Berlin Brothersvalley School District
Berlin Brothersvalley Middle School
Year at a Glance Curriculum

Math Department
7th Grade (Section 1, Section 2) Math
7th Grade

Course Description:
This course is designed to guide and provide learning opportunities for students to model and solve real-world mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. Students utilize mathematical rules and concepts to understand patterns in mathematics. Proportional reasoning, algebraic structures, geometric components and relationships, and statistical conceptions are provided as foundational tools for the students to utilize while exploring applications to real-world situations. Please see below for a concise outline of the course.

Units of Study	Competencies	Approximate Timeframe	Standards
Ratios and Proportional Reasoning	Students will be able to determine unit rates, simplify complex fractions and find unit rates, convert units of measure between derived units to solve problems, identify proportional and nonproportional relationships by graphing on the coordinate plane, apply proportions to solve problems, identify constant rate of change or slope, using tables and graphs, and demonstrate direct variation to solve problems.	25 days	CC.2.1.7.D.1
Percents	Students will be able to find the percent of a number, estimate percents using fractions and decimals, utilize the percent proportion and the percent equation, find the percent of change and the percent of error, and solve problems involving sales tax, tips, and markup.	20 days	CC.2.2.7.B.3
Integers and Rational Numbers	Students will be able to calculate integers and rational numbers.	24 days	CC.2.1.7.E.1
Expressions	Students will be able to select and distinguish between properties being used and linear expressions.	16 days	CC.2.2.7.B.1
Equations and Inequalities	Students will be able to apply properties of equality to solve one and two-step equations and inequalities.	15 days	CC.2.2.7.B.3

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Geometric and Measure Figures	Students will be able to classify, create, and manipulate geometric figures, lines and angles, and measure circumference, area, volume, and surface area of two-dimensional and three-dimensional shapes.	18 days	CC.2.3.7.A.1 CC.2.3.7.A.2
Probability and Statistics	Students will be able to simulate probability through investigation, calculate probability of simple and compound events, distinguish between independent and dependent events related to probability, discriminate between unbiased and biased samples and graphs, analyze graphs to justify accuracy, and eliminate misleading presentations of data.	17 days	CC.2.4.7.B.3 CC.2.4.7.B.1 CC.2.4.7.B.2
Application, Assessment, and Remediation of Math Skills	Students will be able to interpret, represent, and compare unit rates and percentages graphically, numerically, and analytically, manipulate to solve and compare algebraic operations for equations and inequalities, distinguish geometric classification in measurement components and apply formulas to calculate measurements, investigate and critique independent and dependent probability and graphic representation.	45 days	CC.2.2.7.B.3

*Please visit pdesas.org for a complete list of standards taught in this course and for more information regarding PA State Standards for this course.

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