

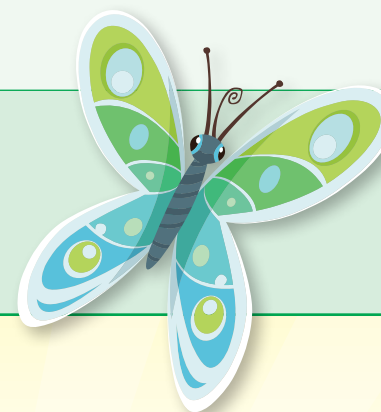


Mathseeds Lessons and Quebec Preschool Education Program



PRESCHOOL

			Mathseeds Lesson #			Additional Mathseeds Resources	
	Observable behaviours The child:	Pedagogical strategies The child is encouraged to:	Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
			Online Lesson and Printable Resources	End-of-lesson Quiz	Critical Thinking and Problem Solving Worksheets	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
NUMBER	manipulates various objects to count; selects games that involve counting	count the items in a small collection	1, 2, 3, 5, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 25, 28, 31, 33, 41, 43, 45, 46, 48, 50			DT Early Number 1-4	Kindergarten Number Tests 1, 2
	manipulates various objects to group and compare; selects games that involve counting and matching; recognizes the difference between «a lot» and «a little»		22			DT Early Number 6-8	Kindergarten Number Tests 3, 4
Patterns	creates regular patterns and sequences		27, 37			DT Early Patterns 1-9	
Operations	tries to find a solution to a problem	find various strategies for solving a problem; consider more than one possible solution	24, 30, 32, 34, 36, 40, 47, 49			DT Early Operations 1, 2, 6-9 MM Addition Sprints MM Subtraction Sprints	Kindergarten Operations Tests 1-4
Measurement	manipulates various objects to compare; selects games that involve matching and classifying; recognizes the difference between «a lot» and «a little»	compare objects in his/her immediate environment; sort or classify objects by size	13, 26, 29, 38			DT Early Measurement 2, 3, 5-12, 15, 16, 20	Kindergarten Measurement Tests 1-5
	follows a simple itinerary		39, 42			DT Early Measurement 1, 4, 13, 14, 17-19	
Geometry	recognizes shapes (squares, triangles, circles, rectangles) in his/her environent; selects games that involve matching and classifying	sort or classify objects by shape	4, 6, 9, 15, 23, 35, 44			DT Early Geometry 1, 5, 6, 8	Kindergarten Geometry Tests 1-3
Data	manipulates various objects to group, count, classify, compare, organize, etc.; selects games that involve counting, matching and classifying	associate various elements in play areas; sort, classify, group, compare and organize objects in his/her immediate environment; sort or classify objects by size, colour, shape, etc	8			DT Early Data 1-10	Kindergarten Data Tests 1, 2



