

**Berlin Brothersvalley School District
Berlin Brothersvalley Elementary School
2nd Grade Math Curriculum Framework
Full Year Course**

Big Idea(s) for 1st nine weeks	Concept(s) of 1st nine weeks	Competencies of 1st nine weeks	Essential Questions for 1st nine weeks
<p>The recognition of coin names and values equipped learners with essential financial literacy skills for a lifetime of financial competence.</p> <p>A deep understanding of number relationships, patterns, and odd and even numbers foster a solid foundation for mathematical fluency and problem-solving.</p> <p>The discovery of numerous pathways to the number 10 and the mastering of adding identical numbers is a foundation skill that enhances computational fluency.</p>	<p>Students will know...</p> <ul style="list-style-type: none"> ● coin names and values ● exploration of counts and whole numbers on a number line ● class number scrolls from 0 to 1,000 using place value strategies ● number grid puzzles and patterns ● equivalent names for numbers ● playing fishing for ten to build fact fluency ● even and odd numbers with concrete visuals ● skip counting patterns on calculators and number grids ● comparing numbers with symbols ● grouping by tens through the exchange game ● addition number stories ● doubles and combinations of ten to build fact fluency ● the making ten strategy and the near double strategy to 	<p>Students will be able to...</p> <ul style="list-style-type: none"> ● recognize and count coins ● explore number lines ● create class number scrolls ● solve number grid puzzles ● analyze equivalent names for numbers ● identify ways to make ten ● evaluate even and odd numbers ● demonstrate skip counting patterns ● compare numbers ● distinguish groups by tens ● solve addition number stories ● apply doubles and combinations of ten ● apply the making ten strategy and the near double strategy 	<p>What is the name and value of the displayed coins?</p> <p>What are the missing numbers on the number line?</p> <p>What are other ways to represent this number?</p> <p>How many ways can you make ten?</p> <p>How do you know if a number is even or odd?</p> <p>What are the ten doubles' facts?</p>

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	add within twenty		
<u>Unit/Chapter/Selection of Study</u> Unit 1A: Coins	<u>Approx # of days - % of time</u> 5 Days	<u>PA Core Standards</u> CC.2.4.2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 1B: Number Lines	<u>Approx # of days - % of time</u> 5 Days	<u>PA Core Standards</u> 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.3 Use place-value understanding and properties of operations to add and subtract within 1000.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 1C: Class Number Scrolls	<u>Approx # of days - % of time</u> 1 Day	<u>PA Core Standards</u> CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers	<u>Assessment Anchors & Eligible Content</u> N/A

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Unit 1D: Number Grid Puzzles	4 Days	<p>CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers</p> <p>CC.2.1.2.B.3 Use place-value understanding and properties of operations to add and subtract within 1000.</p>	N/A
Unit 1E: Equivalent Names for Numbers	4 Days	<p>CC.2.1.2.B.2 Use place-value concepts to read, write, and skip count to 1000.</p> <p>CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.</p>	N/A
Unit 1F: Playing Fishing for Ten	4 Days	<p>CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.</p>	N/A

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Unit 1G: Even and Odd Numbers	2 Days	CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers	N/A
Unit 1H: Skip Counting Patterns	3 Days	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 1000.	N/A
Unit 1I: Comparing Numbers	2 Days	CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers	N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 2A: Grouping by Tens	3 Days	CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers	N/A
Unit 2B: Addition Number Stories	3 Days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 2C: Doubles and Combinations of 10	4 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A
Unit 2D: The Making 10 Strategy	2 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A

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Unit 2E: The Near Double Strategy	3 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A

