Spring Lake Middle School
Math Grade 7 Curriculum Map
First Trimester

Unit	CCSS	Learning Targets	Resources
Operations with Integers (Adding Integers)	**7.NS.1 b** Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	I can add integers using a number line, manipulatives, and/or paper and pencil.

I can use adding integers in real world situations. | Course 2: 1-7
Course 3:
On Core: |
| **Operations with Integers** (Subtracting Integers) | **7.NS.1 c** Understand subtraction of rational numbers as adding the additive inverse, p - q = p + (-q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. | I can subtract integers using a number line, manipulatives, and/or paper and pencil.

I can use subtracting integers in real world situations. | Course 2: 1-7
Course 3:
On Core: |
| **Operations with Integers** (Multiiplying Integers) | **7.NS.2 a** Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. | I can multiply integers.

I can use multiplying integers in real world situations. | Course 2: 1-8
Course 3:
On Core: |
| **Operations with Integers** (Dividing Integers) | **7.NS.2 b** Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q =p/(–q). Interpret quotients of rational numbers by describing real-world contexts. | I can divide integers.

I can use dividing integers in real world situations. | Course 2: 1-8
Course 3:
On Core: |
| **Operations with Integers** (Integer Properties) | **7.NS.2 c** Apply properties of operations as strategies to multiply and divide rational numbers. | I can use properties of integers to add, subtract, multiply and divide.
I can follow the order of operations. | Course 2:
Course 3:
On Core: |
| **Operations with Integers** (Real Life situations with Integers) | **7.EE.3** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. | I can solve real life integer problems using various tools. | Course 2:
Course 3:
On Core: |

Unit	CCSS	Learning Targets	Resources
Rational Numbers (Fractions & Decimals)	**7.NS.1 a** Describe situations in which opposite quantities combine to make 0.	I can describe examples of opposite quantities combining to make 0.	Course 2: 4-2,4-3, 1-2
Course 3:
On Core: 1-2

Revised 8-23-12

Spring Lake Middle School
Math Grade 7 Curriculum Map
First Trimester

Rational Numbers (Adding Fractions & Decimals)	**7.NS.1 b** Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	I can add fractions, decimals and mixed numbers. I can add fractions, decimals, and mixed numbers in real world situations.	Course 2: Course 3: On Core: 1-2, 1-6
Rational Numbers (Subtracting Fractions & Decimals)	**7.NS.1 c** Understand subtraction of rational numbers as adding the additive inverse, p - q = p + (-q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	I can subtract fractions, decimals and mixed numbers. I can subtract fractions, decimals, and mixed numbers in real world situations.	Course 2: Course 3: On Core: 1-3, 1-6
Rational Numbers (Properties of rational numbers)	**7.NS1 d** Apply properties of operations as strategies to add and subtract rational numbers.	I can use properties of rational numbers to add and subtract.	Course 2: 1-2 Course 3: On Core: 1-2, 1-3
Rational Numbers (Multiplying Fractions & Decimals)	**7.NS.2 a** Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	I can multiply fractions, decimals, and mixed numbers. I can multiply fractions, decimals, and mixed numbers in real world situations.	Course 2: 1-3,4-4,4-5 Course 3: On Core: 1-4, 1-6
Rational Numbers (Dividing Fractions & Decimals)	**7.NS.2b** Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If *p* and *q* are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.	I can divide fractions, decimals, and mixed numbers. I can divide fractions, decimals, and mixed numbers in real world situations.	Course 2: Course 3: On Core: 1-5, 1-6
Rational Numbers (Properties of Rational Numbers)	**7.NS.2 c** Apply properties of operations as strategies to multiply and divide rational numbers.	I can use properties of fractions, decimals, and mixed numbers to multiply and divide	Course 2: 1-3 Course 3: On Core: 1-4, 1-5
Rational Numbers (Convert between fractions and decimals)	**7.NS.2 d** Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	I can convert between fractions and decimals	Course 2: 3-9 Course 3: On Core: 1-1
Rational Numbers (Real life use with rational numbers)	**7.NS.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	I can solve real life problems with rational numbers	Course 2: Course 3: On Core: 1-6, 2-1

Spring Lake Middle School
Math Grade 7 Curriculum Map
First Trimester

Rational Numbers (Using properties to simplify expressions)	**7.EE.1** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	I can simplify algebraic expressions by using the distributive property.	Course 2: Course 3: On Core: 3-1
Rational Numbers (Rewriting Expressions)	**7.EE.2** Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related	I can simplify algebraic expressions by using the distributive property, combining like terms and factoring.	Course 2: Course 3: On Core: 3-2
Rational Numbers (Two-Step Equations)	**7.EE.3** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	I can solve muli-step equations with positive and negative numbers	Course 2: 2-5, 2-6 Course 3: On Core: 3-6
Rational Numbers (applications of equations)	**7.EE.4 a** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities (see notes): a. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. **7.EE.4 b** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities (see notes): b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	I can solve real life multi-step problems with integers.	Course 2: Course 3: On Core: 3-3
Rational Numbers (Solving Inequalities)	**7.EE.4 a** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities (see notes): a. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	I can write equations and inequalities.	Course 2: 2-1,2-7, 2-8 Course 3: On Core: 3-3, 3-4, 3-5

Revised 8-23-12

Spring Lake Middle School
Math Grade 7 Curriculum Map
First Trimester

	7.EE.4 b Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities (see notes): b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	I can solve and graph inequalities.	Course 2: 2-9,2-10 Course 3: On Core: 3-4, 3-5,3-6

Unit	CCSS	Learning Targets	Resources
Proportions (Rates and Ratios)	**7.RP.1** Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	I can use dimensional analysis to convert between units. I can find and compare unit rates	Course 2: Course 3: On Core: 2-1
Proportions (Slope and Graphing)	**7.RP.2** Recognize and represent proportional relationships between quantities. a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	I can test if proportions are equal using tables and graphs.	Course 2: Course 3: On Core: 2-2, 2-3
Proportions (Finding Rates)	**7.RP.2** Recognize and represent proportional relationships between quantities. b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Find a unit rate using tables and graphs.	Course 2: Course 3: On Core: 2-2, 2-3
Proportions (Writing and Solving Proportions using equations)	**7.RP.2** Recognize and represent proportional relationships between quantities. c. Represent proportional relationships by equations.	I can write an equation that represents a proportional relationship.	Course 2: Course 3: On Core: 2-2
Proportions (Relationships of points on a graph)	**7.RP.2** Recognize and represent proportional relationships between quantities. d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.	I can describe the meaning of a point (x,y) on a graph, including the points (0,0) and (1,r) where r is the unit rate.	Course 2: Course 3: On Core: 2-3
Proportions (Percent change)	**7.RP.3** Use proportional relationships to solve multistep ratio and percent problems.	I can solve real world problems using proportions.	Course 2: 5-5 Course 3: On Core: 2-2, 2-3, 2-4

Revised 8-23-12

Spring Lake Middle School
Math Grade 7 Curriculum Map
First Trimester