

Mathletics Manitoba Curriculum

Activities (Courses) and Skill Quests



Grades K-2

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Mathletics

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Kindergarten

1 Number

1.1 Develop number sense.

K.N.1	
Say the number sequence by 1s, starting anywhere from 1 to 30 and from 10 to 1. Recite the number sequence from 1 to 30 and from 10 to 1. Name the number that comes after a given number, 1 to 9. Name the number that comes before a given number, 2 to 10. Recite number names from a given number to a stated number (forward – 1 to 10, backward – 10 to 1) using visual aids.	
Course Topics	Activities
Number	1 to 30
	Order Numbers to 10
	Before, After and Between 20

K.N.2	
Subitize and name familiar arrangements of 1 to 6 dots (or objects). Look briefly at a given familiar arrangement of 1 to 6 dots (or objects), and identify the number represented without counting. Identify the number represented by a given dot arrangement on a five frame, and describe the number's relationship to 5. Identify the number represented by a given dot arrangement on a five frame, and identify the numbers that are one more and one less.	
Course Topics	Activities
Teacher directed	

K.N.3	
Relate a numeral, 1 to 10, to its respective quantity. Construct a set of objects corresponding to a given numeral. Name the number for a set of objects. Hold up the appropriate number of fingers for a given numeral. Match numerals with their pictorial representations.	
Course Topics	Activities
Number	Count to 5

K.N.4	
Represent and describe numbers 2 to 10 in two parts, concretely and pictorially. Show a number as two parts, using fingers, counters, or other objects, and name the number of objects in each part. Show a number as two parts using pictures, and name the number of objects in each part.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Teacher directed	

K.N.5

Demonstrate an understanding of counting to 10 by indicating that the last number said identifies “how many”, showing that any set has only one count Answer the question, “How many are in the set?” using the last number counted in a set. Show that the count of the number of objects in a set does not change regardless of the order in which the objects are counted. Count the number of objects in a given set, rearrange the objects, predict the new count, and recount to verify the prediction.

Course Topics	Activities
Number	How Many?

K.N.6

Compare quantities, 1 to 10, using one-to-one correspondence, by ordering numbers representing different quantities. Construct a set to show more than, fewer than, or as many as a given set. Compare two sets through direct comparison, and describe the sets using words such as “more,” “fewer,” “as many as,” or “the same number.” Order quantities using objects, five frames, ten frames, or dot cards. Order, using at least two benchmarks, numerals 1 to 10 on a vertical or horizontal number line.

Course Topics	Activities
Number	Who has the Goods?
	More or Less?

2 Patterns and Relations

2.1 Use patterns to describe the world and solve problems.

K.PR.1	
Demonstrate an understanding of repeating patterns (two or three elements) by identifying, reproducing, extending, creating patterns using manipulatives, sounds, and actions. Distinguish between repeating patterns and non-repeating sequences in a set by identifying the part that repeats. Copy a repeating pattern (e.g., actions, sound, colour, size, shape, orientation) and describe the pattern. Extend a variety of repeating patterns to two more repetitions. Create a repeating pattern using manipulatives, musical instruments, or actions, and describe the pattern. Identify and describe a repeating pattern in the classroom, the school, and outdoors (e.g., in a familiar song, in a nursery rhyme).	
Course Topics	Activities
Patterns and Relations	Simple Patterns
	Missing it!
	Complete the Pattern
	Colour Patterns

3 Shape and Space

3.1 Use direct or indirect measurement to solve problems.

K.SS.1	
Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight), and volume (capacity). Compare the length (height) of two objects, and explain the comparison using the words “shorter,” “longer (taller),” or “almost the same.” Compare the mass (weight) of two objects, and explain the comparison using the words “lighter,” “heavier,” or “almost the same.” Compare the volume (capacity) of two objects, and explain the comparison using the words “less,” “more,” “bigger,” “smaller,” or “almost the same.”	
Course Topics	Activities
Shape and Space	Everyday Mass
	Filling Fast!
	Everyday Length
	Same and Different
	Which Holds More?

