WNCP B.C. GRADE 1, 2 & 3 MATHEMATICS AT A GLANCE

NOTE: Text in ***italics*** is from the suggested achievement indicators.

STRAND: NUMBER

General Outcome: Develop number sense.

Grade 1 Prescribed Learning Outcomes	Grade 2 Prescribed Learning Outcomes	Grade 3 Prescribed Learning Outcomes
A1 Say the number sequence, 0 to 100, by: **(a)** 1s forward and backward between any two given numbers **(b)** 2s to 20, forward starting at 0 **(c)** 5s and 10s to 100, forward starting at 0.	**A1** Say the number sequence from 0 to 100 by: **(a)** 2s, 5s and 10s, forward & backward, using starting points that are multiples of 2, 5 & 10 **(b)** 10s using starting points from 1 to 9 **(c)** 2s starting from 1.	**A1** Say the number sequence forward & backward from 0 to 1000 by: **(a)** 5s, 10s or 100s using any starting point **(b)** 3s using multiples of 3 starting points **(c)** 4s using multiples of 4 starting points **(b)** 25s using starting points that are multiples of 25.
A2 Recognize at a glance, and name familiar arrangements of 1 to 10 objects or dots.	**A2** Demonstrate if a number (up to 100) is even or odd.	**May be reviewed but do not assess**
A3 Demonstrate an understanding of counting by: **(a)** indicating the last number said identifies "how many" **(b)** showing that any set has only one count **(c)** using the counting on strategy **(d)** using parts or equal groups to count sets.	**A3** Describe order or relative position using ordinal numbers (1st to 10th).	
A4 Represent and describe numbers to 20 concretely, pictorially and symbolically.	**A4** Represent and describe numbers to 100, concretely, pictorially and symbolically.	**A2** Represent and describe numbers to 1000 concretely, pictorially and symbolically.
A5 Compare sets containing up to 20 elements to solve problems using: **(a)** referents **(b)** one-to-one correspondence.	**A5** Compare and order numbers up to 100.	**A3** Compare and order numbers to 1000.
A6 Estimate quantities to 20 by using referents.	**A6** Estimate quantities to 100 using referents.	**A4** Estimate quantities less than 1000 using referents.
A7 Demonstrate, concretely and pictorially, how a given number can be represented by a variety of equal groups with and without singles.	**A7** Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.	**A5** Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.
A8 Identify the number, up to 20, that is one more, two more, one less and two less than a given number.	**A8** Demonstrate and explain the effect of adding zero to or subtracting zero from any number.	**May be reviewed but do not assess**
	May be explored informally but do not assess	**A6** Describe and apply mental mathematics strategies for adding two 2-digit numerals, such as: **(a)** adding from left to right **(b)** taking one addend to the nearest multiple of ten then compensating **(c)** using doubles.
		A7 Describe and apply mental mathematics strategies for subtracting two 2-digit numerals, such as: **(a)** taking the subtrahend to the nearest multiple of ten and then compensating **(b)** thinking of addition **(c)** using doubles.
		A8 Apply estimation strategies to predict sums and differences of two 2-digit numerals in a problem-solving context.

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STRAND: NUMBER (continued)

General Outcome: Develop number sense

Grade 1 Prescribed Learning Outcomes	Grade 2 Prescribed Learning Outcomes	Grade 3 Prescribed Learning Outcomes
A9 Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially and symbolically, by: **(a)** using familiar and mathematical language to describe additive and subtractive actions from their experience **(b)** creating and solving problems in context that involve addition and subtraction **(c)** modelling addition and subtraction using a variety of concrete and visual representations, and recording the process symbolically.	**A9** demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: **(a)** using personal strategies for adding and subtracting with and without the support of manipulatives **(b)** creating and solving problems that involve addition and subtraction **(c)** explaining the order in which numbers are added does not affect the sum **(d)** explaining the order in which numbers are subtracted may affect the difference.	**A9** Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 (limited to 1, 2 and 3-digit numerals) by: **(a)** using personal strategies for adding & subtracting with and without the support of manipulatives **(b)** creating and solving problems in contexts that involve addition and subtraction of numbers concretely, pictorially and symbolically.
A10 Communicate and use mental mathematics strategies (memorization not intended), such as: **(a)** counting on and counting back **(b)** making 10 **(c)** doubles **(d)** using addition to subtract to determine the basic addition facts to 18 and related subtraction facts. *(recall of basic facts not intended)*	**A10** Apply mental mathematics strategies, such as: **(a)** using doubles **(b)** making 10 **(c)** 1 more, 1 less **(d)** 2 more, 2 less **(e)** building on a known double **(f)** addition for subtraction to determine basic addition facts to 18 and related subtraction facts.	**A10** Apply mental mathematics strategies and number properties, such as: **(a)** using doubles **(b)** making 10 **(c)** using commutative property **(d)** property of 0 **(e)** thinking addition for subtraction to recall basic addition facts to 18 and related subtraction facts.
		A11 Demonstrate an understanding of multiplication to 5×5 by: **(a)** representing and explaining multiplication using equal grouping and arrays **(b)** creating and solving problems in context that involve multiplication **(c)** modelling multiplication using concrete and visual representations & recording the process symbolically **(d)** relating multiplication to repeated addition **(e)** relating multiplication to division.
	May be explored informally but do not assess	**A12** Demonstrate an understanding of division by: **(a)** representing and explaining division using equal sharing and equal grouping **(b)** creating and solving problems in context that involve equal sharing and equal grouping **(c)** modelling equal sharing and equal grouping using concrete and visual representations and recording the process symbolically **(d)** relating division to repeated subtraction **(e)** relating division to multiplication (limited to division related to mult. facts up to 5 x 5).
		A13 Demonstrate an understanding of fractions *(concretely or pictorially)* by: **(a)** explaining a fraction represents a part of whole **(b)** describing situations in which fractions are used **(c)** comparing fractions of same whole with like denominators.

