Mathematics Outcomes Progression P-3

Supplementary Document

NOVA SCOTIA
NOUVELLE-ÉCOSSE

2021

MATHEMATICS PROGRESSION: Primary to Grade 3

The **Foundational Outcomes** identified in this document represent outcomes determined to be relevant for future learning in mathematics. Decisions about foundational outcomes were made in consultation with teachers, provincial mathematics team, Board and Regional Centre staff. In response to feedback, some changes have been made to the 2020-21 foundational outcomes to ensure continuity of learning within and across grade levels. The foundational outcomes are meant to guide teachers in making decisions about creating learning experiences that will prepare and engage their learners in a responsive way. However, a teacher's professional judgment remains the most important guide to effectively responding to the needs of their learners.

Colour coding has been used to identify outcomes and indicators as foundational (**green**), optional (**orange**) or non-foundational (**red**) for the 2021-2022 school year.

NUMBER PROGRESSION: WHOLE NUMBERS				
TOPIC	**MATHEMATICS PRIMARY**	**MATHEMATICS 1**	**MATHEMATICS 2**	**MATHEMATICS 3**
SAYING NUMBER SEQUENCES AND SKIP COUNTING	**N01:** Students will be expected to say the number sequence by 1s, from 1 to 20 - by 1s, starting anywhere from 1 to 10 and - from 10 to 1	**N01:** Students will be expected to say the number sequence - by 1s, forward and backward between any two given numbers, 0 to 100 2s to 20, forward starting at 0 5s to 100, forward starting at 0, using a hundred chart or a number line 10s to 100, forward starting at 0, using a hundred chart or a number line	**N01:** Students will be expected to say the number sequence by 1s, forward and backward, starting from any point to 200 2s, forward and backward, starting from any point to 100 5s and 10s, forward and backward, using starting points that are multiples of 5 and 10 respectively to 100 10s, starting from any point, to 100	**N01:** Students will be expected to say the number sequence forward and backward by 1s through transitions to 1000 2s, 5s, 10s, or 100s, using any starting point to 1000 3s, using starting points that are multiples of 3 up to 100 4s, using starting points that are multiples of 4 up to 100 25s, using starting points that are multiples of 25 up to 200
MEANINGFUL COUNTING	N06: Students will be expected to demonstrate an understanding of counting to 10.	N03: Students will be expected to demonstrate an understanding of counting to 20 by indicating that the last number said identifies "how many" showing that any set has only one count using the counting-on strategy N07: Students will be expected to demonstrate an understanding of conservation of number for up to 20 objects.	N04: Students will be expected to represent and partition numbers to 100. N04.01 represent a given number using concrete materials, such as ten-frames and base-ten materials N04.02 represent a given number using coins (pennies, nickels, dimes, and quarters) N04.03 represent a given number using tallies N04.04 represent a given number pictorially (both print and digital) N04.05 find examples of a given number in the environment	**N01:** Students will be expected to say the number sequence forward and backward by 1s through transitions to 1000 2s, 5s, 10s, or 100s, using any starting point to 1000 3s, using starting points that are multiples of 3 up to 100 4s, using starting points that are multiples of 4 up to 100 25s, using starting points that are multiples of 25 up to 200

