Mathseeds Pennsylvania Curriculum Chart

KINDERGARTEN

Concept	Competencies	Standard	Mathseeds Lesson #			Additional Resources	
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
			Online Lesson, Printable Resources, and Problem Solving Tasks	End–of–lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Numercal Sequence	Rote count to 100.	CC.2.1.K.A.1	1, 2, 3, 5, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 25, 28, 33, 41, 43, 45, 46, 48, 50, 56, 63		12, 41, 46, 63	**DT** Early Number 1–7, 9–19, 24, 25	**Kindergarten Number** Test 1, 2
	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).						
	Name numerals 0–20.						
	Represent a number of objects with a written numeral 0–20.						
Object Quantity	Uses one–to–one correspondence when counting to 20.	CC.2.1.K.A.2					
	State the total number of objects counted, demonstrating understanding that that last number named tells the number of objects counted.						
	Understand that each successive number name refers to a quantity that is one larger.						
Number Comparison	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	CC.2.1.K.A.3	22		38	**DT** Early Number 8, 20	**Kindergarten Number** Test 3
	Compare two numbers between 1 and 10 presented as written numerals.						
Place Value	Compose and decompose numbers up to 19 to ten and ones by using objects or drawings, and record each composition or decomposition by a drawing or equation.	CC.2.1.K.B.1	88		88		**Kindergarten Number** Test 4
Addition and Subtraction	Represent addition and subtraction with objects, fingers, mental images, and drawings, sounds acting out situations, verbal explanations, expressions, or equations.	CC.2.2.K.A.1	24, 30, 31, 32, 34, 36, 40, 47, 49, 58, 68		19, 30, 31, 34, 36, 40, 43, 47	**DT** Early Operations 1–20, 22–25 **MM** Addition Sprints **MM** Subtraction Sprints	**Kindergarten Operations** Test 1–4
	Decompose numbers less than or equal to 10 into pairs in more than one way, by using objects or drawings, and record each decomposition by a drawing or equation.						
	Find the number that makes 10, for any number from 1 to 9, when added to the given number, by using objects or drawings, and record the answer with a drawing or equation.						
	Solve addition and subtraction word problems, and add and subtract within 10, by using objects or drawings to represent the problem.						
Two– and Three–dimensional shapes	Identify shapes as two–dimensional or three–dimensional.	CC.2.3.K.A.1 CC.2.3.K.A.2	4, 6, 9, 15, 23, 35, 44			**DT** Early Geometry 5, 6, 19–22	**Kindergarten Geometry** Test 1, 2
	Name shapes regardless of their orientations or overall size.						
	Use simple shapes to compose larger shapes.		69		69	**DT** Early Geometry 12	**Kindergarten Geometry** Test 4
	Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front, behind, and next to.		57, 78		57	**DT** Early Geometry 9–11, 13–18	**Kindergarten Geometry** Test 5, 6 **Grade 1 Geometry: Shape** Test 7
	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.					**DT** Early Geometry 1–4, 7	**Kindergarten Geometry** Test 3
	Model shapes in the world by building shapes from components and drawing shapes.				6, 15, 23	**DT** Early Geometry 8, 23	
Measureable Attributes	Describe measurable attributes of objects, such as length. Describe several measurable attributes of a single object. Compare two objects with a measurable attribute in common and describe the difference.	CC.2.4.K.A.1	26, 55			**DT** Early Measurement 5, 6, 9, 10	**Kindergarten Measurement** Test 1, 2 **Grade 1 Measurement: Length and Capacity** Test 1–5
	Describe measurable attributes of objects, such as weight. Describe several measurable attributes of a single object. Compare two objects with a measurable attribute in common and describe the difference.		29, 73, 135, 172		135, 172	**DT** Early Measurement 7, 8, 11, 12 **DT** Grade 2 Measurement 18, 19	**Kindergarten Measurement** Test 4 **Grade 2 Measurement: Informal Units** Test 6,7
	Describe measurable attributes of objects, such as area. Describe several measurable attributes of a single object. Compare two objects with a measurable attribute in common and describe the difference.		59, 112		59		**Grade 2 Measurement: Informal Units** Test 3
	Describe measurable attributes of objects, such as capacity. Describe several measurable attributes of a single object. Compare two objects with a measurable attribute in common and describe the difference.		38, 89, 116, 154		154	**DT** Early Measurement 15, 16, 20 **DT** Grade 1 Measurement 11, 17–19 **DT** Grade 2 Measurement 8	**Kindergarten Measurement** Test 5 **Grade 1 Measurement: Length and Capacity** Test 6, 7 **Grade 2 Measurement: Informal Units** Test 4,5
Object Classification and Count	Classify up to 20 objects using one attribute into categories; display the number of objects in each category; count and compare the quantities of each category and describe the difference.	CC.2.4.K.A.4				**DT** Early Data 1–10	**Kindergarten Data** Test 1, 2

