## mathology

## Grade 1 Sample Long-Range Pathway - Option 1

In the examples below, the suggested learning is cyclical, allowing concepts to be revisited throughout the year. The Number Strand alternates with another strand every month. Students can then make connections with concepts in another, more prominent strand. This suggested pathway also allows students whose strengths are in the visual-spatial areas of math to have more opportunities to be engaged.

|  | Strand | Big Idea | Conceptual Threads | Activity Kit | Grade 1 Mathology Little Books | Practice and Learning Centres |
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| Sept. | Geometry | 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes <br> 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change | Investigating geometric attributes and properties of 2-D shapes <br> Exploring 2-D shapes by applying and visualizing transformations | Geometry Cluster 1 2-D Shapes Activities 1-6 | The Tailor Shop What Was Here? | Sorting Activities |
| Sept. | Number | Numbers tell us how many and how much | Applying the principles of counting <br> Recognizing and writing numerals | Number Cluster 1 <br> Counting Activities 1-5 | On Safari! <br> A Family Cookout <br> Paddling the River | Counting and subitizing practice from K |


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| Oct. | Patterning and Algebra | Regularity and repetition form patterns that can be generalized and predicted mathematically | Identifying, sorting, and classifying attributes and patterns mathematically <br> Identifying, reproducing, extending, and creating patterns that repeat | Patterning and Algebra Cluster 1 <br> Investigating Repeating Patterns <br> Activities 1-5 <br> Cluster 2 <br> Creating Patterns <br> Activities 6-9 | Midnight and Snowfall | Making repeating patterns |
| Oct. | Number | Numbers tell us how many and how much <br> Numbers are related in many ways | Recognizing quantities by subitizing <br> Estimating quantities and numbers | Number Cluster 2 <br> Spatial Reasoning Activities 6-8 | Paddling the River | Counting and subitizing practice, including skip-counting |
| Nov. | Geometry | 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes <br> 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change | Investigating geometric attributes and properties of 3-D shapes <br> Exploring 3-D solids by applying and visualizing transformations | Geometry Cluster 2 3-D Solids <br> Activities 7-10 | What Was Here? | 2-D and 3-D sorting and building activities <br> Creating and translating repeating patterns |
| Nov. | Number | Numbers tell us how many and how much | Applying the principles of counting <br> Recognizing and writing numerals | Number Cluster 4 Skip-Counting Activities 13-16 | How Many is Too Many? | Counting and subitizing practice, including skip-counting |


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| Dec. | Data <br> Management and Probability* <br> *Ontario and BC only | Formulating questions, collecting data, and consolidating data in visual and graphical displays helps us to understand, predict, and interpret situations that involve uncertainty, variability and randomness | Formulating questions to learn about groups, collections, and events <br> Collecting data and organizing it into categories <br> Creating graphical displays of collected data <br> Using the language of chance to describe and predict events | Data Management Cluster 1 <br> Activities 1-4 <br> Cluster 2 <br> Probability and Chance <br> Activities 5-6 | Graph It! | 2-D and 3-D sorting and building activities <br> Creating and translating repeating patterns |
| Dec. | Number | Numbers are related in many ways | Comparing and ordering quantities | Number Cluster 3 <br> Comparing and Ordering <br> Activities 9-12 | Cats and Kittens! | Counting and subitizing practice, including skip-counting <br> Comparing and ordering numbers and quantities |
| Jan. | Measurement | Many things in our world have attributes that can be measured and compared | Understanding attributes that can be measured <br> Directly and indirectly comparing and ordering objects with the same measureable attribute | Measurement Cluster 1 Comparing Objects Activities 1-6 | The Amazing Seed | Sorting and building with 2-D shapes and 3-D solids <br> Creating, extending, and repeating patterns |
| Jan. | Number | Numbers are related in many ways | Decomposing wholes into parts and composing wholes from parts | Number Cluster 5 <br> Composing and Decomposing Activities 17-23 | Paddling the River <br> That's 10! | Counting and subitizing practice, including skip-counting <br> Comparing and ordering numbers and quantities |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Feb. | Patterning and Algebra | Patterns and relations can be represented with symbols, equations, and expressions | Understanding equality and inequality, building on generalized properties of numbers and operations <br> Using symbols, unknowns, and variables to represent mathematical relations | Patterning and Algebra Cluster 3 <br> Equality and Inequality Activities 10-13 | Nutty and Wolfy | Sorting and building with 2-D shapes and 3-D solids <br> Creating, extending, and repeating patterns <br> Measurement through direct comparison and repeating iteration of uniform non-standard unit |
| Feb. | Number | Quantities and numbers can be added and subtracted to tell how many and how much | Developing conceptual meaning of addition and subtraction | Number Cluster 7 Operational Fluency Activities 28-30 <br> (Change Problems) | Hockey Time! <br> Buy 1 - Get 1 <br> Canada's Oldest <br> Sport <br> Cats and Kittens! | Counting and subitizing practice, including skipcounting <br> Comparing and ordering numbers and quantities <br> Composing and Decomposing |
| Mar. | Geometry | 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes <br> 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change | Investigating 2-D shapes and 3-D solids, and their attributes through composition and decomposition Exploring symmetry to analyze 2-D shapes and 3-D solids* <br> *Ontario only | Geometry Cluster 3 Geometric Relationships Activities 11-15 <br> Geometry Cluster 3 Geometric Relationships Activities 11-15 <br> Geometry Cluster 4 Symmetry Activities 16-18 | What Was Here? <br> The Tailor Shop | Sorting and building with 2-D shapes and 3-D solids <br> Creating, extending, and repeating patterns <br> Measurement through direct comparison and repeating iteration of uniform non-standard unit <br> Balance scale activities to explore equality and inequality |


