Mathematics Grade 4

Numbers and Operation in Base 10

Unit 1 Place Value

Estimated					Lessons Objectives		
Unit Time Frames	Big Ideas (understand)	Essential Questions	Concepts (know)	Competencies (do)	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 multidigit 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	How does the place value help to represent the value of a number?	There are different ways to write multidigit whole numbers. Place value can be	Students should be able to use a place-value chart to write numbers in expanded form	SWBA to read and write multi-digit whole numbers in standard, word and expanded form	Expanded form Period Standard form	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multidigit whole numbers.
	compare numbers using groups of tens		used to write numbers in expanded form and in word form.	and word form. Students should	through the millions.	word form	M04.A-T.1.1.2 Read and write whole numbers in expanded,

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

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Tr	he base-ten	How does the	=, < symbols to record the results. One can round multi-	Students should	SWBA to estimate		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. CC.2.1.3.B.1 Apply place
nı is	number system s a way to organize,	place value help to represent the value of a	digit whole numbers to any place-value.	be able to round a number to the nearest place	numbers by rounding to any place value.		value concepts to show an understanding of multidigit whole numbers.
cc nı gr ar	epresent and ompare sumbers using roups of tens nd place alues.	number?	To round a number, you first determine the place to which the number is to be rounded. Use place value	value by circling the digit in the desired place, underline the digit to its right, if that number is 5 or greater, then			M04.A-T.1.1.4 Round multi-digit whole numbers (through 1,000,000) to any place.
			understanding to round multi-digit whole numbers to any place.	round that number up. The digits to the right of the circles digit are replaced with zeros.			
nu is or re cc nu gr	the base-ten number system is a way to surganize, epresent and ompare numbers using roups of tens nd place alues.	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	Students should be able to use the four step plan for all problem solving. Students should be able to justify the reasonableness	SWBA to use the four step plan to solve word problems involving whole.	Plan Solve Check	CC.2.1.3.B.1 Apply place value concepts to show an understanding of multidigit whole numbers. M04.A-T.1.1.2 Read and write whole numbers in expanded, standard and word form through 1,000,000.
			names, and expanded form. Compare two multidigit numbers based on meanings of the digits in each place using >, =, < symbols to record	of the solution.			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	B: 11				Lessons Objectives		6. 1 1 151: 11			
Unit Time Frames	Big Ideas (understand)	Essential Questions	Concepts (know)	Competencies (do)	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			

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		which numbers are				than 2 digits x 1 digit,
		added does not change				excluding powers of 10).
		the sum.				
		The Associative				
		Property of Addition				
		states that the way in				
		which the numbers are				
		grouped does not				
		change the sum.				
		change the sam.				
		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.				
The base-ten	What strategies	In a whole number, a	Students should	SWBA to use	Pattern	CC.2.1.4.B.1 Apply place
number system	can be used to add	digit in one place has a	be able to use	patterns to solve	T determ	value understanding and
is a way to	and subtract	value 10 times greater	place value to	addition and		properties of operations
	whole numbers?	than it would in the	describe and	subtraction problems		to perform multi-digit
organize,	whole numbers:			•		
represent and		place to its right.	extend patterns	in the base ten		arithmetic.
compare			in numbers.	system.		
numbers using		One can use number				CC.2.2.4.A.4 Generate and
groups of tens		patterns and place	Students should			analyze patterns using one
and place		value to add and	be able to explain			rule.
values.		subtract numbers.	why we study			
			patterns in			M04.A-T.2.1.1 Add and
		Fluently add and	numbers.			Subtract multi-digit whole
		subtract multi-digit				numbers (limit sums to
		whole numbers using				and subtrahends up to
		the standard				and including 1,000,000.
		algorithm.				and merdaning 1,000,000.
		aigui Itillii.				M04.A-T.2.1.4 Estimate
		Companyate a militaria a militaria				
		Generate a number or				the answer to addition,
		shape pattern that				subtraction, and
		follows a given rule.				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 multidigit 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.	be able to explain how to know if an estimate is			to perform multi-digit arithmetic.
		Fluently add and subtract multi-digit whole numbers using the standard algorithm.	reasonable.			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	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.	Students should be able to find the sums of multi-digit numbers by adding the ones	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.
numbers using groups of tens and place values.		Fluently add and subtract multi-digit whole numbers using the standard	(regroup if necessary), add the tens (regroup when necessary), add the hundreds			CC.2.2.4.A.1 Represent and Solve problems involving the four operation.
		algorithm. Solve multi-step word	(regroup when necessary) and add the			M04.A-T.2.1.1 Add and Subtract multi-digit whole numbers (limit sums to
		problems posed with whole numbers and	thousands.			and subtrahends up to and including 1,000,000.
		having whole-number answers using the four operations. Including	Students should be able to explain why an addition			M04.A-T.2.1.4 Estimate the answer to addition,

