

# Curriculum Correlation

## Number Cluster 1: Counting

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b>  <b>Quantity Relations:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢  <b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p>			
<p><b>N2.2</b> Read and print in words whole numbers to twenty, using meaningful contexts</p> <p><b>N2.9</b> 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</p> <p><b>N2.10</b> Count backwards by 1's from 50 and any number less than 50, and count backwards by 10's from 100 and any number less than 100, using number lines and hundreds charts</p>	<p><b>Below Grade: Intervention</b>                      1: Skip-Counting with Objects                      2: Skip-Counting Backward</p> <p><b>On Grade: Teacher Cards</b>                      1: Bridging Tens (N2.2, N2.9, N2.10)                      2: Skip-Counting Forward (N2.9)                      3: Skip-Counting Flexibly (not required by your curriculum)                      4: Skip-Counting Backward (N2.10)                      5: Counting Consolidation (N2.9, N2.10)</p> <p><b>On Grade: Math Every Day Card 1A:</b>                      Skip-Counting on a Hundred Chart (N2.9, N2.10)                      Skip-Counting from Any Number (not required by your curriculum)  <b>Card 1B:</b>                      Skip-Counting with Actions (N2.9) What's Wrong? What's Missing? (N2.9, N2.10)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>On Safari (Activities 1, 2, 5)</li> <li>How Many is Too Many? (Activities 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activities 1, 2, 5)</li> <li>Ways to Count (Activities 2, 5)</li> <li>Family Fun Day (Activities 2, 5)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>Applying the Principles of Counting</li> <li>Says the number name sequences forward and backward from a given number. (Activities 1, 5)</li> <li>Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (Activities 1, 5)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 2, 4, 5; MED 1A: 1, MED 1B: 1, 2)</li> </ul> <p>Recognizing and Writing Numerals</p> <ul style="list-style-type: none"> <li>Names, writes, and matches two-digit numerals to quantities. (Activity 1)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 2, 4, 5; MED 1A: 1, MED 1B: 1, 2)</li> </ul>

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### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Numbers to 100 represent quantities that can be decomposed into 10s and 1s.</p> <p>Number concepts to 100</p> <ul style="list-style-type: none"> <li>Counting                             <ul style="list-style-type: none"> <li>2.1 skip-counting by 2, 5, and 10:                                     <ul style="list-style-type: none"> <li>2.1a using different starting points</li> <li>2.1b increasing and decreasing (forward and backward)</li> </ul> </li> </ul> </li> </ul>	<p><b>Below Grade: Intervention</b></p> <ol style="list-style-type: none"> <li>Skip-Counting with Objects</li> <li>Skip-Counting Backward</li> </ol> <p><b>On Grade: Teacher Cards</b></p> <ol style="list-style-type: none"> <li>Bridging Tens (not required by your curriculum)</li> <li>Skip-Counting Forward (2.1, 2.1b)</li> <li>Skip-Counting Flexibly (2.1, 2.1a, 2.1b)</li> <li>Skip-Counting Backward (2.1, 2.1b)</li> <li>Counting Consolidation (2.1, 2.1b)</li> </ol> <p><b>On Grade: Math Every Day Card 1A:</b></p> <p>Skip-Counting on a Hundred Chart (2.1, 2.1b)</p> <p>Skip-Counting from Any Number (2.1, 2.1a, 2.1b)</p> <p><b>Card 1B:</b></p> <p>Skip-Counting with Actions (2.1, 2.1a, 2.1b)</p> <p>What's Wrong? What's Missing? (2.1, 2.1b)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>On Safari (Activities 2, 5)</li> <li>How Many is Too Many? (Activities 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activities 2, 5)</li> <li>Ways to Count (Activities 2, 3, 5)</li> <li>Family Fun Day (Activities 2, 5)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul>

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New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>2N1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2N1.2</b> 10s, using starting points from 1 to 9</li> <li>• <b>2N1.3</b> 2s, starting from 1.</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 1: Skip-Counting with Objects 2: Skip-Counting Backward</p> <p><b>On Grade: Teacher Cards</b> 1: Bridging Tens (2N4, 2N5) 2: Skip-Counting Forward (2N1.1) 3: Skip-Counting Flexibly (2N1.2, 2N1.3) 4: Skip-Counting Backward (2N1.1) 5: Counting Consolidation (2N1.1)</p> <p><b>On Grade: Math Every Day Card 1A:</b> Skip-Counting on a Hundred Chart (2N1.1) Skip-Counting from Any Number (2N1.2, 2N1.3) <b>Card 1B:</b> Skip-Counting with Actions (2N1.1, 2N1.2) What's Wrong? What's Missing? (2N1.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• On Safari (Activities 1, 2, 5)</li> <li>• How Many is Too Many? (Activities 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 1, 2, 5)</li> <li>• Ways to Count (Activities 2, 3, 5)</li> <li>• Family Fun Day (Activities 2, 5)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Says the number name sequences forward and backward from a given number. (Activities 1, 5)</li> <li>- Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (Activities 1, 5)</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul> <p>Recognizing and Writing Numerals</p> <ul style="list-style-type: none"> <li>- Names, writes, and matches two-digit numerals to quantities. (Activity 1)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul>

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### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense.</p> <p><b>2.N.1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2.N.1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2.N.1.2</b> 10s, using starting points from 1 to 9</li> <li>• <b>2.N.1.3</b> 2s, starting from 1.</li> </ul> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2.N.5</b> Compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 1: Skip-Counting with Objects 2: Skip-Counting Backward</p> <p><b>On Grade: Teacher Cards</b> 1: Bridging Tens (<b>2.N.4, 2.N.5</b>) 2: Skip-Counting Forward (<b>2.N.1.1</b>) 3: Skip-Counting Flexibly (<b>2.N.1.2, 2.N.1.3</b>) 4: Skip-Counting Backward (<b>2.N.1.1</b>) 5: Counting Consolidation (<b>2.N.1.1</b>)</p> <p><b>On Grade: Math Every Day Card 1A:</b> Skip-Counting on a Hundred Chart (<b>2.N.1.1</b>) Skip-Counting from Any Number (<b>2.N.1.2, 2.N.1.3</b>) <b>Card 1B:</b> Skip-Counting with Actions (<b>2.N.1.1, 2.N.1.2</b>) What's Wrong? What's Missing? (<b>2.N.1.1</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• On Safari (<b>Activities 1, 2, 5</b>)</li> <li>• How Many is Too Many? (<b>Activities 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activities 1, 2, 5</b>)</li> <li>• Ways to Count (<b>Activities 2, 3, 5</b>)</li> <li>• Family Fun Day (<b>Activities 2, 5</b>)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Says the number name sequences forward and backward from a given number. (<b>Activities 1, 5</b>)</li> <li>- Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (<b>Activities 1, 5</b>)</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (<b>Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2</b>)</li> </ul> <p>Recognizing and Writing Numerals</p> <ul style="list-style-type: none"> <li>- Names, writes, and matches two-digit numerals to quantities. (<b>Activity 1</b>)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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). (<b>Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2</b>)</li> </ul>

### Mathology 2

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# Curriculum Correlation

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### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p>			
<p><b>2N01</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li>• <b>2N01.1</b> 1s, forward and backward, starting from any point to 200</li> <li>• <b>2N01.2</b> 2s, forward and backward, starting from any point to 100</li> <li>• <b>2N01.3</b> 5s and 10s, forward and backward, using starting points that are multiples of 5 and 10 respectively to 100</li> <li>• <b>2N01.4</b> 10s, starting from any point, to 100</li> </ul> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N05</b> Students will be expected to compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 1: Skip-Counting with Objects 2: Skip-Counting Backward</p> <p><b>On Grade: Teacher Cards</b> 1: Bridging Tens (2N01.1, 2N04, 2N05) 2: Skip-Counting Forward (2N01.2, 2N01.3) 3: Skip-Counting Flexibly (2N01.2, 2N01.4) 4: Skip-Counting Backward (2N01.2, 2N01.3) 5: Counting Consolidation (2N01.1, 2N01.2, 2N01.3)</p> <p><b>On Grade: Math Every Day Card 1A:</b> Skip-Counting on a Hundred Chart (2N01.2, 2N01.3) Skip-Counting from Any Number (2N01.2, 2N01.4)</p> <p><b>Card 1B:</b> Skip-Counting with Actions (2N01.2, 2N01.3, 2N01.4) What's Wrong? What's Missing? (2N01.2, 2N01.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• On Safari (Activities 1, 2, 5)</li> <li>• How Many is Too Many? (Activities 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 1, 2, 5)</li> <li>• Ways to Count (Activities 2, 3, 5)</li> <li>• Family Fun Day (Activities 2, 5)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Says the number name sequences forward and backward from a given number. (Activities 1, 5)</li> <li>- Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (Activities 1, 5)</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul> <p>Recognizing and Writing Numerals</p> <ul style="list-style-type: none"> <li>- Names, writes, and matches two-digit numerals to quantities. (Activity 1)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2)</li> </ul>

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### Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>General Outcome</b> Develop number sense			
<b>2N1</b> Say the number sequence 0 to 100 by: <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2N1.2</b> 10s, using starting points from 1 to 9</li> <li>• <b>2N1.3</b> 2s, starting from 1.</li> </ul>	<b>Below Grade: Intervention</b> 1: Skip-Counting with Objects 2: Skip-Counting Backward  <b>On Grade: Teacher Cards</b> 1: Bridging Tens ( <b>2N4</b> , <b>2N5</b> ) 2: Skip-Counting Forward ( <b>2N1.1</b> ) 3: Skip-Counting Flexibly ( <b>2N1.2</b> , <b>2N1.3</b> ) 4: Skip-Counting Backward ( <b>2N1.1</b> ) 5: Counting Consolidation ( <b>2N1.1</b> )	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• On Safari (<b>Activities 1, 2, 5</b>)</li> <li>• How Many is Too Many? (<b>Activities 2, 5</b>)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activities 1, 2, 5</b>)</li> <li>• Ways to Count (<b>Activities 2, 3, 5</b>)</li> <li>• Family Fun Day (<b>Activities 2, 5</b>)</li> </ul>	<b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting <ul style="list-style-type: none"> <li>- Says the number name sequences forward and backward from a given number. (<b>Activities 1, 5</b>)</li> <li>- Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (<b>Activities 1, 5</b>)</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (<b>Activities 2, 3, 4, 5</b>; <b>MED 1A: 1, 2</b>; <b>MED 1B: 1, 2</b>)</li> </ul> Recognizing and Writing Numerals <ul style="list-style-type: none"> <li>- Names, writes, and matches two-digit numerals to quantities. (<b>Activity 1</b>)</li> </ul>
<b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.	<b>On Grade: Math Every Day Card 1A:</b> Skip-Counting on a Hundred Chart ( <b>2N1.1</b> ) Skip-Counting from Any Number ( <b>2N1.2</b> , <b>2N1.3</b> )		<b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Utilizing Quantities and Comparing Units to the Whole <ul style="list-style-type: none"> <li>- 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). (<b>Activities 2, 3, 4, 5</b>; <b>MED 1A: 1, 2</b>; <b>MED 1B: 1, 2</b>)</li> </ul>
<b>2N5</b> Compare and order numbers up to 100.	<b>Card 1B:</b> Skip-Counting with Actions ( <b>2N1.1</b> , <b>2N1.2</b> ) What's Wrong? What's Missing? ( <b>2N1.1</b> )		

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### Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by:</p> <ul style="list-style-type: none"> <li>• <b>N2.1.1</b> representing (including place value)</li> <li>• <b>N2.1.2</b> describing</li> <li>• <b>N2.1.3</b> skip counting</li> <li>• <b>N2.1.4</b> differentiating between odd and even numbers</li> <li>• <b>N2.1.5</b> estimating with referents</li> <li>• <b>N2.1.6</b> comparing two numbers</li> <li>• <b>N2.1.7</b> ordering three or more numbers</li> </ul>	<p><b>Below Grade: Intervention</b> 1: Skip-Counting with Objects 2: Skip-Counting Backward</p> <p><b>On Grade: Teacher Cards</b> 1: Bridging Tens (<b>N2.1.1, N2.1.7</b>) 2: Skip-Counting Forward (<b>N2.1.3</b>) 3: Skip-Counting Flexibly (<b>N2.1.3</b>) 4: Skip-Counting Backward (<b>N2.1.3</b>) 5: Counting Consolidation (<b>N2.1.3</b>)</p> <p><b>On Grade: Math Every Day Card 1A:</b> Skip-Counting on a Hundred Chart (<b>N2.1.3</b>) Skip-Counting from Any Number (<b>N2.1.3</b>) <b>Card 1B:</b> Skip-Counting with Actions (<b>N2.1.3</b>) What's Wrong? What's Missing? (<b>N2.1.3</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• On Safari (<b>Activities 1, 2, 5</b>)</li> <li>• How Many is Too Many? (<b>Activities 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activities 1, 2, 5</b>)</li> <li>• Ways to Count (<b>Activities 2, 3, 5</b>)</li> <li>• Family Fun Day (<b>Activities 2, 5</b>)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Says the number name sequences forward and backward from a given number. (<b>Activities 1, 5</b>)</li> <li>- Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). (<b>Activities 1, 5</b>)</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (<b>Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2</b>)</li> </ul> <p>Recognizing and Writing Numerals</p> <ul style="list-style-type: none"> <li>- Names, writes, and matches two-digit numerals to quantities. (<b>Activity 1</b>)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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). (<b>Activities 2, 3, 4, 5; MED 1A: 1, 2; MED 1B: 1, 2</b>)</li> </ul>

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 2

### Hundred Chart (101–200)

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	74	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 3a

### Hundred Charts (101–200)

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	74	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 3b

### Hundred Charts (201–300)

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 3c

### Hundred Charts (301–400)

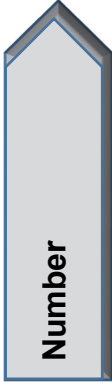
301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 3d

### Hundred Charts (401–500)

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500



# Master 4: Activity 1 Assessment

## Bridging Tens

Counting On and Counting Back Behaviours/Strategies												
1. Student begins with start number, but omits numbers when saying number name sequences forward and backward.  "11, 12, 14, 16, 17, 18"	2. Student begins with start number, but mixes up the order when saying number name sequences forward and backward.  "11, 12, 14, 13, 15, 16"	3. Student says the number name sequences forward and backward from a given number and relies on the hundred chart or class number line.  <table border="1"><tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr></table> "24, 25, 26, 27, 28, 29"	21	22	23	24	25	26	27	28	29	30
21	22	23	24	25	26	27	28	29	30			
Observations/Documentation												
4. Student says the number name sequences forward and backward from a given number, but struggles to bridge tens.  "Eight, nine, ten, ten-one, ten-two"	5. Student says the number name sequences forward and backward from a given number and successfully bridges tens, but does not recognize patterns in the number name sequence.  "I don't see any patterns."	6. Student says the number name sequences forward and backward from a given number and uses number patterns to bridge tens.										
Observations/Documentation												

Master 5

# Dream Catcher Photo



## ***Sweet Dreams Story***

**By Amanda Norton and Jillian Laursen**

Last night, I had a bad dream. I woke up in a panic and called for my Noohkoom (grandmother). Noohkoom came rushing into to my room and I told her what had happened. She told me that she had something for me.

Noohkoom left the room and returned a few minutes later. In her hands, she was carrying something. I asked her what it was. Noohkoom told me that it was a dream catcher.

Noohkoom hung the dream catcher above my bed. She explained that dream catchers protect you from bad dreams. She told me that good dreams pass through the centre of the dream catcher and the bad dreams get stuck in the web.

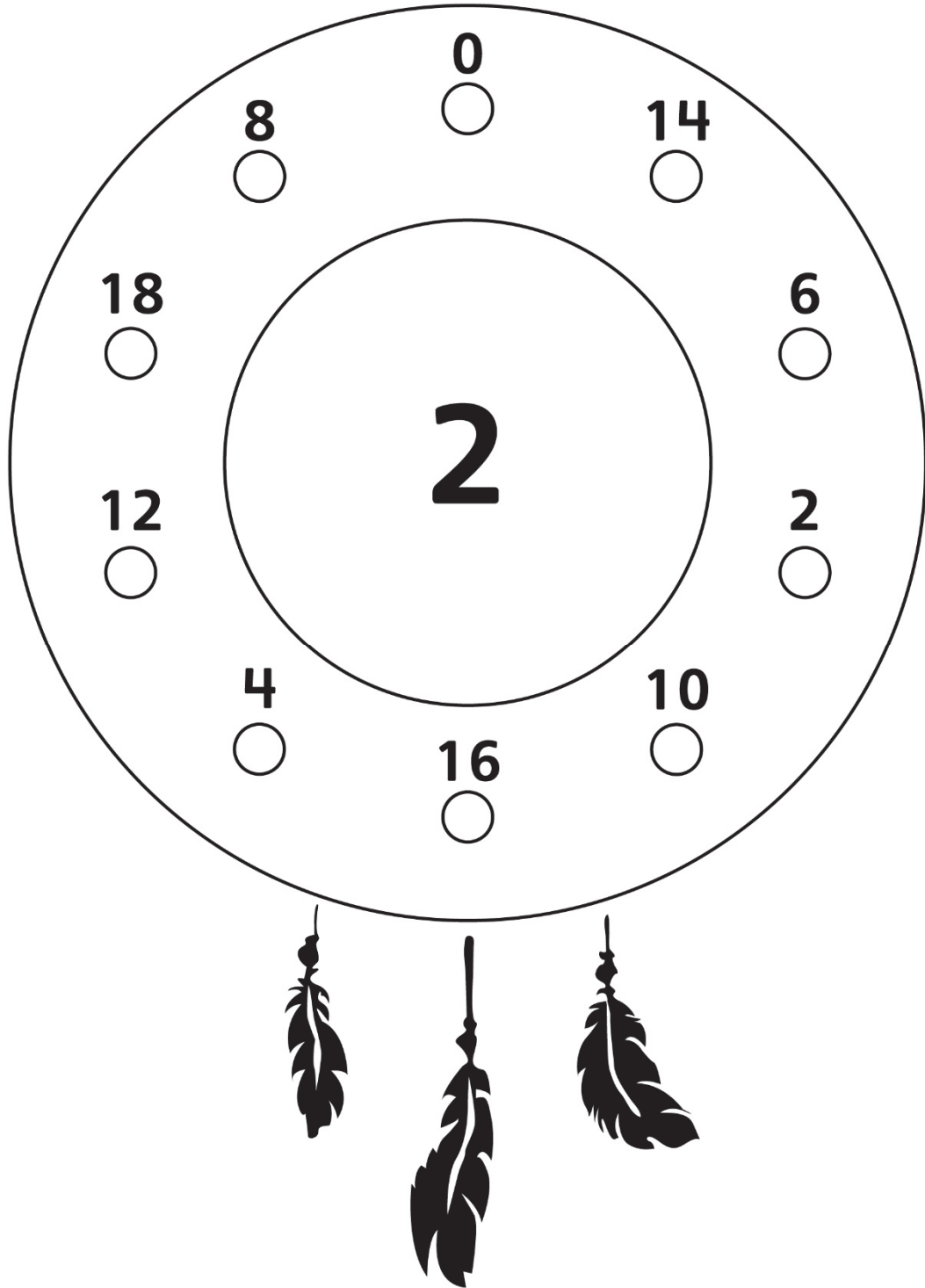
Dream catchers are made of many materials. They can have feathers or beads. The web can be made of sinew (animal tendons) or string. They are always round. In the old days, they were made of willow. Today, they are made of metal and are usually colourful.

Noohkoom tucked me in again and kissed me good night. I only had good dreams after that.