Mathseeds Pennsylvania Curriculum Chart

GRADE 1

Concept	Competencies	Standard	Mathseeds Lesson #			Additional Resources	
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
			Online Lesson, Printable Resources, and Problem Solving Tasks	End–of–lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Numerical Sequence	Count to 120, starting at any number less than 120.	CC.2.1.1.B.1	60, 67, 75, 81, 86		60, 67, 75, 81	**DT** Early Number 21–23 **DT** Grade 1 Number 1–6, 8–17, 19–24	**Grade 1 Number and Algebra: Whole Numbers** Test 1–6
	Read and write numerals up to 120 and repesent a number of objects with a written numeral.						
Place Value	Compare two two–digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	CC.2.1.1.B.2 CC.2.1.1.B.3				**DT** Grade 1 Number 7, 18	**Grade 1 Number and Algebra: Whole Numbers** Test 7 **Grade 1 Number and Algebra: Place Value** Test 6
	Add within 100, including adding a two–digit number and a one–digit number, and adding a two–digit number and a multiple of 10 using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.		79, 95, 98		95, 98	**DT** Grade 1 Operations 13, 15, 17–20	**Grade 1 Number and Algebra: Operations** Test 6 **Grade 1 Number and Algebra: Place Value** Test 1–5
	Subtract mulitples of 10 in the range 10–90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.		98		98	**DT** Grade 1 Operations 14, 20	
Addition and Subtraction	Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbols for the unknown number to represent the problem.	CC.2.2.1.A.1	53, 65, 68, 72, 76, 85, 91, 96, 100		53, 56, 65, 68, 72, 76, 85, 91, 96	**DT** Grade 1 Operations 1–12 **MM** Addition Sprints **MM** Subtraction Sprints	**Grade 1 Number and Algebra: Operations** Test 1–4
	Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction and creating equivalent but easier or known sums.						
	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.		51		51, 118		
Properties of Operations	Apply properties of operations as strategies to add and subtract.	CC.2.2.1.A.2	93		93	**DT** Grade 1 Operations 16	**Grade 1 Number and Algebra: Operations** Test 5
	Understand subtraction as an unknown–addend problem.						
Two– and three–dimensional	Compose two and three–dimensional shapes and distinguish between attributes.	CC.2.3.1.A.1	52, 62, 99, 121, 169, 184		52, 121		**Grade 1 Geometry: Shape** Test 1–5
	Build and draw shapes to possess attributes.						**Grade 1 Geometry: Shape** Test 6
Fraction	Partition circles and rectangles into two and four equal shares. Understand that decomposing into more equal shares creates smaller shares.	CC.2.3.1.A.2	61, 66			**DT** Grade 1 Patterns and Fractions 3, 5, 6, 11, 13, 14	**Grade 1 Number and Algebra: Fractions and Money** Test 1–3
Measurement	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	CC.2.4.1.A.1	84			**DT** Grade 1 Measurement 2, 4, 13, 14	
	Use standard and non–standard units of measure to express the length of an objects a whole number of length units.						
	Understand that the length measurement of an object is the number of same–size length units.						
Time	Tell and write time in hours and half hours using analog and digital clocks.	CC.2.4.1.A.2	39, 54, 70, 87		87	**DT** Early Measurement 17 **DT** Grade 1 Measurement 1, 8–10, 15, 16	**Grade 1 Measurement: Time** Test 1–6
Represent and Interpret Data	Organize, represent, and interpret data with up to three categories. Ask and answer questions about the data.	CC.2.4.1.A.4	80, 97		80	**DT** Grade 1 Data 1–3, 9, 10, 12–16	**Grade 1 Data** Test 1–5

