

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

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

STRAND: NUMBER

GENERAL OUTCOME: Develop number sense.

| Grade 2 Prescribed Outcomes | Grade 3 Prescribed Outcomes |
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| <p>A1 Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> (a) 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively (b) 10s using starting points from 1 to 9 (c) 2s starting from 1. | <p>A1 Say the number sequence forward and backward from 0 to 1000 by:</p> <ul style="list-style-type: none"> (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. |
| <p>A2 Demonstrate if a number (up to 100) is even or odd (<i>concretely, pictorially and symbolically</i>).</p> | <p>May be reviewed but do not assess</p> |
| <p>A3 Describe order or relative position using ordinal numbers (1st to 10th).</p> | |
| <p>A4 Represent and describe numbers to 100, concretely, pictorially & symbolically.</p> | |
| <p>A5 Compare and order numbers up to 100.</p> | |
| <p>A6 Estimate quantities to 100 using referents.</p> | <p>A2 Represent and describe numbers to 1000 concretely, pictorially and symbolically.</p> |
| <p>A7 Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.</p> | <p>A3 Compare and order numbers to 1000.</p> |
| <p>A8 Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> | <p>A4 Estimate quantities less than 1000 using referents.</p> |
| <p>May be explored informally, but do not assess</p> | <p>A5 Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.</p> |
| | <p>May be reviewed but do not assess</p> |
| | <p>A6 Describe and apply mental mathematics strategies for adding two 2-digit numerals such as:</p> <ul style="list-style-type: none"> (a) adding from left to right (b) taking one addend to the nearest multiple of ten then compensating (c) using doubles. |
| | <p>A7 Describe & apply mental strategies for subtracting two 2-digit numerals such as:</p> <ul style="list-style-type: none"> (a) taking the subtrahend to the nearest multiple of ten then compensating (b) thinking of addition (c) using doubles. |
| | <p>A8 Apply estimation strategies to predict sums and differences of two 2-digit numerals in a problem-solving context.</p> |

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STRAND: NUMBER (continued)

Grade 2 Prescribed Outcomes

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 that the order in which numbers are added does not affect the sum
- (d) explaining that the order in which numbers are subtracted may affect the difference.

A10 Apply mental mathematics strategies such as:

- (a) using doubles
- (b) making 10
- (c) one more, one less
- (d) two more, two less
- (e) addition for subtraction.

to determine basic addition facts to 18 and the related subtraction facts.

May be explored informally but do not assess

Grade 3 Prescribed Outcomes

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 & without manipulatives
- (b) creating and solving problems in context that involve addition and subtraction of numbers concretely, pictorially and symbolically.

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,

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 and recording the process symbolically
- (d) relating multiplication to repeated addition
- (e) relating multiplication to division.

(**MEMORIZATION NOT INTENDED**)

A12 Demonstrate an understanding of division by:

- (a) representing & explaining division using equal sharing & equal grouping
- (b) creating & solving problems in context that involve equal sharing & 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 multiplication facts up to 5×5).

A13 Demonstrate an understanding of fractions by:

- (a) explaining that a fraction represents a part of a whole
- (b) describing situations in which fractions are used
- (c) comparing fractions of the 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 2 Prescribed Outcomes

- D1** Gather and record data about self and others to answer questions.
- D2** Construct and interpret concrete graphs and pictographs to solve problem.

Grade 3 Prescribed Outcomes

- D1** Collect first-hand data and organize it to answer questions using:
(a) tally marks (b) line plots (c) charts (d) lists.
- D2** Construct, label and interpret bar graphs to solve problems.

STRAND: PATTERNS AND RELATIONS (PATTERNS)

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

- B1** Demonstrate an understanding of repeating patterns (3 to 5 elements) by:
(a) describing (b) extending
(c) comparing (d) creating
patterns using manipulatives, diagrams, sounds and actions.

- B2** Demonstrate an understanding of increasing pattern by:
(a) describing (b) reproducing
(c) extending (d) creating
patterns using manipulatives, diagrams, sounds & 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 actions (numbers to 1000).

- 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** Demonstrate and explain the meaning of inequality by using manipulatives and diagrams (0 to 100).
- B4** Record equalities and inequalities symbolically using the equal symbol or the not equal symbol (*with concrete representations*).

May be reviewed but do not assess

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 2 Prescribed Outcomes

C1 Relate the number of days to a week and the number of months to a year in a problem-solving context.

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).

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).

C5 Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.

May be explored informally but do not assess

Grade 3 Prescribed Outcomes

C1 Relate the passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months and years).

C2 Relate the number of seconds to a minute, the number of minutes to an hour and the number of days to a month in a problem-solving context.

C4 Demonstrate an understanding of measuring mass (g and kg) by:
 (a) selecting and justifying referents for the units g and kg
 (b) modelling and describing the relationship between the units g and kg
 (c) estimating mass using referents
 (d) measuring and recording mass.

C3 Demonstrate an understanding of measuring length (cm and m) by:
 (a) selecting and justifying referents for the units cm and m
 (b) modelling and describing the relationship between the units cm and m
 (c) estimating length using referents
 (d) measuring and recording length, width and height.

May be reviewed but do not assess

C5 Demonstrate an understanding of perimeter of regular & 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 and 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.

C6 Sort 2-D shapes & 3-D objects using two attributes, and explain the sorting rule.

C7 Describe, compare, and construct 3-D objects including:
 (a) cubes (b) spheres (c) cones (d) cylinders (e) pyramids.

C8 Describe, compare, and construct 2-D shapes including:
 (a) triangle (b) squares (c) rectangles (d) circles.

C9 Identify 2-D shapes as parts of 3-D objects in the environment.

May be reviewed but do not assess

C6 Describe 3-D objects according to the shape of the faces, and the number of edges and vertices.

C7 Sort regular and irregular polygons according to number of sides including:
 (a) triangles (b) quadrilaterals (c) pentagons (d) hexagons (e) octagons.

May be reviewed but do not assess