Mathematics Grade 4

Numbers and Operation in Base 10

Unit 1 Place Value

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
10 Days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does the place value help to represent the value of a number?	One can find the relative value of a digit in a multi-digit whole number by looking at its place value. Recognize that a multi-digit whole number, a digit in the one place represents ten times what it represents in the place to its right. The value of a digit in a whole number is ten times greater than its value in the place to its right.	Students should be able to use place value to find the value of digits in a whole number. Students should be able to explain how moving the place of the digit changes its value.	SWAB to identify the place value of digits in multi-digit whole numbers through the millionths place.	Digit Place value Period	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.1 Demonstrate an understanding that in Multi-digit whole numbers (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens	How does the place value help to represent the value of a number?	There are different ways to write multi-digit whole numbers. Place value can be used to write numbers in expanded form and in word form.	Students should be able to use a place-value chart to write numbers in expanded form and word form. Students should	SWBA to read and write multi-digit whole numbers in standard, word and expanded form through the millions.	Expanded form Period Standard form word form	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.2 Read and write whole numbers in expanded,

	and place values.		Read and write 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 >, =, < symbols to record the results.	be able to explain why expanded form is important.			standard and word form through 1,000,000. M04.A-T.1.1.3 Compare two multi digit numbers through 1,000,000 based on the meanings of the digits in each place using >, =, and < symbols.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does the place value help to represent the value of a number?	One can use place value to compare two multi-digit numbers. One can use the <, =, > symbols to compare two numbers. Read and write 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 >, =, < symbols to record the results.	Students should be able to use a number line or a place value chart to compare two numbers. Students should be able to show how numbers are related to each other.	SWBA to compare whole numbers using a number line and place value chart.	Is equal to (=) Is greater than (>) Is less than (<) Number line	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.2 Read and write whole numbers in expanded, standard and word form through 1,000,000. M04.A-T.1.1.3 Compare two multi digit numbers through 1,000,000 based on the meanings of the digits in each place using >, =, and < symbols.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does the place value help to represent the value of a number?	Read and write 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 >,	Students should be able to order numbers from least to greatest, Students should be able to explain when to compare real-world numbers.	SWBA to order whole numbers by using a place-value chart and comparing the digit values.		CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.2 Read and write whole numbers in expanded, standard and word form through 1,000,000.

			=, < symbols to record the results.				M04.A-T.1.1.3 Compare two multi digit numbers through 1,000,000 based on the meanings of the digits in each place using >, =, and < symbols.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does the place value help to represent the value of a number?	One can round multi-digit whole numbers to any place-value. To round a number, you first determine the place to which the number is to be rounded. Use place value understanding to round multi-digit whole numbers to any place.	Students should be able to round a number to the nearest place value by circling the digit in the desired place, underline the digit to its right, if that number is 5 or greater, then round that number up. The digits to the right of the circles digit are replaced with zeros.	SWBA to estimate numbers by rounding to any place value.		CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.4 Round multi-digit whole numbers (through 1,000,000) to any place.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does the place value help to represent the value of a number?	A structured method to problem solving helps to organize the given data and plan how to solve the problem. Read and write 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 >, =, < symbols to record	Students should be able to use the four step plan for all problem solving. Students should be able to justify the reasonableness of the solution.	SWBA to use the four step plan to solve word problems involving whole.	Understand Plan Solve Check	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers. M04.A-T.1.1.2 Read and write whole numbers in expanded, standard and word form through 1,000,000. M04.A-T.1.1.3 Compare two multi digit numbers through 1,000,000 based on the meanings of the digits in each place using >, =, and < symbols.

			the results. Use place value understanding to round multi-digit whole numbers to any place.				M04.A-T.1.1.4 Round multi-digit whole numbers (through 1,000,000) to any place.
	Review Common Assessment Unit 1 Place Value						
10 Days	Common Assessment Unit 1 Place Value						
Unit 2 Add and Subtract Whole Numbers							
Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
13 Days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	One can use properties and rules to add or subtract or to find the missing number in an addition and subtraction problems. When you subtract 0 from any number, the result is the number itself. When you subtract a number from itself, the result is 0. The Commutative Property of Addition states that the order in	Students should be able to use a property of addition to find the missing number in an equation. Students should be able to explain how addition properties and subtractions rules are helpful when solving problems.	Use addition properties and subtraction rules to add and subtract whole numbers.	Commutative Property of Addition Associative Property of Addition Identity Property of Addition Unknown	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more

			which numbers are added does not change the sum. The Associative Property of Addition states that the way in which the numbers are grouped does not change the sum. The Identity Property of Addition states that the sum of any number and zero is the number. Fluently add and subtract multi-digit whole numbers using the standard algorithm.				than 2 digits x 1 digit, excluding powers of 10).
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	In a whole number, a digit in one place has a value 10 times greater than it would in the place to its right. One can use number patterns and place value to add and subtract numbers. Fluently add and subtract multi-digit whole numbers using the standard algorithm. Generate a number or shape pattern that follows a given rule.	Students should be able to use place value to describe and extend patterns in numbers. Students should be able to explain why we study patterns in numbers.	SWBA to use patterns to solve addition and subtraction problems in the base ten system.	Pattern	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems

			Identify apparent features of the pattern that were not explicit in the rule itself.				using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10). M04.B-O.3.1.1 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.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	One can add or subtract larger numbers mentally by making one number end in ten, hundred or thousand. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Students should be able to use mental math to find sums of multi-digit numbers. Students should be able to explain why mental math addition and subtraction are important when learning more difficult concepts.	SWBA to use mental math to add and subtract.	Tens Hundreds Thousands Millions	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10).
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens	What strategies can be used to add and subtract whole numbers?	To estimate a sum or difference, one can round each number to a given place value. Use place value understanding to round multi-digit	Students should be able to use rounding to estimate sums of multi-digit numbers. Students should	SWBA to estimate sums and differences of multi-digit numbers.	Estimate Difference Sum	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multi-digit whole numbers CC.2.1.4.B.1 Apply place value understanding and properties of operations

	and place values.		whole numbers to any place value. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	be able to explain how to know if an estimate is reasonable.			to perform multi-digit arithmetic. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.1.1.4 Round multi-digit whole numbers (through 1,000,000) to any place. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10).
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	To add multi-digit whole numbers, begin by adding the ones, then the tens, and so on. Regroup if necessary. Fluently add and subtract multi-digit whole numbers using the standard algorithm. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations. Including	Students should be able to find the sums of multi-digit numbers by adding the ones (regroup if necessary), add the tens (regroup when necessary), add the hundreds (regroup when necessary) and add the thousands. Students should be able to explain why an addition	SWBA to add multi-digit numbers.	Regroup	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.1 Represent and Solve problems involving the four operation. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition,

			problems in which remainders can be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of the answer using mental computation and estimation strategies including rounding.	problem that has 4-digits addends could have a 5-digit sum.			subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10). M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	Fluently add and subtract multi-digit whole numbers using the standard algorithm. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations. Including problems in which remainders can be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.	Students should be able to find differences of multi-digit numbers by subtracting the ones (regroup if necessary), subtract the tens (regroup when necessary), subtract the hundreds (regroup when necessary) and subtract the thousands. Students should be able to explain why it is	SWBA to subtract multi-digit numbers.	Subtrahend Minuend	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.1 Represent and Solve problems involving the four operation. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition,

			Assess the reasonableness of the answer using mental computation and estimation strategies including rounding.	important to line up the digits in each place value position when subtracting.			subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10). M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	One can use regrouping in subtracting problems that have zeros in one or more of the digits in the minuend. One can use addition or estimation to check the solution to a subtraction problem. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Students should be able to find differences of multi-digit numbers by subtracting the ones (regroup if necessary), subtract the tens (regroup when necessary), subtract the hundreds (regroup when necessary) and subtract the thousands.	SWBA to subtract multi-digit numbers when some digits are zeros.	Minuend Subtrahend Regroup	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more

