**Curriculum Correlation**

**Master 99a**

**Number Cluster 8: Early Multiplicative Thinking**

Note: Codes to curriculum are for cross-referencing purposes only.

**Ontario**

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| **Curriculum Expectations** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **Overall Expectation**  **Operational Sense:** solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division  **Cross Strand:** Patterning and Algebra  **Patterns and Relationships:** identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns  **Expressions and Equality:** demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18 | | | |
| **N2.9** Count forward by 1’s, 2’s, 5’s, 10’s, and 25’s to 200, using number lines and hundreds charts, starting from multiples of 1, 2, 5, and 10  **N2.14** represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of  equal groups  **N2.15** represent and explain, through investigation using concrete materials and drawings, division as the sharing of a quantity  equally  **P2.1** identify and describe, through investigation, growing patterns and shrinking patterns generated by the repeated addition or subtraction of 1’s, 2’s, 5’s, 10’s, and 25’s on a number line and on a hundreds chart  **P2.8** demonstrate an understanding of the concept of equality by partitioning whole  numbers to 18 in a variety of ways, using concrete materials | **Below Grade: Intervention**  15: How Many Do You See?  16: Messy and Organize It  **On Grade: Teacher Cards**  37: Grouping in 2s, 5s, and 10s (N2.9, N2.15, P2.8)  38: Making Equal Shares (N2.15)  39: Making Equal Groups (N2.15, P2.8)  40: Exploring Repeated Addition (N2.9, N2.14, P2.1)  41: Repeated Addition and Multiplication (N2.9, N2.14, P2.1)  42: Early Multiplicative Thinking Consolidation (N2.9, N2.14, N2.15, P2.1, P2.8)  **On Grade: Math Every Day**  **Card 8A:** Counting Equal Groups to Find How Many (N2.9)  I Spy (N2.9, N2.14, P2.1)  **Card 8B:** How Many Blocks? (N2.9, N2.14, P2.1)  How Many Ways? (N2.9, N2.14, P2.1, P2.8) | **Below Grade:**   * How Many Is Too Many?  (Activities 37, 39, 42)   **On Grade:**   * What Would You Rather? (Activity 37) * Ways to Count  (Activity 37) * Family Fun Day (Activities 37, 39) * The Best Birthday (Activity 38) * Array’s Birthday  (Activities 38, 39, 40, 41, 42) * Marbles, Alleys, Mibs, and Guli! (Activities 39, 40, 41, 42)   **Above Grade:**   * Calla’s Jingle Dress  (Activities 38, 39, 40, 41, 42) * Sports Camp  (Activities 40, 41, 42) * Planting Seeds (Activities 41, 42) | **Big Idea: Numbers tell us how many and how much.** |
| Applying the Principles of Counting  - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and  multiples of 10 from any given number. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2) |
| **Big Idea: Quantities and numbers can be grouped**  **by or partitioned into equal-sized units.** |
| Unitizing Quantities and Comparing Units to the Whole  - Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones (e.g., counting a set by 1s or by 5s gives the same result). (Activities 37, 41; MED 8A: 1, 2)  - Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) |
| **Big Idea: Quantities and numbers can be grouped by,**  **and partitioned into, units to determine how many or how much.** |
| Developing Conceptual Meaning of Multiplication and Division  - Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2)  - Models and solves equal sharing problems to 100. (Activities 38, 42)  - Models and solves equal grouping problems to 100. (Activities 39, 42)  - Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)  - Models equal groups and uses multiplication symbol (×) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2) |
| **Big Idea: Regularity and repetition form patterns**  **that can be generalized and predicted mathematically.** |
| Representing and Generalizing Increasing/Decreasing Patterns  - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41, MED 8A: 2; MED 8B: 1) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Using Symbols, Unknowns, and Variables to Represent Mathematical Relations  - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42, MED 8A: 2, MED 8B: 2) |

**Ontario (continued)**

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