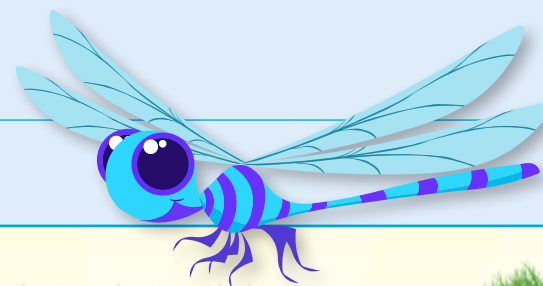


Mathseeds Lessons and Quebec Elementary Mathematics Program



GRADE 1

Essential Knowledges	Learning	Strategy	Mathseeds Lesson #			Additional Mathseeds Resources	
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
Arithmetic: Understanding and writing numbers	Natural numbers	reading, writing, digit, number, counting, one-to-one correspondence, representation, comparison, classification, order, equivalent expressions, patterns, number line, approximation	56, 60, 63, 67, 75, 77, 79, 81, 86, 88, 90	End-of-lesson Quiz	Critical Thinking and Problem Solving Worksheets	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
	Fractions	fractions related to the student's everyday life	61, 66			DT Early Number 9-25 DT Grade 1 Number 1-24	Grade 1 Number and Algebra: Whole Numbers Tests 1-9 Grade 1 Number and Algebra: Place Value Tests 1-5
Arithmetic: Meaning of operations involving numbers	Natural numbers	operation, operation sense: addition, sum, subtraction, difference, number line, multiplication (repeated addition) and division (repeated subtraction, sharing)	51, 53, 58, 68, 71, 72, 74, 85, 88, 91, 95, 96, 98, 100			DT Early Operations 11-25 DT Grade 1 Operations 1-20	
		meaning of an equality relation (equation)	76			DT Early Operations 10 DT Grade 1 Operations 10, 11	
		relationships between the operations	93, 100			DT Grade 1 Operations 16	
Arithmetic: Operations involving numbers	Natural numbers	own processes for mental computation: addition, subtraction; operations to be memorized: additions (0 + 0 to 10 + 10) related to the corresponding subtractions; own processes for written computation: addition, subtraction	51, 53, 65, 68, 72, 83, 85, 91, 92, 95, 96, 98, 100			DT Early Operations 10-25 DT Grade 1 Operations 1-20 MM Addition Sprints MM Subtraction Sprints	Grade 1 Number and Algebra: Operations Tests 1-6
		patterns: series of numbers	77, 79, 90			DT Grade 1 Patterns and Fractions 7-10, 12	Grade 1 Number and Algebra: Patterns Tests 1-7
Geometry: Geometric figures and spatial sense	Space	locating objects and getting one's bearings in space, spatial relationships (e.g. in front, on, to the left)	57, 78, 94			DT Early Geometry 9-11, 13, 14 DT Grade 1 Geometry 4, 5, 11, 12, 14-16	
	Solids	comparing prisms, spheres, cylinders, cones; comparing objects in the environment with solids; attributes (number of faces, base)	62, 99			DT Early Geometry 15-18, 21-23 DT Grade 1 Geometry 7, 8, 17-19	Grade 1 Geometry: Shape Tests 3-6
	Plane figures	comparing and constructing figures made with closed curved lines or closed straight lines; identifying a square, rectangle, triangle, circle; describing a square, rectangle, triangle	52, 69			DT Early Geometry 2-4, 7, 12, 19, 20 DT Grade 1 Geometry 1-3, 6, 9, 10, 13	Grade 1 Geometry: Shape Tests 1, 2, 5-7
Measurement: Estimating and measuring	Lengths	dimensions of an object; unconventional units: comparison, construction of rulers	55, 84			DT Grade 1 Measurement 2, 4, 13, 14	Grade 1 Measurement: Length Tests 1-5
	Surface areas	unconventional units	59				
	Capacities	unconventional units	89			DT Grade 1 Measurement 11, 17-19	
	Masses	unconventional units	73				
	Time	conventional units, duration (day, hour, minute, second, daily cycle, weekly cycle, yearly cycle)	54, 70, 87			DT Grade 1 Measurement 1, 8-10, 15, 16	Grade 1 Measurement: Time Tests 1-5
Statistics and Probability	Statistics	collecting, describing and organizing data using tables; interpreting data using a pictograph and a data table; displaying data using a pictograph and a data table	80, 97			DT Grade 1 Data 1-4, 6, 9, 10, 12-16	Grade 1 Statistics: Data Tests 1-5
	Probability	experimentation with activities involving chance; predicting the likelihood of an event (certainty, possibility or impossibility)	82			DT Grade 1 Data 5, 7, 8, 11	





