Kindergarten	Grade One	Grade Two	Grade Three	Grade Four
Number concepts to 10	**number concepts** to 20	**number concepts** to 100	**number concepts** to 1000	**number concepts** to 10 000
counting: one-to-one correspondence conservation cardinality stable order counting sequencing 1-10 linking sets to numerals subitizing using counting collections made of local materials counting to 10 in more than one language, including local First Peoples language or languages	counting: counting on and counting back skip-counting by 2 and 5 sequencing numbers to 20 comparing and ordering numbers to 20 Numbers to 20 can be arranged and recognized. subitizing base 10 10 and some more	counting: skip-counting by 2, 5, and 10: using different starting points increasing and decreasing (forward and backward) Quantities to 100 can be arranged and recognized: comparing and ordering numbers to 100 benchmarks of 25, 50, and 100 place value: understanding of 10s and 1s understanding the relationship between digit places and their value, to 99 (e.g., the digit 4 in 49 has the value of 40) decomposing two-digit numbers into 10s and 1s even and odd numbers	counting: skip-counting by any number from any starting point, increasing and decreasing (i.e., forward and backward) Skip-counting is related to multiplication. investigating place-value based counting patterns (e.g., counting by 10s, 100s; bridging over a century; noticing the role of zero as a placeholder 698, 699, 700, 701; noticing the predictability of our number system) Numbers to 1000 can be arranged and recognized: comparing and ordering numbers estimating large quantities place value: 100s, 10s, and 1s understanding the relationship between digit places and their values, to 1000 (e.g., the digit 4 in 342 has the value of 40 or 4 tens) understanding the importance of 0 as a place holder (e.g., in the number 408, the zero indicates that there are 0 tens)	counting: multiples flexible counting strategies whole number benchmarks Numbers to 10 000 can be arranged and recognized: comparing and ordering numbers estimating large quantities place value: 1000s, 100s, 10s, and 1s understanding the relationship between digit places and their value, to 10 000
			fraction concepts	ordering and comparing **fractions**
			Fractions are numbers that represent an amount or quantity. Fractions can represent parts of a region, set, or linear model. Fraction parts are equal shares or equal-sized portions of a whole or unit. Provide opportunities to explore and create fractions with concrete materials. recording pictorial representations of fraction models and connecting to symbolic notation equal partitioning equal sharing, pole ratios as visual parts, medicine wheel, seasons	comparing and ordering of fractions with common denominators estimating fractions with benchmarks (e.g., zero, half, whole) using concrete and visual models equal partitioning
				decimals to hundredths
				Fractions and decimals are numbers that represent an amount or quantity. Fractions and decimals can represent parts of a region, set, or linear model.

				Fractional parts and decimals are equal shares or equal-sized portions of a whole or unit. understanding the relationship between fractions and decimals
ways to make 5	ways to **make 10**	**benchmarks** of 25, 50, and 100 and personal referents		
perceptual subitizing (e.g., I see 5) conceptual subitizing (e.g., I see 4 and 1) comparing quantities, 1-10 using concrete materials to show ways to make 5 Traditional First Peoples counting methods involved using fingers to count to 5 and for groups of 5.	decomposing 10 into parts Numbers to 10 can be arranged and recognized. benchmarks of 10 and 20 Traditional First Peoples counting methods involved using fingers to count to 5 and for groups of 5. traditional songs/singing and stories	seating arrangements at ceremonies/feasts		
decomposition of numbers to 10	**addition and subtraction to 20** (understanding of operation and process)	**addition and subtraction to 100**	**addition and subtraction** to 1000	**addition and subtraction** to 10 000
decomposing and recomposing quantities to 10 Numbers can be arranged and recognized. benchmarks of 5 and 10 making 10 part-part-whole thinking using concrete materials to show ways to make 10 whole-class number talks	decomposing 20 into parts mental math strategies: counting on making 10 doubles Addition and subtraction are related. whole-class number talks nature scavenger hunt	decomposing numbers to 100 estimating sums and differences to 100 using strategies such as looking for multiples of 10, friendly numbers (e.g., 48 + 37, 37 = 35 + 2, 48 + 2, 50 + 35 = 85), decomposing into 10s and 1s and recomposing (e.g., 48 + 37, 40 + 30 = 70, 8 +7 = 15, 70 +15 = 85), and compensating (e.g., 48 + 37, 48 +2 = 50, 37 – 2 = 35, 50 + 35 = 80) adding up to find the difference using an open number line, hundred chart, ten-frames using addition and subtraction in real-life contexts and problem-based situations whole-class number talks	using flexible computation strategies, involving taking apart (e.g., decomposing using friendly numbers and compensating) and combining numbers in a variety of ways, regrouping estimating sums and differences of all operations to 1000 using addition and subtraction in real-life contexts and problem-based situations whole-class number talks	using flexible computation strategies, involving taking apart (e.g., decomposing using friendly numbers and compensating) and combining numbers in a variety of ways, regrouping estimating sums and differences to 10 000 using addition and subtraction in real-life contexts and problem-based situations whole-class number talks
				addition and subtraction of **decimals** to hundredths
				estimating decimal sums and differences using visual models, such as base 10 blocks, place-value mats, grid paper, and number lines using addition and subtraction in real-life contexts and problem-based situations whole-class number talks

change in quantity to 10, using concrete materials	**change in quantity to 20**, concretely and verbally	**change in quantity**, using pictorial and symbolic representation		
generalizing change by adding 1 or 2 modeling and describing number relationships through change (eg., build and change tasks - begin with four cubes, what do you need to do to change it to six? to change it to 3?)	verbally describing a change in quantity (e.g., I can build 7 and make it 10 by adding 3)	numerically describing a change in quantity (e.g., for 6 + n = 10, visualize the change in quantity by using ten-frames, hundred charts, etc.)		