			11 11 11			
		problems in which	problem that has			subtraction, and
		remainders can be	4-digits addends			multiplication problems
		interpreted. Represent	could have a 5-			using whole numbers
		these problems using	digit sum.			through six digits (for
		equations with a letter				multiplication, no more
		standing for the				than 2 digits x 1 digit,
		unknown quantity.				excluding powers of 10).
		Assess the				M04.B-O.1.1.3 Solve
		reasonableness of the				multi-step word problems
		answer using mental				posed with whole
		computation and				numbers using the four
		estimation strategies				operations. Answers will
		including rounding.				be either whole numbers
		including rounding.				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	What strategies	Fluently add and	Students should	SWBA to subtract	Subtrahend	CC.2.1.4.B.1 Apply place
number system	can be used to add	subtract multi-digit	be able to find	multi-digit numbers.		value understanding and
is a way to	and subtract	whole numbers using	differences of		Minuend	properties of operations
organize,	whole numbers?	the standard	multi-digit			to perform multi-digit
represent and		algorithm.	numbers by			arithmetic.
compare			subtracting the			
numbers using		Solve multi-step word	ones (regroup if			CC.2.2.4.A.1 Represent
groups of tens		problems posed with	necessary),			and Solve problems
and place		whole numbers and	subtract the tens			involving the four
values.						_
values.		having whole-number	(regroup when			operation.
		answers using the four	necessary),			
		operations. Including	subtract the			
		problems in which	hundreds			M04.A-T.2.1.1 Add and
		remainders can be	(regroup when			Subtract multi-digit whole
		interpreted. Represent	necessary) and			numbers (limit sums to
		these problems using	subtract the			and subtrahends up to
		equations with a letter	thousands.			and including 1,000,000.
		standing for the	Students should			
		unknown quantity.	be able to explain			M04.A-T.2.1.4 Estimate
			why it is			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			than 2 digits x 1 digit,
			be able to explain			excluding powers of 10).
			·			excluding powers or 10).
			how understanding			
			place value helps			
			to subtract across			
- 1	144		zeros.	CIAIDA I III	- ··	00244544
The base-ten	What strategies	One can represent a	Students should	SWBA to solve multi-	Equation	CC.2.1.4.B.1 Apply place
number system	can be used to add	multi-step word	be able to write	step word problems		value understanding and
is a way to	and subtract	problem by writing an	an equation to	using addition and	Variable	properties of operations
organize,	whole numbers?	equation.	solve an addition	subtraction.		to perform multi-digit
represent and			or subtraction			arithmetic.
compare		One can use a variable	word problem.			
numbers using		to represent the				CC.2.2.4.A.1 Represent
groups of tens		unknown quantity in	Student should			and Solve problems
and place		an equation.	be able to			involving the four
values.			describe how to			operation.
		Fluently add and	use variables to			
		subtract multi-digit	describe real			
		whole numbers using	world problems.			M04.A-T.2.1.1 Add and
		the standard				Subtract multi-digit whole
		algorithm.				numbers (limit sums to
						and subtrahends up to
		Solve multi-step word				and including 1,000,000.
		problems posed with				
		whole numbers and				M04.A-T.2.1.4 Estimate
		having whole-number				the answer to addition,
		answers using the four				subtraction, and
		operations. Including				multiplication problems
		problems in which				using whole numbers
		remainders can be				through six digits (for
		interpreted. Represent				multiplication, no more
		these problems using				than 2 digits x 1 digit,
		equations with a letter				excluding powers of 10).
		standing for the				
		unknown quantity.				M04.B-O.1.1.3 Solve
		a qualitity.				multi-step word problems
		Assess the				posed with whole
		reasonableness of the				numbers using the four
		answer using mental				operations. Answers will
		computation and				be either whole numbers
		•				
		estimation strategies			1	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					Lessons Objectives					
Unit Time	Big Ideas	Essential	Concepts	Competencies	and Suggested	Vocabulary	Standards and Eligible			
Frames	(understand)	Questions	(know)	(do)	Resources		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.			

