

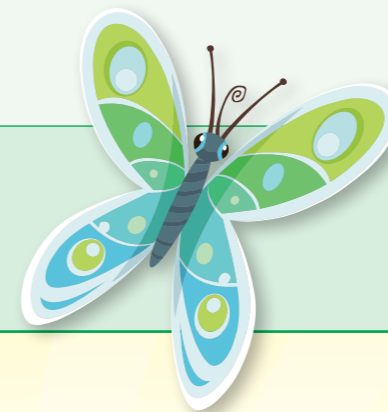


Mathseeds Lessons and the Alberta Mathematics Program of Studies



KINDERGARTEN

Strand	General Outcome	Specific Outcomes	Mathseeds Lesson #			Additional Mathseeds Resources	
			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	Develop number sense.	Say the number sequence 1 to 10 by 1s, starting anywhere from 1 to 10 and from 10 to 1.	10, 16, 18, 20, 21, 25, 28, 31			DT Early Number 2, 4, 5, 9	
		Subitize (recognize at a glance) and name familiar arrangements of 1 to 5 objects or dots.					
		Relate a numeral, 1 to 10, to its respective quantity.					
		Represent and describe numbers 2 to 10, concretely and pictorially.					
		Compare quantities 1 to 10, using one-to-one correspondence.					
PATTERNS AND RELATIONS (Patterns)	Use patterns to describe the world and to solve problems.	Demonstrate an understanding of repeating patterns (two or three elements).	8, 27, 37			DT Early Patterns 1–9	
		Sort a set of objects based on a single attribute, and explain the sorting rule.					
SHAPE AND SPACE (Measurement)	Use direct and indirect measurement to solve problems.	Use direct comparison to compare two objects based on a single attribute, such as length (height).	13, 26			DT Early Measurement 2, 3, 5, 6, 9, 10	Kindergarten Measurement Tests 1, 2, 3
		Use direct comparison to compare two objects based on a single attribute, such as mass (weight).					
		Use direct comparison to compare two objects based on a single attribute, such as volume (capacity).					
SHAPE AND SPACE (3-D Objects and 2-D Shapes)	Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.	Sort 3-D objects, using a single attribute.	4, 6, 9, 15, 35, 44			DT Early Geometry 15–18, 21–23	Kindergarten Geometry Tests 2, 3