Master 7a

# Dream Catchers

## Skip-Counting by 2s

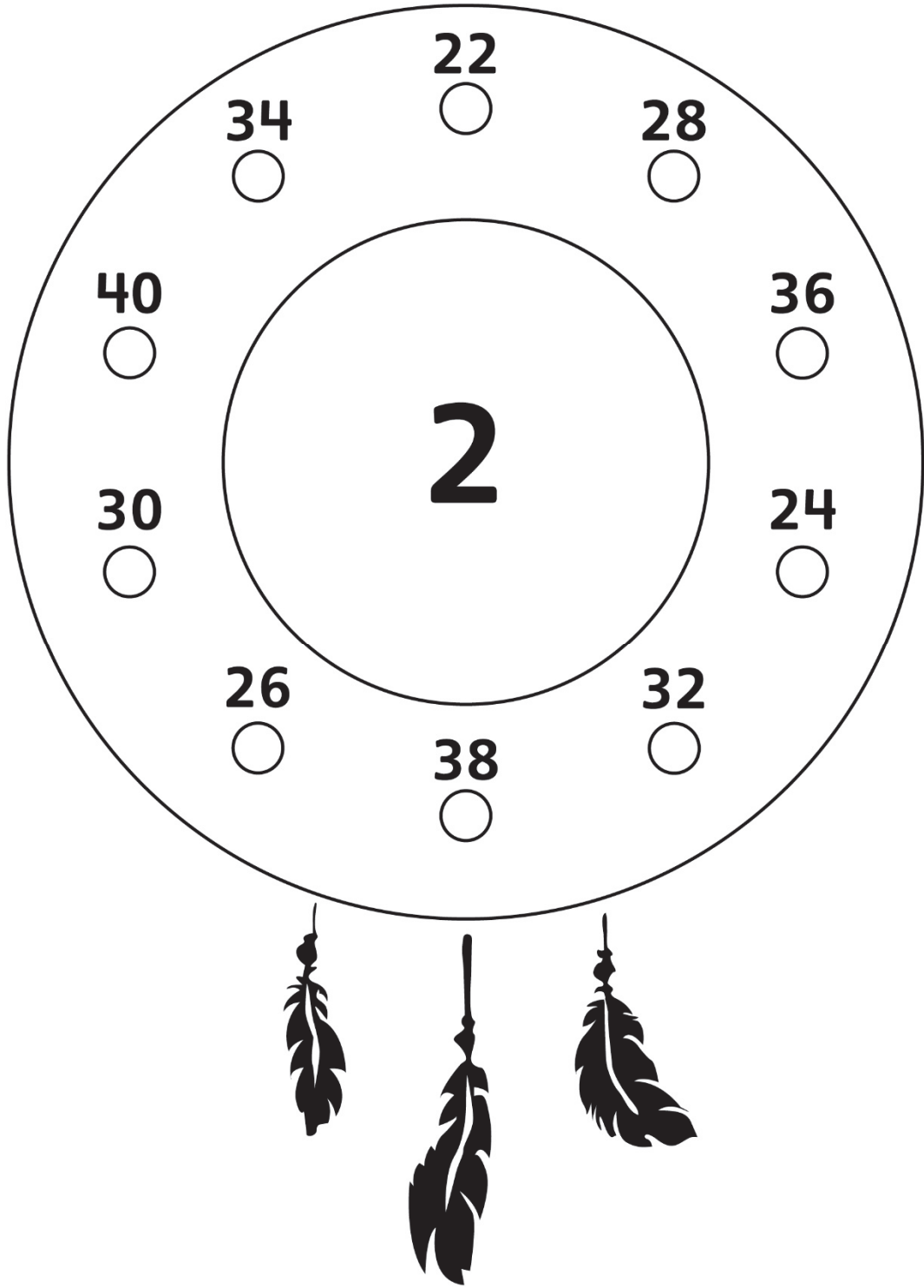




Master 7b

# Dream Catchers

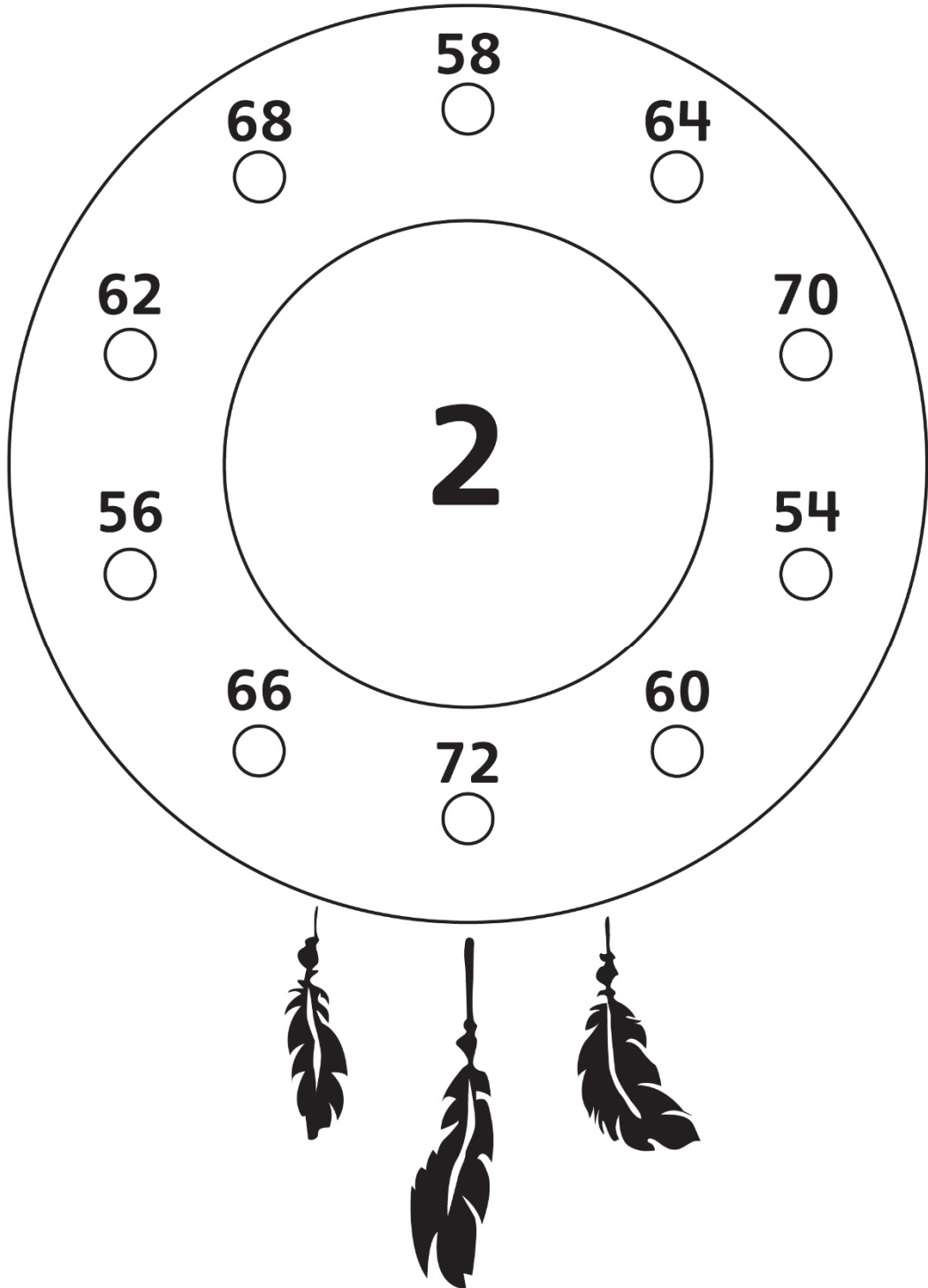
## Skip-Counting by 2s



Master 7c

# Dream Catchers

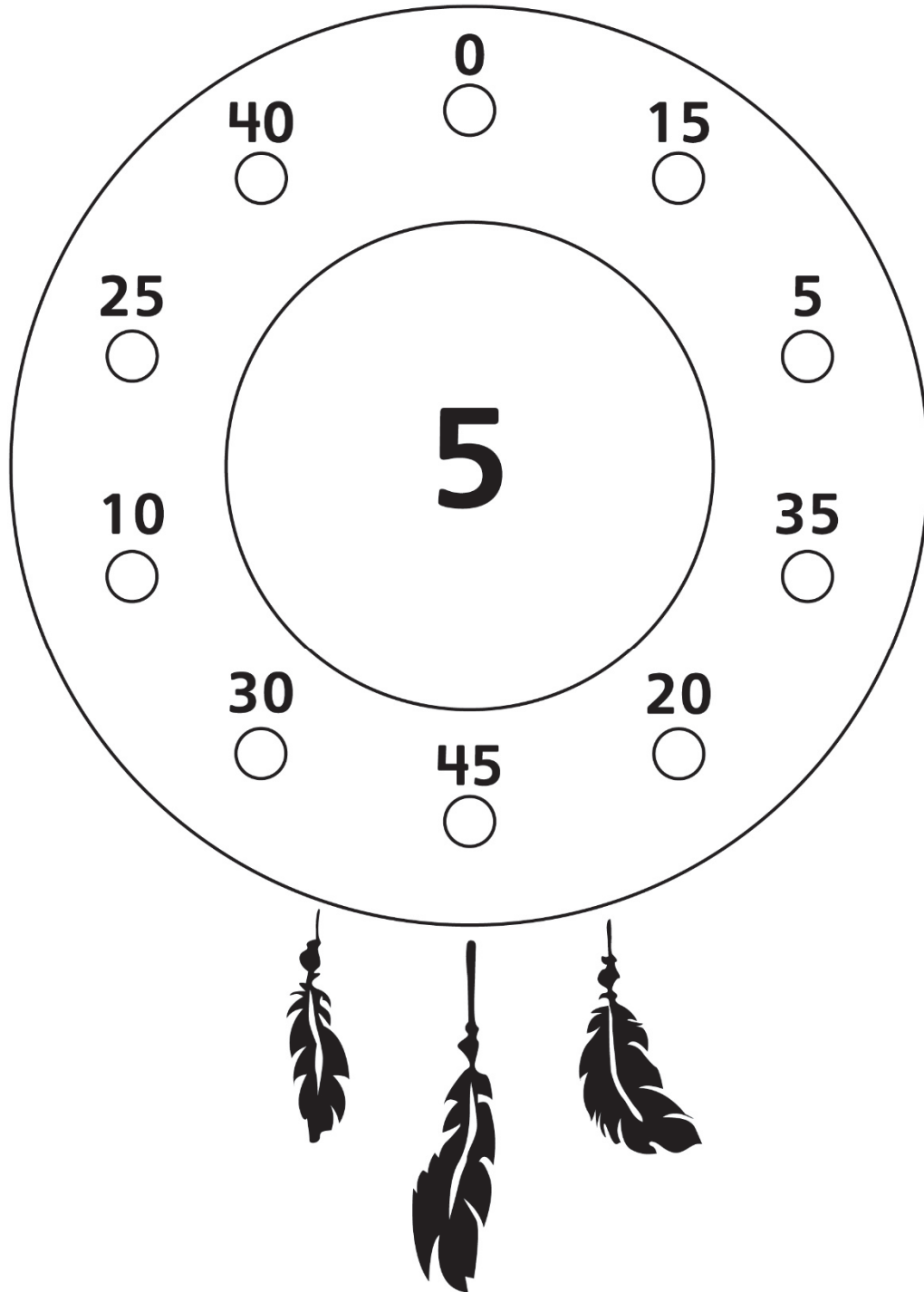
Skip-Counting by 2s



Master 7d

# Dream Catchers

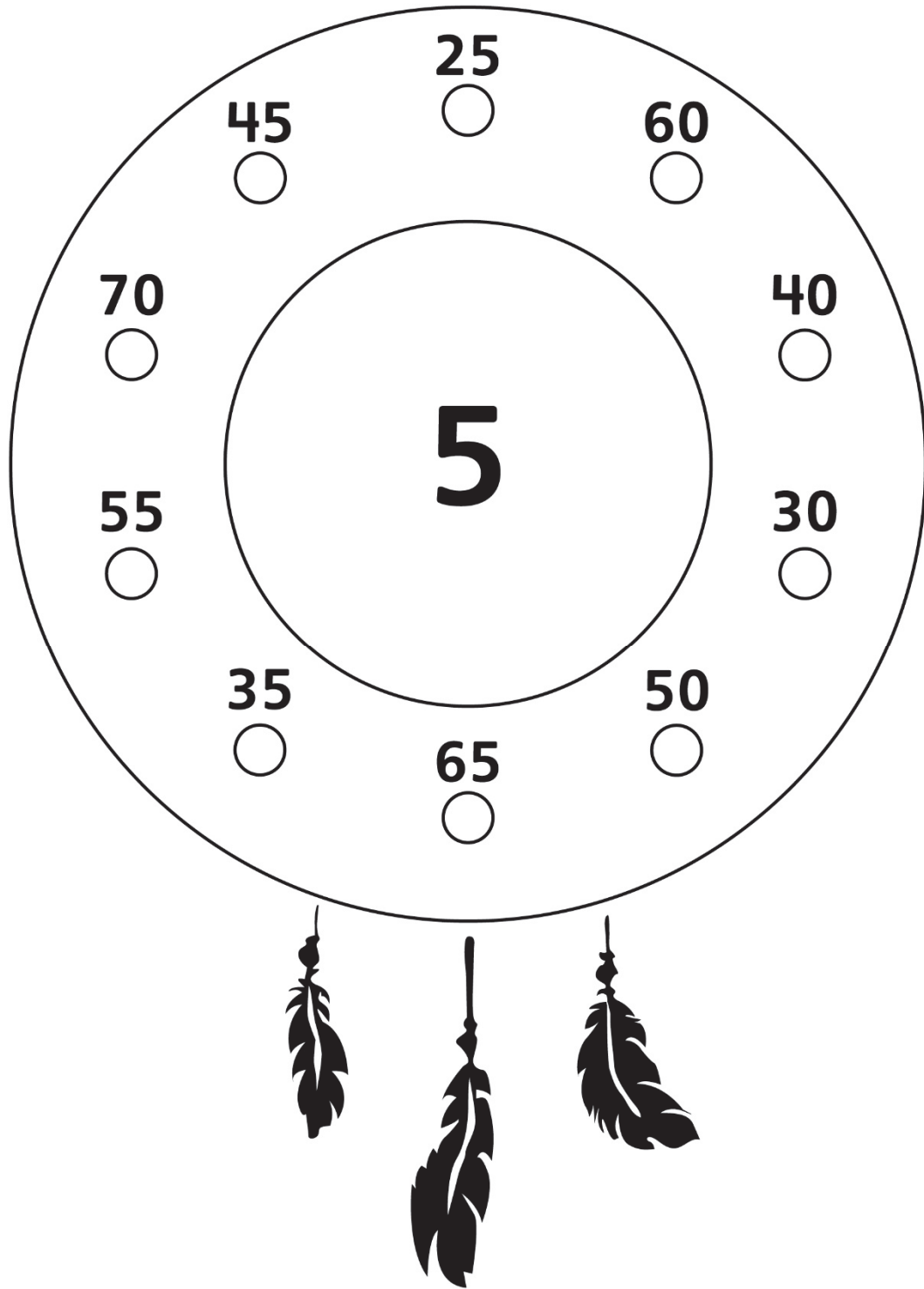
Skip-Counting by 5s



Master 7e

# Dream Catchers

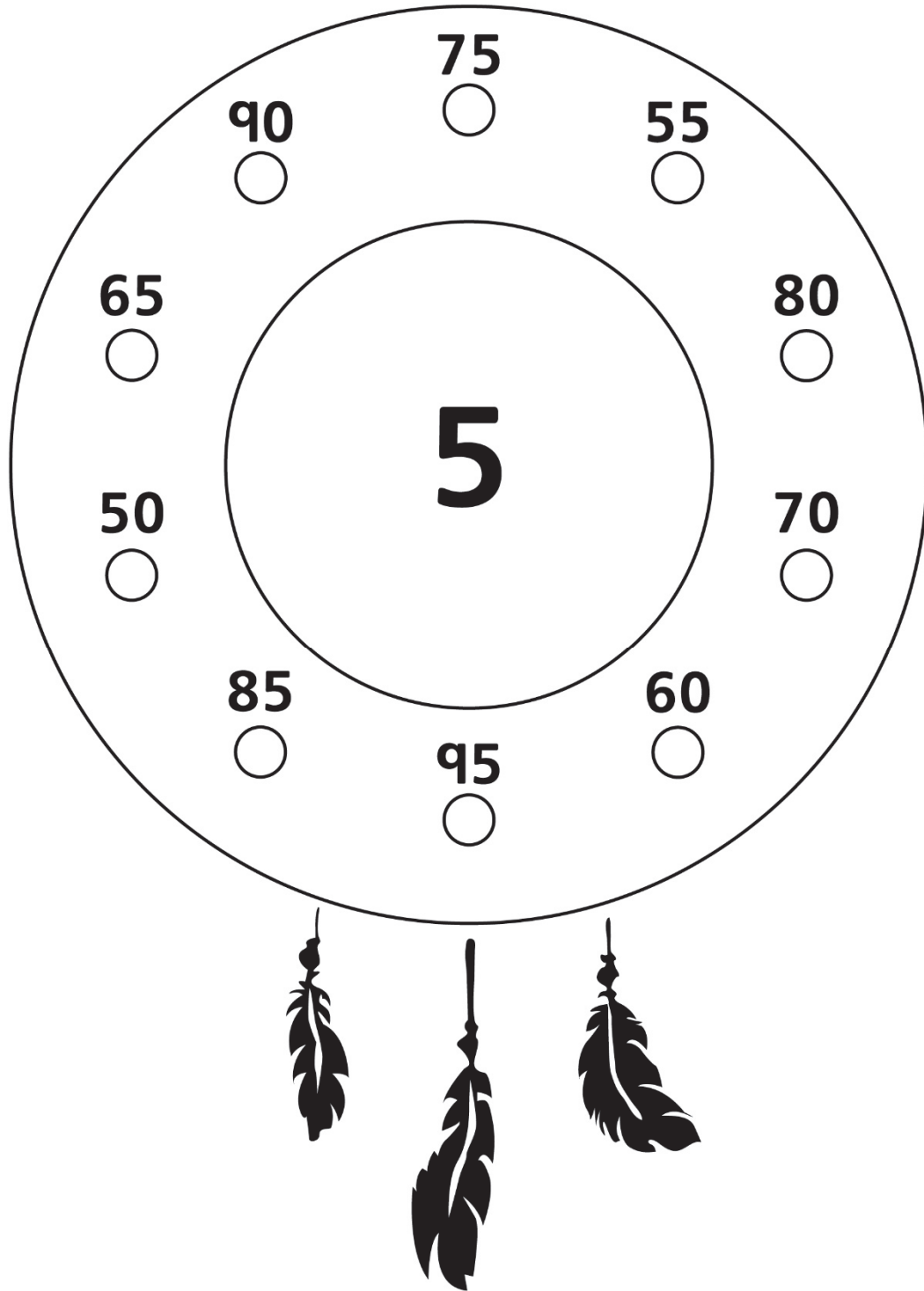
Skip-Counting by 5s



Master 7f

# Dream Catchers

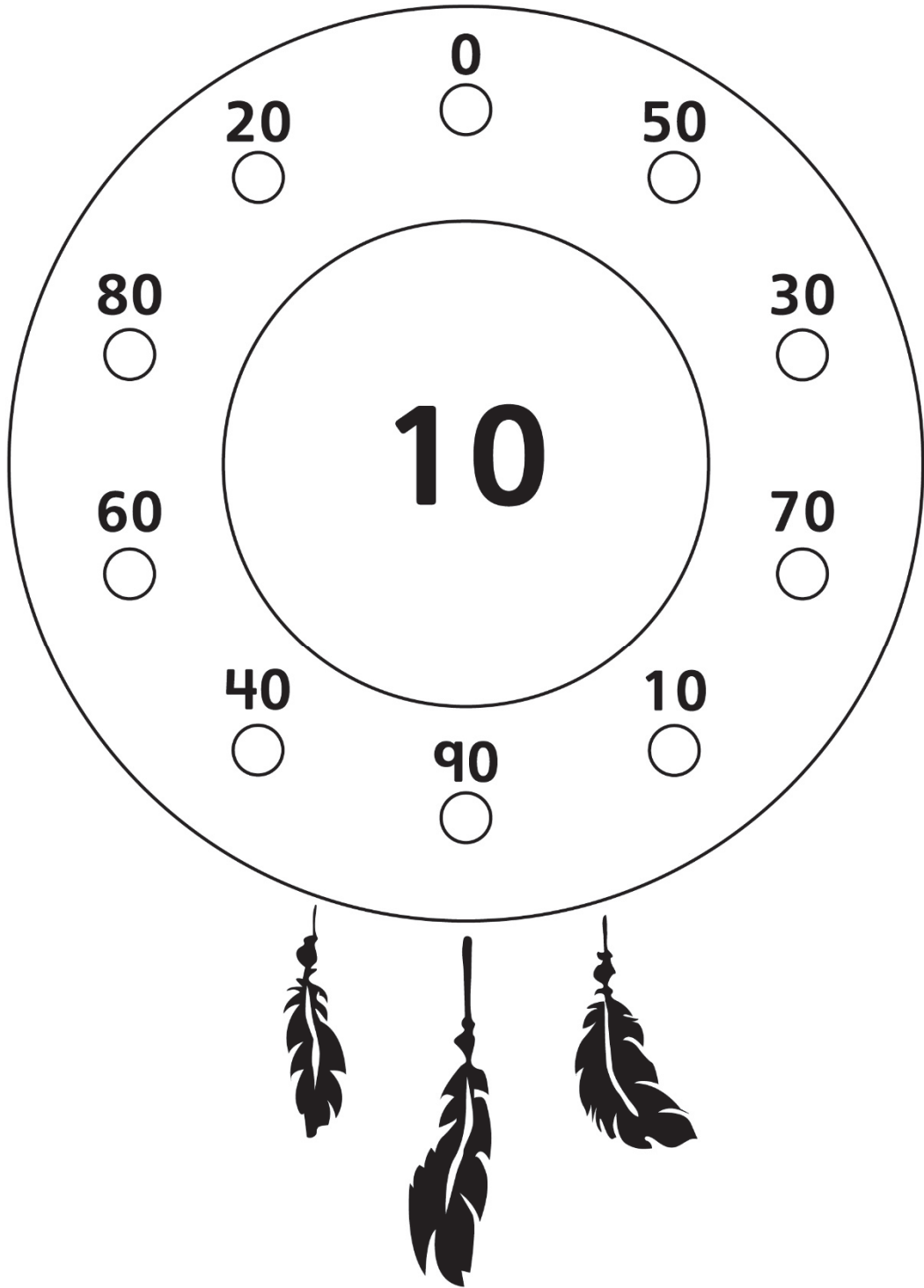
## Skip-Counting by 5s



Master 7g

# Dream Catchers

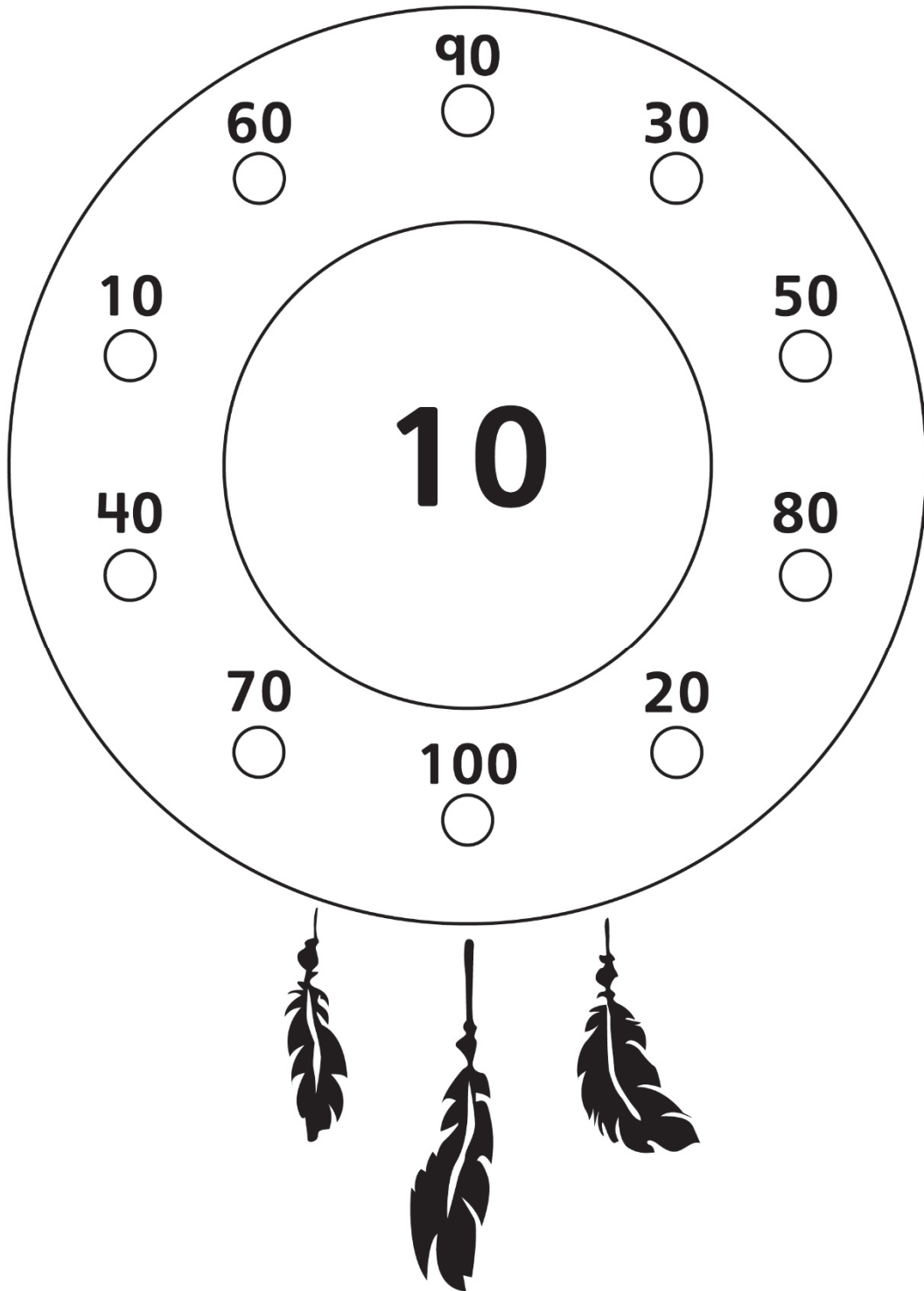
Skip-Counting by 10s



Master 7h

# Dream Catchers

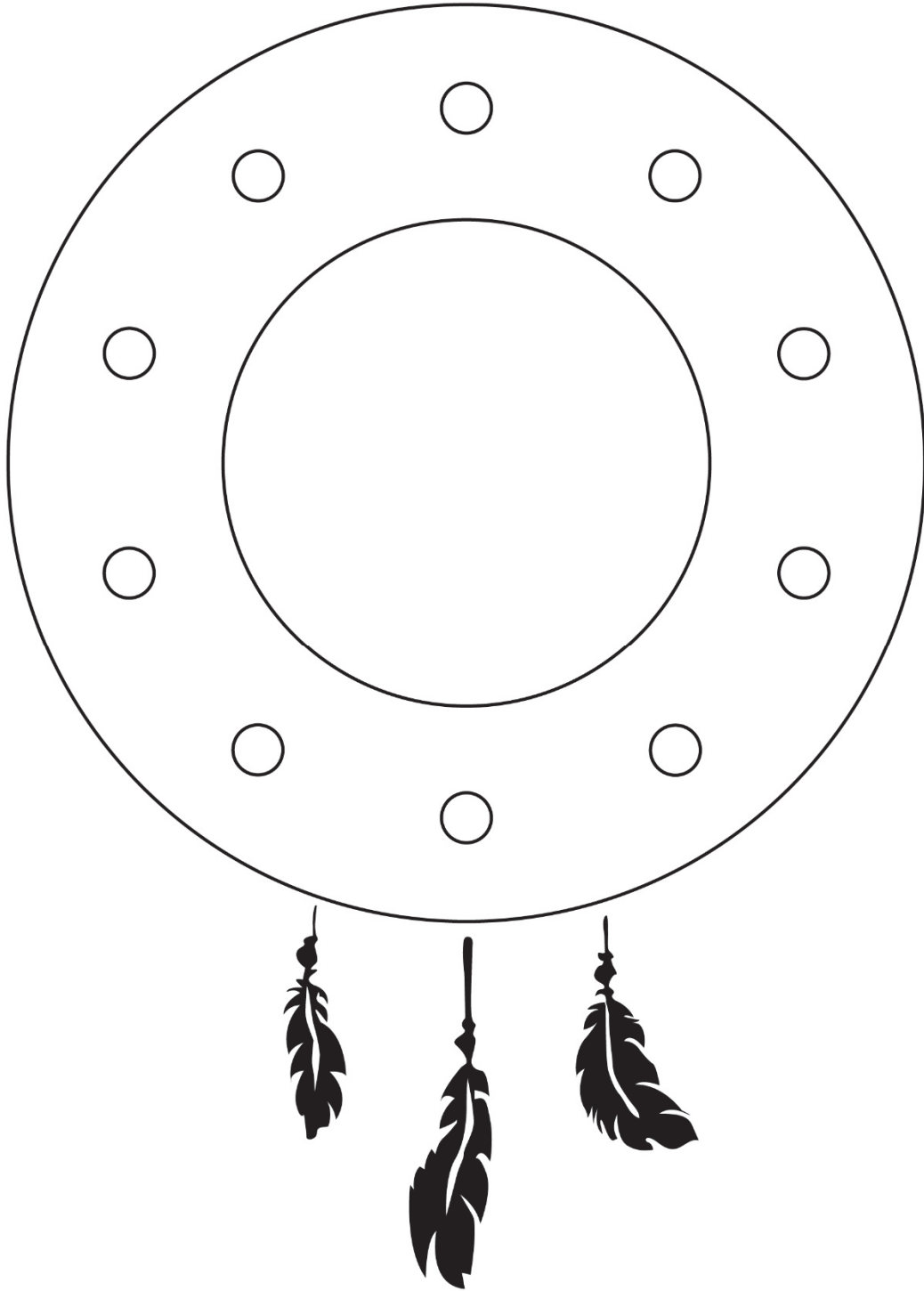
## Skip-Counting by 10s



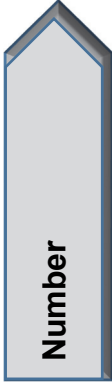
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 8

# Make Your Own Dream Catcher


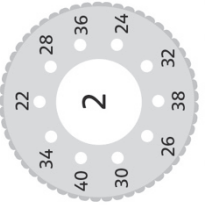






# Master 9: Activity 2 Assessment

## Skip-Counting Forward


Skip-Counting Forward Behaviours/Strategies	
<p>1. Student knows the number to skip-count by, but struggles to thread the yarn through the holes (lacks fine-motor skills).</p>	<p>2. Student threads the yarn through the holes, but mixes up the numbers in the skip-counting sequence when skip-counting by factors of 10.</p> 
<p>3. Student fluently skip-counts by 2s and 10s, but has difficulty skip-counting by 5s.</p> <p>"I find it hard to count by 5s."</p>	<p>4. Student fluently skip-counts by factors of 10, but struggles to notice and explain patterns in the skip-counting numbers.</p> <p>"I don't see patterns in the numbers."</p> 
Observations/Documentation	
<p>4. Student skip-counts by factors of 10 (e.g., 2, 5, 10), but struggles when the start number is a multiple of 2, 5, or 10.</p> <p>"I'm not sure where to start."</p>	<p>5. Student fluently skip-counts by factors of 10, but struggles to notice and explain patterns in the skip-counting numbers.</p> <p>"I don't see patterns in the numbers."</p>
Observations/Documentation	
<p>6. Student fluently skip-counts by 2s and 10s, but has difficulty skip-counting by 5s.</p> <p>"I find it hard to count by 5s."</p>	<p>6. Student fluently skip-counts by factors of 10 and notices and explains patterns in the skip-counting numbers.</p>

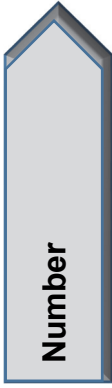
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 10

# Number Cards (4 to 9)

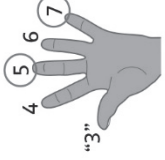
4	5
6	7
8	9





# Master 11: Activity 3 Assessment

## Skip-Counting Flexibly

Skip-Counting from Any Number Behaviours/Strategies		
1. Student uses correct start number, but reverts to the skip-counting from 0 sequence when skip-counting by factors of 10 (i.e., 2, 10) from any given number.  "3, 10, 20, 30, ..."	2. Student uses correct start number, but mixes up the numbers or omits numbers in the skip-counting sequence when skip-counting by factors of 10 from any given number.  "3, 13, 33, 43, ..."	3. Student skip-counts by factors of 10 from any given number and uses fingers or the hundred chart to help.  
Observations/Documentation		
4. Student skip-counts by factors of 10 from any given number, but loses track of number of times counted.  "3, 5, 7, 9. Can I stop yet?"	5. Student skip-counts by factors of 10 from any given number, but struggles to identify errors or missing numbers in partner's skip-counting sequences.  "5, 7, 9, 10, 12, ..." "I'm not sure if she is correct."	6. Student fluently skip-counts by factors of 10 (i.e., 2, 10) from any given number.  "3, 5, 7, 9, 11, ..." "4, 14, 24, 34, 44, 54, ..."
Observations/Documentation		

Master 12a

# Skip-Counting Backward Game Cards (Part 1)

<p>Skip-count backward by 2s.</p> <p>20, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>46, ____, ____, ____, ____</p>
<p>Skip-count backward by 2s.</p> <p>14, ____, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>70, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 2s.</p> <p>88, ____, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>34, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 5s.</p> <p>40, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>65, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 5s.</p> <p>70, ____, ____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>85, ____, ____, ____, ____, ____, ____</p>



Master 12a

## Skip-Counting Backward Game Cards (Part 2)

<p>Skip-count backward by 5s.</p> <p>25, ____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>50, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 10s.</p> <p>40, ____, ____, ____</p>	<p>Skip-count backward by 10s.</p> <p>100, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 10s.</p> <p>70, ____, ____, ____, ____</p>	<p>Skip-count backward by 10s.</p> <p>60, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 10s.</p> <p>90, ____, ____, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 10s.</p> <p>50, ____, ____, ____, ____</p>



Master 12b

# Skip-Counting Backward Game Cards (Extension) (Part 1)

<p>Skip-count backward by 2s.</p> <p>120, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>144, ____, ____, ____, ____</p>
<p>Skip-count backward by 2s.</p> <p>156, ____, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>170, ____, ____, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 2s.</p> <p>182, ____, ____, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 2s.</p> <p>138, ____, ____, ____, ____, ____, ____, ____, ____</p>
<p>Skip-count backward by 5s.</p> <p>140, ____, ____, ____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>165, ____, ____, ____, ____, ____, ____, ____, ____</p>



Master 12b

## Skip-Counting Backward Game Cards (Extension) (Part 2)

<p>Skip-count backward by 5s.</p> <p>180, ____, ____, ____, ____,</p> <p>____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>195, ____, ____, ____, ____,</p> <p>____, ____, ____</p>
<p>Skip-count backward by 5s.</p> <p>120, ____, ____, ____,</p> <p>____, ____, ____</p>	<p>Skip-count backward by 5s.</p> <p>155, ____, ____, ____, ____,</p> <p>____, ____, ____, ____</p>
<p>Skip-count backward by 10s.</p> <p>140, ____, ____, ____, ____,</p> <p>____, ____</p>	<p>Skip-count backward by 10s.</p> <p>200, ____, ____, ____, ____,</p> <p>____, ____</p>
<p>Skip-count backward by 10s.</p> <p>170, ____, ____, ____,</p> <p>____, ____</p>	<p>Skip-count backward by 10s.</p> <p>160, ____, ____, ____, ____,</p> <p>____</p>
<p>Skip-count backward by 10s.</p> <p>190, ____, ____, ____, ____,</p> <p>____, ____</p>	<p>Skip-count backward by 10s.</p> <p>150, ____, ____, ____, ____,</p> <p>____</p>



Master 12c

## Skip-Counting Backward Game Cards (Combined Grades) (Part 1)

Skip-count backward by 2s.

123, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 2s.

147, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 2s.

159, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 2s.

171, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 2s.

199, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 2s.

104, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 5s.

123, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 5s.

161, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 5s.

184, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 5s.

199, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_





Master 12c

## Skip-Counting Backward Game Cards (Combined Grades) (Part 2)

Skip-count backward by 5s.

106, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 5s.

195, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 10s.

121, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 10s.

197, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 10s.

143, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 10s.

200, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 100s.

800, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 100s.

567, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Skip-count backward by 100s.

764, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_

Skip-count backward by 100s.


999, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_,  
\_\_\_\_, \_\_\_\_, \_\_\_\_

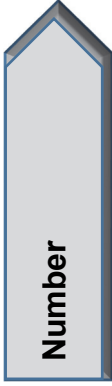


Name \_\_\_\_\_ Date \_\_\_\_\_

Master 12d

# Skip-Counting Backward Game Cards (Blank Cards)



# Master 13: Activity 4 Assessment

## Skip-Counting Backward

Skip-Counting Backward Behaviours/Strategies		
1. Student skip-counts forward when asked to skip-count backward by factors of 10 (i.e., 2, 5, 10).  "40, 50, 60, 70"	2. Student uses correct start number, but mixes up the numbers or omits numbers in the skip-counting sequence when skip-counting backward by factors of 10.  "60, 40, 50, 30, 20, 10"	3. Student skip-counts backward by factors of 10 and uses fingers or the hundred chart to help.
Observations/Documentation		
4. Student skip-counts backward by factors of 10, but loses track of number of times counted.  "60, 50, 40, 30. When do I stop?"	5. Student skip-counts backward by factors of 10, but struggles to decide if partner's sequence is correct.  "60, 50, 40, 20, 10, 0. I'm not sure if he is correct."	6. Student fluently skip-counts backward by factors of 10 (i.e., 2, 5, 10).  "60, 50, 40, 30, 20, 10" "40, 35, 30, 25, 20, 15" "20, 18, 16, 14, 12, 10"
Observations/Documentation		

Master 14a

# Counting On and Back Game Cards


Count on by 1s, 2 times	Count on by 1s, 3 times
Count on by 1s, 4 times	Count on by 1s, 5 times
Count on by 1s, 6 times	Count on by 1s, 7 times
Count on by 1s, 8 times	Count on by 1s, 9 times
Count on by 1s, 10 times	Count back by 1s, 2 times



**Master 14b**

# Counting On and Back Game Cards


Count back by 1s, 2 times	Count back by 1s, 3 times
Count back by 1s, 4 times	Count back by 1s, 5 times
Count back by 1s, 6 times	Count back by 1s, 7 times
Count back by 1s, 8 times	Count back by 1s, 9 times



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 14c

# Counting On and Back Game Cards (Blank Cards)

Master 15a

## Skip-Counting by 2s Game Cards


Skip-count forward by 2s, 2 times	Skip-count forward by 2s, 3 times
Skip-count forward by 2s, 4 times	Skip-count forward by 2s, 5 times
Skip-count forward by 2s, 6 times	Skip-count forward by 2s, 7 times
Skip-count forward by 2s, 8 times	Skip-count forward by 2s, 9 times
Skip-count forward by 2s, 10 times	Skip-count backward by 2s, 2 times



Master 15b

## Skip-Counting by 2s Game Cards

Skip-count backward by 2s, 3 times	Skip-count backward by 2s, 4 times
Skip-count backward by 2s, 5 times	Skip-count backward by 2s, 6 times
Skip-count backward by 2s, 7 times	Skip-count backward by 2s, 8 times
Skip-count backward by 2s, 9 times	Skip-count backward by 2s, 10 times





Master 15c

# Skip-Counting by 5s Game Cards

Skip-count forward by 5s, 2 times	Skip-count forward by 5s, 3 times
Skip-count forward by 5s, 4 times	Skip-count forward by 5s, 5 times
Skip-count forward by 5s, 6 times	Skip-count backward by 5s, 2 times
Skip-count backward by 5s, 3 times	Skip-count backward by 5s, 4 times
Skip-count backward by 5s, 5 times	Skip-count backward by 5s, 6 times



Master 15d

## Skip-Counting by 10s Game Cards

Skip-count forward by 10s,  
1 time

Skip-count forward by 10s,  
2 times

Skip-count forward by 10s,  
3 times

Skip-count forward by 10s,  
4 times

Skip-count forward by 10s,  
5 times

Skip-count backward by 10s,  
1 time

Skip-count backward by 10s,  
2 times

Skip-count backward by 10s,  
3 times

Skip-count backward by 10s,  
4 times


Skip-count backward by 10s,  
5 times

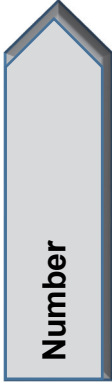


Name \_\_\_\_\_ Date \_\_\_\_\_

Master 15e

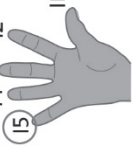
# Skip-Counting Game Cards (Blank Cards)

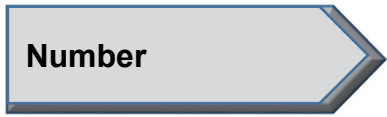





# Master 16a: Activity 5 Assessment

## Counting: Consolidation

Counting On and Back Behaviours/Strategies													
1. Student uses correct start number, but omits numbers or mixes up the order when saying the number name sequences forward and backward.  "11, 12, 14, 16, 17"	2. Student says the number name sequences forward and backward from a given number, but relies on the hundred chart.  <table border="1"> <tr> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> </tr> </table> "24, 25, 26, 27, 28, 29"	21	22	23	24	25	26	27	28	29	30	3. Student says the number name sequences forward and backward from a given number, but struggles to bridge tens.  "Eight, nine, ten, ten-one, ten-two"	4. Student says the number name sequences forward and backward from a given number and uses number patterns to bridge tens.
21	22	23	24	25	26	27	28	29	30				
Observations/Documentation													
Skip-Counting Forward and Backward Behaviours/Strategies													
1. Student uses correct start number, but mixes up the numbers or omits numbers when skip-counting forward and backward by factors of 10.  "5, 10, 20, 25, 35"	2. Student skip-counts forward by factors of 10, but struggles to skip-count backward.  "It is much easier to skip-count forward."	3. Student skip-counts forward and backward by factors of 10, but uses fingers or the hundred chart to help.   "10"	4. Student fluently skip-counts forward and backward by factors of 10.  "80, 70, 60, 50, 40" "60, 65, 70, 75, 80, 85" "50, 48, 46, 44, 42, 40"										
Observations/Documentation													



# Master 16b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can count on and back by 1s from a given number. <b>(Activities 1, 5)</b>									
Student can use number patterns to bridge tens when counting on and back by 1s. <b>(Activities 1, 5)</b>									
Student can skip-count forward by 2s, 5s, and 10s. <b>(Activities 2, 5)</b>									
Student can skip-count forward by 2s and 10s from any given number. <b>(Activity 3)</b>									
Student can skip-count backward by 2s, 5s, and 10s. <b>(Activities 4, 5)</b>									
Student can identify patterns in the skip-counting sequences. <b>(Activities 2, 3, 4, 5)</b>									
Student can identify errors or missing numbers in a skip-counting sequence. <b>(Activity 2, 3, 4, 5)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Counts on and back by 1s from a given number. <b>(Activities 1, 5)</b>			
Uses number patterns to bridge tens when counting on and back by 1s. <b>(Activities 1, 5)</b>			
Skip-counts forward by 2s, 5s, and 10s. <b>(Activities 2, 5)</b>			
Skip-counts forward by 2s and 10s from any given number. <b>(Activity 3)</b>			
Skip-counts backward by 2s, 5s, and 10s. <b>(Activities 4, 5)</b>			
Identifies patterns in the skip-counting sequences. <b>(Activities 2, 3, 4, 5)</b>			
Identifies errors or missing numbers in a skip-counting sequence. <b>(Activities 2, 3, 4, 5)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢</p> <p><b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p> <p><b>Cross Strand:</b> Patterning and Algebra</p> <p><b>Expressions and Equality:</b> demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18</p>			
<p><b>N2.1</b> represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools</p> <p><b>N2.2</b> read and print in words whole numbers to twenty, using meaningful contexts</p> <p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.4</b> determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer</p>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet</p> <p>4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (N2.1, N2.9)</p> <p>7: Ordering Quantities (N2.1, N2.9)</p> <p>8: Odd and Even Numbers (N2.1, N2.9)</p> <p>9: Ordinal Numbers</p> <p>10: Estimating with Benchmarks</p> <p>11: Decomposing to 20 (N2.3, N2.9, P2.8)</p> <p>12: Number Relationships 1 Consolidation (N2.1, N2.3, N2.4, N2.9, P2.8)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

### Ontario (continued)

<p><b>N2.9</b> 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</p> <p><b>N2.11</b> locate whole numbers to 100 on a number line and on a partial number line</p> <p><b>P2.8</b> demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials</p>	<p><b>On Grade: Math Every Day</b>  <b>Card 2A:</b>          Show Me in Different Ways          (N2.1, N2.2, N2.3, P2.8)          Guess My Number (N2.1, N2.3)  <b>Card 2B:</b>          Math Commander          Building an Open Number Line          (N2.1, N2.2, N2.3, N2.4, N2.11)</p>	<p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsdled Race (Activity 7)</li> <li>• Finding Buster (Activity 11)</li> <li>• How Numbers Work (Activity 11)</li> </ul>	<p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones. (Activities 8, 12)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <ul style="list-style-type: none"> <li>- Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</li> </ul>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Numbers to 100 represent quantities that can be decomposed into 10s and 1s.</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p>Number concepts to 100</p> <p>Counting</p> <ul style="list-style-type: none"> <li>• <b>2.1</b> skip-counting by 2, 5, and 10:               <ul style="list-style-type: none"> <li>– <b>2.1b</b> increasing and decreasing (forward and backward)</li> </ul> </li> <li>• <b>2.2</b> Quantities to 100 can be arranged and recognized               <ul style="list-style-type: none"> <li>– <b>2.2a</b> comparing and ordering numbers to 100</li> <li>– <b>2.2b</b> benchmarks of 25, 50, and 100</li> </ul> </li> <li>• <b>2.3</b> Even and odd numbers</li> <li>• <b>2.4</b> Benchmarks of 25, 50, and 100 and personal referents               <ul style="list-style-type: none"> <li>– <b>2.4a</b> Seating arrangements at ceremonies/feasts</li> </ul> </li> </ul> <p>Addition and subtraction facts to 20 (introduction of computational strategies)</p> <ul style="list-style-type: none"> <li>• <b>2.6</b> fluency with math strategies for addition</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet 4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (2.2, 2.2a) 7: Ordering Quantities (2.2, 2.2a, 2.2b) 8: Odd and Even Numbers (2.3) 9: Ordinal Numbers 10: Estimating with Benchmarks (2.2, 2.2b, 2.4, 2.4a) 11: Decomposing to 20 (2.1b, 2.6, 2.21) 12: Number Relationships 1 Consolidation (2.2, 2.2a, 2.2b, 2.3, 2.4, 2.7, 2.21)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Show Me in Different Ways (2.2, 2.2a, 2.3, 2.6, 2.7) Guess My Number (2.2, 2.2a, 2.3) <b>Card 2B:</b> Math Commander (2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activity 7)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>- Applying the Principles of Counting</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

### British Columbia/Yukon Territories (continued)

<p>and subtraction (e.g., making or bridging 10, decomposing, identifying related doubles, adding on to find the difference)</p> <p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li>• <b>2.7</b> Decomposing numbers to 100</li> <li>• <b>2.11</b> using an open number line, hundred chart, ten-frames</li> </ul> <p><b>2.21</b> Symbolic representation of equality and inequality</p>	<p>Building an Open Number Line (<b>2.2</b>, <b>2.2a</b>, <b>2.2b</b>, <b>2.4</b>, <b>2.11</b>)</p>	<ul style="list-style-type: none"> <li>• Finding Buster (<b>Activity 11</b>)</li> <li>• How Numbers Work (<b>Activity 11</b>)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b>          Utilizing 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. (<b>Activities 8, 12</b>)</p> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b>          - Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (<b>Activities 11, 12</b>)</p>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense <b>Cross Strand:</b> Patterns and Relations Represent algebraic expressions in multiple ways</p>	<p><b>Below Grade: Intervention</b> 3: My 10 Bracelet 4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b> 6: Comparing Quantities (2N5) 7: Ordering Quantities (2N5) 8: Odd and Even Numbers (2N2) 9: Ordinal Numbers (2N3) 10: Estimating with Benchmarks (2N6) 11: Decomposing to 20 (2N1.1, 2N4, 2PR3) 12: Number Relationships 1 Consolidation (2N2, 2N3, 2N4, 2N5, 2PR3)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Show Me in Different Ways (2N2, 2N4, 2N5) Guess My Number (2N2, 2N4, 2N5) <b>Card 2B:</b> Math Commander (2N2, 2N3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

	Building an Open Number Line (2N4, 2N5)	<ul style="list-style-type: none"> <li>The Great Dogsled Race (Activity 7)</li> <li>Finding Buster (Activity 11)</li> <li>How Numbers Work (Activity 11)</li> </ul>	<ul style="list-style-type: none"> <li>Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones. (Activities 8, 12)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <ul style="list-style-type: none"> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</li> </ul>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations Represent algebraic expressions in multiple ways</p> <p><b>2.N.1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2.N.1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> </ul> <p><b>2.N.2</b> Demonstrate if a number (up to 100) is even or odd.</p> <p><b>2.N.3</b> Describe order or relative position using ordinal numbers.</p> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2.N.5</b> Compare and order numbers up to 100.</p> <p><b>2.N.6</b> Estimate quantities to 100 using referents.</p>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet 4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (2.N.5) 7: Ordering Quantities (2.N.5) 8: Odd and Even Numbers (2.N.2) 9: Ordinal Numbers (2.N.3) 10: Estimating with Benchmarks (2.N.6) 11: Decomposing to 20 (2.N.1.1, 2.N.4, 2.PR.3) 12: Number Relationships 1 Consolidation (2.N.2, 2.N.3, 2.N.4, 2.N.5, 2.PR.3)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Show Me in Different Ways (2.N.2, 2.N.4, 2.N.5) Guess My Number (2.N.2, 2.N.4, 2.N.5) <b>Card 2B:</b> Math Commander (2.N.2, 2.N.3) Building an Open Number Line (2.N.4, 2.N.5)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsdled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsdled Race (Activity 7)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>- Applying the Principles of Counting</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul>

### Mathology 2

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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

### Manitoba (continued)

<p><b>2.PR.3</b> Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).</p>		<ul style="list-style-type: none"> <li>• Finding Buster (Activity 11)</li> <li>• How Numbers Work (Activity 11)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b>            Utilizing 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. (Activities 8, 12)</p> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b>            - Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</p>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b></p> <p>Students will be expected to demonstrate number sense.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p>Students will be expected to represent algebraic expressions in multiple ways.</p> <p><b>2N01</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li>• <b>2N01.2</b> 2s, forward and backward, starting from any point to 100</li> </ul> <p><b>2N02</b> Students will be expected to demonstrate if a number (up to 100) is even or odd.</p> <p><b>2N03</b> Students will be expected to describe order or relative position using ordinal numbers (up to tenth).</p> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N05</b> Students will be expected to compare</p>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet</p> <p>4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (2N05)</p> <p>7: Ordering Quantities (2N05)</p> <p>8: Odd and Even Numbers (2N02)</p> <p>9: Ordinal Numbers (2N03)</p> <p>10: Estimating with Benchmarks (2N06)</p> <p>11: Decomposing to 20 (2N01.2, 2N04, 2PR03)</p> <p>12: Number Relationships 1 Consolidation (2N02, 2N03, 2N04, 2N05, 2PR03)</p> <p><b>On Grade: Math Every Day Card 2A:</b></p> <p>Show Me in Different Ways (2N02, 2N04, 2N05)</p> <p>Guess My Number (2N02, 2N04, 2N05)</p> <p><b>Card 2B:</b></p> <p>Math Commander (2N02, 2N03)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

### Nova Scotia (continued)

<p>and order numbers up to 100.</p> <p><b>2N06</b> Students will be expected to estimate quantities to 100 by using referents.</p> <p><b>2PR03</b> Students will be expected to demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).</p>	<p>Building an Open Number Line (2N04, 2N05)</p>	<ul style="list-style-type: none"> <li>• The Great Dogsled Race (Activity 7)</li> <li>• Finding Buster (Activity 11)</li> <li>• How Numbers Work (Activity 11)</li> </ul>	<p>- Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</p> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <p>- Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones. (Activities 8, 12)</p> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>- Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</p>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p> <p><b>Cross Strand:</b> Patterns and Relations Represent algebraic expressions in multiple ways.</p>			
<p><b>2N1</b> Say the number sequence 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s, and 10s, forward and backward, using starting points that are multiples of 2, 5, and 10 respectively.</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet 4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (2N5) 7: Ordering Quantities (2N5) 8: Odd and Even Numbers (2N2) 9: Ordinal Numbers (2N3) 10: Estimating with Benchmarks (2N6)</p> <p>11: Decomposing to 20 (2N1.1, 2N4, 2PR4) 12: Number Relationships 1 Consolidation (2N2, 2N3, 2N4, 2N5, 2PR4)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Show Me in Different Ways (2N2, 2N4, 2N5) <b>Guess My Number (2N2, 2N4, 2N5)</b> <b>Card 2B:</b> Math Commander (2N2, 2N3) Building an Open Number Line (2N4, 2N5)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 6, 7, 11, 12)</li> <li>• A Family Cookout (Activities 6, 7, 10)</li> <li>• At the Corn Farm (Activity 10)</li> <li>• Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activities 6, 7)</li> <li>• Back to Batoche (Activity 7)</li> <li>• Ways to Count (Activities 8, 10)</li> <li>• Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activity 6)</li> <li>• Fantastic Journeys (Activities 6, 7, 10, 12)</li> <li>• The Great Dogsled Race (Activity 7)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>- Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>- Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>- Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>- Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>- Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

<p><b>2PR4</b> Demonstrate and explain the meaning of equality and inequality, concretely and pictorially.</p>		<ul style="list-style-type: none"> <li>• Finding Buster (Activity 11)</li> <li>• How Numbers Work (Activity 11)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b>            Utilizing 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. (Activities 8, 12)</p> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b>            - Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</p>
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# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

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

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour <b>Cross Strand:</b> Patterns and Relations</p>			
<p><b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by:</p> <ul style="list-style-type: none"> <li><b>N2.1.1</b> representing (including place value)</li> <li><b>N2.1.2</b> describing</li> <li><b>N2.1.3</b> skip counting</li> <li><b>N2.1.4</b> differentiating between odd and even numbers</li> <li><b>N2.1.5</b> estimating with referents</li> <li><b>N2.1.6</b> comparing two numbers</li> <li><b>N2.1.7</b> ordering three or more numbers</li> </ul> <p><b>P2.3</b> Demonstrate understanding of equality and inequality concretely</p>	<p><b>Below Grade: Intervention</b></p> <p>3: My 10 Bracelet 4: Who Has More?</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Comparing Quantities (N2.1.6) 7: Ordering Quantities (N2.1.6, N2.1.7) 8: Odd and Even Numbers (N2.1.4) 9: Ordinal Numbers (N2.1.1) 10: Estimating with Benchmarks (N2.1.5) 11: Decomposing to 20 (N2.1.1, N2.1.3, P2.3) 12: Number Relationships 1 Consolidation (N2.1.1, N2.1.4, N2.1.6, N2.1.7, P2.3)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Show Me in Different Ways (N2.1.1, N2.1.4, N2.1.6) Guess My Number (N2.1.1, N2.1.4, N2.1.6)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Padding the River (Activities 6, 7, 11, 12)</li> <li>A Family Cookout (Activities 6, 7, 10)</li> <li>At the Corn Farm (Activity 10)</li> <li>Canada's Oldest Sport (Activities 11, 12)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activities 6, 7, 10, 12)</li> <li>The Great Dogsdled Race (Activities 6, 7)</li> <li>Back to Batoche (Activity 7)</li> <li>Ways to Count (Activities 8, 10)</li> <li>Family Fun Day (Activities 11, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Math Makes Me Laugh (Activity 6)</li> <li>Fantastic Journeys (Activities 6, 7, 10, 12)</li> <li>The Great Dogsdled Race (Activity 7)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>Applying the Principles of Counting</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activity 11)</li> <li>Names, writes, and matches numerals to numbers and quantities to 10. (MED 2B: 2)</li> <li>Names, writes, and matches two-digit numerals to quantities. (MED 2B: 2)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>Compares and orders quantities and written numbers using benchmarks. (Activities 6, 7, 12; MED 2A: 2, MED 2B: 4)</li> <li>Determines how many more/less one quantity is compared to another. (Activities 6, 12; MED 2A: 1, 2)</li> <li>Determines and describes the relative position of objects using ordinal numbers. (Activities 9, 12; MED 2B: 1)</li> <li>Uses ordinal numbers in context. (Activities 9, 12; MED 2B: 1)</li> </ul> <p>Estimating Quantities and Numbers</p> <ul style="list-style-type: none"> <li>Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activity 10)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>Composes and decomposes quantities to 20. (Activities 11, 12; MED 2A: 1, 2)</li> </ul>

# Curriculum Correlation

## Number Cluster 2: Number Relationships 1

### Saskatchewan (continued)

<p>and pictorially (0 to 100).</p>	<p><b>Card 2B:</b> Math Commander (N2.1.1, N2.1.4) Building an Open Number Line (N2.1.1, N2.1.7)</p>	<ul style="list-style-type: none"> <li>Finding Buster (Activity 11)</li> <li>How Numbers Work (Activity 11)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> 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. (Activities 8, 12)</p> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> - Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 11, 12)</p>
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Name \_\_\_\_\_ Date \_\_\_\_\_

Master 18

## ***Comparing Quantities* Recording Sheet**

Compare your objects.

Who used more cubes? \_\_\_\_\_

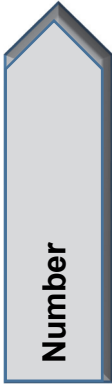
How many more? \_\_\_\_\_

Show how you found out.

Complete one of these sentences.

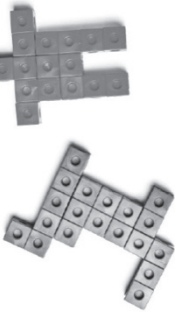
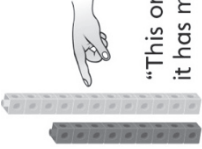




I used \_\_\_\_\_ more cubes than \_\_\_\_\_.

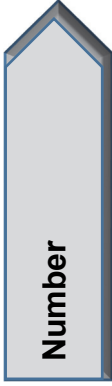
I used \_\_\_\_\_ fewer cubes than \_\_\_\_\_.



# Master 19: Activity 6 Assessment



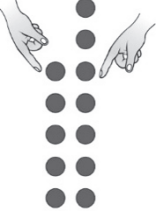



## Comparing Quantities

Comparing Quantities Behaviours/Strategies			
<p>1. Student perceptually compares quantities, comparing based on "how things look."</p> <p>"Mine has more because it looks bigger."</p>	<p>2. Student compares quantities using one-to-one matching or counting (takes objects apart).</p> 	<p>3. Student compares quantities using grouping (groups cubes together to make towers).</p>  <p>"This one is taller, so it has more cubes."</p>	<p>4. Student efficiently compares quantities using benchmarks of 5 and 10.</p>
Observations/Documentation			
Finding How Many More or Less Behaviours/Strategies			
<p>1. Student builds objects, but struggles to determine how many more one quantity is compared to the other.</p>  <p>"I don't know how many more."</p>	<p>2. Student determines how many more/less by grouping (groups cubes to make trains and then aligns the trains).</p>  <p>"1, 2, 3"</p>	<p>3. Student determines how many more/less using counting (finds distance between numbers on a number line or hundred chart).</p>  <p>"1, 2, 3, 4, 5"</p>	<p>4. Student successfully compares quantities and determines how many more/less one quantity is compared to another (e.g., counts on "13, 14, 15, 16, 17" or back, tracking with fingers).</p>  <p>"It has 5 more cubes."</p>
Observations/Documentation			



# Master 20: Activity 7 Assessment

## Ordering Quantities


Comparing and Ordering Behaviours/Strategies			
<p>1. Student makes two-digit numbers, but struggles to name them.</p> <p>23 56</p> <p>"Two three and five six."</p>	<p>2. Student models numbers with objects, but is unable to coordinate number words with counting actions (does not say one word for each object).</p>  <p>"3, 4"</p>	<p>3. Student makes two-digit numbers, but places them randomly on the cards without giving any thought to order.</p> 	<p>4. Student compares and orders quantities using one-to-one matching (models numbers with counters).</p> 
Observations/Documentation			
<p>5. Student compares and orders quantities using counting (models numbers with counters).</p> <p>"1, 2, 3, 4, 5"</p>  <p>"1, 2, 3, 4, 5, 6, 7"</p>	<p>6. Student compares and orders written numbers using benchmarks.</p>  <p>"I compared 14 and 23 to 20, and 23 and 32 to 30."</p>	<p>7. Student successfully compares and orders written numbers using benchmarks, but uses comparative language incorrectly.</p>  <p>"63 is less than 32."</p>	<p>8. Student successfully compares and orders written numbers using benchmarks and uses comparative language correctly.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 21a

### Number Cards (1–20)

1	2
3	4
5	6
7	8
9	10





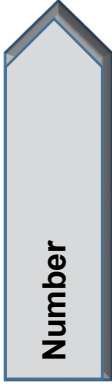
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 21b

### Number Cards (1–20)




11	12
13	14
15	16
17	18
19	20





# Master 22: Activity 8 Assessment

## Odd and Even Numbers

Identifying Even and Odd Numbers Behaviours/Strategies		
<p>1. Student turns over a card and reads the number, but struggles to say the number sequence starting with 1 and counting forward.</p> <p>“... 5, 7, 6, 8, 9”</p>	<p>2. Student says the number sequence forward, but struggles to coordinate number words with counting actions (e.g., says the number word between each “touch,” or does not say one number word for each counter counted).</p>  <p>“One”</p>	<p>3. Student partitions counters into groups of 2, but struggles to identify even numbers.</p> 
Observations/Documentation		
<p>4. Student partitions counters into groups of 2, but struggles to identify odd numbers (ignores the leftover counter or does not know what to do with it).</p> 	<p>5. Student partitions counters into groups of 2 and successfully identifies even and odd numbers, but struggles to explain why a number is even or odd.</p> <p>“I know it is odd because it isn't even.”</p>	<p>6. Student partitions counters into groups of 2, successfully identifies even and odd numbers, and explains why the numbers are even or odd.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 23a

## Ordinal Number Cards (to 20th)

**1st**

**2nd**

**3rd**

**4th**

**5th**

**6th**

**7th**

**8th**

**9th**

**10th**



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 23b

## Ordinal Number Cards (to 20th)

**11th**

**12th**

**13th**

**14th**

**15th**

**16th**

**17th**

**18th**

**19th**

**20th**



## Ordinal Word Cards (to twentieth)

**first**

**second**

**third**

**fourth**

**fifth**

**sixth**

**seventh**

**eighth**

**ninth**

**tenth**

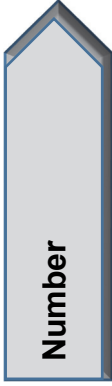


Master 24b

### Ordinal Word Cards (to twentieth)

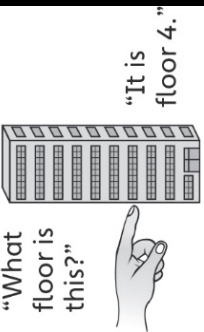

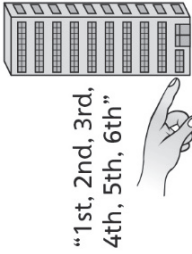
<b>eleventh</b>	<b>twelfth</b>
<b>thirteenth</b>	<b>fourteenth</b>
<b>fifteenth</b>	<b>sixteenth</b>
<b>seventeenth</b>	<b>eighteenth</b>
<b>nineteenth</b>	<b>twentieth</b>





# Master 25: Activity 9 Assessment

## Ordinal Numbers

Ordinal Numbers Behaviours/Strategies		
<p>1. Student knows the floor number, but is unable to represent it with an ordinal number name.</p> 	<p>2. Student uses some ordinal number names, but has difficulty with those that sound different from the counting numbers (first, second, third).</p> <p>“1th, 2th, 3th”</p>	<p>3. Student uses ordinal number names to describe relative position, but does not realize that the position of an object can change, depending on the starting point.</p> 
Observations/Documentation		
<p>4. Student uses ordinal number names in context to describe relative position, but is unable to count forward or backward from a given ordinal number (always counts from 1 or from the first floor).</p> 	<p>5. Student uses ordinal number names to 20th to describe relative position, but does not know what comes next.</p> <p>“18th, 19th, 20th. I don't know what comes next.”</p>	<p>6. Student uses ordinal numbers in context to describe relative position and has an understanding of their repeating sequence.</p>
Observations/Documentation		

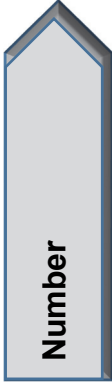
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 26

# How Many in the Jar? Recording Sheet




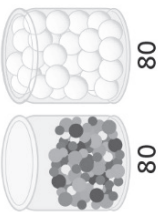
Object	Estimate	Number in Jar





# Master 27: Activity 10 Assessment

## Estimating with Benchmarks

Estimating Using Benchmarks Behaviours/Strategies			
1. Student guesses instead of using a benchmark of 10 to estimate.  "I guess 100 marbles."	2. Student counts instead of using a benchmark of 10 to estimate.  "I see about 1, 2, 3, ..., 10, 11, 12 marbles."	3. Student tries to use a benchmark of 10 to estimate, but struggles to visualize groups of 10 in the jar.  "I don't know how many groups of 10 there are."	4. Student uses a benchmark of 10 to estimate, but does not use previous estimates to help.
Observations/Documentation			
5. Student uses a benchmark of 10 to successfully estimate quantities of one size of object, but struggles when the size of the object changes. 	6. Student uses a benchmark of 10 to successfully estimate quantities, but struggles to explain the strategies used.	7. Student uses a benchmark of 10 to successfully estimate quantities, but is unable to explain how the estimates compare to the actual amounts.	8. Student uses a benchmark of 10 to successfully compare and estimate quantities and explains strategies used.
Observations/Documentation			

Master 28

# Making Trains Recording Sheet

**Our Number:** \_\_\_\_\_






Number of Cubes in One Train	Number of Cubes in Other Train

Number of Cubes in One Train	Number of Cubes in Other Train



# Master 29: Activity 11 Assessment

## Decomposing to 20

Counting Behaviours/Strategies			
1. Student makes a train of linking cubes, but does not know that rearranging the cubes does not change the quantity (i.e., conservation of number).	 <p>"1, 2, 3, ..., 10, 11, 12"</p>	3. Student skip-counts to determine how many in each part, but continues to skip-count to count the leftover cubes.	4. Student fluently skip-counts by factors of 10 to determine how many in each part.
<b>Observations/Documentation</b>		 <p>"2, 4, 6, 8, 10, 12, 14"</p>	 <p>"2, 4, 6, 8, 10, 12, 13"</p>
Decomposing Behaviours/Strategies			
1. Student decomposes quantity into two parts, but breaks train randomly to find different ways.	 <p>"There aren't any more ways."</p>	3. Student uses patterns to successfully find different ways to decompose quantity into two parts.	4. Student uses known number relationships to successfully find all possible ways to decompose quantity into two parts.
<b>Observations/Documentation</b>			$0 + 12 = 12$ $1 + 11 = 12$ $2 + 10 = 12$ $3 + 9 = 12$ $4 + 8 = 12$ $5 + 7 = 12$ $6 + 6 = 12$ $7 + 5 = 12$ $8 + 4 = 12$ $9 + 3 = 12$ $10 + 2 = 12$ $11 + 1 = 12$ $12 + 0 = 12$

Master 30a

## Task Cards: Odd or Even Numbers

**Name 3 even numbers  
greater than 15.**

**Name 3 odd numbers  
less than 24.**

**Name 3 even numbers  
greater than 33.**

**Name 3 odd numbers  
less than 43.**



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 30b

## Task Cards: Odd or Even Numbers (for Accommodations)

Name 2 even numbers  
greater than 4.

Name 2 odd numbers  
less than 10.



Master 30c

## Task Cards: Comparing and Ordering

Order these numbers  
from least to greatest:

**25, 39, 20**

Order these numbers  
from greatest to least:

**37, 41, 32**

Name 2 numbers  
greater than 22 and  
less than 30.

Name 2 numbers  
less than 40 and  
greater than 28.

Which is the greater  
number?  
By how much?

**23, 32**

Which is the lesser  
number?  
By how much?

**17, 21**



Master 30d

## Task Cards: Comparing and Ordering (for Accommodations)

Order these numbers  
from least to greatest:

**7, 12, 5**

Order these numbers  
from greatest to least:

**10, 6, 9**

Name a number  
greater than 7 and  
less than 10.

Name a number  
less than 12 and  
greater than 8.

Which is the greater  
number?  
By how much?

**10, 7**

Which is the lesser  
number?  
By how much?


**6, 11**



Master 30e

## Task Cards: Composing and Decomposing

<p><b>Show 3 ways to make 31.</b></p>	<p><b>Show 3 ways to make 26.</b></p>
<p><b>Show 3 ways to make 19.</b></p>	<p><b>Show 3 ways to make 40.</b></p>






Master 30f

## Task Cards: Composing and Decomposing (for Accommodations)


<p>Show 2 ways to make 11.</p>	<p>Show 2 ways to make 8.</p>
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Master 30g

## Task Cards: Ordinal Numbers

<p>What is the fifth number you say after 17?</p>	<p>What is the third number you say after 28?</p>
<p>What is the second number you say after 47?</p>	<p>What is the fourth number you say after 31?</p>



Name \_\_\_\_\_ Date \_\_\_\_\_

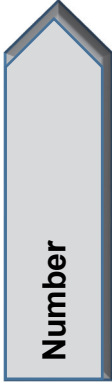
Master 30h

## Task Cards: Ordinal Numbers (for Accommodations)

What is the fifth  
number you say  
after 2?


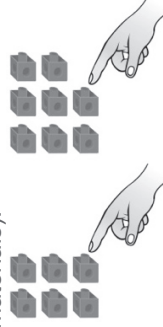

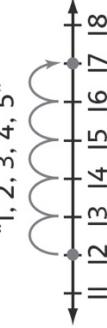

What is the third  
number you say  
after 8?