3.2 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

K.SS.2	
Sort 3-D objects using a single attribute. Sort a set of familiar 3-D objects using a single attribute, such as size or shape, and explain the sorting rule. Determine the difference between two pre-sorted sets by explaining a sorting rule used to sort them.	
Course Topics	Activities
Teacher directed	

K.SS.3	
Build and describe 3-D objects. Create a representation of a 3-D object using materials such as modelling clay and building blocks, and compare the representation to the original 3-D object. Describe a 3-D object using words such as “big,” “little,” “round,” “like a box,” and “like a can.”	
Course Topics	Activities
Shape and Space	Match the Object
	Match the Solid 1
	Match the Solid 2

Grade 1

1 Number

1.1 Develop number sense.

1.N.1	
Say the number sequence by: 1s forward and backward between any two given numbers (0 to 100), 2s to 30, forward starting at 0, 5s and 10s to 100, forward starting at 0	
Course Topics	Activities
Number-Counting	1 to 30
	Counting Forward
	Going Up
	Going Down
	Counting by Twos
	Counting by Fives
	Number Lines
Number-Comparing & Ordering	Number Line Order
	Groups of Two
	Groups of Five
	Order Numbers to 20
	Before, After & Between to 100
Topics	Skill Quests
Number sequences to 100	Counting by 1s to 100
	Skip counting by 2s to 30
	Skip counting by 5s to 100
	Skip counting by 10s to 100
	Skip counting by 2s, 5s & 10s

1.N.2	
Subitize and name familiar arrangements of 1 to 10 dots (or objects).	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Teacher directed	

1.N.3 Demonstrate an understanding of counting by: using the counting-on strategy, using parts or equal groups to count sets	
Course Topics	Activities
Number-Counting	How Many?
	Making Numbers Count
Topics	Skill Quests
Counting strategies	Counting collections to 20
	Counting collections to 50
	Counting collections to 100

1.N.4 Represent and describe numbers to 20, concretely, pictorially, and symbolically.	
Course Topics	Activities
Number-Addition & Subtraction	Adding to make 5 and 10
Number-Comparing & Ordering	Matching Numbers to 10
	Matching Numbers to 20
Topics	Skill Quests
Represent & describe numbers to 20	Connecting number names to 20
	Sequencing numbers to 20
	Partitioning numbers to 20

1.N.5 Compare and order sets containing up to 20 elements to solve problems using: referents, one-to-one correspondence	
Course Topics	Activities
Number-Comparing & Ordering	More or Less?
	Comparing Groups of Objects
	More, less or the same to 10
	More, less or the same to 20
Topics	Skill Quests
Compare & order sets up to 20	Comparing & ordering sets up to 20
	Exploring change in quantity up to 20

1.N.6 Estimate quantities to 20 by using referents.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Teacher directed	

1.N.7	
Demonstrate, concretely and pictorially, how a number, up to 30, can be represented by a variety of equal groups with and without singles.	
Course Topics	Activities
Number-Counting	Making Big Numbers Count
Number-Comparing & Ordering	Making Equal Groups
	Divide Into Equal Groups
	Groups
Topics	Skill Quests
Represent numbers to 30	Understanding the conservation of number
	Representing numbers to 30 in equal groups

1.N.8	
Identify the number, up to 20, that is one more, two more, one less, and two less than a given number.	
Course Topics	Activities
Number-Addition & Subtraction	1 more, 2 less
Topics	Skill Quests
Numbers more than & less than	Identifying numbers more than & less than

1.N.9	
Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially, and symbolically, by: using familiar and mathematical language to describe additive and subtractive actions from their experience, creating and solving problems in context that involve addition and subtraction, modelling addition and subtraction using a variety of concrete and visual representations, and recording the process symbolically	
Course Topics	Activities
Number-Addition & Subtraction	Problems: Add and Subtract
	Add and Subtract Using Graphs
	Adding to 10 Word Problems
Topics	Skill Quests
Addition & subtraction to 20	Adding to 20
	Adding to 20 by bridging to 10
	Subtracting within 20
	Subtracting within 20 by bridging to 10
	Adding & subtracting using a bar model
	Creating addition & subtraction word problems
	Finding fact families for addition & subtraction
	Adding & subtracting within 20 fluently

1.N.10

Describe and use mental mathematics strategies, including: counting on, counting back, using one more, one less, making 10, starting from known doubles, using addition to subtract to determine the basic addition and related subtraction facts to 18

Course Topics	Activities
Number-Addition & Subtraction	Adding to Ten
	All about Ten
	All about Twenty
	Additive Addition
	Addition
	Simple Subtraction
	Fact Families: Add and Subtract
	Related Facts 1
	Model Addition
	Addition Facts
	Model Subtraction
	Subtraction Facts to 18
Topics	Skill Quests
Addition & subtraction strategies	Making a 10
	Adding & subtracting to 18
	Adding & subtracting using doubles
	Introducing the commutative property of addition

