**Curriculum Correlation**

**Master 83a**

**Number Cluster 7: Operational Fluency**

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  **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 | | | |
| **N2.3** compose and decompose two-digit numbers in a variety of ways, using concrete  materials  **N2.12** solve problems involving the addition and  subtraction of whole numbers to 18, using  a variety of mental strategies  **N2.13** describe relationships between quantities by using whole-number addition and subtraction  **N2.16** solve problems involving the addition and  subtraction of two-digit numbers, with and without regrouping, using concrete materials (e.g., base ten materials, counters), student-generated algorithms, and  standard algorithms  **P2.11** identify, through investigation, and use the  commutative property of addition to facilitate computation with whole numbers | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (N2.12, N2.13, P2.11)  33: Using Doubles (N2.12)  34: Fluency with 20 (N2.12, N2.13)  35: Multi-Digit Fluency (N2.12, N2.13, N2.16)  36: Operational Fluency Consolidation (N2.12, N2.13)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (N2.12)  I Have… I Need… (N2.3, N2.12, N2.16)  **Card 7B:** Hungry Bird (N2.12, N2.13, N2.16)  Make 10 Sequences (N2.12, N2.13) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Ontario (continued)**

**Master 83b**

**Curriculum Correlation**

**Master 83c**

**Number Cluster 7: Operational Fluency**

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

**British Columbia/Yukon Territories**

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| **Learning Standards** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **Big Idea**  Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value.  **Cross Strand:** Patterns and Relations | | | |
| Addition and subtraction facts to 20 (introduction of computational strategies)   * **2.5** adding and subtracting numbers to 20 * **2.6** fluency with math strategies for addition and subtraction   Addition and subtraction to 100   * **2.7** decomposing numbers to 100 * **2.8** estimating sums and differences to 100 * **2.9** using strategies such as looking for multiples of 10, friendly numbers, decomposing into 10s and 1s and recomposing, and compensating * **2.10** adding up to find the difference * **2.11** using an open number line, hundred chart, ten-frames * **2.12** using addition and subtraction in real-life contexts and problem-based situations * 2.13 whole-class number talks   Change in quantity using pictorial and symbolic representation   * **2.20** numerically describing a change in quantity * **2.21** symbolic representation of equality and inequality | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (2.5, 2.6, 2.20)  33: Using Doubles (2.5, 2.6, 2.21)  34: Fluency with 20 (2.5, 2.6, 2.21)  35: Multi-Digit Fluency (2.8, 2.9, 2.10, 2.11, 2.12)  36: Operational Fluency Consolidation (2.5, 2.6, 2.8, 2.9, 2.10, 2.11, 2.12)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (2.5, 2.6, 2.13)  I Have… I Need… (2.5, 2.6, 2.7, 2.9, 2.10, 2.11, 2.20)  **Card 7B:** Hungry Bird (2.5, 2.6, 2.9, 2.10, 2.11, 2.12)  Make 10 Sequences (2.5, 2.6, 2.9, 2.13) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**British Columbia/Yukon Territories (continued)**

**Master 83d**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Curriculum Correlation**

**Master 83e**

**Number Cluster 7: Operational Fluency**

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

**New Brunswick/Prince Edward Island/Newfoundland and Labrador**

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| **Specific Outcomes** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **General Outcome**  Develop number sense  **Cross Strand:** Patterns and Relations (Variables and Equations)  **General Outcome**  Represent algebraic expressions in multiple ways. | | | |
| **2N8** Demonstrate and explain the effect of adding zero to or subtracting zero from any number.  **2N9** Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:  • **2N9.1** using personal strategies for adding and subtracting with and without the support of manipulatives  • **2N9.2** creating and solving problems that involve addition and subtraction  • **2N9.3** explaining that the order in which numbers are added does not affect the sum  • **2N9.4** explaining that the order in which numbers are subtracted may affect the difference  **2N10** Apply mental mathematics strategies, such as:  • **2N10.1** using doubles  • **2N10.2** making 10  • **2N10.3** one more, one less  • **2N10.4** two more, two less  • **2N10.5** building on a known double  • **2N10.6** addition for subtraction to determine basic addition facts to 18 and related subtraction facts.  **2PR4** Record equalities and inequalities symbolically using the equal symbol or the not equal symbol. | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (2N8, 2N9.3, 2N10.2)  33: Using Doubles (2N10.1, 2N10.5, 2PR4)  34: Fluency with 20 (2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6, 2PR4)  35: Multi-Digit Fluency  36: Operational Fluency Consolidation (2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (2N10.1, 2N10.5)  I Have… I Need… (2N9.1, 2N10.6)  **Card 7B:** Hungry Bird (2N9.1, 2N9.2, 2N10.6)  Make 10 Sequences (2N10.2) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**New Brunswick/Prince Edward Island/Newfoundland and Labrador (continued)**