			N04.06 represent a given number using expressions (e.g., 24 + 6, 15 + 15, 40 − 10) N04.07 read a number (0–100) given in symbolic or word form N04.08 record in words a given number (0–20) N04.09 record, symbolically, any number (0–100).	
ESTIMATE QUANTITY	n/a	N06: Students will be expected to estimate quantities to 20 by using referents.	N06: Students will be expected to estimate quantities to 100 by using referents. N06.01 estimate a given quantity by comparing it to a referent (known quantity) N06.02 estimate the number of groups of ten in a given quantity using 10 as a referent N06.03 select between two possible estimates for a given quantity and explain the choice	N04: Students will be expected to estimate quantities less than 1000 using referents. N04.01 estimate the number of groups of ten in a given quantity using 10 as a referent (known quantity) N04.02 estimate the number of groups of a hundred in a given quantity using 100 as a referent N04.03 estimate a given quantity by comparing it to a referent N04.04 select an estimate for a given quantity by choosing among three possible choices N04. 5select and justify a referent for determining an estimate for a given quantity
ORDINALS	n/a	n/a	N03: Students will be expected to describe order or relative position using ordinal numbers (up to tenth).	PR01: Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, comparing, and creating numerical (numbers to 1000) patterns and non-numerical patterns using manipulatives, diagrams, sounds, and actions.
SUBITIZING	N02: Students will be expected to recognize, at a glance, and name the quantity represented by familiar arrangements of one to five objects or dots.	N02: Students will be expected to recognize, at a glance, and name the quantity represented by familiar arrangements of 1 to 10 objects or dots.	n/a	n/a
REPRESENTING AND PARTITIONING WHOLE NUMBERS	N04: Students will be expected to represent and describe numbers 2 to 10 in two parts, concretely and pictorially. N03: Students will be expected to relate a numeral, 1 to 10, to its respective quantity.	N04: Students will be expected to represent and partition numbers to 20. N07: Students will be expected to demonstrate an understanding of conservation of number for up to 20 objects.	N04: Students will be expected to represent and partition numbers to 100. N04.01 represent a given number using concrete materials, such as ten-frames and base-ten materials	N02: Students will be expected to represent and partition numbers to 1000.

			N04.02 represent a given number using coins (pennies, nickels, dimes, and quarters) N04.03 represent a given number using tallies N04.04 represent a given number pictorially (both print and digital) N04.05 find examples of a given number in the environment N04.06 represent a given number using expressions (e.g., 24 + 6, 15 + 15, 40 − 10) N04.07 read a number (0–100) given in symbolic or word form N04.08 record in words a given number (0–20) N04.09 record, symbolically, any number (0–100).	
COMPARING AND ORDERING WHOLE NUMBERS	N05: Students will be expected to compare quantities, 1 to 10, using one-to-one correspondence.	N05: Students will be expected to compare sets containing up to 20 objects to solve problems using referents and one-to-one correspondence N08: Students will be expected to identify the number, up to 20, that is one more, two more, one less, and two less than a given number.	N05: Students will be expected to compare and order numbers up to 100. N05.01 compare and order a given set of numbers in ascending or descending order and verify the result using a hundred chart, number line, ten-frames, or by making references to place value N05.02 identify errors in a given ordered sequence N05.03 identify missing numbers in a given hundred chart N05.04 identify errors in a given hundred chart	N03: Students will be expected to compare and order numbers up to 1000. N03.01 place a given set of numbers in ascending or descending order and verify the result using a number chart or other models N03.02 create as many different three-digit numerals as possible, given three different digits. place the numbers in ascending or descending order N03.03 identify errors in a given ordered sequence N03.04 identify missing numbers in parts of a given number chart and on a number line N03.05 identify errors in a given number chart and on a number line N03.06 place numbers on a number line containing benchmark numbers for the purpose of comparison N03.07 compare numbers based on a variety of methods, and record the comparison using words and symbols (=, >, and <)
PLACE VALUE: WHOLE NUMBERS	n/a	n/a	N07: Students will be expected to illustrate, concretely and pictorially, the meaning of place value for numerals to 100.	N05: Students will be expected to illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.

NUMBER PROGRESSION: FRACTIONS				
TOPIC	MATHEMATICS PRIMARY	MATHEMATICS 1	MATHEMATICS 2	MATHEMATICS 3
REPRESENTING FRACTIONS	n/a	n/a	n/a	N13: Students will be expected to 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
COMPARING AND ORDERING FRACTIONS	n/a	n/a	n/a	N13: Students will be expected to 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

