Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

ON

Kindergarten
18.2 explore and extend patterns (e.g., fill in missing elements of a repeating pattern) using a variety of materials (e.g., beads, shapes, words in a poem, beat and rhythm in music, objects from the natural world)
18.3 identify the smallest unit (the core) of a pattern (e.g., ABBABBABB – the core is ABB) and describe why it is important (e.g., it helps us to know what comes next; it helps us make generalizations)
18.4 create and translate patterns (e.g., re-represent "red-blue-blue, red-blue-blue, red-blue-blue" as "circle-square-square, circle-square-square, circle-square-square")

Grade 1
Patterning and Algebra Patterns and Relationships – identify, describe, and extend, through investigation, geometric repeating patterns involving one attribute (e.g., colour, size, shape, thickness, orientation); (Activities 6, 7, 9) – identify and extend, through investigation, numeric repeating patterns (e.g., 1, 2, 3, 1, 2, 3, 1, 2, 3, ...); (Activities 6, 7, 9) – identify a rule for a repeating pattern (e.g., "We're lining up boy, girl, boy, girl, boy, girl."); (Activities 6, 7, 9) – create a repeating pattern involving one attribute (e.g., colour, size, shape, sound) (Sample problem: Use beads to make a string that shows a repeating pattern involving one attribute.); (Activities 7, 9) – represent a given repeating pattern in a variety of ways (e.g., pictures, actions, colours, sounds, numbers, letters) (Sample problem: Make an ABA, ABA, ABA pattern using actions like clapping or tapping.) (Activities 7, 9) Cross Strand: Geometry Geometric Properties – identify and describe common two-dimensional shapes (e.g., circles, triangles, rectangles, squares) and sort and classify them by their attributes (e.g., colour; size; texture; number of sides), using concrete materials and pictorial representations (e.g., "I put all the triangles in one group. Some are long and skinny, and some are short and fat, but they all have three sides."); (Activities 6, 7, 9)

Curriculum Correlation
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ON (con't)

Grade 2
Patterning and Algebra
Patterns and Relationships
– 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)
– 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, …)
– 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)
– 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) (Sample problem: Show the letter pattern A,AA, AAA,AAAA, … by clapping or hopping.)
– create growing or shrinking patterns (Sample problem: Create a shrinking pattern using cut-outs of pennies and/or nickels, starting with 20 cents.)
– create a repeating pattern by combining two attributes (e.g., colour and shape; colour and size) (Sample problem: Use attribute blocks to make a train that shows a repeating pattern involving two attributes.)
– 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)

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

BC/YT

Kindergarten
Repeating patterns with two or three elements

- Sorting and classifying using a single attribute
- Identifying patterns in the world
- Repeating patterns with 2-3 elements
- Identifying the core
- Representing repeating patterns in various ways
- Noticing and identifying repeating patterns in First Peoples and local art and textiles, including beadwork and beading, and frieze work in borders

Grade 1
Repeating patterns with multiple elements and attributes

- repeating patterns with multiple elements/attributes (Activities 6, 7, 8, 9)
- translating patterns from one representation to another (e.g., an orange-blue pattern could be translated to a circle-square pattern) (Activities 7, 9)
- letter coding of pattern (Activities 7, 9)
- predicting an element in repeating patterns using a variety of strategies (Activities 8, 9)

Cross Strands:
Comparison of 2D shapes and 3D objects
- sorting 3D objects and 2D shapes using one attribute, and explaining the sorting rule

Likelihood of familiar life events, using comparative language
- cycles (Elder or knowledge keeper to speak about ceremonies and life events) (Activity 7)

Grade 2
Repeating and increasing patterns

- exploring more complex repeating patterns (e.g., positional patterns, circular patterns)
- identifying the core of repeating patterns (e.g., the part of the pattern that repeats over and over)
- increasing patterns using manipulatives, sounds, actions, and numbers (0 to 100)
- Metis finger weaving
- First Peoples head/armband patterning
- Online video and text: Small Number Counts to 100 (mathcatcher.irmacs.sfu.ca/story/small-number-counts-100)

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

SK

Kindergarten
Patterns and Relations PK.1 Demonstrate an understanding of repeating patterns (two or three elements) by: • identifying • reproducing • extending • creating patterns using manipulatives, sounds and actions.

Grade 1
Patterns and Relations P1.1 Demonstrate an understanding of repeating patterns (two to four elements) by: • describing • reproducing • extending • creating patterns using manipulatives, diagrams, sounds, and actions. (Activities 6, 7, 8, 9) P1.2 Translate repeating patterns from one form of representation to another. (Activities 7, 9) Cross Strand: Shape and Space SS1.2 Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.

Grade 2
Patterns and Relations P2.1 Demonstrate understanding of repeating patterns (three to five elements) by: • describing • representing patterns in alternate modes • extending • comparing • creating patterns using manipulatives, pictures, sounds, and actions. P2.2 Demonstrate understanding of increasing patterns by: • describing • reproducing • extending • creating patterns using manipulatives, pictures, sounds, and actions (numbers to 100).