				Students should be able to explain how understanding place value helps to subtract across zeros.			than 2 digits x 1 digit, excluding powers of 10).
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What strategies can be used to add and subtract whole numbers?	One can represent a multi-step word problem by writing an equation. One can use a variable to represent the unknown quantity in an equation. Fluently add and subtract multi-digit whole numbers using the standard algorithm. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations. Including problems in which remainders can be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of the answer using mental computation and estimation strategies	Students should be able to write an equation to solve an addition or subtraction word problem. Student should be able to describe how to use variables to describe real world problems.	SWBA to solve multi-step word problems using addition and subtraction.	Equation Variable	CC.2.1.4.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.1 Represent and Solve problems involving the four operation. M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to and subtrahends up to and including 1,000,000. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10). M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that

			including rounding.				must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	Review Common assessment Unit 2 Add and Subtract Whole Numbers						
13 Days	Common assessment Unit 2 Add and Subtract Whole Numbers						
Unit 3 Understand Multiplication and Division							
Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
12 days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	Multiplication and division are opposite or inverse operations. A fact family is a set of four related multiplication and division facts. 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	Students should be able to write a fact family for a given rectangular array. Students should be able to explain how fact families and multiplication facts help when dividing.	SWBA to demonstrate the relationship between multiplication and division using fact families.	Dividend Devisor Fact Family Factor Product Quotient	CC.2.1.4.B.2 Use place value concepts to show understanding of operations and rounding as they pertain to whole numbers and decimals. M04.A-T. 2.1.2 Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers. M04.A-T.2.1.3 Divide up to four digit dividends by a one digit divisor with answers written as whole number quotients and remainders.

			calculation by using equations, rectangular arrays and/or area models. Find the whole number quotient and remainders with up to four digit dividends and one digit divisors, using strategies based 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 area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	The operations of subtraction and division are related. One can use repeated subtraction to divide. Find the whole number quotient and remainders with up to four digit dividends and one digit divisors, using strategies based 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,	Students should be able to solve division problems by using repeated subtraction. Students should be able to explain how the operation of subtraction and division are related.	SWBA to use repeated subtraction to model division.	Repeated Subtraction	CC.2.1.4.B.2 Use place value concepts to show understanding of operations and rounding as they pertain to whole numbers and decimals. M04.A-T.2.1.3 Divide up to four digit dividends by a one digit divisor with answers written as whole number quotients and remainders.

			and/or area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	Verbal statements like times as many, times more and times as much mean that the a problem involves multiplicative comparison. One can use multiplication equations to solve multiplicative comparison problems. Interpret a multiplication equation as a comparison. (ex. Interpret 35 = 5 x 7 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. Multiply or divide to solve word problems involving multiplicative comparison. (ex. By using drawings and equations with the symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Students should be able to write equations to represent comparisons. Students should be able to explain how a bar diagram can help plan and solve a problem.	SWBA to recognize the comparison of two groups as another strategy to use when multiplying.	Bar diagram	CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.B-O.1.1.1 Interpret an multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations. (ex. Interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Know that 24 is 3 times as many as 8 can be represented by the equation 24 = 3 x 8 or 24 = 8 x 3) M04.B-O. 1.1.2 Multiply and Divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. (ex. Know that 3 x 4 can be used to represent that Student A has 4 objects and Student B has 3 times as many objects, and not just three more objects.

	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	Phrases like “how many more” and “how much more” indicate an additive comparison. They tell that addition and subtraction is used to compare. Phrases like “how many times more” and “how many times greater” indicate multiplicative comparison. They tell that multiplication and division are being used. One can solve a comparison problem by writing an equation and letting the variable stand for the unknown. Multiply or divide to solve word problems involving multiplicative comparison. (ex. By using drawings and equations with the symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Student should be able to write a multiplication equation with a variable to solve a comparison problem. Students should be able to describe how to tell the difference between additive comparison and multiplicative comparison.	SWBA to use comparison to solve problems.	Compare Add Subtract Multiply Divide	CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.B-O. 1.1.2 Multiply and Divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. (ex. Know that 3 x 4 can be used to represent that Student A has 4 objects and Student B has 3 times as many objects, and not just three more objects.
	The base-ten number system is a way to organize, represent and	How are multiplication and division related?	One can use multiplication properties to help you multiply.	Students should be able to use properties of multiplication to find the unknown	SWBA to use multiplication properties and division rules.	Commutative Property Identity Property	CC.2.1.4.B.2 Use place value concepts to show understanding of operations and rounding as they pertain to whole

	compare numbers using groups of tens and place values.		The multiplication properties include the Commutative Property, the Identity Property, and the Zero Property of Multiplication. 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.	in an equation. Students should be able to explain how multiplication properties and division rules help to multiply and divide.		Zero Property	numbers and decimals. M04.A-T. 2.1.2 Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	The Associative Property of Multiplication states that the way you group numbers when you multiply does not change the product. One can use the Associative Property of Multiplication to find products mentally. 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	Students should be able to use the Associative Property of Multiplication to multiply three numbers. Stunts should be able to explain how the Associative Property of Multiplication can help calculate products mentally.	SWBA to use Associative Property of multiplication to solve problems.	Associative Property of Multiplication	CC.2.1.4.B.2 Use place value concepts to show understanding of operations and rounding as they pertain to whole numbers and decimals. M04.A-T. 2.1.2 Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers.

			place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How are multiplication and division related?	One can find all factors of a number by thinking of factor pairs that result in a product of that number. A whole number is a multiple of each of its factors. Find all factor pairs for a whole number in the range from 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 1 – 100 is prime or composite.	Students should be able to list the first five multiples of a one digit number. Students should be able to explain how you know when you have found all the factors of a number.	SWBA to find factors and multiples of whole numbers.	Decompose Multiple.	CC.2.2.4.A.2 Develop and/or apply number theory concepts to find factors and multiples. M04.B-O.2.1.1 Find all factor pairs for a whole number in the interval 1 through 100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1 through 100 is a multiple of a given number. Determine whether a given whole number in the interval 1 through 100 is prime of composite.
	Review Common Assessment Unit 3 Add Two Digit Numbers						
12 Days	Common Assessment Unit 3 Add Two Digit Numbers						

Unit 4 Multiply with One Digit Numbers							
Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
15 days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	One can find patterns when multiplying a number by multiples of 10. One can use patterns to mentally find product of a number and a multiple of 10. 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 (ex. Recognize that 700 divided by 70 is 10 by applying concepts of place value and Division) 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	Students should be able to use basic facts and patterns to find a product. Students should be able to explain why the product of a multiple of ten always has a zero in the ones place.	SWBA to multiply multiples of 10, 100, and 1000 using basic facts and patterns.	Multiples Patterns	CC.2.1.4.B.1 Apply place Value concepts to show understanding of multi-digit whole numbers. CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.5.A.2 Develop and/or apply number theory concepts to find factors and multiples. M04.A-T.1.1.1 Demonstrate an understanding that in Multi-digit whole numbers (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.B-O.2.1.1 Find all

			and explain the calculation by using equations, rectangular arrays, and/or area models. Find the 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 of 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.				factor pairs for a whole number in the interval 1 through 100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1 through 100 is a multiple of a given one digit number. Determine whether a given whole number in the interval 1 through 100 is prime or composite. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	One can estimate the product of a one digit number and a multi-digit number to the greatest place value. Use place value understanding to round multi-digit whole numbers to any place. Multiply a whole number of up to four digits by a one digit whole number and multiply two two-digit	Students should be able to estimate products by rounding. Students should be able to explain how estimation is helpful when finding a product mentally.	Students will be able to estimate products by rounding.	Place value Round	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits

			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.				(for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	One can use models to help you multiply by a one digit numbers First model the multiplication problem. Then count the number of tens and ones. 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.	Students should be able to find a product using models such as base ten blocks.	SWBA to explore multiplication using models.	Factor Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using	How can I communicate multiplication?	One can use area models and place value to multiply a one-digit number by a two-digit number. To multiply, one can	Students should be able to find products using area models and partial products.	SWBA to explore multiplication using area models and partial products.	Partial Products Factor Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a

	groups of tens and place values.		separate the two-digit number into tens and ones, find the partial products, and then add the partial products together. 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.				whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	One can use place value to help you multiply a one-digit number by a two-digit number. To multiply by a two-digit number, first multiply the ones and then the tens. 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	Students should be able to find a product of a two-digit number and one-digit number by multiplying the ones and then multiply the tens. Students should be able to explain how estimation can be used to check multiplication problems for reasonableness.	SWBA to multiply a two digit number by a one digit number without regrouping.	Partial Products Factor Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of

			operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.				10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	Sometimes one needs to use regrouping when multiplying numbers. One can use models to regroup 10 ones as 1 ten. 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.	Students should be able to find products with regrouping using models.	SWBA to explore multiplication with regrouping using models.	Regroup	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	The Distributive Property makes multiplying numbers easier because the multiplication is broken into parts. One can use the Distributive Property to multiply a one-digit number by a two digit number as a sum of	Students should be able to use an area model to find the product. Students should be able to explain how the Distributive Property can help when you are multiplying by a	SWBA to use the Distributive Property to make multiplication easier.	Distributive Property	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers.

