units ○ fractions ○ operations
	Lesson 4 Subtract Like Fractions			
McGraw-Hill My Math: Go Digital at:	**4.NF.3a** Understand Addition from unit of fractions by applying and extending previous understandings of operations on whole numbers.	How can I use operations to model real-world fractions?	Students will subtract like fractions.	Academic / Content ○ like fractions ○ simplest form

Connected.mcgraw-hill.com	**Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.			
	Lesson 5 Problem Solving Investigations: Work Backward			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.3d** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fractions models and equations to represent the problem. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically.	How can I use operations to model real-world fractions?	Students will work backwards to solve problems.	Academic / Content ○ work backwards ○ fractions ○ denominations ○ visual models ○ equations ○ represent
	Lesson 6 Add Mixed Numbers			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3c** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. **Mathematical Practices:**	How can I use operations to model real-world fractions?	Students will add mixed numbers.	Academic / Content ○ Associative Property ○ decompose ○ equivalent fractions ○ mixed number

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and make use of structure. ○ Look for and express regularly in repeated reasoning.			
	Lesson 7 Subtract Mixed Numbers			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.NF.3c** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and make use of structure. ○ Look for and express regularly in repeated reasoning.	How can I use operations to model real-world fractions?	Students will subtract mixed numbers.	Academic / Content ○ equivalent fractions ○ denominators ○ mixed number ○ properties ○ operations ○ addition ○ subtraction
	Lesson 8 Hands on: Model Fractions and Multiplication			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.4a** Understand a fraction a/b as a multiple of 1/b. Mathematical Practices: ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision ○ Look for and make sure of structure.	How can I use operations to model real-world fractions?	Students will use models to multiply fractions.	Academic / Content ○ fraction ○ multiple ○ variable

	Lesson 9 Multiply Fractions by Whole Numbers			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.4b** Understanding a multiple a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision ○ Look for and express regularly in repeated reasoning.	How can I use operations to model real-world fractions?	Students will multiply fractions by whole numbers.	Academic / Content ○ product ○ multiple ○ fraction ○ variable
	Chapter 10 Fractions and Decimals **Lesson 1** Hands on: Place Value Through Tenths and Hundredths	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.6** Use decimal notation for fractions with denominators 10 or 100. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	How are decimals and fractions related?	Students will explore using place-value charts and grids to model decimals.	Academic / Content ○ decimal ○ tenth ○ hundredths
	Lesson 2 Tenths			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.6** Use decimal notation for fractions with denominators 10 or 100. **Mathematical Practices**	How are decimals and fractions related?	Students will model and describe tenths as part of the base-ten system.	Academic / Content ○ tenths

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 3 Hundredths			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.6** Use decimal notation for fractions with denominators 10 or 100. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How are decimals and fractions related?	Students will model and describe hundredths as part of the base-ten system.	Academic / Content ○ hundredths
	Lesson 4: Hands on: Model Decimals and Fractions			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective 10 and 100. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively.	How are decimals and fractions related?	Students will explore using grids and number lines to model the relationship between decimals and fractions.	Academic / Content ○ express ○ fraction ○ denominator ○ technique ○ respective ○ equivalent

	○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.			
	Lesson 5 Decimals and Fractions			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective 10 and 100. **Mathematical Practices** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	How are decimals and fractions related?	Students will identify, read, and write tenths and hundredths as decimals and fractions.	Academic / Content ○ fraction ○ denominator ○ technique ○ respective ○ equivalent
	Lesson 6 Use Place Value and Models to Add			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective 10 and 100. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics.	How are decimals and fractions related?	Student will use place value and equivalent fractions to add two fractions with respective denominators 10 and 100.	Academic / Content ○ like fractions ○ denominator ○ technique ○ respective ○ fraction ○ equivalent