Mathseeds Lessons and Quebec Elementary Mathematics Program



GRADE 2

			Mathseeds Lesson #			Additional Mathseeds Resources	
Essential Knowledges	Learning	Strategy	Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency	Assessment
			Online Lesson and Printable Resources	End-of-lesson Quiz	Critical Thinking and Problem Solving Worksheets	Driving Tests (DT) Mental Minute (MM)	Printable Achievement Standards Assessment
Arithmetic: Understanding and writing numbers	Natural numbers	natural numbers less than 1000 (units, tens, hundreds), reading, writing, digit, number, counting, one-to-one correspondence, representation, comparison, classification, order, equivalent expressions, writing numbers in expanded form, patterns, properties (even numbers, odd numbers), number line, approximation	101, 105, 106, 108, 117, 122, 129			DT Grade 2 Number 1-24 DT Grade 2 Operations 3	Grade 2 Number and Algebra: Numbers to 1000 Tests 1-8
	Fractions	fractions related to the student's everyday life	132, 138			DT Grade 2 Patterns and Fractions 5, 11, 12, 14-17	Grade 2 Number and Algebra: Fractions and Money Tests 1-3
Arithmetic: Meaning of operations involving numbers	Natural numbers	operation, operation sense: addition, sum, subtraction, difference, term, missing term, number line, multiplication and division	110, 111, 113, 115, 120, 130, 131, 136, 141			DT Grade 2 Operations 6, 8-12, 19	Grade 2 Number and Algebra: Equal Groups Tests 1-5
		choice of operation: addition, subtraction	118, 139				
		meaning of an equality relation (equation), meaning of an equivalence relation	125				
		relationships between the operations	131, 141, 142			DT Grade 2 Operations 20, 26	
		property of operations: commutative law	142				
Arithmetic: Operations involving numbers	Natural numbers	own processes for mental computation: addition, subtraction; operations to be memorized: additions (0 + 0 to 10 + 10) related to the corresponding subtractions; own processes for written computation: addition, subtraction	103, 110, 118, 120, 131, 139, 141, 142, 144, 146, 147, 148, 150			DT Grade 2 Operations 1, 2, 4, 5, 7, 13, 14, 15, 21, 22, 24, 27, 28 MM Addition Sprints MM Subtraction Sprints	Grade 2 Number and Algebra: Addition and Subtraction Tests 1-9
		conventional processes for written computation: adding two four-digit numbers; subtracting a four-digit number from a four-digit number such that the difference is greater than 0	124, 128, 134, 144, 146, 150			DT Grade 2 Operations 16, 17, 18, 23, 25	
		patterns: series of numbers, family of operations	117, 133, 142			DT Grade 2 Patterns and Fractions 1-4, 6-10, 13	Grade 2 Number and Algebra: Number Patterns Tests 1-7
Geometry: Geometric figures and spatial sense	Solids	comparing prisms, pyramids, spheres, cylinders, cones; comparing objects in the environment with solids; attributes (number of faces, base): prisms, pyramids	121			DT Grade 2 Geometry 3, 5, 6, 7	Grade 2 Geometry: Shape Tests 3, 4, 5
	Plane figures	comparing and constructing figures made with closed curved lines or closed straight lines; identifying a square, rectangle, triangle, circle and rhombus; describing a square, rectangle, triangle and rhombus	119, 145			DT Grade 2 Geometry 4, 6, 7, 10	Grade 2 Geometry: Shape Tests 1, 2, 5
	Frieze patterns and tessellations	observing and producing patterns using geometric figures; congruent figures	102			DT Grade 2 Geometry 1, 9, 11, 12	
Measurement: Estimating and measuring	Lengths	dimensions of an object; conventional units (m, cm)	104, 126, 143			DT Grade 2 Measurement 6, 9, 11, 13, 15, 19, 21-24	Grade 2 Measurement: Length Tests 1-8
	Surface areas	unconventional units	112, 149			DT Grade 2 Measurement 6	
	Volumes	unconventional units	116			DT Grade 2 Measurement 8	
	Masses	unconventional units	135			DT Grade 2 Measurement 17, 18	
	Time	conventional units, duration (day, hour, minute, second, daily cycle, weekly cycle, yearly cycle)	109, 114, 123, 127			DT Grade 2 Measurement 1-5, 7, 10, 14, 16, 20	Grade 2 Measurement: Time Tests 1-7
Statistics and Probability	Statistics	formulating questions for a survey; collecting, describing and organizing data using tables; interpreting data using a bar graph, a pictograph and a data table; displaying data using a bar graph, a pictograph and a data table	135, 137, 143			DT Data and Chance 1, 4, 5, 7-14	Grade 2 Statistics: Data Tests 1-4
	Probability	experimentation with activities involving chance; predicting the likelihood of an event (certainty, possibility or impossibility); enumerating the possible outcomes of a simple random experiment	107			DT Data and Chance 2, 3, 6	