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

NS

Kindergarten
Patterns and Relations PR01: Students will be expected to demonstrate an understanding of repeating patterns (two or three elements) by identifying, reproducing, extending, and creating patterns using manipulatives, sounds, and actions

Grade 1
Patterns and Relations PR01: Students will be expected to demonstrate an understanding of repeating patterns (two to four elements) by describing, reproducing, extending, and creating patterns using manipulatives, diagrams, sounds, and actions. (Activities 6, 7, 8, 9) PR02 Students will be expected to translate repeating patterns from one representation to another. (Activities 7, 9) Cross Strand: Geometry G01 Students will be expected to sort 3-D objects and 2-D shapes using one attribute and explain the sorting rule.

Grade 2
Patterns and Relations PR01: Students will be expected to demonstrate an understanding of repeating patterns (three to five elements) by describing, extending, comparing, and creating patterns using manipulatives, diagrams, sounds, and actions. PR02: Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, and creating numerical patterns (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds, and actions.

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

NB/PEI

Kindergarten
Patterns and Relations KPR1. Demonstrate an understanding of repeating patterns (two or three elements) by: • identifying • reproducing • extending • creating patterns using manipulatives, sounds and actions.

Grade 1
Patterns and Relations 1PR1. Demonstrate an understanding of repeating patterns (two to four elements) by: • describing • reproducing • extending • creating patterns using manipulatives, diagrams, sounds and actions. (Activities 6, 7, 8, 9) 1PR2. Translate repeating patterns from one representation to another. (Activities 7, 9) Cross Strand Shape and Space SS2. Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.

Grade 2
Patterns and Relations 2PR1. Demonstrate an understanding of repeating patterns (three to five elements) by: • describing • extending • comparing • creating patterns using manipulatives, diagrams, sounds and actions. 2PR2. Demonstrate an understanding of increasing patterns by: • describing • reproducing • extending • creating patterns using manipulatives, diagrams, sounds and actions (numbers to 100).

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

NFL

Kindergarten
Patterns and Relations KPR1. Demonstrate an understanding of repeating patterns (two or three elements) by: • identifying • reproducing • extending • creating patterns using manipulatives, sounds and actions.

Grade 1
Patterns and Relations 1PR1. Demonstrate an understanding of repeating patterns (two to four elements) by: • describing • reproducing • extending • creating patterns using manipulatives, diagrams, sounds and actions. (Activities 6, 7, 8, 9) 1PR2. Translate repeating patterns from one representation to another. (Activities 7, 9) Cross Strand: Shape and Space 1SS2. Sort 3-D objects and 2-D shapes, using one attribute, and explain the sorting rule.

Grade 2
Patterns and Relations 2PR1. Demonstrate an understanding of repeating patterns (three to five elements) by: • describing • extending • comparing • creating patterns using manipulatives, diagrams, sounds and actions. 2PR2. Demonstrate an understanding of increasing patterns by: • describing • reproducing • extending • creating numerical (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

MB

Kindergarten
Patterns and Relations
K.PR1. Demonstrate an understanding of repeating patterns (two or three elements) by:
• identifying
• reproducing
• extending
• creating
patterns using manipulatives, sounds and actions.

Grade 1
Patterns and Relations
1.PR1. Demonstrate an understanding of repeating patterns (two to four elements) by:
• describing
• reproducing
• extending
• creating
patterns using manipulatives, diagrams, sounds and actions. (Activities 6, 7, 8, 9)
1.PR2. Translate repeating patterns from one representation to another. (Activities 7, 9)
Cross Strand
Shape and Space
1.SS.2. Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule.

Grade 2
Patterns and Relations
2.PR.1. Predict an element in a repeating pattern using a variety of strategies.
2.PR2. Demonstrate an understanding of increasing patterns by:
• describing
• reproducing
• extending
• creating
patterns using manipulatives, diagrams, sounds and actions (numbers to 100).

Curriculum Correlation
Patterning and Algebra Cluster 2: Creating Patterns

AB/NWT/NU

Kindergarten
Patterns and Relations

1. Demonstrate an understanding of repeating patterns (two or three elements) by:
  • identifying
  • reproducing
  • extending
  • creating
  patterns using manipulatives, sounds and actions.

Grade 1
Patterns and Relations

1. Demonstrate an understanding of repeating patterns (two to four elements) by:
  • describing
  • reproducing
  • extending
  • creating
  patterns using manipulatives, diagrams, sounds and actions. (Activities 6, 7, 8, 9)
 	
2. Translate repeating patterns from one representation to another. (Activities 7, 9)
 	
Cross Strand:
Shape and Space
2. Sort 3-D objects and 2-D shapes, using one attribute, and explain the sorting rule.

Grade 2
Patterns and Relations

1. Demonstrate an understanding of repeating patterns (three to five elements) by:
  • describing
  • extending
  • comparing
  • creating
  patterns using manipulatives, diagrams, sounds and actions.
 	
2. Demonstrate an understanding of increasing patterns by:
  • describing
  • reproducing
  • extending
  • creating
  numerical (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.
 	
3. Sort a set of objects, using two attributes, and explain the sorting rule.