NUMBER PROGRESSION: OPERATIONS ADDING AND SUBTRACTING				
TOPIC	MATHEMATICS PRIMARY	MATHEMATICS 1	MATHEMATICS 2	MATHEMATICS 3
ADDITION AND SUBTRACTION: BASIC FACTS	n/a	n/a	N10: Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts. N10.01 explain the mental mathematics strategy that could be used to determine basic addition facts. • Doubles Facts • Plus One Facts • One-Apart (Near Doubles) Facts • Plus Two Facts • Plus Zero Facts • Make-10 Facts • Two-Apart Facts • Plus Three Facts N10.02 use and describe a personal strategy for determining a sum to 18 N10.03 quickly recall basic addition facts to 18 in a variety of contexts N10.04 explain the think-addition strategy used to determine a basic subtraction fact	N10: Students will be expected to apply mental mathematics strategies and number properties to develop quick recall of basic addition facts to 18 and related basic subtraction facts.

			N10.05 use and describe a personal strategy for determining the subtraction facts N08: Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number.	
ADDITION AND SUBTRACTION: MENTAL MATHEMATICS AND ESTIMATION	n/a	N08: Students will be expected to identify the number, up to 20, that is one more, two more, one less, and two less than a given number. N10: Students will be expected to use and describe strategies to determine sums and differences using manipulatives and visual aids. Strategies include ● counting on or counting back ● one more or one less ● making ten ● doubles ● near doubles N10.01 USe and describe your personal strategy to determine the sum . N10.02 use and describe a personal strategy to determine a difference N10.03 use and describe how two different strategies can be used to determine a sum or difference	N08: Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number. N10: Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts. N10.01 explain the mental mathematics strategy that could be used to determine basic addition facts. ● Doubles Facts ● Plus One Facts ● One-Apart (Near Doubles) Facts ● Plus Two Facts ● Plus Zero Facts ● Make-10 Facts ● Two-Apart Facts ● Plus Three Facts N10.02 use and describe a personal strategy for determining a sum to 18 N10.03 quickly recall basic addition facts to 18 in a variety of contexts N10.04 explain the think-addition strategy used to determine a basic subtraction fact N10.05 use and describe a personal strategy for determining the subtraction facts	N06: Students will be expected to describe and apply mental mathematics strategies for adding two two-digit numerals. N06.01 explain mental mathematics strategies that could be used to determine a sum. ● Ten and some more ● Tens and some more ● Quick addition ● Addition facts to 10 applied to multiples of 10 ● Addition on the hundred chart ● Adding on ● Make ten ● Compensation ● Compatible numbers N06.02 use and describe a personal strategy for determining a sum N06.03 determine a sum of two two-digit numerals efficiently, using mental mathematics strategies N07: Students will be expected to describe and apply mental mathematics strategies for subtracting two two-digit numerals. N07.01 explain mental mathematics strategies that could be used to determine a difference. ● Facts with minuends of 10 or less applied to multiples of 10 ● Quick subtraction ● Subtraction on the hundred chart ● Compensation ● Back through ten N07.02 use and describe a personal strategy for determining a difference N07.03 determine a difference of two two-digit numerals efficiently, using mental mathematics strategies

