SHERWOOD CHARTER SCHOOL

2016-2017 Middle School Curriculum Planning Map
Math
7th Grade

This is a working document and subject to change.

	September	October	November	December	January	February	March	April	May	June
Component	Stage 2, Book 1: Rational Numbers & Equations		Stage 2, Book 1: Rational Numbers & Equations Stage 2, Book 2: Proportions & Probability	Stage 2, Book 2: Proportions & Probability			Stage 2, Book 2: Proportions & Probability Stage 2, Book 3: Shapes & Angles	Stage 2, Book 3: Shapes & Angles		
Topic	Block 1: Positive Rational Numbers Block 2: Integers	Block 2: Integers Block 3: Rational Number Operations Block 4: Solving Equations	Block 4: Solving Equations Block 1: Ratios & Rates	Block 1: Ratios & Rates	Block 2: Proportions & Similarity Block 3: Percents	Block 3: Percents Block 4: Probability & Random Sampling	Block 4: Probability & Random Sampling Block 5: Direct Variation Block 1: Angle Relationships	Block 1: Angle Relationships Block 2: Two-Dimensional Geometry	Block 2: Two-Dimensional Geometry Block 3: Surface Area & Volume	Block 3: Surface Area & Volume
Topic Description	Fractions: Simplifying, mixed numbers and improper, adding and subtracting, multiplying and dividing. Operations with mixed numbers. Decimals: Adding and subtracting and multiplying and dividing. Integers: Adding, subtracting, multiplying, and dividing. Powers and exponents. Order of operations. Estimating sums and differences. Rational numbers: adding and subtracting and multiplying and dividing. Estimating products and quotients. Expressions and equations. Equations: One step, two step, and simplifying and solving. The distributive property. Simplifying expressions. Solving equations with variables on both sides. Linear inequalities.			Measurement. Fractions and decimals. Ratios. Unit rates. Rate conversions. Rates and ratios with complex fractions. Proportions: Write and solve and problem solving. Figures: Similar and congruent, proportions and special ratios. Scale drawings. Fractions, decimals, and percents. Solving percents using proportions and equations. Percent of change and applications. Probability. Using probability to predict. Probabilities and data displays. Compound probabilities using lists, tree diagrams, and tables. Compound probabilities using multiplication and simulation. Random sampling. Inferences about a population. Measures of center and variability in two data sets. The coordinate plane, making sense of graphs, direction variation of tables, graphs, and equations. Recognizing direct variation.				Angles: Measuring and naming, classifying, complementary and supplementary, vertical and adjacent. Drawing geometric shapes. Area: Triangles and parallelograms, trapezoids, circles, and sectors. Parts of a circle. Circumference and pi. Composite figures. Circle similarity. Three-dimensional figures. Drawing solids. Slicing solids. Surface area of prisms. Volume of prisms. Surface area of regular pyramids. Volume of pyramids.		
Standards Alignment	The Number System: Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers. Expressions and Equations: Use properties of operations to generate equivalent expressions. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.			Ratios and Proportional Relationships: Analyze proportional relationships and use them to solve real-world and mathematical problems. Statistics and Probability: Use random sampling to draw inferences about a population. Draw informal comparative inferences about two populations. Investigate chance processes and develop, use and evaluate probability models.				Geometry: Draw, construct, and describe geometrical figures and describe the relationships between them. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume		
Core Knowledge Correlation	N/A									
Essential Questions	How do you add, subtract, multiply, or divide mixed numbers?	How do you find the value of expressions using the order of operations?	How do you compute rates and ratios that include complex fractions?	How do you solve problems involving proportions?	How do you compare samples using measures of center and variability?	How do you write and graph direct variation equations?	How do you find the area of composite figures?	How do you find measures of angles of special triangles?	How do you determine the coordinates of an image after a rotation?	How do you find the volume of cylinders, cones, and spheres?
Anticipatory Set	Block 1: Survey people about how they use fractions in their everyday life. Block 2: Research the record high and low temperatures for 10 different states.	Block 3: Follow three stocks for a week. Show daily changes in value and total change over a week-long period of time. Block 4: Design a poster which explains how to solve multi-step equations.	Block 1: Record the amount of time spent on activities. Find the ratio of time spent doing each one.		Block 2: Draw a floor plan for a single story home. Block 3: Create a matching game using equal percent increases.	Block 4: Survey students. Create a pie chart displaying the results. Predict the choices the entire student population would make.	Block 5: Investigate how the circumference of a circle models direct variation.	Block 1: Use a compass and straightedge to duplicate angles.	Block 2: Find the areas of sectors on a pie chart.	Block 3: Research a landmark or building. Calculate the surface area.
Cross Curriculum Integration/Field Trips	Explore Activities: B1: Fraction Tiles, Fraction Careers, Rope Rodeo B2: Integer Chips, Number Jumping, Positive or Negative, Fact Puzzle	Explore Activities: B3: Trip to the Store, What's the difference, In your Head. B4: Introductions to Equation Mats, Equations Mats for Two-Step Equations, Where do I Belong, Equation Manipulation		Explore Activities: B1: Fractions and Decimals, Which Ratio is Greater, Find the Best Deal, A Change of Pace	Explore Activities: B2: Macaroni and Cheese, Cookies, Similar Triangles, Perimeter and Area. B3: Flooring Sale, Minimum Wage	Explore Activities: B4: Coin Flip, Capture/Recapture, Three Sports, Probability Simulation, Favorite Color, Comparing Tests	Explore Activities: B5: Connect-the-Dots, Train Trip, Graphs of Functions	Explore Activities: B1: Classify and Angle, Complimentary vs. Supplementary, The Vertical Angle Relationship, Knowing Three Measures	Explore Activities: B2: A Formula for Trapezoid Area, A Special Ratio, Circle Area, Which Pi?, Stepping Stone	Explore Activities: B3: Netting a Solid, Cutting Clay, Take your Pick, Cutting Corners, Tent Making, Pyramid vs. Prism