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		l	and/or area models.	0. 1 . 1	0.4.5.4.	- "	100000000000000000000000000000000000000
	The base-ten	How are	Verbal statements like	Students should	SWBA to recognize	Bar diagram	CC.2.2.4.A.1 Represent
	number system	multiplication and	times as many, times	be able to write	the comparison of		and solve problems
	is a way to	division related?	more and times as	equations to	two groups as		involving the four
	organize,		much mean that the a	represent	another strategy to		operations.
	represent and		problem involves	comparisons.	use when		
	compare		multiplicative		multiplying.		M04.B-O.1.1.1 Interpret
	numbers using		comparison.	Students should			an multiplication equation
	groups of tens			be able to explain			as a comparison.
	and place		One can use	how a bar			Represent verbal
	values.		multiplication	diagram can help			statements of
			equations to solve	plan and solve a			multiplicative comparisons
			multiplicative	problem.			as multiplication
1			comparison problems.				equations. (ex. Interpret
1							35 = 5 x 7 as a statement
			Interpret a				that 35 is 5 times as many
			multiplication equation				as 7 and 7 times as many
			as a comparison. (ex.				as 5. Know that 24 is 3
			Interpret 35 = 5 x 7 as a				times as many as 8 can be
			statement that 35 is 5				represented by the
			times as many as 7 and				equation 24 = 3 x 8 or 24 =
			7 times as many as 5).				8 x 3)
			Represent verbal				
			statements of				M04.B-O. 1.1.2 Multiply
			multiplicative				and Divide to solve word
			comparisons as				problems involving
			multiplication				multiplicative comparison,
			equations.				distinguishing
							multiplicative comparison
			Multiply or divide to				from additive comparison.
			solve word problems				(ex. Know that 3 x 4 can be
			involving multiplicative				used to represent that
			comparison. (ex. By				Student A has 4 objects
1			using drawings and				and Student B has 3 times
1			equations with the				as many objects, and not
1			symbol for the				just three more objects.
			unknown number to				
1			represent the problem,				
1			distinguishing				
1			multiplicative				
1			comparison from				
			additive comparison.				

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.	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		The multiplication	in an equation.		Zero Property	numbers and decimals.
numbers using		properties include the	an equation			
groups of tens		Commutative Property,	Students should			M04.A-T. 2.1.2 Multiply a
and place		the Identity Property,	be able to explain			whole number of up to
values.		and the Zero Property	how			four digits by a one-digit
varaes.		of Multiplication.	multiplication			whole number and
		or wattiplication.	properties and			multiply 2 two-digit
		Multiply a whole	division rules			numbers.
		number of up to four	help to multiply			Humbers.
		digits by a one digit	and divide.			
		whole number, and	and divide.			
		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				
T.		models.	6. 1 . 1 . 1	CIAIDA		002445211
The base-ten	How are	The Associative	Students should	SWBA to use	Associative	CC.2.1.4.B.2 Use place
number system	multiplication and	Property of	be able to use the	Associative Property	Property of	value concepts to show
is a way to	division related?	Multiplication states	Associative	of multiplication to	Multiplication	understanding of
organize,		that the way you group	Property of	solve problems.		operations and rounding
represent and		numbers when you	Multiplication to			as they pertain to whole
compare		multiply does not	multiply three			numbers and decimals.
numbers using		change the product.	numbers.			
groups of tens						M04.A-T. 2.1.2 Multiply a
and place		One can use the	Stunts should be			whole number of up to
values.		Associative Property of	able to explain			four digits by a one-digit
		Multiplication to find	how the			whole number and
		products mentally.	Associative			multiply 2 two-digit
			Property of			numbers.
		Multiply a whole	Multiplication			
		number of up to four	can help calculate			
		digits by a one digit	products			
		whole number, and	mentally.			
		multiply two two-digit				
		numbers, using				
		strategies based on				

	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?	place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models. 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	t Unit 3 Add Two	Digit Numbers		
12 Days		Com	mon Assessment Uni	t 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				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.
			number. Determine whether a given whole number in the range 1-100 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)
nun is a orga repi com nun grou	mber system a way to ganize, present and mpare mbers using pups of tens	How can I communicate multiplication?	One can estimate the product of a one digit number and a multidigit number to the greatest place value. Use place value understanding to	Students should be able to estimate products by rounding. Students should be able to explain	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
	d place lues.		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	how estimation is helpful when finding a product mentally.			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

