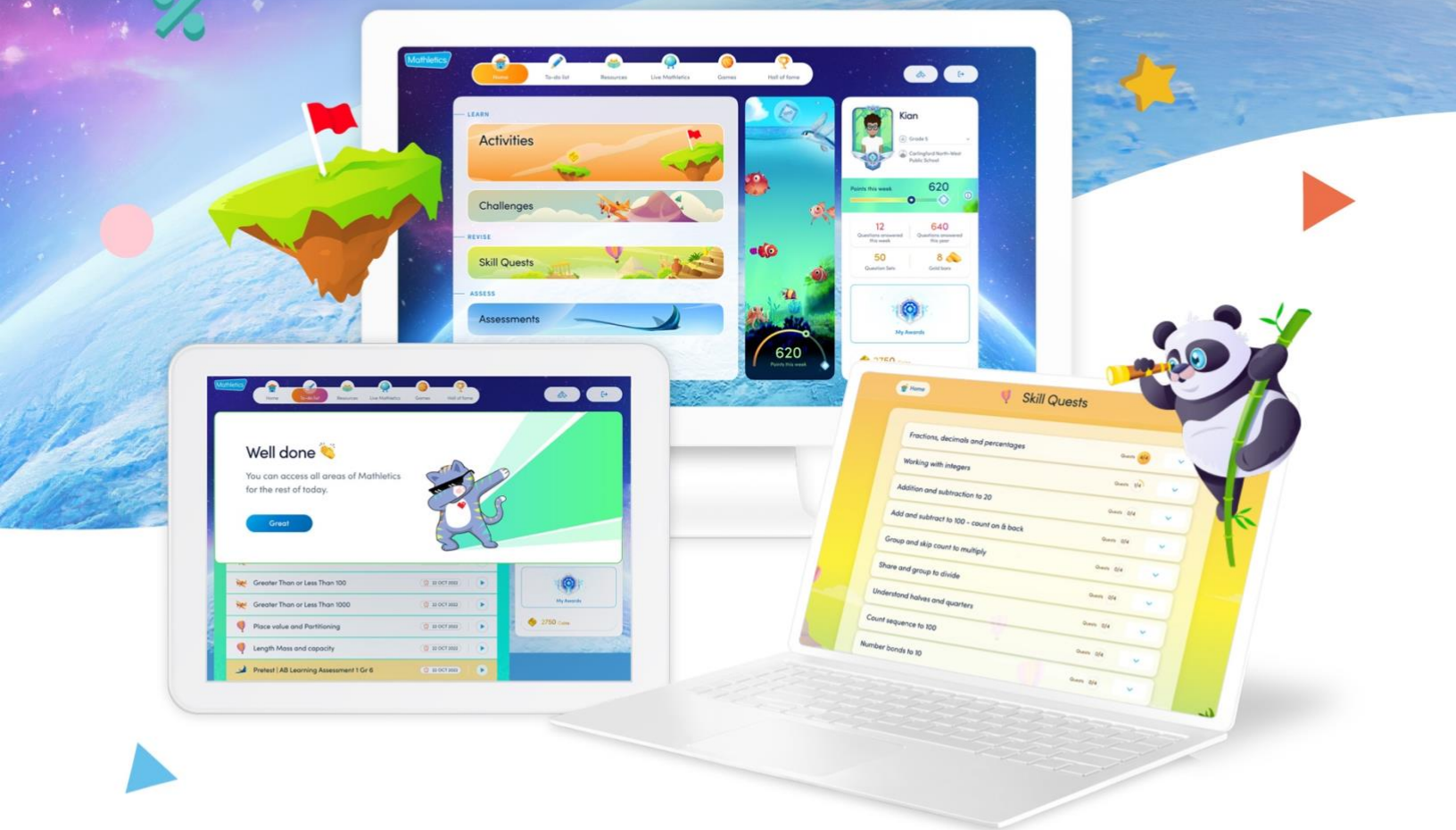
Mathletics

New Brunswick Curriculum

Activities (Courses) and Skill Quests



Grades K-5

July, 2025

Mathletics

Mathletics

New Brunswick Curriculum

Activities (Courses) & Skill Quests

July, 2025

Kindergarten **5**
1 Number **5**
1.1 Develop number sense 5
2 Patterns and Relations **6**
2.1 Use patterns to describe the world & solve problems 6
3 Shape & Space **7**
3.1 Use direct or indirect measurement to solve problems 7
3.2 3-D Objects and 2-D Shapes 7
Grade 1 ..... **8**
1 Number **8**
1.1 Develop number sense 8
2 Patterns and Relations **12**
2.1 Use patterns to describe the world and solve problems 12
2.2 Represent algebraic expressions in multiple ways 13
3 Shape & Space **14**
3.1 Use direct or indirect measurement to solve problems 14
3.2 Describe 3-D objects and 2-D shapes, and analyze the relationships 14
Grade 2 ..... **15**
1 Number **15**
1.1 Develop number sense 15
2 Patterns and Relations **19**
2.1 Use patterns to describe the world and solve problems 19
2.2 Represent algebraic expressions in multiple ways 20
3 Shape & Space **21**
3.1 Use direct or indirect measurement to solve problems 21
3.2 Describe 3-D objects and 2-D shapes, and analyze the relationships 22
4 Statistics and Probability **24**
4.1 Collect, display and analyze data to solve problems 24
Grade 3 ..... **25**
1 Number **25**
1.1 Develop number sense 25
2 Patterns and Relations (Patterns) **30**
2.1 Use patterns to describe the world and to solve problems 30

3 Patterns and Relations (Variables and Equations) 31
3.1 Represent algebraic expressions in multiple ways 31
4 Shape and Space (Measurement) 32
4.1 Use direct and indirect measurement to solve problems 32
5 Shape and Space (3-D Objects and 2-D Shapes) 34
5.1 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them 34
6 Statistics and Probability (Data Analysis) 35
6.1 Collect, display and analyze data to solve problems 35
Grade 4 36
1 Number 36
1.1 Develop number sense 36
2 Patterns and Relations (Patterns) 42
2.1 Use patterns to describe the world and to solve problems 42
3 Patterns and Relations (Variables and Equations) 43
3.1 Represent algebraic expressions in multiple ways 43
4 Shape and Space (Measurement) 44
4.1 Use direct and indirect measurement to solve problems 44
5 Shape and Space (3-D Objects and 2-D Shapes) 45
5.1 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them 45
6 Shape and Space (Transformations) 46
6.1 Describe and analyze position and motion of objects and shapes 46
7 Statistics and Probability (Data Analysis) 47
7.1 Collect, display and analyze data to solve problems 47
Grade 5 48
1 Number 48
1.1 Develop number sense 48
2 Patterns & Relations (Patterns) 53
2.1 Use patterns to describe the world and to solve problems 53
3 Patterns & Relations (Variables & Equations) 54
3.1 Represent algebraic expressions in multiple ways 54
4 Shape & Space (Measurement) 55

4.1 Use direct and indirect measurement to solve problems 55

5 Shape & Space (3-D Objects & 2-D Shapes) 57

5.1 Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them 57

6 Shape & Space (Transformations) 58

6.1 Describe and analyze position and motion of objects and shapes 58

7 Statistics & Probability (Data Analysis) 59

7.1 Collect, display and analyze data to solve problems 59

8 Statistics & Probability (Chance & Uncertainty) 60

8.1 Use experimental or theoretical probabilities to represent and solve problems involving uncertainty 60

Kindergarten

1 Number

1.1 Develop number sense

K.N1 Say the number sequence by 1s starting anywhere from 1 to 10 and from 10 to 1.	
Course Topics	**Activities**
Number	Count to 5
	Order Numbers to 10
	How Many?

K.N2 Recognize, at a glance, and name familiar arrangements of 1 to 5 objects or dots.	
Course Topics	**Activities**
Number	How many dots?

