HAZLETON AREA SCHOOL DISTRICT

GRADE 2

Math Curriculum

What is a Curriculum Framework?

A Curriculum Framework is an organized plan or set of standards that defines the content to be learned in terms of clear, definable standards of what the student should know and be able to do.
A Curriculum Framework is part of the standards aligned system. The framework is the first step, defining clear, high standards which will be achieved by **all** students. The curriculum is then aligned to the standards, and students are assessed against the standards. When the standards are reached, all students will meet world class standards and will be career and college ready.

A Curriculum Framework is not a textbook. A textbook is one tool or resource used to deliver a Curriculum Framework. Likewise, a series is one of many resources used to develop students' skills and understanding of the world around them. From the Curriculum Framework, teachers create lessons and units to meet each individual student's needs. A Curriculum Framework should allow a teacher to include differentiation through multiple resources, learning opportunities, and assessments. Choice and creativity for teachers and students are very important, and a Curriculum Framework should allow for both, yet focus on the standards.

A Curriculum Framework is a living document that must grow and develop with time and experience. Administrators, teachers, parents, and students will continue to revise the Curriculum Framework to continue to meet the needs of the students in the Hazleton Area School District.
Aligning with PA Core Standards, this Math curriculum focuses on the five Key Objectives of Math: Counting and Cardinality, Objectives and Algebraic Thinking, Numbers and Operations in Base Ten, Measurement and Data, Geometry. Students demonstrate their understanding of the content and mastery of the math skills through assessments. This framework allows for continuity between all classrooms and content areas.

HAZLETON AREA SCHOOL DISTRICT
Mathematics Curriculum
Grade 2

NUMBERS AND OPERATIONS

CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.
CC.2.1 2.B.2 Use place value concepts to read, write, and skip count to 1,000.
CC.2.1.2.B.3 Use place-value understanding and properties of operations to add and subtract within 1000.

ALGEBRAIC CONCEPTS

CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.
CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.
CC.2.2.2.A.3 Work with equal groups of objects to gain foundations for multiplication.

GEOMETRY

CC.2.3.2.A.1 Analyze and draw two- and three dimensional shapes having specified attributes.
CC.2.3.2.A.2 Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

MEASUREMENT, DATA, AND PROBABILITY

CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools.
CC.2.4.2.A.2 Tell and write time to the nearest five minutes using both analog and digital clocks.
CC.2.4.2.A.3 Solve make change using coins and paper currency with appropriate symbols
CC. 2.4.2.A.4 Represent and interpret data using line plots, picture graphs, and bar graphs
CC.2.4.2.A.6 Extend the concepts of addition and subtraction to problems involving length

Place Value				
Quarter 1	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 1 Number Strategies (Math is…) Review (2-3 weeks)	CC.2.2.A.2 Use mental strategies to add and subtract within 20.	• Doubles • Near Doubles • Count On • Add 3 Digit Numbers • Count Back • Subtract all/zero • Fact Families	• Hundreds • Tens • Base-ten blocks • Digit • Ones • Place-value chart • Expanded form • Standard form • Word form • Place-value • Greater than (>) • Less than (<)
	UNIT 2 Place Value to 1,000 (2-3 weeks)	CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.	• Represent 3-Digit Numbers • Read and Write Numbers to 1,000 • Decompose 3-Digit Numbers	

Place Value				
Quarter 1	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 3 Patterns within Numbers (2-3 weeks)	CC.2.1 2.B.2 Use place value concepts to read, write, and skip count to 1,000.	• Continue counting patterns • Identify patterns when skip counting by 5s • Patterns when skip counting by 10s and 100s • Understand Even and Odd Numbers • Addition Patterns • Patterns with Arrays • Use Arrays to Add	• Column • Pattern • Row • Skip count • Even • Odd • Array • Repeated addition

Add 2-Digit Numbers				
Quarter 2	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 4 Meanings of Addition and Subtraction (2-3weeks)	CC.2.2 2.A.2 Use mental strategies to add and subtract within 20. CC.2.2 2.A.1 Represent and solve problems involving addition and subtraction within 100.	• Represent and Solve Add To Problems • Represent and Solve Take From Problems • Solve Two-Step Add To and Take From Problems • Represent and Solve Put Together Problems • Represent and Solve Take Apart Problems • Solve Two-Step Put Together and Take Apart Problems • Represent and Solve Compare Problems • Represent and Solve Compare Problems • Solve Two-Step Problems with Comparison • Solve Two-Step Problems Using Addition and Subtraction	• Add • Addend • Sum • Difference • Unknown □ • Part • Whole • Total • In all • Altogether • How many • Have now • Equation • Number sentence • Addition sentence

