

# Grade 6 JUMP Math Correlation to the New BC Curriculum

## NOTES:

Underlined JUMP Math lessons are review from a previous grade.

*Italicized* JUMP Math lessons contain prerequisite material required to meet the learning standard.

An asterisk (\*) indicates that a JUMP Math lesson covers a curriculum requirement primarily in the lesson plan.

JUMP Math strands are represented by:

NS Number Sense

ME Measurement

G Geometry

PA Patterns and Algebra

PDM Probability and Data Management

## Big Ideas

Mixed **numbers** and decimal numbers represent quantities that can be decomposed into parts and wholes.

Computational **fluency** and flexibility with numbers extend to operations with whole numbers and decimals.

**Linear relations** can be identified and represented using expressions with variables and line graphs and can be used to form generalizations.

**Properties** of objects and shapes can be described, measured, and compared using volume, area, perimeter, and angles.

**Data** from the results of an experiment can be used to predict the theoretical probability of an event and to compare and interpret.

## Content

**small to large numbers** (thousandths to billions)

## JUMP Math Lessons

Part	Unit	Lessons
1	2	NS6-1 to 6
1	4	NS6-17
2	9	NS6-38, 39 NS6-40, 41, 43 to 47
2	10	NS6-50 to 53, 57

Content	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>place value from thousandths to billions, operations with thousandths to billions</li> </ul>	Part	Unit	Lessons
	1	2	NS6-1, 2, 4
	2	9	NS6-38, 39 NS6-43 to 46
<ul style="list-style-type: none"> <li>numbers used in science, medicine, technology, and media</li> </ul>	2	10	NS6-50 to 53, 57
	Part	Unit	Lessons
	1	2	NS6-1 to 4
<ul style="list-style-type: none"> <li>compare, order, estimate</li> </ul>	2	9	NS6-45
	Part	Unit	Lessons
	1	2	NS6-3, 5, 6
multiplication and division <b>facts to 100</b> (developing computational fluency)	1	4	NS6-17
	2	9	NS6-40, 41, 47
<ul style="list-style-type: none"> <li>mental math strategies (e.g., the double-double strategy to multiply <math>23 \times 4</math>)</li> </ul>	Part	Unit	Lessons
	1	4	NS6-10, 11, 13, 14
<b>order of operations</b> with whole numbers	Part	Unit	Lessons
	1	7	NS6-24
	1	8	NS6-36
<ul style="list-style-type: none"> <li>includes the use of brackets, but excludes exponents</li> </ul>	Part	Unit	Lessons
	1	7	NS6-24
<ul style="list-style-type: none"> <li>quotients can be rational numbers</li> </ul>	Part	Unit	Lessons
	1	8	NS6-36
<b>factors and multiples</b> — greatest common factor and least common multiple	Part	Unit	Lessons
	1	7	NS6-18 to 23
<ul style="list-style-type: none"> <li>prime and composite numbers, divisibility rules, factor trees, prime factor phrase (e.g., <math>300 = 2^2 \times 3 \times 5^2</math>)</li> </ul>	Part	Unit	Lessons
	1	7	NS6-22, 23
<ul style="list-style-type: none"> <li>using graphic organizers (e.g., Venn diagrams) to compare numbers for common factors and common multiples</li> </ul>	Part	Unit	Lessons
	1	7	NS6-18, 21
<b>improper fractions</b> and mixed numbers	Part	Unit	Lessons
	1	8	NS6-26, 28 NS6-29 to 34, 36, 37
	2	9	NS6-42

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.