2 Patterns and Relations (Patterns)

2.1 Use patterns to describe the world and solve problems.

1.PR.1	
Demonstrate an understanding of repeating patterns (two to four elements) by: describing, reproducing, extending, creating patterns using manipulatives, diagrams, sounds, and actions.	
Course Topics	Activities
Patterns and Relations	Simple Patterns
	Patterns and Relations
	Missing it!
	Colour Patterns
Topics	Skill Quests
Repeating patterns	Recognizing repeating patterns
	Reproducing repeating patterns
	Manipulating repeating patterns
	Extending repeating patterns
	Describing & creating repeating patterns

1.PR.2	
Translate repeating patterns from one representation to another.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Translate repeating patterns	Translating repeating patterns

3 Patterns and Relations (Variables and Equations)

3.1 Represent algebraic expressions in multiple ways.

1.PR.3 Describe equality as a balance and inequality as an imbalance, concretely and pictorially (0 to 20).	
Course Topics	Activities
Patterns and Relations	Balancing Act
Topics	Skill Quests
Equality & inequality	Exploring equality & inequality

1.PR.4 Record equalities using the equal symbol (0 to 20).	
Course Topics	Activities
Number-Addition & Subtraction	Composing Additions to 20
Patterns and Relations	Balance Numbers to 20
Topics	Skill Quests
Record equalities	Recording equalities
	Solving addition & subtraction equality problems

4 Shape and Space (Measurement)

4.1 Use direct or indirect measurement to solve problems.

1.SS.1	
Demonstrate an understanding of measurement as a process of comparing by: identifying attributes that can be compared, ordering objects, making statements of comparison, filling, covering, or matching	
Course Topics	Activities
Shape and Space	Biggest Shape
	Filling Fast!
	Everyday Length
	Sort It
	Which Holds More?
Topics	Skill Quests
Measurement	Exploring length
	Exploring volume
	Exploring mass
	Exploring area

5 Shape and Space (3-D Objects and 2-D Shapes)

5.1 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

1.SS.2 Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.	
Course Topics	Activities
Shape and Space	Collect the Shapes
	Collect the Objects
	Collect Simple Shapes
Topics	Skill Quests
Sort 2-D shapes and 3-D objects	Sorting 2-D shapes
	Sorting 3-D objects

1.SS.3 Replicate composite 2-D shapes and 3-D objects.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Replicate composite 2-D shapes	Replicating composite 2-D shapes
Replicate composite 3-D objects	Replicating composite 3-D objects

1.SS.4 Compare 2-D shapes to parts of 3-D objects in the environment.	
Course Topics	Activities
Shape and Space	Match the Object
	Match the Solid 1
Topics	Skill Quests
Compare 2-D shapes to 3-D objects	Comparing 2-D shapes to parts of 3-D objects

Grade 2

1 Number

1.1 Develop number sense.

2.N.1	
Say the number sequence from 0 to 100 by: 2s, 5s, and 10s, forward and backward, using starting points that are multiples of 2, 5, and 10 respectively, 10s using starting points from 1 to 9, 2s starting from 1	
Course Topics	Activities
Number-Counting	Going Up
	Going Down
	Counting by Twos
	Counting by Fives
	Counting by Tens
	Count by 2s, 5s and 10s
Number-Place Value & Ordering	Number Line Order
	Number Lines
	Concept of zero
Number-Addition	Additive Addition
	Related Facts 1
	Model Addition
	Add 3 Numbers Using Bonds to 10
	Doubles and Halves to 20
	Doubles and Near Doubles
	Doubles and Halves to 10
Number-Subtraction	Simple Subtraction
Topics	Skill Quests
Number sequences	Counting by 2s to 100
	Counting by 2s to 100 from any number
	Counting by 5s to 100
	Counting by 10s to 100
	Counting by 10s to 100 from any number
	Counting in 2s, 5s or 10s
	Counting a sum of money to 100¢

2.N.2	
Demonstrate if a number (up to 100) is even or odd.	
Course Topics	Activities
Number-Place Value & Ordering	Odd or Even
Topics	Skill Quests
Model and identify even & odd numbers	Modelling and identifying even & odd numbers

