

# Grade 2 JUMP Math Correlation to the Ontario 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 Teacher's Guide.

Expectation codes source: Ontario Curriculum Unit Planner

JUMP Math strands are represented by:

NS Number Sense

ME Measurement

G Geometry

PA Patterns and Algebra

PDM Probability and Data Management

## Number Sense and Numeration

### Overall Expectations

2m8	read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢;
2m9	demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points;
2m10	solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division.

### Specific Expectations

#### Quantity Relationships

2m11 represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools (e.g., ten frames, base ten materials, coin manipulatives, number lines, hundreds charts and hundreds carpets);

2m12 read and print in words whole numbers to twenty, using meaningful contexts (e.g., storybooks, posters, signs);

#### JUMP Math Lessons

Part	Unit	Lessons
1	7	NS2-18 to 21
2	13	NS2-56
2	17	NS2-72

Part	Unit	Lessons
1	2	NS2-12, 13

Number Sense and Numeration				
2m13	compose and decompose two-digit numbers in a variety of ways, using concrete materials (e.g., place 42 counters on ten frames to show 4 tens and 2 ones; compose 37¢ using one quarter, one dime, and two pennies) ( <b>Sample problem:</b> Use base ten blocks to show 60 in different ways.);	Part	Unit	Lessons
		1	7	NS2-18 to 21
		2	13	NS2-51 to 53, 56
		2	17	NS2-72
2m14	determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer (e.g., use counters on ten frames to determine that 47 is closer to 50 than to 40);	Part	Unit	Lessons
		2	12	NS2-45
2m15	determine, through investigation using concrete materials, the relationship between the number of fractional parts of a whole and the size of the fractional parts (e.g., a paper plate divided into fourths has larger parts than a paper plate divided into eighths) ( <b>Sample problem:</b> Use paper squares to show which is bigger, one half of a square or one fourth of a square.);	Part	Unit	Lessons
		2	18	NS2-77
2m16	regroup fractional parts into wholes, using concrete materials (e.g., combine nine fourths to form two wholes and one fourth);	Part	Unit	Lessons
		2	18	NS2-78
2m17	compare fractions using concrete materials, without using standard fractional notation (e.g., use fraction pieces to show that three fourths are bigger than one half, but smaller than one whole);	Part	Unit	Lessons
		2	18	NS2-77
2m18	estimate, count, and represent (using the ¢ symbol) the value of a collection of coins with a maximum value of one dollar.	Part	Unit	Lessons
		2	12	NS2-46
		2	17	NS2-71, 72
Counting		JUMP Math Lessons		
2m19	count forward by 1's, 2's, 5's, 10's, and 25's to 200, using number lines and hundreds charts, starting from multiples of 1, 2, 5, and 10 (e.g., count by 5's from 15; count by 25's from 125);	Part	Unit	Lessons
		1	7	NS2-19
		2	12	NS2-43
		2	17	NS2-67 to 69
2m20	count backwards by 1's from 50 and any number less than 50, and count backwards by 10's from 100 and any number less than 100, using number lines and hundreds charts ( <b>Sample problem:</b> Count backwards from 87 on a hundreds carpet, and describe any patterns you see.);	Part	Unit	Lessons
		1	10	NS2-40
		2	12	NS2-44
2m21	locate whole numbers to 100 on a number line and on a partial number line (e.g., locate 37 on a partial number line that goes from 34 to 41).	Part	Unit	Lessons
		1	7	NS2-23

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## Number Sense and Numeration