				N08: Students will be expected to apply estimation strategies to predict sums and differences of one-, two-, and three-digit numerals in a problem-solving context. N08.01 explain estimation strategies that could be used to determine an approximate sum or difference N08.02 use and describe a strategy for determining an estimate N08.03 estimate the solution for a given story problem involving the sum or difference of up to two three-digit numerals N10: Students will be expected to apply mental mathematics strategies and number properties to develop quick recall of basic addition facts to 18 and related basic subtraction facts.
ADDITION AND SUBTRACTION: CALCULATIONS	n/a	N09: Students will be expected to demonstrate an understanding of the addition of two one-digit numbers and the corresponding subtraction, concretely, pictorially, and symbolically, in join, separate, equalize/compare, and part-part-whole situations. N10: Students will be expected to use and describe strategies to determine sums and differences using manipulatives and visual aids. Strategies include ● counting on or counting back ● one more or one less ● making ten ● Doubles ● near doubles N10.01 USe and describe your personal strategy to determine the sum . N10.02 use and describe a personal strategy to determine a difference	N08: Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number. N09: Students will be expected to demonstrate an understanding of addition (limited to one- and two-digit numerals) with answers to 100 and the corresponding subtraction by -using personal strategies for adding and subtracting with and without the support of manipulates -creating and solving problems that involve addition and subtraction -explaining and demonstrating that the order in which numbers are added does not affect the sum -explaining and demonstrating that the order in which numbers are subtracted matters when finding a difference N09.01 solve a given story problem of any type by modelling it with materials or a diagram (both print and digital),	N09: Students will be expected to demonstrate an understanding of addition and subtraction of numbers (limited to one-, two-, and three-digit numerals) with answers to 1000 by ● using personal strategies for adding and subtracting with and without the support of manipulatives ● creating and solving problems in context that involve addition and subtraction of numbers concretely, pictorially, and symbolically N09.01 model the addition of two or more given numbers using concrete or visual representations and record the process symbolically N09.02 model the subtraction of two given numbers using concrete or visual representations and record the process symbolically N09.03 create an addition or subtraction story problem for a given solution N09.04 determine the sum of two given numbers using a personal

		N10.03 use and describe how two different strategies can be used to determine a sum or difference	and write a number sentence that represents the thinking in the solution N09.02 solve a given story problem of any type by writing a number expression and combining the numbers to complete the number sentences N09.03 match a number sentence to a given story problem N09.04 create an addition or a subtraction number sentence and a story problem for a given solution N09.05 model addition and subtraction using concrete materials or visual representations, and record the process symbolically N09.06 add a given set of numbers in two different ways and explain why the sum is the same N09.07 recognize and create equivalent addition and subtraction number sentences	strategy (e.g., for 326 + 48, record 300 + 60 + 14) N09.05 determine the difference of two given numbers using a personal strategy (e.g., for 127 − 38, record 127 − 20 − 10 − 8) N09.06 solve a given problem involving the sum or difference of two given numbers.

NUMBER PROGRESSION: OPERATIONS
MULTIPLICATION AND DIVISION

TOPIC	MATHEMATICS PRIMARY	MATHEMATICS 1	MATHEMATICS 2	MATHEMATICS 3
MULTIPLICATION AND DIVISION	n/a	n/a	n/a	N11: Students will be expected to 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 involves multiplication modelling • multiplication using concrete and visual representations and recording the process symbolically • relating multiplication to repeated addition • relating multiplication to division N12: Students will be expected to 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.)

N12.01 identify events from experience that can be described as equal sharing.
N12.02 identify events from experience that can be described as equal grouping
N12.03 illustrate, with counters or a diagram (both print and digital), a given story problem involving equal sharing, presented orally or through shared reading, and solve the problem
N12.04 illustrate, with counters or a diagram (both print and digital), a given story problem involving equal grouping, presented orally or through shared reading, and solve the problem
N12.05 listen to a story problem, represent the numbers using manipulatives or a diagram (both print and digital) and record the problem with a number sentence and/or expression
N12.06 create and illustrate with counters, a story problem for a given number sentence and/or expression
N12.07 represent a given division sentence and/or expression as repeated subtraction
N12.08 represent a given repeated subtraction as a division sentence
N12.09 relate division to multiplication by using arrays and writing related number sentences.
N12.10 solve a given problem involving division.