K.N3 Relate a numeral, 1 to 10, to its respective quantity.	
Course Topics	**Activities**
Number	Who has the Goods?
	Balancing Act

K.N4 Represent and describe numbers 2 to 10, concretely and pictorially.	
Course Topics	**Activities**
Teacher directed	

K.N5 Compare quantities, 1 to 10, using one-to-one correspondence.	
Course Topics	**Activities**
Number	More or Less?
	More, Less or the Same to 10

2 Patterns and Relations

2.1 Use patterns to describe the world & solve problems

K.PR1 Demonstrate an understanding of repeating patterns (two or three elements) by:	
Course Topics	**Activities**
Patterns and Relations	Complete the Pattern
	Missing it!
	Colour Patterns
	Simple Patterns

3 Shape & Space

3.1 Use direct or indirect measurement to solve problems

K.SS1 Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight) and volume (capacity).	
Course Topics	**Activities**
Shape and Space	Which Holds More?
	Filling Fast!
	Everyday Length
	Everyday Mass
	Same and Different
	How Heavy?

3.2 3-D Objects and 2-D Shapes

K.SS2 Sort 3-D objects using a single attribute.	
Course Topics	**Activities**
Shape and Space	Collect the Objects
	Collect the Objects 1

K.SS3 Build and describe 3-D objects.	
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.N1 Say the number sequence, 0 to 100, by: 1s forward and backward between any two given numbers; 2s to 20, forward starting at 0; 5s and 10s to 100, forward starting at 0.	
Course Topics	**Activities**
Number-Counting	Making Numbers Count
	1 to 30
	Making Big Numbers Count
	Number Lines
	Counting Forward
	Counting by Twos
	Counting by Fives
	Count by 2s, 5s and 10s
	Counting by Tens
	Going Up
	Going Down
	Counting Up to 20
	Before, After and Between to 20
	Counting Back Within 20
	Before, After & Between to 100
	Making Teen Numbers
Number-Comparing & Ordering	Matching Numbers to 10
	Matching Numbers to 20
	Arranging Numbers
Topics	**Skill Quests**
Number sequences to 100	Counting by 1s to 100
	Skip counting by 2s to 20
	Skip counting by 5s to 100
	Skip counting by 10s to 100
	Skip counting by 2s, 5s & 10s

1.N2 Recognize, at a glance, and name familiar arrangements of 1 to 10 objects or dots.	
Course Topics	**Activities**
Number-Counting	How Many?
Topics	**Skill Quests**
Teacher directed	

1.N3 Demonstrate an understanding of counting by: indicating that the last number said identifies “how many”; showing that any set has only one count; using the counting on strategy; using parts or equal groups to count sets.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Counting strategies	Counting collections to 20

1.N4 Represent and describe numbers to 20 concretely, pictorially and symbolically.	
Course Topics	**Activities**
Number-Counting	How many Blocks?
Number-Comparing & Ordering	Number Line Order
Topics	**Skill Quests**
Represent & describe numbers to 20	Number names to 20
	Sequencing numbers to 20
	Partitioning numbers to 20

1.N5 Compare 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
	Order Numbers 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.N6 Estimate quantities to 20 by using referents.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

1.N7 Demonstrate, concretely and pictorially, how a given number can be represented by a variety of equal groups with and without singles.	
Course Topics	**Activities**
Number-Comparing & Ordering	Groups of Two
	Groups of Five
	Making Equal Groups
	Divide Into Equal Groups
	Groups
Topics	**Skill Quests**
Represent numbers to 20	Representing numbers to 20 in equal groups

1.N8 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	Numbers more than & less than

1.N9 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; modeling addition and subtraction using a variety of concrete and visual representations, and recording the process symbolically.	
Course Topics	**Activities**
Number-Addition & Subtraction	Addition Facts
	Addition
	Model Addition
	Adding In Any Order
	Subtraction Facts to 18
	Simple Subtraction
	Model Subtraction
	Addictive Addition
	Add and Subtract Using Graphs
	Problems: Add and Subtract
	All about Ten
	All about Twenty
	Add and Subtract Problems
	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

1.N10 Describe and use mental mathematics strategies (memorization not intended), such as: counting on and counting back to determine the basic addition facts to 18 and related subtraction facts; making 10 to determine the basic addition facts to 18 and related subtraction facts; doubles to determine the basic addition facts to 18 and related subtraction facts; using addition to subtract to determine the basic addition facts to 18 and related subtraction facts.	
Course Topics	**Activities**
Number-Addition & Subtraction	Fact Families: Add and Subtract
	Related Facts 1
	Composing Additions to 20
	Adding to make 5 and 10
	Adding to Ten
	Doubles and Halves to 10
Topics	**Skill Quests**
Addition & subtraction strategies	Making a 10
	Adding & subtracting to 18
	Adding & subtracting using doubles
	Introducing commutative property of addition

2 Patterns and Relations

2.1 Use patterns to describe the world and solve problems

1.PR1 Demonstrate an understanding of repeating patterns (two to four elements) by: describing, reproducing, extending and creating patterns using manipulatives, diagrams, sounds and actions.	
Course Topics	**Activities**
Patterns and Relations	Simple Patterns
	Missing it!
	Pattern Error
	Balancing Act
	Colour Patterns
	Missing Values
	Increasing Patterns
	Patterns - Increasing
Topics	**Skill Quests**
Repeating patterns	Recognizing repeating patterns
	Reproducing repeating patterns
	Manipulating repeating patterns
	Extending repeating patterns
	Replicating repeating patterns
	Describing & creating repeating patterns

1.PR2 Translate repeating patterns from one representation to another.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Translate repeating patterns	Translating repeating patterns

2.2 Represent algebraic expressions in multiple ways

1.PR3 Describe equality as a balance and inequality as an imbalance, concretely and pictorially (0 to 20).	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Equality & inequality	Exploring equality & inequality

1.PR4 Record equalities using the equal symbol.	
Course Topics	**Activities**
Patterns and Relations	More, less or the same to 10
	More, less or the same to 20
Topics	**Skill Quests**
Record equalities	Recording equalities
	Solving addition & subtraction equality problems

3 Shape & Space

3.1 Use direct or indirect measurement to solve problems

1.SS1 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
Topics	**Skill Quests**
Measurement	Exploring length
	Exploring volume
	Exploring mass
	Exploring area

3.2 Describe 3-D objects and 2-D shapes, and analyze the relationships

1.SS2 Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.	
Course Topics	**Activities**
Shape and Space	Which Holds More?
	Sort It
	Collect the Shapes
	Collect the Objects
	Collect Simple Shapes
Topics	**Skill Quests**
Sort 2-D shapes & 3-D objects	Sorting 2-D shapes
	Sorting 3-D objects

1.SS3 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.SS4 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.N1 Say the number sequence, 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	Counting by Twos
	Counting by Fives
	Counting by Tens
	Count by 2s, 5s and 10s
	Counting on a 100 grid
	Skip Counting
	Skip Counting with coins
	Going Up
	Going Down
	Counting Forwards
	1 to 30
Number-Place Value & Ordering	Number Line Order
	Repartition Two-digit Numbers
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.N2 Demonstrate if a number (up to 100) is even or odd.	
Course Topics	**Activities**
Number-Counting	How Many?
Number-Place Value & Ordering	Odd and Even Numbers 1
	Odd or Even
Topics	**Skill Quests**
Even & odd numbers	Even & odd numbers

2.N3 Describe order or relative position using ordinal numbers (up to tenth).	
Course Topics	**Activities**
Number-Counting	Ordinal Numbers
	1st to 31st
Topics	**Skill Quests**
Ordinal numbers	Introducing ordinal numbers

2.N4 Represent and describe numbers to 100, concretely, pictorially and symbolically.	
Course Topics	**Activities**
Number-Counting	Reading Numbers to 30
Number-Place Value & Ordering	Model Numbers
Topics	**Skill Quests**
Numbers to 100	Number names to 100
	Counting collections to 50
	Counting to 100
	Numbers to 100 using a tally
	Using coins to represent numbers to 100

2.N5 Compare and order numbers up to 100.	
Course Topics	**Activities**
Number-Place Value & Ordering	Arranging Numbers
	Place value 1
	Greater or Less to 100
	Understanding Place Value 1
Pattern, Relations, Variables, Equations	Compare Numbers to 50
Topics	**Skill Quests**
Compare & order numbers to 100	Comparing & ordering numbers to 100
	Identifying numbers before & after up to 100