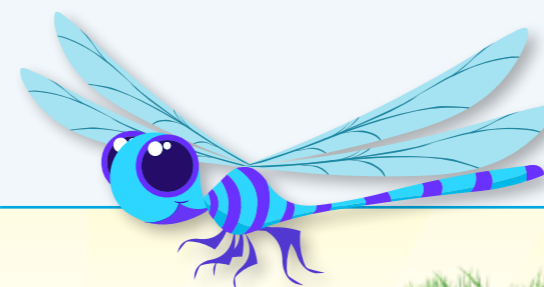




Mathseeds Lessons and the Alberta Mathematics Program of Studies

GRADE 1

Strand	General Outcome	Specific Outcomes	Mathseeds Lesson #			Additional Mathseeds Resources	
			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	Develop number sense.	Say the number sequence 0 to 100 by 1s, backward from 20 to 0, by 2s from 0 to 20, by 5s and 10s from 0 to 100. Demonstrate an understanding of counting.	50, 60, 63, 67, 75, 77, 79, 81, 86, 90			DT Grade 1 Number 2–6, 10, 11, 13, 16, 21 DT Grade 1 Patterns and Fractions 7–10	Grade 1 Number and Algebra: Whole Numbers Tests 1, 3–5, 7–9 Grade 1 Number and Algebra: Patterns Tests 1, 4, 6, 7
		Represent and describe numbers to 20, concretely, pictorially and symbolically.	41, 43, 45, 46, 48, 56			DT Grade 1 Number 1	Grade 1 Number and Algebra: Whole Numbers Test 6
		Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially and symbolically.	47, 51, 53, 58, 65			DT Grade 1 Operations 4–12, 16	Grade 1 Number and Algebra: Operations Tests 1–3
		Describe and use mental mathematics strategies for basic addition facts and related subtraction facts to 18.	49, 68, 72, 85, 91, 93, 100			DT Grade 1 Operations 1–3 MM Addition Sprints MM Subtraction Sprints	
PATTERNS AND RELATIONS (Patterns)	Use patterns to describe the world and to solve problems.	Demonstrate an understanding of repeating patterns (two to four elements). Translate repeating patterns from one representation to another.				DT Grade 1 Patterns and Fractions 1, 2, 4	
		Sort objects, using one attribute, and explain the sorting rule.	62, 80				
PATTERNS AND RELATIONS (Variables and Equations)	Represent algebraic expressions in multiple ways.	Describe equality as a balance and inequality as an imbalance, concretely and pictorially (0 to 20). Record equalities, using the equal symbol.	76				
SHAPE AND SPACE (Measurement)	Use direct and indirect measurement to solve problems.	Demonstrate an understanding of measurement as a process of comparing length, mass, and capacity.	55, 73, 84, 89			DT Grade 1 Measurement 2, 4, 11, 13, 14, 17–19	Grade 1 Measurement: Length Tests 1–5
SHAPE AND SPACE (3-D Objects and 2-D Shapes)	Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.	Sort 3-D objects and 2-D shapes, using one attribute, and explain the sorting rule. Replicate composite 2-D shapes and 3-D objects. Compare 2-D shapes to parts of 3-D objects in the environment.	52, 62, 69, 99			DT Grade 1 Geometry 1–3, 6–9, 10, 13, 17–19	Grade 1 Geometry: Shape Tests 1–7





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GRADE 2

Strand	General Outcome	Specific Outcomes	Mathseeds Lesson #			Additional Mathseeds Resources	
			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	Develop number sense.	Say the number sequence 0 to 100 by 2s, 5s and 10s, forward and backward.	117			DT Grade 2 Patterns and Fractions 1–3	
		Demonstrate if a number (up to 100) is even or odd.	108			DT Grade 2 Operations 3	
		Describe order or relative position, using ordinal numbers (up to tenth).	63			DT Early Number 24, 25	
		Represent and describe numbers to 100, concretely, pictorially and symbolically.	88, 122, 129			DT Grade 1 Number 8, 12, 22	
		Compare and order numbers up to 100.				DT Grade 1 Number 7, 14, 18, 20, 23	
		Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.				DT Grade 1 Number 9, 17, 19, 24	Grade 1 Number and Algebra: Place Value Tests 1–6
		Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction.	95, 96, 98, 103, 110, 118, 120, 124, 128, 131, 137, 139, 150			DT Grade 2 Operations 7, 13–17, 20, 22, 23 MM Addition Sprints MM Subtraction Sprints	Grade 1 Number and Algebra: Operations Tests 4–6 Grade 2 Number and Algebra: Addition and Subtraction Tests 2–6
Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.	142			DT Grade 2 Operations 1, 2, 4, 5	Grade 2 Number and Algebra: Addition and Subtraction Test 1		
PATTERNS AND RELATIONS (Patterns)	Use patterns to describe the world and to solve problems.	Demonstrate an understanding of increasing numerical (numbers to 100) and non-numerical patterns.	133			DT Grade 2 Patterns and Fractions 6–9	Grade 2 Number and Algebra: Number Patterns Tests 1–3
		Sort a set of objects, using two attributes, and explain the sorting rule.				DT Grade 2 Data 1	
SHAPE AND SPACE (Measurement)	Use direct and indirect measurement to solve problems.	Relate the number of days to a week and the number of months to a year in a problem-solving context.	42, 109			DT Grade 2 Measurement 1–5, 14, 16	
		Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length.	135, 141			DT Grade 2 Measurement 11, 13, 21, 23	
		Compare and order objects by length, height, distance around, and mass (weight) using nonstandard units, and make comparisons.				DT Grade 2 Measurement 6, 15, 17, 18, 24	
		Measure length to the nearest nonstandard unit by using multiple copies of a unit or using a single unit (iteration).				DT Grade 2 Measurement 9, 22	Grade 2 Measurement: Length Tests 1, 2
		Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.	102				
SHAPE AND SPACE (3-D Objects and 2-D Shapes)	Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.	Sort 2-D shapes and 3-D objects, using two attributes, and explain the sorting rule. Describe, compare and construct 3-D objects, including cubes, spheres, cones, cylinders, pyramids. Describe, compare and construct 2-D shapes, including triangles, squares, rectangles, circles. Identify 2-D shapes as parts of 3-D objects in the environment.	119, 121, 145			DT Grade 2 Geometry 3–7, 10	Grade 2 Geometry: Shape Tests 1–5
STATISTICS AND PROBABILITY (Data Analysis)	Collect, display and analyze data to solve problems.	Gather and record data about self and others to answer questions. Construct and interpret concrete graphs and pictographs to solve problems.	97, 143			DT Grade 2 Data 4, 5, 7–14	Grade 1 Statistics: Data Tests 1–5

