

BCCS
7th Grade MATH Curriculum Map
 (Revised 5-2008)

Month	Content What topic(s) is being covered and what is the important vocabulary? What do students need to know		Skills What do students have to be able to do connected to the Content?	Essentials What are fundamental, enduring questions that will guide study and instruction?	Standards/ Benchmarks What benchmarks are met through this topic?	Instruction What activities are used to develop the skills and knowledge?	Resources What materials, texts, videos, internet, software, or human resources support instruction?	Assessment What evidence (products and/or performances) is collected to establish that the Content and Skills have been learned?
Sept – Oct	Topic: Integers & Equations	Vocabulary: - Absolute value - Additive inverse / opposites -Algebraic expression -Coordinate -Equation -Evaluate -Inequality -Integer -Inverse operations -Negative number -Numerical expression -Open sentence -Order of operations -Powers -Properties: Commutative Associative Distributive Identity Equality -Solution -Solve -Variable	Solve problems involving operations with integers. N.FL.07.07 Understand and use basic properties of real numbers: additive and multiplicative identities, additive and multiplicative inverses, and commutative, associative, & distributive properties. A.PA.07.11	Evaluate expressions and identify properties. Graph integers on a number line and find absolute value. Add, subtract, multiply, & divide integers. Solve one-step equations using the properties of equality / inverse operations.	N.FL.07.07 A.PA.07.11	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review. Use algebra tiles to review/teacher integer operations and properties.	Glencoe Mathematics – Course 3. Chapter 1 Sections 2 – 6 , 8, & 9. Integer operations chart. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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Oct – Nov	Topic: Rational Numbers	Vocabulary: -Dimensional analysis -Life fractions -Multiplicative inverses -Rational number -Reciprocals -Unlike fractions	Understand derived quantities such as density, velocity, and weighted averages. N.ME.07.01 Solve problems involving derived quantities. N.FL.07.02 Add, subtract, multiply, and divide negative rational numbers. N.FL.07.08 Estimate results of computation with rational numbers. N.FL.07.09 Understand and use basic properties of real numbers: additive and multiplicative identities, additive and multiplicative inverses, and commutative, associative, & distributive properties. A.PA.07.11	Add, subtract, multiply, divide rational numbers. Solve one-step equations with rational numbers (introduction).	N.ME.07.01 N.FL.07.02 N.FL.07.08 N.FL.07.09 A.PA.07.11	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 2 Sections 3, 4, 5, & 6. Fractions operations chart. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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Dec	Topic: Real Numbers	Vocabulary: -Irrational number -Perfect square -Principal square root -Radical sign -Real number & real number system -Square root	Understand the concept of square root and cube root, and estimate using calculators. N.MR.07.06	Find square roots and perfect squares. Estimate square roots. Identify and classify numbers in a real number system.	N.MR.07.06	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 3 Sections 1, 2, & 3. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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Dec – Jan	Topic: Proportions, Algebra, & Geometry	Vocabulary: -Congruent -Corresponding parts -Cross products -Indirect measurement -Proportion -Rate -Rate of change -Ratio -Rise -Run -Scale -Scale drawing -Scale factor -Scale model -Similar -Slope -Unit rate	Understand derived quantities such as density, velocity, and weighted averages. N.ME.07.01 Calculate rates of change including speed. N.FL.07.03 Convert ratio quantities between different systems of units. N.MR.07.04 Recognize when information given in a table, graph, or formula suggests a directly proportional or linear relationship. A.PA.07.01 Represent directly proportional & linear relationships using verbal descriptions, tables, graphs, & formulas, and translate among these representations. A.RP.07.02 For directly proportional or linear situations, solve applied problems using graphs and equations. A.PA.07.04 Calculate the slope from the graph of a linear function as the ratio of “rise/run” for a pair of points on the graph, and express the answer as a fraction and decimal; understand that linear functions have slope that is a constant rate of change. A.PA.07.06 Solve proportion problems using	Express ratios as fractions in simplest form and determine unit rates. Find rates of change. Find the slope of a line by counting rise/run. Use proportions to solve problems. Identify similar polygons and find missing measures of similar polygons. Solve problems involving scale drawings. Solve problems involving similar triangles.	N.ME.07.01 N.FL.07.03 N.MR.07.04 A.PA.07.01 A.RP.07.02 A.PA.07.04 A.PA.07.06 A.PA.07.06 G.TR.07.03 G.TR.07.05 G.TR.07.06	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 4 Sections 1 - 7. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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		<p>such methods as unit rate, scaling, finding equivalent fractions, and solving the proportion equation $a/b=c/d$; know how to see patterns about proportional situations in tables. A.PA.07.06</p> <p>Understand that in similar polygons, corresponding angles are congruent and the ratios of corresponding sides are equal; understand the concepts of similar figures and scale factor. G.TR.07.03</p> <p>Solve problems about similar figures and scale drawings. G.TR.07.04</p> <p>Show that two triangles are similar using the criteria: AAA, SAS, & SSS. G.TR.07.05</p> <p>Understand and use the fact that when two triangles are similar with scale factor of r, their area are related by a factor of r^2. G.TR.07.06</p>					