Content	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>using benchmarks, number line, and common denominators to compare and order, including whole numbers</li> </ul>	Part	Unit	Lessons
	1	8	NS6-29 to 34, 36, 37
	2	9	NS6-42
<ul style="list-style-type: none"> <li>using pattern blocks, Cuisenaire Rods, fraction strips, fraction circles, grids</li> </ul>	Part	Unit	Lessons
	1	8	<u>NS6-26, 28</u> NS6-29, 30
<ul style="list-style-type: none"> <li>birchbark biting</li> </ul>	Part	Unit	Lessons
	1	8	NS6-30
introduction to <b>ratios</b>	Part	Unit	Lessons
	2	14	NS6-58 to 63
<ul style="list-style-type: none"> <li>comparing numbers, comparing quantities, equivalent ratios</li> </ul>	Part	Unit	Lessons
	2	14	NS6-58 to 63
<ul style="list-style-type: none"> <li>part-to-part ratios and part-to-whole ratios</li> </ul>	Part	Unit	Lessons
	2	14	NS6-58
whole-number <b>percents</b> and percentage discounts	Part	Unit	Lessons
	2	14	NS6-64 to 70
<ul style="list-style-type: none"> <li>using base 10 blocks, geoboard, <math>10 \times 10</math> grid to represent whole number percents</li> </ul>	Part	Unit	Lessons
	2	14	NS6-64, 65
<ul style="list-style-type: none"> <li>finding missing part (whole or percentage)</li> </ul>	Part	Unit	Lessons
	2	14	NS6-67, 68
<ul style="list-style-type: none"> <li><math>50\% = 1/2 = 0.5 = 50:100</math></li> </ul>	Part	Unit	Lessons
	2	14	NS6-66, 69, 70
multiplication and division of <b>decimals</b>	Part	Unit	Lessons
	1	4	NS6- <u>12</u> , 15, <u>16</u>
	1	8	NS6-30
	2	10	NS6-48 to 53, 57
<ul style="list-style-type: none"> <li><math>0.125 \times 3</math> or <math>7.2 \div 9</math></li> </ul>	Part	Unit	Lessons
	1	4	NS6- <u>12</u> , 15, <u>16</u>
	2	10	NS6-48 to 53, 57
<ul style="list-style-type: none"> <li>using base 10 block array</li> </ul>	Part	Unit	Lessons
	2	10	NS6-51 to 53, 57

Content	JUMP Math Lessons		
• birchbark biting	Part	Unit	Lessons
	1	8	NS6-30
increasing and decreasing <b>patterns</b> , using expressions, tables, and graphs as functional relationships	Part	Unit	Lessons
	1	1	PA6-3 to 8
	1	3	PDM6-3
	2	12	PA6-16 to 20
• limited to discrete points in the first quadrant	Part	Unit	Lessons
	2	12	PA6-16 to 18, 20
• visual patterning (e.g., colour tiles)	Part	Unit	Lessons
	1	1	PA6-5, 7
	2	12	PA6-16, 19
• Take 3 add 2 each time, $2n + 1$ , and 1 more than twice a number <i>all</i> describe the pattern 3, 5, 7, ...	Part	Unit	Lessons
	1	1	PA6-3 to 8
	2	12	PA6-17 to 20
• graphing data on First Peoples language loss, effects of language intervention	Part	Unit	Lessons
	1	3	PDM6-3
<b>one-step equations</b> with whole-number coefficients and solutions	Part	Unit	Lessons
	2	12	PA6-13 PA6-9 to 12, 14, 15
• preservation of equality (e.g., using a balance, algebra tiles)	Part	Unit	Lessons
	2	12	PA6-10, 11
• $3x = 12$ , $x + 5 = 11$	Part	Unit	Lessons
	2	12	PA6-13 PA6-9 to 12, 14, 15
<b>perimeter</b> of complex shapes	Part	Unit	Lessons
	1	5	ME6-1, 2 ME6-4
• A complex shape is a group of shapes with no holes (e.g., use colour tiles, pattern blocks, tangrams).	Part	Unit	Lessons
	1	5	ME6-4
<b>area</b> of triangles, parallelograms, and trapezoids	Part	Unit	Lessons
	2	13	ME6-10 to 15
• grid paper explorations	Part	Unit	Lessons
	2	13	ME6-10 to 14

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.

