Mathematics Grade 3

Unit 1 Understand Multiplication and Division of Whole Numbers

Estimated Unit Time Frames	Big Ideas	Essential Questions	Concepts (Know)	Competencies (Do)	Lessons/ Suggested Resources	Vocabulary	Standards/ Eligible Content
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	Multiplication can help you add identical numbers quickly. One can use equal groups to model and solve multiplication. Interpret products of whole numbers (ex. 5 x 7 as the totals number of objects in 5 groups of 7 objects. Use multiplication and division within 100 to solve word problems in situations that involving equal groups, arrays and measurement quantities, by drawings and equations with a symbol for the unknown number to represent the problem.	Students should be able to use equal groups to show the multiplication of whole numbers. Students should be able to describe how multiplication and repeated addition are alike.	Lesson 1-1 Multiplication as Repeated Addition SWBA to use addition or multiplication to join equal groups. SWBA to relate multiplication and addition. Envision 2.0 Pgs. 7-12	Equal groups Multiplication Factors Equations Unknown	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers.

	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	Multiplication can help you add identical numbers quickly. One can use equal groups to model and solve multiplication. Interpret products of whole numbers (ex. 5 x 7 as the totals number of objects in 5 groups of 7 objects. Use multiplication and division within 100 to solve word problems in situations that involving equal groups, arrays and measurement quantities, by drawings and equations with a symbol for the unknown number to represent the problem.	Students should be able to use equal groups to show the multiplication of whole numbers. Students should be able to describe how multiplication and repeated addition are alike.	Lesson 1-2 Multiplication on a Number Line SWBA to use a number line to represent and solve multiplication facts. Envision 2.0 Pgs. 13-18	Number Line	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	One can use arrays to represent and solve multiplication problems. One can use the Commutative Property of Multiplication as a strategy for solving multiplication problem.	Students should be able to write two multiplication sentences for an array.	Lesson 1-3 Arrays and Multiplication SWBA to use arrays to show and solve multiplication problems. Envision 2.0 Pgs. 19-24	Array Row Column	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.

			Interpret products of whole numbers (ex. 5 x 7 as the totals number of objects in 5 groups of 7 objects. Use multiplication and division within 100 to solve word problems in situations that involving equal groups, arrays and measurement quantities, by drawings and equations with a symbol for the unknown number to represent the problem. Apply properties of operations as strategies to multiply and divide. Solve word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation				M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O 2.1.1 Apply the commutative property of multiplication (not identification or definition of the property) M03.B-O 2.1.2 apply the associative property of multiplication (not identification or definition of the property) M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole

			strategies including rounding.				numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	One can use arrays to represent and solve multiplication problems. One can use the Commutative Property of Multiplication as a strategy for solving multiplication problem. Interpret products of whole numbers (ex. 5 x 7 as the totals number of objects in 5 groups of 7 objects. Use multiplication and division within 100 to solve word problems in situations that involving equal groups, arrays and measurement quantities, by drawings and equations with a symbol for the unknown number to	Students should be able to describe how the Commutative Property can be used to write multiplication sentences.	Lesson 1-4 The Commutative Property SWBA to multiply factors in any order to solve multiplication problems. Envision 2.0 Pgs. 25-30	Commutative Property of Multiplication	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O 2.1.1 Apply the commutative property of multiplication (not identification or definition of the property)

			represent the problem. Apply properties of operations as strategies to multiply and divide. Solve word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.				M03.B-O 2.1.2 apply the associative property of multiplication (not identification or definition of the property) M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	One can separate objects into groups to model division. In a division problem, one number tells you how many items you have. The other tells you how many equal shares. or groups, to form, or how many to put in each group.	Student should be able to explore the meaning of division by dividing objects into equal groups. Students should be able to write a division sentence to represent equal sharing.	Lesson 1-5 Division as Sharing SWBA to use object or pictures to show how objects can be divided into equal parts. SWBA to model division as equal sharing. Envision 2.0	Division Divide	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10)

			Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as a number of objects in each share when the 56 objects are partitioned equally into 8 shares, or the number of shares when 56 objects are partitioned into equal shares of 8 objects each. Determine the unknown whole number in a multiplication or division equation relating to three whole numbers. (ex. Determine the unknown number that makes the equation true in each of the equations 8 x ? = 48, 5 = ? divided by 3, 6 x 6 = ?	Students will be able to explain how dividing is like sharing.	Pgs. 31-36		M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different meanings of multiplication and division?	One can divide using repeated subtraction and number lines. One can solve real world division problems by writing a division sentence and letting a symbol stand for the unknown number.	Students should be able to solve division problems by using repeated subtraction. Students should be able to explain how division is related to subtraction.	Lesson 1-6 Division as Repeated Subtraction SWBA to use repeated subtraction to understand and solve division problems. Envision 2.0 Pgs. 37-42	Repeated subtraction	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. M03.B-O.1.1.2 Interpret and/or describe whole

			Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as a number of objects in each share when the 56 objects are partitioned equally into 8 shares, or the number of shares when 56 objects are partitioned into equal shares of 8 objects each. Determine the unknown whole number in a multiplication or division equation relating to three whole numbers. (ex. Determine the unknown number that makes the equation true in each of the equations 8 x ? = 48, 5 = ? divided by 3, 6 x 6 = ? Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by				number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10) M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities.

			5 = 8) or properties of operations. ***By the end of Grade 3, know from memory all products of two one digit numbers.***				
Review Common Assessment Unit 1 Understand Multiplication and Division of Whole Numbers							
Common Assessment Unit 1 Understand Multiplication and Division of Whole Numbers							
Unit 2 Multiplication Facts: Use Patterns							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using patterns and properties?	One can use patterns in the multiplication table to find products and unknown factors. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using	Students should be able to find and explain patterns in a multiplication table. Students should be able to explain how a multiplication table can help you multiply.	Lesson 2-1 2 and 5 as Factors SWBA to use patterns to multiply by 2 and 5 Envision 2.0 Pgs. 61-66	Multiples	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property).

			properties of operations.				M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using patterns and properties?	One can use patterns in the multiplication table to find products and unknown factors. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. One can use patterns and known facts to	Students should be able to find and explain patterns in a multiplication table. Students should be able to explain how a multiplication table can help you multiply. Students should be able to find the product of a multiplication problem with a factor of 9	Lesson 2-2 9 as a Factor SWBA to use patterns to multiply by 9 Envision 2.0 Pgs. 67-72	Multiples	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not

			help you remember 9s facts.				identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using patterns and properties?	One can use patterns in the multiplication table to find products and unknown factors. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. When a number is multiplied by 1, the product is that number. This is the	Students should be able to find and explain patterns in a multiplication table. Students should be able to explain how a multiplication table can help you multiply. Students should be able to use properties to find the unknown number in multiplication sentences. Students should be able to explain how the identity property affects numbers	Lesson 2-3 Apply Properties: multiply by 0 and 1 SWBA to use patterns and properties to multiply by 0 and 1 Envision 2.0 Pgs. 67-72	Identity Property of Multiplication Zero Property of Multiplication	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).

			Identity Property of multiplication. When a number is multiplied by 0, the product is 0. This is the Zero Property of multiplication.				M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using patterns and properties?	One can use patterns in the multiplication table to find products and unknown factors. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. One can use basic facts and patterns to multiply a one-digit number by a multiple of 10. One can use place value and/or	Students should be able to find and explain patterns in a multiplication table. Students should be able to explain how a multiplication table can help you multiply. Students should be able to multiply a one-digit number by a multiple of 10 using different strategies, such decomposing numbers and using the distributive property or using place value	Lesson 2-4 Multiply by 10 SWBA to use patterns to multiply by 10 Envision 2.0 Pgs. 79-84	Product	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and

			properties to multiply by a multiple of 10.				multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using patterns and properties?	One can use patterns in the multiplication table to find products and unknown factors. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations.	Students should be able to find and explain patterns in a multiplication table. Students should be able to explain how a multiplication table can help you multiply.	Lesson 2-5 Multiplication Facts: 0,1,2,5,9,10 SWBA to use Basic Multiplication facts to solve problems. Envision 2.0 Pgs. 85-90		CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a

							number is always even and explain why 6 times a number can be decomposed into three equal addends.
Review Common Assessment Unit 2 Multiplication Facts: Use Patterns							
Common Assessment Unit 2 Multiplication Facts: Use Patterns							
Unit 3 Apply Properties Multiplication Facts for 3, 4, 6, 7, 8							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	One can use the distributive property to help find products. First, decompose on of the factors into a sum. Then use the smaller known facts to multiply. Finally, add the products. The distributive property combines operations of multiplication and addition. Apply properties of operations as strategies to multiply and divide.	Students should be able to find a product of a problem by using the distributive property. Students should be able to explain how parentheses are used when grouping factors.	Lesson 3-1 The Distributive Property SWBA to break apart unknown facts into known facts and solve multiplication problems. Envision 2.0 Pgs. 109-114	Distributive Property	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).

			Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.				
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	One can use arrays, equal groups, number lines, and properties to multiply by 3. One can find the unknown in a multiplication sentence by using the Commutative Property. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to	Students should be able to use different strategies such as arrays and skip counting with number lines, to multiply. Students should be able to explain how a number line can help them multiply by 3.	Lesson 3-2 Apply Properties: 3 as a Factor SWBA to Use tools and properties strategically to solve problems when one multiplies by 3. Envision 2.0 Pgs. 115-120		CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends

			represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one				through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be

			knows 40 divided by 5 = 8) or properties of operations.				decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	To multiply by 4, one can decompose 4 into equal addends of 2 + 2, then use the known fact and double the product. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true).	Students should be able to solve a multiplication problem by doubling a known fact, decompose a factor into two equal addends, then use a known fact and double it. Students should be able to explain a strategy they could use to multiply by 4.	Lesson 3-3 Apply Properties: 4 as a Factor SWBA to use what is known about multiplying by 2 and properties to multiply by 4. Envision 2.0 Pgs. 121-126		CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups

			Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations.				and/or measurement quantities. M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	To multiply by 6, you can decompose 6 into equal addends of 3 + 3 or 5 + 1 One can draw an array to multiply by 6. One can use the multiplication table to find patterns when multiplying by 6. When multiplying by 7, 7 can be decomposed into addends of 2 + 5.	Students should be able to find the product of a multiplication problem of multiplying by 6 by doubling a known fact. Students should be able to explain how doubling a known fact can be helpful when finding products mentally.	Lesson 3-4 Apply Properties: 6 and 7 as a Factor SWBA to make and use models to solve multiplication problems that have 6 and 7 as factors. Envision 2.0 Pgs. 127-132	Decompose	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.

			To multiply by 7, one can use known multiplication facts to involve 5 and 2. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including				M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns

			patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.				(including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	To multiply by 8, one can decompose 8 into equal addends of 4 + 4. One can also draw an array or picture, or use the commutative property to help you multiply by 8. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each)	Students should be able to find the product of a multiplication problem by doubling a known fact. Students should be able to explain when they would choose to decompose a multiplication fact rather than draw a picture.	Lesson 3-5 Apply Properties: 8 as a Factor SWBA to use known facts and properties to multiply by 8. Envision 2.0 Pgs. 135-138	Known fact	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the

			Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as				four operations, and identify and explain patterns in arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).

			strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.				M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown	Students should be able to find the product of a multiplication problem by doubling a known fact. Students should be able to explain when they would choose to decompose a multiplication fact rather than draw a picture.	Lesson 3-6 Practice Multiplication Facts SWBA to strategies and tools to represent and solve multiplication facts. Envision 2.0 Pgs. 139-144	Known fact	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10)

			number that makes the equation true). Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.				M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a

							number is always even and explain why 6 times a number can be decomposed into three equal addends.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown multiplication facts be found using known facts?	The associative property of multiplication states that you can group factors differently and the product will remain the same. One can use the associative property of multiplication to mentally multiply three numbers more easily. Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to use parentheses to group two factors when multiplying three numbers. Students should be able to explain why the grouping of the factors does not matter when finding a product of three numbers.	Lesson 3-7 The Associative Property: Multiply with 3 Factors SWBA to multiply 3 factors in any order to find a product. Envision 2.0 Pgs. 145-150	Associative Property of Multiplication	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).
Review Common Assessment Unit 3 Apply Properties Multiplication Facts for 3, 4, 6, 7, 8							

Common Assessment Unit 3 Apply Properties Multiplication Facts for 3, 4, 6, 7, 8							
Unit 4 Use Multiplication to Divide: Division Facts							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each. Apply properties of operations as	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor.	Lesson 4-1 Relate Multiplication to Division SWBA to use fact families to see how multiplication and division are related. Envision 2.0 Pgs. 169-150	Dividend Quotient Divisor Fact Family	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups

			strategies to multiply and divide.				and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each.	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor.	Lesson 4-2 Use Multiplication to divide with 2,3,4, and 5 SWBA to divide by 2,3,4 and 5 by thinking about how one multiplies by those numbers. Envision 2.0 Pgs. 175-180	Dividend Quotient Divisor Fact Family	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients

			Apply properties of operations as strategies to multiply and divide.				through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor.	Lesson 4-3 Use Multiplication to divide with 6 and 7 SWBA to divide by 6 and 7 by thinking about how one multiplies by those numbers. Envision 2.0 Pgs. 181-186	Dividend Quotient Divisor Fact Family	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication

			partitioned into equal shares of 8 objects each. Apply properties of operations as strategies to multiply and divide.				(up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor.	Lesson 4-4 Use Multiplication to divide with 8 and 9 SWBA to divide by 8 and 9 by thinking about how one multiplies by those numbers. Envision 2.0 Pgs. 187-192	Dividend Quotient Divisor Fact Family	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10

			of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each. Apply properties of operations as strategies to multiply and divide.				M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor. Identify arithmetic patterns (including patterns in the multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always	Lesson 4-5 Multiplication Patterns SWBA to find and explain patterns for even and odd numbers. Envision 2.0 Pgs. 193-198	Even Odd	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.

			whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.)	even and explain why 4 times a number can be decomposed into two equal addends.)			. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations

	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use division rules to find the quotient when dividing by 1. One can use division rules to fins the quotient when the dividend is 0. One cannot divide by zero. One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each.	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor.	Lesson 4-6 Division Involving 0 and 1 SWBA to explain the patterns of division with 0 and 1. Envision 2.0 Pgs. 187-192		CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not

			Apply properties of operations as strategies to multiply and divide.				identification or definition of the property).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition tables or multiplication	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor. Identify arithmetic patterns (including patterns in the multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.)	Lesson 4-7 Practice Multiplication and Division Facts SWBA to use patterns and related facts to solve multiplication and division problems. Envision 2.0 Pgs. 205-209		CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. . M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups

			tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.)				and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	How can unknown division be found using known multiplication facts?	One can use different strategies, such as equal groups or repeated subtraction to divide. One can also use the inverse operation of multiplication to divide. One can find the unknown in a division number sentence. Interpret whole number quotients of whole numbers (ex. Interpret 56 divided	Students should be able to find the unknown number in a division problem by using multiplication to find that unknown factor. Identify arithmetic patterns (including patterns in the multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can	Lesson 4-8 Solve multiplication and division equations. SWBA to use multiplication and division facts to find unknown values in an equation. Envision 2.0 Pgs. 211-216	Unknown Equation Equal (=) sign	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. .

			by 8 as the number of objects in each shares when 56 objects are partitioned into equal shares of 8 objects each. Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.)	be decomposed into two equal addends.)			M03.B-O.1.1.2 Interpret and/or describe whole number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10 M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations.

Review Common Assessment Unit 4 Use Multiplication to Divide: Division Facts							
Common Assessment Unit 4 Use Multiplication to Divide: Division Facts							
Unit 5 Fluently Multiply and Divide within 100							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to explain patterns in multiplication charts.	Lesson 5-1 Patterns for Multiplication Facts SWBA to use structure and properties to explain patterns for multiplication facts. Envision 2.0 Pgs. 237-242	Double	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not

							identification or definition of the property) M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to explain patterns in multiplication tables.	Lesson 5-2 Use Multiplication Tables SWBA to use reasoning and the relationship between multiplication and division to find basic facts. Envision 2.0 Pgs. 243-248	Reasoning	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the

							addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to explain patterns in multiplication tables.	Lesson 5-3 Find Missing Numbers in a Multiplication Table. SWBA to use reasoning and the relationship between multiplication and division to find basic facts. Envision 2.0 Pgs. 249-254	Factors Products	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations

	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to use different strategies to find products.	Lesson 5-4 Use Strategies to Multiply. SWBA to use different strategies to solve multiplication problems. Envision 2.0 Pgs. 255-260	Factors Products	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide.	Students should be able to use different strategies to find products.	Lesson 5-5 Solve word Problems: Multiplication and Division Facts SWBA to use strategies to solve word problems	Factors Products	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.

	mathematical situations and structures in many equivalent forms.		Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should use strategies to solve real-world application problems that involve multiplication and division.	that involve multiplication and division. Envision 2.0 Pgs. 261-266		CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing	Students should be able to use different strategies to find products. Students should write real-world application problems that involve multiplication.	Lesson 5-6 Write Math Stories: Multiplication SWBA to write and solve math stories for multiplication equations. Envision 2.0 Pgs. 267-272		CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency.

			that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.				CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to use different strategies to find products. Students should write real-world application problems that involve division.	Lesson 5-7 Write Math Stories: Division SWBA to write and solve math stories for division equations. Envision 2.0 Pgs. 273-278		CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.

							M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the strategies to solve multiplication and division facts?	Apply properties of operations as strategies to multiply and divide. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations.	Students should be able to use different strategies to find products. Students should examine structure of multiplication and division to compare expressions..	Lesson 5-8 Look for and Use Structure SWBA to use the structure of multiplication and division to compare expressions Envision 2.0 Pgs. 273-278	Fact families	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property).

