HAZLETON AREA SCHOOL DISTRICT

GRADE K

Math Curriculum

Hazleton Area School District

Math Curriculum

Grade <u>K</u>

Topic:	Counting and Cardinality (Chapters 1,2,3)
Weeks:	9 Weeks (Quarter 1)
PA Standards:	**CC.2.1.K.A.1** Know number names and write and recite the count sequence. **CC.2.1.K.A.2** Apply one-to-one correspondence to count the number of objects.
Math Practice Standards:	- Make sense of problems and persevere in solving them. - Reason abstractly and quantitatively. - Model with mathematics. - Use appropriate tools strategically.

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3-4 Weeks with consistent practice to review and enhance throughout the entire year	Counting and Cardinality	CC.2.1.K.A.1 Know number names and write and recite the count sequence. CC.2.1.K.A.2 Apply one-to-one correspondence to count the number of objects.	• Count to 100. • Count forward beginning from a given number within a known sequence (instead of having to begin at 1). • Name numerals 0–10. • Represent a number of objects with a written numeral 0–10. • Recognize that a number represents a specific quantity. • Connect the quantity to a written Symbol for numerals 1 – 10. • Continually check work by asking questions. (e.g., "Does this make sense?")	• Count • Count backward • Count forward • Eight, 8 • Five, 5 • Four, 4 • Manipulatives • Nine, 9 • Number • Numeral • One, 1 • Quantity • Seven, 7 • Six, 6 • Ten, 10 • Three, 3 • Two, 2

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
4-5 Weeks with consistent practice to review and enhance throughout the entire year	Counting and Cardinality	CC.2.1.K.A.1 Know number names and write and recite the count sequence. CC.2.1.K.A.2 Apply one-to-one correspondence to count the number of objects.	• Count to 100. • Count forward beginning from a given number within a known sequence (instead of having to begin at 1). • Name and write numerals 0–20. • Represent a number of objects with a written numeral 0–20. • Recognize that a number represents a specific quantity. • Connect the quantity to a written Symbol for numerals 1 – 20. • Continually check work by asking questions. (e.g., "Does this make sense?")	• Count • Count backward • Count forward • Eighteen, 18 • Eleven, 11 • Fifteen, 15 • Fourteen, 14 • Larger number • Manipulatives • Nineteen, 19 • Number • Numeral • Quantity • Seventeen, 17 • Sixteen, 16 • Smaller number • Thirteen, 13 • Twelve, 12 • Twenty, 20

Hazleton Area School District

Math Curriculum

Grade K

Topic:	Counting and Cardinality (Chapter 3) Measurement and Data (Chapters 8,9) Operations and Algebraic Thinking (Chapter 4)
Weeks:	9 weeks (Quarter 2)
PA Standards:	**CC.2.1.K.A.1** Know number names and write and recite the count sequence. **CC.2.1.K.A.2** Apply one-to-one correspondence to count the number of objects. **CC.2.4.K.A.4** Classify objects and count the number of objects in each category. **CC.2.1.K.B.1** Use place value to compose and decompose numbers within 10.
Math Practice Standards:	• Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics. • Use appropriate tools strategically. • Attend to precision. • Look for and make use of structure. • Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3 Weeks with consistent practice and review throughout the entire year	Counting and Cardinality	CC.2.1.K.A.1 Know number names and write and recite the count sequence. CC.2.1.K.A.2 Apply one-to-one correspondence to count the number of objects.	• Count to 100. • Count forward beginning from a given number within a known sequence (instead of having to begin at 1). • Name numerals 0–20. • Represent a number of objects with a written numeral 0–20. • Recognize that a number represents a specific quantity. • Connect the quantity to a written Symbol for numerals 1 – 20. • Continually check work by asking questions. (e.g., "Does this make sense?")	• Count • Count backward • Count forward • Eighteen, 18 • Eleven, 11 • Fifteen, 15 • Fourteen, 14 • Larger number • Manipulatives • Nineteen, 19 • Number • Numeral • Quantity • Seventeen, 17 • Sixteen, 16 • Smaller number • Thirteen, 13 • Twelve, 12 • Twenty, 20