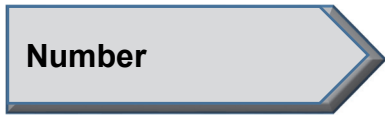




# Master 31a: Activity 12 Assessment

## Number Relationships 1: Consolidation

Number Relationships Behaviours/Strategies			
<p>1. Student uses some ordinal numbers, but has difficulty with those that sound different from the counting numbers (first, second, third).</p>	<p>2. Student partitions quantities into groups of 2, but struggles to identify even and odd numbers.</p>  <p>“I know I have to make pairs, but then what?”</p>	<p>3. Student compares and orders quantities using one-to-one matching or counting (models numbers with concrete materials).</p> 	<p>4. Student compares and orders written numbers using benchmarks.</p> <p>“I know 25 is less than 30 and 39 is greater than 30. So, 39 is greater than 25.”</p>
Observations/Documentation			
<p>5. Student determines how many more/less by grouping (groups cubes to make trains and then aligns the trains).</p>  <p>“1, 2, 3, ...”</p>	<p>6. Student determines how many more/less using counting (finds distance between numbers on a number line or hundred chart).</p>  <p>“1, 2, 3, 4, 5”</p>	<p>7. Student uses patterns to successfully find different ways to decompose quantity into two parts.</p>  <p>“I kept moving one cube to the other train.”</p>	<p>8. Student performs number relationship tasks with ease and communicates thinking using math language.</p>
Observations/Documentation			



# Master 31b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can compare two quantities to determine how many more/less. <b>(Activities 6, 12)</b>									
Student says one word for each object or group of objects counted (one-to-one correspondence/ tagging). <b>(Activities 6, 7, 11, 12)</b>									
Student can compare and order quantities to 100. <b>(Activities 7, 12)</b>									
Student uses math language when comparing and ordering quantities. <b>(Activities 6, 7, 12)</b>									
Student can identify even and odd numbers and explain thinking. <b>(Activity 8, 12)</b>									
Student can use ordinal numbers to describe relative position. <b>(Activities 9, 12)</b>									
Student can use benchmarks to estimate quantities to 100. <b>(Activity 10)</b>									
Student can decompose quantities to 20 into two parts. <b>(Activities 11, 12)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Compares two quantities to determine how many more/less. <b>(Activities 6, 12)</b>			
Says one word for each object or group of objects counted (one-to-one correspondence/ tagging). <b>(Activities 6, 7, 11, 12)</b>			
Compares and orders quantities to 100. <b>(Activities 7, 12)</b>			
Uses math language when comparing and ordering quantities. <b>(Activities 6, 7, 12)</b>			
Identifies even and odd numbers and explains thinking. <b>(Activity 8, 12)</b>			
Uses ordinal numbers to describe relative position. <b>(Activities 9, 12)</b>			
Uses benchmarks to estimate quantities to 100. <b>(Activity 10)</b>			
Decomposes quantities to 20 into two parts. <b>(Activities 11, 12)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢</p> <p><b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p> <p><b>Cross Strand: Patterning and Algebra</b></p> <p><b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p>			
<p><b>N2.1</b> represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools</p> <p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.9</b> 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</p> <p><b>N2.10</b> count backwards by 1's from 50 and any number less than 50, and count backwards by 10's</p>	<p><b>Below Grade: Intervention</b></p> <p>5: Adding Tens</p> <p>6: Taking Away Tens</p> <p><b>On Grade: Teacher Cards</b></p> <p>13: Building Numbers (N2.1, N2.3)</p> <p>14: Making a Number Line (N2.1, N2.9, N2.10, N2.11, P2.1)</p> <p>15: Grouping to Count (N2.1, N2.3, N2.9, P2.2)</p> <p>16: Grouping and Place Value Consolidation (N2.1, N2.3, N2.9, P2.2)</p> <p><b>On Grade: Math Every Day Card 3A:</b></p> <p>Adding Ten (N2.9, P2.1)</p> <p>Taking Away Ten (N2.10, P2.1)</p> <p><b>Card 3B:</b></p> <p>Thinking Tens (N2.3, N2.9, N2.10)</p> <p>Describe Me (N2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>At the Corn Farm (Activity 13)</li> <li>How Many Is Too Many? (Activities 15, 16)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Back to Batoche (Activity 13)</li> <li>A Class-full of Projects (Activities 13, 16)</li> <li>The Money Jar (Activity 13)</li> <li>Ways to Count (Activities 15, 16)</li> <li>Family Fun Day (Activity 15)</li> <li>What Would You Rather? (Activities 15, 16)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>How Numbers Work (Activities 13, 16)</li> <li>Hockey Homework (Activity 15)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>Applying the Principles of Counting</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 15, 16)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2)</li> <li>Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 15, 16)</li> <li>Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16)</li> <li>Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)</li> </ul>

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

### Ontario (continued)

<p>from 100 and any number less than 100, using number lines and hundreds charts</p> <p><b>N2.11</b> locate whole numbers to 100 on a number line and on a partial number line</p> <p><b>P2.1</b> 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</p> <p><b>P2.2</b> Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s).</p>		<p><b>Cross Strand: Patterning and Algebra</b>  <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Numbers to 100 represent quantities that can be decomposed into 10s and 1s.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p>Number concepts to 100 Counting</p> <ul style="list-style-type: none"> <li>2.1 skip-counting by 2, 5, and 10:               <ul style="list-style-type: none"> <li>2.1a using different starting points</li> <li>2.1b increasing and decreasing (forward and backward)</li> </ul> </li> <li>2.2 Quantities to 100 can be arranged and recognized               <ul style="list-style-type: none"> <li>2.2a comparing and ordering numbers to 100</li> </ul> </li> </ul> <p>Place value</p> <ul style="list-style-type: none"> <li>2.2c understanding of 10s and 1s</li> <li>2.2d understanding the relationship between digit places and their value, to 99</li> <li>2.2e decomposing two-digit numbers into 10s and 1s</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>5: Adding Tens 6: Taking Away Tens</p> <p><b>On Grade: Teacher Cards</b></p> <p>13: Building Numbers (2.2c, 2.2d, 2.2e, 2.20) 14: Making a Number Line (2.1, 2.1a, 2.1b, 2.2a) 15: Grouping to Count (2.1, 2.1b) 16: Grouping and Place Value Consolidation (2.1, 2.1a, 2.1b, 2.2c, 2.2d, 2.2e, 2.20)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Adding Ten (2.1, 2.1a, 2.1b, 2.11) Taking Away Ten (2.1, 2.1a, 2.1b, 2.11) <b>Card 3B:</b> Thinking Tens (2.2c, 2.2d, 2.2e) Describe Me (2.2c, 2.2d, 2.2e)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>At the Corn Farm (Activity 13)</li> <li>How Many Is Too Many? (Activities 15, 16)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Back to Batoche (Activity 13)</li> <li>A Class-full of Projects (Activities 13, 16)</li> <li>The Money Jar (Activity 13)</li> <li>Ways to Count (Activities 15, 16)</li> <li>Family Fun Day (Activity 15)</li> <li>What Would You Rather? (Activities 15, 16)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>How Numbers Work (Activities 13, 16)</li> <li>Hockey Homework (Activity 15)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 15, 16)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2)</li> <li>Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 15, 16)</li> <li>Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16)</li> <li>Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)</li> </ul>

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

### British Columbia/Yukon Territories (continued)

<p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li>• <b>2.11</b> using an open number line, hundred chart, ten-frames</li> </ul> <p>Change in quantity using pictorial and symbolic representation</p> <ul style="list-style-type: none"> <li>• <b>2.20</b> numerically describing a change in quantity (e.g., for <math>6 + n = 10</math>, visualize the change in quantity by using ten-frames, hundred charts, etc.)</li> </ul>		<p><b>Cross Strand: Patterning and Algebra</b>  <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems</p> <p><b>2N1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li><b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li><b>2N1.2</b> 10s using starting points from 1 to 9</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p> <p><b>2N7</b> Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1</p>	<p><b>Below Grade: Intervention</b></p> <p>5: Adding Tens</p> <p>6: Taking Away Tens</p> <p><b>On Grade: Teacher Cards</b></p> <p>13: Building Numbers (2N4, 2N7)</p> <p>14: Making a Number Line (2N1, 2N1.1, 2N1.2, 2N5, 2N9.1, 2PR2)</p> <p>15: Grouping to Count (2N1.1, 2N4, 2PR2)</p> <p>16: Grouping and Place Value Consolidation (2N1.1, 2N4, 2N7, 2N9.1, 2PR2)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Adding Ten (2N1.1, 2N1.2, 2N9.1, 2PR2)</p> <p>Taking Away Ten (2N1.1, 2N1.2, 2N9.1, 2PR2)</p> <p><b>Card 3B:</b> Thinking Tens (2N1.1, 2N1.2, 2N7) Describe Me (2N7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>At the Corn Farm (Activity 13)</li> <li>How Many Is Too Many? (Activities 15, 16)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Back to Batoche (Activity 13)</li> <li>A Class-full of Projects (Activities 13, 16)</li> <li>The Money Jar (Activity 13)</li> <li>Ways to Count (Activities 15, 16)</li> <li>Family Fun Day (Activity 15)</li> <li>What Would You Rather? (Activities 15, 16)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>How Numbers Work (Activities 13, 16)</li> <li>Hockey Homework (Activity 15)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 15, 16)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2)</li> <li>Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 15, 16)</li> <li>Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16)</li> <li>Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)</li> </ul>

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

<p>and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR2</b> Demonstrate an understanding of increasing patterns by using manipulatives, diagrams, sounds and actions (numbers to 100).</p>		<p><b>Cross Strand: Patterning and Algebra</b>  <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems</p> <p><b>2.N.1</b> Say the number sequence from 0 to 100 by</p> <ul style="list-style-type: none"> <li><b>2.N.1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li><b>2.N.1.2</b> 10s using starting points from 1 to 9</li> </ul> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially, and symbolically.</p> <p><b>2.N.5</b> Compare and order numbers up to 100.</p> <p><b>2.N.7</b> Illustrate, concretely and pictorially, the meaning of place value for numbers to 100.</p> <p><b>2.N.9</b> Demonstrate an understanding of</p>	<p><b>Below Grade: Intervention</b> 5: Adding Tens 6: Taking Away Tens</p> <p><b>On Grade: Teacher Cards</b> 13: Building Numbers (2.N.4, 2.N.7) 14: Making a Number Line (2.N.1, 2.N.1.1, 2.N.1.2, 2.N.5, 2.N.9.1, 2.PR.2) 15: Grouping to Count (2.N.1.1, 2.N.4, 2.PR.2) 16: Grouping and Place Value Consolidation (2.N.1.1, 2.N.4, 2.N.7, 2.N.9.1, 2.PR.2)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Adding Ten (2.N.1.1, 2.N.1.2, 2.N.9.1, 2.PR.2) Taking Away Ten (2.N.1.1, 2.N.1.2, 2.N.9.1, 2.PR.2) <b>Card 3B:</b> Thinking Tens (2.N.1.1, 2.N.1.2, 2.N.7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>At the Corn Farm (Activity 13)</li> <li>How Many Is Too Many? (Activities 15, 16)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Back to Batoche (Activity 13)</li> <li>A Class-full of Projects (Activities 13, 16)</li> <li>The Money Jar (Activity 13)</li> <li>Ways to Count (Activities 15, 16)</li> <li>Family Fun Day (Activity 15)</li> <li>What Would You Rather? (Activities 15, 16)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>How Numbers Work (Activities 13, 16)</li> <li>Hockey Homework (Activity 15)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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 15, 16)</p> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts - Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2) - Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1) 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 15, 16) - Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16) - Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)</p>

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

### Manitoba (continued)

<p>addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2.PR.2</b> Demonstrate an understanding of increasing patterns by using manipulatives, diagrams, sounds and actions (numbers to 100).</p>	Describe Me (2.N.7)	<p><b>Cross Strand: Patterning and Algebra Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 15, 16)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activity 14, MED 3A: 1, 2)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to develop number sense. <b>Cross Strand:</b> Patterns and Relations Students will be expected to use patterns to describe the world and solve problems</p>			
<p><b>2N01</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li><b>2N01.1</b> 1s, forward and backward, starting from any point to 200</li> <li><b>2N01.2</b> 2s, forward and backward, starting from any point to 100</li> <li><b>2N01.3</b> 5s and 10s, forward and backward, using starting points that are multiples of 5 and 10 respectively to 100</li> <li><b>2N01.4</b> 10s, starting from any point, to 100</li> </ul> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N05</b> Students will be expected to compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b></p> <p>5: Adding Tens 6: Taking Away Tens</p> <p><b>On Grade: Teacher Cards</b></p> <p>13: Building Numbers (2N04, 2N07) 14: Making a Number Line (2N01.1, 2N01.3, 2N01.4, 2N05, 2N09.1, 2PR02) 15: Grouping to Count (2N01.1, 2N01.2, 2N01.3, 2N04, 2PR02) 16: Grouping and Place Value Consolidation (2N01.1, 2N01.2, 2N01.3, 2N04, 2N07, 2N09.1, 2PR02)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Adding Ten (2N01.3, 2N01.4, 2N09.1, 2PR02) Taking Away Ten (2N01.3, 2N01.4, 2N09.1, 2PR02)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>At the Corn Farm (Activity 13)</li> <li>How Many Is Too Many? (Activities 15, 16)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Back to Batoche (Activity 13)</li> <li>A Class-full of Projects (Activities 13, 16)</li> <li>The Money Jar (Activity 13)</li> <li>Ways to Count (Activities 15, 16)</li> <li>Family Fun Day (Activity 15)</li> <li>What Would You Rather? (Activities 15, 16)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>How Numbers Work (Activities 13, 16)</li> <li>Hockey Homework (Activity 15)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 15, 16)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2)</li> <li>Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 15, 16)</li> <li>Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16)</li> <li>Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)</li> </ul>

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

### Nova Scotia (continued)

<p><b>2N07</b> Students will be expected to illustrate, concretely and pictorially, the meaning of place value for numerals to 100.</p> <p><b>2N09</b> 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</p> <ul style="list-style-type: none"> <li>• <b>2N09.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR02</b> Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, and creating numerical patterns (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.</p>	<p><b>Card 3B:</b> Thinking Tens (<b>2N01.3, 2N01.4, 2N07</b>) Describe Me (<b>2N07</b>)</p>		<p><b>Cross Strand: Patterning and Algebra</b> <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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
<b>General Outcome</b> Develop number sense <b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems			
<b>2N1</b> Say the number sequence 0 to 100 by: <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2N1.2</b> 10s using starting points from 1 to 9</li> </ul>	<b>Below Grade: Intervention</b> 5: Adding Tens 6: Taking Away Tens  <b>On Grade: Teacher Cards</b> 13: Building Numbers (2N4, 2N7) 14: Making a Number Line (2N1, 2N1.1, 2N1.2, 2N5, 2N9.1, 2PR2) 15: Grouping to Count (2N1.1, 2N4, 2PR2) 16: Grouping and Place Value Consolidation (2N1.1, 2N4, 2N7, 2N9.1, 2PR2)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• At the Corn Farm (Activity 13)</li> <li>• How Many Is Too Many? (Activities 15, 16)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• Back to Batoche (Activity 13)</li> <li>• A Class-full of Projects (Activities 13, 16)</li> <li>• The Money Jar (Activity 13)</li> <li>• Ways to Count (Activities 15, 16)</li> <li>• Family Fun Day (Activity 15)</li> <li>• What Would You Rather? (Activities 15, 16)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• How Numbers Work (Activities 13, 16)</li> <li>• Hockey Homework (Activity 15)</li> </ul>	<b>Big Idea: Numbers tell us how many and how much.</b> 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 15, 16)  <b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Utilizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts - Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2) - Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)  Utilizing 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 15, 16) - Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16) - Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)
<b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.	<b>On Grade: Math Every Day Card 3A:</b> Adding Ten (2N1.1, 2N1.2, 2N9.1, 2PR2) Taking Away Ten (2N1.1, 2N1.2, 2N9.1, 2PR2) <b>Card 3B:</b> Thinking Tens (2N1.1, 2N1.2, 2N7) Describe Me (2N7)		
<b>2N5</b> Compare and order numbers up to 100.			
<b>2N7</b> Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.			
<b>2N9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals)			

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

<p>with answers to 100 and the corresponding subtraction by</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR2</b> Demonstrate an understanding of numerical (numbers to 100) and non-numerical increasing patterns by using manipulatives, diagrams, sounds and actions.</p>		<p><b>Cross Strand: Patterning and Algebra</b>  <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

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

### Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour <b>Cross Strand:</b> Patterns and Relations			
<b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by: <ul style="list-style-type: none"> <li>• <b>N2.1.1 representing (including place value)</b></li> <li>• <b>N2.1.2 describing</b></li> <li>• <b>N2.1.3 skip counting</b></li> <li>• N2.1.4 differentiating between odd and even numbers</li> <li>• N2.1.5 estimating with referents</li> <li>• N2.1.6 comparing two numbers</li> <li>• <b>N2.1.7 ordering three or more numbers</b></li> </ul>	<b>Below Grade: Intervention</b> 5: Adding Tens 6: Taking Away Tens  <b>On Grade: Teacher Cards</b> 13: Building Numbers (N2.1.1, N2.1.2) 14: Making a Number Line (N2.1.3, N2.1.7, N2.2.4, P2.2) 15: Grouping to Count (N2.1.1, N2.1.2, N2.1.3, P2.2) 16: Grouping and Place Value Consolidation (N2.1.1, N2.1.2, N2.1.3, N2.1.7, N2.2.4, P2.2)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• At the Corn Farm (Activity 13)</li> <li>• How Many Is Too Many? (Activities 15, 16)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• Back to Batoche (Activity 13)</li> <li>• A Class-full of Projects (Activities 13, 16)</li> <li>• The Money Jar (Activity 13)</li> <li>• Ways to Count (Activities 15, 16)</li> <li>• Family Fun Day (Activity 15)</li> <li>• What Would You Rather? (Activities 15, 16)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• How Numbers Work (Activities 13, 16)</li> <li>• Hockey Homework (Activity 15)</li> </ul>	<b>Big Idea: Numbers tell us how many and how much.</b> 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 15, 16)
<b>N2.2</b> Demonstrate understanding of addition (limited to 1	<b>On Grade: Math Every Day</b> <b>Card 3A:</b> Adding Ten (N2.1.3, N2.2.4, P2.2) Taking Away Ten (N2.1.3, N2.2.4, P2.2) <b>Card 3B:</b> Thinking Tens (N2.1.1, N2.1.3) Describe Me (N2.1.1)	<b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Utilizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts - Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 13, 16; MED 3B: 1, 2) - Determines 10 more/less than a given number without counting. (Activity 14, 16; MED 3A: 1, 2, MED 3B: 1)  Utilizing 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 15, 16) - Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 15, 16) - Recognizes and describes equal-sized sets as units within a larger set (doubling or tripling). (Activities 15, 16)	

# Curriculum Correlation

## Number Cluster 3: Grouping and Place Value

### Saskatchewan (continued)

<p>and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>N2.2.4</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>P2.2</b> Demonstrate an understanding of increasing patterns by using manipulatives, diagrams, sounds and actions (numbers to 100).</p>		<p><b>Cross Strand: Patterning and Algebra</b>  <b>Big Idea:</b> Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 15, 16</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activity 14, MED 3A: 1, 2</b>)</li> </ul>
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Master 33a

### Building Numbers Cards

<b>62</b>	<b>43</b>	<b>39</b>
<b>85</b>	<b>70</b>	<b>51</b>
three tens and eight ones	nine tens and three ones	four tens and zero ones
five tens and two ones	six tens and seven ones	seven tens and four ones



Master 33b

### Building Numbers Cards (for Accommodations)

12	23	9
10	17	28
zero tens and eight ones	one ten and four ones	one ten and one one
two tens and six ones	two tens and nine ones	two tens and zero ones

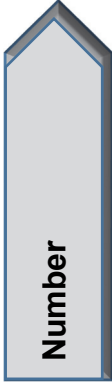


Master 34

# Ten Trains and Ones

The image shows a grid for a math activity. The top row consists of ten vertical trains, each made of ten rectangular cars stacked on top of each other. Below this are five rows of ten single rectangular blocks, each with a small square on top, arranged in a 5x10 grid. The entire grid is enclosed in a dashed border.





# Master 35: Activity 13 Assessment

## Building Numbers

Composing and Decomposing Numbers Behaviours/Strategies	
<p>1. Student decomposes number into units of tens and leftover ones, but has more than 10 cubes in the Ones column.</p>	<p>2. Student decomposes number into units of tens and leftover ones, but does not realize that one ten is the same as 10 ones.</p> <p>"It doesn't have ones. It's a ten."</p>
<p>3. Student decomposes number into units of tens and leftover ones, but confuses the number of tens with the number of cubes.</p> <p>"I have 40 tens."</p>	<p>4. Student decomposes number into units of tens and leftover ones, but is unable to relate the number of tens and leftover ones to the digits of the number (cannot read the number).</p> <p>"4 tens and 3 ones. What number is that?"</p>
Observations/Documentation	
<p>5. Student decomposes number into units of tens and leftover ones, but cannot write the number.</p> <p>"5 tens and 1 one, fifty-one. How do I write it?"</p>	
<p>6. Student decomposes number into units of tens and leftover ones, and counts on with cubes to determine how many more ones are needed to make another ten.</p> <p>"So, 1, 2, 3, 4, 5, 6, 7 more."</p>	<p>7. Student decomposes number into units of tens and leftover ones and counts on with fingers to determine how many more ones are needed to make another ten.</p> <p>"3" 4</p> <p>"7 more are needed."</p>
<p>8. Student successfully writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones.</p>	
Observations/Documentation	



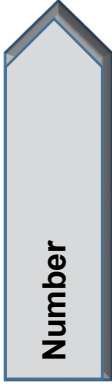
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 36

# Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100





# Master 37: Activity 14 Assessment

## Making a Number Line

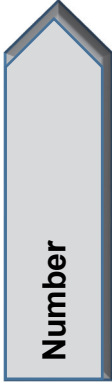
Determining 10 More/Less Behaviours/Strategies																	
<p>1. Student tapes rows together, but struggles to say the number name sequence forward (rows are not in numerical order).</p> <table border="1"><tr><td>7</td><td>8</td><td>9</td><td>10</td><td>31</td><td>32</td><td>33</td><td>34</td></tr></table>	7	8	9	10	31	32	33	34	<p>2. Student correctly says the number name sequence forward (tapes rows together in numerical order), but has difficulty seeing the similarities and differences between a hundred chart and number line.</p> <p>“They don’t look the same to me at all.”</p>	<p>3. Student successfully builds the number line, but does not recognize that numbers of the same colour increase or decrease by 10.</p> <table border="1"><tr><td>8</td><td>18</td><td>28</td><td>38</td><td>48</td><td>58</td><td>68</td></tr></table> <p>“The colours keep repeating.”</p>	8	18	28	38	48	58	68
7	8	9	10	31	32	33	34										
8	18	28	38	48	58	68											
Observations/Documentation																	
<p>4. Student recognizes that numbers of the same colour increase or decrease by 10, but struggles to see patterns and relationships between numbers of the same colour.</p> <table border="1"><tr><td>8</td><td>18</td><td>28</td><td>38</td><td>48</td><td>58</td><td>68</td></tr></table> <p>“I don’t know how all the red numbers are alike.”</p>	8	18	28	38	48	58	68										
8	18	28	38	48	58	68											
Observations/Documentation																	
<p>5. Student determines 10 more/less than a number that is a multiple of ten, but struggles when the start number is not a multiple of ten.</p> <p>“I don’t know ten more than 17.”</p>																	
<p>6. Student successfully builds the number line, recognizes all patterns, and fluently determines 10 more/less than a number without counting.</p>																	
Observations/Documentation																	

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 38


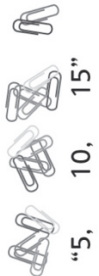
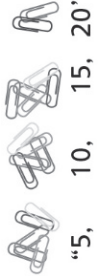
## How Many? Recording Sheet

Group Size	Number of Groups	Number of Leftovers	Total



# Master 39: Activity 15 Assessment

## Grouping to Count

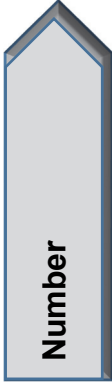
Partitioning into Equal-Sized Units Behaviours/Strategies									
<p>1. Student counts objects by 1s, but struggles to partition objects into equal-sized units (not all units are equal).</p> 	<p>2. Student partitions objects into equal-sized units, but mixes up the skip-counting sequence or does not know the number to skip-count by.</p> <p>“5, 10, 20, 25, 35”</p>								
<p>3. Student partitions into and skip-counts by equal-sized units, but does not include the leftovers in the total.</p>  <p>“5, 10, 15”</p>	<p>4. Student partitions into and skip-counts by equal-sized units, but continues to skip-count by the same number to count the leftovers.</p>  <p>“5, 10, 15, 20”</p>								
Observations/Documentation									
<p>5. Student partitions into and skip-counts by equal-sized units, but does not recognize that the results will be the same when counted in different ways.</p> <p>“There were 17 when I grouped in 5s. Let's see how many when I group in 2s.”</p>	<p>6. Student partitions into and skip-counts by equal-sized units, but does not realize that increasing the number of sets decreases the number of objects in each set.</p> <p>“There should be more groups of 10 than groups of 5 because 10 is bigger.”</p>								
<p>7. Student partitions into and skip-counts by equal-sized units, but does not recognize that the number of groups of 5 is often double the number of groups of 10 (i.e., does not see equal-sized sets as units within a larger set).</p> <table border="1"> <thead> <tr> <th>Groups of 5</th> <th>Groups of 10</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>6</td> </tr> <tr> <td>18</td> <td>9</td> </tr> <tr> <td>10</td> <td>5</td> </tr> </tbody> </table> <p>“I don't see how they are related.”</p>	Groups of 5	Groups of 10	12	6	18	9	10	5	<p>8. Student successfully partitions into and skip-counts by equal-sized units and recognizes relationships among the different unit sizes.</p>
Groups of 5	Groups of 10								
12	6								
18	9								
10	5								
Observations/Documentation									

Master 40

## Consolidation Task Cards

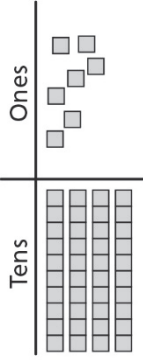
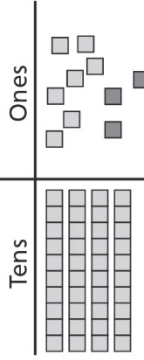
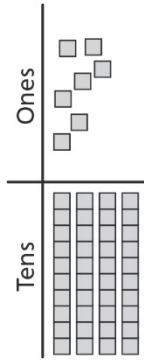


<p>Show the number using tens and ones in two ways.</p>	<p>How many tens are in the number? How many leftover ones?</p>	<p>What is ten more than the number?</p>
<p>What is ten less than the number?</p>	<p>How many more ones are needed to make another ten?</p>	<p>Make equal groups of 2. How many groups of 2 are there? How many leftovers?</p>
<p>Make equal groups of 5. How many groups of 5 are there? How many leftovers?</p>		

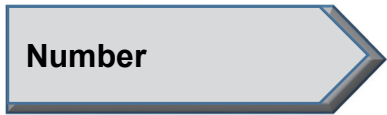




# Master 41a: Activity 16 Assessment

## Grouping and Place Value: Consolidation

Decomposing Numbers Behaviours/Strategies			
<p>1. Student decomposes number into units of tens and leftover ones, but has more than 10 cubes in the Ones column or confuses the number of tens with the number of cubes.</p>  <p>"I have 40 tens."</p>	<p>2. Student decomposes number into units of tens and leftover ones, and uses cubes to determine how many more ones are needed to make another ten.</p>  <p>"8, 9, 10. So, 1, 2, 3 more."</p>	<p>3. Student decomposes number into units of tens and leftover ones, but is unable to determine 10 more/less without counting.</p>	<p>4. Student decomposes number into units of tens and leftover ones, determines how many more ones are needed to make another ten, and finds 10 more/less without counting.</p>  <p>"10 more is 57. 10 less is 37." "3 more ones are needed to make another ten."</p>
Observations/Documentation			
Partitioning into Equal-Sized Units Behaviours/Strategies			
<p>1. Student counts objects by 1s, but struggles to partition objects into equal-sized units (not all units are equal).</p> 	<p>2. Student partitions into and skip-counts by equal-sized units, but continues to skip-count to count the leftovers.</p>  <p>"5, 10, 15, 20, 25"</p>	<p>3. Student partitions into and skip-counts by equal-sized units, but does not recognize relationships among the different unit sizes.</p>	<p>4. Student successfully partitions into and skip-counts by equal-sized units and recognizes relationships among the different unit sizes.</p>
Observations/Documentation			



# Master 41b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can compose and decompose two-digit numbers into units of tens and leftover ones. <b>(Activities 13, 16)</b>									
Student can relate the number of tens and leftover ones to the digits of a number. <b>(Activities 13, 16)</b>									
Student can determine how many more ones are needed to make another ten. <b>(Activities 13, 16)</b>									
Student can determine 10 more or less than a number without counting. <b>(Activities 14, 16)</b>									
Student can partition objects into equal-sized groups to count them in different ways. <b>(Activities 15, 16)</b>									
Student recognizes that no matter how objects are grouped, the total does not change (conservation). <b>(Activity 15, 16)</b>									
Student realizes that, as the number of objects in a group increases, the number of groups decreases. <b>(Activities 15, 16)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Composes and decomposes two-digit numbers into units of tens and leftover ones. <b>(Activities 13, 16)</b>			
Relates the number of tens and leftover ones to the digits of a number. <b>(Activities 13, 16)</b>			
Determines how many more ones are needed to make another ten. <b>(Activities 13, 16)</b>			
Determines 10 more or less than a number without counting. <b>(Activities 14, 16)</b>			
Partitions objects into equal-sized groups to count them in different ways. <b>(Activities 15, 16)</b>			
Recognizes that no matter how objects are grouped, the total does not change (conservation). <b>(Activity 15, 16)</b>			
Realizes that, as the number of objects in a group increases, the number of groups decreases. <b>(Activities 15, 16)</b>			

Strengths:

Next Steps:



# Curriculum Correlation

## Number Cluster 4: Early Fractional Thinking

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Overall Expectation</b> <b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢			
<b>N2.5</b> determine, through investigation using concrete materials, the relationship between the number of fractional parts of a whole and the size of the fractional parts  <b>N2.6</b> regroup fractional parts into wholes, using concrete materials  <b>N2.7</b> compare fractions using concrete materials, without using standard fractional notation	<b>Below Grade: Intervention</b> 7: Exploring Equal Parts 8: Naming Fractional Amounts  <b>On Grade: Teacher Cards</b> 17: Equal Parts (N2.5) 18: Comparing Fractions 1 (N2.5) 19: Comparing Fractions 2 (N2.5, N2.7) 20: Regrouping Fractional Parts (N2.6)  21: Early Fractional Thinking Consolidation (N2.5, N2.6, N2.7)	<b>On Grade:</b> <ul style="list-style-type: none"> <li>The Best Birthday (Activities 17, 18, 19, 21)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>Hockey Homework (Activities 17, 18, 19, 20, 21)</li> </ul>	<b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Partitioning Quantities to Form Fractions <ul style="list-style-type: none"> <li>Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. (Activities 17, 18, 19, 20, 21)</li> <li>Relates the size of parts to the number of equal parts in a whole (e.g., a whole cut into 2 equal pieces has larger parts than a whole cut into 3 equal pieces). (Activities 17, 18, 19, 20, 21)</li> <li>Compares unit fractions to determine relative size. (Activities 19, 21)</li> </ul>