Operational Sense		JUMP Math Lessons		
2m22	solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies (e.g., “To add $6 + 8$ , I could double 6 and get 12 and then add 2 more to get 14.”);	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		1	2	NS2-14
		1	7	NS2-27
		1	9	NS2-31 to 35
		1	10	NS2-39
		2	13	NS2-52 to 54, 59, 60
		2	14	NS2-61, 62
2m23	describe relationships between quantities by using whole-number addition and subtraction (e.g., “If you ate 7 grapes and I ate 12 grapes, I can say that I ate 5 more grapes than you did, or you ate 5 fewer grapes than I did.”);	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		1	2	NS2-14
		1	7	NS2-27
2m24	represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of equal groups (e.g., use counters to show that 3 groups of 2 is equal to $2 + 2 + 2$ and to $3 \times 2$ );	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		2	18	NS2-79, 80
2m25	represent and explain, through investigation using concrete materials and drawings, division as the sharing of a quantity equally (e.g., “I can share 12 carrot sticks equally among 4 friends by giving each person 3 carrot sticks.”);	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		2	18	NS2-81, 82
2m26	solve problems involving the addition and subtraction of two-digit numbers, with and without regrouping, using concrete materials (e.g., base ten materials, counters), student-generated algorithms, and standard algorithms;	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		1	9	NS2-32, 34 to 36
		1	10	NS2-41, 42
		2	13	NS2-54, 55, 57, 58, 60
2m27	add and subtract money amounts to 100¢, using a variety of tools (e.g., concrete materials, drawings) and strategies (e.g., counting on, estimating, representing using symbols).	<b>Part</b>	<b>Unit</b>	<b>Lessons</b>
		2	17	NS2-73, 74

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Measurement				
Overall Expectations				
2m28	estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units;			
2m29	compare, describe, and order objects, using attributes measured in non-standard units and standard units.			
Specific Expectations				
Attributes, Units, and Measurement Sense		JUMP Math Lessons		
2m30	choose benchmarks – in this case, personal referents – for a centimetre and a metre (e.g., “My little finger is about as wide as one centimetre. A really big step is about one metre.”) to help them perform measurement tasks;	Part	Unit	Lessons
		1	11	ME2-14, 16*
2m31	estimate and measure length, height, and distance, using standard units (i.e., centimetre, metre) and non-standard units;	Part	Unit	Lessons
		1	4	<u>ME2-1, 2</u> ME2-3 to 6
		1	11	ME2-9 to 16
2m32	record and represent measurements of length, height, and distance in a variety of ways (e.g., written, pictorial, concrete) ( <b>Sample problem:</b> Investigate how the steepness of a ramp affects the distance an object travels. Use cash-register tape for recording distances.);	Part	Unit	Lessons
		1	4	ME2-1, 2, 6*
		1	11	ME2-12, 13
2m33	select and justify the choice of a standard unit (i.e., centimetre or metre) or a non-standard unit to measure length (e.g., “I needed a fast way to check that the two teams would race the same distance, so I used paces.”);	Part	Unit	Lessons
		1	4	ME2-4*
		1	11	ME2-16
2m34	estimate, measure, and record the distance around objects, using non-standard units ( <b>Sample problem:</b> Measure around several different doll beds using string, to see which bed is the longest around.);	Part	Unit	Lessons
		1	4	ME2-7
2m35	estimate, measure, and record area, through investigation using a variety of non-standard units (e.g., determine the number of yellow pattern blocks it takes to cover an outlined shape) ( <b>Sample problem:</b> Cover your desk with index cards in more than one way. See if the number of index cards needed stays the same each time.);	Part	Unit	Lessons
		2	21	ME2-29 to 31