2.N6 Estimate quantities to 100 using referents.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

2.N7 Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.	
Course Topics	**Activities**
Number-Place Value & Ordering	Making Equal Groups
	Making Numbers Count

	Making Big Numbers Count
	Make Numbers Count
	Number Lines
Topics	**Skill Quests**
Place value partitioning up to 100	Place value partitioning of numbers to 50
	Non-standard partitioning of numbers to 100
Solve 2-digit place value problems	Solving place value problems with 2-digit numbers

2.N8	
Demonstrate and explain the effect of adding zero to or subtracting zero from any number.	
Course Topics	**Activities**
Number-Place Value & Ordering	Concept of zero
Topics	**Skill Quests**
Add & subtract a zero	Adding & subtracting a zero

2.N9	
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	Compensation – Add
	Add Three 1-Digit Numbers
	Add Numbers: Regroup a Ten
	Commutative Property of Addition
	Complements to 10, 20, 50
	Addictive Addition
	Add Two 2-Digit Numbers
	Adding to 2-digit numbers
	Adding In Any Order
	Model Addition
	Related Facts 1
	Doubles and Near Doubles
	Doubles and Halves to 20
	Doubles and Halves to 10
	Bar model problems 1
	Add 3 Numbers Using Bonds to 10
Number-Subtraction	Subtract Tens
	Compensation – Subtract
	Subtract Numbers
	Subtract Numbers: Regroup
	Simple Subtraction
	Mental Subtraction
Topics	**Skill Quests**
Addition to 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
	Add/subtract place value patterns
	Add/subtract using mixed strategies
	Add/subtract two 2-digit numbers using place value
	Solving addition & subtraction word problems
	Number sentences to solve word problems
	Estimating sums & differences
	Judging the reasonableness of answers

2.N10

Apply mental mathematics strategies, such as: using doubles to determine basic addition facts to 18 and related subtraction facts; making 10 to determine basic addition facts to 18 and related subtraction facts; one more, one less to determine basic addition facts to 18 and related subtraction facts; two more, two less to determine basic addition facts to 18 and related subtraction facts; building on a known double to determine basic addition facts to 18 and related subtraction facts; addition for subtraction to determine basic addition facts to 18 and related subtraction facts.

Course Topics	Activities
Number-Subtraction	Repartition to Subtract
Topics	**Skill Quests**
Addition & subtraction to 18	Addition & subtraction to 18
	Adding using doubles
	Subtracting using doubles
	Adding doubles or near doubles
	Finding fact families for addition & subtraction
	Using the commutative property of addition
	Counting on by bridging to 10
	Addition & subtraction facts — word problems

2 Patterns and Relations

2.1 Use patterns to describe the world and solve problems

2.PR1 Demonstrate an understanding of repeating patterns (three to five elements): identify the core of a given repeating pattern; describe and extend a given double attribute pattern; explain the rule used to create a given repeating non-numerical pattern; predict an element in a given repeating pattern using a variety of strategies; predict an element of a given repeating pattern and extend the pattern to verify the prediction.	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Count Forward Patterns
	Increasing Patterns
	Pattern Error
	Describing Patterns
	Missing Values
Topics	**Skill Quests**
Explore repeating patterns	Creating & extending repeating patterns
	Identifying repeating patterns
	Numeric patterns

2.PR2 Demonstrate an understanding of increasing patterns (for PR1 and PR2) by: describing, extending, comparing and creating patterns using manipulatives, diagrams, sounds and actions (numbers to 100).	
Course Topics	**Activities**
Teacher directed	
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

2.2 Represent algebraic expressions in multiple ways

2.PR3 Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Balancing Act
Topics	**Skill Quests**
Equality & inequality	Introducing equality & inequality
2.PR4 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 symbols	Using the equal & not-equal symbols

3 Shape & Space

3.1 Use direct or indirect measurement to solve problems

2.SS1 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	Using a Calendar
	Days of the Week
	Months of the Year
Topics	**Skill Quests**
Explore the passing of time	Calendars
	Days of the week & months of the year

2.SS2 Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight).	
Course Topics	**Activities**
Shape and Space-Measurement	Everyday Length
	Comparing Length
	Everyday Mass
	How Long is That?
	Measuring length with blocks
Topics	**Skill Quests**
Non-standard measurement	Non-standard measurement of length
	Non-standard measurement of mass

2.SS3 Compare and order objects by length, height, distance around and mass (weight) using nonstandard units, and make statements of comparison.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Compare & order objects	Comparing & ordering objects by length
	Comparing & ordering objects by mass

2.SS4 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**
Teacher directed	
Topics	**Skill Quests**
Measure length using non-standard units	Measuring length using non-standard units

2.SS5 Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

3.2 Describe 3-D objects and 2-D shapes, and analyze the relationships

2.SS6 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	Sort It
	Collect the Objects
	Collect the Objects 1
	Collect the Objects 2
	Collect Simple Shapes
	Collect the Shapes
	Collect the Shapes 1
	Collect the Shapes 2
Topics	**Skill Quests**
Sort 2-D shapes & 3-D objects	Sorting 2-D shapes
	Sorting 3-D shapes

2.SS7 Describe, compare and construct 3-D objects, including: cubes; spheres; cones; cylinders; pyramids.	
Course Topics	**Activities**
Teacher directed	
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.SS8 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.SS9 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
	Match the Object
	Match the Solid 1
	Match the Solid 2
Topics	**Skill Quests**
Identify 2-D shapes in the environment	Identifying 2-D shapes in the environment

4 Statistics and Probability

4.1 Collect, display and analyze data to solve problems

2.SP1 Gather and record data about self and others to answer questions.	
Course Topics	**Activities**
Statistics & Probability-Data Analysis	Tallies
	Making Graphs
	Sorting Data
Topics	**Skill Quests**
Gather & record data	Gathering & recording data

2.SP2 Construct and interpret concrete graphs and pictographs to solve problems.	
Course Topics	**Activities**
Statistics & Probability-Data Analysis	Pictographs
	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

Grade 3

1 Number

1.1 Develop number sense

3.N1 Say the number sequence forward and backward from 0 to 1000 by: 5s, 10s, or 100s, using any starting point; 3s using starting points that are multiples of 3; 4s using starting points that are multiples of 4; 25s, using starting points that are multiples of 25.	
Course Topics	**Activities**
Number-Counting and Ordering	Counting by Fives
	Counting by Tens
	Skip Counting
	Skip Counting with coins
	Money
	Who has the Money?
Topics	**Skill Quests**
Count to 1000	Counting by 5s to 1000, forward & backward
	Counting by 10s to 1000, forward & backward
	Counting by 100s to 1000, forward & backward
	Counting by 1s to 1000
	Skip counting by 3s
	Skip counting by 4s
	Skip counting by 25s

3.N2 Represent and describe numbers to 1000, concretely, pictorially and symbolically	
Course Topics	**Activities**
Number-Counting and Ordering	Model Numbers
	How many Blocks?
Topics	**Skill Quests**
Represent & describe numbers to 1000	Representing & describing numbers to 1000
	Connecting multiples of 10 & 100 to number words

3.N3 Compare and order numbers to 1000.	
Course Topics	**Activities**
Number-Counting and Ordering	Which is Bigger?
	Which is Smaller?
	Compare Numbers to 100
	Ascending Order
	Descending Order
Topics	**Skill Quests**

Compare & order numbers to 1000	Identifying numbers before & after within 1000
	Comparing numbers to 1000
	Ordering numbers to 1000

3.N4 Estimate quantities less than 1000 using referents.	
Course Topics	**Activities**
Number-Counting and Ordering	Nearest 10?
	Nearest 100?
Topics	**Skill Quests**
Estimate quantities less than 1000	Estimating quantities using referents

3.N5 Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.	
Course Topics	**Activities**
Number-Counting and Ordering	Place value 2
	Understanding Place Value 1
Topics	**Skill Quests**
Place value of numbers up to 1000	Identifying place value of numbers to 1000
	Using place value to partition 3-digit numbers
	Non-standard partitioning, 3-digit numbers
	Solving place value number problems