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 43

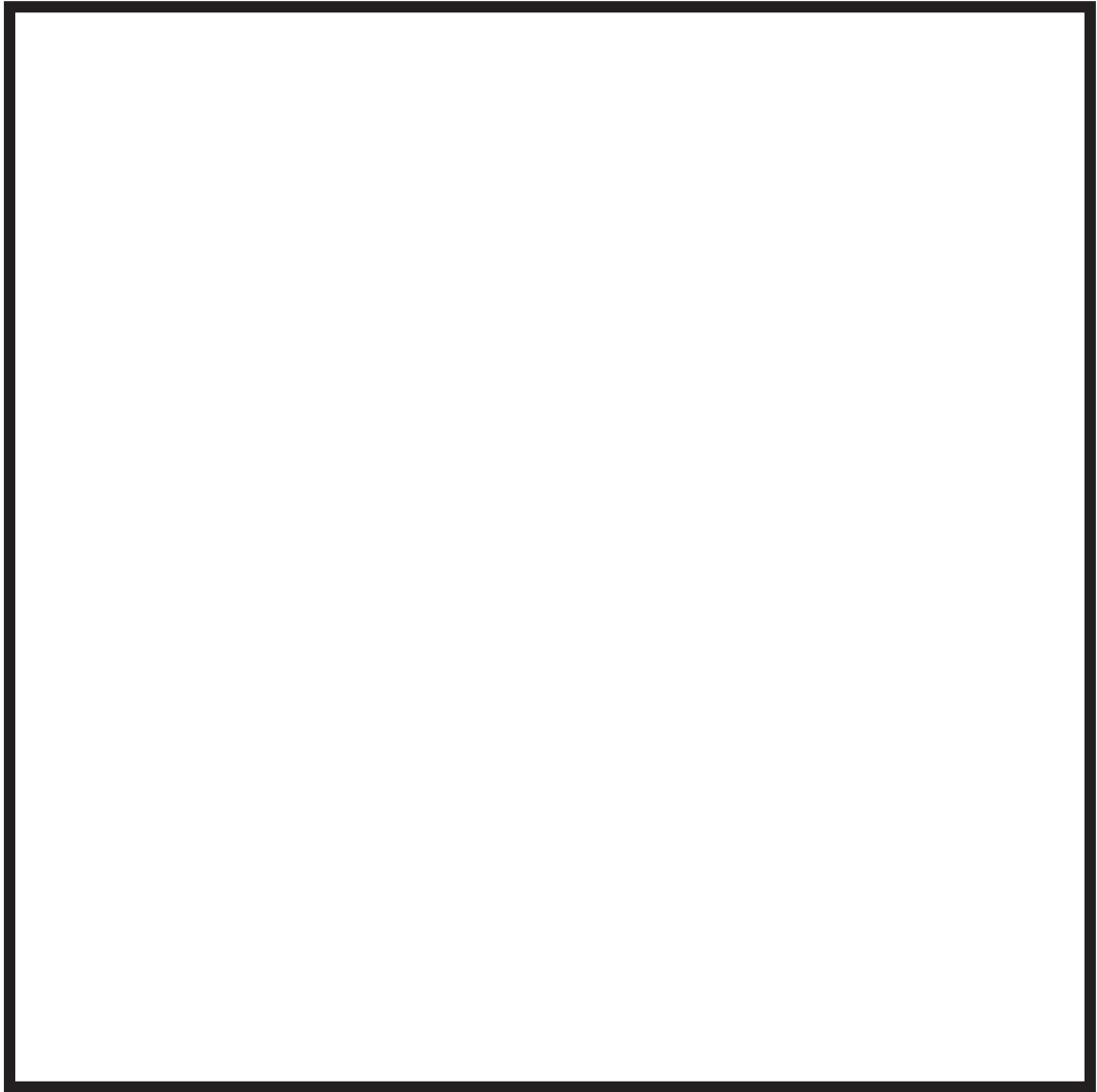
## Rectangles (for *Before*)



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 44**

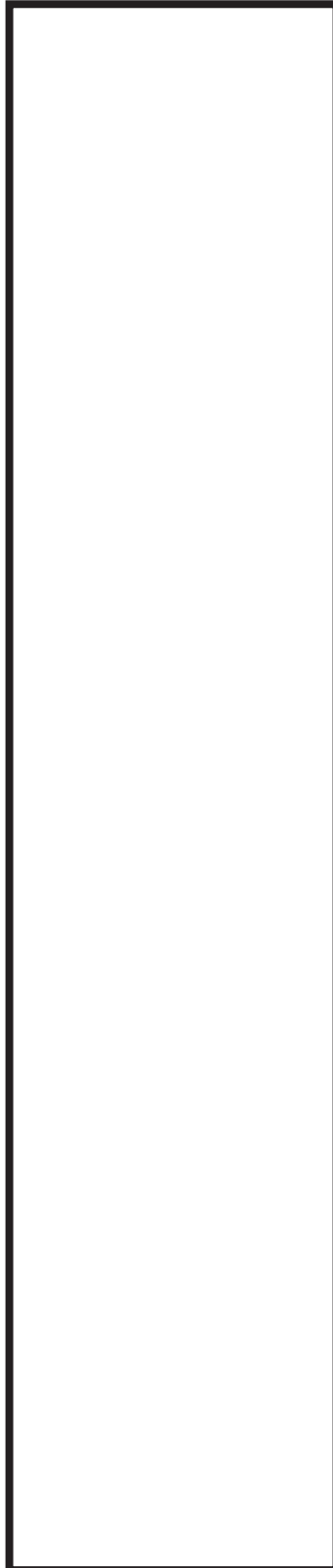
# Paper Square

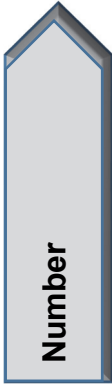


Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 45**




# Paper Strip





# Master 46: Activity 17 Assessment

## Equal Parts

Partitioning Wholes into Equal Parts Behaviours/Strategies	
<p>1. Student takes an item, but struggles to partition it into equal parts, and parts are not equal.</p> 	<p>2. Student partitions wholes into 2 and 4 equal parts, but struggles to cut or fold wholes into other numbers of equal parts (e.g., 3, 6, 8).</p>
<p>3. Student partitions wholes into equal parts, but struggles to prove that they are equal.</p>  <p>“How do I show they are equal?”</p>	<p>3. Student partitions wholes into equal parts, but struggles to prove that they are equal.</p>
Observations/Documentation	
<p>4. Student partitions wholes into equal parts, but struggles to name the unit (does not know fraction words).</p>  <p>“I don't know what each part is.”</p>	<p>5. Student partitions wholes into equal parts and names the unit, but cannot relate the size of parts to the number of equal parts in a whole.</p>
<p>6. Student successfully partitions wholes into equal parts, names the unit, and relates the size of parts to the number of equal parts in a whole.</p>	<p>6. Student successfully partitions wholes into equal parts, names the unit, and relates the size of parts to the number of equal parts in a whole.</p>
Observations/Documentation	

## Bannock Story: My Aunty's Bannock

By Amanda Norton and Jillian Laursen

Bannock is a special type of bread. It is usually flat and can be baked or fried. The best bannock of all is cooked over an open fire. It tastes really good with jam on it.

### Traditional Bannock

- 3 cups all-purpose flour
  - 2 tablespoons baking powder
  - 1 tablespoon sugar
  - $\frac{1}{2}$  teaspoon salt
  - $\frac{1}{2}$  cup oil
  - $\frac{3}{4}$  to 1 cup water
1. Preheat the oven to 400 degrees F (200 degrees C).
  2. In a large bowl, combine the flour, baking powder, salt, and oil. Gradually mix in enough water to make soft but not sticky.
  3. Knead on a lightly floured surface for about 10 minutes.
  4. Bake for 15 to 20 minutes on a greased baking sheet until the bottom is golden when you lift up the bread to take a peek.

I could hardly contain my excitement. My aunty took two large bannock from the oven. She placed one of them on the kitchen table where my brother, sister, and cousin were sitting.

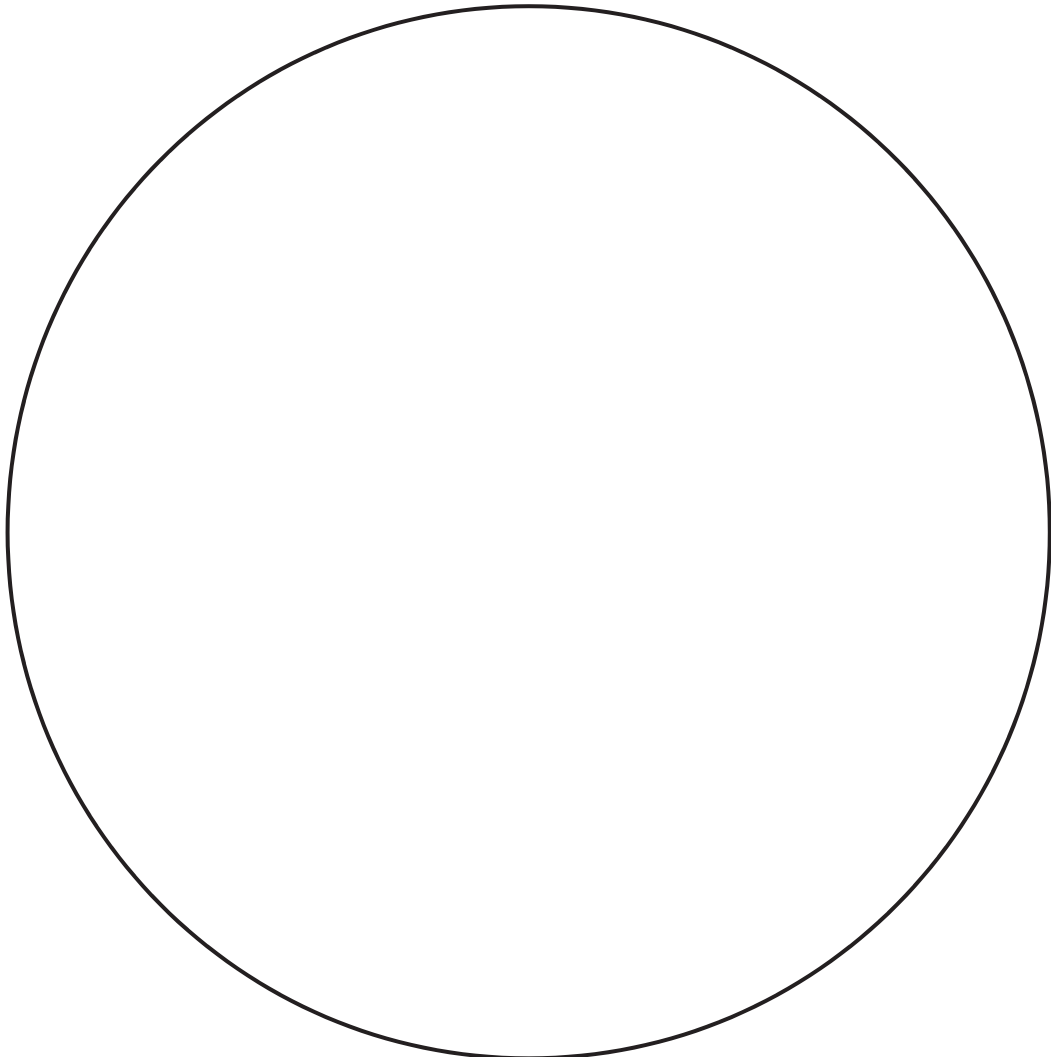
My aunty placed the other bannock on a table in the living room, where my Noohkoom (grandmother) was sipping her tea. My aunty then brought out her homemade wild berry jam. I love my aunty's bannock.

I knew each bannock would be shared equally, so I had to decide which table to sit at. I wanted to get the biggest piece of bannock.

Which table would you sit at?

**Master 48**

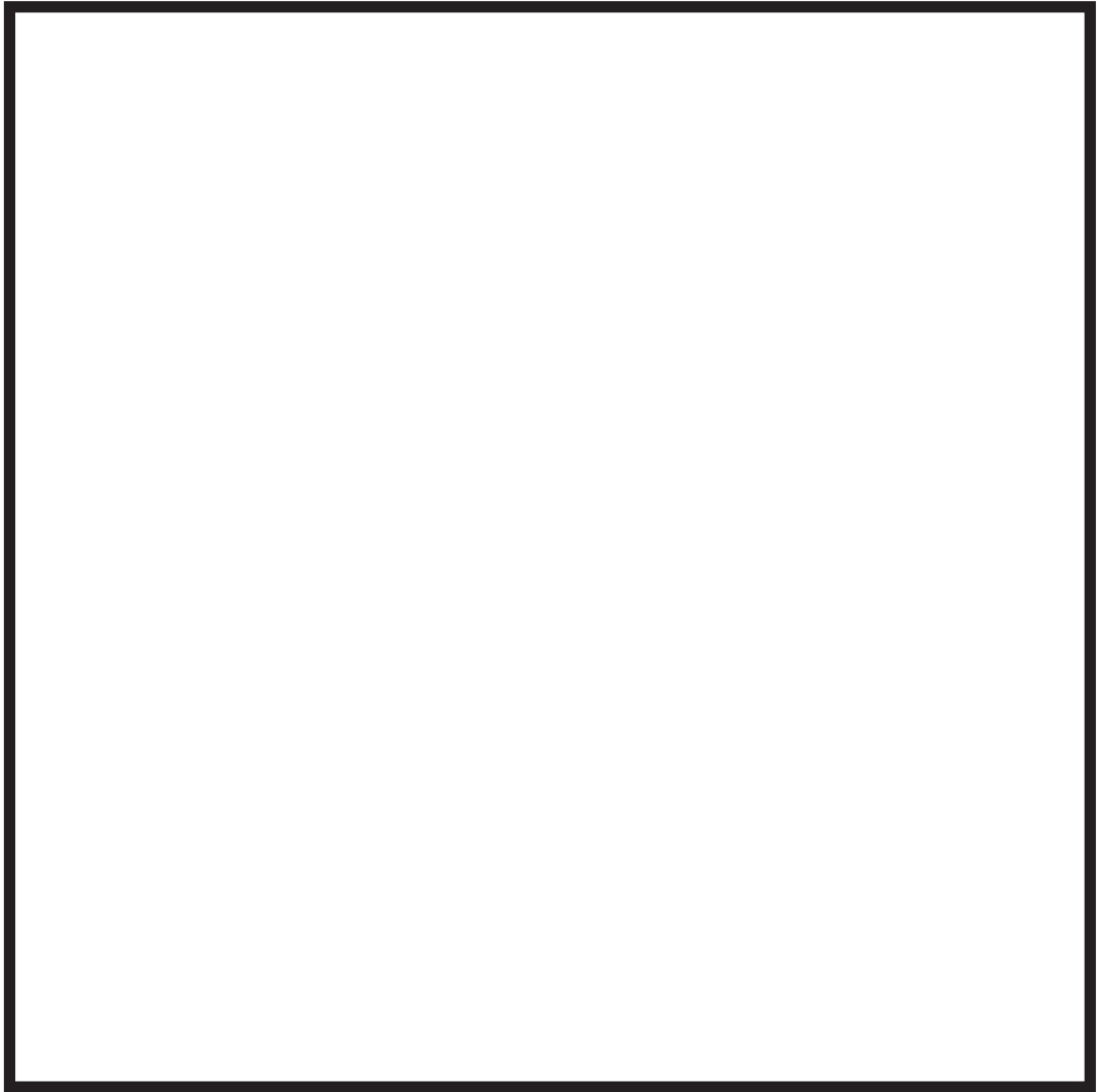
# Circular Bannock



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 44**

# Paper Square





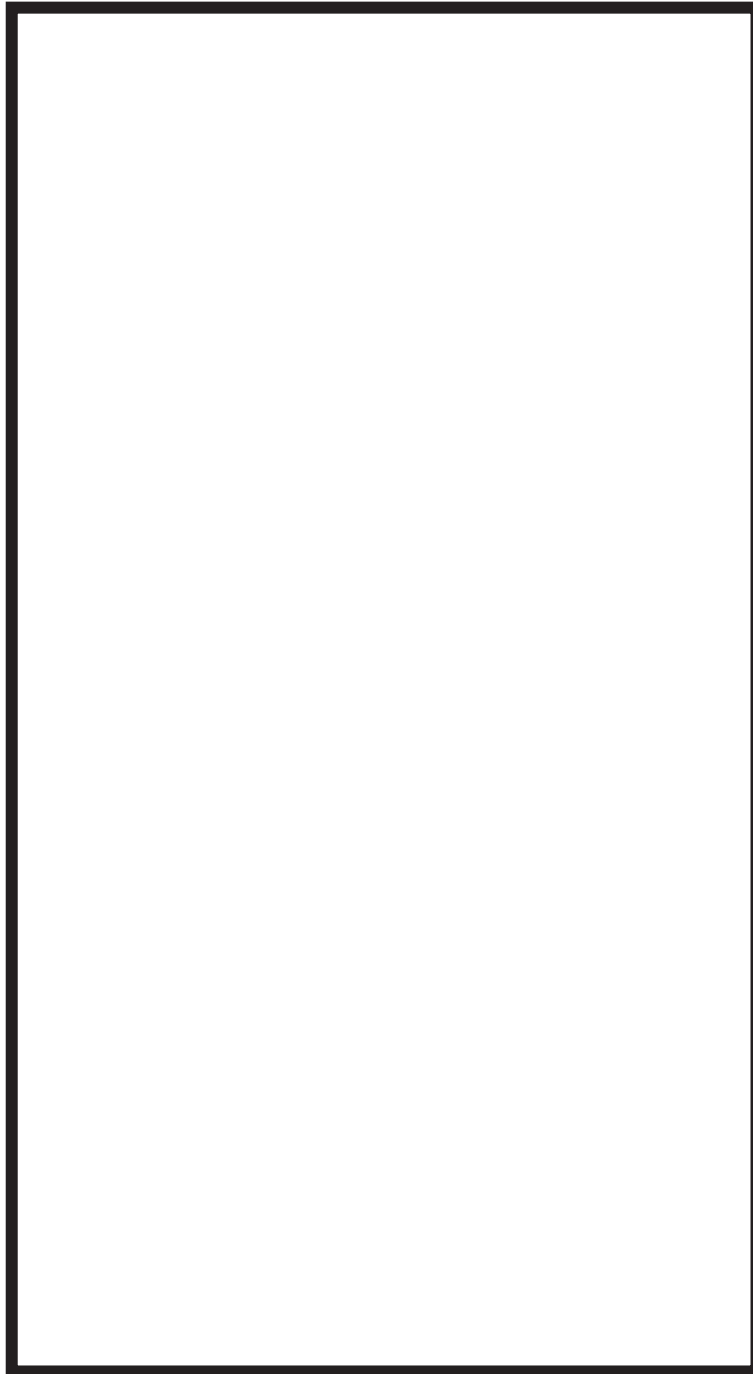
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 50a

# Paper Shapes

**Note:** Give each pair three copies of the same shape. Each shape should be printed on a different colour of paper.

## Rectangle



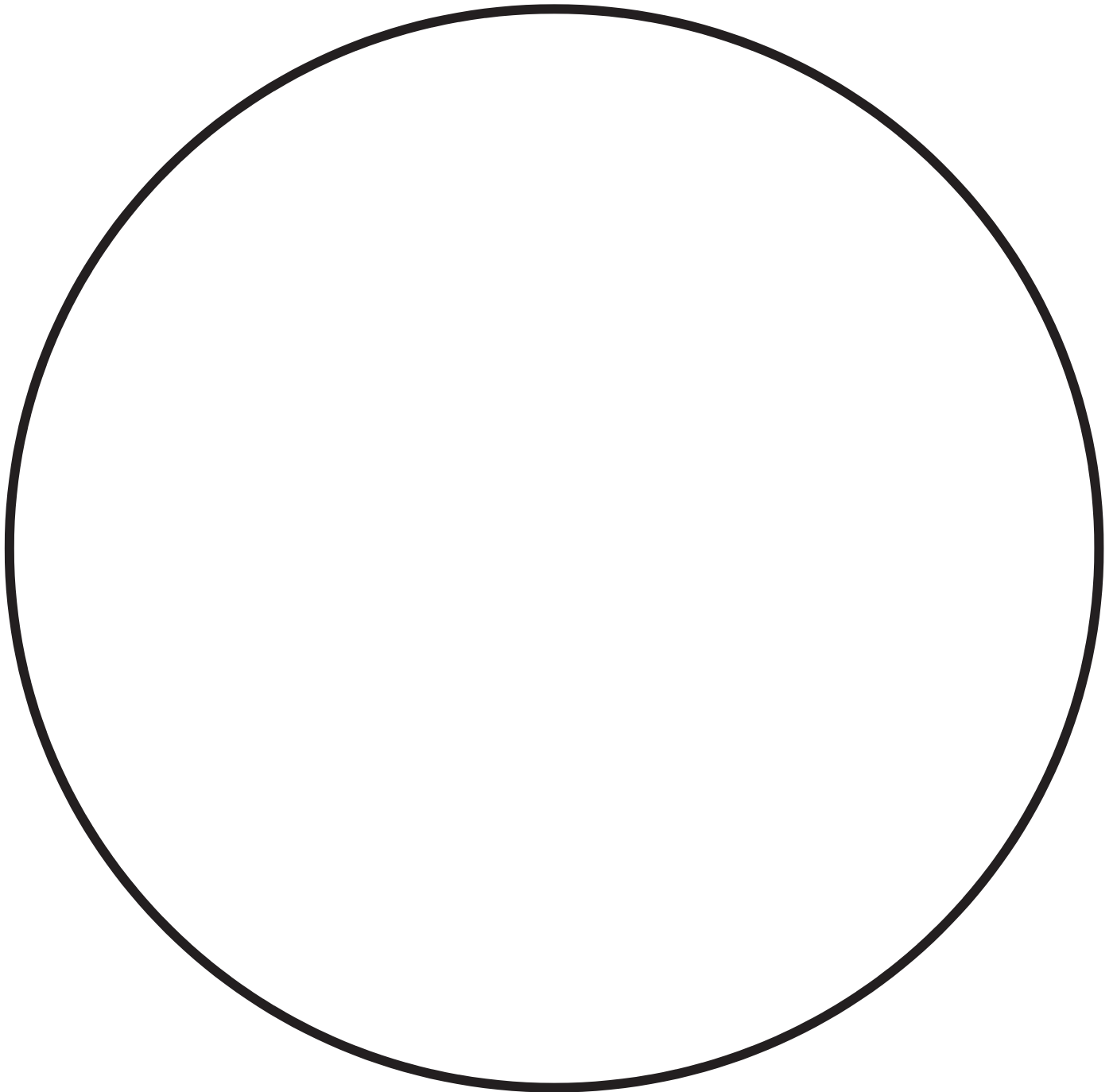
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Master 50b

## Paper Shapes

**Note:** Give each pair three copies of the same shape. Each shape should be printed on a different colour of paper.

### Circle



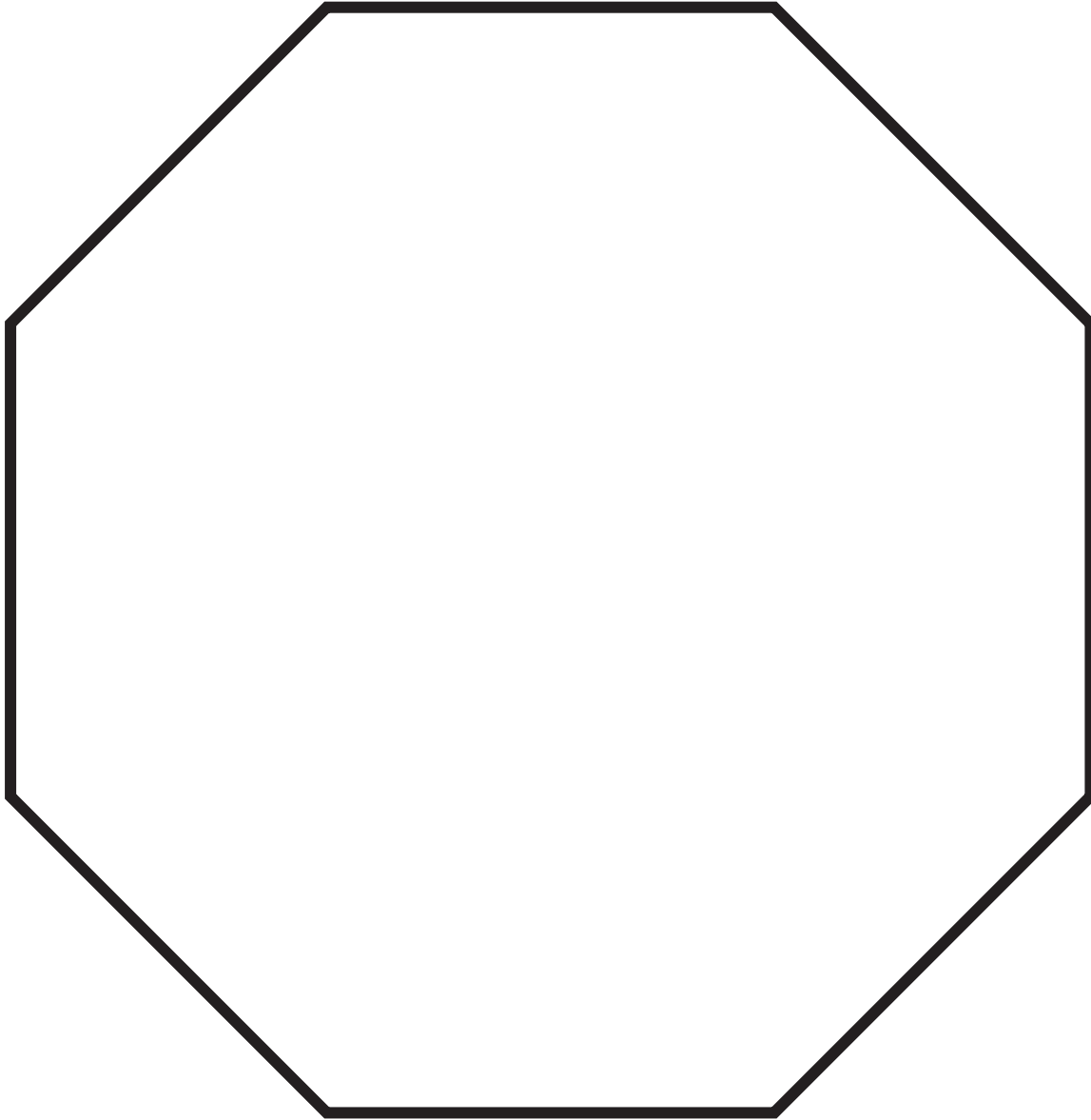
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Master 50c

## Paper Shapes

**Note:** Give each pair three copies of the same shape. Each shape should be printed on a different colour of paper.

### Octagon



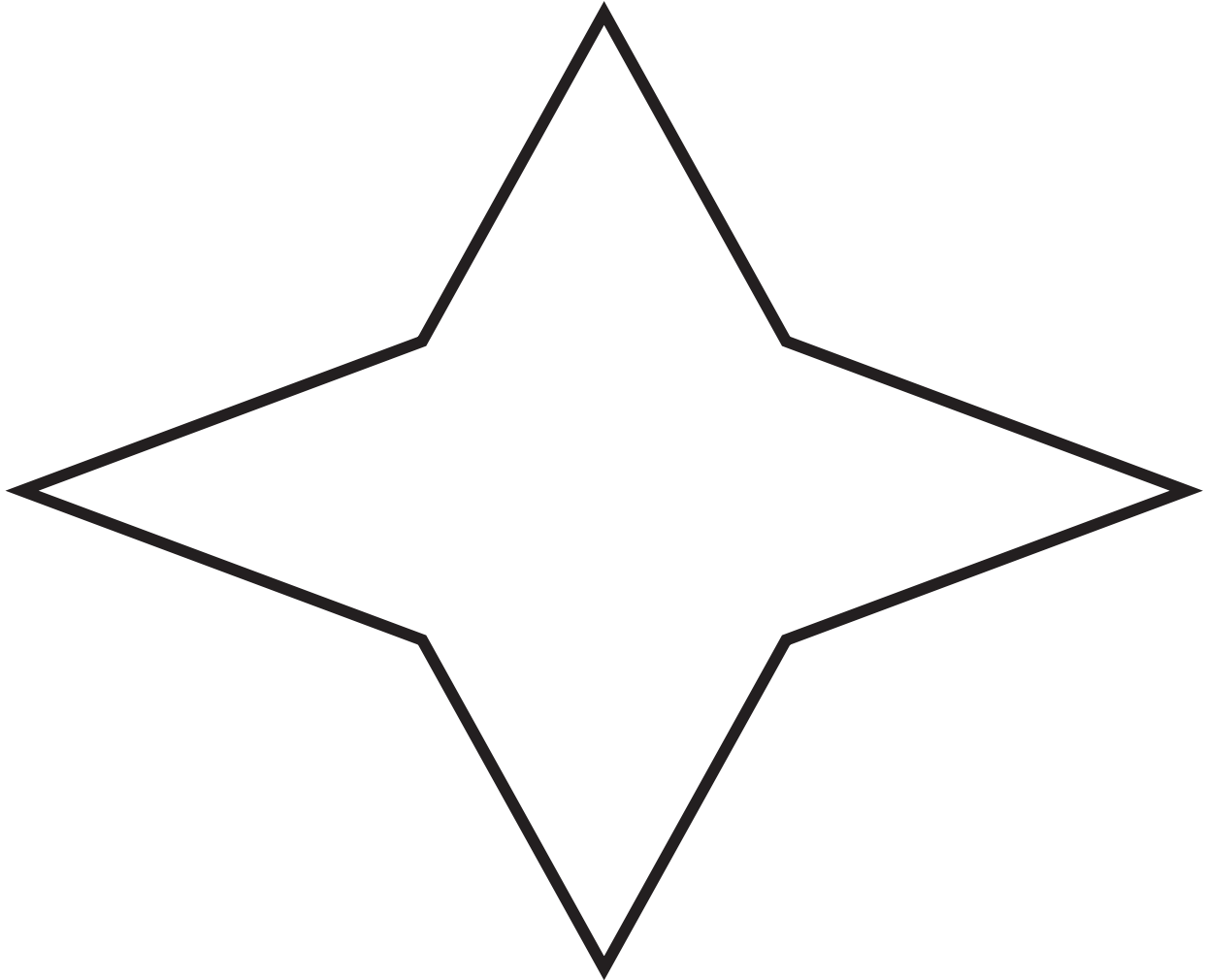
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Master 50d

## Paper Shapes

**Note:** Give each pair three copies of the same shape. Each shape should be printed on a different colour of paper.

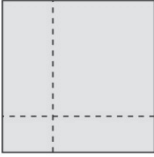
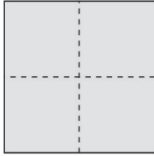

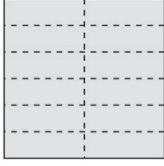
### 8-Sided Shape





# Master 51: Activity 18 Assessment


## Comparing Fractions 1

Comparing Fractions of a Whole Behaviours/Strategies			
<p>1. Student takes a square, but struggles to partition it into equal parts, and parts are not equal.</p> 	<p>2. Student partitions wholes into 2 and 4 equal parts, but struggles to partition whole into 8 equal parts.</p>  <p>“How do I make 8 equal parts?”</p>	<p>3. Student partitions wholes into equal parts, but struggles to prove that they are equal.</p>  <p>“How do I show they are equal?”</p>	<p>4. Student partitions wholes into equal parts, but struggles to name the unit (does not know fraction words).</p>  <p>“I don't know what each part is.”</p>
Observations/Documentation			
<p>5. Student partitions wholes into equal parts and names the unit, but does not realize that dividing a whole into more equal parts produces smaller parts.</p>	<p>6. Student partitions wholes into equal parts and names the unit, but does not realize that dividing a whole into smaller parts produces more parts.</p>	<p>7. Student partitions wholes into equal parts and names the unit, but struggles to use math language to compare parts.</p>	<p>8. Student successfully partitions wholes into equal parts, names the unit, and relates the size of the parts to the number of equal parts in a whole.</p>
Observations/Documentation			

**Master 52**

# Coloured Rods

White	White	White	White	White	White	White	White
Red	Red	Red	Red	Red	Red	Red	Red
Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple
Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green
Black	Black	Black	Black	Black	Black	Black	Black
Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
White	White	White	White	White	White	White	White
Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

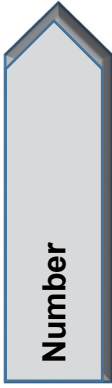


Master 53

## Brown Rod Questions






Which is bigger: two fourths or three eighths?	Which is bigger: one half or three fourths?
Which is bigger: one half or five eighths?	Which is bigger: one half or two fourths?
Which is bigger: one half or three eighths?	Which is bigger: three fourths or five eighths?
Which is bigger: one fourth or two eighths?	Which is bigger: three fourths or one whole?