							M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations
Review Common Assessment Unit 5 Fluently Multiply and Divide within 100							
Common Assessment Unit 5 Fluently Multiply and Divide within 100							
Unit 6 Connect Area to Multiplication and Addition							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it,	How can area be measured and found?	Area is the number of square units needed to cover a plane figure without overlapping. A square with side length of 1 has an area of 1 square unit, and can be used to measure the area of a figure.	Students should be able to find the area of figures on grids by counting unit squares.	Lesson 6-1 Cover Regions SWBA to count unit squares to find the area of a shape. Envision 2.0 Pgs. 301-306	Area Square unit Unit Square Estimate	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.

	and how best to represent it.		Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called " a unit square", is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by "n" unit squares is said to have an area of "n" square units. Measure areas by counting unit squares (square cm, square m, square in. square ft., and improvised units) Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles				M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

			with the same area and different perimeters				
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can area be measured and found?	Area is the number of square units needed to cover a plane figure without overlapping. A square with side length of 1 has an area of 1 square unit, and can be used to measure the area of a figure. Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square", is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by "n" unit squares is said to have an area of "n" square units. Measure areas by counting unit squares (square cm, square	Students should be able to find the area of figures on grids by counting unit squares.	Lesson 6-2 Area: Non-Standard Units SWBA to count unit squares to find the area of a shape. Envision 2.0 Pgs. 307-312	Area Square unit Unit Square Estimate	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same

			m, square in. square ft., and improvised units) Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters				perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can area be measured and found?	Area is the number of square units needed to cover a plane figure without overlapping. A square with side length of 1 has an area of 1 square unit, and can be used to measure the area of a figure. Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square", is	Students should be able to find the area of figures on grids by counting unit squares.	Lesson 6-3 Area: Standard Units SWBA to measure the area of a shape using standard units. Envision 2.0 Pgs. 313-318	Area Square inch Square foot Square centimeter Square meter	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole

			said to have “one square unit” of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by “n” unit squares is said to have an area of “n” square units. Measure areas by counting unit squares (square cm, square m, square in. square ft., and improvised units) Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters				number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the	How can area be measured and found?	One can find the area of a rectangle by tiling the rectangle or by multiplying the length by its width.	Students should be able to find the area of a rectangle by using the area formula.	Lesson 6-4 Areas of Squares and Rectangles SWBA to find the area of a square and rectangles by multiplying.	Formula	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.

	question to be answered determines the data to be collected, how best to collect it, and how best to represent it.		Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square", is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by "n" unit squares is said to have an area of "n" square units. Measure areas by counting unit squares (square cm, square m, square in. square ft., and improvised units) Relate area to the operations of multiplication and addition. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by	Students should be able to explain how multiplication and division can be used to solve problems involving the area of rectangles.	Envision 2.0 Pgs. 319-324		CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

			multiplying the side lengths. Multiply side lengths to find areas of rectangles with whole-number side lengths in context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters				
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the	How can area be measured and found?	One can use the distributive property to find the area of rectangles with greater side lengths more easily. One can find the area of a rectangle by decomposing it into	Students should be able to use the distributive property to find the area of a rectangle by decomposing one side length measure into a sum	Lesson 6-5 Apply Properties and the Distributive Property SWBA to use properties when multiplying to find area of squares and rectangles. Envision 2.0	Distributive Property	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in.

	data to be collected, how best to collect it, and how best to represent it.		two rectangles and then adding the areas of the parts. Recognize area as an attribute of plane figures and understand concepts of area measurement. Relate area to the operations of multiplication and addition. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths “a” and “b + c” is the sum of a x b and a x c, Use area models to represent the distributive property in mathematical reasoning.		Pgs. 325-330		square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how	How can area be measured and found?	One can find the area of a figure by counting the number of squares and half squares covered by the figure on the grid. A figure that covers “n” units on a grid has an area of “n” square units.	Students should be able to find the areas of irregular figures by counting the square units Students should be able to find the areas of irregular figures by breaking the shape into smaller recognizable parts.	Lesson 6-6 Apply Properties: Area of Irregular Shapes SWBA to use properties to find the area of irregular shapes by breaking the shape into smaller parts. Envision 2.0 Pgs. 331-336	Area	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.

	best to collect it, and how best to represent it.		Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square", is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by "n" unit squares is said to have an area of "n" square units. Measure areas by counting unit squares (square cm, square m, square in. square ft., and improvised units) Relate area to the operations of multiplication and addition.				M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing	How can area be measured and found?	One can find the area of a figure by counting the number of squares and half squares covered by	Students should be able to find the areas of irregular figures by counting the square units	Lesson 6-7 Look for and Use Structure SWBA to use the relationship between quantities to break a	Area	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.

	data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.		the figure on the grid. A figure that covers "n" units on a grid has an area of "n" square units. Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called " a unit square", is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by "n" unit squares is said to have an area of "n" square units. Measure areas by counting unit squares (square cm, square m, square in. square ft., and improvised units) Relate area to the operations of	Students should be able to find the areas of irregular figures by breaking the shape into smaller recognizable parts.	problem into simpler parts. Envision 2.0 Pgs. 337-342		CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

			multiplication and addition.				
Review Common Assessment Unit 6 Connect Area to Multiplication and Addition							
Common Assessment Unit 6 Connect Area to Multiplication and Addition							
Unit 7 Represent and Interpret Data							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can data be represented, interpreted, and analyzed?	One can use symbols to represent a set of data in a scaled picture graph and use bars to represent the same set of data in a bar graph. The data does not change from when it is displayed in a scaled picture graph to when it is displayed in a bar graph. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more"	Students should be able to read and interpret information from picture and bar graphs. Students should be able to draw a scaled picture graph and a scaled bar graph to represent a set data.	Lesson 7-1 Read Picture Graphs and Bar Graphs. SWBA to use picture graphs and bar graphs to answer questions about data sets. Envision 2.0 Pgs. 359-364	Scaled Picture Graphs Key Scaled Bar Graphs Scale	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories. (scales limited to 1, 2, 5, and 10) M03.D-M.2.1.2 Solve one and two-step problems using information to interpret data presented in scaled pictographs. (scales limited to 1, 2, 5, and 10)

			and “how many less” problems using information presents in scaled bar graphs.				
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can data be represented, interpreted, and analyzed?	In a pictograph, or scales picture graph, a symbol is used to represent more than one tally of data. One can represent and interpret data using a scales picture graph. The key tells how many each symbol represents. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presents in scaled bar graphs.	Student should be able to construct pictographs and use them to interpret data and draw conclusions.	Lesson 7-2 Make Picture Graphs SWBA to make a scaled picture graph to record information and answer questions. Envision 2.0 Pgs. 365-370	Picture graph Pictograph Key Analyze Interpret	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories. (scales limited to 1, 2, 5, and 10) M03.D-M.2.1.2 Solve one and two-step problems using information to interpret data presented in scaled pictographs. (scales limited to 1, 2, 5, and 10)
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be	How can data be represented, interpreted, and analyzed?	A scaled bar graph uses bars and scales greater than 1 to represent data. Bar graphs are useful for analyzing and interpreting data. A bar graph can be vertical or horizontal.	Students should be able to represent data in scaled bar graphs and include the following: a title, a scale, labels on the side and bottom of the graph and bars of equal width to represent the data.	Lesson 7-3 Make Bar Graphs SWBA to make a scaled bar graph to record information and answer questions. Envision 2.0 Pgs. 371-376	Bar graph Scale	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with

	collected, how best to collect it, and how best to represent it.		Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presents in scaled bar graphs.	Student should be able to explain what factors help to determine the scale used for a bar graph.			several categories. (scales limited to 1, 2, 5, and 10) M03.D-M.2.1.2 Solve one and two-step problems using information to interpret data presented in scaled pictographs. (scales limited to 1, 2, 5, and 10)
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can data be represented, interpreted, and analyzed?	A scaled bar graph uses bars and scales greater than 1 to represent data. Bar graphs are useful for analyzing and interpreting data. A bar graph can be vertical or horizontal. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presents in scaled bar graphs. In a pictograph, or scales picture graph,	Students should be able to represent data in scaled bar graphs and include the following: a title, a scale, labels on the side and bottom of the graph and bars of equal width to represent the data. Student should be able to explain what factors help to determine the scale used for a bar graph. Student should be able to construct pictographs and use them to interpret data and draw conclusions.	Lesson 7-4 Solving Word Problems Using Information in Graphs SWBA to use graphs and other tools to solve word problems. Envision 2.0 Pgs. 377-382	Bar graph Scale Picture graph Pictograph Key Analyze Interpret	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories. (scales limited to 1, 2, 5, and 10) M03.D-M.2.1.2 Solve one and two-step problems using information to interpret data presented in scaled pictographs. (scales limited to 1, 2, 5, and 10)

			a symbol is used to represent more than one tally of data. One can represent and interpret data using a scales picture graph. The key tells how many each symbol represents. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presents in scaled bar graphs.				
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can data be represented, interpreted, and analyzed?	A scaled bar graph uses bars and scales greater than 1 to represent data. Bar graphs are useful for analyzing and interpreting data. A bar graph can be vertical or horizontal. Draw a scaled picture graph and a scaled bar graph to represent a data set	Students should be able to represent data in scaled bar graphs and include the following: a title, a scale, labels on the side and bottom of the graph and bars of equal width to represent the data. Student should be able to explain what factors help to determine the scale used for a bar graph.	Lesson 7-5 Precision SWBA to be precise when solving math problems Envision 2.0 Pgs. 383-388	Bar graph Scale Picture graph Pictograph Key Analyze Interpret	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs. M03.D-M.2.1.1 Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories. (scales limited to 1, 2, 5, and 10) M03.D-M.2.1.2 Solve one and two-step problems using information to interpret data presented

			with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presents in scaled bar graphs. In a pictograph, or scales picture graph, a symbol is used to represent more than one tally of data. One can represent and interpret data using a scales picture graph. The key tells how many each symbol represents. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presents in scaled bar graphs.	Student should be able to construct pictographs and use them to interpret data and draw conclusions.			in scaled pictographs. (scales limited to 1, 2, 5, and 10)
Review Common Assessment Unit 7 Represent and Interpret Data							