			tens and ones. 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.	two-digit number.			
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	Sometimes multiplying by two-digit numbers requires regrouping. To multiply with regrouping, first multiply the ones, then regroup the ones into tens and ones and finally multiply the tens. Solve multi step word problems posed with whole numbers and having whole-number answers sing the four operations including problems which remainders must be interpreted. Represent these problems with an equation with a letter standing for the unknown quantity.	Students should be able to know the steps for multiplying a two-digit number by a one-digit number by multiplying the ones (regroup if necessary) and then multiply the tens (add the regrouped tens). Students should be able to explain the steps to use to multiply by a two-digit number with regrouping.	SWBA to multiply a two digit number by a one digit number.	Factor Regroup Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that must be interpreted

			Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 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.				yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	To multiply by a one-digit number by a multi-digit number, one should use the same steps that you used to multiply by a two-digit. 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	Students should be able to multiply a multi-digit number by multiplying the ones (regroup if necessary), then multiply the tens (regroup if necessary) and then multiply the hundreds. Students should be able to explain how to multiply by multi-digit numbers is similar to multiplying by	SWBA to multiply a multi-digit number by a one digit number	Partial Products Factor Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of

			equations, rectangular arrays, and/or area models.	two-digit numbers.			10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I communicate multiplication?	One can multiply a one digit by a multi-digit number with zeros by using the distributive Property or partial products. 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.	Students should be able to multiply a multi-digit number with zeros by a one digit number using the Distributive Property and partial products. Students should be able to explain why the products of multi-digit numbers with zero and one-digit numbers sometimes have zeros in them and sometimes have no zeros in them.	SWBA to multiply a multi-digit number with zeros by a one digit number	Distributive Property Partial products Estimate Multiply Factor Product	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	Review Common Assessment Unit 4 Multiply with One Digit Numbers						
15 days	Common Assessment Unit 4 Multiply with One Digit Numbers						

Unit 5 Multiply with Two-Digit Numbers

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**

10 Days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I multiply by a two-digit number?	One can multiply two two-digit numbers by using strategies based on place value and the Associative Property of Multiplication. One can illustrate and explain multiplying by tens using equations. 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.	Students should be able to find products of a two-digit number and a multiple of ten. Students' should be able to explain how place value can help to multiply a two-dgit number by a multiple of 10.	SWBA to use properties and algorithms to multiply by tens.	Multiply	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I multiply by a two-digit number?	To estimate products, one can round multi-digit factors to any place. When both factors are rounded up, the estimate will be high. When both factors are rounded down, the estimate will be low. Use place value understanding to round multi-digit	Students should be able to estimate a product of two two-digit numbers by rounding. Student should be able to describe how an estimate product relates to the actual product.	SWBA to estimate products by rounding.	Estimate	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole

			whole numbers to any place. 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.				numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)

	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I multiply by a two-digit number?	One can multiply two two-digit numbers by using the Distributive Property. One can illustrate and explain calculations by using area models. 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.	Students should be able to work through multiplication using the Distributive Property. Students should be able to use area models to break down the factors into smaller numbers to make multiplication easier.	SWBA to explore multiplying by two-digit numbers.		CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I multiply by a two-digit number?	One can multiply two two-digit numbers using partial products or paper and pencil. One can illustrate and explain the calculation by using equations and area models Multiply a whole	Students should be able to use partial products to multiply two two-digit numbers. Students should be able to explain why the product of two two-digit	SWBA to multiply two two-digit numbers by partial products and algorithm.	Partial Products	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers.

			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.	numbers can never be two digits.			M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can I multiply by a two-digit number?	One can represent multi-step problems using equations with a letter to represent the unknown quantity. Find all factor pairs for whole numbers 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 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 Multiply a whole number of up to four digits by a one digit whole number and multiply two two-digit numbers using	Students should be able to solve multi-step word problems. Students should be able to describe how equations can be used to model real-world problems.	SWBA to use multiplication to solve multi-step word problems.	Operation	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.A-T.2.1.1 Add and subtract multi-digit whole numbers (limit sums and subtrahends up to and including 1,000,000) M04.A-T.2.1.2 Multiply a whole number up to four digits by a one-digit whole number and multiply two two-digit numbers. M04.A-T. 2.1.4 Estimate the answer to addition , subtraction, and multiplication using whole

			strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. Solve multi step word problems posed with whole numbers and having whole-number answers sing the four operations including problems which remainders must be interpreted. Represent these problems with an equation with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.				numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10) M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	Review Common Assessment Unit 5 Multiply with Two-Digit Numbers						
10 Days	Common Assessment Unit 5 Multiply with Two-Digit Numbers						
Unit 6 Divide by a One Digit Divisor							

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
15 Days	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use multiplication patterns to divide dividends that are multiples of 10, 100, and 1000. One can also use basic facts and place value to divide dividends that are multiples of 10, 100, and 1000. 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. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models. Find all factor pairs for	Students should be able to find a quotient using basic facts and place value. Students should be able to explain why basic facts are needed when dividing large numbers.	SWBA to use basic number facts and patterns to divide mentally.	Multiples Dividend	CC.2.1.5.B.1 Apply place value concepts to show an understanding of operations and rounding. CC.2.1.4.B.2 Use place value understanding and properties of operations perform multi-digit arithmetic. CC.2.2.4.A.2 Develop and/or apply number theory concept to find factors and multiples. M04.B-O.2.1.1 Find all factor pairs for a whole number in the interval 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1-100 is a multiple of a given one digit number. Determine whether a given number in the interval 1-100 is prime or composite M04.A-T.1.1.1 Demonstrate an understanding that in a multi-digit whole number (through 1,000,000), a digit in one place

			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 number in the interval 1-100 is prime or composite				represents ten times what it represents in the place to its right. M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use compatible numbers, or numbers that are easy to divide mentally, to estimate quotients. One can also use basic multiplication facts and place value to estimate quotients. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between	Students should be able to estimate a quotient by rounding the dividend and divisor to compatible numbers and dividing mentally. Check your estimate by using multiplication. Students should be able to explain how they can estimate quotients.	SWBA to estimate quotients, using compatible numbers, basic facts and place value.	Compatible numbers Quotient Divisor Dividend	CC.2.1.5.B.1 Apply place value concepts to show an understanding of operations and rounding. CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.1.1.4 Rounding multi-digit whole numbers (through 1,000,000) to any place. M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders.

			multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.				M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use models and place value to solve problems. When numbers do not divide evenly, the amount left over is called the remainder. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.	Students should be able to use base ten blocks to find quotients for a division problem by dividing the models into equal groups.	SWBA to use place value and models to explore dividing by one digit numbers.	Remainder	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10

	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use a procedure involving place value to divide. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.	Students should be able to solve a division problem by following the standard procedure of dividing the tens, multiply and subtract, bring down the ones divide the ones, multiply and subtract and write the remainder. Students should be able to explain the remainder is always less than the divisor.	SWBA to divide with remainders and check using multiplication and addition.	Division Remainder	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	There are different was to interpret remainders in real world problems. One can determine what the remainder means by first determining what the problem is asking for. Find whole number quotients and remainders with up	Students should be able to explain what the remainders means in a division problem. Students should be able to explain why it is important to know how to interpret a remainder.	SWBA to interpret what the remainder means in the context of a division problem.	Remainder	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and

			to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.				multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	When dividing a two-digit number by a one-digit number and there are not enough tens to divide, the first digit of the quotient will be in the ones place. When dividing a three-digit by a one digit number and there is not enough hundreds to divide, the first digit of the quotient will be in the tens place. Find whole number quotients and remainders with up to four digit	Students will be able to solve a division problem in which the first digit in the dividend is less than the divisor. Students should be able to explain how they know where to place the first digit of a quotient in a division problem.	SWBA to determine where to place the first digit in the quotient when dividing.	Digit	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10

			dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use the Distributive Property and place value to help you divide. One can use partial quotients to divide by breaking the dividend into parts to make it easier to divide. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship	Students should be able to solve division problems by first modeling the number and divide each section of an area model by the divisor and add the quotients.	SWBA to use the distributive property and partial quotients to divide.	Partial quotient	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10