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

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

	1					
		tens and ones.	two-digit			
			number.			
		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.				
The base-ten	How can I	Sometimes multiplying	Students should	SWBA to multiply a	Factor	CC.2.1.4.B.2 Use place
number system	communicate	by two-digit numbers	be able to know	two digit number by		value understanding and
is a way to	multiplication?	requires regrouping.	the steps for	a one digit number.	Regroup	properties of operations
organize,			multiplying a			to perform multi-digit
represent and		To multiply with	two-digit number		Product	arithmetic.
compare		regrouping, first	by a one-digit			
numbers using		multiply the ones, then	number by			CC.2.2.4.A.1 Represent
groups of tens		regroup the ones into	multiplying the			and solve problems
and place		tens and ones and	ones (regroup if			involving the four
values.		finally multiply the	necessary) and			operations.
		tens.	then multiply the			
		-	tens (add the			M04.A-T.2.1.2 Multiply a
		Solve multi step word	regrouped tens).			whole number up to four
		problems posed with	U = = = = =			digits by a one-digit whole
		whole numbers and	Students should			number and multiply two
		having whole-number	be able to explain			two-digit numbers.
		answers sing the four	the steps to use			
		operations including	to multiply by a			M04.B-0.1.1.3 Solve
		problems which	two-digit number			multi-step word problems
		remainders must be	with regrouping.			posed with whole
		interpreted. Represent				numbers using the four
		these problems with an				operations. Answers will
		equation with a letter				be either whole numbers
		standing for the				of have remainders that
		unknown quantity.				
		ulikilowii qualitity.				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	How can I	To multiply by a one-	Students should	SWBA to multiply a	Partial Products	CC.2.1.4.B.2 Use place
number system is a way to	communicate multiplication?	digit number by a multi-digit number,	be able to multiply a multi-	multi-digit number by a one digit	Factor	value understanding and properties of operations
organize,	multiplication:	one should use the	digit number by	number	i actor	to perform multi-digit
represent and		same steps that you	multiplying the		Product	arithmetic.
compare		used to multiply by a	ones (regroup if			
numbers using		two-digit.	necessary), then			M04.A-T.2.1.2 Multiply a
groups of tens			multiply the tens			whole number up to four
and place		Multiply a whole	(regroup if			digits by a one-digit whole
values.		number of up to four	necessary) and			number and multiply two
		digits by a one digit	then multiply the			two-digit numbers.
		whole number and	hundreds.			MO4 A T 2 1 4 Fatiments
		multiply two two-digit numbers using	Students should			M04.A-T. 2.1.4 Estimate the answer to addition ,
		strategies based on	be able to explain			subtraction, and
		place value and the	how to multiply			multiplication using whole
		properties of	by multi-digit			numbers through six digits
		operations. Illustrate	numbers is			(for multiplication, no
		and explain the	similar to			more than 2 digits x 1
		calculation by using	multiplying by			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 multidigit 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 multidigit numbers with zero and onedigit 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 Co	ommon Assessment Ui	nit 4 Multiply wit	h One Digit Number	S				
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	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?	models. To estimate products, one can round multidigit 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		numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)
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 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.

The base-ten	How can I multiply	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.	SWBA to use	Operation	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) CC.2.1.4.B.2 Use place
number system is a way to organize, represent and compare numbers using groups of tens and place values.	by a two-digit number?	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	be able to solve multi-step word problems. Students should be able to describe how equations can be used to model real-world problems.	multiplication to solve multi-step word problems.	Speration	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 multidigit 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

	strategies based on place value and the properties of operations. Illustrate and explain the			numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10)			
	calculation by using equations, rectangula 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. Represe these problems with equation with a letter standing for the unknown quantity. Assess the reasonableness of answers using mentate computation and estimation strategies including rounding.	it an		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 Ass	essment Unit 5 M	ultiply with Two-Dig	it 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.	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 whother 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

		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,
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	excluding powers of 10) 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				M04.A-T.2.1.4 Estimate
		explain the calculations				the answer to addition,
		by using equations,				subtraction, and
		rectangular arrays				multiplication problems
		and/or area models.				using whole numbers
						through six digits (for
						multiplication, no more
						than 2 digits x 1 digit,
						excluding powers of 10
The base-ten	How does division	One can use models	Students should	SWBA to use place	Remainder	CC.2.1.4.B.2 Use place
number system	affect numbers?	and place value to	be able to use	value and models to		value understanding and
is a way to		solve problems.	base ten blocks	explore dividing by		properties of operations
organize,			to find quotients	one digit numbers.		to perform multi-digit arithmetic
represent and compare		When numbers do	for a division problem by			antimiletic
numbers using		not divide evenly,	dividing the			M04.A-T.2.1.3 Divide up to
groups of tens		the amount left over	models into equal			four-digit dividends by
and place		is called the	groups.			one-digit divisors with
values.		remainder.	0 1			numbers written as
						whole-number quotients
		Find whole number				and remainders.
		quotients and				
		remainders with up				M04.A-T.2.1.4 Estimate
		to four digit				the answer to addition,
		dividends and one				subtraction, and
		digit devisors, using				multiplication problems
		strategies based on				using whole numbers
		place value, the				through six digits (for multiplication, no more
		properties of				than 2 digits x 1 digit,
		operations and/or				excluding powers of 10
		the relationship				. 5,
		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 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

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?	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. 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	multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10 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
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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? 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
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is a way organiz represe compar number	affect numbers? y to ze, ent and re ers using of tens ace	between multiplication and division. Illustrate and explain the calculations by using equations, rectangular arrays and/or area models. 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	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	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
		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	digits when dividing 3-digit numbers by 1-digit numbers.			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?	equations, rectangular arrays and/or area models. 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	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
The base-ten number system	How does division affect numbers?	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. When writing a equation to solve a	Students should be able to write	SWBA to solve multi- step word problems	Equations	multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits x 1 digit, excluding powers of 10 CC.2.2.4.A.1 Represent and solve problems
is a way to organize, represent and compare numbers using groups of tens and place		multi-step word problem, one can use a letter, or variable, to stand for the unknown number. Solve multi-step word	an equation using more than one operation to solve a multi-step word problem. Students should	using more than one operation.	Parentheses Variables	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	YS Common Assessment Unit 6 Dividing by a One-Digit Divisor								
	Operations and Algebraic Thinking								
			Unit 7 Patter	rns and Sequ	ences				
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	How are patterns used in mathematics?	One can use a rule to produce a nonnumeric pattern, or a pattern that does not use	Students should be able to generate a nonnumeric	SWBA to describe nonnumeric growing and repeating patterns.	Patterns Nonnumeric patterns	CC.2.2.4.A.4 Generate and analyze patterns using one 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	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?	way) 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.