2.N.3 Describe order or relative position using ordinal numbers.	
Course Topics	Activities
Number-Counting	1st to 31st
	Ordinal Numbers
Topics	Skill Quests
Ordinal numbers	Introducing ordinal numbers

2.N.4 Represent and describe numbers to 100, concretely, pictorially, and symbolically.	
Course Topics	Activities
Number-Counting	Everyday Money
	Reading Numbers to 30
	Skip Counting with coins
Topics	Skill Quests
Represent numbers to 100	Connecting number names to 100
	Counting to 100
	Representing numbers to 100 using a tally
	Using coins to represent numbers to 100

2.N.5 Compare and order numbers up to 100.	
Course Topics	Activities
Number-Place Value & Ordering	Arranging Numbers
	Greater or Less to 100
Topics	Skill Quests
Compare & order numbers to 100	Comparing & ordering numbers to 100

2.N.6 Estimate quantities to 100 using referents.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Teacher directed	

2.N.7	
Illustrate, concretely and pictorially, the meaning of place value for numbers to 100.	
Course Topics	Activities
Number-Place Value & Ordering	Making Numbers Count
	Making Big Numbers Count
	Make Numbers Count
	Place value 1
	Repartition Two-digit Numbers
Topics	Skill Quests
Place value of numbers to 100	Standard partitioning of numbers to 100
	Non-standard partitioning of numbers to 100
Place value problems: 2-digit numbers	Solving place value problems with 2-digit numbers

2.N.8	
Demonstrate and explain the effect of adding zero to or subtracting zero from any number.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Add & subtract a zero	Adding & subtracting a zero

2.N.9	
Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by: using personal strategies for adding and subtracting with and without the support of manipulatives, creating and solving problems that involve addition and subtraction, explaining that the order in which numbers are added does not affect the sum, explaining that the order in which numbers are subtracted may affect the difference	
Course Topics	Activities
Number-Addition	Add Three 1-Digit Numbers
	Add Two 2-Digit Numbers
	Commutative Property of Addition
	Adding In Any Order
	Add Numbers: Regroup a Ten
	Complements to 10, 20, 50
	Bar model problems 1
	Adding to 2-digit numbers
Number-Subtraction	Mental Subtraction
	Subtract Numbers
	Subtract Numbers: Regroup
	Compensation - Subtract
	Subtract Tens
	Repartition to Subtract
Topics	Skill Quests
Addition within 100	Adding 2-digit & 1-digit numbers using place value
	Adding by bridging to 10 with 2- & 1-digit numbers
	Adding tens to a 2-digit number using models

	Adding two 2-digit numbers using place value
	Adding two 2-digit numbers using a number line
	Adding by compensating
	Adding using compatible numbers
	Using number bonds to 100
Subtraction within 100	Subtracting by bridging to 10
	Subtracting 2- & 1-digit numbers using place value
	Subtracting using mixed strategies
	Subtracting tens from a 2-digit number
	Subtracting two 2-digit numbers using place value
	Subtracting two 2-digit numbers, number line
	Subtracting by compensating
Addition & subtraction within 100	Adding up to find the difference within 100
	Adding & subtracting place value patterns
	Adding & subtracting using mixed strategies
	Add/subtract two 2-digit numbers using place value
	Solving addition & subtraction word problems
	Writing number sentences to solve word problems
	Estimating sums & differences
	Judging the reasonableness of answers

2.N.10	
Apply mental mathematics strategies, including: using doubles, making 10, using one more, one less, using two more, two less, building on a known double, using addition for subtraction to develop recall of basic addition facts to 18 and related subtraction facts.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Addition & subtraction to 18	Addition & subtraction to 18
	Adding using doubles
	Subtracting using doubles
	Adding doubles or near doubles
	Fact families for addition and subtraction
	Using the commutative property of addition
	Counting on by bridging to 10
	Addition & subtraction facts - word problems

2 Patterns and Relations (Patterns)

2.1 Use patterns to describe the world and solve problems.

2.PR.1 Predict an element in a repeating pattern using a variety of strategies.	
Course Topics	Activities
Pattern, Relations, Variables, Equations	Simple Patterns
	Pattern Error
	Colour Patterns
Topics	Skill Quests
Explore repeating patterns	Creating & extending repeating patterns
	Identifying & manipulating repeating patterns
	Numeric patterns