			between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	One can use the same process for dividing a two-digit dividend to divide three- and four-digit dividends. Division is a process that is repeated for each place value: divide, multiply, subtract and compare. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using	Students should be able to solve a division problem by first dividing the hundreds, the dividing the tens and finally dividing the ones. Student should be able to explain if quotients always have the same number of digits when dividing 3-digit numbers by 1-digit numbers.	SWBA to solve division problems with greater numbers.	Ones Tens Hundreds Thousands	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10

			equations, rectangular arrays and/or area models.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How does division affect numbers?	In a division problem, when there is not enough of a certain place value to divide after bringing down a number, place a zero in the quotient. Find whole number quotients and remainders with up to four digit dividends and one digit devisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models.	Students should be able to solve division problems that results with a zero in the quotient. Students should be able to explain why sometimes you have to use a zero in a quotient.	SWBA to solve division problems that result in quotients that have zeros.	Dividend Divisor Quotient Remainder Partial quotients	CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic M04.A-T.2.1.3 Divide up to four-digit dividends by one-digit divisors with numbers written as whole-number quotients and remainders. M04.A-T.2.1.4 Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place	How does division affect numbers?	When writing a equation to solve a multi-step word problem, one can use a letter, or variable, to stand for the unknown number. Solve multi-step word	Students should be able to write an equation using more than one operation to solve a multi-step word problem. Students should	SWBA to solve multi-step word problems using more than one operation.	Equations Parentheses Variables	CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four

	values.		problems posed with whole numbers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity.	be able to explain how writing an equation can help solve multi-step problems.			operations. Answers will be either whole numbers of have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	Review Common Assessment Unit 6 Dividing by a One-Digit Divisor						
15 Days	Common Assessment Unit 6 Dividing by a One-Digit Divisor						

Operations and Algebraic Thinking

Unit 7 Patterns and Sequences

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
13 Days	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	One can use a rule to produce a nonnumeric pattern, or a pattern that does not use number. Some of the rules form patterns that are repeating, and other rules form patterns	Students should be able to generate a nonnumeric pattern. Students should be able to be able to explain the difference	SWBA to describe nonnumeric growing and repeating patterns.	Patterns Nonnumeric patterns	CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule.

			that are growing. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)	between a nonnumeric growing pattern and a repeating pattern.			
	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	To extend a numeric pattern, first determine the relationship between the numbers and write a rule, Then, use the rule to write more numbers in the pattern. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate	Students should identify and extend numeric patterns. Students should be able to explain why it is important to look at more than just the first two numbers of a pattern to decide the rule for the pattern.	SWBA to identify describe, and extend numeric patterns.	Numeric patterns Rule	CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule.

			terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)				
	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	One can generate a number pattern, or sequence by using a rule. One can identify other patterns in sequences, such as whether the numbers alternate between even and odd. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)	Students should be able to use a rule to extend a pattern of numbers, and then make a observation about the pattern. (Ex. The terms alternate between even and odd) Students should be able to explain how to find pattern.	SWBA to extend patterns and write observations about the pattern.	Term Sequence	CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule.

	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	One can use equations to describe patterns involving addition and subtraction. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)	Students should be able to write an equation that describes a pattern between the input and output numbers in a table, then use the equation to find the next two numbers. Students should be able to explain how to find the rule of a pattern.	SWBA to find the rules to write addition and subtraction equations, and extend the pattern using function tables.	Input Output Function table	CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule. M04.B-O.3.1.2 Determine the missing elements of a function table (limit to =,-, or x and to whole numbers or money) M04.B-O.3.1.3 Determine a rule for a function given a table (limit to =, -, or x and to whole numbers).
	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	One can use equations to describe patterns involving multiplication and division. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe	Students should be able to write an equation that describes a pattern between input and output number in a table, then use the equation to find the next two numbers. Students should be able to explain how an input/output table can help	SWBA to find the rules to write multiplication and division equations, , and extend the pattern using function tables.	Multiplication Division Function tables	CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule. M04.B-O.3.1.2 Determine the missing elements of a function table (limit to =,-, or x and to whole numbers or money) M04.B-O.3.1.3 Determine a rule for a function given a table (limit to =, -, or x

			that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)	solve real world problems.			and to whole numbers).
	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	The order of operations tells you which operations to perform first when a problem has more than one operation. The order of operations is important because there is only one correct answer to a problem with more than one operation. Solve multi-step word problems posed with whole numbers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Students should be able to use the order of operations to simplify expressions. Students should be able to explain why the order of operations is important.	SWBA to use the order of operations to solve problems.	Order of operations Parentheses	CC.2.2.4.A.1 Represent and solve problems involving the four operations. M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.
	Patterns exhibit	How are patterns	One can use a table to	Students should	SWBA to explore		CC.2.2.4.A.4 Generate and

	relationships that can be extended, described and generalized.	used in mathematics?	show the patterns in input and output values for an equation that has two operations. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)	be able to use an equation machine and counters to model equations with two operations.	equations with two operations.		analyze patterns using one rule. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule. M04.B-O.3.1.2 Determine the missing elements of a function table (limit to =,-, or x and to whole numbers or money) M04.B-O.3.1.3 Determine a rule for a function given a table (limit to =, -, or x and to whole numbers).
	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	Solve multi-step word problems posed with whole numbers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental	Students should be able to complete a table of values by finding the output values. Students should be able to describe a real-world situation that could use a table with two operations.	SWBA to use tables to recognize and write equations with two operations.	Equation Operation	CC.2.2.4.A.1 Represent and solve problems involving the four operations. CC.2.2.4.A.4 Generate and analyze patterns using one rule. M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers of have remainders that

			computation and estimation strategies including rounding. Generate a number or shape pattern that follows a given rule. Identify the apparent features of the pattern that were not explicit in the rule itself. (ex. Given the rule "add 3" and the starting number of 1, generate terms in the resulting sequence and observe that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way)				must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity. M04.B-O.3.1.1 Generate a number or shape pattern that follows a given rule. M04.B-O.3.1.2 Determine the missing elements of a function table (limit to =,-, or x and to whole numbers or money) M04.B-O.3.1.3 Determine a rule for a function given a table (limit to =, -, or x and to whole numbers).
	Review Common Assessment Unit 7 Patterns and Sequences						
13 Days	Common Assessment Unit 7 Patterns and Sequences						
Numbers and Operations -Fractions							
Unit 8 Fractions							

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
14 Days	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	Factor pairs of a number are two factors that are multiplied together to produce the number. One can determine whether a whole number is a multiple of q one-digit number by dividing or by listing multiples. 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 number in the interval 1-100 is prime or composite	Students should be able to find factor pairs of a number. Students should be able to explain how factors and multiples are related.	SBWA to find factors and multiples of whole numbers	Factor Pairs Factor Multiple	CC.2.2.4.A.2 Develop and/or apply number theory concept to find factors and multiples. M04.B-O.2.1.1 Find all factor pairs for a whole number in the interval 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1-100 is a multiple of a given one digit number. Determine whether a given number in the interval 1-100 is prime or composite
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in	How can different fractions name the same amount?	A prime number is a whole number with exactly two factors: 1 and itself. A composite number is a whole number with more than two factors.	Students should be able to determine whether a number is prime, composite or neither. Students should	SWBA to determine if a number is prime or composite.	Prime numbers Composite numbers	CC.2.2.4.A.2 Develop and/or apply number theory concept to find factors and multiples. M04.B-O.2.1.1 Find all factor pairs for a whole number in the interval 1-100. Recognize that a

	many equivalent forms.		One can use factors to determine whether a number is prime or composite. 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 number in the interval 1-100 is prime or composite	be able to explain how factors are related to prime numbers.			whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1-100 is a multiple of a given one digit number. Determine whether a given number in the interval 1-100 is prime or composite
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	One can show that two fractions are equivalent, or equal, by using fraction models or a number line. Explain why a fraction a/b is equivalent to a fraction (n x a)/ (n x b) by using visual fraction models, with attention to hoe 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.	Students should be able to recognize whether two fractions are equivalent.	SWBA to explore equivalent fractions.	Numerator Denominator Equivalent fractions	CC.2.1.4.C.1 Extend the understanding of fractions to show equivalence and ordering. M04.A-F.1.1.1 Recognize and generate equivalent fractions.
	Numbers, measures,	How can different fractions name the	One can find equivalent fractions by	Students should be able to write a	SWBA to find equivalent fractions.	Numerator	CC.2.1.4.C.1 Extend the understanding of fractions

	expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	same amount?	multiplying the numerator and denominator of a fraction by the same number. One can also use multiplication to determine whether two fractions are equivalent. Explain why a fraction a/b is equivalent to a fraction (n x a)/ (n x b) by using visual fraction models, with attention to hoe 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. Express a fraction with denominator 10 as an equivalent fraction with a denominator of 100, and use this technique to add two fractions with respective denominators 10 and 100.	fraction that is equivalent to another fraction by multiplying the numerator and denominator by the same number. Students should be able to explain how to check and see if two fractions are equivalent		Denominator Equivalent fractions	to show equivalence and ordering. CC.2.1.4.C.3 Connect decimal notation to fractions and compare decimal fractions (base 10 denominator, e.g. 19/100) M04.A-F.1.1.1 Recognize and generate equivalent fractions. M04.A-F. 3.1.1Add two fractions with respective denominators.
	Numbers, measures, expressions, equations, and inequalities can represent	How can different fractions name the same amount?	A fraction is in simplest form when 1 is the only common factor of the numerator and denominator.	Students should be able to write a fraction in simplest form by dividing the numerator and	SWBA to write a fraction in simplest form.	Simplest form Greatest Common Factor (GCF)	CC.2.1.4.C.1 Extend the understanding of fractions to show equivalence and ordering. M04.A-F.1.1.1 Recognize

	mathematical situations and structures in many equivalent forms.		One can write a fraction in simplest form by dividing the numerator and denominator by the greatest common factor. Explain why a fraction a/b is equivalent to a fraction (n x a)/ (n x b) by using visual fraction models, with attention to hoe 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.	denominator by the greatest common factor. Students should be able to explain how to check whether a fraction is in simplest form.			and generate equivalent fractions.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	One can compare two fractions by creating equivalent fractions with the same numerators or denominator. IF two fractions have the same denominator, the fraction with the same greater numerator is greater. If the two fractions have the same numerator, the fraction with the smaller denominator is greater. Compare two fractions	Students should be able to compare fractions. Students should be able to explain how to compare two fractions with the same numerator.	SWBA to compare and order fractions.	Least Common Multiple (LCM)	CC.2.2.4.A.2 Develop and/or apply number theory concept to find factors and multiples. M04.A-F.1.1.2 Compare two fractions with different numerators and different denominators (denominators limited to 2,3,4,5,6,8,10,12 and 100) using symbols >, =, > and justify the conclusions.

			with different numerators and different denominators (ex., by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with >, =, or <, and justify the conclusion by using a visual fraction model.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	One can compare and order fractions by using a benchmark fraction, or common fraction such as ½. Compare two fractions with different numerators and different denominators (ex., by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with >, =, or <, and justify the conclusion by using a	Students should be able to order fractions from least to greatest. Students should be able to explain how to decide if ¾ is greater than 1/6.	SWBA to use benchmark fractions to compare and order numbers.	Benchmark fractions	CC.2.2.4.A.2 Develop and/or apply number theory concept to find factors and multiples. M04.A-F.1.1.2 Compare two fractions with different numerators and different denominators (denominators limited to 2,3,4,5,6,8,10,12 and 100) using symbols >, =, > and justify the conclusions.

			visual fraction model.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	One can use models to represent mixed numbers One can decompose a mixed number into the sum of whole numbers and unit fractions. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole number.	Students should be able to write an equation that represents a mixed number as a sum of whole number and unit fractions. Students should be able to explain how mixed numbers are used in the real world.	SWBA to represent mixed numbers by decomposing the fraction into a sum of whole numbers and unit fractions.	Mixed Numbers	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.1 Add and subtract fractions with a common denominator(denominator limited to 2, 3, 4, 5, 6, 7, 8, 10, 12, and 100: answers need not be reduced; no improper fractions as the final answer)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can different fractions name the same amount?	One can write a mixed number as an improper fraction, or an equivalent fraction with a numerator greater than or equivalent to the denominator. Writing mixed numbers as improper fractions is one way to add and subtract mixed numbers. Understand a fraction a/b with a>1 as a sum of fractions 1/b.	Students should be able to write a mixed number as an improper fraction. Student should be able to explain how improper fractions relate mixed numbers	SWBA to write mixed numbers as improper fractions and improper fractions as mixed numbers.	Improper fractions	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

	Review Common Assessment Unit 9 Fractions
14 Days	Common Assessment Unit 8 Fractions

Unit 9 Operations with Fractions

Estimated Unit Time Frames	**Big Ideas** (understand)	Essential Questions	Concepts (know)	Competencies (do)	Lessons Objectives and Suggested Resources	Vocabulary	Standards and Eligible Content
13 Days	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can use fraction tiles to add fractions that have the same denominator. A fraction can be written as the sum of unit fractions or as the sum of other fractions with the same denominator. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. Decompose a fraction into a sum of fractions	Students should be able to model the sum of fractions using fraction tiles. Students should be able to write equations to decompose a fraction into different sums.	SWBA to use models to add like fractions.	Like fractions	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.1 Add and subtract fractions with common denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; answers do not need to be reduced; no improper fractions as the final answer. M04.A-F.2.1.2 Decompose a fraction or mixed number into a sum of fractions with the same denominator (denominators limited to

			with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by using visual fraction models. (ex. 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8. Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				2,3,4,5,6,8,10, 12 and 100, record the decomposition by an equation Justify decompositions (for example by using a visual fraction model M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can think of adding like fraction as joining parts that refer to the same whole. To add like fractions, add the numerator and keep the same denominator. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same	Students will be able to add fraction with a common denominator by adding the numerators and keeping the same denominator. Then simplify by reducing the numerator and denominator by the GCF. Students should be able to explain how to add like fractions.	SWBA to add like fractions and simplify the sum.	Like fractions Numerator Denominator Simplify Greatest Common Factor (GCF)	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.1 Add and subtract fractions with common denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; answers do not need to be reduced; no improper fractions as the final answer.

			whole. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by using visual fraction models. (ex. 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8. Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				M04.A-F.2.1.2 Decompose a fraction or mixed number into a sum of fractions with the same denominator (denominators limited to 2,3,4,5,6,8,10, 12 and 100, record the decomposition by an equation Justify decompositions (for example by using a visual fraction model M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can use fraction tiles to subtract fractions that have the same denominator. One can think of subtracting fractions as separating parts that refer to the same whole. Understand a fraction a/b with a>1 as a sum of fractions 1/b.	Students should be able to model the subtraction of fractions using fraction tiles.	SWBA to use models to subtract like fractions and simplify the difference.		CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.1 Add and subtract fractions with common denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; answers do not need

			Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				to be reduced; no improper fractions as the final answer. M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can think of subtracting fractions as separating parts that refer to the same whole. To subtract like fractions, subtract the numerators and keep the same denominator. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. Solve word problems involving addition and subtraction of fractions	Student should be able to solve a subtraction problem by subtracting the numerators and keep the same denominator. Simplify by dividing the numerator and denominator by the GCF. Students should be able to describe what happens to the numerator and denominator when subtracting like fractions.	SWBA to subtract like fractions.	Simplest form Like fractions	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.1 Add and subtract fractions with common denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; answers do not need to be reduced; no improper fractions as the final answer. M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators

			referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				(denominators limited to 2, 3,4,5,6,8,10, 12 and 100) M04.A-F.2.1.3 Add and subtract mixed numbers with common denominators (denominators limited to 2,3,4,5,6,8,10, 12 and 100; no regrouping with subtraction; fractions do not need to be reduced; no improper factions as a final answer.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can add mixed numbers by decomposing them as a sum of while numbers and unit fractions. One can also add mixed numbers by writing each mixed number as an equivalent improper fraction. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by	Students should be able to Add mixed number by decomposing the numbers, rearrange the terms using the commutative property and associative property, add the whole numbers and add the like fractions. Simplify. Students should be able to explain how a mixed number can be written as a sum.	SWBA add mixed numbers.	Equivalent fractions Decompose Mixed number Associative Property	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.2 Decompose a fraction or mixed number into a sum of fractions with the same denominator (denominators limited to 2,3,4,5,6,8,10, 12 and 100, record the decomposition by an equation Justify decompositions (for example by using a visual fraction model M04.A-F.2.1.3 Add and subtract mixed numbers with common denominators (denominators limited to 2,3,4,5,6,8,10, 12 and 100;