# Master 54: Activity 19 Assessment

## Comparing Fractions 2

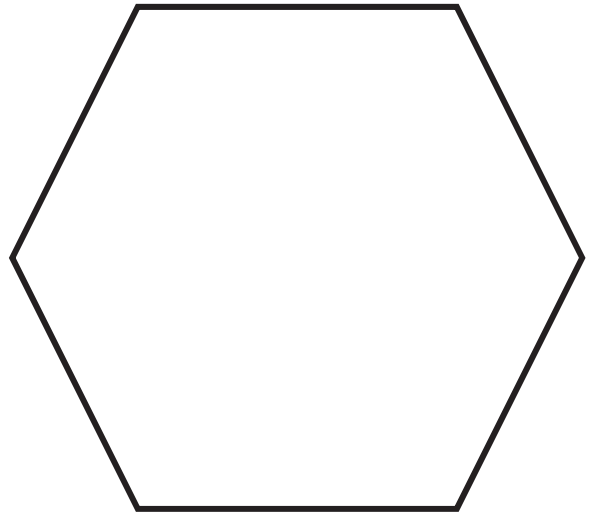
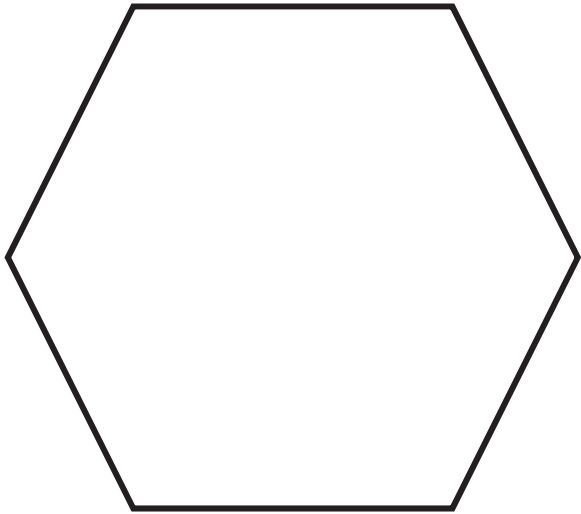
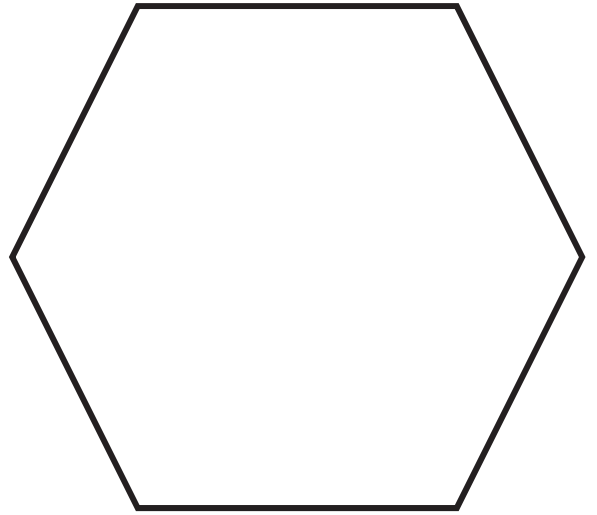
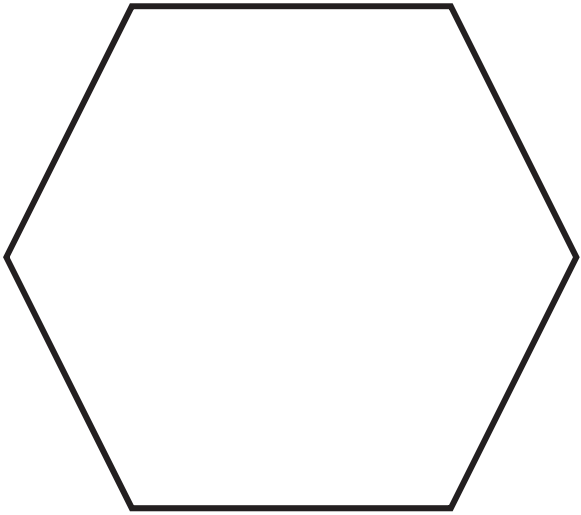
Comparing Fractions of a Whole Behaviours/Strategies		
<p>1. Student takes a rod, but struggles to partition it into equal parts, and parts are not equal.</p> 	<p>2. Student takes a rod, but struggles to partition it into equal parts, and parts do not cover whole exactly.</p> 	<p>3. Student partitions wholes into equal parts, but struggles to name the unit (does not know fraction words).</p>  <p>“I don’t know what each part is.”</p>
Observations/Documentation		
<p>4. Student partitions wholes into equal parts and names the unit, but does not realize that partitioning a whole into more equal parts produces smaller parts.</p>  <p>“I don’t notice anything.”</p>	<p>5. Student partitions wholes into equal parts and names the unit, but struggles to compare with unit fractions.</p>  <p>“I don’t know which is bigger: two fourths or three eighths.”</p>	<p>6. Student successfully partitions wholes into equal parts, names the unit, relates the size of parts to the number of equal parts in a whole, and compares with unit fractions.</p>
Observations/Documentation		



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 55**

# Hexagons



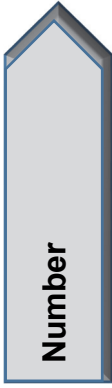
Name \_\_\_\_\_ Date \_\_\_\_\_

Master 56

## Regrouping Recording Sheet







**Whole:** Yellow Block

	<b>Name of Part</b>	<b>Number in Handful</b>	<b>Number of Wholes</b>	<b>Amount Left Over</b>
<b>Red block</b>				
<b>Blue block</b>				
<b>Green block</b>				



# Master 57: Activity 20 Assessment

## Regrouping Fractional Parts

Regrouping Fractional Parts Behaviours/Strategies		
<p>1. Student takes a block, but struggles to partition it into equal parts, and parts do not cover whole exactly.</p> 	<p>2. Student partitions wholes into equal parts, but struggles to name the unit (does not know fraction words).</p>  <p>“I don’t know what each part is.”</p>	<p>3. Student partitions wholes into equal parts, but struggles to combine equal parts to make wholes as he or she does not know how many parts make a whole.</p>  <p>“I don’t know how many parts to use.”</p>
Observations/Documentation		
<p>4. Student partitions wholes into equal parts, but struggles to combine equal parts to make wholes.</p> 	<p>5. Student combines equal parts to make wholes, but struggles to name the wholes and leftover parts.</p>  <p>“I made two and have two left over.”</p>	<p>6. Student successfully partitions wholes into equal parts, names the unit, and combines equal parts to make wholes.</p>  <p>“I made two wholes and have two thirds left over.”</p>
Observations/Documentation		

Master 58a

### Consolidation Cards

Use the same whole. Which is bigger: one half or one fourth?	Use the same whole. Which is bigger: one half or two eighths?
Use the same whole. Which is bigger: one fourth or one eighth?	Use the same whole. Which is smaller: one half or one eighth?
Use the same whole. Which is bigger: one half or two sixths?	Use the same whole. Which is smaller: three sixths or one third?
Use the same whole. Which is bigger: two thirds or one half?	Use the same whole. Which is smaller: three fourths or one half?

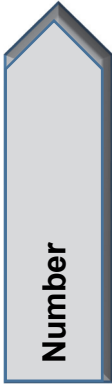


Master 58b

## Consolidation Cards






<p>Use 5 halves. How many wholes can you make?</p>	<p>Use 7 fourths. How many wholes can you make?</p>
<p>Use 8 thirds. How many wholes can you make?</p>	<p>Use 10 sixths. How many wholes can you make?</p>
<p>Use 9 halves. How many wholes can you make?</p>	<p>Use 8 fourths. How many wholes can you make?</p>

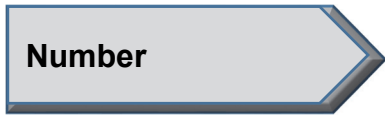




# Master 59a: Activity 21 Assessment

## Early Fractional Thinking: Consolidation

Comparing and Regrouping Fractional Parts Behaviours/Strategies			
1. Student turns over a card, but struggles to partition wholes into equal parts and does not know how many parts are in the whole.  "How many parts do I need to show sixths?"	2. Student turns over a card, but struggles to partition wholes into equal parts and chooses an inappropriate whole (e.g., uses Pattern Blocks to show fourths).	3. Student chooses a whole, but struggles to partition it into equal parts, and parts are not all equal or they do not cover the whole exactly. 	4. Student partitions wholes into equal parts, but struggles to compare with unit fractions.  "I don't know which is bigger: two fourths or three eighths."
Observations/Documentation			
5. Student partitions wholes into equal parts, but compares parts of different wholes. 	6. Student partitions wholes into equal parts, but struggles to combine equal parts to make wholes.  "I don't know how many parts to use."	7. Student combines equal parts to make wholes, but struggles to name the wholes and leftover parts.  "I made two and have two left over."	8. Student successfully partitions wholes into equal parts, compares with unit fractions, and combines equal parts to make wholes.
Observations/Documentation			



# Master 59b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can partition a whole into equal parts and name the unit fraction. <b>(Activities 17, 18, 19, 20, 21)</b>									
Student realizes that the number of equal parts names the part. <b>(Activities 17, 18, 19, 20, 21)</b>									
Student realizes that dividing a whole into more equal parts produces smaller parts. <b>(Activities 17, 18, 19)</b>									
Student realizes that dividing a whole into smaller parts produces more parts. <b>(Activities 17, 18, 19)</b>									
Student can compare fractional parts to determine which is bigger/smaller. <b>(Activities 18, 19, 21)</b>									
Student can regroup fractional parts into wholes. <b>(Activities 20, 21)</b>									
Student uses math language when comparing parts and naming wholes and leftover parts. <b>(Activities 18, 19, 20, 21)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Partitions a whole into equal parts and names the unit fraction. <b>(Activities 17, 18, 19, 20, 21)</b>			
Realizes that the number of equal parts names the part. <b>(Activities 17, 18, 19, 20, 21)</b>			
Realizes that dividing a whole into more equal parts produces smaller parts. <b>(Activities 17, 18, 19)</b>			
Realizes that dividing a whole into smaller parts produces more parts. <b>(Activities 17, 18, 19)</b>			
Compares fractional parts to determine which is bigger/smaller. <b>(Activities 18, 19, 21)</b>			
Regroups fractional parts into wholes. <b>(Activities 20, 21)</b>			
Uses math language when comparing parts and naming wholes and leftover parts. <b>(Activities 18, 19, 20, 21)</b>			

Strengths:

Next Steps:



# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢</p> <p><b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p>			
<p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.4</b> determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer</p> <p><b>N2.9</b> 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</p> <p><b>N2.11</b> locate whole numbers to 100 on a number line and on a partial number line</p>	<p><b>Below Grade: Intervention</b></p> <p>9: Making 20</p> <p>10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b></p> <p>22: Benchmarks on a Number Line (N2.4, N2.11)</p> <p>23: Decomposing 50 (N2.3)</p> <p>24: Jumping on the Number Line (N2.3, N2.9, N2.11)</p> <p>25: Number Relationships 2 Consolidation (N2.3, N2.4, N2.9, N2.11)</p> <p><b>On Grade: Math Every Day Card 5A:</b></p> <p>Which Ten is Nearer? (N2.4) Building Numbers (N2.3)</p> <p><b>Card 5B:</b></p> <p>How Many Ways? (N2.3)</p> <p>What's the Unknown Part? (N2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 23, 25)</li> <li>• Family Fun Day (Activity 23)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• A Class-full of Projects (Activities 23, 25)</li> <li>• The Money Jar (Activities 24, 25)</li> <li>• Family Fun Day (Activity 25)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Finding Buster (Activities 23, 25)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude and Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p>Utilizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>- Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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 24, 25)</li> </ul>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Numbers to 100 represent quantities that can be decomposed into 10s and 1s.</p>			
<p>Number concepts to 100 Counting</p> <ul style="list-style-type: none"> <li><b>2.1</b> skip-counting by 2, 5, and 10:               <ul style="list-style-type: none"> <li><b>2.1a</b> using different starting points</li> <li><b>2.1b</b> increasing and decreasing (forward and backward)</li> </ul> </li> <li><b>2.2</b> Quantities to 100 can be arranged and recognized               <ul style="list-style-type: none"> <li><b>2.2a</b> comparing and ordering numbers to 100</li> <li><b>2.2b</b> benchmarks of 25, 50, and 100</li> </ul> </li> <li><b>2.7</b> decomposing numbers to 100</li> </ul> <p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li><b>2.11</b> using an open number line, hundred chart, ten-frames</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>9: Making 20 10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b></p> <p>22: Benchmarks on a Number Line (<b>2.2a, 2.2b</b>) 23: Decomposing 50 (<b>N2.7</b>) 24: Jumping on the Number Line (<b>2.1, 2.1a, 2.1b, 2.7, 2.11</b>) 25: Number Relationships 2 Consolidation (<b>2.1, 2.1a, 2.1b, 2.7, 2.11</b>)</p> <p><b>On Grade: Math Every Day Card 5A:</b> Which Ten is Nearer? (<b>2.2a, 2.2b</b>) Building Numbers (<b>2.7</b>)</p> <p><b>Card 5B:</b> How Many Ways? (<b>2.7</b>) What's the Unknown Part? (<b>2.7</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Padding the River (<b>Activities 23, 25</b>)</li> <li>Family Fun Day (<b>Activity 23</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>A Class-full of Projects (<b>Activities 23, 25</b>)</li> <li>The Money Jar (<b>Activities 24, 25</b>)</li> <li>Family Fun Day (<b>Activity 25</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Finding Buster (<b>Activities 23, 25</b>)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude)</p> <ul style="list-style-type: none"> <li>Compares and orders quantities and written numbers using benchmarks. (<b>Activities 22, 25, MED 5A: 1</b>)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (<b>Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2</b>)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (<b>Activities 24, 25</b>)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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). (<b>Activities 24, 25</b>)</li> </ul>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>General Outcome</b> Develop number sense			
<p><b>N1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li><b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 9: Making 20 10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b> 22: Benchmarks on a Number Line 23: Decomposing 50 (2N4) 24: Jumping on the Number Line (2N1.1, 2N4) 25: Number Relationships 2 Consolidation (2N1.1, 2N4)</p> <p><b>On Grade: Math Every Day Card 5A:</b> Which Ten is Nearer? (2N5) Building Numbers (2N4) <b>Card 5B:</b> How Many Ways? (2N4) What's the Unknown Part? (2N4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Padding the River (Activities 23, 25)</li> <li>Family Fun Day (Activity 23)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>A Class-full of Projects (Activities 23, 25)</li> <li>The Money Jar (Activities 24, 25)</li> <li>Family Fun Day (Activity 25)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Finding Buster (Activities 23, 25)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</p> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts - Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25) 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 24, 25)</p>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>2.N.1</b> Say the number sequence from 0 to 100 by</p> <ul style="list-style-type: none"> <li><b>2.N.1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> </ul> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially, and symbolically.</p> <p><b>2.N.5</b> Compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 9: Making 20 10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b> 22: Benchmarks on a Number Line 23: Decomposing 50 (2.N.4) 24: Jumping on the Number Line (2.N.1.1, 2.N.4) 25: Number Relationships 2 Consolidation (2.N.1.1, 2.N.4)</p> <p><b>On Grade: Math Every Day</b> <b>Card 5A:</b> Which Ten is Nearer? (2.N.5) Building Numbers (2.N.4) <b>Card 5B:</b> How Many Ways? (2.N.4) What's the Unknown Part? (2.N.4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Padding the River (Activities 23, 25)</li> <li>Family Fun Day (Activity 23)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>A Class-full of Projects (Activities 23, 25)</li> <li>The Money Jar (Activities 24, 25)</li> <li>Family Fun Day (Activity 25)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Finding Buster (Activities 23, 25)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude)</p> <ul style="list-style-type: none"> <li>Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>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 24, 25)</li> </ul>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p> <p><b>2N01</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li>• <b>2N01.1</b> 1s, forward and backward, starting from any point to 200</li> <li>• <b>2N01.2</b> 2s, forward and backward, starting from any point to 100</li> <li>• <b>2N01.3</b> 5s and 10s, forward and backward, using starting points that are multiples of 5 and 10 respectively to 100</li> </ul> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N05</b> Students will be expected to compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b> 9: Making 20 10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b> 22: Benchmarks on a Number Line 23: Decomposing 50 (2N04) 24: Jumping on the Number Line (2N01.1, 2N01.2, 2N01.3, 2N04) 25: Number Relationships 2 Consolidation (2N01.1, 2N01.2, 2N01.3, 2N04)</p> <p><b>On Grade: Math Every Day Card 5A:</b> Which Ten is Nearer? (2N05) Building Numbers (2N04) <b>Card 5B:</b> How Many Ways? (2N04) What's the Unknown Part? (2N04)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 23, 25)</li> <li>• Family Fun Day (Activity 23)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• A Class-full of Projects (Activities 23, 25)</li> <li>• The Money Jar (Activities 24, 25)</li> <li>• Family Fun Day (Activity 25)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Finding Buster (Activities 23, 25)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</p> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Utilizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts - Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25) Utilizing 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 24, 25)</p>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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
<b>General Outcome</b> Develop number sense			
<p><b>2N1</b> Say the number sequence 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p>	<p><b>Below Grade: Intervention</b></p> <p>9: Making 20 10: The Other Part of 10</p> <p><b>On Grade: Teacher Cards</b></p> <p>22: Benchmarks on a Number Line 23: Decomposing 50 (2N4) 24: Jumping on the Number Line (2N1.1, 2N4) 25: Number Relationships 2 Consolidation (2N1.1, 2N4)</p> <p><b>On Grade: Math Every Day Card 5A:</b> Which Ten is Nearer? (2N5) Building Numbers (2N4) <b>Card 5B:</b> How Many Ways? (2N4) What's the Unknown Part? (2N4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 23, 25)</li> <li>• Family Fun Day (Activity 23)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• A Class-full of Projects (Activities 23, 25)</li> <li>• The Money Jar (Activities 24, 25)</li> <li>• Family Fun Day (Activity 25)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Finding Buster (Activities 23, 25)</li> </ul>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude)</p> <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1)</li> </ul> <p>Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Unitizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts</p> <ul style="list-style-type: none"> <li>- Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25)</li> </ul> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> <li>- 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 24, 25)</li> </ul>

# Curriculum Correlation

## Number Cluster 5: Number Relationships 2

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

### Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour			
<b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by: <ul style="list-style-type: none"> <li>• <b>N2.1.1</b> representing (including place value)</li> <li>• <b>N2.1.2</b> describing</li> <li>• <b>N2.1.3</b> skip counting</li> <li>• <b>N2.1.4</b> differentiating between odd and even numbers</li> <li>• <b>N2.1.5</b> estimating with referents</li> <li>• <b>N2.1.6</b> comparing two numbers</li> <li>• <b>N2.1.7</b> ordering three or more numbers</li> </ul>	<b>Below Grade: Intervention</b> 9: Making 20 10: The Other Part of 10  <b>On Grade: Teacher Cards</b> 22: Benchmarks on a Number Line 23: Decomposing 50 (N2.1.1, N2.1.2) 24: Jumping on the Number Line (N2.1.1, N2.1.2, N2.1.3) 25: Number Relationships 2 Consolidation (N2.1.1, N2.1.2, N2.1.3)  <b>On Grade: Math Every Day Card 5A:</b> Which Ten is Nearer? (N2.1.6) Building Numbers (N2.1.1, N2.1.2)  <b>Card 5B:</b> How Many Ways? (N2.1.1, N2.1.2) What's the Unknown Part? (N2.1.1, N2.1.2)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• Paddling the River (Activities 23, 25)</li> <li>• Family Fun Day (Activity 23)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• A Class-full of Projects (Activities 23, 25)</li> <li>• The Money Jar (Activities 24, 25)</li> <li>• Family Fun Day (Activity 25)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• Finding Buster (Activities 23, 25)</li> </ul>	<b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude and Magnitude) <ul style="list-style-type: none"> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 22, 25, MED 5A: 1)</li> </ul> Decomposing Wholes into Parts and Composing Wholes from Parts <ul style="list-style-type: none"> <li>- Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 23, 24, 25, MED 5A: 2, MED 5B: 1, 2)</li> </ul> <b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> Utilizing Quantities into Ones, Tens, and Hundreds Place-Value Concepts <ul style="list-style-type: none"> <li>- Writes, reads, composes, and decomposes two-digit numbers as units of tens and leftover ones. (Activities 24, 25)</li> </ul> Utilizing Quantities and Comparing Units to the Whole <ul style="list-style-type: none"> <li>- 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 24, 25)</li> </ul>

Master 61a

### Closer To Cards

<b>27</b> Closer to 20 or 30?	<b>18</b> Closer to 10 or 20?	<b>34</b> Closer to 30 or 40?
<b>32</b> Closer to 30 or 40?	<b>29</b> Closer to 20 or 30?	<b>13</b> Closer to 10 or 20?
<b>37</b> Closer to 30 or 40?	<b>16</b> Closer to 10 or 20?	<b>21</b> Closer to 20 or 30?
<b>35</b> Closer to 30 or 40?	<b>14</b> Closer to 10 or 20?	<b>15</b> Closer to 10 or 20?





Master 61b

## Closer To Cards (for Accommodations)

**17**

Closer to 10 or 20?

**18**

Closer to 10 or 20?

**14**

Closer to 10 or 20?

**12**

Closer to 10 or 20?

**19**

Closer to 10 or 20?

**13**

Closer to 10 or 20?

**7**

Closer to 0 or 10?

**6**

Closer to 0 or 10?

**2**

Closer to 0 or 10?

**5**

Closer to 0 or 10?

**4**

Closer to 0 or 10?

**8**

Closer to 0 or 10?



Master 61c

## Closer To Cards (for Extension)

**127**

Closer to 120 or  
130?

**188**

Closer to 180 or  
190?

**134**

Closer to 130 or  
140?

**97**

Closer to 90 or  
100?

**105**

Closer to 100 or  
110?

**149**

Closer to 140 or  
150?

**152**

Closer to 150 or  
160?

**165**

Closer to 160 or  
170?

**177**

Closer to 170 or  
180?

**199**

Closer to 190 or  
200?

**145**

Closer to 140 or  
150?

**113**

Closer to 100 or  
120?

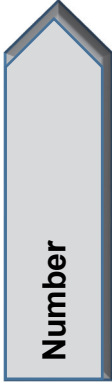


Master 61d

## Closer To Cards (for Combined Grades Extension)





<b>59</b> Closer to 50 or 60?	<b>78</b> Closer to 70 or 80?	<b>44</b> Closer to 40 or 50?
<b>92</b> Closer to 90 or 100?	<b>39</b> Closer to 30 or 40?	<b>83</b> Closer to 80 or 90?
<b>77</b> Closer to 70 or 80?	<b>56</b> Closer to 50 or 60?	<b>61</b> Closer to 60 or 70?
<b>95</b> Closer to 90 or 100?	<b>64</b> Closer to 60 or 70?	<b>85</b> Closer to 80 or 90?

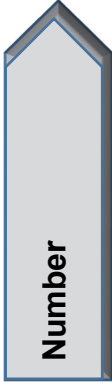




# Master 62: Activity 22 Assessment

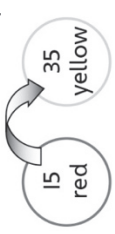
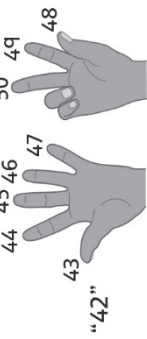
## Benchmarks on a Number Line

Comparing Numbers Using Benchmarks on a Number Line Behaviours/Strategies		
<p>1. Student takes a paper strip, but is unable to make benchmark folds (e.g., folds the paper randomly or struggles to fold the strip in half).</p> 	<p>2. Student makes benchmark folds, but struggles to label folds with benchmark numbers.</p> 	<p>3. Student correctly shows benchmark numbers on the number line, but cannot compare numbers to identify the closer ten.</p>  <p>"14 is closer to 20."</p>
Observations/Documentation		
<p>4. Student successfully compares most numbers using benchmarks, but struggles when the ones digit of the number is 5.</p> <p>"I don't know what number 15 is closer to."</p>	<p>5. Student successfully compares numbers using benchmarks, but struggles to write the number in its approximate location on the number line.</p>  <p>"27 is closer to 30."</p>	<p>6. Student successfully compares numbers using benchmarks and writes numbers in their approximate locations on the number line.</p>
Observations/Documentation		



# Master 63: Activity 23 Assessment

## Decomposing 50

Decomposing 50 Behaviours/Strategies											
<p>1. Student decomposes 50 into two parts, but does not know that rearranging the counters does not change the quantity (i.e., conservation of number).</p>	<p>2. Student decomposes 50 into two parts, but arranges counters randomly or starts again to find different ways. "I'll put the counters back in the bin and start again."</p>	<p>3. Student uses patterns to find different ways to decompose 50 into two parts (flips counters and moves them to the other part).</p> 	<p>4. Student uses patterns to systematically find different ways to decompose 50 into two parts (flips one counter at a time and moves it to the other part).</p>								
Observations/Documentation											
Finding the Unknown Part Behaviours/Strategies											
<p>1. Student writes numbers on the mat, but mixes up the whole and the part, or adds the whole and the known part to find the unknown part.</p> <table border="1"> <tr> <td>Whole</td> <td>50</td> </tr> <tr> <td>Part</td> <td>10</td> </tr> </table> <p>"The other part is 60."</p>	Whole	50	Part	10	<p>2. To find a part given the whole and another part, student guesses and then uses counters to check.</p> <table border="1"> <tr> <td>Whole</td> <td>50</td> </tr> <tr> <td>Part</td> <td>35</td> </tr> </table> <p>"Guess 25" "35 counters and 25 counters is 60 counters: too many."</p>	Whole	50	Part	35	<p>3. To find a part given the whole and another part, student counts on from the part or back from the whole with counters or fingers.</p>  <p>"42" "The other part is 8."</p>	<p>4. Student uses efficient counting strategies, number relationships, or mental strategies to find a part given the whole and another part.</p>
Whole	50										
Part	10										
Whole	50										
Part	35										
Observations/Documentation											