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3Weeks	Measurement and Data – (Data)	CC. 2.4 K.A.4 Classify objects and count the number of objects in each category.	• Classify up to 20 objects into categories using one attribute. ✓ Display the number of objects in each category. ✓ Count and compare the quantities of each category. ✓ Describe the difference. • Construct arguments using concrete objects to classify items. (e.g., ask "Why is this true?" "Does this make sense?") • Connect the different representations and explain the connections.	• Attribute • Category • Classify • Compare • Count • Object

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3Weeks	Operations and Algebraic Thinking	CC.2.1 K.B.1 Use place-value to compose and decompose numbers within 19.	• Compose and decompose numbers up to 19 into ten and ones by using objects or drawings. ✓ Record each composition or decomposition by a drawing or equation. • Continually check work by asking questions. (e.g., "Does this make sense?") • Begin to discern a pattern or structure that exists in teen numbers.	• Compose • Decompose • Pattern • Sequence • Numerals • Numbers • Tens • Ones • Place value

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Grade <u>K</u>

Topic:	Operations and Algebraic Thinking (Chapter 5) Geometry (Chapter 10) Operations and Algebraic Thinking (Chapter 6)
Weeks:	9 weeks (Quarter 3)
PA Standards:	**CC.2.2.K.A.1** Extend the concepts of putting together and taking apart to add and subtract within 10. **CC.2.3.K.A.2** Analyze, compare, create, compose two-and three-dimensional shapes. **CC.2.2.K.A.1** Extend the concepts of putting together and taking apart to add and subtract within 10.
Math Practice Standards:	- Make sense of problems and persevere in solving them. - Reason abstractly and quantitatively. - Model with mathematics. - Use appropriate tools strategically. - Attend to precision. - Look for and make use of structure. - Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
	Operations and Algebraic Thinking	CC.2.2 K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10.	• Represent addition and subtraction. (e.g., with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations) • Decompose numbers less than or equal to 1 into pairs in more than one way, by using objects or drawings. ✓ Record each decomposition through a drawing or equation. • Find the number that makes 10, for any number from 1 to 9, when added to the given number. • Solve addition and subtraction word problems, and add and subtract within 10, by using objects, drawings, or equations. • Begin to discern a pattern or structure in equations of addition and subtraction. • Experiment with representing problem situations in multiple ways including numbers, words (e.g. mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. • Connect the different representations and explain the connections.	• Add • Addend • Addition • Altogether • Compose • Decompose • Difference • Equal to = • Equation • In all • Less than • Math sentence • Minus - • Plus + • Subtract • Subtraction • Sum • Symbol • Take away

Weeks	Topic	PA Standard	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
		CC.2.3 K.A.2 Analyze, compare, create, and compose two- and three dimensional shapes.	• Describe objects in the environment using names of shapes. • Describe the relative positions of objects using appropriate terms. (e.g., above, below, beside, in front, behind, next to) • Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts, and other attributes. • Model shapes in the world by building shapes. • Construct arguments using concrete referents. (e.g., objects, pictures, drawing, and actions) • Develop mathematical communication skills as they participate in mathematical discussions.	• Above • Analyze • Attribute • Behind • Below • Beside • Corner • Curve • Edge • In front of • Next to • Pattern • Roll • Sequence • Side • Slide • Stack • Vertex • Vertices

