

# WNCP B.C. GRADE 4 & 5 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 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds	Grade 5 Prescribed Learning Outcomes	MMS 5 Meets	Exceeds
A1 Represent and describe whole numbers to 10 000 pictorially and symbolically.	Unit 2 Lesson 1		A1 Represent and describe whole numbers to 1 000 000.	Unit 2 Lesson 1 uses expanded form instead of expanded notation	Unit 2 Lesson 2 prime and composite
A2 Compare and order numbers to 10 000.	Unit 2 Lesson 3	Unit 2 Lesson 2 rounding	<b>May be reviewed but do not assess</b>		
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 and subtracting (b) estimating sums and differences (c) solving problems involving addition and subtraction.	Unit 1 Game p. 24, Unit Problem Unit 2 Launch, Lessons 4 to 12, Unit Problem Unit 6 Launch, Lessons 3, 4 strategies limited				
A4 EXPLAIN THE PROPERTIES OF 0 AND 1 FOR MULTIPLICATION, AND THE PROPERTIES OF 1 FOR DIVISION.					
<b>GR. 3: estimate quantities less than 1000 using referents</b>			A2 Use estimation strategies including: (a) front-end rounding (b) compensation (c) compatible numbers in problem-solving contexts.	Unit 2 Launch, Lessons 3, 5, 10 Lessons 4, 6 review adding and subtracting 3 & 4-digit numbers	
A5 Describe & apply mental mathematics strategies, such as: (a) <b>SKIP COUNTING FROM A KNOWN FACT</b> (b) using doubling or HALVING (c) <b>USING DOUBLING OR HALVING AND ADDING OR SUBTRACTING ONE MORE GROUP</b> (d) using patterns in the 9s facts (e) <b>USING REPEATED DOUBLING</b> to determine basic multiplication facts up to 9 x 9 and 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	A3 Apply mental mathematics strategies and number properties, such as: (a) skip counting from a known fact (b) <b>USING DOUBLING OR HALVING</b> (c) <b>USING PATTERNS IN THE 9S FACTS</b> (d) <b>USING REPEATED DOUBLING OR HALVING</b> to determine ( <i>RECALL</i> ) answers for basic multiplication facts to 81 & related division facts.	Unit 2 Lesson 7, Game p. 50 limit assessment to facts to 81	
A6 Demonstrate an understanding of multiplication (2 or 3-digit by 1- digit) to solve problems by: (a) using personal strategies with and without concrete materials (b) using arrays to represent multiplication (c) connecting concrete representations 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	A4 Apply mental mathematics strategies for multiplication, such as: (a) annexing then adding zero (b) halving and doubling (c) using distributive property. A5 Demonstrate an understanding of 2-digit by 2-digit multiplication ( <i>concretely, pictorially and symbolically</i> ) to solve problems.	Unit 2 Lessons 8, 9, 13, Unit Problem Unit 10 Lesson 1 do not assess factors  Unit 2 Lessons 9, 11, 13 Unit 10 Lesson 1	
A7 Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by: (a) using personal strategies with & without concrete materials (b) <b>ESTIMATING QUOTIENTS</b> (c) relating division to multiplication. <i>It is not intended that remainders be expressed as decimals or fractions.</i>	Unit 4 Lessons 8 to 12, Unit Problem Unit 10 Lesson 7	Unit 10 Lesson 8 3-digit dividends	A6 Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems.	Unit 2 Lesson 12 to 14, Game p. 71, Unit Problem Unit 8 Lesson 6 remainders are expressed as fractions, but not decimals	

# WNCP B.C. GRADE 4 & 5 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 (continued)

General Outcome: Develop number sense.