equality as a balance and inequality as an imbalance	meaning of **equality and inequality**	symbolic representation of equality and inequality	one-step addition and subtraction **equations** with an unknown number	**one-step equations** with an unknown number, using all operations
modeling equality as balanced and inequality as imbalanced using concrete and visual models (e.g., using a pan balance with cubes on each side to show equal and not equal) fish drying and sharing	demonstrating and explaining the meaning of equality and inequality recording equations symbolically, using = and ≠		start unknown (e.g., n + 15 = 20 or □ + 15 + 20) change unknown (e.g., 12 + n = 20 or 12 + □ = 20) result unknown (e.g., 6 + 13 = n or 6 + 13 = □) investigating even and odd numbers	one-step equations for all operations involving an unknown number (e.g., ___ + 4 = 15, 15 – □ = 11) start unknown (e.g., n + 15 = 20; 20 – 15 = □) change unknown (e.g., 12 + n = 20) result unknown (e.g., 6 + 13 = __)
		addition and subtraction **facts to 20** (introduction of computational strategies)	addition and subtraction facts to 20 (emerging **computational fluency**)	addition and subtraction facts to 20 (developing **computational fluency**)
		adding and subtracting numbers to 20 fluency with math strategies for addition and subtraction (e.g., making or bridging 10, decomposing, identifying related doubles, adding on to find the difference)	adding and subtracting of numbers to 20 demonstrating fluency with math strategies for addition and subtraction (e.g., decomposing, making and bridging 10, related doubles, and commutative property) Addition and subtraction are related. At the end of Grade 3, most students should be able to recall addition facts to 20.	Provide opportunities for authentic practice, building on previous grade-level addition and subtraction facts. flexible use of mental math strategies
				multiplication and division **facts** to 100 (introductory computational strategies)
				Provide opportunities for concrete and pictorial representations of multiplication. building computational fluency Use games to provide opportunities for authentic practice of multiplication computations. looking for patterns in numbers, such as in a hundred chart, to further develop understanding of multiplication computation Connect multiplication to skip-counting. Connecting multiplication to division and repeated addition. Memorization of facts is not intended for this level.

				Students will become more fluent with these facts. using mental math strategies, such as doubling or halving Students should be able to recall the following multiplication facts by the end of Grade 4 (2s, 5s, 10s).
