**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 Groups  18: Equal Parts |  |
| Demonstrate conservation of number when sharing or grouping. | **Number Cluster 4: Composing and Decomposing**  17: Equal Groups  18: 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 10  15: Numbers to 10  16: Numbers to 20  20: 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 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 |  |

**Master 34d**