PATTERNS AND RELATIONS PROGRESSION				
TOPIC	**MATHEMATICS PRIMARY**	**MATHEMATICS 1**	**MATHEMATICS 2**	**MATHEMATICS 3**
REPEATING PATTERNS	PR01: Students will be expected to demonstrate an understanding of repeating patterns (two or three elements) by identifying, reproducing, extending, and creating patterns using manipulatives, sounds, and actions.	PR01: Students will be expected to demonstrate an understanding of repeating patterns (two to four elements) by describing, reproducing, extending, and creating patterns using manipulatives, diagrams, sounds, and actions. PR01.01 describe a given repeating pattern containing two to four elements in its core PR01.02 identify errors in a given repeating pattern PR01.03 identify the missing element(s) in a given repeating pattern PR01.04 create and describe a repeating pattern using a variety of manipulatives, musical instruments, and actions PR01.05 reproduce and extend a given repeating pattern using manipulatives, diagrams (both print and digital), sounds, and actions PR01.06 identify and describe a repeating pattern in the environment (e.g., classroom, outdoors) using everyday language PR01.07 identify repeating events (e.g., days of the week, birthdays, seasons) PR02: Students will be expected to translate repeating patterns from one representation to another.	PR01: Students will be expected to demonstrate an understanding of repeating patterns (three to five elements) by describing, extending, comparing, and creating patterns using manipulatives, diagrams, sounds, and actions. PR01.01 identify the core of a given repeating pattern PR01.02 describe and extend a given double attribute pattern PR01.03 create (both print and digital) a repeating non-numerical pattern and explain the rule PR01.04 predict an element of a given repeating pattern using a variety of strategies and extend the pattern up to the tenth element to verify the prediction PR01.05 translate a repeating pattern from one mode to another PR01.06 compare two given repeating patterns and describe how they are alike/different	n/a
INCREASING PATTERNS	n/a	n/a	**PR02:** Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, and creating numerical patterns (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds, and actions.	PR01: Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, comparing, and creating numerical (numbers to 1000) patterns and non-numerical patterns using manipulatives, diagrams, sounds, and actions.
DECREASING PATTERNS	n/a	n/a	n/a	PR02: Students will be expected to demonstrate an understanding of decreasing patterns by describing, extending, comparing, and creating numerical (numbers to 1000) patterns and non-numerical patterns using

			manipulatives, diagrams, sounds, and actions.
EQUALITY	N05: Students will be expected to compare quantities, 1 to 10, using one-to-one correspondence.	PR03: Students will be expected to describe equality as a balance and inequality as an imbalance, concretely and pictorially (0 to 20). PR04: Students will be expected to record equalities using the equal symbol. N05: Students will be expected to compare sets containing up to 20 objects to solve problems using referents and one-to-one correspondence.	PR03: Students will be expected to demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100). PR03.01 determine whether two given quantities of the same object (same shape and mass) are equal by using a balance scale PR03.02 construct and draw two unequal sets using the same object (same shape and mass) and explain the reasoning PR03.03 demonstrate how to change two given sets, equal in number, to create inequality PR03.04 choose from three or more given sets the one that does not have a quantity equal to the others and explain why PR04: Students will be expected to record equalities and inequalities symbolically, using the equal symbol or not equal symbol.	PR03: Students will be expected to solve one-step addition and subtraction equations involving symbols representing an unknown number.
VARIABLES	n/a	n/a	n/a	PR03: Students will be expected to solve one-step addition and subtraction equations involving symbols representing an unknown number.
		MEASUREMENT PROGRESSION		
TOPIC	**MATHEMATICS PRIMARY**	**MATHEMATICS 1**	**MATHEMATICS 2**	**MATHEMATICS 3**
LENGTH	M01: Students will be expected to use direct comparison to compare two objects based on a single attribute, such as length, mass, volume, and capacity.	**M01** Students will be expected to 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 M01.01: Identify common attributes, such as length, mass, volume, capacity, and area that could be used to compare a given set of two objects.	M02: Students will be expected to relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass. M03: Students will be expected to compare and order objects by length, height, distance around, and mass using non-standard units and make statements of comparison. Indicators: M03.01 estimate, measure, and record the length, height, distance around, or mass of a given object using non-standard units	M03: Students will be expected to demonstrate an understanding of measuring length (cm, m) by • selecting and justifying referents for the units centimetre or metre (cm, m) • modelling and describing the relationship between the units centimetre or metre (cm, m) • estimating length using referents • measuring and recording length, width, and height M05: Students will be expected to demonstrate an understanding of perimeter of regular, irregular, and