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Measurement				
2m36	estimate, measure, and record the capacity and/or mass of an object, using a variety of non-standard units (e.g., “I used the pan balance and found that the stapler has the same mass as my pencil case.”);	Part	Unit	Lessons
		1	11	<u>ME2-17</u> ME2-18, 19
		2	21	ME2-37, 38
2m37	tell and write time to the quarter-hour, using demonstration digital and analogue clocks (e.g., “My clock shows the time recess will start [10:00], and my friend’s clock shows the time recess will end [10:15].”);	Part	Unit	Lessons
		2	19	<u>ME2-23</u> ME2-24 to 28
2m38	construct tools for measuring time intervals in non-standard units (e.g., a particular bottle of water takes about five seconds to empty);	Part	Unit	Lessons
		2	19	ME2-21
2m39	describe how changes in temperature affect everyday experiences (e.g., the choice of clothing to wear);	Part	Unit	Lessons
		2	21	ME2-34
2m40	use a standard thermometer to determine whether temperature is rising or falling (e.g., the temperature of water, air).	Part	Unit	Lessons
		2	21	ME2-34
Measurement Relationships		JUMP Math Lessons		
2m41	describe, through investigation, the relationship between the size of a unit of area and the number of units needed to cover a surface ( <b>Sample problem:</b> Compare the numbers of hexagon pattern blocks and triangle pattern blocks needed to cover the same book.);	Part	Unit	Lessons
		2	21	ME2-31
2m42	compare and order a collection of objects by mass and/or capacity, using non-standard units (e.g., “The coffee can holds more sand than the soup can, but the same amount as the small pail.”);	Part	Unit	Lessons
		1	11	ME2-17, 18
		2	21	ME2-35 to 38
2m43	determine, through investigation, the relationship between days and weeks and between months and years.	Part	Unit	Lessons
		2	21	ME2-32, 33

Geometry and Spatial Sense				
Overall Expectations				
2m44	identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties;			
2m45	compose and decompose two-dimensional shapes and three-dimensional figures;			
2m46	describe and represent the relative locations of objects, and represent objects on a map.			
Specific Expectations				
Geometric Properties		JUMP Math Lessons		
2m47	distinguish between the attributes of an object that are geometric properties (e.g., number of sides, number of faces) and the attributes that are not geometric properties (e.g., colour, size, texture), using a variety of tools (e.g., attribute blocks, geometric solids, connecting cubes);	Part	Unit	Lessons
		1	5	G2-1, 3 to 5
2m48	identify and describe various polygons (i.e., triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons) and sort and classify them by their geometric properties (i.e., number of sides or number of vertices), using concrete materials and pictorial representations (e.g., “I put all the figures with five or more vertices in one group, and all the figures with fewer than five vertices in another group.”);	Part	Unit	Lessons
		1	5	G2-2 to 5, 7, 8
		1	6	PDM2-1 to 4
		1	8	G2-12
2m49	identify and describe various three-dimensional figures (i.e., cubes, prisms, pyramids) and sort and classify them by their geometric properties (i.e., number and shape of faces), using concrete materials (e.g., “I separated the figures that have square faces from the ones that don’t.”);	Part	Unit	Lessons
		2	16	G2-14, 17, 18, 20, 23, 24
2m50	create models and skeletons of prisms and pyramids, using concrete materials (e.g., cardboard; straws and modelling clay), and describe their geometric properties (i.e., number and shape of faces, number of edges);	Part	Unit	Lessons
		2	16	G2-24
2m51	locate the line of symmetry in a two-dimensional shape (e.g., by paper folding; by using a Mira).	Part	Unit	Lessons
		1	8	G2-9, 10
Geometric Relationships		JUMP Math Lessons		
2m52	compose and describe pictures, designs, and patterns by combining two-dimensional shapes (e.g., “I made a picture of a flower from one hexagon and six equilateral triangles.”);	Part	Unit	Lessons
		1	8	G2-11, 13

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Geometry and Spatial Sense				
2m53	compose and decompose two-dimensional shapes ( <b>Sample problem:</b> Use Power Polygons to show if you can compose a rectangle from two triangles of different sizes.);	Part	Unit	Lessons
		1	8	G2-9, 12, 13
2m54	cover an outline puzzle with two-dimensional shapes in more than one way;	Part	Unit	Lessons
		1	8	G2-13
2m55	build a structure using three-dimensional figures, and describe the two-dimensional shapes and three-dimensional figures in the structure (e.g., “I used a box that looks like a triangular prism to build the roof of my house.”).	Part	Unit	Lessons
		2	16	G2-17 to 19, 21*
Location and Movement		JUMP Math Lessons		
2m56	describe the relative locations (e.g., beside, two steps to the right of ) and the movements of objects on a map (e.g., “The path shows that he walked around the desk, down the aisle, and over to the window.”);	Part	Unit	Lessons
		2	16	G2-25, 26
2m57	draw simple maps of familiar settings, and describe the relative locations of objects on the maps ( <b>Sample problem:</b> Draw a map of the classroom, showing the locations of the different pieces of furniture.);	Part	Unit	Lessons
		2	16	G2-26
2m58	create and describe symmetrical designs using a variety of tools (e.g., pattern blocks, tangrams, paper and pencil).	Part	Unit	Lessons
		1	8	G2-11

