WNCP B.C. GRADE 3 & 4 AT A GLANCE CORRELATED WITH MATH MAKES SENSE (WESTERN)

NOTE: Text in **UPPERCASE** indicates outcomes that are not met in MATH MAKES SENSE. Text in ***italics*** is from the suggested achievement indicators.

STRAND: NUMBER

General Outcome: Develop number sense. **Use Unit and Cumulative Reviews Selectively**

Grade 3 Prescribed Learning Outcomes	MMS 3 Meets	Exceeds	Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds
A1 Say number sequence forward & backward from 0 to 1000 by: **(a)** 5s, 10s or 100s using any starting point **(b)** 3S USING STARTING POINTS THAT ARE MULTIPLES OF 3 **(c)** 4S USING STARTING POINTS THAT ARE MULTIPLES OF 4 **(d)** 25s using starting points that are multiples of 25.	**Unit 1** Lessons 2, 3, 9 (limited) **Unit 6** Lessons 5, 6 (money) have student say the number sequence when assessing		**May be reviewed but do not assess**		
A2 Represent and describe numbers to 1000, concretely, pictorially and symbolically.	**Unit 1** Lessons 4 to 6, 9, 11, 13, Unit Problem; number words to 1000 limited		**A1** Represent and describe whole numbers to 10 000 pictorially and symbolically.	**Unit 2** Lesson 1	
A3 Compare and order numbers to 1000.	**Unit 1** Lessons 4, 5, 7, 10		**A2** Compare and order numbers to 10 000.	**Unit 2** Lesson 3	**Unit 2** Lesson 2 rounding
A4 Estimate quantities less than 1000 using referents.	**Unit 1** Lessons 4, 5, 13 **Unit 6** Lesson 6 (money) do not assess decimal notation **Cross Strand**: 142-143	**Unit 1** Lesson 14 rounding	**May be reviewed but do not assess**		
A5 Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.	**Unit 1** Lessons 5, 6, 8, 11, 12, Unit Problem				
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 and then compensating **(c)** USING DOUBLES.	**Unit 2** Lessons 6, 7, 9 (limited) Front-ending is another name for adding from left to right				
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.	**Unit 2** Lessons 6, 8, 9 (limited) some alternate strategies are included				
A8 APPLY ESTIMATION STRATEGIES TO PREDICT SUMS AND DIFFERENCES OF TWO 2-DIGIT NUMERALS IN A PROBLEM-SOLVING CONTEXT.	strategies could be applied to problems involving 2-digit numerals in Unit 2	**Unit 2** Lesson 10 uses 3-digit numerals			
A9 Demonstrate an understanding of addition & subtraction of numbers with answers to 1000 (limited to 1, 2 and 3-digit numerals) by: **(a)** using personal strategies for adding and 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.	**Unit 1** Launch **Unit 2** Lessons 6, 11 to 14, Unit Problem **Unit 6** Lesson 7(money) do not assess decimal notation		**A3** Demonstrate an understanding of addition of numbers with answers to 10 000 and their corresponding subtractions (limited to 3 and 4-digit numerals) by: **(a)** using personal strategies for adding &subtracting **(b)** estimating sums and differences **(c)** solving problems involving addition & subtraction.	**Unit 1** Game p. 24, Unit Problem **Unit 2** Launch, Lessons 4 to 12, Unit Problem **Unit 6** Launch, Lessons 3, 4 strategies are limited	

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STRAND: NUMBER (continued)

General Outcome: Develop number sense. **Use Unit and Cumulative Reviews Selectively**

