**Mathology Grade 1 Correlation – Alberta**

**Master 56a**

**Number Cluster 6: Operational Fluency**

**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** |
| Familiar arrangements of small quantities facilitate subitizing. | A quantity can be perceived as the composition of smaller quantities. | Recognize quantities to 10. | **Number Cluster 6: Operational Fluency**26: Complements of 10  |  |
| Comparisons of quantity can be described by using word such as * equal
* not equal
* less
* more

Equality can be modelled using a balance. The equal sign, =, is used to show equality between two quantities.The unequal sign, ≠, is used to show that two quantities are not equal. | Two quantities are equal when there is the same number of objects in both sets.Equality is a balancebetween twoquantities. | Identify numbers that are one more, two more, one less, and two less than a given number. | **Number Cluster 6: Operational Fluency**25: More or Less |  |
| Represent a quantity relative to another, including symbolically. | **Number Cluster 6: Operational Fluency**25: More or Less  |  |

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| **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. | Model addition and subtraction within 20 in various ways, including with a balance. | **Number Cluster 6: Operational Fluency**27: Adding to 2028: Subtracting 2030: The Number Line32: Part-Part-Whole33: Patterns in Addition and Subtraction |  |

**Master 56b**

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| Strategies are meaningful steps taken to solve problems.**Master 56c**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 6: Operational Fluency**31: Doubles | That’s 10!Hockey Time!Canada’s Oldest Sport |
| Add and subtract within 20. | **Number Cluster 6: Operational Fluency**27: Adding to 2028: Subtracting 2029: Fluency with 2030: The Number Line32: Part-Part-Whole35: Consolidation  | Buy 1—Get 1Hockey Time!Cats and Kittens!Canada’s Oldest Sport |
| Check differences and sums using inverse operations. | **Number Cluster 6: Operational Fluency**27: Adding to 2028: Subtracting 2030: The Number Line31: Doubles32: Part-Part-Whole34: Solving Story Problems35: Consolidation | Buy 1—Get 1Canada’s Oldest SportCats and Kittens!Hockey Time! |
| Determine a missing quantity in a sum or difference, within 20, in a variety of ways. | **Number Cluster 6: Operational Fluency**32: Part-Part-Whole34: Solving Story Problems35: Consolidation |  |
| Express addition and subtraction symbolically. | **Number Cluster 6: Operational Fluency**30: The Number Line32: Part-Part-Whole34: Solving Story Problems35: Consolidation |  |
| Solve problems using addition and subtraction. | **Number Cluster 6: Operational Fluency**34: Solving Story Problems35: Consolidation  |  |

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| Addition and subtraction number facts represent part-part-whole relationships.Fact families are groups of related addition and subtraction number facts. | Addition number facts have related subtraction number facts. | Identify patterns in addition and subtraction, including patterns in addition tables. | **Number Cluster 6: Operational Fluency**33: Patterns in Addition and Subtraction | Paddling the River |
| Recognize families of related addition and subtraction number facts. | **Number Cluster 6: Operational Fluency**32: Part-Part-Whole 34: Solving Story Problems |  |
| Recall addition number facts, with addends to 10, and related subtraction number facts. | **Number Cluster 6: Operational Fluency**26: Complements of 10 | That’s 10! |

**Master 56d**