	○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.			
	Lesson 7 Compare and Order Decimals			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.7** Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, <, and justify the conclusions, e.g., by using a visual model. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and make use of structure.	How are decimals and fractions related?	Students will compare and order decimals to hundredths by reasoning about their size.	Academic / Content ○ Place Value ○ decimal ○ comparisons ○ justify ○ visual model ○ hundredths ○ reasoning ○ record
	Lesson 8 Problem Solving Investigations: Extra or Missing Information			

McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4. NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective 10 and 100. **Mathematical Practices** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others.	How are decimals and fractions related?	Students will find extra or missing information when solving problems.	Academic / Content ○ express ○ fraction ○ denominator ○ technique ○ respective

	○ Attend to precision. ○ Look for and express regularity in repeated reasoning.			
Quarter 3 Jan. 7 - Mar 13 2020	Domain: **Measurement and Data** ○ Chapter 11 Customary Measurement ○ Chapter 12 Metric Measurement ○ Chapter 13 Perimeter and Area		Domain: **Geometry** ○ Chapter 14 Geometry	
	Chapter 11 Customary Measurement **Lesson 1** Customary Units of Length	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units within one system of units (including km, m, cm; kg, g, lb. oz; l, ml; hr, min, sec,). Within a single system of measurement, express measurement in a larger unit in terms of a smaller unit. Record measurement equivalents I a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	Why do we convert measurement?	Students will estimate and measure length using customary units.	Academic / Content ○ customary system ○ yard (yd) ○ foot (ft)
	Lesson 2 Convert Customary Units of Length			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:**	Why do we convert measurement?	Students will convert customary units of length	Academic / Content ○ convert ○ mile (mi.)

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 3 Customary Units of Capacity			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	Why do we convert measurement?	Students will estimate and measure customary capacities.	Academic / Content ○ capacity ○ cup (c) ○ fluid ounce (fl oz) ○ gallon (ga.) ○ pint (pt) ○ quart (qt)
	Lesson 4 Convert Customary Units of Capacity			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in	Why do we convert measurement?	Students will convert customary units of capacity.	Academic / Content ○ capacity ○ convert ○ is equal to (=)

	terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			○ is greater than (>) ○ is less than (<)
	Lesson 5 Customary Units of Weight			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	Why do we convert measurement?	Students will estimate and measure customary units of weight.	Academic / Content ○ ounce ○ pound ○ ton ○ weight
	Lesson 6 Convert Customary Units of Weight			
McGraw-Hill My Math: Go Digital at:	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.)	Why do we convert measurement?	Students will convert customary units of weight.	Academic / Content ○ capacity ○ convert ○ ounce

Connected.mcgraw-hill.com	Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			○ pound ○ ton ○ weight
	Lesson 7 Convert Units of Time			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	Why do we convert measurement?	Students will convert units of time	Academic / Content ○ seconds ○ minutes ○ hour ○ time ○ Analog time ○ digital time
	Lesson 8 Display Measurement Data in a Line Plot			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in	Why do we convert measurement?	Students will display measurement data in a line plot.	Academic / Content ○ line plot ○ data ○ tally

	terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.			
	Lesson 9 Solve Measurement Problems			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure.	Why do we convert measurement?	Students will solve problems involving measurement.	Academic / Content ○ fraction
	Lesson 10 Problem – Solving Investigation: Guess, Check, and Revise			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	Why do we convert measurement?	Students will solve problems using the guess, check, and revise strategy.	Academic / Content ○ Guess, check, and revise strategy

	Mathematical Practices: o Make sense of problems and persevere in solving them. o Model with mathematics. o Use appropriate tools strategically. o Attend to precision. o Look for and make use of structure.			
	Chapter 12 Metric Measurement **Lesson 1** Metric Units of Length	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.1** Know relative sizes of measurement units Within one system of measurement (including km, m, com, kg, g: lb., oz; l, ml,; hr, min, sec.) Within a single system of measurements, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. **4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. **Mathematical Practices:** o Reason abstractly and quantitatively. o Construct viable arguments and critique the reasoning of others. o Model with mathematics. o Use appropriate tools strategically. o Attend to precision. o Look for and express regularity in repeated reasoning.	How can conversion of measurements help me solve real-world problems?	Students will estimate and measure lengths within the metric system	Academic / Content o centimeter o kilometer o meter o metric system o millimeter

