Master 56a

Mathology Grade 1 Correlation – Alberta
Number Cluster 6: Operational Fluency

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
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 balance between two quantities.	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 20 28: Subtracting 20 30: The Number Line 32: Part-Part-Whole 33: Patterns in Addition and Subtraction	

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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 = □ • 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 20 28: Subtracting 20 29: Fluency with 20 30: The Number Line 32: Part-Part-Whole 35: Consolidation	Buy 1—Get 1 Hockey Time! Cats and Kittens! Canada's Oldest Sport
		Check differences and sums using inverse operations.	**Number Cluster 6: Operational Fluency** 27: Adding to 20 28: Subtracting 20 30: The Number Line 31: Doubles 32: Part-Part-Whole 34: Solving Story Problems 35: Consolidation	Buy 1—Get 1 Canada's Oldest Sport Cats 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-Whole 34: Solving Story Problems 35: Consolidation	
		Express addition and subtraction symbolically.	**Number Cluster 6: Operational Fluency** 30: The Number Line 32: Part-Part-Whole 34: Solving Story Problems 35: Consolidation	
		Solve problems using addition and subtraction.	**Number Cluster 6: Operational Fluency** 34: Solving Story Problems 35: 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!