			using visual fraction models. (ex. 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8. Add and subtract mixed numbers with like denominators (ex. By replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction.) Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem. Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				no regrouping with subtraction; fractions do not need to be reduced; no improper factions as a final answer. M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)
	Numbers, measures, expressions,	How can I use operations to model real-world	One can subtract mixed numbers by writing each mixed	Students will be able to subtract mixed numbers	SWBA to subtract mixed numbers.	Equivalent fraction	CC.2.1.4.C.2 Build fractions from unit fractions by applying and

	equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	fractions?	number as an equivalent improper fraction. Understand a fraction a/b with a>1 as a sum of fractions 1/b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions by using visual fraction models. (ex. 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8. Add and subtract mixed numbers with like denominators (ex. By replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction.) Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction	by writing each mixed number as an equivalent improper fraction, subtract the improper fractions and then simplify.			extending previous understandings of operations on whole numbers. M04.A-F.2.1.2 Decompose a fraction or mixed number into a sum of fractions with the same denominator (denominators limited to 2,3,4,5,6,8,10, 12 and 100, record the decomposition by an equation Justify decompositions (for example by using a visual fraction model M04.A-F.2.1.3 Add and subtract mixed numbers with common denominators (denominators limited to 2,3,4,5,6,8,10, 12 and 100; no regrouping with subtraction; fractions do not need to be reduced; no improper factions as a final answer. M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)

			models and equations to represent the problem. Solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators (ex. By using visual fraction models and equations to represent the problem.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can write a fraction as a multiple of a unit fraction. A multiple of a fraction can also be written as a multiple of a unit fraction. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b. for example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5) recognizing this product as 6/5. (in general n x(a/b) = (n x a)/b). Solve word problems involving multiplication	Student should be able to use an equation to write a fraction as a multiple of a unit fraction. (ex. 2/3=1/3 + 1/3 or 2 x 1/3)	SWBA to use models to multiply a whole number by a fraction.		CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.5 Multiply a whole number by a unit fraction. (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; final answer s do not be able to be reduced or written as a mixed number) M04.A-F.2.1.6 Multiply a whole number by a non-unit fraction. (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; final answer s do not be able to be reduced or written as a mixed number)

			of a fraction by a whole number. (ex., by using visual fraction models and equations to represent the problem.)				M04.A-F.2.1.7 Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can I use operations to model real-world fractions?	One can use models to multiply a fraction by a whole number. One can also use equations and properties to multiply a fraction by a whole number. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b. for example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5) recognizing this product as 6/5. (in general n x(a/b) = (n x a)/b). Solve word problems involving multiplication of a fraction by a whole number. (ex., by using visual fraction models and equations to represent the problem.)	Student should be able to find a product of a whole number and a fraction by decomposing the fraction as a product of a unit fraction, use the associative property to regroup the whole numbers, multiply the whole numbers and then multiply by the unit fraction. Simplify if necessary. Students should be able to explain how changing improper fractions to mixed numbers can help to determine between which two whole numbers a fraction lies.	SWBA to multiply fractions by whole numbers.	Product	CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. M04.A-F.2.1.5 Multiply a whole number by a unit fraction. (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; final answer s do not be able to be reduced or written as a mixed number) M04.A-F.2.1.6 Multiply a whole number by a non-unit fraction. (denominators limited to 2, 3,4,5,6,8,10, 12 and 100; final answer s do not be able to be reduced or written as a mixed number) M04.A-F.2.1.7 Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2, 3,4,5,6,8,10, 12 and 100)

	Review Common Assessment Unit 9 Operations with Fractions
13 Days	Common Assessment Unit 9 Operations with Fractions

Unit 10 Fractions and Decimals

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
12 Days	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	A decimal use place value and a decimal point to show part of a whole. In a decimal, the digit in one place has a value ten times what it would have in the place to its right. Use decimal notation for fractions with denominators 10 or 100. 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	Students should be able to write a decimal that can be represented in a place-value chart, by a decimal model, or by a tenths or hundredths grid.	SWBA to explore using place value charts and grids to model decimals.		CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100) M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100. M04.A-F. 3.1.3 Compare two decimals to hundreds using the symbols >, =, <, and justify the conclusions.

			symbols >, =, <, and justify the conclusions by using a visual model.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	One can use a tenths grid to represent a decimal with its final digit in the tenths place. One can use a decimal to represent a part of ten. Use decimal notation for fractions with denominators 10 or 100.	Students should be able to write and model a decimal such as six out of ten.	SWBA to model and describe tenths as part of a base ten system. Students should be able to describe how to use decimal grids to model tenths	tenths	CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100) M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	One can use a decimal to represent part of 100. Use decimal notation for fractions with denominators 10 or 100.	Students should be able to write a decimal to represent a hundredths model.	SWBA to model and describe hundredths as part of the base ten systems. Students should be able to describe how to use decimal grids to model hundredths..	Hundredths	CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100) M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100. .
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	Fractions and decimals both show parts of a whole. One can easily write fractions for decimals, using denominators of 10 or 100. Express a fraction with denominator 10 as an equivalent fraction	Students should be able to represent the shaded part of tenths and hundredths grid as both a fraction and a decimal.	SWBA to explore using grids and number lines to model the relationships between decimals and fractions.		CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100) M04.A-F.3.1.1 Add two fractions with respective denominators 10 and 100. M04.A-F.3.1.2 Use decimal notation for fractions with

			with denominator of 100 and use this technique to add two fractions with respective denominators 10 and 100. Use decimal notation for fractions with denominators 10 or 100.				denominators 10 and 100.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	One can write a fraction with a denominator of 10 as an equivalent fraction with denominator of 100. One can write decimals to represent fractions that have denominators 10 and 100. Express a fraction with denominator 10 as an equivalent fraction with denominator of 100 and use this technique to add two fractions with respective denominators 10 and 100. Use decimal notation for fractions with denominators 10 or 100.	Students should be able to use models, write fraction with denominator of 10, as a fraction with a denominator of 100 and as a decimal. Students should be able to explain how to identify the shaded part of a hundredths grid as a fraction and a decimal.	SWBA to identify, read, and write tenths and hundredths as decimals and as fractions.	Decimals Fractions	CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100 M04.A-F.3.1.1 Add two fractions with respective denominators 10 and 100. M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100
	Numbers, measures,	How are fractions and decimals	One can write a fraction with a	Students should be able to find a	SWBA to use place value and equivalent	Like fractions	CC.2.1.4.C.3 Connect decimal notation to

	expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	related?	denominator of 10 as an equivalent fraction with a denominator of 100. One can use the technique of writing equivalent fractions to add two fractions with respective denominators of 10 and 100. Express a fraction with denominator 10 as an equivalent fraction with denominator of 100 and use this technique to add two fractions with respective denominators 10 and 100. Use decimal notation for fractions with denominators 10 or 100.	sum of two fractions with unlike denominators of 10 and 100. Students should be able to explain how place value helps when adding unlike fractions with denominators of 10 and 100.	fractions to add two fractions with respective denominators of 10 and 100.		fractions, and compare decimal fractions (base 10 denominator, ex. 19/100 M04.A-F.3.1.1 Add two fractions with respective denominators 10 and 100. M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	One can compare decimals to the tenths or hundredths by using place value to reason about their size. One can use number lines or grids to compare decimals. Use decimal notation for fractions with denominators 10 or 100.	Students should be able to order decimals from least to greatest by lining up the decimal points, annex zeros where necessary, and compare the digits in each place value position. Students should	SWBA to compare and order decimals to hundredths by reasoning about their place value.	Place value	CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, ex. 19/100 M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 and 100. M04.A-F. 3.1.3 Compare two decimals to hundreds using the symbols >, =, <, and justify the

			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 by using a visual model.	be able to explain how to use models to compare decimals.			conclusions.
	Review Common Assessment Unit 10 Fractions and Decimals						
12 Days	Test Common Assessment Unit 10 Fractions and Decimals						