Patterns exhibi relationships that can be extended, described and generalized.	How are patterns used in mathematics?	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) 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	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)	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.
		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 explain how to find pattern.			

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

Patterns exhibit	How are patterns	that the terms appear to alternate between even and odd numbers. Explain informally why the numbers will continue to alternate in this way) The order of	solve real world problems. Students should be able to we the	SWBA to use the	Order of	cc.2.2.4.A.1 Represent
relationships that can be extended, described and generalized.	used in mathematics?	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.	be able to use the order of operations to simplify expressions. Students should be able to explain why the order of operations is important.	order of operations to solve problems.	operations Parentheses	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	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).
1	Patterns exhibit relationships that can be extended, described and generalized.	How are patterns used in mathematics?	way) 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 realworld 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	must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing						
	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	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						
	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)	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 Se	quences						
13 Days	Common Assessment Unit 7 Patterns and Seque	nces						
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.	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.	How can different	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. A fraction is in simplest	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	SWBA to write a	Equivalent fractions Simplest form	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.
measures, expressions, equations, and inequalities can represent	fractions name the same amount?	form when 1 is the only common factor of the numerator and denominator.	be able to write a fraction in simplest form by dividing the numerator and	fraction in simplest form.	Greatest Common Factor (GCF)	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 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,	How can different	One can compare and	Students should	SWBA to use	Benchmark	CC.2.2.4.A.2 Develop
measures,	fractions name the same amount?	order fractions by	be able to order fractions from	benchmark fractions	fractions	and/or apply number theory concept to find
expressions, equations, and	Same amounts	using a benchmark fraction, or common	least to greatest.	to compare and order numbers.		factors and multiples.
inequalities can		fraction such as ½.	icast to greatest.	order numbers.		ractors and mattiples.
represent			Students should			M04.A-F.1.1.2 Compare
mathematical		Compare two fractions	be able to explain			two fractions with
situations and		with different	how to decide if			different numerators and
structures in many		numerators and different denominators	¾ is greater than 1/6.			different denominators (denominators limited to
equivalent		(ex., by creating	1/0.			2,3,4,5,6,8,10,12 and 100)
forms.		common denominators				using symbols >, =, > and
		or numerators, or by				justify the conclusions.
		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 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			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
			+ 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.2.1.4 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)
m e: e: ir re m si st m	Numbers, measures, expressions, equations, and mequalities can represent mathematical cituations and etructures in many equivalent orms.	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 as joining and separating parts referring to the same whole.	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.	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	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. MO4.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
		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	be able to explain how a mixed number can be written as a sum.			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;

Numbers.	How can Luse	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. One can subtract	Students will be	SWBA to subtract	Equivalent	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) CC.2.1.4.C.2 Build
Numbers,	How can I use	One can subtract			Equivalent	
measures,	operations to	mixed numbers by	able to subtract	mixed numbers.	fraction	fractions from unit fractions by applying and
expressions,	model real-world	writing each mixed	mixed numbers			

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

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

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

Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How are fractions and decimals related?	symbols >, =, <, and justify the conclusions by using a visual model. 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 measure expressic equation inequalit represen mathem situation structure many equivale forms.	and decimals related? s, and ies can t entical s and is in	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 and 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 measure		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.	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 Cor	mmon Assessment Un	it 10 Fractions a	nd Decimals					
12 Days	12 Days Test Common Assessment Unit 10 Fractions and Decimals									
			Measure	ement and [Data					
			Unit 11 Custo	omary Measu	rement					
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			

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quantified.	about the length of a	by using a ruler	to measure to the		relative sizes of
	textbook, and a yard is	to measure to the	nearest ½ and ¼ inch.	Inch	measurements within one
	about the height of a	nearest inch, 1/2			system of units including
	chair.	inch, and ¼ inch.		mile	standard units, metric
					units, and time. Within a
	Know the relative sizes	Students should			single system of
	of measurement units	be able to name			measurement, express
	within one system of	two customary			measurements in a larger
	units including km, m,	units of length			unit in terms of a smaller.
	cm, kg, g, lbs., oz., l, ml,	and explain			
	hrs. min, sec. Within a	which			M04.D-M.1.1.2 Use the
	single system of	measurement is			four operations to solve
	measurement, express	more accurate.			word problems involving
	measurements in a				distances, intervals of time
	larger unit in terms of a				(such as elapsed time),
	smaller unit. Record				liquid volumes, masses of
	measurements				objects; money, including
	equivalents in a two				problems involving simple
	column table. (ex. 1 ft.				fractions or decimals; and
	is 12 times as long as 1				problems that require
	inch, 4 ft. is 48 inches.				expressing measurements
					given in a larger unit in
	Use the four				terms of a smaller unit.
	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				