Add 3-Digit Numbers				
Quarter 2	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 9 Strategies to Add 3-Digit Numbers (1-2weeks)	CC.2.2 2.A.2 Use mental strategies to add and subtract within 20. CC.2.2 2.A.1 Represent and solve problems involving addition and subtraction within 100.	• Use Mental Math to Add 10 or 100 • Represent Addition with 3-Digit Numbers • Represent Addition with 3-Digit Numbers with Regrouping • Decompose One Addend to Add 3-Digit Numbers • Adjust Addends to Add 3-Digit Numbers • Explain Addition Strategies	• Hundreds • Digit • Sum • Addend • How many • In all • Altogether • Have now

Subtract 2-Digit Numbers				
Quarter 2	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 6 Strategies to Fluently Subtract within 100 (2-3weeks)	CC.2.2 2.A.1 Represent and solve problems involving addition and subtraction within 100. CC.2.2 2.A.2 Use mental strategies to add and subtract within 20	• Strategies to Subtract Fluently within 20 • More Strategies to Subtract Fluently within 20 • Represent Subtraction with 2-Digit Numbers • Represent 2-Digit Subtraction with Regrouping • Use a Number Line to Subtract • Decompose Number to Subtract • Adjust Numbers to Subtract • Relate Addition to Subtraction • Solve One-Step Problems Using Subtraction • Solve Two-Step Problems Using Subtraction	• Count Back • Related Facts • Difference • Subtract • Regroup • How many left • How many more

Subtract 3-Digit Numbers				
Quarter 2	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 10 Strategies to Subtract 3-Digit Numbers (1-2weeks)	CC.2.2 2.A.1 Represent and solve problems involving addition and subtraction within 100. CC.2.2 2.A.2 Use mental strategies to add and subtract within 20.	• Use Mental Math to Subtract 10 and 100 • Represent Subtraction with 3-Digit Numbers • Decompose One 3-Digit Number to Count Back • Count On to Subtract 3-Digit Numbers • Regroup Tens and Hundred • Adjust Numbers to Subtract 3-Digit Numbers • Explain Subtraction Strategies • Solve Problems Involving Addition and Subtraction	• Subtract • Difference • Regroup • How many more • How many left • Equation • Number Sentence • Hundreds

Money and Time				
Quarter 3	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 8 Measurement: Money and Time (9 weeks)	CC.2.4 2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols. CC.2.4 2.A.2 Tell and write time to the nearest five minutes using both analog and digital clocks.	• Identify the Values of Coins • Solve Money Problems Involving Coins • Solve Money Problems Involving Dollar Bills and Coins • Tell Time to the Nearest Five Minutes	• $ and ¢ symbols • Difference • Dime • Dollar bill • Equation • Nickel • Number sense • Penny • Quarter • Sum • Total • Analog clock • Colon • Digital clock • Half Past • Quarter To • Half-hour • Hands (hour/minute) • Hours • Minutes • AM/PM • Midnight/Noon

Measurement				
Quarter 4	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 7: Measure and Compare Lengths (2-3 weeks)	CC.2.4 2.A.6 Extend the concepts of addition and subtraction to problems involving length. CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools	• Measure Length with Inches, Feet, and Yards • Compare Lengths Using Customary Units • Relates Inches, Feet, and Yards • Estimate Length Using Customary Units • Measure Length with Centimeters and Meters • Compare Lengths Using Metric Units • Relate Centimeters and Meters • Estimate Length Using Metric Units • Solve Problems Involving Length	• Centimeter (cm) • Difference • Estimate • Foot (ft) • Inch (in) • Unit • Length • Meter (m) • Meter stick • Non-standard measurement • Rulers • Yard (yd) • Yardstick

Data Analysis				
Quarter 4	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 11: Data Analysis (2-3 weeks)	CC.2.4.2.A.4 Represent and interpret data using line plots, picture graphs, and bar graphs.	• Understand Picture Graphs, Bar Graphs, and Line Plots • Solve Problems Using Bar Graphs • Collect Measurement Data • Show Data on a Line Plot	• Category • Data • Key • Picture graph • Tally chart • Tally marks • Title • Bar graph • Line plot • Label

Shapes and Shares				
Quarter 4	**Unit**	**PA Standard**	**Concepts and Competencies**	**Tier 2 & 3 Vocabulary**
	UNIT 12: Geometric Shapes and Equal Shares (2-3weeks)	CC.2.3 2.A.1 Analyze and draw two- and three dimensional shapes having specified attributes. CC.2.3.2.A.2 Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	• Recognize 2 & 3-Dimensional Shapes by Their Attributes • Draw 2 & 3-Dimensional Shapes from Their Attributes • Understand Equal Shares • Relate Equal Shares • Partition a Rectangle into Rows and Columns	• Angle • Sides • Vertices • Opposite Sides • Same Length • Different Length • Attribute • Pentagon • Polygon • Quadrilateral • Equal shares • Fourths • Halves • Partition • Thirds • Triangle • Hexagon • Octagon • 2-Dimensional • 3-Dimensional • Faces • Edge • Cube • Rectangular Prism • Sphere • Cone • Cylinder • Base