Pearson mathology

Mathology Grade 1 Correlation – Alberta
Number Cluster 4: Composing and Decomposing

Organizing Idea:

Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

Guiding Question: How can quantity be communicated?				
Learning Outcome: Students interpret and explain quantity to 100.				
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**
Sharing involves partitioning a quantity into a certain number of groups.

Grouping involves partitioning a quantity into groups of a certain size. | Quantity can be partitioned by sharing or grouping. | Partition a set of objects by sharing and grouping. | **Number Cluster 4: Composing and Decomposing**
17: Equal Groups
18: Equal Parts | |
| | | Demonstrate conservation of number when sharing or grouping. | **Number Cluster 4: Composing and Decomposing**
17: Equal Groups
18: Equal Parts | |

Guiding Question: How can addition and subtraction provide perspectives of number?				
Learning Outcome: Students examine addition and subtraction within 20.				
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**
Quantities can be composed or decomposed to model a change in quantity. Addition can be applied in various contexts, including • combining parts to find the whole • increasing an existing quantity Subtraction can be applied in various contexts, including • comparing two quantities • taking away one quantity from another • finding a part of a whole Addition and subtraction can be modelled using a balance.	Addition and subtraction are processes that describe the composition and decomposition of quantity.	Relate addition and subtraction to various contexts involving composition or decomposition of quantity.	**Number Cluster 4: Composing and Decomposing** 14: Decomposing 10 15: Numbers to 10 16: Numbers to 20 20: Consolidation	

| Strategies are meaningful steps taken to solve problems.

Addition and subtraction strategies include

  • counting on
  • counting back
  • decomposition
  • compensation
  • making tens

Sums and differences can be expressed symbolically using the addition sign, +, the subtraction sign, -, and the equal sign, =.

The order in which two quantities are added does not affect the sum (commutative property).

The order in which two quantities are subtracted affects the difference.

Addition of 0 to any number, or subtraction of 0 from any number, results in the same number (zero property).

A missing quantity in a sum or difference can be represented in different ways, including

  • $a + b = \square$
  • $a + \square = c$
  • $\square + b = c$
  • $e - f = \square$
  • $e - \square = g$
  • $\square - f = g$ | Addition and subtraction are opposite (inverse) mathematical operations. | Investigate addition and subtraction strategies. | **Number Cluster 4: Composing and Decomposing**
16: Numbers to 20 | That's 10!
Hockey Time!
Canada's Oldest Sport |
| | | Add and subtract within 20. | **Number Cluster 4: Composing and Decomposing**
16: Numbers to 20 | Buy 1—Get 1
Hockey Time!
Cats and Kittens!
Canada's Oldest Sport |

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Guiding Question: In what ways can parts and wholes be related?				
Learning Outcome: Students examine one-half as a part-whole relationship.				
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**
One-half can be one of two equal groups or one of two equal pieces.	In a quantity partitioned into two equal groups, each group represents one-half of the whole quantity. In a shape or object partitioned into two identical pieces, each piece represents one-half of the whole.	Identify one-half in familiar situations.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	Grade 2 The Best Birthday
		Partition an even set of objects into two equal groups, limited to sets of 10 or less.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	Grade 2 The Best Birthday
		Partition a shape or object into two equal pieces.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	
		Describe one of two equal groups or pieces as one-half.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	
		Verify that the two halves of one whole group, shape, or object are the same size.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	