

# Kindergarten JUMP Math Correlation to the Ontario Curriculum

## NOTES:

JUMP Math strands are represented by:

NS Number Sense

ME Measurement

G Geometry

PA Patterns and Algebra

PDM Probability and Data Management

## OE15

### General Outcome

demonstrate an understanding of numbers, using concrete materials to explore and investigate counting, quantity, and number relationships

### Specific Expectations

### JUMP Math Lessons

| Specific Expectations  | JUMP Math Lessons |      |                       |
|--|-------------------|------|-----------------------|
|  | Part              | Unit | Lessons               |
| 15.1 investigate (e.g., using a number line, a hundreds carpet, a board game with numbered squares) the idea that a number's position in the counting sequence determines its magnitude (e.g., the quantity is greater when counting forward and less when counting backward)  |                   |      |                       |
|  | 1                 | 6    | NSK-40, 41            |
|  | 2                 | 13   | NSK-69                |
| 15.2 investigate some concepts of quantity and equality through identifying and comparing sets with more, fewer, or the same number of objects (e.g., find out which of two cups contains more or fewer beans [i.e., the concept of one-to-one correspondence]; investigate the ideas of more, less, or the same, using concrete materials such as counters or five and ten frames; recognize that the last number counted represents the number of objects in the set [i.e., the concept of cardinality]) | Part              | Unit | Lessons               |
|  | 1                 | 1    | NSK-5, 6, 8, 11       |
|  | 1                 | 2    | NSK-16 to 22, 24      |
|  | 1                 | 5    | NSK-26, 29, 32, 35    |
|  | 1                 | 6    | NSK-37 to 41          |
|  | 2                 | 7    | MEK-8                 |
| 15.3 make use of one-to-one correspondence in counting objects and matching groups of objects  | Part              | Unit | Lessons               |
|  | 1                 | 1    | NSK-4 to 6, 8, 11, 14 |
|  | 1                 | 2    | NSK-17 to 21, 24      |
|  | 1                 | 5    | NSK-26, 29, 32, 35    |
|  | 1                 | 6    | NSK-37 to 41          |

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| OE15 |  |             |                          |
|------|--|-------------|--------------------------|
| 15.4 | demonstrate an understanding of the counting concepts of stable order (i.e., the concept that the counting sequence is always the same – 1 is followed by 2, 2 by 3, and so on) and of order irrelevance (i.e., the concept that the number of objects in a set will be the same regardless of which object is used to begin the counting) | <b>Part</b> | <b>Unit</b>              |
|      |  |             | <b>Lessons</b>           |
|      |  | 1           | 1                        |
|      |  |             | NSK-1, 4 to 6, 8, 11, 14 |
|      |  | 1           | 2                        |
|      |  |             | NSK-15                   |
|      |  | 1           | 3                        |
|      |  |             | GK-1                     |
|      |  | 1           | 4                        |
|      |  |             | PAK-1                    |
|      |  | 1           | 5                        |
|      |  |             | NSK-25, 26, 29, 32, 35   |
|      |  | 1           | 6                        |
|      |  |             | NSK-36, 41               |
|      |  | 2           | 7                        |
|      |  |             | MEK-1                    |
|      |  | 2           | 8                        |
|      |  |             | NSK-42                   |
|      |  | 2           | 9                        |
|      |  |             | NSK-54                   |
|      |  | 2           | 10                       |
|      |  |             | PDMK-1                   |
| 15.5 | subitize quantities to 5 without having to count, using a variety of materials ( <i>e.g., dominoes, dot plates, dice, number of fingers</i> ) and strategies ( <i>composing or decomposing numbers</i> )   | <b>Part</b> | <b>Unit</b>              |
|      |  |             | <b>Lessons</b>           |
|      |  | 1           | 1                        |
|      |  |             | NSK-2, 3, 9, 12          |
| 15.6 | use information to estimate the number in a small set ( <i>e.g., apply knowledge of quantity; use a common reference such as a five frame; subitize</i> )  | <b>Part</b> | <b>Unit</b>              |
|      |  |             | <b>Lessons</b>           |
|      |  | 1           | 5                        |
|      |  |             | NSK-27, 30, 33           |
|      |  | 2           | 7                        |
|      |  |             | MEK-3                    |
|      |  | 2           | 8                        |
|      |  |             | NSK-46                   |