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

1	Τ		T	I	T	1
		measurement				
		quantities using				
		diagrams such as a				
		number line diagrams				
		that feature a				
		measurement scale.				
Some attribute	Why do we	Capacity is the amount	Students should I	SWBA to estimate	Capacity	CC.2.4.4.A.1 Solve
of objects are	convert	of liquid that a	be able to	and measure		problems using
measurable,	measurements?	container can hold.	estimate capacity	customary capacities.	Cup	conversions within a given
e.g. length,			of different			measurement system.
mass, capacity,		Cups, pints, quarts, and	objects.		Fluid ounce	
and it can be		gallons, are units are			Traid durice	M04.D-M.1.1.1Know
quantified.		used to measure	Students should		Callan	relative sizes of
		capacity in the	be able to solve		Gallon	measurements within one
		customary system.	word problems			system of units including
			involving		Pint	standard units, metric
		Know the relative sizes	capacity, or liquid			units, and time. Within a
		of measurement units	volumes.		Quart	single system of
		within one system of				measurement, express
		units including km, m,	Students should			measurements in a larger
		cm, kg, g, lbs., oz., l, ml,	be able to explain			unit in terms of a smaller.
		hrs. min, sec. Within a	why they			
		single system of	measure			M04.D-M.1.1.2 Use the
		measurement, express	capacity.			four operations to solve
		measurements in a				word problems involving
		larger unit in terms of a				distances, intervals of time
		smaller unit. Record				(such as elapsed time) ,
		measurements				liquid volumes, masses of
		equivalents in a two				objects; money, including
		column table. (ex. 1 ft.				problems involving simple
		is 12 times as long as 1				fractions or decimals; and
		inch, 4 ft. is 48 inches.				problems that require
						expressing measurements
		Use the four				given in a larger unit in
		operations to solve				terms of a smaller unit.
		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				
Como ottributa	M/by do wo	measurement scale.	Ctudonts should	CM/DA to convert	Canacity	CC 2 4 4 4 1 Solve
Some attribute of objects are	Why do we convert	In the customary system, to convert	Students should be able to use the	SWBA to convert customary units of	Capacity	CC.2.4.4.A.1 Solve problems using
measurable,		larger units to a	relationships	· · · · · · · · · · · · · · · · · · ·	Convert	conversions within a given
	measurements?	_	•	capacity.	Convert	-
e.g. length, mass, capacity,		smaller unit, multiply.	among fluid ounces, cups,		Greater than (>)	measurement system.
and it can be		Know the relative sizes			Greater than (>)	M04.D-M.1.1.1Know
quantified.		of measurement units	pints, quarts, and gallons to convert		Less than (<)	relative sizes of
quantineu.			measures of		Less than (<)	measurements within one
		within one system of units including km, m,	capacity.		Equal to (=)	system of units including
		cm, kg, g, lbs., oz., l, ml,	capacity.		Equal to (-)	standard units, metric
		hrs. min, sec. Within a	Students should			units, and time. Within a
		single system of	be able to explain			single system of
		measurement, express	how gallons and			measurement, express
		measurements in a	fluid ounces are			measurements in a larger
		larger unit in terms of a	related.			unit in terms of a smaller.
		smaller unit. Record	i ciatca.			and in terms of a sindict.
		measurements				M04.D-M.1.1.2 Use the
		equivalents in a two				four operations to solve
		column table. (ex. 1 ft.				word problems involving
		is 12 times as long as 1				distances, intervals of time
		inch, 4 ft. is 48 inches.				(such as elapsed time),
						liquid volumes, masses of
		Use the four				objects; money, including
		operations to solve				problems involving simple
		word problems				fractions or decimals; and
		involving distances,				problems that require
		interval of time (such				expressing measurements
		as elapsed time),				given in a larger unit in