Grade 3 Prescribed Learning Outcomes	MMS 3 Meets	Exceeds	Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds
A10 Apply mental mathematics strategies and number properties, such as: **(a)** using doubles **(b)** making 10 **(c)** using the commutative property **(d)** using the property of zero **(e)** thinking addition for subtraction to recall basic addition facts to 18 and related subtraction facts.	**Unit 2** Launch, Lessons 1 to 5 **Unit 5** Lesson 7 strategy (a) limited to *doubles plus one;* include *doubles take away one, doubles plus 2 and doubles take away 2*		**A5** Describe & apply mental mathematics strategies, such as: **(a)** SKIP COUNTING FROM A KNOWN FACT **(b)** using doubling or HALVING **(c)** USING DOUBLING OR HALVING AND ADDING OR SUBTRACTING ONE MORE GROUP **(d)** using patterns in the 9s facts **(e)** USING REPEATED DOUBLING to determine basic multiplication facts to 9x9 & related division facts.	**Unit 4** Launch, Lesson 1 Explore only, Lessons 2 to 6, 8, 9, Game p. 157, Unit Problem	**Unit 4** Lesson 1 Connect and Practice multiples
May be explored informally but do not assess			**A4** EXPLAIN PROPERTIES OF 0 & 1 FOR MULTIPLICATION;1 FOR DIVISION.		
A11 Demonstrate an understanding of multiplication to 5×5 by: **(a)** representing and explaining using equal grouping and arrays **(b)** creating & solving problems in context that involve multiplication **(c)** modelling multiplication using concrete & visual representations and recording the process symbolically **(d)** relating multiplication to repeated addition **(e)** relating multiplication to division.	**Unit 4** Launch, Lessons 1 to 3, 5 to 8, 12, Unit Problem assess facts to 5 x 5; explore multiplying by 0 and 1 but do not assess properties; explore multiplication tables and charts *Recall of facts not intended*	**Unit 4** Lesson 4 multiplying by 10	**A6** Demonstrate an understanding of multiplication (2 or 3-digit by 1-digit) to solve problems by: **(a)** using personal strategies for multiplication with and without concrete materials **(b)** using arrays to represent multiplication **(c)** connecting concrete to symbolic representations **(d)** estimating products.	**Unit 4** Lessons 4 to 6 **Unit 10** Lessons 2, 3	Do not assess multiplying thousands in Unit 4 Lesson 4
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 grouping **(c)** modelling equal sharing & 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 multiplication facts up to 5x5).	**Unit 4** Lessons 8, 9, 11, 12, Unit Problem **Cross Strand:** 2-3 limit assessment to facts related to multiplication up to 5 x 5	**Unit 4** Lesson 10 dividing by 2, 5 and 10	**A7** Demonstrate an understanding of division(1-digit divisor and up to 2-digit dividend) to solve problems by: **(a)** using personal strategies for dividing with and without concrete materials **(b)** ESTIMATING QUOTIENTS **(c)** relating division to multiplication. *It is not intended that remainders be expressed as decimals or fractions.*	**Unit 4** Lessons 8 to 12, Unit Problem **Unit 10** Lesson 7	**Unit 10** Lesson 8 3-digit dividends
A13 Demonstrate an understanding of fractions *(concretely or pictorially)* by: **(a)** explaining that a fraction represents a part of a whole **(b)** describing situations in which fractions are used **(c)** COMPARING FRACTIONS OF SAME WHOLE WITH LIKE DENOMINATORS.	**Unit 8** Launch, Lessons1, 2, 5, Unit Problem (part 1 only) terms denominator and numerator need to be introduced	**Unit 8** Lessons 3, 4, 6, 7, Unit Problem (part 2 to 4) fraction of a set; mixed numbers	**A8** Demonstrate an understanding of fractions less than or equal to one by using concrete & pictorial representations to: **(a)** name & record fractions for the parts of a whole or a set **(b)** compare and order fractions **(c)** MODEL/EXPLAIN FOR DIFFERENT WHOLES, 2 IDENTICAL FRACTIONS MAY NOT REPRESENT SAME QUANTITY **(d)** PROVIDE EXAMPLES WHERE FRACTIONS ARE USED.	**Unit 8** Launch, Lessons 1 to 4.	**Unit 8** Lesson 5 to 12, Unit Problem equivalent fractions, mixed numbers, compare and order mixed numbers, compare, order, add, subtract decimals related to mixed numbers, Technology p. 294, 297 fractions on a calculator
May be explored informally but do not assess			**A9** DESCRIBE AND REPRESENT DECIMALS (TENTHS AND HUNDREDTHS) CONCRETELY, PICTORIALLY AND SYMBOLICALLY.		
			A10 RELATE DECIMALS TO FRACTIONS (TO HUNDREDTHS).		
			A11 Demonstrate an understanding of addition & subtraction of decimals (limited to 100ths) to solve problems by: **(a)** USING COMPATIBLE NUMBERS **(b)** estimating sums and differences **(c)** using mental math strategies.	**Unit 6** Lessons 5 to 7 **Unit 8** Lesson 13 sums and differences for money can be greater than 1	

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STRAND: STATISTICS & PROBABILITY (DATA ANALYSIS)

General Outcome: Collect, display and analyze data to solve problems. Use Unit and Cumulative Reviews Selectively