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 64a

# Target Number Cards

37	29	32
40	26	45
17	23	41
25	44	60



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 64b

## Target Number Cards (for Accommodations)

6	9	11
3	10	5
18	15	12
14	7	1



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 64c

## Target Number Cards (for Combined Grades Extension)

86

99

71

120

108

75

150

97

82

103

64

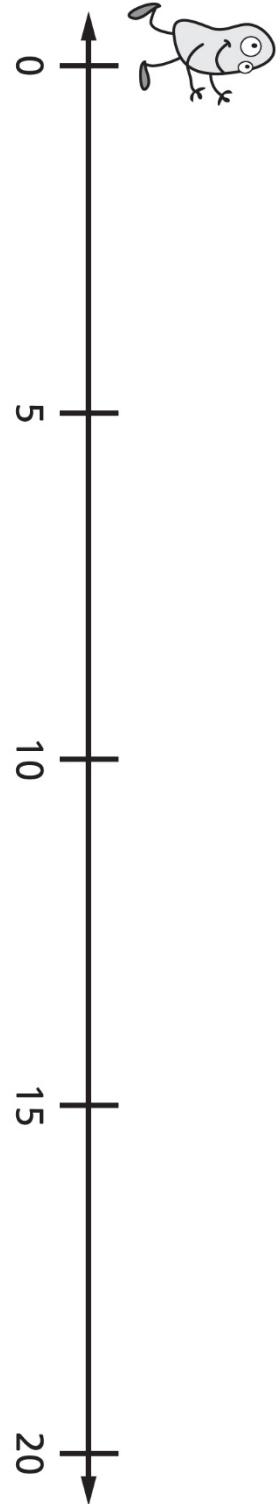
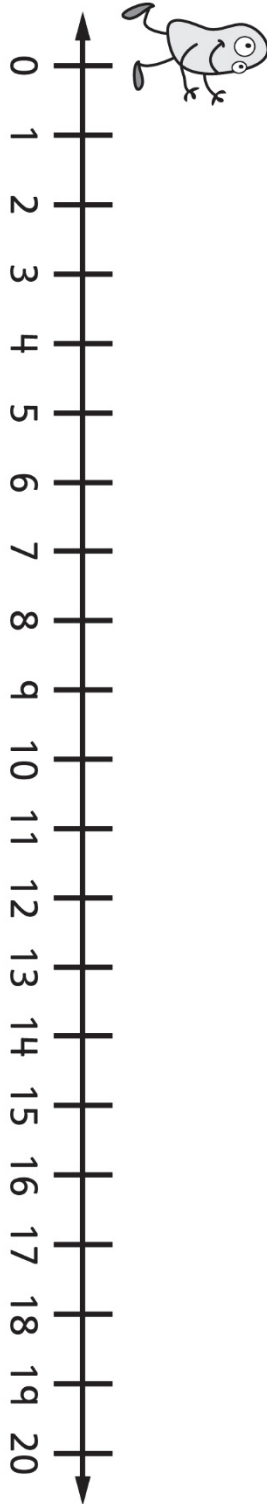
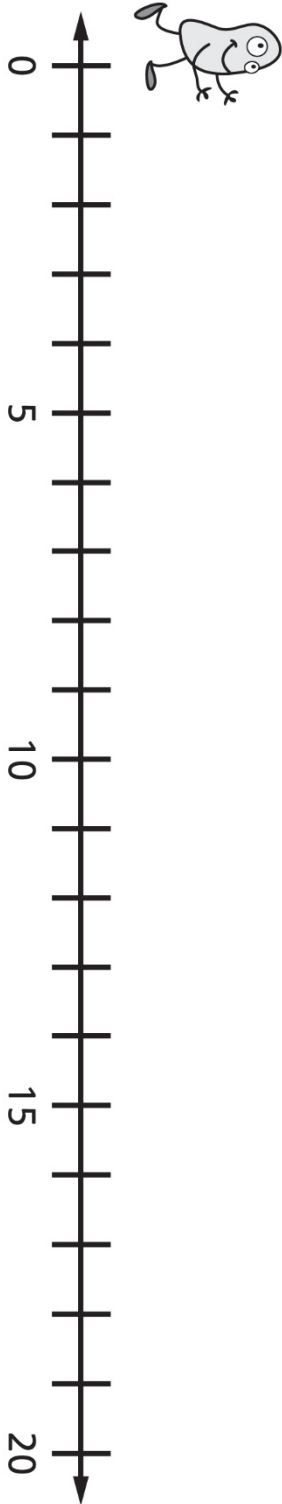
116





Master 65

# Jumping Bean Number Lines



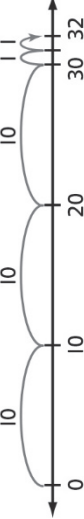




# Master 66: Activity 24 Assessment

## Jumping on the Number Line

Number

Decomposing Numbers on a Number Line Behaviours/Strategies	
<p>1. Student chooses a card, but struggles to decompose numbers into parts using a number line.</p> <p>"I don't know what to do."</p>	<p>2. Student decomposes numbers into parts using a number line, but always takes jumps of 1.</p> 
Observations/Documentation	
<p>4. Student flexibly decomposes numbers into parts using a number line, but struggles to identify the way that takes the fewest jumps.</p> <p>"I found lots of ways to jump to the number."</p>	<p>3. Student decomposes numbers into parts using a number line, but only takes jumps of 1 and 10.</p> 
Observations/Documentation	
<p>5. Student flexibly decomposes numbers into parts using a number line, but struggles to record the jumps in her or his math journal.</p>  <p>"I don't know how to write this."</p>	<p>6. Student flexibly decomposes numbers into parts using a number line, identifies the most efficient way, and records work.</p>
Observations/Documentation	

**Master 67a**

**Who Am I? Cards**

<p><b>I am</b> two parts of 40.</p>	<p><b>I am</b> between 30 and 40, but closer to 30.</p>	<p><b>I am</b> the other part of 60 when one part is 42.</p>
<p>Start at 20. Take • 3 jumps of 10 • 4 jumps of 1 <b>What number am I?</b></p>	<p><b>I am</b> two parts of 80.</p>	<p><b>I am</b> between 60 and 70, but much closer to 70.</p>
<p><b>I am</b> the other part of 90 when one part is 63.</p>	<p>Start at 25. Take • 2 jumps of 10 • 1 jump of 5 • 2 jumps of 1 <b>What number am I?</b></p>	<p><b>I am</b> two parts of 100.</p>
<p><b>I am</b> the other part of 100 when one part is 81.</p>	<p><b>I am</b> between 80 and 90, and the same distance from 80 as from 90.</p>	<p>Start at 5. Take • 1 jump of 10 • 1 jump of 5 • 3 jumps of 1 <b>What number am I?</b></p>



Master 67b


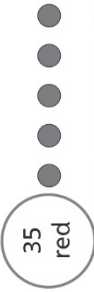
# Who Am I? Cards (for Accommodations)

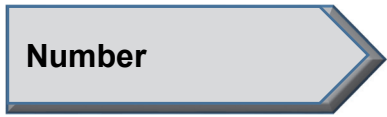
<p><b>I am</b> two parts of 10.</p>	<p><b>I am</b> between 0 and 10, but closer to 10.</p>	<p><b>I am</b> the other part of 10 when one part is 4.</p>
<p>Start at 0. Take • 2 jumps of 5 • 4 jumps of 1 <b>What number am I?</b></p>	<p><b>I am</b> two parts of 20.</p>	<p><b>I am</b> between 10 and 20, but much closer to 10.</p>
<p><b>I am</b> the other part of 20 when one part is 12.</p>	<p>Start at 0. Take • 1 jump of 10 • 2 jumps of 1 <b>What number am I?</b></p>	<p><b>I am</b> two parts of 15.</p>
<p><b>I am</b> the other part of 20 when one part is 6.</p>	<p><b>I am</b> between 10 and 20, and the same distance from 10 as from 20.</p>	<p>Start at 0. Take • 1 jump of 10 • 1 jump of 5 • 3 jumps of 1 <b>What number am I?</b></p>



# Number

## Master 68a: Activity 25 Assessment Number Relationships 2: Consolidation

<b>Number Relationships Behaviours/Strategies</b>									
<p>1. To decompose two-digit numbers into parts, student counts out counters and then arranges them in two groups.</p> <div style="text-align: center;">  </div>	<p>2. To decompose two-digit numbers into parts, student chooses a part and then counts on or back with counters to find the other part.</p> <div style="text-align: center;">  <p style="text-align: center;">"36, 37, 38, 39, 40"</p> </div>	<p>3. Student decomposes two-digit numbers into parts, but struggles to compose two-digit numbers from parts (unable to take jumps of different sizes on a number line).</p>	<p>4. To find a part given the whole and another part, student guesses and then uses counters to check.</p> <div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;">Whole 60</td> <td style="padding: 5px;">Part 42</td> <td style="padding: 5px;">Part</td> </tr> <tr> <td colspan="2"></td> <td style="padding: 5px;">"Guess 20"</td> </tr> </table> <p style="text-align: center;">"42 counters and 20 counters is 62 counters: too many."</p> </div>	Whole 60	Part 42	Part			"Guess 20"
Whole 60	Part 42	Part							
		"Guess 20"							
<b>Observations/Documentation</b>									
<p>5. To find a part given the whole and another part, student counts on or back with counters or fingers.</p> <p style="text-align: center;">"43, 44, 45, ..., 58, 59, 60"</p>	<p>6. Student shows benchmark numbers on the number line, but struggles to name a number closer to the given ten.</p> <p style="text-align: center;">"36 is between 30 and 40, but I don't know which number it is closer to."</p>	<p>7. Student shows benchmark numbers on the number line, but struggles to name the number that is the same distance from both benchmarks.</p> <p style="text-align: center;">"I don't know what number is the same distance from 80 as from 90."</p>	<p>8. Student successfully demonstrates an understanding of number relationships by using efficient strategies (skip-counting, mental math) to answer cards of all types.</p>						
<b>Observations/Documentation</b>									



# Master 68b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can compare numbers using benchmarks on a number line. <b>(Activities 22, 25)</b>									
Student can name the ten closer to a number. <b>(Activities 22, 25)</b>									
Student can name the number that is the same distance from both benchmark numbers. <b>(Activities 22, 25)</b>									
Student can decompose two-digit numbers into two parts in different ways. <b>(Activities 23, 25)</b>									
Student recognizes that no matter how objects are partitioned, the total does not change (conservation). <b>(Activities 23)</b>									
Student can find a part given the whole and another part. <b>(Activities 23, 25)</b>									
Student can decompose numbers in different ways on a number line. <b>(Activities 24, 25)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Compares numbers using benchmarks on a number line. <b>(Activities 22, 25)</b>			
Names the ten closer to a number. <b>(Activities 22, 25)</b>			
Names the number that is the same distance from both benchmark numbers. <b>(Activities 22, 25)</b>			
Decomposes two-digit numbers into two parts in different ways. <b>(Activities 23, 25)</b>			
Recognizes that no matter how objects are partitioned, the total does not change (conservation). <b>(Activities 23)</b>			
Finds a part given the whole and another part. <b>(Activities 23, 25)</b>			
Decomposes numbers in different ways on a number line. <b>(Activities 24, 25)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b></p> <p><b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division</p> <p><b>Cross Strand:</b> Patterning and Algebra</p> <p><b>Expressions and Equality:</b> demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18</p>			
<p><b>N2.12</b> solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies</p> <p><b>N2.13</b> describe relationships between quantities by using whole-number addition and subtraction</p> <p><b>N2.16</b> 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</p> <p><b>P2.11</b> identify, through investigation, and use the</p>	<p><b>Below Grade: Intervention</b></p> <p>11: Adding and Subtracting to 20</p> <p>12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b></p> <p>26: Exploring Properties (N2.12, P2.11, P2.12)</p> <p>27: Solving Problems 1 (N2.12, N2.13, N2.16)</p> <p>28: Solving Problems 2 (N2.12, N2.13, N2.16)</p> <p>29: Solving Problems 3 (N2.12, N2.13, N2.16)</p> <p>30: Solving Problems 4 (N2.12, N2.13, N2.16)</p> <p>31: Conceptualizing Addition and Subtraction Consolidation (N2.12, N2.13, N2.16)</p> <p><b>On Grade: Math Every Day Card 6:</b></p> <p>What Math Do You See? (N2.12, N2.13, N2.16)</p> <p>What Could the Story Be? (N2.12, N2.13, N2.16)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>The Great Dogsdog Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>Extends known sums and differences to solve other equations (e.g., using <math>5 + 5</math> to add <math>5 + 6</math>). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>



# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

### Ontario (continued)

commutative property of addition to facilitate computation with whole numbers

**P2.12** identify, through investigation, the properties of zero in addition and subtraction (i.e., when you add zero to a number, the number does not change; when you subtract zero from a number, the number does not change).

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# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value. <b>Cross Strand:</b> Patterns and Relations</p> <p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li><b>2.9</b> using strategies such as looking for multiples of 10, friendly numbers, decomposing into 10s and 1s and recomposing, and compensating</li> <li><b>2.10</b> adding up to find the difference</li> <li><b>2.11</b> using an open number line, hundred chart, ten-frames</li> <li><b>2.12</b> using addition and subtraction in real-life contexts and problem-based situations</li> <li><b>2.21</b> symbolic representation of equality and inequality</li> </ul>	<p><b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b> 26: Exploring Properties 27: Solving Problems 1 (2.9. 2.10, 2.11, 2.12, 2.21) 28: Solving Problems 2 (2.9. 2.10, 2.11, 2.12, 2.21) 29: Solving Problems 3 (2.9. 2.10, 2.11, 2.12, 2.21) 30: Solving Problems (2.9. 2.10, 2.11, 2.12, 2.21) 31: Conceptualizing Addition and Subtraction Consolidation (2.9. 2.10, 2.11, 2.12, 2.21)</p> <p><b>On Grade: Math Every Day Card 6:</b> What Math Do You See? (2.12) What Could the Story Be? (2.12)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>The Great Dogsled Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p> <p><b>2N8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> explaining that the order in</li> </ul>	<p><b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b> 26: Exploring Properties (2N8, 2N9.3, 2N9.4, 2N10.1, 2N10.2, 2N10.3, 2N10.4) 27: Solving Problems 1 (2N9.1, 2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6, 2PR4) 28: Solving Problems 2 (2N9.1, 2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2PR4) 29: Solving Problems 3 (2N9.1, 2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2PR4) 30: Solving Problems (2N9.1, 2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6, 2PR4) 31: Conceptualizing Addition and Subtraction Consolidation</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>• The Great Dogsled Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>- Extends known sums and differences to solve other equations (e.g., using <math>5 + 5</math> to add <math>5 + 6</math>). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

<p>which numbers are added does not affect the sum</p> <ul style="list-style-type: none"> <li>• <b>2N9.4</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul>	<p>(2N9.1, 2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6, 2PR4)</p> <p><b>On Grade: Math Every Day</b></p> <p><b>Card 6:</b> What Math Do You See? (2N9.2, 2N10.1, 2N10.2, 2N10.3, 2N10.4, 2N10.5, 2N10.6)</p> <p>What Could the Story Be? (2N9.2)</p>	
<p><b>2N10</b> Apply mental mathematics strategies, such as:</p> <ul style="list-style-type: none"> <li>• <b>2N10.1</b> using doubles</li> <li>• <b>2N10.2</b> making 10</li> <li>• <b>2N10.3</b> one more, one less</li> <li>• <b>2N10.4</b> two more, two less</li> <li>• <b>2N10.5</b> building on a known double</li> <li>• <b>2N10.6</b> addition for subtraction to determine basic addition facts to 18 and related subtraction facts.</li> </ul>		
<p><b>2PR4</b> Record equalities and inequalities symbolically using the equal symbol or the not equal symbol.</p>		

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p> <p><b>2.N.8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2.N.9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2.N.9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2.N.9.3</b> explaining that the order in</li> </ul>	<p><b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b> 26: Exploring Properties (2.N.8, 2.N.9.3, 2.N.9.4, 2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4) 27: Solving Problems 1 (2.N.9.1, 2.N.9.2, 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) 28: Solving Problems 2 (2.N.9.1, 2.N.9.2, 2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4, 2.N.10.5, 2.PR.4) 29: Solving Problems 3 (2.N.9.1, 2.N.9.2, 2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4, 2.N.10.5, 2.PR.4) 30: Solving Problems (2.N.9.1, 2.N.9.2, 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) 31: Conceptualizing Addition and Subtraction Consolidation</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>• The Great Dogsled Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>- Extends known sums and differences to solve other equations (e.g., using <math>5 + 5</math> to add <math>5 + 6</math>). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>

### Mathology 2

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# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

### Manitoba (continued)

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.

(2.N.9.1, 2.N.9.2, 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)

#### On Grade: Math Every Day

##### Card 6:

What Math Do You See?

(2.N.9.2, 2.N.10.1, 2.N.10.2, 2.N.10.3, 2.N.10.4, 2.N.10.5, 2.N.10.6)

What Could the Story Be?

(2.N.9.2)

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Students will be expected to represent algebraic expressions in multiple ways.</p> <p><b>2N08</b> Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N09</b> 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</p> <ul style="list-style-type: none"> <li>• <b>2N09.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N09.2</b> creating and solving</li> </ul>	<p><b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b> 26: Exploring Properties (2N08, 2N09.3, 2N09.4, 2N10) 27: Solving Problems 1 (2N09.1, 2N09.2, 2N10, 2PR04) 28: Solving Problems 2 (2N09.1, 2N09.2, 2N10, 2PR04) 29: Solving Problems 3 (2N09.1, 2N09.2, 2N10, 2PR04) 30: Solving Problems (2N09.1, 2N09.2, 2N10, 2PR04) 31: Conceptualizing Addition and Subtraction Consolidation (2N09.1, 2N09.2, 2N10, 2PR04)</p> <p><b>On Grade: Math Every Day Card 6:</b> What Math Do You See? (2N09.2, 2N10)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>• The Great Dogsdled Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>- Extends known sums and differences to solve other equations (e.g., using <math>5 + 5</math> to add <math>5 + 6</math>). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

### Nova Scotia (continued)

	What Could the Story Be? (2N09.2)		
<p>problems that involve addition and subtraction</p> <ul style="list-style-type: none"> <li>• <b>2N09.3</b> explaining that the order in which numbers are added does not affect the sum</li> <li>• <b>2N09.4</b> explaining and demonstrating that the order in which numbers are subtracted matters when finding a difference</li> </ul> <p><b>2N10</b> Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts.</p> <p><b>2PR04</b> Students will be expected to record equalities and inequalities symbolically, using the equal symbol or the not equal symbol.</p>			



# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p>			
<p><b>2N8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> using the</li> </ul>	<p><b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems</p> <p><b>On Grade: Teacher Cards</b> 26: Exploring Properties (2N8, 2N9.3, 2N9.4, 2N9.5, 2N10) 27: Solving Problems 1 (2N9.1, 2N9.2, 2N10, 2PR05) 28: Solving Problems 2 (2N9.1, 2N9.2, 2N10, 2PR05) 29: Solving Problems 3 (2N9.1, 2N9.2, 2N10, 2PR05) 30: Solving Problems (2N9.1, 2N9.2, 2N10, 2PR05) 31: Conceptualizing Addition and Subtraction Consolidation (2N9.1, 2N9.2, 2N10, 2PR05)</p> <p><b>On Grade: Math Every Day Card 6:</b> What Math Do You See? (2N9.2, 2N10) What Could the Story Be? (2N9.2)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>• The Great Dogsdog Race (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>- Extends known sums and differences to solve other equations (e.g., using <math>5 + 5</math> to add <math>5 + 6</math>). (Activities 27, 28, 29, 30, 31)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

Alberta/Northwest Territories/Nunavut (continued)

<p>commutative property of addition (the order in which numbers are added does not affect the sum)</p> <ul style="list-style-type: none"> <li>• <b>2N9.4</b> using the associative property of addition (grouping a set of numbers in different ways does not affect the sum)</li> <li>• <b>2N9.5</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.</p> <p><b>2PR05</b> Record equalities and inequalities symbolically, using the equal symbol or the not equal symbol.</p>		
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# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

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

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour <b>Cross Strand:</b> Patterns and Relations			
<b>N2.2</b> Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: <ul style="list-style-type: none"> <li>• <b>N2.2.1</b> representing strategies for adding and subtracting concretely, pictorially, and symbolically</li> <li>• <b>N2.2.2</b> creating and solving problems involving addition and subtraction</li> <li>• <b>N2.2.3</b> estimating</li> <li>• <b>N2.2.4</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>N2.2.5</b> analyzing the effect of adding or subtracting zero</li> </ul>	<b>Below Grade: Intervention</b> 11: Adding and Subtracting to 20 12: Solving Story Problems  <b>On Grade: Teacher Cards</b> 26: Exploring Properties (N2.2.1, N2.2.4, N2.2.5, N2.2.6) 27: Solving Problems 1 (N2.2.1, N2.2.2, N2.2.4, P2.3.3) 28: Solving Problems 2 (N2.2.1, N2.2.2, N2.2.4, P2.3.3) 29: Solving Problems 3 (N2.2.1, N2.2.2, N2.2.4, P2.3.3) 30: Solving Problems (N2.2.1, N2.2.2, N2.2.4, P2.3.3) 31: Conceptualizing Addition and Subtraction Consolidation (N2.2.1, N2.2.2, N2.2.4, P2.3.3)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• Canada's Oldest Sport (Activities 27, 28, 29, 30, 31)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• Array's Bakery (Activities 27, 28, 29, 30, 31)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activities 27, 28, 29, 30, 31)</li> <li>• The Great Dogsled Race (Activities 27, 28, 29, 30, 31)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• Math Makes Me Laugh (Activities 27, 28, 29, 30, 31)</li> </ul>	<b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b>  Developing Conceptual Meaning of Addition and Subtraction <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 26, 27, 28, 29, 30, 31)</li> <li>- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). (Activities 27, 28, 29, 30, 31; MED 6: 1, 2)</li> </ul> Developing Fluency of Addition and Subtraction Computation <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 10. (Activity 26)</li> <li>- Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (Activities 27, 28, 29, 30, 31)</li> </ul>
<b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b>  Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations <ul style="list-style-type: none"> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 26)</li> </ul>			

# Curriculum Correlation

## Number Cluster 6: Conceptualizing Addition and Subtraction

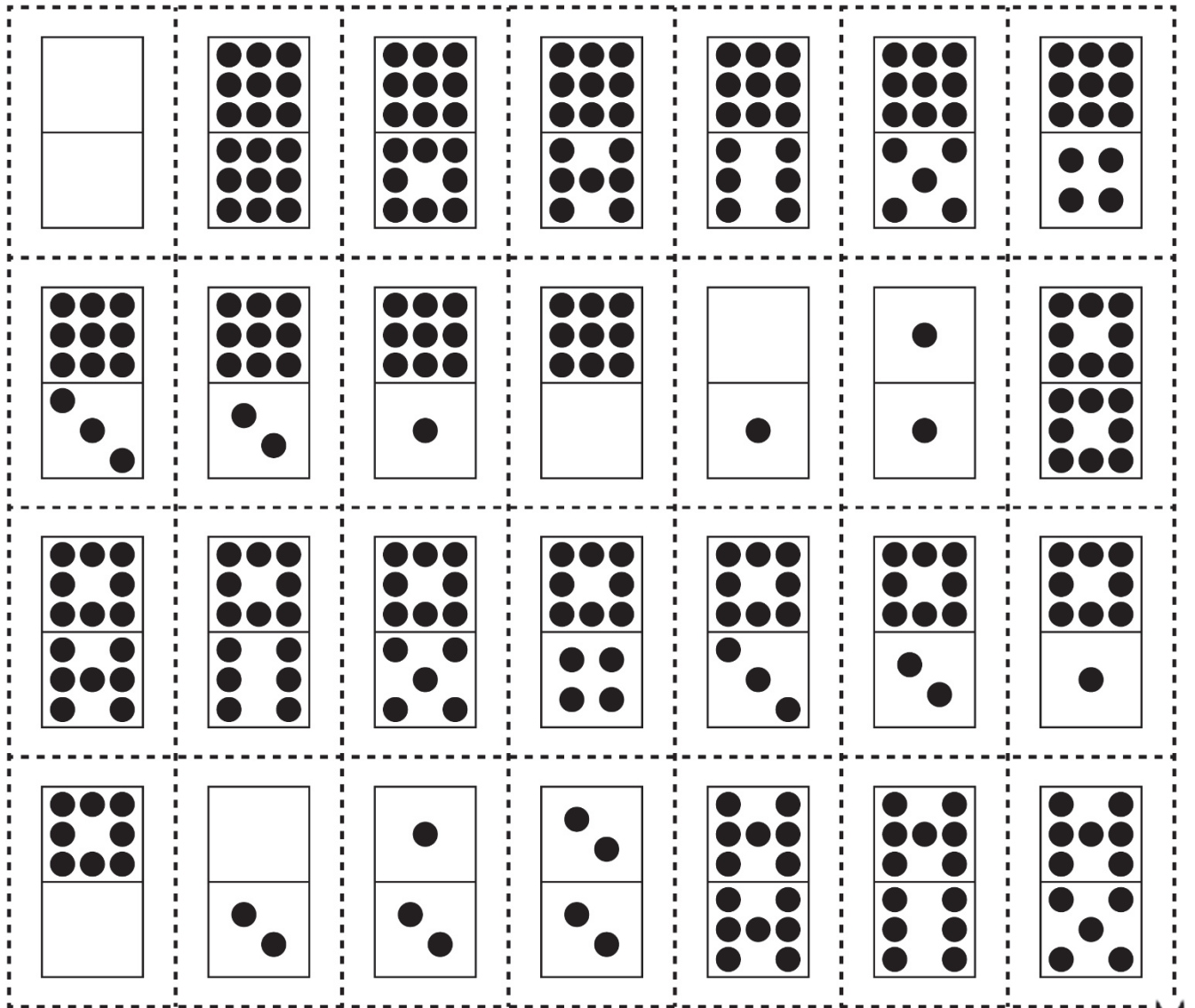
**Saskatchewan (continued)**

<ul style="list-style-type: none"> <li>• <b>N2.2.6</b> analyzing the effect of the ordering of the quantities (addends, minuends, and subtrahends) in addition and subtraction statements.</li> </ul> <p><b>P2.3</b> Demonstrate understanding of equality and inequality concretely and pictorially (0 to 100) by:</p> <ul style="list-style-type: none"> <li>• <b>P2.3.1</b> relating equality and inequality to balance</li> <li>• <b>P2.3.2</b> comparing sets</li> <li>• <b>P2.3.3</b> recording equalities with an equal sign</li> <li>• <b>P2.3.4</b> recording inequalities with a not equal sign</li> <li>• <b>P2.3.5</b> solving problems involving equality and inequality.</li> </ul>		
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Name \_\_\_\_\_ Date \_\_\_\_\_

Master 70a

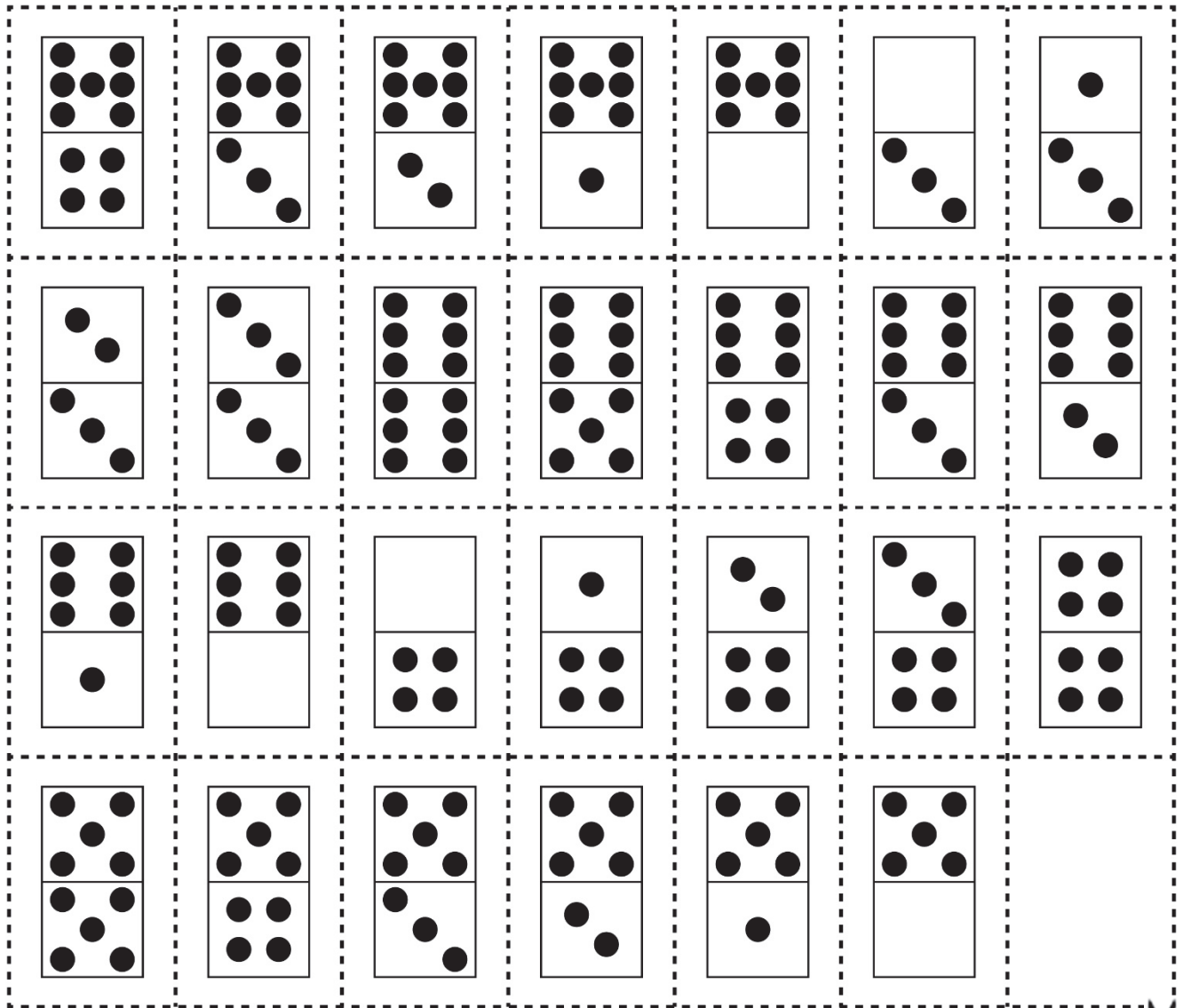
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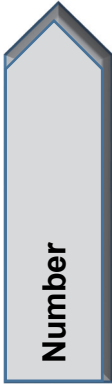


Name \_\_\_\_\_ Date \_\_\_\_\_

Master 70b

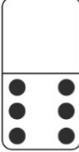
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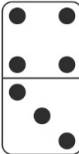
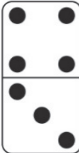
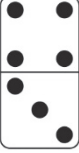
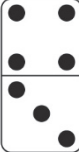




# Master 71: Activity 26 Assessment

## Exploring Properties





Operational Sense Behaviours/Strategies			
<p>1. Student turns over a domino, but is unable to use symbols and equations to represent an addition situation.</p> <p>"I don't know how to write an addition sentence for a domino."</p>	<p>2. Student uses symbols and equations to represent some addition situations, but struggles when one of the addends is zero.</p>  <p>"I don't know what to write."</p>	<p>3. Student uses symbols and equations to represent an addition situation in one way, but does not use the commutative property to represent it another way.</p> <p>"3 + 4 = 7. I don't know another sentence."</p>	<p>4. Student successfully uses symbols and equations to represent addition and subtraction situations and shows understanding of the zero and commutative properties.</p> <p>7 + 0 = 7 0 + 7 = 7 7 - 0 = 7</p>
Observations/Documentation			

Mental Math and Computational Behaviours/Strategies			
<p>1. Student counts three times to add quantities (find the total number of dots).</p> <p>"1, 2, 3" "1, 2, 3, 4"</p>  <p>"1, 2, 3, 4, 5, 6, 7"</p>	<p>2. Student counts on from the smaller number to add quantities.</p>  <p>"3" "4, 5, 6, 7"</p>	<p>3. Student uses a known fact, doubles, or skip-counting to add quantities.</p>  <p>"I know 3 + 3 = 6, so 3 + 4 = 7."</p>	<p>4. Student fluently adds and subtracts with quantities to 10.</p>  <p>"I know 3 + 4 = 7."</p>
Observations/Documentation			



# Master 72: Activity 27 Assessment

## Solving Problems 1

Conceptual Understanding of Story Problems Behaviours/Strategies			
1. Student reads story problem, but is unable to model add-to and take-from situations with concrete materials.	2. Student models and solves problems, but cannot use symbols and equations to represent the problems.	3. Student uses symbols to write a subtraction equation, but struggles to see the relation among the numbers.  $26 - ? = 9$ 	4. Student models and solves addition and subtraction problem types and uses symbols and equations to represent the problems.  $50 - 21 = ?$ $17 + ? = 41$
Observations/Documentation			
Addition and Subtraction Computational Behaviours/Strategies			
1. Student counts three times to add or subtract quantities, but struggles to coordinate number words with counting actions.   "One"	2. Student counts three times to add or subtract quantities.  "1, 2, 3, ..., 6, 7, 8, 9"  "1, 2, 3, 4, 5"	3. Student counts on or back to add or subtract quantities.   "25, 24, 23, 22, 21, 20, 19, 18, 17"	4. Student uses mental strategies to add or subtract quantities.  "9 and 1 more is 10. 10 and 16 is 26. 16 and 1 is 17."  So, 17 books were signed out."
Observations/Documentation			



**Master 73**

# Think Board A

## Story Problem

Su has 7 red balloons and 4 green balloons.  
How many balloons does she have altogether?