		M01.02: Compare and order two given objects and identify the attributes used to compare.	M03.02 compare and order the measure of two or more objects in ascending or descending order and explain the method of ordering	composite shapes by
		M01.03: Predict which object in a set is longest/shortest, determine by matching and explain the reasoning.		• estimating perimeter using referents for centimetre or metre (cm, m)
		M01.04: Predict which object in a set is heaviest/lightest, determine by comparing and explain the reasoning.	M04: Students will be expected to measure length to the nearest non-standard unit by using multiple copies of a unit and using a single copy of a unit (iteration process).	• measuring and recording perimeter (cm, m)
		M01.05: Predict which object in a set is largest/smallest, determine by comparing and explain the reasoning.	M04.01 explain why overlapping or leaving gaps does not result in accurate measures	• create different shapes for a given perimeter (cm, m) to demonstrate that many shapes are possible for a perimeter
		M01.06: Predict which object in a set holds the most/least, determine by filling and explain the reasoning.	M04.02 count the number of non-standard units required to measure the length of a given object using a single copy or multiple copies of a unit	M05.01 measure and record the perimeter of a given regular shape and explain the strategy used
		M01.07: Predict which figure in a set has the greatest/least area, determine by covering and explain the reasoning.	M04.03 estimate and measure a given object using multiple copies of a non-standard unit and using a single copy of the same unit many times, and explain the results	M05.02 measure and record the perimeter of a given irregular or composite shape, and explain the strategy used
			M04.04 estimate and measure, using non-standard units, a given length that is not a straight line.	M05.03 construct a shape for a given perimeter (cm, m)
				M05.04 construct or draw more than one shape for the same given perimeter
			M05: Students will be expected to demonstrate that changing the position of an object does not alter the measurements of its attributes.	M05.05 estimate the perimeter of a given shape (cm, m) using personal referents

MASS	M01: Students will be expected to use direct comparison to compare two objects based on a single attribute, such as length, mass, volume, and capacity.	M01 Students will be expected to 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 M01.01: Identify common attributes, such as length, mass, volume, capacity, and area that could be used to compare a given set of two objects. M01.02: Compare and order two given objects and identify the attributes used to compare. M01.03: Predict which object in a set is longest/shortest, determine by matching and explain the reasoning. M01.04: Predict which object in a set is heaviest/lightest, determine by comparing and explain the reasoning. M01.05: Predict which object in a set is largest/smallest, determine by comparing and explain the reasoning. M01.06: Predict which object in a set holds the most/least, determine by filling and explain the reasoning. M01.07: Predict which figure in a set has the greatest/least area, determine by covering and explain the reasoning.	M02: Students will be expected to relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass. M03: Students will be expected to compare and order objects by length, height, distance around, and mass using non-standard units and make statements of comparison. M03.01 estimate, measure, and record the length, height, distance around, or mass of a given object using non-standard units M03.02 compare and order the measure of two or more objects in ascending or descending order and explain the method of ordering M05: Students will be expected to demonstrate that changing the position of an object does not alter the measurements of its attributes.	M04: Students will be expected to demonstrate an understanding of measuring mass (g, kg) by • selecting and justifying referents for the units gram and kilogram (g, kg) • modelling and describing the relationship between the units gram and kilogram (g, kg) • estimating mass using referents • measuring and recording mass M04.01 provide a personal referent for one gram, and explain the choice M04.02 provide a personal referent for one kilogram, and explain the choice M04.03 match a given standard unit to a given referent M04.04 explain the relationship between 1000 grams and 1 kilogram using a model M04.05 estimate the mass of a given object using personal referents M04.06 measure, using a balance scale, and record the mass of given everyday objects using the units gram (g) and kilogram (kg) M04.07 provide examples of 3-D objects that have a mass of approximately 1 g, 100 g, and 1 kg M04.08 determine the mass of two given similar objects with different masses and explain the results M04.09 determine the mass of an object, change its shape, re-measure its mass, and explain the results
VOLUME	M01: Students will be expected to use direct comparison to compare two objects based on a single attribute, such as length, mass, volume, and capacity.	M01 Students will be expected to 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 M01.01: Identify common attributes, such as length, mass, volume,	n/a	n/a