Grade 3 Prescribed Learning Outcomes	MMS 3 Meets	Exceeds	Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds
D1 Collect first-hand data and organize it to answer questions using: **(a)** tally marks **(b)** LINE PLOTS **(c)** charts **(d)** lists	**Unit 5** Launch, Lessons 3, 6, 8, 9 Unit Problem		**May be reviewed but do not assess**		
May be explored informally but do not assess			**D1** DEMONSTRATE AN UNDERSTANDING OF MANY-TO-ONE CORRESPONDENCE.		
D2 Construct, label and interpret bar graphs to solve problems.	**Unit 5** Launch, Lessons 3, 6, 9, Unit Problem Lesson 1 reviews sorting by 2 attributes (grade 2 outcome)	**Unit 5** Lesson 2, 4, 5 sort by 3 attributes; pictographs; circle graphs	**D2** Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.	**Unit 5** Launch, Lessons 1, 2, 4 to 6, Unit Problem	**Unit 5** Lesson 3 circle graphs

Probability outcomes begin in grade 5 **Unit 11** **Probability** **Unit 11 Cross Strand 420-421**

STRAND: PATTERNS AND RELATIONS (PATTERNS)

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

B1 Demonstrate an understanding of increasing patterns by: **(a)** describing **(b)** extending **(c)** comparing **(d)** creating patterns using manipulatives, diagrams, SOUNDS, AND ACTIONS (numbers to 1000).	**Unit 1** Launch , Lessons 1 to 3, 9 (limited to counting patterns) **Unit 10** Launch, Lessons 1, 3, 4 (limited) increasing patterns are referred to as growth patterns	**Unit 10:** Lesson 2 patterns in tables (gr. 4 outcome)	**B1** Identify and describe patterns found in tables and charts, including a multiplication chart.	**Unit 1** Launch, Lesson 1, Unit Problem **Unit 4** Lessons 1, 2 **Unit 10** Lesson 2	**Unit 1** Lesson 3 patterns with calculators
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).	**Unit 1** Lessons 2, 3 limited to counting patterns to 100 only Unit 10 Lessons 5 to 7, Technology p. 395 and Unit Problem review repeating patterns (grade 2 outcomes)		**B2** Reproduce a pattern shown in a table or chart using concrete materials. **B3** Represent and describe patterns and relationships using charts and tables to solve problems.	**Unit 10** Launch, Lessons 1, 4 to 6 **Unit 1** Launch, Lesson 1, Unit Problem **Unit 4** Lesson 7 **Unit 5** Lesson 7 **Unit 10** Lessons 2, 4 to 6	NOTE: Unit 1 Lesson 2 and Unit 10 Unit Problem review grade 3 outcomes
May be explored informally but do not assess			**B4** Identify and explain mathematical relationships using charts and diagrams to solve problems.	**Unit 2** Lesson 3A **Unit 5** Launch, Lesson 1 **Unit 9** Lesson 4 **Cross Strand:** 2-3, 116-117, 268-269	

STRAND: PATTERNS & RELATIONS (VARIABLES & EQUATIONS)

General Outcome: Represent algebraic expressions in multiple ways.

May be explored informally but do not assess			**B5** EXPRESS A GIVEN PROBLEM AS AN EQUATION IN WHICH A SYMBOL IS USED TO REPRESENT AN UNKNOWN NUMBER *(CONCRETELY, PICTORIALLY OR SYMBOLICALLY)*.	no direct instructional activities other than missing addends	
B3 SOLVE ONE-STEP ADDITION AND SUBTRACTION EQUATIONS INVOLVING SYMBOLS REPRESENTING AN UNKNOWN NUMBER *(USING MANIPULATIVES)*.			**B6** Solve one-step equations involving a symbol to represent an unknown number *(using manipulatives)*.	**Unit 1** Lessons 4, 5 limited; addition and subtraction only	**Unit 1** Lesson 6 more than one unknown number

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STRAND: SHAPE AND SPACE (MEASUREMENT)

General Outcome: Use direct or indirect measurement to solve problems. Use Unit and Cumulative Reviews Selectively