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Feb - Mar	Topic: Data Displays	Vocabulary: -Box-and-whisker plots -Circle graph -Histogram -Interquartile range -Lower quartile -Mean -Measure of central tendency -Measures of variation -Median -Mode -Outlier -Quartiles -Range -Upper quartile	Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box-and-whisker plots, and select appropriate representation to address specific questions. D.RE.07.01 Calculate and interpret relative frequencies and cumulative frequencies for given data sets. D.AN.07.03 Find and interpret the median, quartiles, and interquartile range of a given set of data. D.AN.07.04	Construct and interpret histograms. Construct and interpret circle graphs. Choose an appropriate display for a set of data. Find the mean, median, and mode for a set of data. Find the range and quartiles for a set of data. Display and interpret data in a box-and-whisker plot. Recognize when graphs and statistics are misleading.	D.RE.07.01 D.AN.07.03 D.AN.07.04	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 9 Sections 1 - 7. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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Mar – Apr	Topic: Algebra: More Equations	Vocabulary: -Coefficient -Constant Equivalent expressions -Like terms -Simplest form -Simplifying the expression -Term -Two-step equations	Understand and use basic properties of real numbers: additive and multiplicative identities, additive and multiplicative inverses, and commutative, associative, & distributive properties. A.PA.07.11 Add, subtract, and multiply simple algebraic expressions of the first degree and justify properties of real numbers (combining like terms). A.FO.07.12 Solve two-step equations – with and without combining like terms first; checking solutions. A.FO.07.13	Solve two-step equations. Use the Distributive Property to simplify algebraic expressions. Combine like terms to simplify algebraic expressions. Solve equations with variables on both sides.	A.PA.07.11 A.FO.07.12 A.FO.07.13	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 10 Sections 1, 2, & 4. 6-step process chart for multi-step equations. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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Apr - June	Topic: Slope & Linear Equations	Vocabulary: -Best-fit line -Function table -Linear functions -Scatter plot -Slope formula -Slope-intercept form -x-intercept -y-intercept	Recognize when information given in a table, graph, or formula suggests a directly proportional or linear relationship. A.PA.07.01 Represent directly proportional & linear relationships using verbal descriptions, tables, graphs, & formulas, and translate among these representations. A.RP.07.02 Given a directly proportional or linear situation, graph and interpret the slope and intercept(s) in terms of the original situation; evaluate $y=kx$ for specific x value, given k . A.PA.07.03 For directly proportional or linear situations, solve applied problems using graphs and equations. A.PA.07.04 Recognize and use directly proportional relationships of the form $y=ms$, and distinguish from linear relationships of the form $y=mx+b$, b non-zero; understand that in a directly proportional relationship between two quantities one quantity is a constant multiple of the other quantity A.PA.07.05	Graph linear functions by using function tables and plotting points. Find the slope of a line using the slope formula. Graph linear equations using the slope and y-intercept. Construct and interpret scatter plots.	A.PA.07.01 A.RP.07.02 A.PA.07.03 A.PA.07.04 A.PA.07.05 A.PA.07.07 A.FO.07.08 A.PA.07.09 A.RP.07.10 D.AN.07.02	Use a notebook all year to organize themselves & practice note taking. Use warm-ups as daily review.	Glencoe Mathematics – Course 3. Chapter 11 Sections 3-6 and Chapter 12 Section 1. Book resource materials.	Weekly quizzes, chapter quizzes, and tests including: multiple choice, true or false, computation, and constructed response questions.

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		<p>Represent linear functions in the form $y=x+b$, $y=mx$, $y=mx+b$, and graph, interpreting slope and y-intercept. A.PA.07.07</p> <p>Know that the solution to a linear equation corresponds to the point at which it crosses the x-axis. A.FO.07.08</p> <p>Recognize inversely proportional relationships in contextual situations; know that quantities are inversely proportional if their product is constant. A.PA.07.09</p> <p>Know that the graph of $y=k/x$ is not a line, know its shape, and know that it crosses neither the x nor the y-axis. A.RP.07.10</p> <p>Create and interpret scatter plots and find line of best fit and use an estimated line of best fit to answer questions about the data. D.AN.07.02</p>					