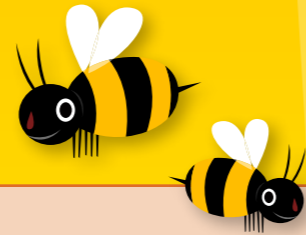




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GRADE 3



Strand	General Outcome	Specific Outcomes	Mathseeds Lesson #			Additional Mathseeds Resources		
			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	Develop number sense.	Say the number sequence 0 to 1000 forward and backward by 5s, 10s or 100s, and multiples of 3, 4 or 25.	101, 105, 106, 194				Grade 2 Number and Algebra: Numbers to 1000 Test 4	
		Represent and describe numbers to 1000, concretely, pictorially and symbolically.					Grade 2 Number and Algebra: Numbers to 1000 Tests 1–3, 8	
		Compare and order numbers to 1000.					Grade 2 Number and Algebra: Numbers to 1000 Test 7	
		Estimate quantities less than 1000, using referents.						
		Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.					Grade 2 Number and Algebra: Numbers to 1000 Test 5	
		Describe and apply mental mathematics strategies for adding two 2-digit numerals.					MM Addition Sprints	
		Describe and apply mental mathematics strategies for subtracting two 2-digit numerals.					MM Subtraction Sprints	
		Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 (limited to 1-, 2- and 3-digit numerals), concretely, pictorially and symbolically.					Grade 2 Number and Algebra: Addition and Subtraction Tests 7–9	
		Demonstrate an understanding of multiplication to 5×5 .					MM Multiplication Sprints	Grade 2 Number and Algebra: Equal Groups Tests 1, 3, 5
		Demonstrate an understanding of division (limited to division related to multiplication facts up to 5×5).					MM Division Sprints	Grade 2 Number and Algebra: Equal Groups Tests 2, 4
Demonstrate an understanding of fractions.	61, 66, 132, 138, 160, 175, 180, 191, 197							
PATTERNS AND RELATIONS (Patterns)	Use patterns to describe the world and to solve problems.	Demonstrate an understanding of increasing numerical (numbers to 1000) and non-numerical patterns. Demonstrate an understanding of decreasing numerical (numbers to 1000) and non-numerical patterns.	153, 166, 195				Grade 2 Number and Algebra: Number Patterns Tests 4–7	
PATTERNS AND RELATIONS (Variables and Equations)	Represent algebraic expressions in multiple ways.	Solve one-step addition and subtraction equations involving a symbol to represent an unknown number.	163					
SHAPE AND SPACE (Measurement)	Use direct and indirect measurement to solve problems.	Relate the passage of time to common activities, using nonstandard and standard units.	39, 127, 179					
		Relate the number of seconds to a minute, the number of minutes to an hour and the number of days to a month.	54, 70, 87, 114, 123, 162, 185, 189				Grade 2 Measurement: Time Tests 1–7	
		Demonstrate an understanding of measuring length (cm, m).	104, 126, 182				Grade 2 Measurement: Length Tests 4, 6	
		Demonstrate an understanding of measuring mass (g, kg).	172					
		Demonstrate an understanding of perimeter of regular and irregular shapes.	192					
SHAPE AND SPACE (3-D Objects and 2-D Shapes)	Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.	Describe 3-D objects according to the shape of the faces and the number of edges and vertices.	169					
		Sort regular and irregular polygons according to the number of sides.	184					
STATISTICS AND PROBABILITY (Data Analysis)	Collect, display and analyze data to solve problems.	Collect first-hand data and organize it using tally marks, line plots, charts, lists, to answer questions.	174, 198				Grade 2 Statistics: Data Tests 1–3, 5	
		Construct, label and interpret bar graphs to solve problems.	187				Grade 2 Statistics: Data Test 4	