3.N6 Describe and apply mental mathematics strategies for adding two 2- digit numerals, such as: adding from left to right; taking one addend to the nearest multiple of ten and then compensating; using doubles.	
Course Topics	**Activities**
Number-Addition	Fact Families: Add and Subtract
	Add Numbers: Regroup a Ten
	Add Two 2-Digit Numbers
	Add Two 2-Digit Numbers: Regroup
	Columns that Add
	Magic Mental Addition
	Complements to 50 and 100
	Addition Facts
	Strategies for Column Addition
	Column Addition
	Addition Properties
Topics	**Skill Quests**
Add 2-digit numbers, mental strategies	Adding 2-digit numbers, jump strategy
	Adding 2-digit numbers, split strategy
	Adding 2-digit numbers, bridge to ten
	Adding 2-digit numbers, using place value
	Adding 2-digit numbers, rounding & compensating
	Adding tens to a 2-digit number, models

3.N7 Describe and apply mental mathematics strategies for subtracting two 2-digit numerals, such as: taking the subtrahend to the nearest multiple of ten and then compensating; thinking of addition; using doubles.	
Course Topics	**Activities**
Number-Subtraction	Subtraction Facts to 18
	Column Subtraction
	Magic Mental Subtraction
	Subtract Numbers
	Subtract Numbers: Regroup
	Columns that Subtract
	2-Digit Differences
	2-Digit Differences: Regroup
	Decompose Numbers to Subtract
Topics	**Skill Quests**
Subtract 2-digit numbers, mental methods	Subtracting 2-digit numbers, jump strategy
	Subtracting 2-digit numbers, split strategy
	Subtracting 2-digit numbers, bridging to ten
	Subtracting 2-digit numbers, round & compensate
	Subtracting tens from a 2-digit number, models

3.N8 Apply estimation strategies to predict sums and differences of two 2-digit numerals in a problem solving context.	
Course Topics	**Activities**
Number-Addition	Estimation: Add and Subtract
	Estimate Sums
Number-Subtraction	Estimate Differences
Topics	**Skill Quests**
Estimate: two 2-digit number problems	Estimating with two 2-digit number problems

3.N9 Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 (limited to 1, 2 and 3-digit numerals) by: using personal strategies for adding and subtracting with and without the support manipulatives; creating and solving problems that involve addition and subtraction concretely, pictorially and symbolically.	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Problems: Add and Subtract
Topics	**Skill Quests**
Addition & subtraction to 1000	Adding up to 1000 using jump strategy
	Adding up to 1000 using bridging to ten
	Adding up to 1000 using split strategy
	Adding up to 1000 using rounding & compensating
	Adding up to 1000 using formal algorithm
	Subtracting up to 1000 using jump strategy

	Subtracting up to 1000 using split strategy
	Subtracting up to 1000 using bridging to ten
	Subtracting up to 1000 - rounding & compensating
	Subtracting up to 1000 using formal algorithm
	Adding & subtracting to 1000 using jump strategy
	Adding & subtracting to 1000 using split strategy
	Representing add/subtract problems using bar model
	Solving addition & subtraction word problems

3.N10 Apply mental mathematics strategies and number properties, such as: using doubles; making 10; using the commutative property; using the property of zero; thinking addition for subtraction to recall basic addition facts to 18 and related subtraction facts.	
Course Topics	**Activities**
Number-Addition	Commutative Property of Addition
	Related Facts 1
Topics	**Skill Quests**
Mental strategies - add/sub facts to 18	Using the commutative property of addition
	Adding 3 single-digit numbers to 18
	Finding the difference between 2 numbers
	Using doubles & near doubles to add & subtract
	Mental strategies for addition & subtraction facts
	Adding & subtracting zero

3.N11 Demonstrate an understanding of multiplication to 5 × 5 by: representing and explaining multiplication using equal grouping and arrays; creating and solving problems in context that involve multiplication; modelling multiplication using concrete and visual representations, and recording the process symbolically; relating multiplication to repeated addition; relating multiplication to division.	
Course Topics	**Activities**
Number-Multiplication & Division	Groups
	Groups of Two
	Groups of Three
	Groups of Four
	Groups of Five
	Multiplication Arrays
	Arrays 1
	Arrays 2
	Model Multiplication to 5 x 5
	Frog Jump Multiplication
Topics	**Skill Quests**
Multiplication concepts to 5 × 5	Using repeated addition to multiply
	Exploring multiplication by 2
	Exploring multiplication by 3
	Exploring multiplication by 4
	Recalling multiplication facts to 5 × 5

3.N12 Demonstrate an understanding of division by: representing and explaining division using equal sharing and equal grouping; creating and solving problems in context that involve equal sharing and equal grouping; modelling equal sharing and equal grouping using concrete and visual representations, and recording the process symbolically; relating division to repeated subtraction; relating division to multiplication. (limited to division related to multiplication facts up to 5 × 5)	
Course Topics	**Activities**
Number-Multiplication & Division	Dividing Twos
	Dividing Threes
	Dividing Fours
	Dividing Fives
	Making Equal Groups
	Divide Into Equal Groups
	Fill the Jars
Topics	**Skill Quests**
Division concepts (up to 5 × 5 facts)	Using repeated subtraction to divide
	Dividing by 2
	Dividing by 3
	Dividing by 4
	Dividing by 5
Relating multiplication & division	Modelling multiplication & division relationship
	Solving problems using arrays
	Multiplication & division word problems

3.N13 Demonstrate an understanding of fractions by: explaining that a fraction represents a part of a whole; describing situations in which fractions are used; comparing fractions of the same whole with like denominators.	
Course Topics	**Activities**
Number-Fractions	Shape Fractions
	Model Fractions
	Is it half?
	Halves and Quarters
	Compare fractions 1a
	Compare fractions 1b
	Halve it!
Topics	**Skill Quests**
Fraction concepts	Finding halves
	Finding fourths
	Working with halves & fourths
	Working with thirds
	Working with sixths
	Working with thirds & sixths
	Working with fifths
	Working with eighths
	Working with halves, fourths & eighths
	Working with halves, thirds, fourths
	Representing simple fractions
	Ordering & comparing fractions

2 Patterns and Relations (Patterns)

2.1 Use patterns to describe the world and to solve problems

3.PR1 Demonstrate an understanding of increasing patterns by: describing; extending; comparing; creating patterns using manipulatives, diagrams, sounds and actions (numbers to 1000).	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Count Forward Patterns
	Count Backward Patterns
	Increasing Patterns
	Pick the Next Number
	Describing Patterns
Topics	**Skill Quests**
Increasing patterns	Working with increasing number patterns to 100
	Working with increasing number patterns to 1000
	Working with visual patterns

3.PR2 Demonstrate an understanding of decreasing patterns by: describing; extending; comparing; creating patterns using manipulatives, diagrams, sounds and actions (numbers to 1000).	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Pick the Next Number
Topics	**Skill Quests**
Decreasing patterns	Working with decreasing number patterns within 100
	Working with decreasing number pattern within 1000

3 Patterns and Relations (Variables and Equations)

3.1 Represent algebraic expressions in multiple ways

3.PR3 Solve one-step addition and subtraction equations involving symbols representing an unknown number	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Missing Values
	Bar model problems 1
	Bar model problems 2
	Word problems with letters
	Solve Equations: Add, Subtract 1
	Find the Missing Number 1
Topics	**Skill Quests**
One-step add/sub problems with unknowns	One-step number problems with unknowns up to 20
	One-step number problems with unknowns up to 100

4 Shape and Space (Measurement)

4.1 Use direct and indirect measurement to solve problems

3.SS1 Relate the passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months, years)	
Course Topics	**Activities**
Shape and Measurement (Time)	Days of the Week
	Months of the Year
	Using a Calendar
Topics	**Skill Quests**
Understand passage of time	Understanding passage of time concepts
	Introducing time in hours, minutes & seconds

