

## Lake Metroparks Programs Math Standards Correlations 2021-2022

	Farm Programs	Nature, Environment, & Science	Outdoor Education
<b>Grade K overview</b>			
<b>Counting and Cardinality</b>			
Know number names and the count sequence. (K.CC.1 -3)	Farmyard Families	Weather Explorers Wee Weatherwatchers	
Count to tell the number of objects. (K.CC.4 -5)	Farmyard Families		
Compare numbers. (K.CC.6 -7)		Apollo Project Adopt Apollo	
<b>operations and algebraic thinking</b>			
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking	Farmyard Families		Santa's Workshop
<b>number and operations in Base ten</b>			
Work with numbers 11–19 to gain foundations for place value. (K.NBT .1 )	Farmyard Families		
<b>measurement and data</b>			
Identify, describe and compare measurable attributes. (K.MD 1-2)	Quilts! Farmyard Families Discover Maple Syrup Pizza Farm	Weather Explorers Wee Weatherwatchers Apollo Project Adopt Apollo Go Wild at Penitentiary Glen	
Classify objects and count the number of objects in categories. (K.MD 3) <sup>SEP</sup>	Farmyard Families Discover Maple Syrup Little Red Hen	Feathers, Fur and Scales Kindergarten Rocks, Soils Rule! Nature's Gifts Apollo Project Adopt Apollo Go Wild at Penitentiary Glen	Santa's Workshop
<b>Geometry</b>			
Identify and describe shapes. (K.G.1-2)	Discover Maple Syrup	Soap Bubble Chemistry	
Describe, compare, create, and compose shapes. (K.G. 3-6)	Quilts!	Soap Bubble Chemistry	
<b>Grade 1 overview</b>			
<b>operations and algebraic thinking</b>			
Represent and solve problems involving addition and subtraction.(1.OA.1-2)	Farm Animals & Me Discover Maple Syrup Little Red Hen	A Big Splash: The Wonders Of Water	
Understand and apply properties of operations and the relationship between addition and subtraction. (1.OA.3-4)	Farm Animals & Me Discover Maple Syrup Little Red Hen		

Add and subtract within 20. (1.OA.5-6)			
Work with addition and subtraction equations. (1.OA.7-8) <sup>[SEP]</sup>			
<b>number and operations in Base ten</b>	Farm Animals & Me Little Red Hen		
Extend the counting sequence. (1.NBT)		Go Wild at Penitentiary Glen	
Understand place value. (1.NBT.2-3)			
Use place value understanding and properties of operations to add and subtract. (1.NBT.4-6) <sup>[SEP]</sup>			
<b>measurement and data</b>			
Measure lengths indirectly and by iterating length units. (1.MD.1-2)	Farm Animals & Me	A Big Splash: The Wonders Of Water Go Wild at Penitentiary Glen	Santa's Workshop Pirate Adventure Dogsled Adventure Adventure Trek
Work with time and money. (1.MD.3)		Night Creatures Starlab: Constellation Investigation Starlab: Sun, Moon & Stars Seasonal Discoveries	
Represent and interpret data. (1.MD.4)		Apollo Project: Bald Eagle Adopt Apollo Raptor Encounters Changes In Motion Build a Beak Go Wild at Penitentiary Glen	
<b>Geometry</b>			
Reason with shapes and their attributes. (1.G.1-3)		Adopt-An-Animal Adopt Apollo Raptor Encounters Starlab: Sun, Moon, & Stars Operation Worm Watch Apollo Project: Bald Eagle Go Wild at Penitentiary Glen	
<b>Grade 2 overview</b>			
<b>operations and algebraic thinking</b>			
Represent and solve problems involving addition and subtraction. (2.OA.1 )	Discover Maple Syrup	A Big Splash: The Wonders Of Water Apollo Project: Bald Eagle Adopt Apollo Raptor Encounters Changes In Motion A Mission To Mars	
Add and subtract within 20. (2.OA.2 )			
Work with equal groups of objects to gain foundations for multiplication.			
<b>number and operations in Base ten</b>			
Understand place value. (2.NBT.1-4)		A Big Splash: The Wonders Of Water	

