**Mathology Grade 1 Correlation – Alberta**

**Master 34a**

**Number Cluster 4: Composing and Decomposing**

**Organizing Idea:**

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

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| **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 Groups18: Equal Parts |  |
| Demonstrate conservation of number when sharing or grouping. | **Number Cluster 4: Composing and Decomposing**17: Equal Groups18: Equal Parts |  |

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| **Guiding Question:** How can addition and subtraction provide perspectives of number?**Master 34b****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 1015: Numbers to 1016: Numbers to 2020: Consolidation |  |

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| Strategies are meaningful steps taken to solve problems.**Master 34c**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 = 
* a +  = c
*  + b = c
* e - f = 
* e -  = g
*  - 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 1Hockey 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 orone of two equalpieces. | 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 2The Best Birthday |
| Partition an even set of objects into two equal groups, limited to setsof 10 or less. | **Number Cluster 4: Composing and Decomposing**19: Exploring Halves | Grade 2The 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 |  |

**Master 34d**