3.SS2 Relate the number of seconds to a minute, the number of minutes to an hour and the number of days to a month in a problem solving context	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Understand measures of time	Using calendars
	Solving problems related to units of time

3.SS3 Demonstrate an understanding of measuring length (cm, m) by: selecting and justifying referents for the units cm and m; modelling and describing the relationship between the units cm and m; estimating length using referents; measuring and recording length, width and height	
Course Topics	**Activities**
Shape and Measurement (Measurement)	Measuring Length
	How Long is That?
	Everyday Length
	Compare Length
	Compare Length 1
	Comparing Length
Topics	**Skill Quests**
Understand & measure length (m, cm)	Measuring in standard units: cm & m
	Selecting units of measurement: m, cm
	Ordering & comparing lengths: m, cm
	Converting between m & cm
	Estimating & measuring in cm
	Measuring length of 3-D objects

3.SS4 Demonstrate an understanding of measuring mass (g, kg) by: selecting and justifying referents for the units g and kg; modelling and describing the relationship between the units g and kg; estimating mass using referents; measuring and recording mass	
Course Topics	**Activities**
Shape and Measurement (Measurement)	How Heavy?
	Everyday Mass
Topics	**Skill Quests**
Understand & measure mass (kg, g)	Measuring mass: kilograms
	Measuring mass: grams
	Selecting units of measurement: kg, g
	Understanding relationships between kg & g

3.SS5 Demonstrate an understanding of perimeter of regular and irregular shapes by: estimating perimeter, using referents for cm or m; measuring and recording perimeter (cm, m); constructing different shapes for a given perimeter (cm, m); to demonstrate that many shapes are possible for a perimeter	
Course Topics	**Activities**
Shape and Measurement (Measurement)	Perimeter
	Perimeter of Shapes
Topics	**Skill Quests**
Understand & measure perimeter	Understanding & calculating perimeter

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

3.SS6 Describe 3-D objects according to the shape of the faces, and the number of edges and vertices	
Course Topics	**Activities**
Shape & Space (3-D Objects, 2-D Shapes)	How many Corners?
	How many Edges?
	How many Faces?
	Faces, Edges and Vertices
Topics	**Skill Quests**
3-D objects	Introducing the attributes of 3-D objects
	Introducing cubes
	Introducing cylinders
	Introducing spheres
	Introducing cones
	Introducing prisms & pyramids
	Describing the attributes of 3-D objects
	Comparing & sorting 3-D objects
	Making basic models of 3-D objects

3.SS7 Sort regular and irregular polygons, including: triangles; quadrilaterals; pentagons; hexagons; octagons according to the number of sides	
Course Topics	**Activities**
Shape & Space (3-D Objects, 2-D Shapes)	Collect the Shapes 2
	Collect the Polygons
Topics	**Skill Quests**
Sort & identify 2-D shapes	Comparing 2-D shapes
	Identifying & naming 2-D shapes
	Sorting 2-D shapes
Regular & irregular polygons	Understanding regular & irregular polygons

6 Statistics and Probability (Data Analysis)

6.1 Collect, display and analyze data to solve problems

3.SP1 Collect first-hand data and organize it using: tally marks; line plots; charts; lists to answer questions	
Course Topics	**Activities**
Statistics & Probability (Data Analysis)	Tallies
	Bar Graphs 1
	Sorting Data 1
	Bar Graphs 2
	Interpreting Tables
	Line Graphs: Interpretation
	Line Graphs: Reading
	Line Graphs: Explanation
Topics	**Skill Quests**
Organize first-hand data	Understanding & using line plots
	Understanding & using data in lists & tables
	Understanding the statistical process

3.SP2 Construct, label and interpret bar graphs to solve problems	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Bar graphs	Understanding & using bar graphs

Grade 4

1 Number

1.1 Develop number sense

4.N1 Represent and describe whole numbers to 10 000, concretely, pictorially and symbolically.	
Course Topics	**Activities**
Number-Place Value	Expanding Numbers
	Expanded Notation
	Place Value to Thousands
	Partition and Rename 1
	Place value 3
	Understanding Place Value 2
	Numbers from Words to Digits 1
	Numbers from Words to Digits 2
Topics	**Skill Quests**
Number concepts to 10 000	Reading & writing numbers to 10 000
	Understanding place value, 4-digit numbers
	Partitioning 4-digit numbers

4.N2 Compare and order numbers to 10 000	
Course Topics	**Activities**
Number-Place Value	Ascending Order
	Descending Order
	Which Is Greater?
	Which Is Less?
Topics	**Skill Quests**
Compare & order numbers to 10 000	Identifying numbers before & after to 10 000
	Identifying missing numbers to 10 000
	Comparing & ordering numbers to 10 000

4.N3 Demonstrate an understanding of addition of numbers with sums to 10 000 and their corresponding subtractions (limited to 3- and 4- digit numerals) by: using personal strategies for adding and subtracting; estimating sums and differences; solving problems involving addition and subtraction	
Course Topics	**Activities**
Number-Addition & Subtraction	3-Digit Differences
	3-Digit Differences with Zeros
	3-Digit Differences: 1 Regrouping
	3-Digit Differences: 2 Regroupings
	Estimate Sums
	Estimate Differences

	Add 3-Digit Numbers
	Add 3-Digit Numbers: Regroup
	Add Three 2-Digit Numbers: Regroup
	Add Three 3-Digit Numbers: Regroup
	Add Multi-Digit Numbers 1
	Subtracting Colossal Columns
	Adding Colossal Columns
	Estimation: Add and Subtract
	Budgeting
Topics	**Skill Quests**
Addition to 10 000	Adding up to 10 000 using number line
	Adding up to 10 000 using place value
	Adding up to 10 000 using a split strategy
	Adding up to 10 000 using rounding & compensating
	Adding up to 10 000 using algorithm
	Choosing mixed addition strategies
Subtraction to 10 000	Subtracting up to 10 000 using number line
	Subtracting up to 10 000 using place value
	Subtracting up to 10 000 using a split strategy
	Subtracting up to 10 000 using round & compensate
	Subtracting up to 10 000 using algorithms
	Choosing mixed subtraction strategies
Add & subtract word problems to 10 000	Solving addition & subtraction word problems

4.N4 Explain the properties of 0 and 1 for multiplication and the property of 1 for division	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

4.N5 Describe and apply mental mathematics strategies, such as: skip counting from a known fact; using doubling or halving; using doubling or halving and adding or subtracting one more group; using patterns in the 9s facts to determine basic multiplication facts to 9 × 9 and related division facts	
Course Topics	**Activities**
Number-Multiplication & Division	Multiplication Grids
	Missing Numbers: x and ÷ facts
	Equivalent Facts: Multiply
	Fact Families: Multiply and Divide
	Multiply and Divide Problems 1
	Problems: Multiply and Divide
	Word Problems: Multiply and Divide
	Divisibility Tests
	Divisibility Tests (2, 5, 10)
	Divisibility Tests (3, 4, 9)
	Double and Halve to Multiply

Topics	Skill Quests
Multiplication facts to 9 × 9	Exploring multiplication by 2
	Exploring multiplication by 3
	Exploring multiplication by 4
	Exploring multiplication by 5
	Exploring multiplication by 6
	Exploring multiplication by 7
	Exploring multiplication by 8
	Exploring multiplication by 9
	Recalling multiplication facts to 7 × 7
Division facts to 81 ÷ 9	Dividing by 2 & 5
	Dividing by 3 & 6
	Dividing by 4 and 8
	Dividing by 9
Multiplication & division facts	Recall multiplication & division facts to 7 × 7
	Understand relationship, multiplication & division