| OE15  |   |             |             |                              |
|-------|---|-------------|-------------|------------------------------|
| 15.7  | explore and communicate the function/purpose of numbers in a variety of contexts (e.g., use magnetic and sandpaper numerals to represent the number of objects in a set [to indicate quantity]; line up toys and manipulatives, and identify the first, second, and so on [to indicate ordinality]; use footsteps to discover the distance between the door and the sink [to measure]; identify a favourite sports player: “My favourite player is number twenty-four” [to label or name])                        | <b>Part</b> | <b>Unit</b> | <b>Lessons</b>               |
|       |   | 1           | 1           | NSK-2 to 6, 8, 9, 11, 12, 14 |
|       |   | 1           | 2           | NSK-15                       |
|       |   | 1           | 3           | GK-1                         |
|       |   | 1           | 4           | PAK-1, 2                     |
|       |   | 1           | 5           | NSK-25 to 27, 29, 30, 32, 33 |
|       |   | 1           | 6           | NSK-36                       |
|       |   | 2           | 7           | MEK-1                        |
|       |   | 2           | 8           | NSK-42                       |
|       |   | 2           | 9           | NSK-54                       |
|       |   | 2           | 10          | PDMK-1                       |
| 15.8  | explore different Canadian coins, using coin manipulatives (e.g., role-play the purchasing of items at the store in the dramatic play area; determine which coin will purchase more – a loonie or a quarter)  | <b>Part</b> | <b>Unit</b> | <b>Lessons</b>               |
|       |   | 2           | 7           | MEK-9                        |
| 15.9  | compose and decompose quantities to 10 (e.g., make multiple representations of numbers using two or more colours of linking cubes, blocks, dot strips, and other manipulatives; play “shake and spill” games)   | <b>Part</b> | <b>Unit</b> | <b>Lessons</b>               |
|       |   | 2           | 8           | NSK-44, 45                   |
|       |   | 2           | 9           | NSK-56 to 60                 |
|       |   | 2           | 13          | NSK-73, 74                   |
|       |   | 2           | 14          | NSK-81                       |
| 15.10 | investigate addition and subtraction in everyday experiences and routines through the use of modelling strategies and manipulatives (e.g., join two sets of objects, one containing a greater number than the other, and count all the objects; separate out the smaller number of objects and determine how many remain) and counting strategies (e.g., use a counting sequence to determine how many objects there are altogether; count backward from the largest number to determine how many objects remain) | <b>Part</b> | <b>Unit</b> | <b>Lessons</b>               |
|       |   | 2           | 8           | NSK-43 to 45, 47 to 51       |
|       |   | 2           | 9           | NSK-55 to 57, 61 to 65       |
|       |   | 2           | 13          | NSK-66 to 68                 |
|       |   | 2           | 14          | NSK-75 to 78                 |

**OE16****General Outcome**

measure, using non-standard units of the same size, and compare objects, materials, and spaces in terms of their length, mass, capacity, area, and temperature, and explore ways of measuring the passage of time, through inquiry and play-based learning

| <b>Specific Expectations</b> |  | <b>JUMP Math Lessons</b> |             |                       |
|------------------------------|--|--------------------------|-------------|-----------------------|
| 16.1                         | select an attribute to measure (e.g., <i>capacity</i> ), determine an appropriate non-standard unit of measure (e.g., <i>a small margarine container</i> ), and measure and compare two or more objects (e.g., <i>determine which of two other containers holds the most water</i> )                                   | <b>Part</b>              | <b>Unit</b> | <b>Lessons</b>        |
|                              |  | 2                        | 7           | MEK-2, 4, 5, 7, 8, 10 |
| 16.2                         | investigate strategies and materials used when measuring with non-standard units of measure (e.g., <i>why feet used to measure length must be placed end to end with no gaps and not overlapping, and must all be the same size; why scoops used to measure water must be the same size and be filled to the top</i> ) | <b>Part</b>              | <b>Unit</b> | <b>Lessons</b>        |
|                              |  | 2                        | 7           | MEK-3, 6, 7           |