**Master 83f**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Curriculum Correlation**

**Master 83g**

**Number Cluster 7: Operational Fluency**

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

**Manitoba**

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| **Specific Outcomes** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **General Outcome**  Develop number sense  **Cross Strand:** Patterns and Relations (Variables and Equations)  **General Outcome**  Represent algebraic expressions in multiple ways. | | | |
| **2.N.8** Demonstrate and explain the effect of adding zero to or subtracting zero from any number.  **2.N.9** Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:  • **2.N.9.1** using personal strategies for adding and subtracting with and without the support of manipulatives  • **2.N.9.2** creating and solving problems that involve addition and subtraction  • **2.N.9.3** explaining that the order in which numbers are added does not affect the sum  • **2.N.9.4** explaining that the order in which numbers are subtracted may affect the difference  **2.N.10** Apply mental mathematics strategies, including:  • **2.N.10.1** using doubles  • **2.N.10.2** making 10  • **2.N.10.3** one more, one less  • **2.N.10.4** two more, two less  • **2.N.10.5** building on a known double  • **2.N.10.6** using addition for subtraction to  develop recall of basic addition facts to 18 and related subtraction facts.  **2.PR.4** Record equalities and inequalities symbolically using the equal symbol or the not-equal symbol. | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (2.N.8, 2.N.9.3, 2.N.10.2)  33: Using Doubles (2.N.10.1, 2.N.10.5, 2.PR.4)  34: Fluency with 20 (2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4, 2.N.10.5, 2.N.10.6, 2.PR.4)  35: Multi-Digit Fluency  36: Operational Fluency Consolidation (2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4, 2.N.10.5, 2.N.10.6)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (2.N.10.1, 2.N.10.5)  I Have… I Need… (2.N.9.1, 2.N.10.6)  **Card 7B:** Hungry Bird (2.N.9.1, 2.N.9.2, 2.N.10.6)  Make 10 Sequences (2.N.10.2) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**Manitoba (continued)**

**Master 83h**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Curriculum Correlation**

**Master 83i**

**Number Cluster 7: Operational Fluency**

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

**Nova Scotia**

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| **Specific Outcomes** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **General Outcome**  Students will be expected to demonstrate number sense.  **Cross Strand:** Patterns and Relations (Variables and Equations)  **General Outcome**  Students will be expected to represent algebraic expressions in multiple ways. | | | |
| **2N08** Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number.  **2N09** Students will be expected to demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by  • **2N09.1** using personal strategies for adding and subtracting with and without the support of manipulatives  • **2N09.2** creating and solving problems that involve addition and subtraction  • **2N09.3** explaining that the order in which numbers are added does not affect the sum  • **2N09.4** explaining and demonstrating that the order in which numbers are subtracted matters when finding a difference  **Manitoba (continued)**  **2N10** Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts.  **2PR04** Students will be expected to record equalities and inequalities symbolically, using the equal symbol or not equal symbol. | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (2N08, 2N09.3, 2N10)  33: Using Doubles (2N10, 2PR04)  34: Fluency with 20 (2N10, 2PR04)  35: Multi-Digit Fluency  36: Operational Fluency Consolidation (2N10)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (2N10)  I Have… I Need… (2N09.1, 2N10)  **Card 7B:** Hungry Bird (2N09.1, 2N09.2, 2N10)  Make 10 Sequences (2N10) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**Master 83j**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Curriculum Correlation**