Measurement and Data

Unit 11 Customary Measurement

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
14 Days	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be	Why do we convert measurements?	Inch, foot, and yard are units of length in the customary system. An inch is the length of a paper clip, a foot is	Students should be able to estimate the length of objects and then check their estimates	SWBA to estimate and measure length using customary units. SWBA to use a ruler	Customary system Foot Yard	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1 Know

	quantified.		about the length of a textbook, and a yard is about the height of a chair. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a	by using a ruler to measure to the nearest inch, ½ inch, and ¼ inch. Students should be able to name two customary units of length and explain which measurement is more accurate.	to measure to the nearest ½ and ¼ inch.	Inch mile	relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

			number line diagrams that feature a measurement scale.				
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	In a customary system, convert a larger unit to a smaller unit, multiply. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent	Students should be able to convert among inches, feet, yards and miles. Students should be able to explain how yards and feet are related.	SWBA to convert customary units of length.	Convert Mile Yard Foot Inch	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

			measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	Capacity is the amount of liquid that a container can hold. Cups, pints, quarts, and gallons, are units are used to measure capacity in the customary system. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems	Students should l be able to estimate capacity of different objects. Students should be able to solve word problems involving capacity, or liquid volumes. Students should be able to explain why they measure capacity.	SWBA to estimate and measure customary capacities.	Capacity Cup Fluid ounce Gallon Pint Quart	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

			involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	In the customary system, to convert larger units to a smaller unit, multiply. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) ,	Students should be able to use the relationships among fluid ounces, cups, pints, quarts, and gallons to convert measures of capacity. Students should be able to explain how gallons and fluid ounces are related.	SWBA to convert customary units of capacity.	Capacity Convert Greater than (>) Less than (<) Equal to (=)	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in

			liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				terms of a smaller unit.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	Weight is how heavy an object is, Ounces, pounds, and tons are units to measure weight in the customary system. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches.	Students should be able to estimate weight of different objects. Students should be able to use the four operations to solve word problems involving weight of objects.	SWBA to estimate and measure customary units of weight.	Ounce Pound Ton Weight	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and

			Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				problems that require expressing measurements given in a larger unit in terms of a smaller unit.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	In the customary system, to convert larger units to a smaller unit, multiply. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft.	Students should be able to convert among the units of weight such as ounces, pounds, and tons.	SWBA to convert customary units of weight.	Weight Capacity Convert	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving

			is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	Why do we convert measurements?	In the customary system, to convert larger units of time to a smaller unit, multiply. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record	Students should be able to create a conversion table to show the relationship between two units on time, such as weeks and days. Students should be able to explain how multiplication relates to time conversions.	SWBA to convert units of time.	Seconds Minute Hour Day Week Month Year	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller.

			measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	Why do we convert measurements?	One can make a line plot to display measurement data given in fractions of a unit. One can solve problems by using information presents in a line plot. Make a line plot to display a data set of	Students should be able to use line plots to represent data and solve problems involving addition and subtraction of fractions.	SWBA to display measurement data in a line plot.	Line plot.	CC.2.4.4.A.2 Translate information from one type of data display to another. M04.D-M.2.1.1 Make a line plot to display a data set of measurements in fractions of a unit. (1/2, 1/4 , 1/8) M04.D-M.2.1.2 Solve problems involving addition and subtraction

			measurements in fractions of a unit. (1/2, 1/4 , 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For ex., from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collect.				of fractions by using information presented in line plots (line plots must be labeled with common denominators, such as 1/4, 2/4, 3/4). M04.D-M.2.1.3 Translate information from one type of display to another (table, chart, bar graph or pictograph)
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	Why do we convert measurements?	ONE can solve word problems involving measurement by converting units and using one or more operations. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a	Students should be able to solve problems involving measurement. Students should be able to describe what information is needed to solve problems.	SWBA to solve word problems involving measurement.		CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.

			number line diagrams that feature a measurement scale.				
	Review Common Assessment Unit 11 Customary Measurement						
13Days	Common Assessment Unit 11 Customary Measurement						
Unit 12 Metric Measurement							
Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
10 Day	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	How can conversion of measurements help to solve real world problems?	Millimeter, centimeter, meter and kilometer are units of length in the metric system. A millimeter id the thickness of a few sheets of paper is the smallest of the units. A kilometer, about the length of six city blocks, is the largest. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express	Students should be able to estimate the length of objects and check estimates by using a ruler to measure to the nearest centimeter. Students should be able to explain if it is reasonable to use centimeters to measure the length of any object.	SWBA to estimate and measure lengths Within the metric system and use a ruler to measure to the nearest centimeter.	Centimeter Kilometer Meter Metric system Millimeter	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller.

			measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches.				
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	How can conversion of measurements help to solve real world problems?	Liter, and milliliter are units of capacity in the metric system. A few drops of water are about one millimeter. A water bottle holds about 1 liter. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches.	Students should be able to choose reasonable estimates in metric units for the capacity of objects. Students should be able to explain how measuring capacity in the metric system is similar to measuring capacity I the customary system.	SWBA to estimate and measure metric capacity.	Liter Milliliter	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be	How can conversion of measurements help to solve real world problems?	The amount of matter that an object has is called its mass. Mass is different from weight. Gram and kilogram are	Students should be able to choose reasonable estimates in metric units for the mass of	SWBA to estimate and measure mass and learn the difference between weight and mass.	Gram Kilogram Mass	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know

	quantified		metric units used to measure mass. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches.	objects.			relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	How can conversion of measurements help to solve real world problems?	To convert a larger metric unit to a smaller metric unit, multiply by 10, 100, or 1000 Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches.	Students will be able to convert between units of measurement in the metric system. Student should be able to explain why the value of a measurement increases when converting from a larger unit to a smaller.	SWBA to convert metric units.	Metric conversion chart	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of

			Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified	How can conversion of measurements help to solve real world problems?	One can solve word problems involving metric measurements by converting units and using one or more operation. Know the relative sizes of measurement units within one system of units including km, m, cm, kg, g, lbs., oz., l, ml, hrs. min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record	Students should be able to solve word problems involving metric measurements. Students should be able to know when it is necessary to convert units before solving a problem.	SWBA to solve problems involving measurement.		CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.1Know relative sizes of measurements within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller. M04.D-M.1.1.2 Use the four operations to solve

			measurements equivalents in a two column table. (ex. 1 ft. is 12 times as long as 1 inch, 4 ft. is 48 inches. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as a number line diagrams that feature a measurement scale.				word problems involving distances, intervals of time (such as elapsed time) , liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
	Review Common Assessment Unit 12 Metric Measurement						
10 Days	Test Common Assessment Unit 12 Metric Measurement						
Unit 13 Perimeter and Area							

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
8 Days	Two- and three dimensional objects can be described, classified, analyzed by their attributes, and their location can be described quantitatively.	Why is it important to measure perimeter and area?	One can find the perimeter of a rectangle by adding the side lengths or by using the formula P = (2 x l) + (2 x w). where l is the length and w is the width. Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. For example find the width of a rectangular room given the area of the floor and the length by viewing the area formula as a multiplication equation with an unknown factor.	Students should be able to find the perimeter of a rectangle by using the perimeter formula. Students should be able to explain how a formula can help to find perimeter.	SWBA to find the perimeter of a figure.	Perimeter	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.3 Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. (May include finding a missing side length)
	Two- and three dimensional objects can be described, classified, analyzed by their attributes, and their location can be described quantitatively.	Why is it important to measure perimeter and area?	Area is the number of square units needed to cover a figure without overlapping. Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. For example find the width of a rectangular room given	Students should be able to discover the formula for the area of a rectangle and use the formula to solve real world problems.	SWBA to explore the area of a figure.		CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.3 Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. (May include finding a missing side length)

			the area of the floor and the length by viewing the area formula as a multiplication equation with an unknown factor.				
	Two- and three dimensional objects can be described, classified, analyzed by their attributes, and their location can be described quantitatively.	Why is it important to measure perimeter and area?	One can find the area of a rectangle by counting the number of non-overlapping squares or by using the formula A = l x w where l is the length and w is the width. Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. For example find the width of a rectangular room given the area of the floor and the length by viewing the area formula as a multiplication equation with an unknown factor.	Students should be able to find the area of a figure. Students should be able to explain how estimation can help find the area of a rectangle or square.	SWBA to find the area of rectangles and squares.	Unit square Square unit Area	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.3 Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. (May include finding a missing side length)
	Two- and three dimensional objects can be described, classified, analyzed by their attributes, and their location can be described quantitatively.	Why is it important to measure perimeter and area?	Two rectangles can have the same perimeter but different areas, or the same area but different perimeters. Apply the area and perimeter formulas for rectangles in real world problems and	Students should be able to find all possible dimensions of a rectangle for a given area. Students should be able to explain the difference between area	SWBA to relate areas to perimeter.	Area Perimeter	CC.2.4.4.A.1 Solve problems using conversions within a given measurement system. M04.D-M.1.1.3 Apply the area and perimeter formulas for rectangles in real world problems and mathematical problems. (May include finding a

			mathematical problems. For example find the width of a rectangular room given the area of the floor and the length by viewing the area formula as a multiplication equation with an unknown factor.	and perimeter.			missing side length)
	Review Common Assessment Unit 13 Perimeter and Area						
8 Days	Test Common Assessment Unit 13 Perimeter and Area						