Mathseeds Pennsylvania Curriculum Chart

GRADE 2

Concept	Competencies	Standard	Mathseeds Lesson #			Additional Resources	
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
			Online Lesson, Printable Resources, and Problem Solving Tasks	End–of–lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Place Value	Understand that the three–digits of a three–digit number represent amounts of hundreds, tens and ones.	CC.2.1.2.B.1 CC.2.1.2.B.2	105		105, 106, 108	**DT** Grade 2 Number 21, 22	**Grade 2 Number and Algebra: Numbers to 1000** Test 5, 6
	Compare two three digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.		122			**DT** Grade 2 Number 14, 15	**Grade 2 Number and Algebra: Numbers to 1000** Test 6
	Count within 1000; skip–count by 5s, 10s, and 100s.		77, 79, 90, 101, 106, 117		117	**DT** Grade 1 Patterns and Fractions 7–10 **DT** Grade 2 Number 1–6, 9–13, 16, 17 **DT** Grade 2 Patterns and Fractions 1–4, 8–10, 13	**Grade 1 Number and Algebra: Whole Numbers** Test 8, 9 **Grade 1 Number and Algebra: Patterns** Test 1–7
	Read and write numbers to 1000 using base–ten numerals, number names, and expanded form.		101, 106			**DT** Grade 2 Number 8, 18–20, 23, 24	**Grade 2 Number and Algebra: Numbers to 1000** Test 1, 3, 7
Addition and Subtraction	Add up to four two–digit numbers using strategies based on place value and properties of operations.	CC.2.1.2.B.3 CC.2.2.2.A.1 CC.2.4.2.A.4	150		120, 150	**DT** Grade 2 Operations 23	**Grade 2 Number and Algebra: Addition and Subtraction** Test 5, 8
	Add and subtract within 1000.						
	Understand that in adding or subtracting three–digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.		144, 146, 148		128, 134, 144, 146, 148	**DT** Grade 2 Operations 18, 21, 24–25,27, 28	**Grade 2 Number and Algebra: Addition and Subtraction** Test 6, 7
	Explain why addition and subtraction strategies work, using place value and the properties of operations.						**Grade 2 Number and Algebra: Addition and Subtraction** Test 3
	Use addition and subtraction within 100 to solve one– and two–step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.		103, 110, 118, 120, 124, 128, 131, 134, 139		110, 124, 128, 134, 139	**DT** Grade 2 Operations 1, 4, 7, 13–17, 22	
	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.						
	Understand subtraction as an unknown–addend problem.		163			**DT** Grade 2 Operations 20, 26	
	Add and subtract within 20. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.					**DT** Grade 2 Operations 2, 5	
	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown number to represent the problem.		141		141		
	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, and represent whole–number sums and differences within 100 on a number line diagram.		25, 28, 40, 56, 58, 85				**Grade 2 Measurement: Informal Units** Test 8
Properties of Operations	Fluently add and subtract within 20 using mental strategies.	CC.2.2.2.A.2	142		142	**MM** Addition Sprints **MM** Subtraction Sprints	**Grade 2 Number and Algebra: Addition and Subtraction** Test 1,2
	Apply properties of operations as strategies to add and subtract.						**Grade 2 Number and Algebra: Addition and Subtraction** Test 4, 6
Equal Groups of Objects	Determine whether a group of objects (up to 20) has an odd or even number of members and write an equation to express an even number as a sum of two equal addends.	CC.2.2.2.A.3	108			**DT** Grade 2 Operations 3	
	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.		111, 113, 130		77, 79, 113, 130	**DT** Grade 2 Operations 10, 19	
Shape Attributes	Recognize and draw shapes having specified attributes. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	CC.2.3.2.A.1	119, 145, 177		119, 140, 145	**DT** Grade 2 Geometry 3–7, 10	**Grade 2 Geometry: Shape and Movement** Test 1–5
Fractions	Partition circles and rectangles into two, three, or four equal shares, recognize that equal shares of identical wholes need not have the same shape.	CC.2.3.2.A.2	132, 138		132	**DT** Grade 2 Patterns and Fractions 5, 11, 12, 14–17	**Grade 2 Number and Algebra: Fractions and Money** Test 1–4
Measurement	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	CC.2.4.2.A.1	104, 126		104	**DT** Grade 2 Measurement 6, 13–15, 21, 22	**Grade 2 Measurement: Informal Units** Test 1–2
	Measure the same length with different–sized units then discuss the measurement made with the smaller unit is more than the measurement made with the larger unit and vice versa.						
	Estimate lengths using units of inches, feet, centimeters, and meters.						
	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.						
Time and Money	Tell and write time from analog and digital clocks to the nearest five minutes.	CC.2.4.2.A.2	114, 123, 127			**DT** Grade 2 Measurement 7, 10, 20	**Grade 2 Measurement: Time** Test 1–3
	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.		64, 83, 92, 125, 147			**DT** Grade 1 Measurement 3, 5–7, 12 **DT** Grade 2 Measurement 11, 12, 23, 24	**Kindergarten Number** Test 5 **Grade 1 Number and Algebra: Fractions and Money** Test 4–8 **Grade 2 Number and Algebra: Fractions and Money** Test 5–8
Represent and Interpret Data	Make a line plot to show measurement data of the lengths of several objects to the nearest whole–number unit.	CC.2.4.2.A.3	143		143	**DT** Grade 2 Data and Chance 1, 4–5, 7–14	**Grade 2 Statistics: Data** Test 1–7
	Draw a picture graph and a bar graph (with single–unit scale) to represent a data set with up to four categories. Solve simple put together, take–apart, and compare problems using information presented in the graph.						