Use Unit and Cumulative Reviews Selectively

Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds	Grade 5 Prescribed Learning Outcomes	MMS 5 Meets	Exceeds
<b>A8</b> Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to: (a) name & record fractions for the parts of a whole or a set (b) COMPARE AND ORDER FRACTIONS (c) MODEL AND EXPLAIN THAT FOR DIFFERENT WHOLES, TWO IDENTICAL FRACTIONS MAY NOT REPRESENT THE SAME QUANTITY (d) PROVIDE EXAMPLES WHERE FRACTIONS ARE USED.	Unit 8 Launch, Lessons 1 to 4.	Unit 8 Lessons 5 to 9, Unit Problem equivalent fractions, mixed numbers, compare and order mixed numbers, Technology p. 294, 297 fractions on a calculator	<b>A7</b> Demonstrate an understanding of fractions by using concrete and pictorial representations to: (a) create sets of equivalent fractions (b) compare fractions with like & unlike denominators.	Unit 8 Lessons 1, 3, 5, 10, Games p. 271 & 283, Unit Problem Part 1 & 2	Unit 8 Lesson 2, Unit Problem (part 3) mixed numbers
<b>A9</b> DESCRIBE AND REPRESENT DECIMALS (TENTHS AND HUNDREDTHS) CONCRETELY, PICTORIALLY AND SYMBOLICALLY.			<b>A8</b> DESCRIBE AND REPRESENT DECIMALS (TENTHS, HUNDREDTHS AND THOUSANDTHS) CONCRETELY, PICTORIALLY AND SYMBOLICALLY.		Unit 4 all lessons relate decimals (10ths and 100ths) to mixed numbers
<b>A10</b> RELATE DECIMALS TO FRACTIONS (TO HUNDREDTHS).			<b>A9</b> RELATE DECIMALS TO FRACTIONS (TO THOUSANDTHS).	Unit 8: Lesson 4	
<b>May be explored informally but do not assess</b>		Unit 8 Lesson 10 compare and order decimals	<b>A10</b> Compare and order decimals (TO THOUSANDTHS) by using: (a) benchmarks (b) PLACE VALUE (c) EQUIVALENT DECIMALS.	Unit 8 Lesson 5, Game p. 283 (10ths and 100ths only)	Unit 8 Launch, Lessons 7 to 9, 11, 12 multiply and divide decimals
<b>A11</b> Demonstrate an understanding of addition & subtraction of decimals (limited to 100ths) by: (a) USING COMPATIBLE NUMBERS (b) estimating sums and differences (c) using mental math strategies to solve problems.	Unit 6 Lessons 5 to 7 Unit 8 Lesson 13 sums and differences for money can be greater than one	Unit 8 Lessons 11, 12 add and subtract decimals related to mixed numbers	<b>A11</b> DEMONSTRATE AN UNDERSTANDING OF ADDITION AND SUBTRACTION OF DECIMAL FRACTIONS (LIMITED TO THOUSANDTHS).	Unit 5 Lesson 7, and Unit 6 Lessons 5 and 6 review problem solving with money (grade 4 outcomes)	

## STRAND: STATISTICS & PROBABILITY (DATA ANALYSIS)

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

<b>D1</b> DEMONSTRATE AN UNDERSTANDING OF MANY-TO-ONE CORRESPONDENCE.			<b>D1</b> DIFFERENTIATE BETWEEN FIRST-HAND & SECOND-HAND DATA.		Unit 5 Lessons 4 to 6, frequency tables, line graphs, sample and population
<b>D2</b> 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	<b>D2</b> CONSTRUCT AND INTERPRET DOUBLE BAR GRAPHS TO DRAW CONCLUSIONS.	Unit 5 Launch, Lessons 1 to 3 and Unit Problem review pictographs and bar graphs	

## STRAND: STATISTICS & PROBABILITY (CHANCE AND UNCERTAINTY)

General Outcome: Use experimental or theoretical probabilities to represent & solve problems involving uncertainty.

<b>May be explored informally but do not assess</b>		Unit 11 Probability outcomes begin in grade 5	<b>D3</b> Describe the likelihood of a single outcome occurring using words such as: (a) impossible (b) possible (c) certain.	Unit 11 Lesson 1 See MMS3, MMS 4 Unit 11 first year for probability outcomes	Unit 11 Lessons 3 to 5, Unit Problem probability as a fraction
			<b>D4</b> Compare the likelihood of two possible outcomes occurring using words such as: (a) less likely (b) equally likely (c) more likely.	Unit 11 Launch, Lessons 1, 2	

