

Carrollton Exempted Village School District – Carrollton, Ohio

OHIO COMMON CORE STATE STANDARDS

Curriculum Map

Course Title: Grade 6 Math Number System	Month: aug/sep/oct/nov	Academic Year: 2013-2014
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Essential Questions for this Month:

- 1. How do operations affect whole numbers, decimals, and fractions?**
- 2. How can rational numbers be represented by models?**
- 3. What informational strategies are used to solve multi-step problems?**

Unit/Time Frame	Core-Standards	Instructional Strategies and Differentiation	Assessment	Resources
	6 NS 2: Fluently divide multi-digit numbers using the standard algorithm	6 NS 2: When dividing 32 into 8456, students should state, “there are 200 thirty-twos in 8456”, writing a 2 in the quotient. Students could write 6400 beneath 8456 rather than only writing 64.	6 NS 2: Students will fluently use the standard division algorithm to divide multi-digit numbers. Students will use their understanding of place value to describe their process.	
	6 NS 3: Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	6 NS 3: First, students should estimate the sum of 12.3 & 9.75. An estimated sum should be $12 + 10 = 22$. Students should also recognize if their estimate is high or low.	6 NS 3: Students will use addition, subtraction, multiplication, and division to fluently solve multi-digit problems using standard algorithms of each operation.	

	<p>6 NS 1: Interpret & compute quotients of fractions, and solve word problems involving division of fractions, e.g., by using visual fraction models & equations to represent the problem</p>	<p>6 NS 1: Students will evaluate fractions divided by fractions. Students will make drawings, model situations with manipulative, or manipulate computer-generated models. Students will write contextual problems for fraction division problems.</p>	<p>6 NS 1: Create a story context for $\frac{2}{3}$ divided by $\frac{3}{4}$ and use a visual fraction model to show quotient. Using the fractional model, students will state that $\frac{2}{3}$ divided by $\frac{3}{4} = \frac{8}{9}$ because $\frac{3}{4}$ of $\frac{8}{9}$ is $\frac{2}{3}$. How much chocolate will each person get if 3 people share $\frac{1}{2}$ pound equally.</p>	
	<p>6 EE 3: Apply the properties of operations to generate equivalent expressions.</p>	<p>6 EE 3: Students will demonstrate the meaning of exponents to write & evaluate numerical expressions with whole number</p>	<p>6 EE 3: Apply the distributive property to the expression $3(2 + x)$ to produce equivalent expression $6 + 3x$; apply same property to the expression $24x + 18y$ to produce equivalent expression $6(4x + 3y)$, also apply same property to $y + y + y$ for the expression $3y$</p>	

	<p>6 NS 4: Find the greatest common factor of two whole numbers less than or equal to 100 & the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.</p>	<p>6 NS 4: Students will find the GCF of two whole numbers.</p> <p>6 NS 4: Students will use GCF to create equivalent expressions.</p> <p>6 NS 4: Students will find the LCM of two whole numbers.</p>	<p>6 NS 4: Ms. England & Mr. France have donated a total of 90 hot dogs & 72 bags of chips for the class party. Each student will receive the same amount of refreshments. All refreshments must be used.</p> <p>a. What is the greatest number of students that can attend the party?</p> <p>b. How many bags of chips will each student receive?</p> <p>c. How many hot dogs will each student receive?</p> <p>Solution:</p> <p>a. GCF=18</p> <p>b. Each student will receive 4 bags of chips</p> <p>c. Each student would receive 5 hot dogs.</p> <p>6 NS 4: Express $36 + 8$ as $4(9+2)$</p>	
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			<p>6 NS 4: 1. Listing multiples of 6 (6, 12, 18, 24, 30...) & 8 (8, 16, 24, 32, 40...); take the least in common from each list (24)</p> <p>2. Use prime factorization</p> <p>Step one: Find prime factors of 6 & 8</p> <p>6 = 2 X 3</p> <p>8 = 2 X 2 X 2</p> <p>Step two: Find common factors between 6 & 8 (2)</p> <p>Step three: Multiply the common factors by leftover factors; 2 X 2 X 2 X 3 = 24</p>	
	<p>6 RP 1: Understand the concept of a ratio & use ratio language to describe a ratio relationship between two quantities.</p>	<p>6 RP 1: Students will construct ratios to compare two quantities in the forms: a : b, a/b, a to b.</p>	<p>6 RP 1: A comparison of 6 puppies to 9 kittens could be expressed as 6 : 9, 6/9, 6 to 9, could also be represented as a model: Kittens # Puppies *</p> <p>##### *****</p>	

	<p>6 RP 2: Understand the concept of a unit rate a/b associated with a ratio $a:b$, where b is not equal to 0, and use rate language in the context of a ratio of a ratio relationship.</p>	<p>6 RP 2: Students will name the amount of either quantity in terms of other quantity.</p>	<p>6 RP 2: This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $\frac{3}{4}$ cup of flour for each cup of sugar. A customer paid \$75 for 15 hamburgers, which is a rate of \$5/hamburger.</p>	
	<p>6 RP 3: Use ratio and rate reasoning to solve real-world and mathematical problems; e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams or equations.</p>	<p>6 RP 3: Students will compare ratios for equivalence by using tables and diagrams.</p> <p>6 RP 3: Students will plot pairs of values on coordinate plane.</p> <p>6 RP 3: Students will solve unit rate problems.</p> <p>6 RP 3: Students will apply ratio reasoning to convert measurement units.</p> <p>6 RP 3: Students will use ratios and rates in ratio tables and graphs to solve problems.</p>		

Vocabulary:	Repeating decimal, terminating decimal, power of ten, dividend, divisor, factor, mean, product, quotient, sum, reciprocal, multiplicative inverse, visual fraction model, multi-digit, greatest common factor, least common multiple, prime number, composite number, relatively prime, factors, distributive property, prime factorization			
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