		capacity, and area that could be used to compare a given set of two objects. M01.02: Compare and order two given objects and identify the attributes used to compare. M01.03: Predict which object in a set is longest/shortest, determine by matching and explain the reasoning. M01.04: Predict which object in a set is heaviest/lightest, determine by comparing and explain the reasoning. M01.05: Predict which object in a set is largest/smallest, determine by comparing and explain the reasoning. M01.06: Predict which object in a set holds the most/least, determine by filling and explain the reasoning. M01.07: Predict which figure in a set has the greatest/least area, determine by covering and explain the reasoning.		
CAPACITY	**M01:** Students will be expected to use direct comparison to compare two objects based on a single attribute, such as length, mass, volume, and capacity.	**M01** Students will be expected to 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 M01.01: Identify common attributes, such as length, mass, volume, capacity, and area that could be used to compare a given set of two objects. M01.02: Compare and order two given objects and identify the attributes used to compare. M01.03: Predict which object in a set is longest/shortest, determine by matching and explain the reasoning. M01.04: Predict which object in a set is heaviest/lightest, determine by comparing and explain the reasoning. M01.05: Predict which object in a set is largest/smallest, determine by comparing and explain the reasoning. M01.06: Predict which object in a set holds the most/least, determine by filling and explain the reasoning.	n/a	n/a

			M01.07: Predict which figure in a set has the greatest/least area, determine by covering and explain the reasoning.		
PERIMETER	n/a	n/a	M03: Students will be expected to compare and order objects by length, height, distance around, and mass using non-standard units and make statements of comparison. M03.01 estimate, measure, and record the length, height, distance around, or mass of a given object using non-standard units M03.02 compare and order the measure of two or more objects in ascending or descending order and explain the method of ordering	M05: Students will be expected to demonstrate an understanding of perimeter of regular, irregular, and composite shapes by • estimating perimeter using referents for centimetre or metre (cm, m) • measuring and recording perimeter (cm, m) • create different shapes for a given perimeter (cm, m) to demonstrate that many shapes are possible for a perimeter M05.01 measure and record the perimeter of a given regular shape and explain the strategy used M05.02 measure and record the perimeter of a given irregular or composite shape, and explain the strategy used M05.03 construct a shape for a given perimeter (cm, m) M05.04 construct or draw more than one shape for the same given perimeter M05.05 estimate the perimeter of a given shape (cm, m) using personal referents
AREA	n/a	**M01** Students will be expected to 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 M01.01: Identify common attributes, such as length, mass, volume, capacity, and area that could be used to compare a given set of two objects. M01.02: Compare and order two given objects and identify the attributes used to compare.	n/a	n/a

		M01.03: Predict which object in a set is longest/shortest, determine by matching and explain the reasoning. M01.04: Predict which object in a set is heaviest/lightest, determine by comparing and explain the reasoning. M01.05: Predict which object in a set is largest/smallest, determine by comparing and explain the reasoning. M01.06: Predict which object in a set holds the most/least, determine by filling and explain the reasoning. M01.07: Predict which figure in a set has the greatest/least area, determine by covering and explain the reasoning.		
TIME	n/a	n/a	M01: Students will be expected to demonstrate an understanding of the calendar and the relationships among days, weeks, months, and years.	M01: Students will be expected to relate the passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months, years). M01.01 select and use a non-standard unit of measure, such as television shows or pendulum swings, to measure the passage of time, and explain the choice M01.02 identify activities that can or cannot be accomplished in minutes, hours, days, weeks, months, and years M01.03 provide personal referents for minutes and hours M01.04 select and use a standard unit of measure, such as minutes, hours, days, weeks, and months, to measure the passage of time, and explain the choice M02: Students will be expected to relate the number of seconds to a minute, the numbers of minutes to an hour, the numbers of hours to a day, and the number of days to a month in a problem-solving context. M02.01 determine the number of days in any given month using a calendar M02.02 solve a given problem involving the number of seconds in a minute, the number of minutes in an hour, the number of hours in a day, or the number of days in a given month