			multiplication and division concepts	**multiplication and division** of two- or three-digit numbers by one-digit numbers
			understanding concepts of multiplication (e.g., groups of, arrays, repeated addition) understanding concepts of division (e.g., sharing, grouping, repeated subtraction) Multiplication and division are related. Provide opportunities for concrete and pictorial representations of multiplication. Use games to develop opportunities for authentic practice of multiplication computations. looking for patterns in numbers, such as in a hundred chart, to further develop understanding of multiplication computation Connect multiplication to skip-counting. Connect multiplication to division and repeated addition. Memorization of facts is not intended for this level. fish drying on rack; sharing of food resources in First Peoples communities	understanding the relationships between multiplication and division, multiplication and addition, division and subtraction using flexible computation strategies (e.g., decomposing, distributive principle, commutative principle, repeated addition and repeated subtraction) using multiplication and division in real-life contexts and problem-based situations whole-class number talks
repeating patterns with two or three elements	**repeating patterns** with multiple elements and attributes	repeating and increasing **patterns**	increasing and decreasing **patterns**	increasing and decreasing **patterns**, using tables and charts
sorting and classifying using a single attribute identifying patterns in the world repeating patterns with 2-3 elements identifying the core representing repeating patterns in various ways noticing and identifying repeating patterns in First Peoples and local art and textiles, including beadwork and beading, and frieze work in borders	identifying sorting rules repeating patterns with multiple elements/attributes translating patterns from one representation to another (e.g., an orange-blue pattern could be translated to a circle-square pattern) letter coding of pattern predicting an element in repeating patterns using a variety of strategies patterns using visuals (ten-frames, hundred charts) investigating numerical patterns (e.g., skip-counting by 2s or 5s on a hundred	exploring more complex repeating patterns (e.g., positional patterns, circular patterns) identifying the core of repeating patterns (e.g., the pattern of the pattern that repeats over and over) increasing patterns using manipulatives, sounds, actions, and numbers (0 to 100) Métis finger weaving First Peoples head/armband patterning	creating patterns using concrete, pictorial, and numerical representations representing increasing and decreasing patterns in multiple ways generalizing what makes the pattern increase or decrease (e.g., doubling, adding 2)	Change in patterns can be represented in charts, graphs, and tables. using words and numbers to describe increasing and decreasing patterns fish stocks in lakes, life expectancies

	chart) beading using 3–5 colours			
			pattern rules using words and numbers, based on concrete experiences	**algebraic relationships** among quantities
			from a concrete pattern, describing the pattern rule using words and numbers predictability in song rhythm and patterns Share examples of local First Peoples art with the class, and ask students to notice patterns in the artwork.	representing and explaining one-step equations with an unknown number describing pattern rules, using words and numbers from concrete and pictorial representations planning a camping or hiking trip; planning for quantities and materials needed per individual and group over time
direct comparative measurement (e.g., linear, mass, capacity)	**direct measurement** with non-standard units (non-uniform and uniform)	**direct linear measurement**, introducing standard metric units	measurement, using **standard units** (linear, mass, and capacity	**perimeter** of regular and irregular shapes
understanding the importance of using a baseline for direct comparison in linear measurement linear height, width, length (e.g., longer than, shorter than, taller than, wider than) mass (e.g., heavier than, lighter than, same as) capacity (e.g., holds more, holds less)	Non-uniform units are not consistent in size (e.g., children's hands, pencils); uniform units are consistent in size (e.g., interlocking cubes, standard paper clips). understanding the importance of using a baseline for direct comparison in linear measurement using multiple copies of a unit iterating a single unit for measuring (e.g., to measure the length of a string with only one cube, a student iterates the cube over and over, keeping track of how many cubes long the string is) tiling an area rope knots at intervals using body parts to measure	centimetres and metres estimating length measuring and recording length, height, and width, using standard units	linear measurements, using standard units (e.g., centimetre, metre, kilometre) capacity measurements, using standard units (e.g., millilitre, litre) Introduce concepts of perimeter, area, and circumference (the distance around); use of formula and pi to calculate not intended — the focus is on the concepts. area measurement, using square units (standard and non-standard) mass measurements, using standard units (e.g., gram, kilogram) estimation of measurements, using standard referents (e.g., If this cup holds 100 millilitres, about how much does this jug hold?)	using geoboards and grids to create, represent, measure, and calculate perimeter
			time concepts	how to **tell time** with analog and digital clocks, using 12- and 24-hour clocks
			understanding concepts of time (e.g., second, minute, hour, day, week, month, year) understanding the relationships between units of time Telling time is not expected at this level. estimating time, using environmental references and natural daily/seasonal cycles, temperatures based on weather systems, traditional calendar	understanding how to tell time with analog and digital clocks, using 12- and 24-hour clocks understanding the concept of a.m. and p.m. understanding the number of minutes in an hour understanding the concepts of using a circle and of using fractions in telling time (e.g., half past, quarter to) telling time in five-minute intervals telling time to the nearest minute First Peoples use of numbers in time and seasons, represented by seasonal cycles

				and moon cycles (e.g., how position of sun, moon, and stars is used to determine times for traditional activities, navigation)
single attributes of 2D shapes and 3D objects	comparison of **2D shapes and 3D objects**	multiple attributes of **2D shapes and 3D objects**	construction of **3D objects**	regular and irregular **polygons**
At this level, using specific math terminology to name and identify 2D shapes and 3D objects is not expected. sorting 2D shapes and 3D objects using a single attribute building and describing 3D objects (e.g., shaped like a can) exploring, creating, and describing 2D shapes using positional language, such as beside, on top of, under, and in front of	sorting 3D objects and 2D shapes using one attribute, and explaining the sorting rule comparing 2D shapes and 3D objects in the environment describing relative positions, using positional language (e.g., up and down, in and out) replicating composite 2D shapes and 3D objects (e.g., putting two triangles together to make a square)	sorting 2D shapes and 3D objects, using two attributes, and explaining the sorting rule describing, comparing, and constructing 2D shapes, including triangles, squares, rectangles, circles identifying 2D shapes as part of 3D objects using traditional northwest coast First Peoples shapes (ovoids, U, split U, and local art shapes) reflected in the natural environment	identifying 3D objects according to the 2D shapes of the faces and the number of edges and vertices (e.g., construction of nets, skeletons) describing the attributes of 3D objects (e.g., faces, edges, vertices) identifying 3D objects by their mathematical terms (e.g., sphere, cube, prism, cone, cylinder) comparing 3D objects (e.g., How are rectangular prisms and cubes the same or different?) understanding the preservation of shape (e.g., the orientation of a shape will not change its properties) jingle dress bells, bentwood box, birch bark baskets, pithouses	describing and sorting regular and irregular polygons based on multiple attributes investigating polygons (polygons are closed shapes with similar attributes) Yup'ik border patterns
				line symmetry
				using concrete materials such as pattern blocks to create designs that have a mirror image within them First Peoples art, borders, birchbark biting, canoe building Visit a structure designed by First Peoples in the local community and have the students examine the symmetry, balance, and patterns within the structure, then replicate simple models of the architecture focusing on the patterns they noted in the original.
