7th Grade Pre-Algebra Mathematics Curriculum Map
Scotland County Schools 2009-10

1st NINE WEEKS					
Suggested Time Frame	**Objectives**	**Essential Questions**	**Resources**	**Vocabulary**	**Writing**
August 25 - September 25 **Variables and Patterns** **+10 days to extend 8th grade, goal 5 objectives**	**5.02** Translate among different representations of algebraic expressions, equations and inequalities. **5.01** Identify, analyze, and create linear relations, sequences, and functions using symbols, graphs, tables, diagrams, and written descriptions. **5.03** Use and evaluate algebraic expressions, linear equations or inequalities to solve problems. **5.04** Develop fluency in the use of formulas to solve problems. **8.5.01** Develop an understanding of function. a) Translate among verbal, tabular, graphic, and algebraic representations of functions. b) Identify relations and functions as linear or nonlinear. c) Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation. d) Interpret and compare properties of linear functions from tables, graphs, or equations. **8.5.02** Write an equation of a linear relationship given: two points, the slope and one point on the line, or the slope and y-intercept. **8.5.03** Solve problems using linear equations and inequalities; justify symbolically and graphically. **8.5.04** Solve equations using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	**5.02** How do you translate algebraic expressions? **5.01** How would you identify patterns when given problems with functions? **5.03** How do you write a problem given a linear equation or inequality? **5.03** How do you evaluate algebraic expressions? **5.02** How do you translate and solve algebraic equations? **5.04** How can you use formulas to help you solve problems?	**5.02** Glencoe Textbook *Blackline Masters (V-10, V-11, V-38 - V-41, V-44 - V-50) *Indicators p. 37,38 * Week by Week Essentials * p. 15 Daily Intervention *Classroom Strategies p. 69-73 **5.01** *Glencoe Textbook * Blackline Masters (V-8, V-9, V-31 - V-37, V-42, V-43) *Indicators p. 35,36 * Week by Week Essentials * p. 176 Hands-On-Lab * Classroom Strategies p. 67 & 68 **5.03** *Glencoe Textbook *Blackline Masters (V-1 - V-7, V-12 - V-21, V - 30) *Indicators p. 39,40 * Week by Week Essentials * p. 154 Hands-On-Lab * Classroom Strategies p. 74 - 76	**5.02** term, like terms, combining like terms, simplify, factor, equivalent expressions, coefficient, variable, exponents, rules of exponents, multiplicative identity, additive identity, multiplicative inverse, additive inverse, grouping symbols, order of operations, parentheses, brackets, braces *Students need to be familiar with a variety of notations for multiplication:* *a x b* *a • b* *a(b)* **5.01** variable, independent dependent, evaluate, order of operations, simplify, like terms domain, range, input, output **5.03** variable, additive inverse multiplicative inverse, distributive property, equivalent, expressions, order of operations, less than <, greater than >, less than or equal to ≤, greater than or equal to ≥, compound inequality, Function, Domain, Range, Input / Output, Parentheses, Brackets, Braces, Distributive, Property, Substitution **5.04** substitution, variable, evaluate, transform, investment, interest **8th grade:** slope intercept, point slope form, cube root	*Write an algebraic expression involving two variables and two or more operations. Assign values to the variables and evaluate. Write a paragraph showing how the result was determined. *During a workourt, a target heart rate, y in beats per minute, is represented by y= .7(220 - x), where x is a person's age. Compare your target heart rate to that of a 30 yr. old. **5.04** Knowing the formulas for area and perimeter of rectangles, Is it sometimes, always, or never true that the perimeter of a rectangle is numerically greater than its area? Give several examples in your explanation.