## OE17

### General Outcome

describe, sort, classify, build, and compare two-dimensional shapes and three-dimensional figures, and describe the location and movement of objects through investigation

| Specific Expectations |  | JUMP Math Lessons |             |                     |
|-----------------------|--|-------------------|-------------|---------------------|
| 17.1                  | explore, sort, and compare the attributes ( <i>e.g., reflective symmetry</i> ) and the properties ( <i>e.g., number of faces</i> ) of traditional and non-traditional two-dimensional shapes and three-dimensional figures ( <i>e.g., when sorting and comparing a variety of triangles: notice similarities in number of sides, differences in side lengths, sizes of angles, sizes of the triangles themselves; see smaller triangles in a larger triangle</i> ) | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>      |
|                       |  | 1                 | 3           | GK-2 to 9, 13 to 15 |
|                       |  | 2                 | 7           | MEK-10              |
|                       |  | 2                 | 11          | GK-16 to 18         |
| 17.2                  | communicate an understanding of basic spatial relationships ( <i>e.g., use terms such as “above/below”, “in/out”, “forward/backward”; use visualization, perspective, and movements [flips/reflections, slides/translations, and turns/ rotations]</i> ) in their conversations and play, in their predictions and visualizations, and during transitions and routines   | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>      |
|                       |  | 1                 | 3           | GK-3, 10 to 14      |
|                       |  | 2                 | 11          | GK-19 to 21         |
| 17.3                  | investigate and explain the relationship between two-dimensional shapes and three-dimensional figures in objects they have made ( <i>e.g., explain that the flat surface of a cube is a square</i> )   | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>      |
|                       |  | 2                 | 11          | GK-16 to 18         |

## OE18

### General Outcome

recognize, explore, describe, and compare patterns, and extend, translate, and create them, using the core of a pattern and predicting what comes next

| Specific Expectations |  | JUMP Math Lessons |      |            |
|-----------------------|--|-------------------|------|------------|
| 18.1                  | identify and describe informally the repeating nature of patterns in everyday contexts (e.g., <i>patterns in nature such as morning-noon-night, the four seasons, or the arrangement of leaves on the stem of a plant; the pattern on a piece of clothing; the pattern made by floor tiles; the pattern of words in a book or poem; the pattern on a calendar or in a schedule; the pattern of the beat or rhythm in songs</i> ), using appropriate terminology (e.g., “goes before”, “goes after”, “repeats”) and gestures (e.g., <i>pointing, nodding, using slaps/claps</i> ) | Part              | Unit | Lessons    |
|                       |  | 1                 | 4    | PAK-3      |
|                       |  | 2                 | 12   | PAK-7 to 9 |
| 18.2                  | explore and extend patterns (e.g., <i>fill in missing elements of a repeating pattern</i> ) using a variety of materials (e.g., <i>beads, shapes, words in a poem, beat and rhythm in music, objects from the natural world</i> )  | Part              | Unit | Lessons    |
|                       |  | 1                 | 4    | PAK-3 to 6 |
|                       |  | 2                 | 12   | PAK-7 to 9 |
| 18.3                  | identify the smallest unit (the core) of a pattern (e.g., <i>ABBABBABB – the core is ABB</i> ) and describe why it is important (e.g., <i>it helps us to know what comes next; it helps us make generalizations</i> )  | Part              | Unit | Lessons    |
|                       |  | 1                 | 4    | PAK-5, 6   |
|                       |  | 2                 | 12   | PAK-7 to 9 |
| 18.4                  | create and translate patterns (e.g., <i>re-represent “red-blue-blue, red-blue-blue, red-blue-blue” as “circle-square-square, circle-square-square, circle-square-square”</i> )   | Part              | Unit | Lessons    |
|                       |  | 1                 | 4    | PAK-3 to 6 |
|                       |  | 2                 | 12   | PAK-7 to 9 |