Big Idea(s) for 2nd nine weeks	Concept(s) of 2nd nine weeks	Competencies of 2nd nine weeks	Essential Questions for 2nd nine weeks
<p>Developing addition and subtraction strategies in order to recognize inverse relationships provide problem-solving tools for number sense, fluency, and deep understanding, while building confidence and proficiency in basic arithmetic.</p> <p>Expressing numbers in multiple ways, to include name-collection boxes, build a foundation in place value, addition, and subtraction while fostering math reasoning and problem-solving.</p> <p>Frame and arrow diagrams are visual approaches to explore patterns and relationships, developing critical thinking,</p>	<p>Students will know...</p> <ul style="list-style-type: none"> ● the turn around rule for addition ● subtraction and the turn around rule ● exploring addition tools, even and odd patterns, and shapes ● even numbers and equal addends ● name-collection boxes ● playing name that number ● frames and arrows ● using addition strategies ● subtraction from think addition ● fact families ● playing salute ● subtraction strategies ● -0 and -1 fact strategies and 	<p>Students will be able to...</p> <ul style="list-style-type: none"> ● apply the turn around rule for addition ● understand subtraction and the turn around rule does not apply ● explore addition tools, even and odd patterns, and shapes ● analyze even numbers and equal addends ● create name-collection boxes ● play name that number ● solve frame and arrow problems ● remember addition strategies ● understand subtraction from think addition ● build fact families ● play salute ● remember subtraction strategies 	<p>How can we use the turn-around rule in addition and subtraction to solve problems?</p> <p>How can name-collection boxes help us understand numbers?</p> <p>How can frame and arrow diagrams help us explore patterns?</p> <p>How can we use addition and subtraction strategies to solve problems quicker?</p> <p>How do fact families help us understand the relationships between addition and subtraction?</p>

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recognizing math connections, and improving problem-solving skills.	subtraction top-it <ul style="list-style-type: none"> • “What’s my rule?” • going-back and up-through-ten strategy • exploring rectangles, fact wheels, and coins 	<ul style="list-style-type: none"> • recall -0 and -1 fact strategies and play subtraction top-it • determine “What’s my rule?” • explain the going-back and up-through-ten strategy • explore rectangles, fact wheels, and coins 	
<u>Unit/Chapter/Selection of Study</u> Unit 2F: The Turn Around Rule for Addition	<u>Approx # of days - % of time</u> 3 Days	<u>PA Core Standards</u> CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 2G: Subtraction and the Turn Around Rule	<u>Approx # of days - % of time</u> 2 Days	<u>PA Core Standards</u> CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 2H: Exploring Addition Tools, Odd and Even Patterns, and Shapes	<u>Approx # of days - % of time</u> 3 Days	<u>PA Core Standards</u> 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. CC.2.3.2.A.1 Analyze and draw two	<u>Assessment Anchors & Eligible Content</u> N/A

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		and three-dimensional shapes having specified attributes.	
<u>Unit/Chapter/Selection of Study</u> Unit 2I: Even Numbers and Equal Addends	<u>Approx # of days - % of time</u> 1 Day	<u>PA Core Standards</u> 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.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 2J: Name-Collection Boxes	<u>Approx # of days - % of time</u> 4 Days	<u>PA Core Standards</u> CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	<u>Assessment Anchors & Eligible Content</u> N/A
<u>Unit/Chapter/Selection of Study</u> Unit 2K: Playing Name that Number	<u>Approx # of days - % of time</u> 2 Days	<u>PA Core Standards</u> CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	<u>Assessment Anchors & Eligible Content</u> N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 2L: Frames and Arrows	2 Days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 3A: Using Addition Strategies	2 Days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 3B: Subtraction from Addition: Think Addition	2 Days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 3C: Fact Families	4 Days	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.	N/A
Unit 3D: Playing Salute!	3 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A
Unit 3E: Subtraction Strategies: Counting Up and Counting Back	2 Days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 3 F: -0 and -1 Fact Strategies and Subtraction Top-It	4 Days	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.	N/A
Unit 3G: "What's My Rule?"	5 Days	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.	N/A
Unit 3H: Going-Back-Through-10 Strategy	3 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A

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Unit 3I: Going-Up-Through-10 Strategy	2 Days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A
Unit 3J: Exploring Rectangles, Fact Wheels, and Coins	1 Day	CC.2.3.2.A.1 Analyze and draw two and three-dimensional shapes having specified attributes.	N/A

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Big Idea(s) for 3rd nine weeks	Concept(s) of 3rd nine weeks	Competencies of 3rd nine weeks	Essential Questions for 3rd nine weeks
<p>The concept of time and how to read and use analog and digital clocks empowers learners to manage our daily routines, plan activities, and grasp the order of events in our lives.</p> <p>Measurement allows learners to compare, order, and make sense of the sizes, dimensions, and quantities of objects and substances in our everyday lives, fostering a deeper understanding of our surroundings and gives us the ability to communicate about them effectively.</p> <p>Addition strategies empower learners to solve mathematical problems flexibly, understand the relationships between numbers, and build a strong foundation for more complex mathematical concepts in the future.</p>	<p>Students will know...</p> <ul style="list-style-type: none"> ● telling time ● place value ● measurement ● coins ● adding and subtracting 10 and 100 ● open number lines ● number stories ● adding multi-digit numbers 	<p>Students will be able to...</p> <ul style="list-style-type: none"> ● state the time to the hour, half-hour, and nearest five minutes ● assemble base-ten blocks to create 3-digit numbers and formulate numbers in expanded form ● interpret an object's measurement in centimeters, inches, or feet ● recognize and count coins to make different coin combinations ● show addition and subtraction by adding or subtracting 10 or 100 ● formulate answers using open number lines ● recognize specific strategies for solving number stories ● solve addition problems using two different strategies 	<p>How can we use and understand time to help us plan our day and daily activities?</p> <p>How can understanding the value of each digit in a number help us work with and make sense of larger numbers?</p> <p>How can we use different tools and units of measurement to compare, order, and understand the sizes?</p> <p>What addition strategies can you recall and apply to solve problems?</p>