Patterning and Algebra				
Overall Expectations				
2m59	identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns;			
2m60	demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18.			
Specific Expectations				
Patterns and Relationships		JUMP Math Lessons		
2m61	identify and describe, through investigation, growing patterns and shrinking patterns generated by the repeated addition or subtraction of 1's, 2's, 5's, 10's, and 25's on a number line and on a hundreds chart (e.g., the numbers 90, 80, 70, 60, 50, 40, 30, 20, 10 are in a straight line on a hundreds chart);	Part	Unit	Lessons
		2	12	NS2-43, 44
		2	15	PA2-7 to 11
2m62	identify, describe, and create, through investigation, growing patterns and shrinking patterns involving addition and subtraction, with and without the use of calculators (e.g., $3 + 1 = 4$ , $3 + 2 = 5$ , $3 + 3 = 6$ , ...);	Part	Unit	Lessons
		2	15	PA2-10, 11
2m63	identify repeating, growing, and shrinking patterns found in real-life contexts (e.g., a geometric pattern on wallpaper, a rhythm pattern in music, a number pattern when counting dimes);	Part	Unit	Lessons
		1	3	PA2-2*, 3*, 6
		2	15	PA2-7, 8
		2	17	NS2-72
2m64	represent a given growing or shrinking pattern in a variety of ways (e.g., using pictures, actions, colours, sounds, numbers, letters, number lines, bar graphs) ( <b>Sample problem:</b> Show the letter pattern A, AA, AAA, AAAA, ... by clapping or hopping.);	Part	Unit	Lessons
		2	15	PA2-13
2m65	create growing or shrinking patterns ( <b>Sample problem:</b> Create a shrinking pattern using cut-outs of pennies and/or nickels, starting with 20 cents.);	Part	Unit	Lessons
		2	15	PA2-7 to 9, 13
		2	17	NS2-71*, 72*
2m66	create a repeating pattern by combining two attributes (e.g., colour and shape; colour and size) ( <b>Sample problem:</b> Use attribute blocks to make a train that shows a repeating pattern involving two attributes.);	Part	Unit	Lessons
		1	3	PA2-2, 3
2m67	demonstrate, through investigation, an understanding that a pattern results from repeating an operation (e.g., addition, subtraction) or making a repeated change to an attribute (e.g., colour, orientation).	Part	Unit	Lessons
		1	3	PA2-2 to 4
		2	15	PA2-7 to 11

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## Patterning and Algebra

Expressions and Equality		JUMP Math Lessons		
2m68	demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials (e.g., starting with 9 tiles and adding 6 more tiles gives the same result as starting with 10 tiles and adding 5 more tiles);	Part	Unit	Lessons
		1	9	NS2-28
2m69	represent, through investigation with concrete materials and pictures, two number expressions that are equal, using the equal sign (e.g., “I can break a train of 10 cubes into 4 cubes and 6 cubes. I can also break 10 cubes into 7 cubes and 3 cubes. This means $4 + 6 = 7 + 3$ .”);	Part	Unit	Lessons
		1	9	NS2-28
2m70	determine the missing number in equations involving addition and subtraction to 18, using a variety of tools and strategies (e.g., modelling with concrete materials, using guess and check with and without the aid of a calculator) ( <b>Sample problem:</b> Use counters to determine the missing number in the equation $6 + 7 = \underline{\quad} + 5$ .);	Part	Unit	Lessons
		1	7	NS2-24, 25
		1	9	NS2-29, 30
2m71	identify, through investigation, and use the commutative property of addition (e.g., create a train of 10 cubes by joining 4 red cubes to 6 blue cubes, or by joining 6 blue cubes to 4 red cubes) to facilitate computation with whole numbers (e.g., “I know that $9 + 8 + 1 = 9 + 1 + 8$ . Adding becomes easier because that gives $10 + 8 = 18$ .”);	Part	Unit	Lessons
		1	7	NS2-22
2m72	identify, through investigation, the properties of zero in addition and subtraction (i.e., when you add zero to a number, the number does not change; when you subtract zero from a number, the number does not change).	Part	Unit	Lessons
		1	1	NS2-8