	1	liantial malenage magnetic				Assess of a smaller contr
		liquid volumes, masses				terms of a smaller unit.
		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.				
Some attribute	Why do we	Weight is how heavy	Students should	SWBA to estimate	Ounce	CC.2.4.4.A.1 Solve
of objects are	convert	an object is,	be able to	and measure		problems using
measurable,	measurements?		estimate weight	customary units of	Pound	conversions within a given
e.g. length,		Ounces, pounds, and	of different	weight.		measurement system.
mass, capacity,		tons are units to	objects.	ŭ	Ton	,
and it can be		measure weight in the				M04.D-M.1.1.1Know
quantified.		customary system.	Students should		Weight	relative sizes of
1		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	be able to use the		- 0	measurements within one
		Know the relative sizes	four operations			system of units including
		of measurement units	to solve word			standard units, metric
		within one system of	problems			units, and time. Within a
		units including km, m,	involving weight			single system of
		cm, kg, g, lbs., oz., l, ml,	of objects.			measurement, express
		hrs. min, sec. Within a	or objects.			measurements in a larger
		single system of				unit in terms of a smaller.
						dilit ili terriis or a sirialier.
		measurement, express				M04.D-M.1.1.2 Use the
		measurements in a				
		larger unit in terms of a				four operations to solve
		smaller unit. Record				word problems involving
		measurements				distances, intervals of time
		equivalents in a two				(such as elapsed time),
		column table. (ex. 1 ft.				liquid volumes, masses of
		is 12 times as long as 1				objects; money, including
		inch, 4 ft. is 48 inches.				problems involving simple
						fractions or decimals; and

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

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

			measurements				M04.D-M.1.1.2 Use the
			equivalents in a two				four operations to solve
			column table. (ex. 1 ft.				word problems involving
			is 12 times as long as 1				distances, intervals of time
			inch, 4 ft. is 48 inches.				(such as elapsed time),
			ilicii, 4 it. is 46 iliciies.				liquid volumes, masses of
			Use the four				
							objects; money, including
			operations to solve				problems involving simple
			word problems				fractions or decimals; and
			involving distances,				problems that require
			interval of time (such				expressing measurements
			as elapsed time) ,				given in a larger unit in
			liquid volumes, masses				terms of a smaller unit.
			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.				
S	Some attribute	Why do we	One can make a line	Students should	SWBA to display	Line plot.	CC.2.4.4.A.2 Translate
0	of objects are	convert	plot to display	be able to use	measurement data in	•	information from one type
l n	measurable,	measurements?	measurement data	line plots to	a line plot.		of data display to another.
e	e.g. length,		given in fractions of a	represent data			
l n	mass, capacity,		unit.	and solve			M04.D-M.2.1.1 Make a
a	and it can be			problems			line plot to display a data
l q	quantified		One can solve	involving addition			set of measurements in
			problems by using	and subtraction			fractions of a unit. (1/2,
			information presents in	of fractions.			1/4 , 1/8)
			a line plot.				
							M04.D-M.2.1.2 Solve
			Make a line plot to				problems involving
ı			display a data set of				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. MO4.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		Com	mon Assessment Unit	11 Customary M	1 easurement					
	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. MO4.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. MO4.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 word problems involving distances, intervals of tim (such as elapsed time), liquid volumes, masses of objects; money, including problems involving simplifications or decimals; an							
	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.							
	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 I 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)

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?	the area of the floor and the length by viewing the area formula as a multiplication equation with an unknown factor. One can find the area of a rectangle by counting the number of non-overlapping squares or by using the formula A = I x w where I 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	Why is it important to	Two rectangles can have the same	Students should be able to find all	SWBA to relate areas to perimeter.	Area	CC.2.4.4.A.1 Solve problems using
objects can be	measure	perimeter but different	possible	to permitter.	Perimeter	conversions within a given
described,	perimeter and	areas, or the same area	dimensions of a			measurement system.
classified,	area?	but different	rectangle for a			
analyzed by their attributes,		perimeters.	given area.			M04.D-M.1.1.3 Apply the area and perimeter
and their		Apply the area and	Students should			formulas for rectangles in
location can be		perimeter formulas for	be able to explain			real world problems and
described		rectangles in real world	the difference			mathematical problems.
quantitatively.		problems and	between area			(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	8 Days Test Common Assessment Unit 13 Perimeter and Area									
	Geometry									
			Unit 1	4 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.

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		parallel lines. Identify				
		these two dimensional				
		figures.	2			
Two- and three-	How are the	An angle is a geometric	Students should	SWBA to understand	Angle	CC.2.3.4.A.1 Draw lines
dimensional	different ideas of	shape formed when	be able to use	the concept of angles		and angles and identify
objects can be	geometry	two rays share a	circles to draw	and angle measure.		these two-dimensional
described,	connected?	common endpoint.	and identify			figures.
classified, and		1	angles with ¼			
analyzed by		An angle is measured	turn or ½ turn,			M04.C-G.1.1.1 Draw point,
their attributes,		(with reference ta	and measures			lines, line segments, rays,
and their		circle) with center at	that are less than			angles (right, acute,
location can be		the common endpoint	or greater than 1/4			obtuse) and perpendicular
described		of the rays.	turn or ½ turn.			and parallel lines. Identify
quantitatively.		Draw point lines line				these two dimensional
		Draw point, lines, line segments, rays, angles				figures.
		(right, acute, obtuse)				
		and perpendicular and				
		parallel lines. Identify				
		these two dimensional				
		figures.				
		ligures.				
		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				

		a circle is called a "one- degree angle" and can be used to measure angles				
Two- and thr dimensional objects can be described, classified, an analyzed by their attribut and their location can described quantitativel	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" onedegree 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.