4.N6 Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by: using personal strategies for multiplication with and without concrete materials; using arrays to represent multiplication; connecting concrete representations to symbolic representations; estimating products	
Course Topics	**Activities**
Number-Multiplication	Multiplication Arrays
	Multiply: 1-Digit Number
	Multiply: 1-Digit Number, Regroup
	Multiply: 2-Digit by 1-Digit
	Multiply Multiples of 10
	Multiply More Multiples of 10
	Times Tables
	Multiplication Properties
	Groups of Six
	Groups of Seven
	Groups of Eight
	Groups of Nine
	Groups of Ten
Number-Multiplication & Division	Arrays 1
	Arrays 2
	Multiply 3 single-digit numbers
Topics	**Skill Quests**
Multiplication, 2- or 3-digit by 1-digit	Multiplying 2- or 3-digits by 1-digit, place value
	Multiplying 2- or 3-digits by 1-digit, doubling
	Multiplying 2- or 3-digits by 1-digit, area model
	Multiplying 2- or 3-digits by 1-digit, factoring
	Multiplying 2- or 3-digits by 1-digit, algorithm
	Multiply to 3-digits x 1-digit, expanded algorithm
	Multiply to 3-digits x 1-digit, round to estimate
	Multiplying by multiples of 10 & 100

4.N7 Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by: using personal strategies for dividing with and without concrete materials; estimating quotients; relating division to multiplication	
Course Topics	**Activities**
Number-Division	Division Facts
	Division Facts 1
	Remainders by Arrays
	Divide: 1-Digit Divisor 1
	Divide: 1-Digit Divisor 2
	Divide: 1-Digit Divisor, Remainder
	Dividing Twos
	Dividing Threes
	Dividing Fours
	Dividing Fives
	Dividing Sixes
	Dividing Sevens
	Dividing Eights
	Dividing Nines
	Dividing Tens
	Short Division
	Long Division
Number-Multiplication & Division	Estimation: Multiply and Divide
Topics	**Skill Quests**
Division, 2-digit by 1-digit	Dividing 2-digits by 1-digit, models
	Dividing 2-digits by 1-digit, halving
	Dividing 2-digits by 1-digit, related facts
	Dividing 2-digits by 1-digit, inverse relationship
	Dividing 2-digits by 1-digit, extended algorithm
	Dividing 2-digits by 1-digit, algorithm
	Dividing 2-digits by 1-digit, round to estimate
	Dividing by 1 using bar models

4.N8 Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to: name and record fractions for the parts of a whole or a set; compare and order fractions; model and explain that for different wholes, two identical fractions may not represent the same quantity; provide examples of where fractions are used	
Course Topics	**Activities**
Number-Fractions	What Fraction is Shaded?
	Identifying Fractions on a Number Line
	Comparing Fractions 1
	Compare Fractions 2
	Equivalent Fractions
	Fraction Fruit Sets 1
	Partition into Equal Parts
	Counting with Fractions on a Number Line
	Ordering Fractions
	Equivalent Fraction Wall 1

Topics	Skill Quests
Represent fractions less than/equal to 1	Introducing the terms numerator & denominator
	Understanding fractions
	Representing halves, fourths & eighths
	Representing thirds & sixths
	Representing fifths
	Representing tenths
	Representing eighths
Compare & order fractions	Comparing & ordering unit fractions with models
	Comparing & ordering common fractions with models
	Comparing fractions with the same numerator
	Comparing fractions with the same denominator

4.N9 Describe and represent decimals (tenths and hundredths) concretely, pictorially and symbolically	
Course Topics	**Activities**
Number-Decimals	Decimals on the Number Line
	Decimal Order 1
	Decimal Place Value
	Comparing Decimals 1
	Decimals from Words to Digits 1
Topics	**Skill Quests**
Decimals to hundredths	Introducing decimal notation
	Introducing decimal tenths
	Introducing decimal hundredths

4.N10 Relate decimals to fractions (to hundredths)	
Course Topics	**Activities**
Number-Decimals	Decimals to Fractions 1
	Decimals to Fractions 2
Topics	**Skill Quests**
Connect decimals & fractions	Connecting decimals & fractions, tenths
	Connecting decimals & fractions, hundredths
	Connecting decimals & fractions, up to hundredths

4.N11 Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by: using compatible numbers; estimating sums and differences; using mental math strategies to solve problems	
Course Topics	**Activities**
Number-Decimals	Rounding Decimals 1
	Nearest Whole Number
	Decimal Complements
	Add Decimals 1
	Subtract Decimals 1
Topics	**Skill Quests**

Add & subtract decimals to hundredths	Adding decimals to tenths
	Subtracting decimals to tenths
	Adding decimals to hundredths
	Subtracting decimals to hundredths
	Estimating decimal sums & differences
	Adding & subtracting decimal word problems
Use decimals in the context of money	Using decimals in money
	Estimating & calculating change
	Solving word problems involving money

2 Patterns and Relations (Patterns)

2.1 Use patterns to describe the world and to solve problems

4.PR1 Identify and describe patterns found in tables and charts, including a multiplication chart	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Decreasing Patterns
	Increasing Patterns
	Describing Patterns
	Missing it!
	Pick the Next Number
	Pattern Error
Topics	**Skill Quests**
Patterns in tables & charts	Exploring increasing number patterns
	Identifying number patterns up to 1000
	Investigating number sequences

4.PR2 Reproduce a pattern shown in a table or chart using concrete materials	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Different representations in patterns	Relating patterns to tables or charts
	Creating addition patterns from a given rule
	Creating multiplication patterns from a given rule

4.PR3 Represent and describe patterns and relationships using charts and tables to solve problems	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Use patterns to solve problems	Using patterns to solve problems
	Identifying & describing additive number patterns

4.PR4 Identify and explain mathematical relationships using charts and diagrams to solve problems	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Venn Diagram1
Topics	**Skill Quests**
Use Venn & Carroll diagrams	Introducing Venn diagrams
	Introducing Carroll diagrams
	Relating Carroll & Venn diagrams
	Describing pattern rules

3 Patterns and Relations (Variables and Equations)

3.1 Represent algebraic expressions in multiple ways

4.PR5 Express a given problem as an equation in which a symbol is used to represent an unknown number	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Missing Numbers: Variables
	Missing Values
	I am Thinking of a Number!
	Find the Missing Number 1
	Missing Values: Decimals
Topics	**Skill Quests**
Express a problem as an equation	Matching equations to word problems
	Using symbols to represent unknown numbers

4.PR6 Solve one-step equations involving a symbol to represent an unknown number	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Problems: Add and Subtract 2
	Problems: Multiply and Divide 1
Topics	**Skill Quests**
One-step equations using all operations	Finding missing numbers: add & subtract equations
	One-step equations: addition & subtraction
	One-step equations: multiplication & division
	One-step equations: balancing number sentences

4 Shape and Space (Measurement)

4.1 Use direct and indirect measurement to solve problems

4.SS1 Read and record time using digital and analog clocks, including 24-hour clocks	
Course Topics	**Activities**
Shape and Space-Measurement	24 Hour Time
	Five Minute Times
	What is the Time?
	Time Mentals
	What Time Will it Be?
	Hours and Minutes
	Elapsed Time
Topics	**Skill Quests**
Read & record time	Telling time to the hour & half hour
	Telling time to the quarter hour
	Telling time to 5 minutes
	Telling time to the minute
	Using am & pm notation
	Using 24-hour time

4.SS2 Read and record calendar dates in a variety of formats	
Course Topics	**Activities**
Shape and Space-Measurement	Using a Calendar
Topics	**Skill Quests**
Read & record calendar dates	Reading & writing calendar dates

4.SS3 Demonstrate an understanding of area of regular and irregular 2-D shapes by: recognizing that area is measured in square units; selecting and justifying referents for the units cm2 or m2; estimating area by using referents for cm2 or m2; determining and recording area (cm2 or m2); constructing different rectangles for a given area (cm2 or m2) in order to demonstrate that many different rectangles may have the same area	
Course Topics	**Activities**
Shape and Space-Measurement	Area of Shapes
	Area: Squares and Rectangles
	Equal Areas
Topics	**Skill Quests**
Understand area	Measuring area using non-standard units
	Introducing formal units for area: cm^2
	Introducing formal units for area: m^2
Measure the area of rectangles	Estimating & measuring areas of rectangles
	Comparing & ordering rectangular areas
	Finding the area of a rectangle, arrays
	Finding the area of a rectangle, area model
	Finding the area of rectangles, formula

Approximate area, non-rectilinear shapes	Approximating areas, non-rectilinear shapes