Common Assessment Unit 7 Represent and Interpret Data							
Unit 8 Use Strategies and Properties to Add and Subtract							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can sums and differences be estimates and found mentally?	Properties of operations are rules that are used to add, subtract, multiply and divide numbers. Properties of addition can help you add whole numbers. Commutative Property: The order in which two numbers are added does not change the sum. Associative Property: the way in which the you group numbers when adding does not change the sum. Identity Property of Addition: Zero plus any number is that number. Fluently add and subtract within 1000	Students should be able to use the commutative, Associative, and identity Properties of Addition to add numbers.	Lesson 8-1 Addition Properties SWBA to properties to understand addition. Envision 2.0 Pgs. 405-410	Properties of addition: Associative Commutative Identity Mental Math Parentheses.	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

			using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can sums and differences be estimates and found mentally?	A place value chart can be used to find addition patterns. Patterns of numbers can be formed by adding 10, 100, or 1000. Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations. (ex. Explain that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends.)	Students should be able to use place value to describe patterns in numbers. Students should be able to explain how place value helps when adding mentally.	Lesson 8-2 Algebra: Addition Patterns SWBA to find and explain addition patterns. Envision 2.0 Pgs. 411-416	Pattern	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition tables or multiplication tables), and explain them using properties of operations.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can sums and differences be estimates and found mentally?	One can round whole numbers to the nearest ten by using place value charts, a number line or rounding rules. Use place value understandings to round whole	Students should be able to round a whole number by first circling the digit to be rounded and look at the digit to the right. If the digit is 5 or greater, add one to the circled number. Replace all	Lesson 8-3 Rounding Whole Numbers SWBA to use place value and a number line to round numbers. Envision 2.0 Pgs. 417-422	Round	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.1 Round two- and three digit whole numbers to the nearest

			numbers to the nearest 10 or 100.	digits after the circled digit with zeros. Students should be able to explain why rounded numbers are easier to work with.			ten or hundred, respectively.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	How can sums and differences be estimates and found mentally?	One can use place value and patterns to help add numbers quickly. One way to add mentally is to make a ten or a hundred. Another way is to break apart addends. Students should not be required to show a particular series of steps when performing mental math. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Student should be able to choose a strategy to add numbers mentally.	Lesson 8-4 Mental Math: Addition SWBA to use mental math to add. Envision 2.0 Pgs. 423-428	Ones Tens Hundreds	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
	The base-ten number system is a way to organize, represent, and	How can sums and differences be estimates and found mentally?	One way to subtract mentally is to break up the smaller number into parts	Students should be able to mentally find the difference to a subtraction problem	Lesson 8-5 Mental Math: Subtraction SWBA to use mental math to subtract.	Difference Subtract	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic.

	compare numbers using groups of ten and place value.		and then subtract the parts. Subtracting a number from itself is zero. Subtracting zero from a number a number is the number. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	by breaking apart the smaller number. Student should be able to explain how to subtract mentally.	Envision 2.0 Pgs. 429-434		CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	The base-ten number system	How can sums and differences	When a problem contains the word	Students should be able to use rounding	Lesson 8-6 Estimate Sums	Estimate	CC.2.1.2.B.1 Apply place value understanding and

	is a way to organize, represent and compare numbers using groups of tens and place values.	be estimates and found mentally?	"about", one can estimate rather than find an exact answer. One way to estimate the sum of numbers is to round to the nearest 10 or 100. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	to the nearest ten or hundred to estimate a sum. Students should be able to explain when they might need to estimate a sum.	SWBA to use what is known about addition and place value to estimate sums. Envision 2.0 Pgs. 435-440		properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	How can sums and differences be estimates and found mentally?	One can estimate the difference of two numbers by rounding each number before subtracting. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction. Solve two-step word problems using the four operations. Represent these problems using equations with a	Students should be able to estimate the difference to a subtraction problem by rounding each number to the nearest hundred. Students should be able to explain how they know to which place value position to round a number.	Lesson 8-7 Estimate Sums SWBA to use what is known about subtraction and place value to estimate differences. Envision 2.0 Pgs. 441-446	Estimate	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers. M03.B-O.3.1.1 Solve two step word problems using the four operations

			letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.				(expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	How can sums and differences be estimates and found mentally?	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of	Solve word problems using the relationship between addition and subtraction. Represent these problems using equations with a question mark representing an unknown quantity.	Lesson 8-8 Relate Addition and subtraction to solve problems SWBA to use the relationship between addition and subtraction to solve problems. Envision 2.0 Pgs. 447-452	Inverse operations	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

			the answers using mental computation and estimation strategies including rounding.				M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	How can sums and differences be estimates and found mentally?	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for	Solve word problems using the relationship between addition and subtraction. Represent these problems using equations with a question mark representing an unknown quantity.	Lesson 8-9 Model with Math SWBA to apply the math learned to solve problems. Envision 2.0 Pgs. 453-458	Inverse operations	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-

			the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.				digit numbers from three-digit whole numbers. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
Review Common Assessment Unit 8 Use Strategies and Properties to Add and Subtract							
Common Assessment Unit 8 Use Strategies and Properties to Add and Subtract							
Unit 9 Fluently Add and Subtract within 1000							

Estimated Unit Time Frames	Big Ideas	Essential Questions	Concepts (Know)	Competencies (Do)	Lessons/ Suggested Resources	Vocabulary	Standards/ Eligible Content
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What are standard procedures for adding and subtracting numbers?	One can add three-digit numbers by regrouping. One can check sums by using the Commutative Property of Addition or by estimating. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students should be able to find a sum and check for reasonableness of the answer. SWBA to explain how to use place value to add three-digit numbers.	Lesson 9-1 Use Partial Sums to Add SWBA to use place value to break apart and add numbers. Envision 2.0 Pgs. 475-480	Partial Sums Reasonable Unknown	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What are standard procedures for adding and subtracting numbers?	One can add three-digit numbers by regrouping. One can check sums by using the Commutative Property of Addition or by estimating. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship	Students should be able to find a sum and check for reasonableness of the answer. SWBA to explain how to use place value to add three-digit numbers.	Lesson 9-2 Add Three-Digit Numbers SWBA to use different strategies to regroup when adding three-digit numbers. Envision 2.0 Pgs. 481-486	Reasonable Regroup Unknown	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

			between addition and subtraction.				
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What are standard procedures for adding and subtracting numbers?	One can add three-digit numbers by regrouping. One can check sums by using the Commutative Property of Addition or by estimating. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students should be able to find a sum and check for reasonableness of the answer. SWBA to explain how to use place value to add three-digit numbers.	Lesson 9-3 Continue to Add Three-Digit Numbers SWBA to use regrouping to add three digit numbers. Envision 2.0 Pgs. 487-492	Reasonable Regroup Unknown	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
	The base-ten number system is a way to organize, represent and compare numbers using groups of tens and place values.	What are standard procedures for adding and subtracting numbers?	One can add three-digit numbers by regrouping. One can check sums by using the Commutative Property of Addition or by estimating. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Students should be able to find a sum and check for reasonableness of the answer. SWBA to explain how to use place value to add three-digit numbers.	Lesson 9-4 Add Three or More Numbers SWBA to add three or more numbers using what is already known about adding three-digit numbers. Envision 2.0 Pgs. 493-498	Reasonable Regroup Unknown	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three digit whole numbers (limit sums from 100 to 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	What are standard procedures for adding and subtracting numbers?	One can use place value to rename a number in a subtraction problem. One can check the answer to a subtraction problem by adding. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	Students should be able to find the difference to a subtraction problem by partial differences.	Lesson 9-5 Partial Differences to Subtract SWBA to use place value to solve simpler problems when subtracting multi-digit numbers. Envision 2.0 Pgs. 499-504	Partial differences	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and

							having whole number answers.
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	What are standard procedures for adding and subtracting numbers?	When solving a subtraction problem, you can regroup hundreds the same way you group tens. One can use addition to check the solution of a subtraction problem. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction.	Students should be able to find the difference to a subtraction problem by regrouping. Students should be able to explain why you can use addition to check your answer to a subtraction problem.	Lesson 9-6 Subtract Three-Digit Numbers. SWBA to use place value reasoning to subtract three-digit numbers. Envision 2.0 Pgs. 505-510		CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	What are standard procedures for adding and subtracting numbers?	When solving a subtraction problem, you can regroup hundreds the same way you group tens. One can use addition to check the solution of a subtraction problem. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship	Students should be able to find the difference to a subtraction problem by regrouping. Students should be able to explain why you can use addition to check your answer to a subtraction problem.	Lesson 9-7 Continue to Subtract Three-Digit Numbers. SWBA to use place value reasoning to subtract three-digit numbers. Envision 2.0 Pgs. 511-516		CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

			between addition and subtraction.				
	The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.	What are standard procedures for adding and subtracting numbers?	When solving a subtraction problem, you can regroup hundreds the same way you group tens. One can use addition to check the solution of a subtraction problem. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations and/or the relationship between addition and subtraction.	Students should be able to find the difference to a subtraction problem by regrouping. Students should be able to explain why you can use addition to check your answer to a subtraction problem.	Lesson 9-8 Construct Arguments SWBA to construct math arguments using what is already known about addition and subtraction. Envision 2.0 Pgs. 517-522	Conjecture	CC.2.1.2.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.A-T.1.1.2 Add two- and three-digit whole numbers (limit sums from 100 through 1000) and/or subtract two- and three-digit numbers from three-digit whole numbers.
Review Common Assessment Unit 9 Fluently Add and Subtract within 1000							
Common Assessment Unit 9 Fluently Add and Subtract within 1000							
Unit 10 Multiply by Multiples of 10							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions,	What are ways to multiply by multiples of 10?	One can use basic facts and patterns to multiply a one-digit	Students should be able to multiply a one-digit number by	Lesson 10-1 Use an Open Number Line to Multiply	Multiple Open Number Line	CC.2.2.3.A.1 Represent and solve problems

	equations and inequalities can represent mathematical situations and structures in many equivalent forms.		number by a multiple of 10. One can use place value and/or properties to multiply by a multiple of 10. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as	a multiple of 10 using different strategies, such decomposing numbers and using the distributive property or using place value. Students should be able to explain how basic facts and patterns help when multiplying a number by a multiple of 10.	SWBA to use an open number line and patterns to multiply by multiples of 10. Envision 2.0 Pgs. 539-544		involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. CC.2.1.3.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers.

			strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as strategies to multiply and divide. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (ex. 9 x 80, 5 x 60) using strategies based on place value and properties of operations. Apply place value understanding and properties of operations to perform multi-digit arithmetic.				M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends. M03.A-T.1.1.3 Multiply one digit whole numbers by two digit multiples of 10 (from 10 through 90).