Geometry

Unit 14 Geometry

Estimated Unit Time Frames	**Big Ideas** (understand)	**Essential Questions**	**Concepts** (know)	**Competencies** (do)	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards and Eligible Content**
15 Days	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	A point is an exact location represented by a dot. A line is a straight set of points that extends n opposite directions without ending. A ray is a part of a line that has one endpoint	Students should be able to draw and identify points, lines, line segments and rays; use both words and symbols to identify the given figure.	SWBA to draw point lines, line segments, and rays and identify these figures.	Point Line Ray Endpoint Line segment	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional

			and extends in one direction without ending. A line segment is a part of a line between two endpoints. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures.	Student should be able to explain how lines and line segments are alike and how they are different.			figures.
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	One can describe lines, rays, and line segments by the way they cross each other or do not cross each other. Parallel lines are always the same distance apart, they do not meet or cross each other, Perpendicular lines met and cross each other to form square corners. Lines that meet or cross each other are called intersecting lines and may or may not be perpendicular. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and	Students should be able to describe a given figure, use parallel, perpendicular, or intersecting and use the most specific term. Students should be able to describe a real world example of when it is necessary that line segments are parallel.	SWBA to draw parallel, intersecting and perpendicular lines and identify these in two-dimensional figures.	Parallel Intersecting Perpendicular	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures.

			parallel lines. Identify these two dimensional figures.				
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	An angle is a geometric shape formed when two rays share a common endpoint. An angle is measured (with reference ta circle) with center at the common endpoint of the rays. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand the concept of angle. An angle is measured with reference to a circle with its center at the common endpoint of the rays by considering the fraction of the circular arc between the endpoints where the two rays intersect the circle. An angle that turns through 1/360 of	Students should be able to use circles to draw and identify angles with ¼ turn or ½ turn, and measures that are less than or greater than ¼ turn or ½ turn.	SWBA to understand the concept of angles and angle measure.	Angle	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures.

			a circle is called a “one-degree angle” and can be used to measure angles				
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	A degree is the unit used to measure angles. A angle turns 1/360 of a circle is called one degree. A circle is made up of 360 degrees. And angle turns through “n” one-degree angles is has a measure of “n” degrees. One can identify angles as acute, right, and obtuse. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand the concept of angle.	Students should be able to classify triangles as right, acute or obtuse. Students should be able to explain how a one-degree angle is helpful in classifying angles.	SWBA to use the concept of angle measurement to classify angles.	Degree One-degree angle Right angle Acute angle Obtuse angle	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures.

			An angle is measured with reference to a circle with its center at the common endpoint of the rays by considering the fraction of the circular arc between the endpoints where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle" and can be used to measure angles An angle that turns through n-degrees is said to have an angle measure of n-degrees.				
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	One can use a protractor to find the degree measure of an angle. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Measure angles in whole-number degrees using a protractor. Sketch angles of specific measure. Recognize angles as	Students should be able to use a protractor to measure angles. Students should be able to explain why it is important to line up a protractor correctly when measuring an angle.	SWBA to use a protractor to measure angles to the nearest degree.	Protractor Degree	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. CC.2.4.4.A.6 Measure angles and uses properties of adjacent angles to solve problems. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. M04.D-M.3.1.1 Measure angles in whole-number

			geometric shapes that are formed wherever two rays share a common endpoint, and understand the concept of angle. Measure angles in whole number degrees using a protractor, Sketch angles of specific measure				degrees using a protractor. With the aid of a protractor, sketch angles of specific measure.
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	One can use a protractor to draw angles with specific measure. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Measure angles in whole number degrees using a protractor, Sketch angles of specific measure	Students should be able to draw an angle with specific measure. Students should be able to explain how they know whether their angle measurements are accurate.	SWBA to use a protractor to draw angles of specific measure.		CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. CC.2.4.4.A.6 Measure angles and uses properties of adjacent angles to solve problems. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. M04.D-M.3.1.1 Measure angles in whole-number degrees using a protractor. With the aid of a protractor, sketch angles of specific measure.
	Two- and three-dimensional objects can be described, classified, and analyzed by	How are the different ideas of geometry connected?	Angle measure is additive. When an angle is decomposed into non-overlapping parts, the	Students should be able to find the unknown angle measure on a diagram.	SWBA to solve addition and subtraction problems to find unknown angles on a diagram in real world and		CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. CC.2.4.4.A.6 Measure

	their attributes, and their location can be described quantitatively.		angle measure of the whole is the sum of the angle measures of the parts. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angle measures on a diagram in real world and mathematical problems by using an equation with a symbol for the unknown angle measure.	Students should be able to explain how addition is related to angle measurement.	mathematical situations.		angles and uses properties of adjacent angles to solve problems. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. M04.D-M.3.1.2 Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems.(angles must be adjacent and non-overlapping)
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described	How are the different ideas of geometry connected?	One can classify triangles by the measure of their angles. Triangle can be acute , obtuse or right. One can describe triangles using their attributes, such as the presence or absence of	Students should be able to classify a triangle as acute, right or obtuse. Then determine how many sides are perpendicular, identify the vertices and line	SWBA to classify triangles based on angle measure and describe the triangle using their attributes	Right triangle Acute triangle Obtuse triangle	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. CC.2.3.4.A.2 Classify two-dimensional figures by properties of their lines and angles. M04.C-G.1.1.1 Draw point,

	quantitatively.		perpendicular line segments. One can identify vertices and line segments in triangles. A triangle has three vertices and three line segment. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specific size. Recognize right triangles as a category, and identify right triangles.	segments in the triangle. Students should be able to explain if it is possible for a triangle to have two obtuse angles.			lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. M04.C-G.1.1.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specific size. Recognize right triangles as a category, and identify right triangles.
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	One can classify quadrilaterals based on attributes, such as parallel line segments, perpendicular lines segments, angle measure, and side length measure. Rectangles, squares an rhombi each have all the attributes of parallelograms, So,	Students should be able to classify quadrilaterals. Students should be able to explain how to classify quadrilaterals.	SWBA to identify quadrilaterals using their attributes.	Parallelogram Rectangle Rhombus Square Trapezoid	CC.2.3.4.A.1 Draw lines and angles and identify these two-dimensional figures. CC.2.3.4.A.2 Classify two-dimensional figures by properties of their lines and angles. M04.C-G.1.1.1 Draw point, lines, line segments, rays, angles (right, acute,

			they are also parallelograms. Draw point, lines, line segments, rays, angles (right, acute, obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specific size. Recognize right triangles as a category, and identify right triangles.				obtuse) and perpendicular and parallel lines. Identify these two dimensional figures. M04.C-G.1.1.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specific size. Recognize right triangles as a category, and identify right triangles.
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How are the different ideas of geometry connected?	When a line of Symmetry is drawn through a figure, the figure can be folded over so that half of the figure matches the other half. Some figures have more than one line of symmetry. Not all figures have line symmetry. Recognize a line of symmetry for a two-dimensional figure as a line across the figure that the figure can be	Students should be able to identify figures that have line symmetry and draw lines of symmetry. Students should be able to name a subject other than math in which symmetry is important.	SWBA to identify figures with line symmetry and draw lines of symmetry.	Line of symmetry Line symmetry	CC.2.3.4.A.3 Recognize symmetric shapes and draw lines of symmetry. M04.C-G.1.1.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure that the figure can be folded across the line into mirroring parts. Identify line symmetric figures and draw lines of symmetry.

			folded across the line into mirroring parts. Identify line symmetric figures and draw lines of symmetry.				
	Review Common Assessment Unit 14 Geometry						
15 days	Test Common Assessment Unit 14 Geometry						