	Lesson 2 Metric Units of Capacity			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Look for and express regularity in repeated reasoning.	How can conversion of measurements help me solve real-world problems?	Students will estimate and measure metric capacities.	Academic / Content ○ liter (L) ○ milliliter (mL)
	Lesson 3 Metric Units of Mass			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	How can conversion of measurements help me solve real-world problems?	Students will estimate and measure mass and learn the difference between weight and mass.	Academic / Content ○ gram ○ kilogram ○ mass

	Lesson 4 Problem – Solving Investigation: Make an Organized List			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. **Mathematical practices:** o Reason abstractly and quantitatively. o Make sense of problems and persevere in solving them. o Construct viable arguments and critique the reasoning of others. o Model with mathematics. o Use appropriate tools strategically.	How can conversion of measurements help me solve real-world problems?	Students will make an organized list to solve problems.	Academic / Content o organize o combination
	Lesson 5 Convert Metric Units			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. **Mathematical practices:** o Reason abstractly and quantitatively. o Construct viable arguments and critique the reasoning of others. o Model with mathematics. o Attend to precision.	How can conversion of measurements help me solve real-world problems?	Students will convert metric units.	Academic / Content o convert o symbols
	Lesson 6 Solve Measurement Problems			

McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.2** Use the four operations to solve word problems involving distances, intervals to time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurement given in larger unit in terms of s smaller unit. Record measurement equivalents in a two-column table. **Mathematical practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematic. ○ Attend to precision.	How can conversion of measurements help me solve real-world problems?	Students will solve problems involving measurement.	Academic / Content ○ Metric system ○ convert ○ capacity ○ length ○ mass ○ units ○ record measurement ○ equivalent ○ operations ○ intervals
	Chapter 13 Perimeter and Area **Lesson 1** Perimeter	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	Why is it important to measure perimeter and area?	Students will find the perimeter of a figure.	Academic / Content ○ perimeter ○ distance ○ length ○ width
	Lesson 2 Problem-Solving Investigation: Solve a simpler Problem.			

McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Construct viable arguments and critique the reasoning of others. ○ Reason abstractly and quantitatively. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	Why is it important to measure perimeter and area?	Students will solve a simpler problem to solve problems.	Academic / Content ○ perimeter ○ units
	Lesson 3 Hands On: Model Area			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	Why is it important to measure perimeter and area?	Students will explore the area of a figure.	Academic / Content ○ area ○ square unit ○ unit square
	Lesson 4 Measure Area			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **Mathematical practices:**	Why is it important to measure perimeter and area?	Students will find the area of rectangles and squares.	Academic / Content ○ area ○ perimeter ○ formula

	○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematic. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.			
	Lesson 5 Relate Area and Perimeter			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **Mathematical Practices:** ○ Make sense of problems and persevere in solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Attend to precision.	Why is it important to measure perimeter and area?	Students will relate area to perimeter.	Academic / Content ○ area ○ perimeter
	Chapter 14 Geometry **Lesson 1** Draw Points, Lines, and Rays	**Essential Question**	**Learning Objectives**	**Vocabulary**
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Connect viable argument and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision.	How are different ideas about geometry connected?	Students will draw points, lines, line segments, and rays and identify these in two-dimensional figures.	Academic / Content ○ line ○ line segment ○ endpoint ○ point ○ ray
	Lesson 2 Draw Parallel &Perpendicular Lines			

McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Make sense of problems and persevere. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	How are different ideas about geometry connected?	Students will draw parallel, intersecting, and perpendicular lines and identify these in two-dimensional figures.	Academic / Content ○ parallel ○ perpendicular ○ intersecting
	Lesson 3 Hands On: Model Angles			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.5a** An angle is measured with reference to a circle with its center at the common endpoints of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Make sense of problems and preserve to solving them. ○ Connect viable argument and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and express regularity in repeated reasoning.	How are different ideas about geometry connected?	Students will understand concepts of angles and angle measurement.	Academic / Content ○ angle
	Lesson 4 Classify Angles			
	4.MD.5b An angle that turns through *n* one-degree angles is said to be have an angle measure of *n* degrees.	How are different ideas about geometry connected?	Students will use concepts of angle measurements to classify angles.	Academic / Content ○ degree

	Mathematical Practices: ○ Make sense of problems and preserve to solving them. ○ Reason abstractly and quantitatively. ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.			○ one-degree angle ○ right angle ○ acute angle ○ obtuse angle
	Lesson 5 Measure Angles			
	4.MD.6 Measure angles in whole number degree using a protractor. **Mathematical Practices:** ○ Construct viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure	How are different ideas about geometry connected?	Students will use a protractor to measure angles to the nearest degrees.	Academic / Content ○ angle ○ degree
	Lesson 6 Draw Angles			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.MD.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Construct viable arguments and critique the reasoning of others. ○ Use appropriate tools strategically. ○ Attend to precision.		Students will use a protractor to draw angles of a specified measure.	Academic / Content ○ angle ○ ray
	Lesson 7 Solve Problems with Angles			
McGraw-Hill My Math: Go Digital at:	**4.G.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel.	How are different ideas about geometry connected?	Students will solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical situations.	Academic / Content ○ angle ○ ray

Connected.mcgraw-hill.com	**Mathematical Practices:** o Reason abstractly and quantitatively. o Connect viable argument and critique the reasoning of others. o Model with mathematics. o Use appropriate tools strategically. o Attend to precision.			
	Lesson 8 Triangles			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the pressure or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangle. **Mathematical Practices:** o Reason abstractly and quantitatively. o Connect viable argument and critique the reasoning of others. o Model with mathematics. o Use appropriate tools strategically. o Attend to precision. o Look for and make use of structure	How are different ideas about geometry connected?	Students will classify triangles based on angle measure and describe triangles using their attributes.	Academic / Content o acute triangle o obtuse triangle o right triangle
	Lesson 9 Quadrilaterals			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. **Mathematical Practices:** o Reason abstractly and quantitatively. o Model with mathematics. o Use appropriate tools strategically. o Look for and make use of structure o Look for and make use of structure. o Attend to precision.	How are different ideas about geometry connected?	Students will classify quadrilaterals using their attributes.	Academic / Content o parallelogram o rectangle o rhombus o trapezoid o square

	Lesson 10 Draw Lines of Symmetry			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines symmetry. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Connect viable arguments and critique the reasoning of others. ○ Model with mathematics. ○ Attend to precision. ○ Look for and make use of structure.	How are different ideas about geometry connected?	Students will identify figures with line symmetry and draw lines of symmetry.	Academic / Content ○ line of symmetry ○ line symmetry
	Lesson 11 Problem-Solving Investigation: Make a Model			
McGraw-Hill My Math: Go Digital at: Connected.mcgraw-hill.com	**4.G.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these in two-dimensional figures. **Mathematical Practices:** ○ Reason abstractly and quantitatively. ○ Make sense of problems and persevere ○ Connect viable argument and critique the reasoning of others. ○ Model with mathematics. ○ Use appropriate tools strategically. ○ Attend to precision. ○ Look for and make use of structure. ○ Look for and express regularity in repeated reasoning.	How are different ideas about geometry connected?	Students will solve problems by making a model.	Academic / Content ○ angles ○ line ○ line-segment ○ perpendicular lines ○ parallel lines

Timeline & Resources	AZ College and Career Readiness Standards	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
Quarter 4 March 23 – May 21, 2020 **McGraw-Hill My Math:** Go Digital at: Connected.mcgraw-hill.com	**Review and Assessments** 1. Reteach specific standards 2. ATI-Galileo Math Benchmarks 3. Az-Merit Math 4. Class Tests