Mathseeds Pennsylvania Curriculum Chart

GRADE 3

Concept	Competencies	Standard	Mathseeds Lesson #			Additional Resources
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency
			Online Lesson, Printable Resources, and Problem Solving Tasks	End–of–lesson Quiz	Critical Thinking and Problem Solving Interactives	Driving Tests (DT) Mental Minute (MM)
Place Value and Properties of Operations	Perform multi–digit arithmetic.	CC.2.1.3.B.1	161, 163, 166, 170, 183		170	
	Demonstrate fluency of addition and subtraction.		173, 178, 188, 195		156, 163, 173, 178	**MM** Addition Sprints **MM** Subtraction Sprints
	Round whole numbers to the nearest ten or hundred.		129, 194		194	
Fractions	Develop an understanding of fractions as numbers.	CC.2.1.3.C.1	191, 197		191, 197	
	Represent fractions on a number line.		160		196	
	Represent and generate equivalent fractions.		175, 180		180	
	Compare fractions with the same numerator or same denominator.					
Multiplication Division Patterns	Demonstrate an understanding of properties of mulitplication.	CC.2.2.3.A.1 CC.2.2.3.A.2 CC.2.2.3.A.3	155, 186			
	Demonstate an understanding of relationship between multiplication and division.		136, 165, 181, 190, 196		113, 115, 130, 136, 168, 181, 188, 199	**DT** Grade 2 Operations 6, 9, 11, 12
	Demonstrate fluency.		115, 158, 168, 171, 176, 188, 193, 199		176, 186, 193	**MM** Multiplication Sprints **MM** Division Sprints
Patterns	Represent and solve problems.	CC.2.2.3.A.4	133, 137, 153		101, 133, 137, 153, 195	
	Identify and explain patterns in arithmetic (including addition and subtraction).					
Two– and Three–Dimensional Figures	Identify and classify shapes and their attributes.	CC.2.3.3.A.1				
	Compare shapes.					
Fractions and Area	Partition two–dimensional shapes into equal parts.	CC.2.3.3.A.2	160		132	
	Express the area of a partition as a unit fraction of the whole.					
Measurement	Solve problems.	CC.2.4.3.A.1 CC.2.4.3.A.5 CC.2.4.3.A.6	182, 198		182	
	Make estimations.					
	Determine the area of a rectangle as it relates to multiplication and addition.		149, 157, 200		149, 200	
	Determine perimeter or side lengths of various polygons.		192			
	Distinguish between linear and area measurements.					
Time	Solve problems.	CC.2.4.3.A.2	179		179	
	Make estimations.					
	Tell and write time to the nearest minute.		162, 185		185, 189	
	Calculate time intervals.					
Money (Coins and Bills)	Solve problems.	CC.2.4.3.A.3	64, 83, 92, 125, 147, 159		125, 147, 159	
	Make estimations.					
	Make change using combination of coins and bills.					
Data Displays	Solve problems.	CC.2.4.3.A.4	174, 187, 189, 198		183, 187, 189	
	Make estimations.					
	Represent and interpret data using various displays.					