Grade 3 Prescribed Learning Outcomes	MMS 3 Meets	Exceeds	Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds
C1 RELATE PASSAGE OF TIME TO COMMON ACTIVITIES USING NON-STANDARD AND STANDARD UNITS (MINA, HRS, DAYS, WEEKS, MONTHS, YEARS).		**Unit 6** Lessons 2, 3, Unit Problem telling time	**C1** Read and record time using digital and analog clocks, INCLUDING 24-HOUR CLOCKS.	**Unit 6** Launch, Lessons 1 to 4 limited see MMS 2 & 3	
C2 Relate NUMBER OF SECONDS TO A MINUTE, MINUTES TO AN HOUR & number of days to a month in a problem-solving context.	**Unit 6** Lesson 1 (limited)		**C2** READ & RECORD CALENDAR DATES IN A VARIETY OF FORMATS.		
C3 Demonstrate an understanding of measuring length (cm / m) by: **(a)** selecting & justifying referents for the units cm and m **(b)** modelling and describing relationship between units cm & m **(c)** estimating length using referents **(d)** measuring and recording length, width and height.	**Unit 5** Lesson 8 **Unit 9** Launch, Lessons 1, 2 **Cross Strand:** 300	**Unit 6** Launch, Lessons 2 to 4, 8 to 11 time, temperature, add and subtract money, capacity **Unit 9** Lesson 3, 6 to 9, Unit Problem km, area no separate money outcomes; use to meet number outcomes	**May be reviewed but do not assess**	**Unit 9** Lesson 1 reviews grade 3 length outcomes	**Unit 9** Lessons 2, 3, 5 millimetres, decimetres, relating units
C4 Demonstrate an understanding of measuring mass (g / kg) by: **(a)** selecting and justifying referents for the units g and kg **(b)** modelling and describing relationship between units g & kg **(c)** estimating mass using referents **(d)** measuring/recording mass.	**Unit 6** Lessons 12, 13 limited			**Unit 6** Lesson 9 reviews grade 3 mass outcomes	**Unit 6** Lesson 8, Unit Problem capacity
C5 Demonstrate understanding of perimeter of regular and irregular shapes by: **(a)** estimating perimeter using referents for centimetre or metre **(b)** measuring and recording perimeter (cm and m) **(c)** constructing different shapes for a given perimeter (cm & m) to demonstrate many shapes are possible for a perimeter.	**Unit 9** Launch, Lessons 4, 5 **Cross Strand:** 2-3, 422 (do not assess area) Integrate Lesson 4 (temperature) with science		**C3** Demonstrate understanding of area of regular and irregular 2-D shapes by: **(a)** RECOGNIZING AREA IS MEASURED IN SQUARE UNITS **(b)** SELECTING/JUSTIFYING REFERENTS (CM^2 OR M^2) **(c)** ESTIMATING AREA USING REFERENTS FOR CM^2 OR M^2 **(d)** determining and recording area (cm^2 or m^2) **(e)** constructing different rectangles for a given area (cm^2 or m^2) to demonstrate many rectangles may have same area.	**Unit 9** Launch, Lessons 8 to 13, Unit Problem Unit 10 Lesson 9 area patterns review grade 3 outcomes	**Unit 9** Lesson 6, 7 calculating perimeters using decimals

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.

C6 Describe 3-D objects *(cubes, spheres, cones, cylinders, pyramids, prisms)* according to the shape of faces, number of edges and vertices.	**Unit 3** Lessons 8, 9 limited; Launch and Unit Problem do not assess outcomes C6 and C7	**Unit 3** Launch, Lessons 2, 5, 7, 10, 11, Unit Problem, Lessons 1, 3, 4, 6 Connect and Practices; angles, parallel sides, congruency, parallelograms	**C4** Describe and construct rectangular and triangular prisms.	**Unit 3** Lessons 8 limited, 8A, 9 to 11 limited; to 11 limited; reviews gr. 3 outcomes; do not assess volume in Lesson 11 **Cross Strand:** 116-117	**Unit 3** Launch, Lessons 1 to 7, Unit Problem 2-D geometry
C7 Sort regular and irregular polygons, including: **(a)** triangles **(b)** QUADRILATERALS **(c)** pentagons **(d)** hexagons **(e)** octagons; according to number of sides.	**Unit 3** Explore & Show and Shares in Lessons 1, 3, 4, 6 limited				

STRAND: SHAPE AND SPACE (TRANSFORMATIONS)

General Outcome: Describe and analyze position and motion.

May be explored informally but do not assess		**Unit 7** Motion Geometry	**C5** Demonstrate an understanding of line symmetry by: **(a)** IDENTIFYING **(b)** CREATING SYMMETRICAL 2-D SHAPES **(c)** drawing one or more lines of symmetry in a 2-D shape.	**Unit 4** Lesson 2 limited **Unit 7** Lesson 4 See MMS 3 Unit 7 Lesson 6	**Unit 7** Launch, Lessons 1 to 3, 5 to 7, Unit Problem grids, coordinates, transformations