

WNCP B.C. MATHEMATICS AT A GLANCE OVERVIEW – GRADE 5

Mathematical Processes

C = Communication

PS = Problem Solving

V = Visualization

R = Reasoning

CN = Connections

T = Technology

ME = Mental Mathematics and Estimation

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

STRAND: NUMBER		Mathematical Processes
General Outcome: Develop number sense		
<i>It is expected that students will:</i>		
A1	Represent and describe whole numbers to 1 000 000.	C CN VT
A2	Use estimation strategies in problem-solving contexts, including: (a) front-end rounding (b) compensation (c) compatible numbers.	C CN ME PS RV
A3	Apply mental mathematics strategies and number properties, such as: (a) skip counting from a known fact (b) using doubling or halving (c) using patterns in the 9s facts (d) using repeated doubling or halving to determine (<i>RECALL</i>) answers for basic multiplication facts to 81 and related division facts.	C CN ME RV
A4	Apply mental mathematics strategies for multiplication, such as: (a) annexing then adding zero (b) halving & doubling (c) using distributive property.	C ME R
A5	Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems (<i>concretely, pictorially and symbolically</i>).	C CN PS V
A6	Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems.	C CN PS
A7	Demonstrate an understanding of fractions using concrete & pictorial representations to: (a) create sets of equivalent fractions (b) compare fractions with like and unlike denominators.	C CN PS RV
A8	Describe and represent decimals (tenths, hundredths and thousandths) concretely, pictorially and symbolically.	C CN RV
A9	Relate decimals to fractions (to thousandths) <i>concretely, pictorially & symbolically</i> .	C CN RV
A10	Compare and order decimals (to thousandths) by using: (a) benchmarks (b) place value (c) equivalent decimals.	CN RV
A11	Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths).	C CN PS RV

STRAND: STATISTICS & PROBABILITY (DATA ANALYSIS)		Mathematical Processes
General Outcome: Collect, display and analyze data to solve problems.		
D1	Differentiate between first-hand and second-hand data.	C RVT
D2	Construct and interpret double bar graphs to draw conclusions.	C PS RVT
STRAND: STATISTICS & PROBABILITY (CHANCE & UNCERTAINTY)		Mathematical Processes
General Outcome: Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.		
D3	Describe the likelihood of a single outcome occurring using words such as: (a) impossible (b) possible (c) certain.	C CN PS R
D4	Compare the likelihood of two possible outcomes occurring using words such as: (a) less likely (b) equally likely (c) more likely.	C CN PS R

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STRAND: PATTERNS AND RELATIONS (PATTERNS)		Mathematical Processes
General Outcome: Use patterns to describe the world and solve problems.		
B1	Determine the pattern rule to make predictions about subsequent elements (with and without concrete materials).	C CN PS R V
STRAND: PATTERNS & RELATIONS (VARIABLES & EQUATIONS)		Mathematical Processes
General Outcome: Represent algebraic expressions in multiple ways.		
B2	Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions.	C CN PS R

STRAND: SHAPE AND SPACE (MEASUREMENT)		Mathematical Processes
General Outcome: Use direct or indirect measurement to solve problems.		
C1	Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions.	C CN PS R V
C2	Demonstrate an 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.	C CN ME PS R V
C3	Demonstrate an understanding of volume by: (a) selecting and justifying referents for cm^3 or m^3 units (b) estimating volume by using referents for cm^3 or m^3 (c) measuring and recording volume (cm^3 or m^3) (d) constructing rectangular prisms for a given volume.	C CN ME PS R V
C4	Demonstrate an understanding of capacity by: (a) describing the relationship between mL and L (b) selecting and 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).	C CN ME PS R V
STRAND: SHAPE AND SPACE (3-D OBJECTS & 2-D SHAPES)		Mathematical Processes
General Outcome: Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.		
C5	Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are: (a) parallel (b) intersecting (c) perpendicular (d) vertical (e) horizontal.	C CN R V T
C6	Identify and sort quadrilaterals, according to their attributes, including: (a) rectangles (b) squares (c) trapezoids (d) parallelograms (e) rhombuses.	C R V
STRAND: SHAPE AND SPACE (TRANSFORMATIONS)		Mathematical Processes
General Outcome: Describe and analyze position and motion.		
C7	Perform a single transformation (translation, rotation or reflection) of a 2-D shape (with and without technology) and draw and describe the image.	C CN V T
C8	Identify a single transformation including a translation, rotation and reflection of 2-D shapes.	C V T