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

4.SS4 Describe and construct rectangular and triangular prisms	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Understand prisms	Introducing rectangular & triangular prisms
	Identifying prisms in the environment
	Comparing & describing prisms
	Connecting nets to rectangular & triangular prisms

6 Shape and Space (Transformations)

6.1 Describe and analyze position and motion of objects and shapes

4.SS5 Demonstrate an understanding of line symmetry by: identifying symmetrical 2-D shapes; creating symmetrical 2-D shapes; drawing one or more lines of symmetry in a 2-D shape	
Course Topics	**Activities**
Shape & Space (3-D Objects, 2-D Shapes)	How many Faces?
	How many Edges?
	How many Corners?
	Faces, Edges and Vertices
	Faces, Edges, and Vertices 1
	What Prism am I?
Topics	**Skill Quests**
Recognize & draw line symmetry	Recognizing line symmetry
	Identifying & drawing lines of symmetry

4.SS6 Demonstrate an understanding of congruency, concretely and pictorially	
Course Topics	**Activities**
Shape and Space-Measurement	Symmetry
	Symmetry or Not?
Topics	**Skill Quests**
Congruent shapes	Understanding congruent shapes

7 Statistics and Probability (Data Analysis)

7.1 Collect, display and analyze data to solve problems

4.SP1 Demonstrate an understanding of many-to-one correspondence	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Understand many-to-one correspondence	Comparing pictographs - different correspondence

4.SP2 Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions	
Course Topics	**Activities**
Statistics & Probability (Data Analysis)	Pictographs
	Bar Graphs 1
	Bar Graphs 2
	Divided Bar Graphs
	Reading from a Bar Chart
Topics	**Skill Quests**
Graphs using many-to-one correspondence	Using pictographs with many-to-one correspondence
	Compare pictographs with different correspondence
	Using bar graphs with many-to-one correspondence

Grade 5

1 Number

1.1 Develop number sense

5.N1 Represent and describe whole numbers to 1 000 000	
Course Topics	**Activities**
Number-Place Value	Numbers in Words
	Numbers from Words to Digits 1
	Numbers from Words to Digits 2
	Numbers from Words to Digits 3
	Place value 3
	Place Value to Millions
	Expanding Numbers
	Partition and rename 3
	Expanded Notation
	Place Value 1 (×10 and ÷10)
	Place Value 2 (×10 and ÷10)
Topics	**Skill Quests**
Number concepts to 1 000 000	Reading & writing numbers up to 6 digits
	Comparing & ordering numbers up to 6 digits
	Identifying place value of 6-digit numbers
	Using place value to partition 6-digit numbers

5.N2 Use estimation strategies including: front-end rounding; compensation; compatible numbers in problem-solving contexts	
Course Topics	**Activities**
Number-Estimation	Estimation: Add and Subtract
	Estimation: Multiply and Divide
	Estimate Products
	Estimate Sums
	Estimate Differences
	Estimate Quotients
	Estimate Decimal Differences 1
	Estimate Decimal Differences 2
	Estimate Decimal Sums 1
	Estimate Decimal Sums 2
	Nearest 100?
	Nearest 1000?
	Nearest Whole Number
	Rounding Numbers
	Rounding Numbers for Division
Topics	**Skill Quests**

Strategies for estimation & computation	Rounding numbers up to 6-digits
	Round numbers to estimate - addition & subtraction
	Checking calculations when adding & subtracting
	Using compensation to add & subtract
	Rounding numbers to estimate - multiply & divide
	Checking calculations when multiplying & dividing

5.N3 Apply mental mathematics strategies and number properties, such as: skip counting from a known fact; using doubling or halving; using patterns in the 9s facts; using repeated doubling or halving to determine answers for basic multiplication facts to 81 and related division facts	
Course Topics	**Activities**
Number-Multiplication	Double and Halve to Multiply
	Multiplication Arrays
	Arrays 1
	Arrays 2
	Multiplication Grids
	Equivalent Facts: Multiply
	Multiplication Properties
	Related Facts 2
	Mental Methods Multiplication
Number-Division	Division Facts
	Compatible Numbers
Topics	**Skill Quests**
Multiplication facts to 9 x 9	Multiplication facts for 2
	Multiplication facts for 3
	Multiplication facts for 4
	Multiplication facts for 5
	Multiplication facts for 6
	Multiplication facts for 7
	Multiplication facts for 8
	Multiplication facts for 9
	Multiplying by 1 or 0
	Recalling multiplication facts to 9 x 9
	Relationship between multiplication & division
Division facts to 81 ÷ 9	Dividing by 2 & 5
	Dividing by 3 & 6
	Dividing by 4 & 8
	Dividing by 9
	Recall multiplication & division facts to 9 x 9

5.N4 Apply mental mathematics strategies for multiplication, such as: annexing then adding zero; halving and doubling; using the distributive property	
Course Topics	**Activities**
Number-Multiplication	Multiplying by 10, 100, 1000
	Mental Methods Multiplication 2
	Mental Methods Multiplication 3

Topics	Skill Quests
Mental strategies to multiply	Multiplying by multiples of 10, 100 & 1000
	Multiplying using doubling
	Multiplying using doubling & halving
	Multiplying using distributive property

5.N5 Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems	
Course Topics	**Activities**
Number-Multiplication	Multiply: 1-Digit Number
	Multiply: 1-Digit Number, Regroup
	Multiply: 2-Digit by 1-Digit
	Multiply 2 Digits Area Model
Topics	**Skill Quests**
Multiply 2-digits by up to 2-digits	Multiplying 2-digits by 2-digits, area model
	Multiplying 2-digits by 2-digits, factorizing
	Multiplying 2-digits by 2-digits, use known facts
	Multiplying 2-digits by 2-digits, formal algorithm
	Solving multiplication word problems

5.N6 Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems	
Course Topics	**Activities**
Number-Division	Mental Methods Division
	Mental Methods Division 1
	Mental Methods Division 2
	Divide: 1-Digit Divisor 1
	Divide: 1-Digit Divisor 2
	Divide: 1-Digit Divisor, Remainder
	Tests of Divisibility 1
	Divisibility Tests
	Divisibility Tests (2, 5, 10)
	Divisibility Tests (3, 4, 9)
	Remainders by Arrays
	Short Division
Topics	**Skill Quests**
Divide up to 3-digits by 1-digit	Dividing up to 3-digit by 1-digit, no remainders
	Dividing by partitioning, no remainders
	Dividing 3-digits by 1-digit, factoring
	Finding the remainder, 2-digits by 1-digit
	Dividing by partitioning with remainders
	Dividing 3-digits by 1-digit, formal algorithm

5.N7 Demonstrate an understanding of fractions by using concrete and pictorial representations to: create sets of equivalent fractions; compare fractions with like and unlike denominators	
Course Topics	**Activities**
Number-Fractions	Shading Equivalent Fractions
	Ordering Fractions
	Simplifying Fractions
	Comparing Fractions 1
	Comparing Fractions 2
	Equivalent Fractions
	Equivalent Fractions on a Number Line 2
	Equivalent Fraction Wall 2
	Fractions of a Collection 1
	Fractions of a Collection 2
	Fraction Length Models 1
	Fraction Length Models 2
	Fraction Wall Labelling 1
	Fraction Wall Labelling 2
	Partition into Equal Parts
Topics	**Skill Quests**
Equivalent fractions	Finding equivalent fractions with models
	Finding equivalent fractions using multiplication
	Finding equivalent fractions using a number line
Compare & order fractions	Comparing unit fractions, different denominators
	Comparing & ordering proper fractions

5.N8 Describe and represent decimals (tenths, hundredths, thousandths) concretely, pictorially and symbolically	
Course Topics	**Activities**
Number-Decimals-Place Value	Rounding Decimals
	Rounding Decimals 1
	Rounding Decimals 2
	Decimal Place Value
	Decimals on a Number Line
	Decimal Complements
	Decimals on the Number Line
	Decimals from Words to Digits 2
Topics	**Skill Quests**
Decimals to thousandths	Understanding decimals to thousandths
	Partitioning decimal numbers to thousandths