	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are ways to multiply by multiples of 10?	One can use the Associative Property of Multiplication as a strategy for solving multiplication problem. One can use the Distributive Property of Multiplication as a strategy for solving multiplication problem. Apply properties of operations as strategies to multiply. Solve word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	Students should be able to write two multiplication sentences for an array. Students should be able to describe how the Associative Property can be used to multiply numbers. Students should be able to describe how the Distributive Property can be used to multiply numbers.	Lesson 10-2 Use Properties to Multiply SWBA to use properties of multiplication to find a product when one factor is a multiple of 10. Envision 2.0 Pgs. 545-550	Commutative Property of Multiplication Distributive Property of Multiplication	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O 2.1.1 Apply the commutative property of multiplication (not identification or definition of the property) M03.B-O 2.1.2 apply the associative property of multiplication (not identification or definition of the property) M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not

							explicitly stated.) Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit problems to whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answer. Limit problems to whole numbers and having whole number answers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are ways to multiply by multiples of 10?	One can use basic facts and patterns to multiply a one-digit number by a multiple of 10. One can use place value and/or properties to multiply by a multiple of 10. Interpret products of whole numbers (ex. Interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each) Use multiplication and division within 100 to solve word	Students should be able to multiply a one-digit number by a multiple of 10 using different strategies, such decomposing numbers and using the distributive property or using place value. Students should be able to explain how basic facts and patterns help when multiplying a number by a multiple of 10.	Lesson 10-3 Multiply by Multiples of 10 SWBA to use different strategies to find products when one factor is a multiple of 10. Envision 2.0 Pgs. 551-556	Multiple	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.

			problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication or division equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as strategies to multiply and divide. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations. Apply properties of operations as strategies to multiply and divide.				CC.2.1.3.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not

			Fluently multiply within 100, using strategies such as the relationship between multiplication (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (ex. 9 x 80, 5 x 60) using strategies based on place value and properties of operations. Apply place value understanding and properties of operations to perform multi-digit arithmetic.				identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends. M03.A-T.1.1.3 Multiply one digit whole numbers by two digit multiples of 10 (from 10 through 90).
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are ways to multiply by multiples of 10?	One can use basic facts and patterns to multiply a one-digit number by a multiple of 10. One can use place value and/or properties to multiply by a multiple of 10. Interpret products of whole numbers (ex. Interpret 5 x 7 as the	Students should be able to multiply a one-digit number by a multiple of 10 using different strategies, such decomposing numbers and using the distributive property or using place value. Students should be able to explain how basic facts and patterns help when	Lesson 10-4 Look For and Use Structure SWBA to use different strategies to find products when one factor is a multiple of 10. Envision 2.0 Pgs. 557-562	Multiple	CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency.

			total number of objects in 5 groups of 7 objects each) Use multiplication within 100 to solve word problems in situations involving equal groups, (ex. By using drawings and equations with a symbol to represent the unknown to represent the problem. Determine the unknown whole number in a multiplication equation relating three whole numbers (determine the unknown number that makes the equation true). Apply properties of operations as strategies to multiply. Identify arithmetic patterns (including patterns in the addition and multiplication tables), and explain them using properties of operations.	multiplying a number by a multiple of 10.			CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. CC.2.1.3.B.1 Apply place value understanding and properties of operations to perform multi-digit arithmetic. M03.B-O.1.1.1 Interpret and/or describe products of whole numbers (up to and including 10 x 10) M03.B-O.1.2.1 Use multiplication (up to and including 10 x 10) or division (limiting dividends through 50, and limit divisors and quotients through 10) equation relating three- whole numbers. M03.B-O.1.2.2 Determine the unknown whole number in a multiplication (up to and including 10 x 10) and/or division (limit divisors and quotients through 10) to solve word problems in situations involving equal groups and/or measurement quantities. M03.B-O.2.1.1 Apply the commutative property of

			Apply properties of operations as strategies to multiply. Fluently multiply within 100, using strategies such as the relationship between multiplication and division (ex. Knowing that 8 x 5 = 40, one knows 40 divided by 5 = 8) or properties of operations. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (ex. 9 x 80, 5 x 60) using strategies based on place value and properties of operations. Apply place value understanding and properties of operations to perform multi-digit arithmetic.				multiplication (not identification or definition of the property). M03.B-O.2.1.2 Apply the associative property of multiplication (not identification or definition of the property). M03.B-O.3.1.5 Identify arithmetic patterns (including patterns in the addition and multiplication table) and/or explain them using properties of operations. (Ex. Observe 6 times a number is always even and explain why 6 times a number can be decomposed into three equal addends. M03.A-T.1.1.3 Multiply one digit whole numbers by two digit multiples of 10 (from 10 through 90).
Review Common Assessment Unit 10 Multiply by Multiples of 10							
Common Assessment Unit 10 Multiply by Multiples of 10							

Unit 11 Use Operations with Whole Numbers to Solve Problems

Estimated Unit Time Frames	Big Ideas	Essential Questions	Concepts (Know)	Competencies (Do)	Lessons/ Suggested Resources	Vocabulary	Standards/ Eligible Content
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to solve two-step problems?	One can use a symbol or letter to stand for an unknown quantity in an expression. This is called a variable. One can evaluate an expression by replacing the variable with a number and finding the numerical value of the expression. Solve two step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	Students should be able to evaluate an expression involving any of the four operations. Students should be able to explain the process of evaluating an expression with more than one operation and no parentheses.	Lesson 11-1 Solve Two-Step Word Problem: Addition and Subtraction SWBA to draw diagrams and write equations to show how quantities in a problem are related. Envision 2.0 Pgs. 573-578	Evaluate Variable	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated) Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with symbols standing for the unknown. Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answers. Limit to problems with whole numbers and having whole number answers.

	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to solve two-step problems?	One can use a symbol or letter to stand for an unknown quantity in an expression. This is called a variable. One can evaluate an expression by replacing the variable with a number and finding the numerical value of the expression. Solve two step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	Students should be able to evaluate an expression involving any of the four operations. Students should be able to explain the process of evaluating an expression with more than one operation and no parentheses.	Lesson 11-2 Solve Two-Step Word Problem: Multiplication and Division SWBA to draw diagrams and write equations to show how quantities in a problem are related. Envision 2.0 Pgs. 579-584	Evaluate Variable	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated) Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with symbols standing for the unknown. Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answers. Limit to problems with whole numbers and having whole number answers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in	What are the ways to solve two-step problems?	One can use a symbol or letter to stand for an unknown quantity in an expression. This is called a variable. One can evaluate an expression by	Students should be able to evaluate an expression involving any of the four operations. Students should be able to explain the process of evaluating	Lesson 11-3 Solve Two-Step Word Problem: All Operations SWBA to solve two-step word problems involving different operations. Envision 2.0	Evaluate Variable	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.1 Solve two step word problems using the four operations

	many equivalent forms.		replacing the variable with a number and finding the numerical value of the expression. Solve two step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.	an expression with more than one operation and no parentheses.	Pgs. 585-590		(expressions are not explicitly stated) Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with symbols standing for the unknown. Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answers. Limit to problems with whole numbers and having whole number answers.
	Numbers, measures, expressions, equations and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to solve two-step problems?	One can use a symbol or letter to stand for an unknown quantity in an expression. This is called a variable. One can evaluate an expression by replacing the variable with a number and finding the numerical value of the expression. Solve two step word problems using the four operations.	Students should be able to evaluate an expression involving any of the four operations. Students should be able to explain the process of evaluating an expression with more than one operation and no parentheses.	Lesson 11-4 Critique Reasoning SWBA to critique the reasoning of others using prior knowledge of estimating. Envision 2.0 Pgs. 591-596	Evaluate Variable	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. M03.B-O.3.1.1 Solve two step word problems using the four operations (expressions are not explicitly stated) Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.2 Represent two-step word problems using equations with

			Represent these problems using equations with a letter standing for the unknown quantity. Asses the reasonableness of the answers using mental computation and estimation strategies including rounding.				symbols standing for the unknown. Limit to problems with whole numbers and having whole number answers. M03.B-O.3.1.3 Asses the reasonableness of the answers. Limit to problems with whole numbers and having whole number answers.
Review Common Assessment Unit 11 Use Operations with Whole Numbers to Solve Problems							
Common Assessment Unit 11 Use Operations with Whole Numbers to Solve Problems							
Unit 12 Understand Fractions as Numbers							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can divide a whole into equal parts. One equal part of the whole is a unit fraction. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b”	Students should be able to use fraction tiles to model a unit fraction. First model the one whole, using the 1-whole fraction tile. Then model one whole divided into “n” equal parts. Find the unit fraction which represents one	Lesson 12-1 Divide Regions into Equal Parts SWBA to read and write a unit fraction. Envision 2.0 Pgs. 609-614	Fraction Unit fraction Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. CC2.3.3.A.2 Use understandings of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.

			equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. (ex. Partition a shape into 4 parts with equal areas, and describe the area of each part as ¼ of the area of the shape.	equal part of the whole. Students should be able to explain what happens to the size of each part when you divide a whole into more and more parts.			M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.C-G.1.1.3 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can divide a whole into equal parts. One equal part of the whole is a unit fraction. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Partition shapes into parts with equal areas. Express the area of each part as a	Students should be able to use fraction tiles to model a unit fraction. First model the one whole, using the 1-whole fraction tile. Then model one whole divided into "n" equal parts. Find the unit fraction which represents one equal part of the whole. Students should be able to explain what happens to the size of each part when you divide a whole into more and more parts.	Lesson 12-2 Fractions and Regions SWBA to use a fraction to represent multiple copies of a unit fraction. Envision 2.0 Pgs. 615-620	Fraction Unit fraction Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. CC2.3.3.A.2 Use understandings of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to

			unit fraction of the whole. (ex. Partition a shape into 4 parts with equal areas, and describe the area of each part as ¼ of the area of the shape.				2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.C-G.1.1.3 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	Students should be able to explain how to write a fraction to describe part of a whole. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b.	Students should be able to use a fraction to represent a fraction model. Students should be able to explain how to write a fraction to describe part of a whole.	Lesson 12-3 Understand the Whole SWBA to identify the whole by seeing a part Envision 2.0 Pgs. 621-626	Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can represent fractions on a number line by letting the interval from 0-1 represent the whole. To represent a fraction on a number line, look at the denominator of the fraction. Then partition the interval	Students should be able to plot points representing fractions on a number line.	Lesson 12-4 Number Lines: Fractions Less Than 1 SWBA to represent fractions on a number line. Envision 2.0 Pgs. 621-626		CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to

			from 0-1 into that number of total equal parts. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0.				2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can represent fractions on a number line by letting the interval from 0-1 represent the whole. To represent an improper fraction on a number line, look at the denominator of the fraction. Then partition the interval from 0-1 and up into that number of total equal parts. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram	Students should be able to plot points representing improper fractions on a number line.	Lesson 12-5 Number Lines: Fractions greater Than 1 SWBA to represent fractions equal to or greater than on a number line. Envision 2.0 Pgs. 633-638	Improper Fraction	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into "b" equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off "a" lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can represent fractions on a number line by letting the interval from 0-1 represent the whole. To represent an mixed number on a number line, look at the denominator of the fraction. Then partition the interval from 0-1 and up into that number of total equal parts.	Students should be able to plot points representing mixed on a line plot.	Lesson 12-6 Line Plots and Length SWBA to measure to the nearest quarter inch and show the data on a line plot. Envision 2.0 Pgs. 639-644	Line plots Nearest fourth of an inch	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the

			Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its				denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can represent fractions on a number line by letting the interval from 0-1 represent the whole. To represent an mixed number on a number line, look at the denominator of the fraction. Then partition the interval from 0-1 and up into that number of total equal parts. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1	Students should be able to plot points representing mixed on a line plot.	Lesson 12-7 More Line Plots and Length SWBA to measure to the nearest half inch and show the data on a line plot. Envision 2.0 Pgs. 645-650	Line plots Nearest fourth of an inch	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			as the whole and partitioning it into "b" equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off "a" lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are different interpretations of a fraction?	One can represent fractions on a number line by letting the interval from 0-1 represent the whole. To represent a mixed number on a number line, look at the denominator of the fraction. Then partition the interval from 0-1 and up into that number of total equal parts. Understand a fraction 1/b as the quantity formed by 1	Students should be able to make sense of the information provided within a problem and persevere in solving the problem.	Lesson 12-8 Make Sense and Persevere SWBA to make sense of a problem and keep working if one gets stuck. Envision 2.0 Pgs. 651-656	Persevere	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

Review Common Assessment Unit 12 Understand Fractions as Numbers							
Common Assessment Unit 12 Understand Fractions as Numbers							
Unit 13 Fraction Equivalence and Comparison							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to compare Fractions?	One can show that two fractions are equivalent, or equal, by using fraction models to show that they have the same size. One can also use a number line to show that two fraction are equivalent. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a	Student should be able to determine whether two fractions are equivalent. Student should be able to explain how they know if two fraction are equivalent.	Lesson 13-1 Equivalent Fractions: Use Models SWBA to find equivalent fractions that name the same part of the whole. Envision 2.0 Pgs. 673-678	Equivalent fractions	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the

			number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into "b" equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off "a" lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				denominator; no simplification necessary) M03.A-F.1.1.3 Recognize and generate simple equivalent fractions. (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to compare Fractions?	One can show that two fractions are equivalent, or equal, by using fraction models to show that they have the same size. One can also use a number line to show	Student should be able to determine whether two fractions are equivalent. Student should be able to explain how they know if two fraction are equivalent.	Lesson 13-2 Equivalent Fractions: Use the Number Line SWBA to use number lines to represent equivalent fractions. Envision 2.0 Pgs. 679-684	Equivalent fractions	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents

			that two fraction are equivalent. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the				x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.3 Recognize and generate simple equivalent fractions. (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to compare Fractions?	One can show that two fractions are equivalent, or equal, by using fraction models to show that they have the same size. One can also use a number line to show that two fraction are equivalent. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into	Student should be able to determine whether two fractions are equivalent. Student should be able to explain how they know if two fraction are equivalent.	Lesson 13-2 Equivalent Fractions: Use the Number Line SWBA to use number lines to represent equivalent fractions. Envision 2.0 Pgs. 679-684	Equivalent fractions	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.3 Recognize and generate simple equivalent fractions. (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary)

			"b" equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off "a" lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to compare Fractions?	One can compare two fractions with the same numerator or the same denominator by reasoning about their size. One can compare two fractions when the fractions refer to the dame whole. One can use fraction models or number lines to compare two fractions. Understand a fraction 1/b as the quantity formed by 1 part when a whole is	Students should be able to use models and the symbols >, =, or <, to compare two fractions. Students should be able to explain how fractions can be compared.	Lesson 13-3 Use Models to Compare Fractions: Same Denominator SWBA to compare fractions that refer to the same-sized whole and have the same denominator by comparing their numerators. Envision 2.0 Pgs. 685-690	Greater than (>) Less than (<) Equal to (=) Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to

			partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.				2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary. M03.A-F.1.1.5 Compare two fractions with the same denominator (limit the denominator to 1, 2,3,4,6 and 8), using the symbols >, =, or <, and justify the conclusions.

			Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same denominator or the same numerator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of the comparisons with the symbols >, =, 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.	What are the ways to compare Fractions?	One can compare two fractions with the same numerator or the same denominator by reasoning about their size. One can compare two fractions when the fractions refer to the dame whole. One can use fraction models or number lines to compare two fractions.	Students should be able to use models and the symbols >, =, or <, to compare two fractions. Students should be able to explain how fractions can be compared.	Lesson 13-4 Use Models to Compare Fractions: Same Numerator SWBA to compare fractions that refer to the same-sized whole and have the same numerator by comparing their denominators. Envision 2.0 Pgs. 691-696	Greater than (>) Less than (<) Equal to (=) Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into “y” equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the

			Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its				denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary. M03.A-F.1.1.5 Compare two fractions with the same denominator (limit the denominator to 1, 2,3,4,6 and 8), using the symbols >, =, or <, and justify the conclusions.

			endpoint locates the number a/b on the number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same denominator or the same numerator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of the comparisons with the symbols >, =, 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.	What are the ways to compare Fractions?	One can compare two fractions with the same numerator or the same denominator by reasoning about their size. One can compare two fractions when the fractions refer to the dame whole.	Students should be able to use models and the symbols >, =, or <, to compare two fractions. Students should be able to explain how fractions can be compared.	Lesson 13-5 Compare Fractions: Use Benchmarks SWBA to use what is known about the size of benchmark numbers to compare fractions. Envision 2.0 Pgs. 697-702	Greater than (>) Less than (<) Equal to (=) Numerator Denominator Benchmark Numbers	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into “y” equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to

			One can use fraction models or number lines to compare two fractions. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into “b” equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line Represent a fraction a/b on the number line diagram by marking off “a”				2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary. M03.A-F.1.1.5 Compare two fractions with the same denominator (limit the denominator to 1, 2,3,4,6 and 8), using the symbols >, =, or <, and justify the conclusions.

			lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same denominator or the same numerator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of the comparisons with the symbols >, =, or <, and justify the conclusion. By using a visual fraction model.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in	What are the ways to compare Fractions?	One can compare two fractions with the same numerator or the same denominator by reasoning about their size.	Students should be able to use models and the symbols >, =, or <, to compare two fractions. Students should be able to explain how	Lesson 13-6 Compare Fractions: Use the Number Line SWBA to compare two fractions by locating them on a number line.	Greater than (>) Less than (<) Equal to (=) Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into “y” equal parts, the fraction 1/y represents 1

	many equivalent forms.		One can compare two fractions when the fractions refer to the dame whole. One can use fraction models or number lines to compare two fractions. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction 1/b on a line diagram by defining the interval from 0 to 1 as the whole and partitioning it into "b" equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line	fractions can be compared.	Envision 2.0 Pgs. 703-708	Benchmark Numbers	part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary. M03.A-F.1.1.5 Compare two fractions with the same denominator (limit the denominator to 1, 2,3,4,6 and 8), using the symbols >, =, or <, and justify the conclusions.

			Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Compare two fractions with the same denominator or the same numerator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of the comparisons with the symbols >, =, or <, and justify the conclusion. By using a visual fraction model.				
	Numbers, measures, expressions, equations, and	What are the ways to compare Fractions?	When the numerator and denominator of a fraction are the	Students should be able to write a fraction and a whole number for a model.	Lesson 13-7 Whole Numbers and Fractions	Numerator Denominator	CC.2.1.3.C.1 Explore and develop an understanding of fractions.

	inequalities can represent mathematical situations and structures in many equivalent forms.		same, the fraction equal 1. When the denominator of a fraction is 1, the fraction is equivalent to the whole number represented by the numerator. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into "b" equal parts: Understand a fraction a/b as the quantity formed by "a" parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction a/b on the number line diagram by marking off "a" lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.	Students should be able to explain how whole numbers can be represented as fractions.	SWBA to use representations to find fraction names for whole numbers. Envision 2.0 Pgs. 709-714	Equivalent fractions	M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into "y" equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.3 Recognize and generate simple equivalent fractions. (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.4 Express whole numbers as fractions, and/or generate fractions that are equivalent to whole (limit the denominators to 1,2,3,4, and 6)

			Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Understand two fractions as equivalent (equal) if they are the same size, or the same point on the number line. Recognize and generate simple equivalent fractions. Explain why the fractions are equivalent by using a visual fraction model. Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers.				
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	What are the ways to compare Fractions?	When the numerator and denominator of a fraction are the same, the fraction equal 1. When the denominator of a fraction is 1, the fraction is equivalent to the whole number represented by the numerator.	Students should be able to write a fraction and a whole number for a model. Students should be able to explain how whole numbers can be represented as fractions.	Lesson 13-8 Construct Arguments SWBA to construct math arguments using what is known about fractions. Envision 2.0 Pgs. 715-720	Numerator Denominator Equivalent fractions	CC.2.1.3.C.1 Explore and develop an understanding of fractions. M03.A-F.1.1.1 Demonstrate that when a whole or set is partitioned into “y” equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit the denominators to

			Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into “b” equal parts: Understand a fraction a/b as the quantity formed by “a” parts of size 1/b. Understand fractions as numbers on a number line: represent fractions on a number line diagram Represent a fraction a/b on the number line diagram by marking off “a” lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Understand two fractions as equivalent (equal) if they are the same				2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.2 Represent fractions on a number line (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.3 Recognize and generate simple equivalent fractions. (limit the denominators to 2,3,4,6,and 8; limit numerators to whole numbers less than the denominator; no simplification necessary) M03.A-F.1.1.4 Express whole numbers as fractions, and/or generate fractions that are equivalent to whole (limit the denominators to 1,2,3,4, and 6)

			size, or the same point on the number line. Recognize and generate simple equivalent fractions. Explain why the fractions are equivalent by using a visual fraction model. Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers.				
Review Common Assessment Unit 13 Fraction Equivalence and Comparison							
Common Assessment Unit 13 Fraction Equivalence and Comparison							
Unit 14 Solve Time, Capacity, and Mass Problems							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can tell time to the nearest minute on a digital clock and an analog clock. Tell and write time to the nearest minute and measure time	Students should be able to read and write time shown on an analog clock in words and numbers. Students should be able to explain why	Lesson 14-1 Time to the Minute SWBA to show and tell time to the minute using clocks.	Analog clock Digital clock	CC.2.4.2.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals.

			intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a lone diagram.	telling time is important.	Envision 2.0 Pgs. 739-744		M03.D-M.1.1.1 Tell, show and or write time (analog) to the nearest minute. M03.D-M.1.1.2 Calculate elapsed time to the nearest minute in a given situation (total elapsed time limited to 60 minutes or less)
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can solve word problems involving time intervals by using a number line. One can also measure time intervals by using addition and subtraction. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a lone diagram.	Student should be able to solve problems involving time intervals. Students should be able to explain how to determine the duration of time intervals in hours and minutes.	Lesson 14-2 Units of Time: Measure Elapsed Time SWBA to measure intervals of time in hours and minutes Envision 2.0 Pgs. 745-750	Time interval Elapsed Time A.M. P.M.	CC.2.4.2.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals. M03.D-M.1.1.1 Tell, show and or write time (analog) to the nearest minute. M03.D-M.1.1.2 Calculate elapsed time to the nearest minute in a given situation (total elapsed time limited to 60 minutes or less)
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can solve word problems involving time intervals by using a number line. One can also measure time intervals by using	Student should be able to solve problems involving time intervals. Students should be able to explain how to determine the duration of time	Lesson 14-3 Units of Time: Solve Word Problems. SWBA to use representations to solve word problems about time.	Time interval Elapsed Time A.M. P.M.	CC.2.4.2.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals. M03.D-M.1.1.1 Tell, show and or write time (analog) to the nearest minute.

			addition and subtraction. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes by representing the problem on a lone diagram.	intervals in hours and minutes.	Envision 2.0 Pgs. 751-756		M03.D-M.1.1.2 Calculate elapsed time to the nearest minute in a given situation (total elapsed time limited to 60 minutes or less)
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure liquid volumes using liters and milliliters. One can add, subtract, multiply, and divide measures of liquid volume. Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to represent the problem.	Students should be able to solve word problems involving liquid volume.	Lesson 14-4 Estimate Liquid Volume. SWBA to use standard units to estimate liquid volumes. Envision 2.0 Pgs. 757-762	Capacity Liquid Volume Liter (L) Metric unit Milliliter Unit	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the

							nearest quarter inch or centimeter.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure liquid volumes using liters and milliliters. One can add, subtract, multiply, and divide measures of liquid volume. Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to represent the problem.	Students should be able to solve word problems involving liquid volume.	Lesson 14-5 Measure Liquid Volume. SWBA to use standard units to measure liquid volumes. Envision 2.0 Pgs. 763-768	Capacity Liquid Volume Liter (L) Metric unit Milliliter Unit	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure the mass of objects using metric units of grams and kilograms. One can add, subtract, multiply and divide measures of mass.	Students should be able to solve one-step word problems involving masses of objects.	Lesson 14-6 Estimate Mass SWBA to use standard units to estimate the masses of solid objects. Envision 2.0 Pgs. 769-774	Gram Kilogram Mass	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard

			Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to represent the problem.				units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure the mass of objects using metric units of grams and kilograms. One can add, subtract, multiply and divide measures of mass. Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to	Students should be able to solve word problems involving masses of objects.	Lesson 14-6 Estimate Mass SWBA to use grams and kilograms to measure the masses of solid objects. Envision 2.0 Pgs. 775-780	Gram Kilogram Mass	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units.

			represent the problem.				M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure liquid volumes using liters and milliliters. One can add, subtract, multiply, and divide measures of liquid volume. One can measure the mass of objects using metric units of grams and kilograms. One can add, subtract, multiply and divide measures of mass. Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to represent the problem.	Students should be able to solve word problems involving masses of objects and liquid volume	Lesson 14-7 Estimate Mass SWBA to use pictures to help solve problems about mass and volume. Envision 2.0 Pgs. 781-786	Gram Kilogram Mass Capacity Liquid Volume Liter (L) Metric unit Milliliter Unit	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.

	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	One can measure liquid volumes using liters and milliliters. One can add, subtract, multiply, and divide measures of liquid volume. One can measure the mass of objects using metric units of grams and kilograms. One can add, subtract, multiply and divide measures of mass. Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms and liters. Add, subtract, multiply or divide to solve one step word problems involving mass and volumes that are given in the same unit to represent the problem.	Students should be able to solve word problems involving masses of objects, liquid volume and time	Lesson 14-8 Reasoning SWBA to make sense of quantities and relationships in problem situations. Envision 2.0 Pgs. 787-792	Gram Kilogram Mass Capacity Liquid Volume Liter (L) Metric unit Milliliter Unit Time interval Elapsed Time A.M. P.M.	CC.2.4.2.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass and length. M03.D-M.1.2.1 Measure and estimate liquid volumes and masses of objects, using standard units (cups, pints, quarts, gallons, ounces and pounds) and metric units (liters, grams and kilograms) M03.D-M.1.2.2 Add, subtract multiply and divide to solve one-step word problems involving masses or liquids volumes that are given in the same units. M03.D-M.1.2.3 Use a ruler to measure lengths to the nearest quarter inch or centimeter.
	Some attribute of objects are measurable, e.g. length, mass, capacity, and it can be quantified.	How can time, capacity, and mass be measured and found?	Solve problems and make change involving money using a combination of coins and bills.	Students should be able to compare total values of combinations of coins (penny, nickel, dime, quarter) and dollar bills less than $5.00	Lesson: Money SWBA to use a combination of bills and coins to solve word problems involving money and making change.	Penny Nickel Dime Quarter Dollar	CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills. M03.D-M. 1.3.1 Compare total values of

							combinations of coins (penny, nickel, dime, quarter) and dollar bills less than $5.00 M03.D-M. 1.3.2 Make change for an amount up to $5.00 with no more than $2.00 change given. (penny, nickel, dime, quarter and dollar) M03.D-M. 1.3.3 Round amounts of money to the nearest dollar.
Review Common Assessment Unit 14 Solve Time, Capacity, and Mass Problems							
Common Assessment Unit 14 Solve Time, Capacity, and Mass Problems							
Unit 15 Attributes of Two-Dimensional Figures							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How can two-dimensional shapes be described and classified?	Some quadrilaterals are parallelograms, figures that have both pairs of opposite sides parallel. A trapezoid is an example of a quadrilateral that is not a parallelogram.	Students should be able to classify quadrilaterals based on their attributes. Students should be able to determine shared attributes among different shapes, such as a	Lesson 15-1 Describe Quadrilaterals SWBA to identify quadrilaterals and use attributes to describe them. Envision 2.0 Pgs. 811-816	Polygon Quadrilateral Parallelogram Parallel sides Angles Vertex	CC.2.3.3.A.1 Identify, compare, and classify shapes by their attributes. M03.C-G.1.1.1 explains that shapes in different categories may share attributes, and that the shared attributes can define a larger category.