**Master 83k**

**Number Cluster 7: Operational Fluency**

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

**Alberta/Northwest Territories/Nunavut**

|  |  |  |  |
| --- | --- | --- | --- |
| **Specific Outcomes** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **General Outcome**  Develop number sense  **Cross Strand:** Patterns and Relations (Variables and Equations)  **General Outcome**  Represent algebraic expressions in multiple ways. | | | |
| **2N8** Demonstrate and explain the effect of adding zero to or subtracting zero from any number.  **2N9** Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:  • **2N9.1** using personal strategies for adding and subtracting with and without the support of manipulatives  • **2N9.2** creating and solving problems that involve addition and subtraction  • **2N9.3** using the commutative property of addition (the order in which numbers are added does not affect the sum) • **2N9.4** using the associative property of addition (grouping a set of numbers in different ways does not affect the sum)  • **2N9.5** explaining that the order in which numbers are subtracted may affect the difference  **2N10** Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.  **2PR5** Students will be expected to record equalities and inequalities symbolically, using the equal symbol or not equal symbol. | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (2N8, 2N9.3, 2N10)  33: Using Doubles (2N10, 2PR5)  34: Fluency with 20 (2N10, 2PR5)  35: Multi-Digit Fluency  36: Operational Fluency Consolidation (2N10)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (2N10)  I Have… I Need… (2N9.1, 2N10)  **Card 7B:** Hungry Bird (2N9.1, 2N9.2, 2N10)  Make 10 Sequences (2N10) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**Alberta/Northwest Territories/Nunavut (continued)**

**Master 83l**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**

**Curriculum Correlation**

**Master 83m**

**Number Cluster 7: Operational Fluency**

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

**Saskatchewan**

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| **Specific Outcomes** | **Mathology Grade 2 Classroom Activity Kit** | **Mathology Little Books** | **Pearson Canada K-3 Mathematics Learning Progression** |
| **Goals**  Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour  **Cross Strand:** Patterns and Relations | | | |
| **N2.2** Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the correspondingsubtraction by:   * **N2.2.1** representing strategies for adding and subtracting concretely, pictorially, and symbolically * **N2.2.2** creating and solving problems involving addition and subtraction * **N2.2.3** estimating * **N2.2.4** using personal strategies for adding and subtracting with and without the support of manipulatives * **N2.2.5** analyzing the effect of adding or subtracting zero * **N2.2.6** analyzing the effect of the ordering of the quantities (addends, minuends, and subtrahends) in addition and subtraction statements.   **Saskatchewan (continued)**  **P2.3** Demonstrate understanding of equality and inequality concretely and pictorially (0 to 100) by:   * **P2.3.1** relating equality and inequality to balance * **P2.3.2** comparing sets * **P2.3.3 recording equalities with an equal sign** * **P2.3.4** recording inequalities with a not equal sign * **P2.3.5** solving problems involving equality and inequality. | **Below Grade: Intervention**  13: Making 10  14: Finding Doubles  **On Grade: Teacher Cards**  32: Complements of 10 (N2.2.1, N2.2.5, N2.2.6)  33: Using Doubles (N2.2.1, P2.3.3)  34: Fluency with 20 (N2.2.1, P2.3.3)  35: Multi-Digit Fluency  36: Operational Fluency Consolidation (N2.2.1)  **On Grade: Math Every Day**  **Card 7A:** Doubles and Near-Doubles (N2.2.1)  I Have… I Need… (N2.2.1, N2.2.4)  **Card 7B:** Hungry Bird (N2.2.1, N2.2.2, N2.2.4)  Make 10 Sequences (N2.2.1) | **Below Grade:**   * That’s 10!  (Activity 32) * Buy 1─Get 1 (Activities 33, 34, 36) * Canada’s Oldest Sport (Activities 34, 36)   **On Grade:**   * What Would You Rather? (Activity 33) * Array’s Bakery  (Activities 34, 36) * Marbles, Alleys, Mibs, and Guli! (Activity 35) * A Class-full of Projects (Activities 35, 36) * The Money Jar  (Activity 35) * The Great Dogsled Race (Activity 35)   **Above Grade:**   * Planting Seeds  (Activity 33) * Math Makes Me Laugh  (Activities 35, 36) * The Street Party (Activities 35, 36) | **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** |
| Developing Conceptual Meaning of Addition and Subtraction  - Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)  Developing Fluency of Addition and Subtraction Computation  - Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)  - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 33, 34, 36; MED 7A: 1; MED 7B: 2)  - Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)  - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)  - Estimates sums and differences of multi-digit numbers. (Activity 35) |
| **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** |
| Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations  - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)  - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).  (Activity 32; MED 7A: 1) |

**Master 83n**

**Curriculum Correlation**

**Number Cluster 7: Operational Fluency**