5.N9 Relate decimals to fractions (to thousandths)	
Course Topics	**Activities**
Number-Fractions	Fractions to Decimals
	Fractions to Decimals 2
	Fraction to Terminating Decimal
Number-Decimals-Place Value	Decimals to Fractions 1
	Decimals to Fractions 2
Topics	**Skill Quests**
Relate decimals & fractions	Relating decimals & fractions up to thousandths

5.N10 Compare and order decimals (to thousandths), by using: benchmarks; place value; equivalent decimals	
Course Topics	**Activities**
Number-Decimals-Place Value	Comparing Decimals 1
	Comparing Decimals 2
	Decimal Order
	Comparing Decimals
Topics	**Skill Quests**
Compare & order decimals to thousandths	Comparing & ordering decimals to thousandths

5.N11 Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths)	
Course Topics	**Activities**
Number-Adding & Subtracting Decimals	Subtract Decimals 1
	Subtracting Decimals
	Subtract Decimals 2
	Add Decimals 1
	Add Decimals 2
	Adding and Subtracting Decimals
	Adding Decimals
Topics	**Skill Quests**
Add & subtract decimals to thousandths	Adding decimals to thousandths
	Subtracting decimals to thousandths
	Adding & subtracting decimal word problems
	Estimating sums & differences to thousandths

2 Patterns & Relations (Patterns)

2.1 Use patterns to describe the world and to solve problems

5.PR1 Determine the pattern rule to make predictions about subsequent terms (elements)	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Pattern Error
	Describing Patterns
	I am Thinking of a Number!
Topics	**Skill Quests**
Represent, analyze & apply patterns	Additive & subtractive number patterns
	Generating add/subtract patterns from a given rule
	Working with repeating number & shape patterns
	Multiplication & division number patterns
	Modelling number patterns from a table of values
	Writing pattern rules as algebraic expressions
	Working with shape patterns & rules

3 Patterns & Relations (Variables & Equations)

3.1 Represent algebraic expressions in multiple ways

5.PR2 Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions	
Course Topics	**Activities**
Pattern, Relations, Variables, Equations	Solve Equations: Add, Subtract 1
	Solve Equations: Multiply, Divide 1
	Problems: Multiply and Divide 1
	Problems: Add and Subtract 1
	Find the Missing Number 1
	Find the Missing Number 2
	Missing Values
	Missing Numbers
	Magic Symbols 1
	Magic Symbols 2
Topics	**Skill Quests**
One-step equations with variables	Writing one-step equations using variables
	Solving one-step equations & word problems
	Solving one-step equations using bar model
	Expressing word problems as equations

4 Shape & Space (Measurement)

4.1 Use direct and indirect measurement to solve problems

5.SS1 Design and construct different rectangles, given either perimeter or area, or both (whole numbers), and draw conclusions	
Course Topics	**Activities**
Shape and Space (Measurement)	Perimeter
	Perimeter, Area, Dimension Change
	Perimeter: Squares and Rectangles
	Perimeter of Shapes
	Perimeter Detectives 1
	Equal Areas
Topics	**Skill Quests**
Perimeter of rectangles	Introducing perimeter
Area of rectangles, formula	Finding the area of rectangles, formula
Relationship between area & perimeter	Solving perimeter & area problems

5.SS2 Demonstrate an understanding of measuring length (mm and km) by: selecting and justifying referents for the unit mm and km; modelling and describing the relationship between mm and cm units, and between mm and m units; modelling and describing the relationship between m and km units	
Course Topics	**Activities**
Shape and Space (Measurement)	Converting cm and mm
	Converting Units of Length
	Measuring Length
	Centimetres and Metres
Topics	**Skill Quests**
Measure length in millimetres	Introducing millimetres
Measure length in kilometres	Introducing kilometres
Relationship between mm, cm, m & km	Recording length in decimal notation
	Comparing lengths in mm, cm, m & km
	Ordering lengths in mm, cm, m & km
	Converting between mm, cm, m & km
	Selecting units of length: mm, cm, m & km

5.SS3 Demonstrate an understanding of volume by: selecting and justifying referents for cm3 or m3 units; estimating volume by using referents for cm3 or m3; measuring and recording volume (cm3 or m3); constructing rectangular prisms for a given volume	
Course Topics	**Activities**
Shape and Space (Measurement)	Volume: Cuboid 1
	Volume: Rectangular Prisms 1
Topics	**Skill Quests**

Measure volume in cubic units	Using unit cubes to measure volume
	Using cubic cm & m to measure volume
	Estimating volume using cubic cm & m

5.SS4 Demonstrate an understanding of capacity by: describing the relationship between mL and L; selecting and justifying referents for mL or L units; estimating capacity by using referents for mL or L; measuring and recording capacity (mL or L)	
Course Topics	**Activities**
Shape and Space (Measurement)	Millilitres and Litres
	Capacity Word Problems
Topics	**Skill Quests**
Measure capacity in L & mL	Introducing litres & millilitres
	Using millilitres & litres as references
	Measuring capacity in mL
	Estimating capacity using mL & L
	Selecting units to measure capacity (mL, L)

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

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

5.SS5 Describe and provide examples of edges and faces of 3-D objects and sides of 2-D shapes that are: parallel; intersecting; perpendicular; vertical or horizontal	
Course Topics	**Activities**
Shape & Space (3-D Objects & 2-D Shapes)	Faces, Edges, and Vertices 1
	Faces, Edges and Vertices
	What Pair of Lines Am I?
Topics	**Skill Quests**
Features of 2-D shapes & 3-D objects	Identifying features on 3-D objects
	Identifying features on 2-D shapes

5.SS6 Identify and sort quadrilaterals, including: rectangles; squares; trapezoids; parallelograms; rhombuses according to their attributes	
Course Topics	**Activities**
Shape & Space (3-D Objects & 2-D Shapes)	Collect the Shapes 2
	Collect the Objects 2
	Shapes
	Collect the Polygons
Topics	**Skill Quests**
Identify & sort quadrilaterals	Sorting & naming quadrilaterals
	Classifying quadrilaterals

6 Shape & Space (Transformations)

6.1 Describe and analyze position and motion of objects and shapes

5.SS7 Perform a single transformation (translation, rotation, or reflection) of a 2-D shape (with and without technology) and draw and describe the image	
Course Topics	**Activities**
Shape & Space (3-D Objects & 2-D Shapes)	Transformations
	Flip, Slide, Turn
Topics	**Skill Quests**
Teacher directed	

5.SS8 Identify a single transformation, including a translation, rotation, and reflection of 2-D shapes	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Single transformations of 2-D shapes	Introducing slides/translations
	Introducing flips/reflections
	Introducing turns/rotations
	One-step translations, reflections & rotations

7 Statistics & Probability (Data Analysis)

7.1 Collect, display and analyze data to solve problems

5.SP1 Differentiate between first-hand and second-hand data	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

5.SP2 Construct and interpret double bar graphs to draw conclusions	
Course Topics	**Activities**
Statistics & Probability	Interpreting Tables
	Analyzing Data
	Bar Graphs 2
Topics	**Skill Quests**
Double bar graphs	Interpreting data, double bar graphs
	Representing data, double bar graphs

8 Statistics & Probability (Chance & Uncertainty)

8.1 Use experimental or theoretical probabilities to represent and solve problems involving uncertainty

5.SP3 Describe the likelihood of a single outcome occurring using words, such as: impossible; possible; certain	
Course Topics	**Activities**
Statistics & Probability	What are the Chances?
	How many Combinations?
	Possible Outcomes
	Most Likely and Least Likely
	Fair Games
Topics	**Skill Quests**
Likelihood of single outcomes	Exploring the language of probability

5.SP4 Compare the likelihood of two possible outcomes occurring using words, such as: less likely; equally likely; more likely	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Likelihood of two possible outcomes	Describing chances of everyday events
	Understanding chance experiments, equal outcomes
	Understanding chance experiments, unequal outcomes
	Understand chance experiments, independent events

Mathletics

For more information about Mathletics,
contact our friendly team.

www.mathletics.com/contact

3P Learning