Content	JUMP Math Lessons		
• deriving formulas	Part	Unit	Lessons
	2	13	ME6-8 to 12, 14
• making connections between area of parallelogram and area of rectangle	Part	Unit	Lessons
	2	13	ME6-11 to 13
• birchbark biting	Part	Unit	Lessons
	2	13	ME6-14
<b>angle</b> measurement and classification	Part	Unit	Lessons
	1	6	G6-1 to 5
• straight, acute, right, obtuse, reflex	Part	Unit	Lessons
	1	6	G6-1 to 4
• constructing and identifying; include examples from local environment	Part	Unit	Lessons
	1	6	G6-1 to 4
• estimating using 45°, 90°, and 180° as reference angles	Part	Unit	Lessons
	1	6	G6-3
• angles of polygons	Part	Unit	Lessons
	1	6	G6-5
• Small Number stories: <i>Small Number and the Skateboard Park</i> (mathcatcher.irmacs.sfu.ca/stories)	Part	Unit	Lessons
	1	6	G6-2
<b>volume and capacity</b>	Part	Unit	Lessons
	1	4	NS6-9
	2	16	ME6-17, 18, 22, 23
• using cubes to build 3D objects and determine their volume	Part	Unit	Lessons
	2	16	ME6-17, 18
• referents and relationships between units (e.g., cm <sup>3</sup> , m <sup>3</sup> , mL, L)	Part	Unit	Lessons
	1	4	NS6-9
	2	16	ME6-22, 23
• the number of coffee mugs that hold a litre	Part	Unit	Lessons
	2	16	ME6-23
• berry baskets, seaweed drying	Part	Unit	Lessons
	2	16	ME6-18

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.

Content	JUMP Math Lessons		
<b>triangles</b>	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	6	G6-7 G6-8
• scalene, isosceles, equilateral	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	6	G6-8
• right, acute, obtuse	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	6	G6-8
• classified regardless of orientation	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	6	G6-8
combinations of <b>transformations</b>	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	6	G6-7
	2	11	G6-13 to 20
• plotting points on Cartesian plane using whole-number ordered pairs	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	11	G6-18 to 20
• translation(s), rotation(s), and/or reflection(s) on a single 2D shape	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	11	G6-13 to 17, 19, 20
• limited to first quadrant	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	11	G6-18 to 20
• transforming, drawing, and describing image	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	11	G6-13 to 16, 19, 20
• Use shapes in First Peoples art to integrate printmaking (e.g., Inuit, Northwest coastal First Nations, frieze work) ( <a href="http://mathcentral.uregina.ca/RR/database/RR.09.01/mcdonald1/">mathcentral.uregina.ca/RR/database/RR.09.01/mcdonald1/</a> )	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	11	G6-17
<b>line graphs</b>	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	3	PDM6-1 PDM6-2 to 4, 6
• table of values, data set; creating and interpreting a line graph from a given set of data	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	3	PDM6-1 PDM6-2 to 4, 6
<b>single-outcome probability</b> , both theoretical and experimental	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	1	8	NS6-35
	2	15	PDM6-7 to 11
• single-outcome probability events (e.g., spin a spinner, roll a die, toss a coin)	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
	2	15	PDM6-7 to 11

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.

Content	JUMP Math Lessons		
• listing all possible outcomes to determine theoretical probability	Part	Unit	Lessons
	2	15	PDM6-7 to 11
• comparing experimental results with theoretical expectation	Part	Unit	Lessons
	1	8	NS6-35
	2	15	PDM6-10, 11
• Lahal stick games	Part	Unit	Lessons
	2	15	PDM6-7, 8
<b>financial literacy</b> — simple budgeting and consumer math	Part	Unit	Lessons
	2	14	NS6-62, 63
• informed decision making on saving and purchasing	Part	Unit	Lessons
	2	14	NS6-62, 63
	2	16	ME6-22*
• How many weeks of allowance will it take to buy a bicycle?	Part	Unit	Lessons
	1	1	PA6-5

# Grade 6 JUMP Math Exemplar Lessons for Curricular Competencies

The Curricular Competencies in the new BC Mathematics curriculum are addressed throughout JUMP Math's Grade 6 resource. The following table lists a selection of JUMP Math lessons that provide effective illustrations of how each Curricular Competency is addressed.