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| Mar. | Number | Quantities and numbers can be added and subtracted to tell how many and how much | Developing fluency of addition and subtraction computation <br> Developing the conceptual meaning of addition and subtraction | Number Cluster 7 <br> Operational Fluency <br> Activities 31-35 <br> (Join/separate and part-partwhole problem types) | Hockey Time! <br> Buy 1 - Get 1 <br> Canada's Oldest <br> Sport <br> Cats and Kittens! | Counting and subitizing practice, including skip-counting <br> Comparing and ordering numbers and quantities <br> Composing and decomposing <br> Creating and solving pictorial change type story problems using addition and subtraction |
| Apr. | Measurement | Assigning a unit to a continuous attribute allows us to measure and make comparisons | Selecting and using non-standard units to estimate, measure, and make comparisons | Measurement Cluster 2 Using Uniform Units Activities 7-15 <br> Cluster 3 <br> Time and temperature <br> Activities 16-21* <br> *Ontario only | Animal Measures | Sorting and building with 2-D shapes and 3-D solids <br> Creating, extending, and repeating patterns <br> Measurement through direct comparison and repeating iteration (repeating) of uniform non-standard unit <br> Balance scale activities to explore equality and inequality <br> Replicating and creating composite 2-D shapes and 3-D solids |


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| Apr. | Number | Quantities and numbers can be grouped by or partitioned into equalsized units | Unitizing quantities into ones, tens, hundreds (place value concepts) <br> Unitizing quantities and comparing units to the whole | Number Cluster 6 Early Place Value Activities 24-27 | At the Corn Farm | Counting and subitizing practice, including skip-counting <br> Composing and decomposing <br> Creating and solving pictorial story problems using addition and subtraction |
| May | Number | Financial Literacy* <br> *Ontario and BC only |  | Number Cluster 8 <br> Activity 36-40 |  |  |
| May | Number | Quantities and numbers can be added and subtracted to tell how many and how much | Developing fluency of addition and subtraction computation <br> Developing conceptual meaning of addition and subtraction <br> (Consider a focus on subtraction) | Number <br> Revisit Cluster 7 <br> Operational Fluency <br> Activities 28-35 <br> Number Talks <br> For mental math fluency and basic fact recall <br> Problem-Solving with all problem types for addition and subtraction | On Safari! <br> Hockey Time! <br> Buy 1 - Get 1 <br> Canada's Oldest Sport <br> Cats and Kittens! | Creating and solving pictorial story problems using addition and subtraction |
| May | Geometry | Objects can be located in space and viewed from multiple perspectives* <br> *Ontario only | Locating and mapping objects in space <br> Viewing and representing objects from multiple perspectives | Geometry Cluster 5 Location and Measurement Activities 19-21 | Memory Book |  |
| June | Revisit difficult concepts |  |  | Revisit activities from each strand |  |  |