	1	1	1	ī		T
		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-	How are the	One can use a	Students should	SWBA to use a	Protractor	CC.2.3.4.A.1 Draw lines
dimensional	different ideas of	protractor to find the	be able to use a	protractor to		and angles and identify
objects can be	geometry	degree measure of an	protractor to	measure angles to	Degree	these two-dimensional
described,	connected?	angle.	measure angles.	the nearest degree.	-0	figures.
classified, and						l inguitation
analyzed by		Draw point, lines, line	Students should			CC.2.4.4.A.6 Measure
their attributes,		segments, rays, angles	be able to explain			angles and uses properties
and their		(right, acute, obtuse)	why it is			of adjacent angles to solve
location can be		and perpendicular and	important to line			problems.
described		parallel lines. Identify	up a protractor			prodicting.
quantitatively.		these two dimensional	correctly when			
quantitatively.		figures.	measuring an			M04.C-G.1.1.1 Draw point,
		iigui es.				lines, line segments, rays,
		Measure angles in	angle.			angles (right, acute,
		whole-number degrees				obtuse) and perpendicular
		_				
		using a protractor.				and parallel lines. Identify
		Sketch angles of				these two dimensional
		specific measure.				figures.
						NAOA D NA 2 4 4 84
						M04.D-M.3.1.1 Measure
		Recognize angles as				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 thr dimensional objects can be described, classified, an analyzed by their attribut and their location can described quantitativel	different ideas of geometry connected? d es,	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 thr dimensional objects can b described, classified, an analyzed by	different ideas of geometry connected?	Angle measure is additive. When an angle is decomposed into nonoverlapping 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		angle measure of the whole is the sum of the	Students should be able to explain	mathematical situations.		angles and uses properties of adjacent angles to solve
location can be described		angle measures of the parts.	how addition is related to angle			problems.
quantitatively.		pures	measurement.			M04.C-G.1.1.1 Draw point,
,		Draw point, lines, line				lines, line segments, rays,
		segments, rays, angles				angles (right, acute,
		(right, acute, obtuse)				obtuse) and perpendicular
		and perpendicular and				and parallel lines. Identify
		parallel lines. Identify				these two dimensional
		these two dimensional				figures.
		figures.				MO4 D M 2 1 2 Calus
		Recognize angle				M04.D-M.3.1.2 Solve addition and subtraction
		measure as additive.				problems to find unknown
		When an angle is				angles on a diagram in
		decomposed into non-				real-world and
		overlapping parts, the				mathematical
		angle measure of the				problems.(angles must be
		whole is the sum of the				adjacent and non-
		angle measures of the				overlapping)
		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.				
Two- and three-	How are the	One can classify	Students should	SWBA to classify	Right triangle	CC.2.3.4.A.1 Draw lines
dimensional	different ideas of	triangles by the	be able to classify	triangles based on		and angles and identify
objects can be	geometry	measure of their	a triangle as	angle measure and	Acute triangle	these two-dimensional
described,	connected?	angles. Triangle can be	acute, right or	describe the triangle		figures.
classified, and		acute, obtuse or right.	obtuse. Then	using their attributes	Obtuse triangle	CC.2.3.4.A.2 Classify two-
analyzed by		0	determine how			dimensional figures by
their attributes,		One can describe	many sides are			properties of their lines
and their location can be		triangles using their attributes, such as the	perpendicular, identify the			and angles.
described		presence or absence of	vertices and line			M04.C-G.1.1.1 Draw point,
acscribed	l	presence of absence of	vertices and fille	I		WIOT.C-G.I.I.I DIAW 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 dimension		When a line of Symmetry is drawn	Students should be able to	SWBA to identify figures with line	Line of symmetry	CC.2.3.4.A.3 Recognize symmetric shapes and
objects c		through a figure, the figure can be folded	identify figures that have line	symmetry and draw lines of symmetry.	Line symmetry	draw lines of symmetry.
classified	and	over so that half of the	symmetry and	inies of symmetry.	Line symmetry	M04.C-G.1.1.3 Recognize a
analyzed their attr		figure matches the other half.	draw lines of symmetry.			line of symmetry for a two-dimensional figure as
and their	,		, ,			a line across the figure
location described		Some figures have more than one line of	Students should be able to name			that the figure can be folded across the line into
quantitat		symmetry.	a subject other			mirroring parts. Identify
		Not all figures have line	than math in which symmetry			line symmetric figures and draw lines of symmetry.
		symmetry.	is important.			
		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.				
	Review Common Assessment Unit 14 Geometry				
15 days	Test Common Assessment Unit 14 Geometry				