				M02.03 create a calendar that includes days of the week, dates, and personal events

GEOMETRY PROGRESSION				
TOPIC	**MATHEMATICS PRIMARY**	**MATHEMATICS 1**	**MATHEMATICS 2**	**MATHEMATICS 3**
3-D OBJECTS	G01: Students will be expected to sort 3-D objects using a single attribute. Outcome G02: Students will be expected to build and describe 3-D objects.	G01: Students will be expected to sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule. G02: Students will be expected to replicate composite 2-D shapes and 3-D objects. G03: Students will be expected to identify 2-D shapes in 3-D objects.	G01: Students will be expected to sort 2-D shapes and 3-D objects using two attributes and explain the sorting rule. G02: Students will be expected to recognize, name, describe, compare, and build 3-D objects, including cubes and other prisms, spheres, cones, cylinders, and pyramids. G02.01 sort a given set of 3-D objects and explain the sorting rule G02.02 identify common attributes of cubes and other prisms, spheres, cones, cylinders, and pyramids from given sets of the same 3-D objects G02.03 identify and describe given 3-D objects with different dimensions G02.04 identify and describe given 3-D objects with different positions G02.05 create and describe a representation of a given 3-D object using materials such as modelling clay G02.06 identify and name examples of cubes and other prisms, spheres, cones, cylinders, and pyramids found in the environment G04: Students will be expected to identify 2-D shapes as part of 3-D objects in the environment.	G01: Students will be expected to describe 3-D objects according to the shape of the faces and the number of edges and vertices. G01.01 identify the faces, edges, and vertices of given 3-D objects, including spheres, cones, cylinders, pyramids, and cubes and other prisms G01.02 identify the shape of the faces of a given 3-D object G01.03 determine the number of faces, edges, and vertices of a given 3-D object G01.04 sort a given set of 3-D objects according to the number of faces, edges, or vertices
2-D SHAPES	n/a	G03: Students will be expected to identify 2-D shapes in 3-D objects. G02: Students will be expected to replicate composite 2-D shapes and 3-D objects.	G03: Students will be expected to recognize, name, describe, compare and build 2-D shapes, including triangles, squares, rectangles, and circles. G03.01 sort a given set of 2-D shapes and explain the sorting rule G03.02 identify common attributes of triangles, squares, rectangles, and circles from given sets of the same type of 2-D shapes G03.03 identify given 2-D shapes with different dimensions G03.04 identify given 2-D shapes with different positions	G01: Students will be expected to describe 3-D objects according to the shape of the faces and the number of edges and vertices. G01.01 identify the faces, edges, and vertices of given 3-D objects, including spheres, cones, cylinders, pyramids, and cubes and other prisms G01.02 identify the shape of the faces of a given 3-D object G01.03 determine the number of faces, edges, and vertices of a given 3-D object G01.04 sort a given set of 3-D objects according to the number of faces, edges, or vertices

			G03.05 identify and name examples of triangles, squares, rectangles, and circles found in the environment G03.06 create a model to represent a given 2-D shape G03.07 create a pictorial representation of a given 2-D shape G04: Students will be expected to identify 2-D shapes as part of 3-D objects in the environment.	
STATISTICS AND PROBABILITY PROGRESSION				
TOPIC	**MATHEMATICS PRIMARY**	**MATHEMATICS 1**	**MATHEMATICS 2**	**MATHEMATICS 3**
DATA MANAGEMENT	n/a	n/a	SP01: Students will be expected to gather and record data about self and others to answer questions. SP02: Students will be expected to construct and interpret concrete graphs and pictographs to solve problems.	SP01: Students will be expected to collect first-hand data and organize it using tally marks, line plots, charts, and lists to answer questions. SP02: Students will be expected to construct, label, and interpret bar graphs to solve problems.