Use place value understanding and properties of operations to add and subtract. (2.NBT.5-9) <sup>[SEP]</sup>			
<b>measurement and data</b>			
Measure and estimate lengths in standard units. (2.MD.1-4)	Discover Maple Syrup	Operation Worm Watch A Big Splash: The Wonders Of Water A Mission To Mars Go Wild at Penitentiary Glen	Pirate Adventure Dogsled Adventure Adventure Trek
Relate addition and subtraction to length. (2.MD.5-6)			
Work with time and money. (2.MD.7-8)			
Represent and interpret data. (2.MD.9-10)		Adopt-An-Animal Starlab: Sun, Moon, & Stars Operation Worm Watch Apollo Project: Bald Eagle Adopt Apollo Raptor Encounters Biospheres A Mission To Mars Go Wild at Penitentiary Glen	
<b>Geometry</b>			
Reason with shapes and their attributes. (2.G.1)	Quilts!	Fossil Find Soap Bubble Chemistry A Spider Named Charlotte Go Wild at Penitentiary Glen	
<b>Grade 3 overview</b>			
<b>operations and algebraic thinking</b>	Ice Cream Grist For the Meal The Chemistry of Cheese Making		
Represent and solve problems involving multiplication and division. (3.OA.1-4)	Grist For the Meal	Measurement: Mass to Volume	
Understand properties of multiplication and the relationship between multiplication and division. (3.OA.5-6)	Grist For the Meal	Measurement: Mass to Volume	
Multiply and divide within 100. (3.OA.7)	Grist For the Meal	Measurement: Mass to Volume	
Solve problems involving the four operations, and identify and explain patterns in arithmetic. (3.OA.8-9) <sup>[SEP]</sup>	Grist For the Meal	Measurement: Mass to Volume	
<b>number and operations in Base ten</b>			
Use place value understanding and properties of operations to perform multi-digit arithmetic. (3.NBT.1-3)	Grist For the Meal Ice Cream The Chemistry of Cheese Making	Measurement: Mass to Volume	
<b>number and operations—fractions</b>			

Develop understanding of fractions as numbers. (3.NF.1-3)		Measurement: Mass to Volume	
<b>measurement and data</b>			
Solve problems involving money, measurement, and estimation of intervals of time, liquid volumes, and masses of objects. (3.MD.1-2)	Grist For the Meal Ice Cream Discover Maple Syrup Energy and Technology On the Farm The Chemistry of Cheese Making Studies In Biodiversity Pizza Farm	Measurement: Mass to Volume Lake Effects A Spider Named Charlotte Go Wild at Penitentiary Glen	
Represent and interpret data. (3.MD.3-4)	Grist For the Meal	Measurement: Mass to Volume Lake Effects	
Geometric measurement: understand concepts of area and relate area to multiplication and to addition. (3.MD.5-7)		Measurement: Mass to Volume Go Wild at Penitentiary Glen	
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. (3.MD.8) <sup>[SEP]</sup>	Quilts!	Measurement: Mass to Volume Go Wild at Penitentiary Glen	
<b>Geometry</b> <sup>[SEP]</sup>			
Reason with shapes and their attributes.(3.G.1-2)	Quilts!	A Spider Named Charlotte Go Wild at Penitentiary Glen	Survivor: A Global Eco-challenge
<b>Grade 4 overview</b>			
<b>operations and algebraic thinking</b>			
Use the four operations with whole numbers to solve problems. (4.OA.1-3)	Grist For the Meal Ice Cream Discover Maple Syrup Grist For the Meal		Escape the Yurt
Gain familiarity with factors and multiples. (4.OA.4)			
Generate and analyze patterns. (4.OA.5) <sup>[SEP]</sup>	Quilts! Fiber Arts from the Farm	Starlab: Constellation Investigation Starlab: Biodiversity Of the Night Starlab: Orbit Odyssey Seasonal Discoveries Sounds Of Nature Go Wild at Penitentiary Glen	Survivor: A Global Eco-challenge Escape the Yurt Adventure Trek
<b>number and operations in Base ten</b>			
Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000. (4.NBT .1-3)			

Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers less than or equal to 1,000,000. (4.NBT.4)		Erosion & Deposition	
Use place value understanding and properties of operations to perform multi-digit arithmetic. (4.NBT.5-6)			
<b>number and operations—fractions</b>	Ice Cream		
Extend understanding of fraction equivalence and ordering limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100. (4.NF.1-2)	Pizza Farm		
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100. (4.NF.3-4)	Pizza Farm		
Understand decimal notation for fractions, and compare decimal fractions limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.(4.NF.5-7)		Erosion and Deposition	
<b>measurement and data</b>			
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. (4.MD.1-3)	Ice Cream Discover Maple Syrup Grist For the Meal The Chemistry of Cheesemaking Pizza Farm	Chair Factory Falls: A Link To the Past A spider Named Charlotte Go Wild at Penitentiary Glen	Escape the Yurt
Represent and interpret data.(4.MD.4)	Grist For the Meal The Chemistry of Cheesemaking	Erosion and Deposition Chair Factory Falls: A Link To the Past Sounds Of Nature Go Wild at Penitentiary Glen	Survivor: A Global Eco-challenge Escape the Yurt Adventure Trek
Geometric measurement: understand concepts of angle and measure angles. (4.MD.5-7) <sub>SEP</sub>	Quilts! Fiber Arts from the Farm	A Spider Named Charlotte Go Wild at Penitentiary Glen	Survivor: A Global Eco-challenge Escape the Yurt
<b>Geometry</b>			
Draw and identify lines and angles, and classify shapes by properties of their lines and angles. (4.G.1-2)	Quilts! Fiber Arts from the Farm	A Spider Named Charlotte	
<b>Grade 5 overview</b>			

<b>operations and algebraic thinking</b>			
Write and interpret numerical expressions. (5.OA.1-2)	The Chemistry of Cheese Making		
Analyze patterns and relationships. (5.OA.3)		Biomimicry of Ecosystems Interactions In Ecosystems Lake Effects Linking Up: From Owl Pellets to Food Webs Seasonal Discoveries Starlab: Constellation Investigation Starlab:Orbit Odyssev	Escape the Yurt Adventure Trek
<b>number and operations in Base ten</b>			
Understand the place value system. (5.NBT .1-4)		Forces and Motion	
Perform operations with multi-digit whole numbers and with decimals to hundredths. (5.NBT .5-7) <sup>[SEP]</sup>		Forces and Motion	
<b>number and operations—fractions</b>	Ice Cream		
Use equivalent fractions as a strategy to add and subtract fractions. (Fractions need not be simplified.) (5.NF.1-2)			
Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified.)		Forces and Motion	
<b>measurement and data</b>			
Convert like measurement units within a given measurement system. <sup>[SEP]</sup> (5.MD.1)	Ice Cream The Chemistry of Cheese Making Grist For the Meal Pizza Farm	Forces and Motion	Escape the Yurt GPS Safari
Represent and interpret data.(5.MD.2)	Ice Cream The Chemistry of Cheese Making Grist For the Meal	Forces and Motion Biomimicry of Ecosystems Interactions In Ecosystems Lake Effects Linking Up: From Owl Pellets to Food Webs Seasonal Discoveries Sounds Of Nature Go Wild at Penitentiary Glen	Survivor: A Global Eco-challenge Escape the Yurt Adventure Trek
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. (5.MD.3- <sup>[SEP]</sup> 5.NF.1)	Ice Cream The Chemistry of Cheese Making Grist For the Meal Pizza Farm		Survivor: A Global Eco-challenge Escape the Yurt
<b>Geometry</b>			