Curricular Competencies			
Reasoning and analyzing	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>Use <b>logic and patterns</b> to solve puzzles and play games</li> </ul>	Part	Unit	Lessons
	1	1	PA6-4
	2	10	NS6-55
<ul style="list-style-type: none"> <li>Use <b>reasoning and logic</b> to explore, analyze, and apply mathematical ideas</li> </ul>	Part	Unit	Lessons
	1	6	G6-8
	2	11	G6-14
<ul style="list-style-type: none"> <li><b>Estimate reasonably</b></li> </ul>	Part	Unit	Lessons
	1	2	NS6-6
	2	13	ME6-8
<ul style="list-style-type: none"> <li>Demonstrate and <b>apply</b> mental math strategies</li> </ul>	Part	Unit	Lessons
	1	1	PA6-2
	1	4	NS6-11
	2	9	NS6-47
<ul style="list-style-type: none"> <li>Use tools or technology to explore and create patterns and relationships, and test conjectures</li> </ul>	Part	Unit	Lessons
	1	4	NS6-17
	2	11	G6-14
<ul style="list-style-type: none"> <li><b>Model</b> mathematics in contextualized experiences</li> </ul>	Part	Unit	Lessons
	1	5	ME6-5
	2	15	PDM6-11
	2	16	ME6-23

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.



## Curricular Competencies

Understanding and solving	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>Apply <b>multiple strategies</b> to solve problems in both abstract and contextualized situations</li> </ul>	Part	Unit	Lessons
	1	3	PDM6-2
	1	7	NS6-20
	2	11	G6-17
<ul style="list-style-type: none"> <li>Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving</li> </ul>	Part	Unit	Lessons
	1	6	G6-8
	2	13	ME6-11
<ul style="list-style-type: none"> <li>Visualize to explore mathematical concepts</li> </ul>	Part	Unit	Lessons
	1	3	PDM6-5
	2	13	ME6-9
<ul style="list-style-type: none"> <li>Engage in problem-solving experiences that are <b>connected</b> to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures</li> </ul>	Part	Unit	Lessons
	1	6	G6-2
	2	15	PDM6-7
	2	16	ME6-18
Communicating and representing	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>Use mathematical vocabulary and language to contribute to mathematical discussions</li> </ul>	Part	Unit	Lessons
	1	3	PDM6-4
	1	7	NS6-21
	2	11	G6-16
<ul style="list-style-type: none"> <li><b>Explain and justify</b> mathematical ideas and decisions</li> </ul>	Part	Unit	Lessons
	1	4	NS6-12
	1	6	G6-3
	2	12	PA6-20
<ul style="list-style-type: none"> <li><b>Communicate</b> mathematical thinking in many ways</li> </ul>	Part	Unit	Lessons
	1	7	NS6-20
	1	8	NS6-30
	2	12	PA6-12
<ul style="list-style-type: none"> <li>Represent mathematical ideas in concrete, pictorial, and symbolic forms</li> </ul>	Part	Unit	Lessons
	1	8	NS6-32
	2	10	NS6-53

COPYRIGHT © 2018 JUMP MATH: NOT TO BE COPIED.

Curricular Competencies			
Connecting and reflecting	JUMP Math Lessons		
<ul style="list-style-type: none"> <li>• <b>Reflect</b> on mathematical thinking</li> </ul>	Part	Unit	Lessons
	1	4	NS6-13
	2	16	ME6-18
<ul style="list-style-type: none"> <li>• Connect mathematical concepts to each other and to <b>other areas and personal interests</b></li> </ul>	Part	Unit	Lessons
	1	2	NS6-1
	2	14	NS6-66
<ul style="list-style-type: none"> <li>• Use mathematical arguments to support <b>personal choices</b></li> </ul>	Part	Unit	Lessons
	2	16	ME6-22
<ul style="list-style-type: none"> <li>• <b>Incorporate First Peoples</b> worldviews and perspectives to <b>make connections</b> to mathematical concepts</li> </ul>	Part	Unit	Lessons
	1	3	PDM6-3
	2	11	G6-17