2.PR.2 Demonstrate an understanding of increasing patterns by: describing, reproducing, extending, creating patterns using manipulatives, diagrams, sounds, and actions (numbers to 100).	
Course Topics	Activities
Number-Counting	Skip Counting
	Counting on a 100 grid
Pattern, Relations, Variables, Equations	Increasing Patterns
	Count Forward Patterns
Topics	Skill Quests
Explore increasing number patterns	Exploring addition & subtraction patterns to 100
	Exploring patterns to 100 using multiples
	Connecting objects & symbols to number patterns
	Exploring growing number patterns up to 100
	Exploring visual patterns

3 Patterns and Relations (Variables and Equations)

3.1 Represent algebraic expressions in multiple ways.

2.PR.3	
Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Equality & inequality	Introducing equality & inequality

2.PR.4	
Record equalities and inequalities symbolically using the equal symbol or the not-equal symbol.	
Course Topics	Activities
Pattern, Relations, Variables, Equations	Compare Numbers to 20
	Compare Numbers to 100
Topics	Skill Quests
Use the equal & not-equal symbol	Using the equal & not-equal symbol

4 Shape and Space (Measurement)

4.1 Use direct and indirect measurement to solve problems.

2.SS.1	
Relate the number of days to a week and the number of months to a year in a problem-solving context.	
Course Topics	Activities
Shape and Space-Measurement	Days of the Week
	Months of the Year
	Using a Calendar
Topics	Skill Quests
Explore the passing of time	Introducing and interpreting calendars
	Introducing days of the week & months of the year

2.SS.2	
Relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass (weight).	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Non-standard measurement	Non-standard measurement of length
	Non-standard measurement of mass

2.SS.3	
Compare and order objects by length, height, distance around, and mass (weight) using non-standard units, and make statements of comparison.	
Course Topics	Activities
Shape and Space-Measurement	Everyday Mass
	Comparing Length
	Everyday Length
Topics	Skill Quests
Compare & order objects	Comparing & ordering objects by length
	Comparing & ordering objects by mas

2.SS.4	
Measure length to the nearest non-standard unit by: using multiple copies of a unit, using a single copy of a unit (iteration process)	
Course Topics	Activities
Shape and Space-Measurement	Measuring length with blocks
Topics	Skill Quests
Measure length using non-standard units	Measuring length using nonstandard units

5 Shape and Space (3-D Objects and 2-D Shapes)

5.1 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

2.SS.6 Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.	
Course Topics	Activities
Shape & Space-3-D Objects & 2-D Shapes	Collect the Shapes
	Collect the Shapes 1
	Collect the Objects
	Collect the Objects 1
	Collect the Shapes 2
	Collect the Objects 2
	Collect Simple Shapes
Topics	Skill Quests
Sort 2-D shapes & 3-D objects	Sorting 2-D shapes
	Sorting 3-D objects

2.SS.7 Describe, compare, and construct 3-D objects, including: cubes, spheres, cones, cylinders, prisms, pyramids	
Course Topics	Activities
Shape & Space-3-D Objects & 2-D Shapes	Match the Object
	Match the Solid 1
	Match the Solid 2
Topics	Skill Quests
Introduce 3-D objects	Introducing spheres
	Introducing cones
	Introducing cubes
	Introducing cylinders
	Introducing pyramids
	Introducing prisms
	Identifying 3-D objects
	Identifying attributes of 3-D objects
	Comparing 3-D objects

2.SS.8 Describe, compare, and construct 2-D shapes, including: triangles, squares, rectangles, circles	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Identify and compare 2-D shapes	Naming 2-D shapes
	Comparing 2-D shapes

2.SS.9 Identify 2-D shapes as parts of 3-D objects in the environment.	
Course Topics	Activities
Shape & Space-3-D Objects & 2-D Shapes	Relate Shapes and Solids
Topics	Skill Quests
Identify 2-D shapes in the environment	Identifying 2-D shapes in the environment

6 Statistics and Probability (Data Analysis)

6.1 Collect, display, and analyze data to solve problems.

2.SP.1 Gather and record data about self and others to answer questions.	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Gather & record data	Gathering & recording data

2.SP.2 Construct and interpret concrete graphs and pictographs to solve problems.	
Course Topics	Activities
Statistics & Probability-Data Analysis	Add and Subtract Using Graphs
Topics	Skill Quests
Interpret data	Using pictographs
	Using basic graphs
	Using a tally
	Making a graph
	Answering questions about a graph



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