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## OE19

### General Outcome

collect, organize, display, and interpret data to solve problems and to communicate information, and explore the concept of probability in everyday contexts

| Specific Expectations |   | JUMP Math Lessons |      |             |
|-----------------------|---|-------------------|------|-------------|
| 19.1                  | ask questions that can be answered through data collection (e.g., “What is your favourite ...?”; “How many pets do our classmates have?”; “Which month had the most snowy days – January or February?”), collect data, and make representations of their observations, using graphs (e.g., concrete graphs such as people graphs or graphs using representational objects; picture graphs)              | Part              | Unit | Lessons     |
|                       |   | 2                 | 10   | PDMK-6, 7   |
| 19.2                  | interpret data presented in graphs (e.g., “There are more children in the pizza line than in the hot dog line – that means more children like pizza”; “The blue bar is twice as long as the yellow bar”; “There were twice as many snowy days in January as snowy days in February”) and draw conclusions (e.g., “There are more blue cubes than yellow cubes”; “January was more snowy than February”) | Part              | Unit | Lessons     |
|                       |   | 2                 | 10   | PDMK-5, 6   |
| 19.3                  | respond to and pose questions about data collection and graphs  | Part              | Unit | Lessons     |
|                       |   | 2                 | 10   | PDMK-2 to 7 |

## OE20

### General Outcome

apply the mathematical processes to support the development of mathematical thinking, to demonstrate understanding, and to communicate thinking and learning in mathematics, while engaged in play-based learning and in other contexts

| Specific Expectations |  | JUMP Math Lessons |             |                        |
|-----------------------|--|-------------------|-------------|------------------------|
| 20.1                  | demonstrate an understanding of number relationships for numbers from 0 to 10, through investigation (e.g., show small quantities using fingers or manipulatives)  | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 1                 | 2           | NSK-23                 |
|                       |  | 1                 | 5           | NSK-35                 |
|                       |  | 2                 | 9           | NSK-55 to 61, 63 to 65 |
|                       |  | 2                 | 13          | NSK-66 to 68, 73, 74   |
|                       |  | 2                 | 14          | NSK-75 to 78, 81       |
| 20.2                  | use, read, and represent whole numbers to 10 in a variety of meaningful contexts (e.g., use a hundreds chart to read whole numbers; use magnetic and sandpaper numerals to represent the number of objects in a set; put the house number on a house built in the blocks area; find and recognize numbers in the environment; write numerals on imaginary bills at the restaurant in the dramatic play area)   | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 1                 | 1           | NSK-7, 10, 13          |
|                       |  | 1                 | 5           | NSK-28, 31, 34         |
| 20.3                  | compose pictures, designs, shapes, and patterns, using two-dimensional shapes; predict and explore reflective symmetry in two-dimensional shapes (e.g., visualize and predict what will happen when a square, a circle, or a rectangle is folded in half); and decompose two-dimensional shapes into smaller shapes and rearrange the pieces into other shapes, using various tools and materials (e.g., stickers, geoboards, pattern blocks, geometric puzzles, tangrams, a computer program) | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 1                 | 3           | GK-5, 9, 13 to 15      |
| 20.4                  | build three-dimensional structures using a variety of materials and identify the three-dimensional figures their structure contains  | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 2                 | 11          | GK-20, 22              |
| 20.5                  | investigate and describe how objects can be collected, grouped, and organized according to similarities and differences (e.g., attributes like size, colour)   | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 1                 | 3           | GK-2 to 5, 7, 8        |
| 20.6                  | use mathematical language (e.g., “always/sometimes/never”; “likely/unlikely”) in informal discussions to describe probability in familiar, everyday situations (e.g., “Sometimes Kindergarten children like pizza more than hot dogs”; “It is likely that January will be a snowy month”)  | <b>Part</b>       | <b>Unit</b> | <b>Lessons</b>         |
|                       |  | 2                 | 12          | PAK-10, 11             |

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