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Unit 4A: Telling Time	7 days	CC.2.4.2.A.2 Tell and write time to the nearest five minutes using both analog and digital clocks.	N/A
Unit 4B: Place Value	6 days	CC.2.1.2.B.3 Use place-value understanding and properties of operations to add and subtract within 1000.	N/A
Unit 4C: Measurement	7 days	CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools. CC.2.4.2.A.6 Extend the concepts of addition and subtraction to problems involving length.	N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 5A: Making Change	9 days	CC.2.4.2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols.	N/A
Unit 5B: Adding and Subtracting 10 and 100	5 days	CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	N/A
Unit 5C: Open Number Lines	3 days	CC.2.1.2.B.2 Use place-value concepts to read, write, and skip count to 1000.	N/A

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<u>Unit/Chapter/Selection of Study</u>	<u>Approx # of days - % of time</u>	<u>PA Core Standards</u>	<u>Assessment Anchors & Eligible Content</u>
Unit 5D: Number Stories <ul style="list-style-type: none"> ● Change to More ● Parts and Total ● Change 	5 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 5E: Adding Multi-Digit Numbers	3 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A

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Big Idea(s) for 4th nine weeks	Concept(s) of 4th nine weeks	Competencies of 4th nine weeks	Essential Questions for 4th nine weeks
<p>Shapes empower students to recognize, describe, and apply geometric concepts in the world around them, fostering a deeper understanding of patterns, structures, and the role of geometry in our everyday lives. Graphs are powerful tools that enable students to visually represent and analyze data, uncover patterns, and convey information, equipping them with valuable skills for making sense of the world and solving real-life problems.</p> <p>Fractions allow students to see and work with parts of a whole, helping them solve everyday problems, share fairly, and appreciate the concept of equal parts in various contexts, from food to shapes and beyond.</p>	<p>Students will know...</p> <ul style="list-style-type: none"> ● number stories ● addition strategies ● subtracting with base-10 blocks ● shapes ● four or more addends ● measurement ● graphs ● fractions 	<p>Students will be able to...</p> <ul style="list-style-type: none"> ● solve comparison and two-step number stories ● construct ballpark estimates to solve problems ● apply strategies to solve open response problems ● build shapes on geoboards ● use addition properties to solve open response problems ● explore U.S. customary length units and make measurements ● draw picture graphs and bar graphs to represent a data set ● create concrete models and visual representations to demonstrate fractions 	<p>How can we use our math skills to solve real-life problems?</p> <p>How can we describe shapes and their properties?</p> <p>How can we use graphs and data representation to organize information and identify patterns?</p> <p>How do fractions help us share, compare, and represent parts and wholes?</p>

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Unit 6A: Number Stories <ul style="list-style-type: none"> ● Comparison ● Interpreting ● Two-step 	5 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 6B: Addition Strategies <ul style="list-style-type: none"> ● Partial Sums 	5 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 6C: Subtracting with Base 10 Blocks	3 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100. CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.	N/A

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Unit 6D: Shapes	7 days	CC.2.3.2.A.1 Analyze and draw two and three-dimensional shapes having specified attributes.	N/A
Unit 7A: Four or More Addends	3 days	CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	N/A
Unit 7B: Measurement	6 days	CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools. CC.2.4.2.A.6 Extend the concepts of addition and subtraction to problems involving length.	N/A

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Unit 7C: Graphs	6 days	CC.2.4.2.A.4 Represent and interpret data using line plots, picture graphs, and bar graphs.	N/A
Unit 8/Unit 9: Fractions	10 days	CC.2.3.2.A.2 Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	N/A

Standards Legend: Essential Important Supplementary

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