# WNCP B.C. GRADE 4 & 5 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: PATTERNS AND RELATIONS (PATTERNS)

**General Outcome: Use patterns to describe the world and solve problems. Use Unit and Cumulative Reviews Selectively**

Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds	Grade 5 Prescribed Learning Outcomes	MMS 5 Meets	Exceeds
<b>B1</b> 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 2 and Unit 10 Unit Problem review grade 3 outcomes	Unit 1 Lesson 3 patterns with calculators	<b>B1</b> Determine the pattern rule to make predictions about subsequent elements ( <i>with &amp; without concrete materials</i> ).	Unit 1 Launch, Lessons 1 to 5, Unit Problem Unit 9 Lesson 10 Unit 10 Launch, Lessons 1, 3, 4, Unit Problem <b>Cross Strand</b> 2-3, 392-393	Unit 10 Lesson 2 line graphs
<b>B2</b> Reproduce a pattern shown in a table or chart using concrete materials.	Unit 10 Launch, Lessons 1, 4 to 6		<b>May be reviewed but do not assess</b>		
<b>B3</b> Represent and describe patterns and relationships using charts and tables to solve problems.	Unit 1 Launch, Lesson 1, Unit Problem Unit 4 Lesson 7 Unit 5 Lesson 7 Unit 10 Lessons 2, 4 to 6	Unit 1 Lesson 2 and Unit 10 Unit Problem review grade 3 outcomes			
<b>B4</b> 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 <b>Cross Strand:</b> 2-3, 116-117, 268-269				

## STRAND: PATTERNS & RELATIONS (VARIABLES & EQUATIONS)

**General Outcome: Represent algebraic expressions in multiple ways.**

<b>B5</b> 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		<b>May be reviewed but do not assess</b>		
<b>B6</b> Solve one-step equations involving a symbol to represent an unknown number ( <i>using manipulatives</i> ).	Unit 1 Lessons 4, 5 limited; addition and subtraction only	Unit 1 Lesson 6 More than one unknown number	<b>B2</b> SOLVE PROBLEMS INVOLVING SINGLE-VARIABLE, ONE-STEP EQUATIONS WITH WHOLE NUMBER COEFFICIENTS AND WHOLE NUMBER SOLUTIONS.		

## STRAND: SHAPE AND SPACE (MEASUREMENT)

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

<b>C1</b> Read and record time using digital and analog clocks, <b>INCLUDING 24-HOUR CLOCKS.</b>	Unit 6 Launch, Lessons 1 to 4 limited; see MMS 2 & 3		<b>Measuring Time, 24-Hour Clocks (reviews grade 4 outcomes)</b>	Unit 6 Lessons 1 and 2	
<b>C2</b> READ AND RECORD CALENDAR DATES IN VARIOUS FORMATS.					
<b>C3</b> Demonstrate an understanding of area of regular and irregular 2-D shapes by: <b>(a) RECOGNIZING AREA IS MEASURED IN SQUARE UNITS</b> <b>(b) SELECTING &amp; JUSTIFYING REFERENTS FOR CM<sup>2</sup> OR M<sup>2</sup></b> <b>(c) ESTIMATING AREA USING REFERENTS FOR CM<sup>2</sup> OR M<sup>2</sup></b> <b>(d) determining and recording area (cm<sup>2</sup> or m<sup>2</sup>)</b> <b>(e) constructing different rectangles for a given area (cm<sup>2</sup> or m<sup>2</sup>) to demonstrate many rectangles may have the same area.</b>	Unit 9 Launch, Lessons 8 to 13, Unit Problem  area patterns in Unit 10 Lesson 9 review grade 3 outcomes	Unit 9 Lessons 2, 3, 5 to 7 mm and dm; relating units of length; perimeter using decimals	<b>C1</b> Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions.	Unit 9: Lessons 7, 10, Unit Problem Unit 10 Unit Problem Unit 9 Lesson 3, 5 reviews earlier grade outcomes (area, perimeter)	Unit 9 Lessons 4, 6, 8, 9 circumference perimeter in decimals