Graph points on the coordinate plane to solve real-world and mathematical problems. (5.G.1-2)		Biomimicry of Ecosystems	
Classify two-dimensional figures into categories based on their properties. (5.G.3-4)			Escape the Yurt
<b>Grade 6 overview</b>			
<b>Ratios and Proportional relationships</b>			
Understand ratio concepts and use ratio reasoning to solve problems. (6.RP .1-3)	Grist For the Meal	Cleveland Soils Biotech Institute	
<b>The number System</b>			
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.		Forces and Motion	
Compute fluently with multi-digit numbers and find common factors and multiples. (6.NS.2-4)			
Apply and extend previous understandings of numbers to the system of rational numbers. (6.NS.5-			
<b>expressions and equations</b>			
Apply and extend previous understandings of arithmetic to algebraic expressions. (6.EE.1-4)		Forces and Motion	
Reason about and solve one-variable equations and inequalities. (6.EE.5-8)			
Represent and analyze quantitative relationships between dependent and independent variables. (6.EE.9) <sup>[SEP]</sup>		Bottle Rocket Blast	
<b>Geometry</b>			
Solve real-world and mathematical problems involving area, surface area, and volume. (6.G.1-4)	Grist For the Meal Discover Maple Syrup	Go Wild at Penitentiary Glen	GPS Safari Survivor: A Global Eco-challenge Escape the Yurt
<b>Statistics and Probability</b>			
Develop understanding of statistical problem solving. (6.SP.1)	Grist For the Meal Discover Maple Syrup	Bottle Rocket Blast	
Summarize and describe distributions. <sup>[SEP]</sup> (6.SP.4-5)			
<b>Grade 7 overview</b>			

<b>ratios and Proportional relationships</b>			
Analyze proportional relationships and use them to solve real-world and mathematical problems. (7.RP.1-3)	Grist For the Meal Energy Through the Farm	Bottle Rocket Blast	
<b>the number System</b>			
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. (7.NS.1-3)		Stream Study	
<b>expressions and equations</b>			
Use properties of operations to generate equivalent expressions. (7.EE.1-2)			
Solve real-life and mathematical problems using numerical and algebraic expressions and equations. (7.EE.3-4) <sup>[SEP]</sup>		Stream Study Bottle Rocket Blast	Escape the Yurt
<b>Geometry</b>			
Draw, construct and describe geometrical figures and describe the relationships between them. (7.G.1-3)	Quilts! Energy Through the Farm Fiber Arts from the Farm	Starlab: Solar & Lunar Cycles Go Wild at Penitentiary Glen	Escape the Yurt
Solve real-life and mathematical problems involving angle measure, circles, area, surface area, and	Energy Through the Farm	Bottle Rocket Blast Go Wild at Penitentiary Glen	GPS Safari Survivor: A Global Eco-challenge Escape the Yurt
<b>Statistics and Probability</b>			
Use sampling to draw conclusions about a population. <sup>[SEP]</sup> (7.SP.1)		Stream Study Decomposition	
Broaden understanding of statistical problem solving. <sup>[SEP]</sup> (7.SP.2)		Stream Study Decomposition	Escape the Yurt
Summarize and describe distributions representing one population and draw informal comparisons between two populations. <sup>[SEP]</sup> (7.SP.3)			
Investigate chance processes and develop, use, and evaluate probability models. <sup>[SEP]</sup> (7.SP.5-8)			
<b>Grade 8 overview</b>			
<b>the number System</b>			
Know that there are numbers that are not rational, and approximate them by rational numbers. <sup>[SEP]</sup> (8.NS.1-2)			
<b>expressions and equations</b>			
Work with radicals and integer exponents. <sup>[SEP]</sup> (8.EE.1-4)			

Understand the connections between proportional relationships, lines, and linear equations. <small>[1][1]</small> <small>[SEP]</small> (8.EE.5-6)			
Analyze and solve linear equations and pairs of simultaneous linear equations. <small>[1][1]</small> <small>[SEP]</small> (8.EE.7-8)			
<b>Functions</b>			
Define, evaluate, and compare functions. <small>[1][1]</small> <small>[SEP]</small> (8.F.1-3)			
Use functions to model relationships between quantities. <small>[1][1]</small> <small>[SEP]</small> (8.F.4-5)			
<b>Geometry</b>			
Understand congruence and similarity using physical models, transparencies, or geometry software. <small>[1][1]</small> <small>[SEP]</small> (8.G.1-5)			
Understand and apply the Pythagorean Theorem. <small>[1][1]</small> <small>[SEP]</small> (8.G.6-8)		Bottle Rocket Blast	
Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (8.G.9) <small>[1][1]</small> <small>[SEP]</small>		Bottle Rocket Blast	Escape the Yurt
<b>Statistics and Probability</b>			
Investigate patterns of association in bivariate data. <small>[1][1]</small> <small>[SEP]</small> (8.SP.1-4)			