concrete or pictorial **graphs** as a visual tool	**concrete graphs**, using one-to-one correspondence	**pictorial representation** of concrete graphs, using one-to-one correspondence	**one-to-one correspondence** with bar graphs, pictographs, charts, and tables	**one-to-one correspondence** and many-to-one correspondence, using bar graphs and pictographs
creating concrete and pictorial graphs to model the purpose of graphs and provide opportunities for mathematical discussions (e.g., survey the students about how they got to school, then represent the data in a graph and discuss together as a class).	creating, describing, and comparing concrete graphs	collecting data, creating a concrete graph, and representing the graph, using a pictorial representation through grids, stamps, drawings one-to-one correspondence	collecting data, creating a graph, and describing, comparing, and discussing the results choosing a suitable representation	many-to-one correspondence: one symbol represents a group or value (e.g., on a bar graph, one square may represent five cookies)
likelihood of **familiar life events**	likelihood of **familiar life events**, using comparative language	likelihood of **familiar life events**, using comparative language	likelihood of **simulated events**, using comparative language	**probability experiments**

using the language of probability, such as unlikely or likely (e.g., Could it snow tomorrow?)	using the language of probability (e.g., never, sometimes, always, more likely, less likely) cycles (Elder or knowledge keeper to speak about ceremonies and life events)	using comparative language (e.g., certain, uncertain; more, less, or equally likely)	using comparative language (e.g., certain, uncertain; more, less, or equally likely) developing an understanding of chance (e.g., tossing a coin creates a 50-50 chance of landing a head or tail; drawing from a bag, using spinners, and rolling dice all simulate probability events)	redicting single outcomes (e.g., when you spin using one spinner and it lands on a single colour) using spinners, rolling dice, pulling objects out of a bag recording results using tallies Dene/Kaska hand games, Lahal stick games
financial literacy — attributes of coins, and financial role-play	**financial literacy** — values of coins, and monetary exchanges	**financial literacy** — coin combinations to 100 cents, and spending and saving	**financial literacy** — fluency with coins and bills to 100 dollars, and earning and payment	**financial literacy** — monetary calculations, including making change with amounts to 100 dollars and making simple financial decisions
noticing attributes of Canadian coins (colour, size, pictures) identifying the names of coins role-playing financial transactions, such as in a restaurant, bakery, or store, using whole numbers to combine purchases (e.g., a muffin is $2.00 and a juice is $1.00), and integrating the concept of wants and needs token value (e.g., wampum bead/trade beads for furs)	identifying values of coins (nickels, dimes, quarters, loonies, and toonies) counting multiples of the same denomination (nickels, dimes, loonies, and toonies) Money is a medium of exchange. role-playing financial transactions (e.g., using coins and whole numbers), integrating the concept of wants and needs trade games, with understanding that objects have variable value or worth (shells, beads, furs, tools)	counting simple mixed combinations of coins to 100 cents introduction to the concepts of spending and saving, integrating the concepts of wants and needs role-playing financial transactions (e.g., using bills and coins)	counting mixed combinations of coins and bills up to $100: totalling up a set of coins and bills using different combinations of coins and bills to make the same amount understanding that payments can be made in flexible ways (e.g., cash, cheques, credit, electronic transactions, goods and services) understanding that there are different ways of earning money to reach a financial goal (e.g., recycling, holding bake sales, selling items, walking a neighbour's dog) Using pictures of First Peoples trade items (e.g., dentalium shells, dried fish, or tools when available) with the values indicated on the back, have students play a trading game.	making monetary calculations, including decimal notation in real-life contexts and problem-based situations applying a variety of strategies, such as counting up, counting back, and decomposing, to calculate totals and make change making simple financial decisions involving earning, spending, saving, and giving equitable trade rules