Cambria Heights School District Curriculum

Course Name	Math
Grade Level	Grade 5

Unit 1	Number and Operations – Base Ten			
Time Frame	4-5 Weeks			
Key Concepts	Essential Questions	PA Core Standard (Descriptor)	Eligible Content (Grades 3-5)	Terminology
Whole numbers and decimals are used to represent quantities of numbers	How can what I know about digit position and value be used to understand whole numbers and decimals?	**M05.A-T.1.1** Demonstrate understanding of place value of whole numbers and decimals, and compare quantities or magnitudes of numbers.	**M05.A-T.1.1.1** Demonstrate an understanding that in a multi-digit number, a digit in one place represents 1/10 of what it represents in the place to its left	Place value Decimal Tenths Hundredths Thousandths Word form Expanded form Standard form Estimating
			M05.A-T.1.1.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	
			M05.A-T.1.1.3 Read and write decimals to thousandths using base-ten numerals, word form, and expanded form.	
			M05.A-T.1.1.4 Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols.	
			M05.A-T.1.1.5 Round decimals to any place (limit rounding to ones, tenths, hundredths, or thousandths place).	

Using whole number to multiply and divide multi-digit numbers using computation or through word problems. Use decimals to do multi-operational concepts including word problems.	How can I multiply and divide multi-digit problems? How do I add, subtract, multiply, and divide decimals through hundredths?	**M05.A-T.2.1** Use whole numbers and decimals to compute accurately (straight computation or word problems).	**M05.A-T.2.1.1** Multiply multi-digit whole numbers (not to exceed 3-digit by 3-digit). **M05.A-T.2.1.2** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors. **M05.A-T.2.1.3** Add, subtract, multiply, and divide decimals to hundredths (no divisors with decimals).	Multiplication Division Tenths Hundredths Decimal

Unit 2	Numbers and Operations – Fractions- Develop an understanding of fractions as numbers.			
Timeframe	**5-6 Weeks**			
Key Concepts	**Essential Questions**	**PA Core Content Standard**	**Eligible Content**	**Terminology**
Using multiple methods and representations to add and subtract fractions through computation and/or word problems.	How do I add and subtraction fractions when represented in multiple forms?	**M05.A-F.1.1** Solve addition and subtraction problems involving fractions (straight computation or word problems).	**M05.A-F.1.1.1** Add and subtract fractions (including mixed numbers) with unlike denominators. (May include multiple methods and representations.)	Mixed numbers Numerator Denominator Improper fraction Unlike denominators Greatest common factors Least common multiple
Using multiple methods and representations to multiply and divide fractions through computation and/or word problems.	How do I multiply and divide fractions when represented in multiple forms?	**M05.A-F.2.1** Solve multiplication and division problems involving fractions and whole numbers (straight computation or word problems).	**M05.A-F.2.1.1** Solve word problems involving division of whole numbers leading to answers in the form of fractions (including mixed numbers). **M05.A-F.2.1.2** Multiply a fraction (including mixed numbers) by a fraction. **M05.A-F.2.1.3** Demonstrate an understanding of multiplication as scaling (resizing). **M05.A-F.2.1.4** Divide unit fractions by whole numbers and whole numbers by unit fractions.	Multiplication Division Fractions Mixed Numbers Improper Fractions Numerator Denominator Greatest common factors

Unit 3	Operations and Algebraic Thinking-			
Timeframe	**5-6 Weeks**			
Key Concepts	**Essential Questions**	**PA Core Content Standard**	**Eligible Content**	**Terminology**
Use order of operation to solve problems. **Use simple expression to model and interpret numbers.**	How do I use order of operations to solve problems? How do I model and interpret numbers in expressions?	**M05.B-O.1.1** Analyze and complete calculations by applying the order of operations.	**M05.B-O.1.1.1** Use multiple grouping symbols (parentheses, brackets, or braces) in numerical expressions, and evaluate expressions containing these symbols.	Order of operations Parentheses Exponents
			M05.B-O.1.1.2 Write simple expressions that model calculations with numbers, and interpret numerical expressions without evaluating them.	
Use a given rule to generate a pattern.	How do I use rules to find and extend a pattern?	**M05.B-O.2.1** Create, extend, and analyze patterns.	**M05.B-O.2.1.1** Generate two numerical patterns using two given rules.	Pattern Rule
			M05.B-O.2.1.2 Identify apparent relationships between corresponding terms of two patterns with the same starting numbers that follow different rules.	

Unit 4 Measurement and Data- Solve problems involving measurement and estimation of intervals of time, money, liquid volumes, masses, and lengths of objects.				
Timeframe	**5-6 Weeks**			
Key Concepts	**Essential Questions**	**PA Core Content Standard**	**Eligible Content**	**Terminology**
Use units of measurement in conversion.	How do I solve problems using simple measurement conversions?	**M05.D-M.1.1** Solve problems using simple conversions (may include multistep, real-world problems).	**M05.D-M.1.1.1** Convert among different -sized measurement units within a given measurement system. **A table of equivalencies will be provided.**	Ounces Pounds Tons Cups Pints Quarts Gallons Feet Inches Yards Miles Metric system Millimeter Centimeter Meter Kilometer Decimeter Liters Milliliters Milligrams Grams Kilograms Hours/minutes/second Day/week/month/year
Graphs, charts, tables, and line plots are use to display different types of data.	How can I use charts, graphs, tables, and line plots to display and interpret data?	**M05.D-M.2.1** Organize, display, and answer questions based on data.	**M05.D-M.2.1.1** Solve problems involving computation of fractions by using information presented in line plots.	Bar graph Line plot Line graph Pictograph Data Frequency table Scale
			M05.D-M.2.1.2 Display and interpret data shown in tallies, tables, charts, pictographs, bar graphs, and line graphs, and use a title, appropriate scale, and labels. A grid will be provided to display data on bar graphs or line graphs.	

Use and apply formulas to find volume.	How do I use a formula to find volume of various objects and prisms?	M05.D-M.3.1 Use, describe, and develop procedures to solve problems involving volume.	M05.D-M.3.1.1 Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real-world and mathematical problems. **Formulas will be provided.**	Volume Prisms Right rectangular prisms Rectangular prisms Solid figures
			M05.D-M.3.1.2 Find volumes of solid figures composed of two non-overlapping right rectangular prisms.	

Unit 5	Geometry- Reason with Shapes and their attributes			
Timeframe	5-6 Weeks			
Key Concepts	Essential Questions	PA Core Content Standard	Eligible Content	Terminology
Use coordinate pairs to plot points on grid.	How can I use coordinate pairs to plot points on a grid?	**M05.C-G.1.1** Identify parts of a coordinate grid, and describe or interpret points given an ordered pair.	**M05.C-G.1.1.1** Identify parts of the coordinate plane (*x*-axis, *y*-axis, and the origin) and the ordered pair (*x* coordinate and *y* -coordinate). Limit the coordinate plane to quadrant I.	X-axis Y-axis Coordinate Grid Ordered pair Quadrant
			M05.C-G.1.1.2 Represent real- world and mathematical problems by plotting points in quadrant I of the coordinate plane, and interpret coordinate values of points in the context of the situation.	
Use properties to classify two-dimensional figures.	How can I classify two-dimensional figures using angle size and length of sides?	**M05.C-G.2.1** Use basic properties to classify two-dimensional figures.	**M05.C-G.2.1.1** Classify two-dimensional figures in a hierarchy based on properties.	Angle Sides Vertex