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Data Management and Probability				
Overall Expectations				
2m73	collect and organize categorical or discrete primary data and display the data, using tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with labels ordered appropriately along horizontal axes, as needed;			
2m74	read and describe primary data presented in tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers;			
2m75	describe probability in everyday situations and simple games.			
Specific Expectations				
Collection and Organization of Data		JUMP Math Lessons		
2m76	demonstrate an ability to organize objects into categories, by sorting and classifying objects using two attributes simultaneously (e.g., sort attribute blocks by colour and shape at the same time);	Part	Unit	Lessons
		1	6	PDM2-1 to 7
2m77	gather data to answer a question, using a simple survey with a limited number of responses (e.g., What is your favourite season?; How many letters are in your first name?);	Part	Unit	Lessons
		1	6	PDM2-5*, 6*, 7*
		2	20	PDM2-12
2m78	collect and organize primary data (e.g., data collected by the class) that is categorical or discrete (i.e., that can be counted, such as the number of students absent), and display the data using one-to-one correspondence in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), with appropriate titles and labels and with labels ordered appropriately along horizontal axes, as needed ( <b>Sample problem:</b> Record the number of times that specific words are used in a simple rhyme or poem.);	Part	Unit	Lessons
		1	6	PDM2-5*, 6*, 7*
		2	20	PDM2-8, 9, 11, 12
Data Relationships		JUMP Math Lessons		
2m79	read primary data presented in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), and describe the data using mathematical language (e.g., “Our bar graph shows that 4 more students walk to school than take the bus.”);	Part	Unit	Lessons
		1	6	PDM2-5 to 7
		2	20	PDM2-8 to 12
2m80	pose and answer questions about class generated data in concrete graphs, pictographs, line plots, simple bar graphs, and tally charts (e.g., Which is the least favourite season?);	Part	Unit	Lessons
		1	6	PDM2-7
		2	20	PDM2-10 to 12

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## Data Management and Probability

2m81	distinguish between numbers that represent data values (e.g., “I have 4 people in my family.”) and numbers that represent the frequency of an event (e.g., “There are 10 children in my class who have 4 people in their family.”);	Part	Unit	Lessons
		2	20	PDM2-9
2m82	demonstrate an understanding of data displayed in a graph (e.g., by telling a story, by drawing a picture), by comparing different parts of the data and by making statements about the data as a whole (e.g., “I looked at the graph that shows how many students were absent each month. More students were away in January than in September.”).	Part	Unit	Lessons
		2	20	PDM2-8 to 12
Probability		JUMP Math Lessons		
2m83	describe probability as a measure of the likelihood that an event will occur, using mathematical language (i.e., <i>impossible, unlikely, less likely, equally likely, more likely, certain</i> ) (e.g., “If I take a new shoe out of a box without looking, it’s equally likely that I will pick the left shoe or the right shoe.”);	Part	Unit	Lessons
		2	20	PDM2-13 to 16
2m84	describe the probability that an event will occur (e.g., getting heads when tossing a coin, landing on red when spinning a spinner), through investigation with simple games and probability experiments and using mathematical language (e.g., “I tossed 2 coins at the same time, to see how often I would get 2 heads. I found that getting a head and a tail was more likely than getting 2 heads.”) ( <b>Sample problem:</b> Describe the probability of spinning red when you spin a spinner that has one half shaded yellow, one fourth shaded blue, and one fourth shaded red. Experiment with the spinner to see if the results are what you expected.).	Part	Unit	Lessons
		2	20	PDM2-13 to 16