			Understand that shapes in different categories (rhombi, rectangles, and others) may share attributes (having 4 sides) and that the shared attributes can define a larger category (quadrilaterals) Recognize rhombi, rectangles, and squares as examples of of quadrilateral, and draw examples of quadrilaterals that do not belong to any of these subcategories.	rhombus and a rectangle. Students should be able to explain how a parallelogram is a special kind of polygon		Sides Square Rectangle Rhombus Trapezoid Convex Concave	M03.C-G.1.1.2 Recognize rhombi, rectangles, and squares as examples of quadrilateral, and/or draw examples of quadrilaterals that do not belong to any of these subcategories.
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How can two-dimensional shapes be described and classified?	Shapes in different categories may have some shared attributes. One can describe categories and subcategories of shapes based on shared attributes. Understand that shapes in different categories (rhombi, rectangles, and others) may share attributes (having 4 sides) and that the shared attributes can define a larger	Students should be able to classify quadrilaterals based on their attributes Students should be able to determine shared attributes among different shapes, such as a rhombus and a rectangle. Students should be able to explain how a parallelogram is a special kind of polygon.	Lesson 15-2 Classify Shapes SWBA to classify shapes in several ways based on how they are alike and how they are different. Envision 2.0 Pgs. 817-8122	Generalize	CC.2.3.3.A.1 Identify, compare, and classify shapes by their attributes. M03.C-G.1.1.1 explains that shapes in different categories may share attributes, and that the shared attributes can define a larger category. M03.C-G.1.1.2 Recognize rhombi, rectangles, and squares as examples of quadrilateral, and/or draw examples of quadrilaterals that do not belong to any of these subcategories.

			category (quadrilaterals) Recognize rhombi, rectangles, and squares as examples of quadrilateral, and draw examples of quadrilaterals that do not belong to any of these subcategories.				
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How can two-dimensional shapes be described and classified?	Some quadrilaterals are parallelograms, figures that have both pairs of opposite sides parallel. A trapezoid is an example of a quadrilateral that is not a parallelogram. Understand that shapes in different categories (rhombi, rectangles, and others) may share attributes (having 4 sides) and that the shared attributes can define a larger category (quadrilaterals) Recognize rhombi, rectangles, and squares as examples of quadrilateral, and draw examples of quadrilaterals that	Students should be able to classify quadrilaterals based on their attributes. Students should be able to determine shared attributes among different shapes, such as a rhombus and a rectangle. Students should be able to explain how a parallelogram is a special kind of polygon.	Lesson 15-3 Analyze and Compare Quadrilaterals SWBA to analyze and compare quadrilaterals and group them by their attributes. Envision 2.0 Pgs. 811-816	Polygon Quadrilateral Parallelogram Parallel sides Angles Vertex Sides Square Rectangle Rhombus Trapezoid Convex Concave	CC.2.3.3.A.1 Identify, compare, and classify shapes by their attributes. M03.C-G.1.1.1 explains that shapes in different categories may share attributes, and that the shared attributes can define a larger category. M03.C-G.1.1.2 Recognize rhombi, rectangles, and squares as examples of quadrilateral, and/or draw examples of quadrilaterals that do not belong to any of these subcategories.

			do not belong to any of these subcategories.				
	Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.	How can two-dimensional shapes be described and classified?	Some quadrilaterals are parallelograms, figures that have both pairs of opposite sides parallel. A trapezoid is an example of a quadrilateral that is not a parallelogram. Understand that shapes in different categories (rhombi, rectangles, and others) may share attributes (having 4 sides) and that the shared attributes can define a larger category (quadrilaterals) Recognize rhombi, rectangles, and squares as examples of quadrilateral, and draw examples of quadrilaterals that do not belong to any of these subcategories.	Students should be able to classify quadrilaterals based on their attributes. Students should be able to determine shared attributes among different shapes, such as a rhombus and a rectangle. Students should be able to explain how a parallelogram is a special kind of polygon.	Lesson 15-4 Precision SWBA to be precise when solving math problems dealing with two-dimensional shapes. Envision 2.0 Pgs. 829-834	Polygon Quadrilateral Parallelogram Parallel sides Angles Vertex Sides Square Rectangle Rhombus Trapezoid Convex Concave	CC.2.3.3.A.1 Identify, compare, and classify shapes by their attributes. M03.C-G.1.1.1 explains that shapes in different categories may share attributes, and that the shared attributes can define a larger category. M03.C-G.1.1.2 Recognize rhombi, rectangles, and squares as examples of quadrilateral, and/or draw examples of quadrilaterals that do not belong to any of these subcategories.
Review Common Assessment Unit 15 Attributes of Two-Dimensional Figures							

Common Assessment Unit 15 Attributes of Two-Dimensional Figures							
Unit 16 Solve Perimeter Problems							
Estimated Unit Time Frames	**Big Ideas**	**Essential Questions**	**Concepts (Know)**	**Competencies (Do)**	**Lessons/ Suggested Resources**	**Vocabulary**	**Standards/ Eligible Content**
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can perimeter be measured and found?	One can use a ruler to measure the side lengths of a figure and then use the measurements to find the perimeter. Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters	Students should be able to estimate the perimeter of a shape. Students should be able to find the actual perimeter given the lengths of the sides.	Lesson 16-1 Understand Perimeter SWBA to find the perimeter of different polygons. Envision 2.0 Pgs. 847-852	Perimeter	CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. Mo3.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the	How can perimeter be measured and found?	One can use a ruler to measure the side lengths of a figure and then use the measurements to find the perimeter. Solve real-world and mathematical problems involving	Students should be able to estimate the perimeter of a shape. Students should be able to find the actual perimeter given the lengths of the sides and/or	Lesson 16-2 Understand Perimeter SWBA to find the perimeter of polygons with common shapes. Envision 2.0 Pgs. 853-858	Perimeter Equilateral Triangle	CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons,

	data to be collected, how best to collect it, and how best to represent it.		perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters	characteristics of the quadrilateral.			include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can perimeter be measured and found?	One can find the perimeter of a figure if you know all the side lengths. One can find an unknown side length of a figure if you know the perimeter and the other side lengths. Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters	Students should be able to find the perimeter of a shape by adding the side lengths. Students should be able to explain what operation to use to find an unknown side length, if the perimeter is known.	Lesson 16-3 Perimeter and unknown side lengths SWBA to find the unknown length of a polygon by using a known perimeter. Envision 2.0 Pgs. 859-864	Perimeter	CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by	How can perimeter be	Two rectangles can have the same area,	Students should be able to draw and label rectangles that	Lesson 16-4 Same Perimeter, Different Area	Area	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to

	collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	measured and found?	but different perimeter. Two rectangles can have the same perimeter but different areas, Recognize area as an attribute of plane figures and understand concepts of area measurement. Relate area to the operations of multiplication and addition. Multiply side lengths to find areas of rectangles with whole-number side lengths in context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting	have the same area or the same perimeter but not both.	SWBA to determine the relationship of shapes with the same perimeter and different areas. Envision 2.0 Pgs. 865-870		multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same

			rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters				units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can perimeter be measured and found?	Two rectangles can have the same area, but different perimeter. Two rectangles can have the same perimeter but different areas, Recognize area as an attribute of plane figures and understand concepts of area measurement. Relate area to the operations of multiplication and addition. Multiply side lengths to find areas of rectangles with whole-number side lengths in context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	Students should be able to draw and label rectangles that have the same area or the same perimeter but not both.	Lesson 16-5 Same Area, Different Perimeters SWBA to determine the relationship of shapes with the same area and different perimeters. Envision 2.0 Pgs. 871-876	Area	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.3.1.1 Measure areas by counting unit squares (square cm, square m, square in. square ft., and non-standard units) M03.D-M.3.1.2 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons,

			Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters				include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.
	Some questions can be answered by collecting, representing, and analyzing data, and the question to be answered determines the data to be collected, how best to collect it, and how best to represent it.	How can perimeter be measured and found?	One can find the perimeter of a figure if you know all the side lengths. One can find an unknown side length of a figure if you know the perimeter and the other side lengths. Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area	Students should be able to find the perimeter of a shape by adding the side lengths. Students should be able to explain what operation to use to find an unknown side length, if the perimeter is known.	Lesson 16-6 Reasoning SWBA to determine the relationship between numbers to simplify and solve problems involving perimeter. Envision 2.0 Pgs. 877-882	Perimeter	CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures. M03.D-M.4.1.1 Solve real-world and mathematical problems involving perimeters of polygons, include finding the perimeter given the sides length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

			and different perimeters				
Review Common Assessment Unit 16 Solve Perimeter Problems							
Unit 16 Solve Perimeter Problems							