Weeks	Topic	PA Standard	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
	Operations and Algebraic Thinking	CC.2.2 K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10.	• Represent addition and subtraction. (e.g., with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations) • Decompose numbers less than or equal to 1 into pairs in more than one way, by using objects or drawings. ✓ Record each decomposition through a drawing or equation. • Find the number that makes 10, for any number from 1 to 9, when added to the given number. • Solve addition and subtraction word problems, and add and subtract within 10, by using objects, drawings, or equations. • Begin to discern a pattern or structure in equations of addition and subtraction. • Experiment with representing problem situations in multiple ways including numbers, words (e.g. mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. • Connect the different representations and explain the connections.	• Add • Addend • Addition • Altogether • Compose • Decompose • Difference • Equal to = • Equation • In all • Less than • Math sentence • Minus - • Plus + • Subtract • Subtraction • Sum • Symbol • Take away

Hazleton Area School District

Math Curriculum

Grade <u>K</u>

Topic:	Numbers & Operations in Base Ten (Chapter 7) Geometry (Chapter 11, 12)
Weeks:	9 weeks (Quarter 4)
PA Standards:	**CC.2.1.K.B.1** Use place value to compose and decompose numbers within 19. **CC.2.3.K.A.1** Identify and describe two and three dimensional shapes. **CC.2.3.K.A.2** Analyze, compare, create, and compose two-and three-dimensional shapes. **CC.2.4.K.A.1** Describe and compare attributes of length, area, weight, and capacity of everyday objects
Math Practice Standards:	• Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics. • Use appropriate tools strategically. • Attend to precision. • Look for and make use of structure. • Look for and make sense of regularity in repeated reasoning.

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3Weeks	Operations and Algebraic Thinking	CC.2.1 K.B.1 Use place-value to compose and decompose numbers within 19.	• Compose and decompose numbers up to 19 into ten and ones by using objects or drawings. ✓ Record each composition or decomposition by a drawing or equation. • Continually check work by asking questions. (e.g., "Does this make sense?") • Begin to discern a pattern or structure that exists in teen numbers.	• Compose • Decompose • Pattern • Sequence • Numerals • Numbers • Tens • Ones • Place value

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
3 weeks	Geometry	CC.2.3 K.A.1 Identify and describe two and three dimensional shapes.	• Identify shapes as two-dimensional or three-dimensional. • Name shapes regardless of their orientations or overall size. • Use simple shapes to compose larger shapes. • Compare two representations side-by-side and explain their connections. • Use clear and precise language in discussions with others and in own reasoning.	• Circle • Compare • Concrete objects • Cone • Cube • Cylinder • Hexagon • Manipulatives • Rectangle • Solid • Sphere • Square • Three-dimensional shapes • Triangles • Two-dimensional shapes

Weeks	Topic	PA Standard	Concepts and Competencies The learner will:	Tier 2 & 3 Vocabulary
		CC.2.3 K.A.2 Analyze, compare, create, and compose two- and three dimensional shapes.	• Describe objects in the environment using names of shapes. • Describe the relative positions of objects using appropriate terms. (e.g., above, below, beside, in front, behind, next to) • Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts, and other attributes. • Model shapes in the world by building shapes. • Construct arguments using concrete referents. (e.g., objects, pictures, drawing, and actions) • Develop mathematical communication skills as they participate in mathematical discussions.	• Above • Analyze • Attribute • Behind • Below • Beside • Corner • Curve • Edge • In front of • Next to • Pattern • Roll • Sequence • Side • Slide • Stack • Vertex • Vertices

Weeks	Topic	PA Standard	Concepts and Competencies **The learner will:**	Tier 2 & 3 Vocabulary
	Measurement and Data – (Measurement)	CC.2.4 K.A.1 Describe and compare attributes of length, area, weight, and capacity of everyday objects.	• Describe measurable attributes of objects. (e.g., length, weight, area, or capacity) • Describe several measurable attributes of a single object. • Compare two objects with a measureable attribute in common. • Consider the available tools (including estimation) when solving a mathematical problem. • Decide when certain tools might be helpful.	• Analyze • Area • Attribute • Bigger • Capacity • Compare • Equal • Heavier • Height • Length • Lighter • Longer • Measure • Shorter • Size • Smaller • Volume • Weight