

HAZLETON AREA SCHOOL DISTRICT



GRADE 3

Math Curriculum

Hazleton Area School District

Math Curriculum

Grade 3

Topic:	Geometry
Weeks:	2 weeks
PA Standards:	CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.
Math Practice Standards:	<ol style="list-style-type: none">1. Make sense of problems and persevere in solving them.2. Reason abstractly and quantitatively.3. Construct viable arguments and critique the reasoning of others.4. Model with mathematics.5. Use appropriate tools strategically.6. Attend to precision.7. Look for and make use of structure.8. Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
2 Weeks	Geometry Compare and Classify shapes	CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.	M03.C-G.1.1.1 M03.C-G.1.1.2	<ul style="list-style-type: none"> • Explain that shapes in different categories may share attributes, and that the shared attributes can define a larger category • Recognize rhombi, rectangles, and squares as examples of quadrilaterals, and/or draw examples of quadrilaterals that do not belong to any of these subcategories 	Acute Angle Angle Attribute Congruent Line Segment Obtuse Angle Parallel Parallel Lines Perpendicular Point Polygon Ray Rhombus Right Angle Right Angle

Hazleton Area School District

Math Curriculum

Grade 3

Topic:	Numbers and Operation in Base Ten / Operations and Algebraic Thinking
Weeks:	17 Weeks
PA Standards:	CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic. CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic. CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. CC.2.2.3.A.1 Represent and solve problems involving multiplication and division. CC.2.2.3.A.3 Demonstrate multiplication and division fluency. CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition. CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.
Math Practice Standards:	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
4 Weeks	Place Value Understanding operations	CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	M03.A-T.1.1.1 M03.A-T.1.1.2 M03.A-T.1.1.3 M03.A-T.1.1.4	<ul style="list-style-type: none"> • Round two- and three-digit whole numbers to the nearest ten or hundred, respectively. • Add two- and three-digit whole numbers and/or subtract two- and three-digit numbers from three-digit whole numbers. • Multiply one-digit whole numbers by two-digit multiples of 10. • Order a set of whole numbers from least to greatest or greatest to least. 	Associative property Commutative property Digit Estimate Expanded Form Identity property Inverse operation Mental Math Parenthesis Round Standard form Unknown Whole Number Word Form

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
9 weeks	Four Operations Solve and explain patterns	CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.	M03.B-O.3.1.1 M03.B-O.3.1.2 M03.B-O.3.1.3 M03.B-O.3.1.4 M03.B-O.3.1.5 M03.B-O.3.1.6 M03.B-O.3.1.7	<ul style="list-style-type: none"> Solve two-step word problems using the four operations. Limit to problems with whole numbers and having whole-number answers. Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers. Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers. Solve two-step equations using order of operations. Identify arithmetic patterns and/or explain them using properties of operations. Create or match a story to a given combination of symbols and numbers. Identify the missing symbol that makes a number sentence true. 	Divide Division Division Sentence Divisor Evaluate Expression Inverse Operation Multiplication Operations Partition Quotient Repeated Subtraction Variable
2 weeks	Perimeter and Area Determine (rectangle) and apply concepts	CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.	M03.D-M.3.1.1 M03.D-M.3.1.2	<ul style="list-style-type: none"> Measure areas by counting unit squares Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems. 	Area Composite Figure Formula Perimeter Square Unit Unit Square
2 weeks	Perimeter and Area Of polygons and Linear measures	CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.	M03.D-M.4.1.1	<ul style="list-style-type: none"> Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem. 	

Hazleton Area School District

Math Curriculum

Grade 3

Topic:	Measurement and Data
Weeks:	8 Weeks
PA Standards:	CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals. CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills. CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.
Math Practice Standards:	<ol style="list-style-type: none">1. Make sense of problems and persevere in solving them.2. Reason abstractly and quantitatively.3. Construct viable arguments and critique the reasoning of others.4. Model with mathematics.5. Use appropriate tools strategically.6. Attend to precision.7. Look for and make use of structure.8. Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
3 weeks	Time Tell (nearest minute) and write (nearest minute)	CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals.	M03.D-M.1.1.1 M03.D-M.1.1.2	<ul style="list-style-type: none"> Tell, show and/or write time (analog) to the nearest minute Calculate elapsed time to the minute in a given situation 	Elapsed Time
3 weeks	Money Solve problems and combination of coins and bills	CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills.	M03.D-M.1.3.1 M03.D-M.1.3.2 M03.D-M.1.3.3	<ul style="list-style-type: none"> Compare total values of combinations of coins and/or dollar bills less than \$5.00 Make change for an amount up to \$5.00 with no more than \$2.00 change given Round amounts of money to the nearest dollar 	Decimal
2 weeks	Measurement Temperature, liquid, volume, mass, length	CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.	M03.D-M.1.2.1 M03.D-M.1.2.2 M03.D-M.1.2.3	<ul style="list-style-type: none"> Measure and estimate liquid volumes and masses of objects using standard units Add, subtract, multiply, and divide to solve one-step word problems involving masses or liquid volumes that are given in the same units Use a ruler to measure lengths to the nearest quarter inch or centimeter 	Capacity Customary System Grams Half Inch Kilograms (Kg) Liquid Volume Liters (L) Mass Metric Unit Milliliter (m L) Quarter Inch

Hazleton Area School District

Math Curriculum

Grade 3

Topic:	Measurement and Data
Weeks:	3 Weeks
PA Standards:	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.
Math Practice Standards:	<ol style="list-style-type: none">1. Make sense of problems and persevere in solving them.2. Reason abstractly and quantitatively.3. Construct viable arguments and critique the reasoning of others.4. Model with mathematics.5. Use appropriate tools strategically.6. Attend to precision.7. Look for and make use of structure.8. Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
3 weeks	Interpret Data Tally charts, tables, pictograph, plots, and bar	CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.	M03.D-M.2.1.1 M03.D-M.2.1.2 M03.D-M.2.1.3 M03.D-M.2.1.4	<ul style="list-style-type: none"> • Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories. • Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs. • Generate measurement data by measuring lengths using rulers and display the data by making a line plot. • Translate information from one type of display to another. 	Frequency Table Increment Interval Round

Hazleton Area School District

Math Curriculum

Grade 3

Topic:	Numbers and Operations – Fractions
Weeks:	3 Weeks
PA Standards:	CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole. CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers.
Math Practice Standards:	<ol style="list-style-type: none">1. Make sense of problems and persevere in solving them.2. Reason abstractly and quantitatively.3. Construct viable arguments and critique the reasoning of others.4. Model with mathematics.5. Use appropriate tools strategically.6. Attend to precision.7. Look for and make use of structure.8. Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Eligible Content	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
1 week	Fractions Partition, shapes, and express area	CC.2.3.3.A.2 Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	M03.C-G.1.1.3	<ul style="list-style-type: none"> • Partition shapes into parts with equal areas Express the area of each part as a unit fraction of the whole • Represent fractions on a number line • Recognize and generate simple equivalent fractions 	Denominator Equivalent Fractions Fractions Numerator Unit Fraction
2 weeks	Fractions - As numbers	CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers.	M03.A-F.1.1.1 M03.A-F.1.1.2 M03.A-F.1.1.3 M03.A-F.1.1.4 M03.A-F.1.1.5	<ul style="list-style-type: none"> • Demonstrate that when a whole or set is partitioned into y equal parts. • Represent fractions on a number line • Recognize and generate simple equivalent fractions • Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers • Compare two fractions with the same denominator using the symbols $>$, $=$, or $<$, and/or justify the conclusions 	