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STRAND: STATISTICS & PROBABILITY (DATA ANALYSIS)

General Outcome: Collect, display and analyze data to solve problems.

Grade 1 Prescribed Learning Outcomes	Grade 2 Prescribed Learning Outcomes	Grade 3 Prescribed Learning Outcomes
May be explored informally but do not assess	**D1** Gather and record data about self and others to answer questions.	**D1** Collect first-hand data and organize it to answer questions using: **(a)** tally marks **(b)** line plots **(c)** charts **(d)** lists
	D2 Construct and interpret concrete graphs and pictographs to solve problems.	**D2** Construct, label and interpret bar graphs to solve problems. NOTE: pictographs are included at the grade 2 and 4 levels

STRAND: PATTERNS AND RELATIONS (PATTERNS)

General Outcome: Use patterns to describe the world and solve problems.

B1 Demonstrate an understanding of repeating patterns (two to four elements) by: **(a)** describing **(b)** reproducing **(c)** extending **(d)** creating patterns using manipulatives, diagrams, sounds and actions.	**B1** Demonstrate an understanding of repeating patterns (three to five elements) by: **(a)** describing **(b)** extending **(c)** comparing **(d)** creating using manipulatives, diagrams, sounds and actions.	**May be reviewed but do not assess**
B2 Translate repeating patterns from one representation to another.	**B2** Demonstrate an understanding of increasing patterns by: **(a)** describing **(b)** reproducing **(c)** extending **(d)** creating patterns using manipulatives, diagrams, sounds and actions (numbers to 100).	**B1** Demonstrate an understanding of increasing patterns by: **(a)** describing **(b)** extending **(c)** comparing **(d)** creating patterns using manipulatives, diagrams, sounds, and action (numbers to 1000).
	May be explored informally but do not assess	**B2** Demonstrate an understanding of decreasing patterns by: **(a)** describing **(b)** extending **(c)** comparing **(d)** creating patterns using manipulatives, diagrams, sounds, and actions (numbers to 1000).

STRAND: PATTERNS & RELATIONS (VARIABLES & EQUATIONS)

General Outcome: Represent algebraic expressions in multiple ways.

B3 Describe equality as a balance and inequality as an imbalance, concretely and pictorially (0 to 20).	**B3** Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).	**May be reviewed but do not assess**
B4 Record equalities using the equal symbol *(concretely, pictorially and symbolically)*.	**B4** Record equalities and inequalities symbolically using the equal symbol or the not equal symbol.	
	May be explored informally but do not assess	**B3** Solve one-step addition and subtraction equations involving symbols representing an unknown number *(using manipulatives)*.

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STRAND: SHAPE AND SPACE (MEASUREMENT)

General Outcome: Use direct or indirect measurement to solve problems.

Grade 1 Prescribed Learning Outcomes	Grade 2 Prescribed Learning Outcomes	Grade 3 Prescribed Learning Outcomes
May be explored informally but do not assess	**C1** Relate the number of days to a week and the number of months to a year in a problem-solving context.	**C1** Relate passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months, years).
		C2 Relate number of seconds to a minute, minutes to an hour, days to a month in a problem-solving context.
C1 Demonstrate an understanding of measurement as a process of comparing by: **(a)** identifying attributes that can be compared **(b)** ordering objects **(c)** making statements of comparison **(d)** filling, covering or matching.	**C2** Relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass (weight).	**C4** Demonstrate understanding of measuring mass (g, kg) by: **(a)** selecting & justifying referents for the units g & kg **(b)** modelling and describing the relationship between g & kg units **(c)** estimating mass using referents **(d)** measuring and recording mass.
	C3 Compare and order objects by length, height, distance around and mass (weight) using non-standard units, and make statements of comparison.	
	C4 Measure length to the nearest non-standard unit by: **(a)** using multiple copies of a unit **(b)** using a single copy of a unit (iteration process).	**C3** Demonstrate understanding of measuring length(cm, m) by: **(a)** selecting & justifying referents for the units cm & m **(b)** modelling and describing the relationship between cm & m units **(c)** estimating length using referents **(d)** measuring and recording length, width and height.
	C5 Demonstrate that changing the orientation of an object does not alter measurements of its attributes.	**May be reviewed but do not assess**
	May be explored informally but do not assess	**C5** Demonstrate understanding of perimeter of regular and irregular shapes by: **(a)** estimating perimeter using referents for cm or m. **(b)** measuring and recording perimeter (cm and m) **(c)** constructing different shapes for a given perimeter (cm, m) to demonstrate that many shapes are possible for a perimeter.

STRAND: SHAPE AND SPACE (3-D OBJECTS & 2-D SHAPES)

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

C2 Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.	**C6** Sort 2-D shapes & 3-D objects using two attributes, and explain the sorting rule.	**May be reviewed but do not assess**
C3 Replicate composite 2-D shapes and 3-D objects.	**C7** Describe, compare, construct 3-D objects including: **(a)** cubes **(b)** spheres **(c)** cones **(d)** cylinders **(e)** pyramids.	**C6** Describe 3-D objects according to the shape of the faces, and the number of edges and vertices.
	C8 Describe, compare, construct 2-D shapes including: **(a)** triangles **(b)** squares **(c)** rectangles **(d)** circles.	**C7** Sort regular and irregular polygons according to the number of sides: **(a)** triangles **(b)** quadrilaterals **(c)** pentagons **(d)** hexagons **(e)** octagons.
C4 Compare 2-D shapes to parts of 3-D objects in the environment.	**C9** Identify 2-D shapes as parts of 3-D objects in the environment.	**May be reviewed but do not assess**