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GRADE 3



Essential Knowledges	Learning	Strategy	Mathseeds Lesson #			Additional Mathseeds Resources
			Knowledge and Skills	Assessment	Higher Order Thinking Skills	Fluency
Arithmetic: Understanding and writing numbers	Natural numbers	reading, writing, representation, comparison, classification, order, equivalent expressions, writing numbers in expanded form, patterns, properties, number line, approximation	Online Lesson and Printable Resources	End-of-lesson Quiz	Critical Thinking and Problem Solving Worksheets	Mental Minute (MM)
	Fractions	fractions based on a whole or a collection of objects: reading, writing, numerator, denominator, various representations (using objects or pictures), equivalent parts, comparison with 0, $\frac{1}{2}$ and 1	151, 156, 161, 166, 194			
Arithmetic: Meaning of operations involving numbers	Natural numbers	operation sense: multiplication, product, division, quotient, properties of divisibility	155, 165			
		choice of operation: multiplication, division	188			
		meaning of an equality relation (equation), meaning of an equivalence relation	159, 163			
		relationships between the operations	163, 181, 190			
		property of operations: associative law	171			
Arithmetic: Operations involving numbers	Natural numbers	own processes for mental computation: addition, subtraction, multiplication, division; operations to be memorized: multiplications (0×0 to 10×10) related to the corresponding divisions	155, 158, 165, 168, 171, 173, 176, 181, 183, 188, 190, 193, 196, 199			MM Addition Sprints MM Subtraction Sprints MM Multiplication Sprints MM Division Sprints
		own processes for written computation: multiplying a three-digit number by a one-digit number	186			
		conventional processes for written computation: adding two four-digit numbers, subtracting a four-digit number from a four-digit number such that the difference is greater than 0	170, 178			
		patterns: series of numbers, family of operations	153, 163, 181, 195			
Geometry: Geometric figures and spatial sense	Space	locating objects on an axis; locating objects in a plane; locating objects in a Cartesian plane	164			
	Solids	describing prisms and pyramids in terms of faces, vertices and edges; nets for prisms and pyramids; classification of prisms and pyramids	169			
	Plane figures	describing quadrilaterals, including trapezoids and parallelograms; classifying quadrilaterals	184			
Measurement: Estimating and measuring	Lengths	conventional units (m, cm, mm); relationships between units of measure	182, 198			
		perimeter, calculating the perimeter	192			
	Angles	comparing angles	177			
	Surface areas	unconventional units; conventional units (m^2)	157, 200			
	Capacities	unconventional units, conventional units (L, mL), relationships between the units of measure	154			
	Masses	unconventional units; conventional units (kg, g), relationships between the units of measure	172			
	Time	conventional units, duration (day, hour, minute, second, daily cycle, weekly cycle, yearly cycle)	162, 179, 185, 189			
Statistics and Probability	Statistics	formulating questions for a survey; collecting, describing and organizing data using tables; interpreting data using a bar graph, a pictograph and a data table; displaying data using a bar graph, a pictograph and a data table	174, 187, 198			
	Probability	experimentation with activities involving chance; predicting the likelihood of an event (certainty, possibility or impossibility); probability that a simple event will occur (more likely, just as likely, less likely); enumerating the possible outcomes of a random experiment using a table; doing simulations with or without a computer	167			

