Berlin Brothersvalley School District
Berlin Brothersvalley Middle School
6th Grade Math Curriculum Framework
Second Nine Weeks

Big Idea(s)	**Concept(s)**	**Competencies**	**Essential Questions**
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Mathematical relationships among numbers can be represented, compared, and communicated.	**Students will know:** ● Decimal operations ● Percentages ● Long division ● Box plots ● Algebraic expressions (order of operations)	**Students will be able to:** ● Evaluate decimals using all 4 operations. ● Calculate and convert between percentage, fractions and decimals ● Evaluate problems using long division ● Analyze and create box plots using data ● Solve expressions by applying the correct order of operations .	What does it mean to estimate or analyze numerical quantities? What does it mean to estimate or analyze numerical quantities? How are relationships represented mathematically?

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Topic	**Approx. # of weeks - % of time**	**PA Academic Standards**	**Assessment Anchors & Eligible Content**
Decimals Decimal Place Value Decimal Operations	2 weeks	CC.2.1.6.E.2 Identify and choose appropriate processes to compute fluently with multi-digit numbers.	M06.A-N.2.1.1 Solve problems involving operations (+, –, ×, and ÷) with whole numbers, decimals (through thousandths), straight computation, or word problems.
Topic	**Approx. # of weeks**	**PA Academic Standards**	**Assessment Anchors & Eligible Content**
Long Division Division of Whole Numbers Division with Decimals	2 weeks	CC.2.1.6.E.2 Identify and choose appropriate processes to compute fluently with multi-digit numbers	M06.A-N.2.1.1 Solve problems involving operations (+, –, ×, and ÷) with whole numbers, decimals (through thousandths), straight computation, or word problems.

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Topic	**Approx. # of weeks**	**PA Academic Standards**	**Assessment Anchors & Eligible Content**
Percentages Percentages of a whole number Convert fraction, decimal, percents	2 week	CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems.	M06.A-R.1.1.5 Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percentage.
Topic	**Approx. # of weeks**	**PA Academic Standards**	**Assessment Anchors & Eligible Content**
Box Plots Create Read and Analyze	1 week	CC.2.4.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.	M06.D-S.1.1.1 Display numerical data in plots on a number line, including line plots, histograms, and box-and-whisker plots. M06.D-S.1.1.2 Determine quantitative measures of center (e.g. median, mean, mode) and variability (e.g. range, interquartile range, mean absolute deviation) M06.D-S.1.1.3 Describe any overall pattern and any deviations from the overall pattern with reference to the context in which the data were gathered. M06.D-S.1.1.4 Relate the choice of measures of center

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			and variability to the shape of the data distribution and the context in which the data were gathered.
Topic Algebraic Expressions: Order of Operations Unknown Quantities (Variables) Expressions and Equations Distributive Property	**Approx. # of weeks** 2 weeks	**PA Academic Standards** CC.2.2.6.B.1 Apply and extend previous understandings of arithmetic to algebraic expressions.	**Assessment Anchors & Eligible Content** M06.B-E.1.1.1 Write and evaluate numerical expressions involving whole-number exponents. M06.B-E.1.1.2 Write algebraic expressions from verbal descriptions. Example: Express the description “five less than twice a number” as 2y – 5. M06.B-E.1.1.3 Identify parts of an expression using mathematical terms (e.g., sum, term, product, factor, quotient, coefficient, quantity). Example: Describe the expression 2(8 + 7) as a product of two factors. M06.B-E.1.1.4 Evaluate expressions at specific values of their variables, including expressions that arise from formulas used in real-world problems. Example: Evaluate the expression b2 – 5 when b = 4. M06.B-E.1.1.5 Apply the properties of operations to generate equivalent expressions. Example

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			1: Apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x. Example 2: Apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6(4x + 3y). Example 3: Apply properties of operations to y + y + y to produce the equivalent expression 3y.

Standards Legend: Essential Important Supplementary