# WNCP B.C. GRADE 4 & 5 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: SHAPE AND SPACE (MEASUREMENT) (continued)

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

Grade 4 Prescribed Learning Outcomes	MMS 4 Meets	Exceeds	Grade 5 Prescribed Learning Outcomes	MMS 5 Meets	Exceeds
<b>GR. 3 cm and m measure / record length, width and height perimeter of regular and irregular shapes</b>	Unit 9 Lesson 1 reviews length	Unit 9 Lessons 2, 3, 5 to 7 mm and dm; relating units of length; perimeter using decimals	<b>C2</b> Demonstrate understanding of measuring length (mm) by: (a) selecting and justifying referents for the unit mm (b) modelling and describing the relationship between mm and cm units, and between mm and m units.	Unit 9 Launch, Lessons 1, 2 limited do not assess dm and km; see MMS 4 Unit 9 Lessons 2 and 5	Unit 9 Lessons 4, 6, 8, 9 circumference perimeter in decimals
<b>GR. 3: g and kg</b>	Unit 6 Lesson 9, reviews g and kg		<b>C3</b> Demonstrate an understanding of volume by: (a) <b>SELECTING &amp; JUSTIFYING REFERENTS FOR CM<sup>3</sup> OR M<sup>3</sup></b> (b) estimating volume <b>USING REFERENTS CM<sup>3</sup> OR M<sup>3</sup></b> (c) measuring and recording volume (cm <sup>3</sup> or M <sup>3</sup> ) (d) constructing rectangular prisms for a given volume.	Unit 6 Launch, Lessons 8, 9; Lesson 10 reviews mass (mg exceed); first year for volume outcomes; see MMS 4 Unit 3 Lesson 11	Unit 6 Lessons 3, 4, 11, Unit Problem time and distance, line graphs, large masses
<b>May be explored informally but do not assess</b>		Unit 6 Lessons 8, Unit Problem capacity	<b>C4</b> Demonstrate an understanding of capacity by: (a) describing the relationship between mL and L (b) selecting & justifying referents for mL or L units (c) estimating capacity by using referents for mL or L (d) measuring and recording capacity (mL or L).	Unit 6 Launch, Lessons 7, 9 limited; first year for capacity outcomes; see MMS 4 Unit 6 Lesson 6	

## 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.**

<b>C4</b> Describe and construct rectangular and triangular prisms.	Unit 3 Lessons 8 limited, 8A, 9 to 11 limited; reviews gr. 3 outcomes; do not assess volume in Lesson 11 <b>Cross Strand:</b> 116-117	Unit 3 Launch, Lessons 1 to 7, Unit Problem 2-D geometry	<b>C5</b> Describe and provide examples of edges and <b>FACES</b> of 3-D objects, and sides of 2-D shapes that are: (a) parallel (b) <b>INTERSECTING</b> (c) <b>PERPENDICULAR</b> (d) <b>VERTICAL</b> (e) <b>HORIZONTAL</b> .	Unit 3 Lessons 4, 5 limited; parallel edges of 3-D objects and sides of 2-D shapes only; Lesson 7 reviews grade 4 outcomes	Unit 3 Launch, Lessons 2, 3, 6, Unit Problem Cross Strand 108-109 angles, classifying & constructing triangles, planes of symmetry
<b>GR. 3: triangle, quadrilateral, pentagon, hexagon, octagon</b> • sort regular & irregular polygons according to number of sides			<b>C6</b> <b>IDENTIFY AND SORT QUADRILATERALS, ACCORDING TO THEIR ATTRIBUTES, INCLUDING:</b> (a) <b>RECTANGLES</b> (b) <b>SQUARES</b> (c) <b>TRAPEZOIDS</b> (d) <b>PARALLELOGRAMS</b> (e) <b>RHOMBUSES</b> .	Unit 3 Lesson 1 reviews identifying and naming polygons (gr. 3 and 4 outcomes)	

## STRAND: SHAPE AND SPACE (TRANSFORMATIONS)

**General Outcome: Describe and analyze position and motion.**

<b>C5</b> Demonstrate an understanding of line symmetry ( <i>with and without manipulatives</i> ) by: (a) <b>IDENTIFYING &amp; (b) CREATING SYMMETRICAL 2-D SHAPES</b> (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		<b>May be reviewed but do not assess</b>		Unit 7 Lessons 5, 7, Unit Problem tessellations, coordinate grids, similar figures
<b>May be explored informally but do not assess</b>	Unit 7 Launch, Lessons 1 to 3, 5 to 7, Unit Problem grids, coordinates, transformations	<b>C7</b> Perform a single transformation (translation, rotation or reflection) of a 2-D shape (with and without technology) and draw and describe the image.	Unit 7 Lessons 1 to 3 first year for transformation outcomes; see MMS 4 Unit 7	Unit 10 Lesson 5 tiling patterns	Unit 7 Launch, Lessons 1 to 3; Lessons 4 and 6 review line symmetry
		<b>C8</b> Identify a single transformation including a translation, rotation and reflection of 2-D shapes.		<b>Cross Strand</b> 256-257 similar figures	