## My Picture


## My Number Sentence

**Master 74**

## Story Problems 2 (Whole Unknown)

**Note:** Story Problem Card 3 is for use as an accommodation.

<p>Last year, I ordered 25 ribbons for field day. This year, I want to order 11 more. How many ribbons should I order?</p>
<p>Ravi read 37 pages in his book before lunch. After lunch, he read 17 more pages. How many pages did Ravi read altogether?</p>
<p>There are 6 students on the bus. At the next stop, 3 students get on. How many students are now on the bus?</p>
<p>Ava has 43 marbles. Her sister, Ada, has 52 marbles. How many marbles do they have altogether?</p>





# Master 75: Activity 28 Assessment

## Solving Problems 2

Conceptual Understanding of Story Problems Behaviours/Strategies			
1. Student reads story problem, but is unable to model add-to situations with concrete materials.  "I don't know what to do."	2. Student models and solves addition problems, but cannot use symbols and equations to represent the problems.	3. Student models and solves addition problems and writes addition sentences, but struggles to represent thinking.  "25 + 11 = ?" or "25 + 11 = 36" "What do I draw?"	4. Student successfully models and solves addition problem types, uses symbols and equations to represent the problems, and represents thinking on the Think Board.
<b>Observations/Documentation</b>			
Addition Computational Behaviours/Strategies			
1. Student counts three times to add quantities. The answer may not be accurate.  "1, 2, 3, ..., 23, 24, 25" "1, 2, 3, ..., 9, 10, 11" "1, 2, 3, ..., 34, 35, 36"	2. Student counts on to add quantities.  "26, 27, 28, ..., 34, 35, 36"	3. Student counts efficiently to add quantities (e.g., makes 10, subitizes).  	4. Student uses mental strategies flexibly and accurately to add quantities.  "25 + 10 = 35, and 35 + 1 = 36"
<b>Observations/Documentation</b>			

Master 76

## Story Problems 3 (Part Unknown: Joining)

**Note:** Story Problem Card 3 is for use as an accommodation.

1

Samson has  
29 marbles.  
His friend gives him  
some more.  
Now he has  
42 marbles.  
How many marbles did  
his friend give him?

2

Julie picked 17 apples on  
Saturday morning.  
She picked some more  
apples in the  
afternoon.  
She picked 38 apples  
altogether.  
How many apples did  
Julie pick in the  
afternoon?

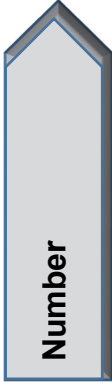
3

There are 4 ladybugs  
on a leaf.  
Some more ladybugs  
fly in and join them.  
Now there are  
10 ladybugs on the leaf.  
How many ladybugs  
flew in and joined  
them?

4


There are 19 cars in  
the parking lot.  
When the store opens,  
more cars arrive.  
Now there are 57 cars  
in the parking lot.  
How many cars arrived  
when the store  
opened?





# Master 77: Activity 29 Assessment

## Solving Problems 3

Conceptual Understanding of Story Problems Behaviours/Strategies			
1. Student reads story problem, but is unable to model add-to and take-from situations with concrete materials.	2. Student models and solves the problem, but cannot use symbols and equations to represent it. "The answer is 13. I don't know the number sentence."	3. Student successfully models and solves the problem and writes an addition sentence, but struggles to relate the addition problem to a subtraction problem. "29 + 13 = 42" "It's not a subtraction problem."	4. Student successfully models and solves the problem and uses symbols and equations to represent it. "29 + 13 = 42" "42 - 29 = 13" "His friend gave him 13 marbles."
<b>Observations/Documentation</b>			
Addition Computational Behaviours/Strategies			
1. Student models problem with counters, but struggles to coordinate number words with counting actions.  "One" <del>one</del>	2. Student counts three times to add or subtract quantities. "1, 2, 3, ..., 41, 42" counts all "1, 2, 3, ..., 28, 29" counts to remove "1, 2, 3, ..., 12, 13" counts leftover	3. Student counts on or back with counters to add or subtract quantities. "30, 31, 32, ..., 40, 41, 42"	4. Student uses mental strategies flexibly and accurately to add or subtract quantities. "29 and 1 more is 30. 30 and 10 more is 40. 40 and 2 more is 42. 1 + 10 + 2 = 13."
<b>Observations/Documentation</b>			

Master 78

# Story Problem Starters

There are \_\_\_\_\_ in the bin.  
NUMBER                  OBJECT 1

There are \_\_\_\_\_ in the bin.  
NUMBER                  OBJECT 2

How many \_\_\_\_\_ and \_\_\_\_\_  
OBJECT 1                                  OBJECT 2  
are in the bin altogether?

There are \_\_\_\_\_ in the bin.  
NUMBER                  OBJECT 1

I take \_\_\_\_\_ out of the bin.  
NUMBER                  OBJECT 2




How many \_\_\_\_\_ are left in the bin?  
OBJECT 1





# Master 79: Activity 30 Assessment

## Solving Problems 4

Conceptual Understanding of Addition and Subtraction Behaviours/Strategies			
1. Student takes objects from bin, but has difficulty using them to create an addition and subtraction problem.	2. Student creates an addition problem, but has difficulty creating a subtraction problem.	3. Student creates addition and subtraction problems, but cannot use symbols and equations to represent them. "I don't know how to write a number sentence."	4. Student creates addition and subtraction problems and uses symbols and equations to represent them. $11 + 9 = ?$ "Answer is 20." $21 - ? = 13$ "Answer is 8."
<b>Observations/Documentation</b>			
Addition and Subtraction Computational Behaviours/Strategies			
1. Student counts three times to add or subtract quantities. "1, 2, 3, 4, 5"  "1, 2, 3, 4, 5, 6"  "1, 2, 3, ..., 9, 10, 11"	2. Student guesses and then counts on or back to add or subtract quantities to check. Guess 7: 13, 14, 15, 16, 17, 18, 19 "Not enough."	3. Student counts on or back to add or subtract quantities. "19, 18, 17, 16, 15, 14, 13, 12" 	4. Student uses mental strategies flexibly and accurately to add or subtract quantities. "I know $10 + 10$ is 20. So, $10 + 11$ is 1 more, or 21."
<b>Observations/Documentation</b>			

**Master 80**

# Think Board B

## Story Problem

Jose has 15 tickets to sell for the school play.  
He has sold 6 tickets.  
How many more tickets does he have left to sell?

## My Picture

## My Number Sentence



## Master 81a

**Problem Cards**

## Take Away Problem (Part Unknown)

Rahmi and Kea collect 36 coloured stones. Rahmi takes out the 8 green stones. How many stones are left?

33 birds are sitting in a tree. Some birds fly away. Now there are 21 birds in the tree. How many birds flew away?

## Take Away Problem (Whole Unknown)

Some children are on a bus. No children get off at the first stop. Now 28 children are left on the bus. How many children were on the bus to begin with?

## Join Problem (Part Unknown)

Ali made a tower with linking cubes. He added 19 more cubes to the tower. The tower now has 31 cubes. How many cubes did the tower have to begin with?

## Join Problem (Part Unknown)

There are 16 cows in the barn. More cows come to join them. Now there are 35 cows in the barn. How many came to join them?

24 grapes are in a bowl. 19 are red and the rest are green. How many green grapes are in the bowl?

## Join Problem (Whole Unknown)

Sienna has 18 stickers. Dakota gives her 13 more stickers. How many stickers does Sienna have now?

There are 16 red apples and 18 green apples in a basket. How many apples are there altogether?

## Comparison Problem

Serena collected 16 shells on the beach. Roger collected 27 shells. How many more shells did Roger collect than Serena? (How many fewer shells did Serena collect than Roger?)

## Make Equal Problem

There are 27 students in the class. Everyone needs a marker. Krishan has 16 markers to give out. How many more markers does he need for everyone to get a marker?

**Master 81b**

# Problem Cards

Take Away Problem (Part Unknown)

Rahmi and Kea collect 12 coloured stones. Rahmi takes out the 10 green stones. How many stones are left?	13 birds are sitting in a tree. Some birds fly away. Now there are 10 birds in the tree. How many birds flew away?
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Take Away Problem (Whole Unknown)

Some children are on a bus. No children get off at the first stop. Now 7 children are left on the bus. How many children were on the bus to begin with?

Join Problem (Part Unknown)

There are 8 cows in the barn. More cows come to join them. Now there are 13 cows in the barn. How many came to join them?	Ali made a tower with linking cubes. He added 19 more cubes to the tower. The tower now has 31 cubes. How many cubes did the tower have to begin with?
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Join Problem (Whole Unknown)

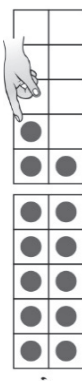
Sienna has 9 stickers. Dakota gives her 6 more stickers. How many stickers does Sienna have now?

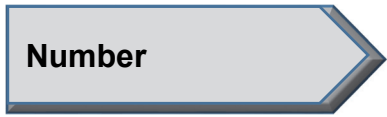




# Master 82a: Activity 31 Assessment

## Conceptualizing Addition and Subtraction: Consolidation

Conceptual Understanding of Story Problems Behaviours/Strategies			
1. Student reads story problem, but is unable to model add-to and take-from situations with concrete materials.	2. Student models the problem, but uses the wrong operation to solve it.	3. Student models and solves the problem, but cannot use symbols and equations to represent it.	4. Student successfully models, solves, and symbolizes addition and subtraction problem types and represents thinking on the Think Board.
<b>Observations/Documentation</b>			
Addition and Subtraction Computational Behaviours/Strategies			
1. Student counts three times to add or subtract quantities. "1, 2, 3, ..., 7, 8, 9" ●●●●●●● counts 9 "1, 2, 3, 4, 5, 6" ●●●● counts 6 "1, 2, 3, ..., 13, 14, 15" counts all	2. Student counts on or back to add or subtract quantities. "35, 34, 33, ..., 30, 29, 28" "36" ●●●●●●●●●●	3. Student counts efficiently to add or subtract quantities (e.g., makes 10 and then counts on or subitizes). "18"  "28" "29, 30, 31"	4. Student uses mental strategies flexibly and accurately to add or subtract quantities. "I know 6 and 6 is 12, so 6 + 9 is 3 more, or 15."
<b>Observations/Documentation</b>			



# Master 82b: Cluster Assessment

## Whole Class

Big Idea	Indicators from Learning Progression								
Curriculum Expectations addressed									
Student Names									
Student realizes that the order in which two numbers are added does not matter. <b>(Activity 26)</b>									
Student realizes that when zero is added to a number or subtracted from a number, the number does not change. <b>(Activity 26)</b>									
Student can write number sentences to represent addition and subtraction situations/story problems. <b>(Activities 26, 27, 28, 29, 30, 31)</b>									
Student can fluently add and subtract with quantities to 10. <b>(Activity 26)</b>									
Student can model and solve addition and subtraction problem types. <b>(Activities 27, 28, 29, 30, 31)</b>									
When solving a problem, student can represent thinking on a Think Board. <b>(Activities 28, 31)</b>									
Student can flexibly and accurately add and subtract quantities to solve story problems. <b>(Activities 27, 28, 29, 30, 31)</b>									
Student can create addition and subtraction story problems. <b>(Activity 30)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Realizes that the order in which two numbers are added does not matter. <b>(Activity 26)</b>			
Realizes that when zero is added to a number or subtracted from a number, the number does not change. <b>(Activity 26)</b>			
Writes number sentences to represent addition and subtraction situations/story problems. <b>(Activities 26, 27, 28, 29, 30, 31)</b>			
Fluently adds and subtracts with quantities to 10. <b>(Activity 26)</b>			
Models and solves addition and subtraction problem types. <b>(Activities 27, 28, 29, 30, 31)</b>			
When solving a problem, represents thinking on a Think Board. <b>(Activities 28, 31)</b>			
Flexibly and accurately adds and subtracts quantities to solve story problems. <b>(Activities 27, 28, 29, 30, 31)</b>			
Creates addition and subtraction story problems. <b>(Activity 30)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b></p> <p><b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division</p> <p><b>Cross Strand:</b> Patterning and Algebra</p> <p><b>Expressions and Equality:</b> demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18</p>			
<p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.12</b> solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies</p> <p><b>N2.13</b> describe relationships between quantities by using whole-number addition and subtraction</p> <p><b>N2.16</b> 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</p>	<p><b>Below Grade: Intervention</b></p> <p>13: Making 10</p> <p>14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b></p> <p>32: Complements of 10 (N2.12, N2.13, P2.11)</p> <p>33: Using Doubles (N2.12)</p> <p>34: Fluency with 20 (N2.12, N2.13)</p> <p>35: Multi-Digit Fluency (N2.12, N2.13, N2.16)</p> <p>36: Operational Fluency Consolidation (N2.12, N2.13)</p> <p><b>On Grade: Math Every Day Card 7A:</b></p> <p>Doubles and Near-Doubles (N2.12)</p> <p>I Have... I Need... (N2.3, N2.12, N2.16)</p> <p><b>Card 7B:</b></p> <p>Hungry Bird (N2.12, N2.13, N2.16)</p> <p>Make 10 Sequences (N2.12, N2.13)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>That's 10! (Activity 32)</li> <li>Buy 1—Get 1 (Activities 33, 34, 36)</li> <li>Canada's Oldest Sport (Activities 34, 36)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activity 33)</li> <li>Array's Bakery (Activities 34, 36)</li> <li>Marbles, Alleys, Mibs, and Guli! (Activity 35)</li> <li>A Class-full of Projects (Activities 35, 36)</li> <li>The Money Jar (Activity 35)</li> <li>The Great Dogsdog Race (Activity 35)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Planting Seeds (Activity 33)</li> <li>Math Makes Me Laugh (Activities 35, 36)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)</li> <li>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)</li> <li>Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)</li> <li>Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)</li> <li>Estimates sums and differences of multi-digit numbers. (Activity 35)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p>

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

### Ontario (continued)

<p>standard algorithms</p> <p><b>P2.11</b> identify, through investigation, and use the commutative property of addition to facilitate computation with whole numbers</p>		<ul style="list-style-type: none"> <li>• The Street Party (Activities 35, 36)</li> </ul>	<ul style="list-style-type: none"> <li>- Decomposes and combines numbers in equations to make them easier to solve (e.g., <math>8 + 5 = 3 + 5 + 5</math>). (Activities 34, 35, 36)</li> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 32; MED 7A: 1)</li> </ul>
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# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value.</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p>Addition and subtraction facts to 20 (introduction of computational strategies)</p> <ul style="list-style-type: none"> <li><b>2.5</b> adding and subtracting numbers to 20</li> <li><b>2.6</b> fluency with math strategies for addition and subtraction</li> </ul> <p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li><b>2.7</b> decomposing numbers to 100</li> <li><b>2.8</b> estimating sums and differences to 100</li> <li><b>2.9</b> using strategies such as looking for multiples of 10, friendly numbers, decomposing into 10s and 1s and recomposing, and compensating</li> <li><b>2.10</b> adding up to find the difference</li> </ul>	<p><b>Below Grade: Intervention</b> 13: Making 10 14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b> 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)</p> <p><b>On Grade: Math Every Day Card 7A:</b> 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)</p> <p><b>Card 7B:</b> 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)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>That's 10! (Activity 32)</li> <li>Buy 1—Get 1 (Activities 33, 34, 36)</li> <li>Canada's Oldest Sport (Activities 34, 36)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activity 33)</li> <li>Array's Bakery (Activities 34, 36)</li> <li>Marbles, Alleys, Mibs, and Guli! (Activity 35)</li> <li>A Class-full of Projects (Activities 35, 36)</li> <li>The Money Jar (Activity 35)</li> <li>The Great Dogsdog Race (Activity 35)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Planting Seeds (Activity 33)</li> <li>Math Makes Me Laugh (Activities 35, 36)</li> <li>The Street Party (Activities 35, 36)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)</li> <li>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)</li> <li>Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)</li> <li>Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)</li> <li>Estimates sums and differences of multi-digit numbers. (Activity 35)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5). (Activities 34, 35, 36)</li> </ul>



# Curriculum Correlation

## Number Cluster 7: Operational Fluency

### British Columbia/Yukon Territories (continued)

<ul style="list-style-type: none"> <li>• <b>2.11</b> using an open number line, hundred chart, ten-frames</li> <li>• <b>2.12</b> using addition and subtraction in real-life contexts and problem-based situations</li> <li>• <b>2.13</b> whole-class number talks</li> </ul> <p>Change in quantity using pictorial and symbolic representation</p> <ul style="list-style-type: none"> <li>• <b>2.20</b> numerically describing a change in quantity</li> <li>• <b>2.21</b> symbolic representation of equality and inequality</li> </ul>		<p>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 32; MED 7A: 1)</p>
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# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p> <p><b>2N8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> explaining that the order in</li> </ul>	<p><b>Below Grade: Intervention</b> 13: Making 10 14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b> 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)</p> <p><b>On Grade: Math Every Day Card 7A:</b> Doubles and Near-Doubles (2N10.1, 2N10.5) I Have... I Need... (2N9.1, 2N10.6) <b>Card 7B:</b> Hungry Bird (2N9.1, 2N9.2, 2N10.6)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• That's 10! (Activity 32)</li> <li>• Buy 1—Get 1 (Activities 33, 34, 36)</li> <li>• Canada's Oldest Sport (Activities 34, 36)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activity 33)</li> <li>• Array's Bakery (Activities 34, 36)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activity 35)</li> <li>• A Class-full of Projects (Activities 35, 36)</li> <li>• The Money Jar (Activity 35)</li> <li>• The Great Dogsdog Race (Activity 35)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Planting Seeds (Activity 33)</li> <li>• Math Makes Me Laugh (Activities 35, 36)</li> <li>• The Street Party (Activities 35, 36)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)</li> <li>- 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)</li> <li>- Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)</li> <li>- Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)</li> <li>- Estimates sums and differences of multi-digit numbers. (Activity 35)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p>

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

<p>which numbers are added does not affect the sum</p> <ul style="list-style-type: none"> <li>• <b>2N9.4</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies, such as:</p> <ul style="list-style-type: none"> <li>• <b>2N10.1</b> using doubles</li> <li>• <b>2N10.2</b> making 10</li> <li>• <b>2N10.3</b> one more, one less</li> <li>• <b>2N10.4</b> two more, two less</li> <li>• <b>2N10.5</b> building on a known double</li> <li>• <b>2N10.6</b> addition for subtraction to determine basic addition facts to 18 and related subtraction facts.</li> </ul> <p><b>2PR4</b> Record equalities and inequalities symbolically using the equal symbol or the not equal symbol.</p>	<p>Make 10 Sequences (2N10.2)</p>	<ul style="list-style-type: none"> <li>- Decomposes and combines numbers in equations to make them easier to solve (e.g., <math>8 + 5 = 3 + 5 + 5</math>). (Activities 34, 35, 36)</li> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 32; MED 7A: 1)</li> </ul>
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# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p> <p><b>2.N.8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2.N.9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.1</b> using personal strategies for adding and subtracting with support of manipulatives</li> <li>• <b>2.N.9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2.N.9.3</b> explaining that the order in</li> </ul>	<p><b>Below Grade: Intervention</b> 13: Making 10 14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b> 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)</p> <p><b>On Grade: Math Every Day Card 7A:</b> Doubles and Near-Doubles (2.N.10.1, 2.N.10.5) I Have... I Need... (2.N.9.1, 2.N.10.6) <b>Card 7B:</b> Hungry Bird (2.N.9.1, 2.N.9.2, 2.N.10.6)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• That's 10! (Activity 32)</li> <li>• Buy 1—Get 1 (Activities 33, 34, 36)</li> <li>• Canada's Oldest Sport (Activities 34, 36)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (Activity 33)</li> <li>• Array's Bakery (Activities 34, 36)</li> <li>• Marbles, Alleys, Mibs, and Gull! (Activity 35)</li> <li>• A Class-full of Projects (Activities 35, 36)</li> <li>• The Money Jar (Activity 35)</li> <li>• The Great Dogsdog Race (Activity 35)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Planting Seeds (Activity 33)</li> <li>• Math Makes Me Laugh (Activities 35, 36)</li> <li>• The Street Party (Activities 35, 36)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 33, 34, 35)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (Activity 32)</li> <li>- 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)</li> <li>- Fluently adds and subtracts with quantities to 20. (Activities 34, 36; MED 7A: 2; MED 7B: 1, 2)</li> <li>- Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (Activity 35; MED 7A: 2)</li> <li>- Estimates sums and differences of multi-digit numbers. (Activity 35)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p>

### Mathology 2

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

### Manitoba (continued)

<p>which numbers are added does not affect the sum</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.4</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul> <p><b>2.N.10</b> Apply mental mathematics strategies, including:</p> <ul style="list-style-type: none"> <li>• <b>2.N.10.1</b> using doubles</li> <li>• <b>2.N.10.2</b> making 10</li> <li>• <b>2.N.10.3</b> one more, one less</li> <li>• <b>2.N.10.4</b> two more, two less</li> <li>• <b>2.N.10.5</b> building on a known double</li> <li>• <b>2.N.10.6</b> using addition for subtraction to develop recall of basic addition facts to 18 and related subtraction facts.</li> </ul> <p><b>2.PR.4</b> Record equalities and inequalities symbolically using the equal symbol or the not-equal symbol.</p>	<p>Make 10 Sequences (<b>2.N.10.2</b>)</p>	<ul style="list-style-type: none"> <li>- Decomposes and combines numbers in equations to make them easier to solve (e.g., <math>8 + 5 = 3 + 5 + 5</math>). (<b>Activities 34, 35, 36</b>)</li> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (<b>Activity 32; MED 7A: 1</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Students will be expected to represent algebraic expressions in multiple ways.</p> <p><b>2N08</b> Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N09</b> 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</p> <ul style="list-style-type: none"> <li>• <b>2N09.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N09.2</b> creating and solving problems that</li> </ul>	<p><b>Below Grade: Intervention</b> 13: Making 10 14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b> 32: Complements of 10 (<b>2N08, 2N09.3, 2N10</b>) 33: Using Doubles (<b>2N10, 2PR04</b>) 34: Fluency with 20 (<b>2N10, 2PR04</b>) 35: Multi-Digit Fluency 36: Operational Fluency Consolidation (<b>2N10</b>)</p> <p><b>On Grade: Math Every Day Card 7A:</b> Doubles and Near-Doubles (<b>2N10</b>) I Have... I Need... (<b>2N09.1, 2N10</b>)</p> <p><b>Card 7B:</b> Hungry Bird (<b>2N09.1, 2N09.2, 2N10</b>) Make 10 Sequences (<b>2N10</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• That's 10! (<b>Activity 32</b>)</li> <li>• Buy 1—Get 1 (<b>Activities 33, 34, 36</b>)</li> <li>• Canada's Oldest Sport (<b>Activities 34, 36</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activity 33</b>)</li> <li>• Array's Bakery (<b>Activities 34, 36</b>)</li> <li>• Marbles, Alleys, Mibs, and Gull! (<b>Activity 35</b>)</li> <li>• A Class-full of Projects (<b>Activities 35, 36</b>)</li> <li>• The Money Jar (<b>Activity 35</b>)</li> <li>• The Great Dogsdog Race (<b>Activity 35</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Planting Seeds (<b>Activity 33</b>)</li> <li>• Math Makes Me Laugh (<b>Activities 35, 36</b>)</li> <li>• The Street Party (<b>Activities 35, 36</b>)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (<b>Activities 33, 34, 35</b>)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (<b>Activity 32</b>)</li> <li>- Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (<b>Activities 33, 34, 36; MED 7A: 1; MED 7B: 2</b>)</li> <li>- Fluently adds and subtracts with quantities to 20. (<b>Activities 34, 36; MED 7A: 2; MED 7B: 1, 2</b>)</li> <li>- Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (<b>Activity 35; MED 7A: 2</b>)</li> <li>- Estimates sums and differences of multi-digit numbers. (<b>Activity 35</b>)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p>

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

### Manitoba (continued)

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

**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.

- 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

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
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Variables and Equations)</p> <p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p>			
<p><b>2N8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> using the</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>13: Making 10 14: Finding Doubles</p> <p><b>On Grade: Teacher Cards</b></p> <p>32: Complements of 10 (<b>2N8, 2N9.3, 2N10</b>)</p> <p>33: Using Doubles (<b>2N10, 2PR5</b>)</p> <p>34: Fluency with 20 (<b>2N10, 2PR5</b>)</p> <p>35: Multi-Digit Fluency</p> <p>36: Operational Fluency Consolidation (<b>2N10</b>)</p> <p><b>On Grade: Math Every Day Card 7A:</b> Doubles and Near-Doubles (<b>2N10</b>)</p> <p>I Have... I Need... (<b>2N9.1, 2N10</b>)</p> <p><b>Card 7B:</b> Hungry Bird (<b>2N9.1, 2N9.2, 2N10</b>) Make 10 Sequences (<b>2N10</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• That's 10! (<b>Activity 32</b>)</li> <li>• Buy 1—Get 1 (<b>Activities 33, 34, 36</b>)</li> <li>• Canada's Oldest Sport (<b>Activities 34, 36</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activity 33</b>)</li> <li>• Array's Bakery (<b>Activities 34, 36</b>)</li> <li>• Marbles, Alleys, Mibs, and Guli! (<b>Activity 35</b>)</li> <li>• A Class-full of Projects (<b>Activities 35, 36</b>)</li> <li>• The Money Jar (<b>Activity 35</b>)</li> <li>• The Great Dogsdog Race (<b>Activity 35</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Planting Seeds (<b>Activity 33</b>)</li> <li>• Math Makes Me Laugh (<b>Activities 35, 36</b>)</li> </ul>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (<b>Activities 33, 34, 36</b>)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (<b>Activity 32</b>)</li> <li>- Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (<b>Activities 33, 34, 36; MED 7A: 1; MED 7B: 2</b>)</li> <li>- Fluently adds and subtracts with quantities to 20. (<b>Activities 34, 36; MED 7A: 2; MED 7B: 1, 2</b>)</li> <li>- Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (<b>Activity 35; MED 7A: 2</b>)</li> <li>- Estimates sums and differences of multi-digit numbers. (<b>Activity 35</b>)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p>



# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

<p>commutative property of addition (the order in which numbers are added does not affect the sum)</p> <ul style="list-style-type: none"> <li>• <b>2N9.4</b> using the associative property of addition (grouping a set of numbers in different ways does not affect the sum)</li> <li>• <b>2N9.5</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.</p> <p><b>2PR5</b> Students will be expected to record equalities and inequalities symbolically, using the equal symbol or not equal symbol.</p>	<ul style="list-style-type: none"> <li>• The Street Party (Activities 35, 36)</li> </ul>	<ul style="list-style-type: none"> <li>- Decomposes and combines numbers in equations to make them easier to solve (e.g., <math>8 + 5 = 3 + 5 + 5</math>). (Activities 34, 35, 36)</li> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 32; MED 7A: 1)</li> </ul>
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# Curriculum Correlation

## Number Cluster 7: Operational Fluency

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

### Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour <b>Cross Strand:</b> Patterns and Relations			
<b>N2.2</b> Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: <ul style="list-style-type: none"> <li>• <b>N2.2.1</b> representing strategies for adding and subtracting concretely, pictorially, and symbolically</li> <li>• <b>N2.2.2</b> creating and solving problems involving addition and subtraction</li> <li>• <b>N2.2.3</b> estimating</li> <li>• <b>N2.2.4</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>N2.2.5</b> analyzing the effect of adding or subtracting zero</li> </ul>	<b>Below Grade: Intervention</b> 13: Making 10 14: Finding Doubles  <b>On Grade: Teacher Cards</b> 32: Complements of 10 ( <b>N2.2.1</b> , <b>N2.2.5</b> , <b>N2.2.6</b> ) 33: Using Doubles ( <b>N2.2.1</b> , <b>P2.3.3</b> ) 34: Fluency with 20 ( <b>N2.2.1</b> , <b>P2.3.3</b> ) 35: Multi-Digit Fluency 36: Operational Fluency Consolidation ( <b>N2.2.1</b> )  <b>On Grade: Math Every Day Card 7A:</b> Doubles and Near-Doubles ( <b>N2.2.1</b> ) I Have... I Need... ( <b>N2.2.1</b> , <b>N2.2.4</b> ) <b>Card 7B:</b> Hungry Bird ( <b>N2.2.1</b> , <b>N2.2.2</b> , <b>N2.2.4</b> ) Make 10 Sequences ( <b>N2.2.1</b> )	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• That's 10! (<b>Activity 32</b>)</li> <li>• Buy 1—Get 1 (<b>Activities 33, 34, 36</b>)</li> <li>• Canada's Oldest Sport (<b>Activities 34, 36</b>)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• What Would You Rather? (<b>Activity 33</b>)</li> <li>• Array's Bakery (<b>Activities 34, 36</b>)</li> <li>• Marbles, Alleys, Mibs, and Guli! (<b>Activity 35</b>)</li> <li>• A Class-full of Projects (<b>Activities 35, 36</b>)</li> <li>• The Money Jar (<b>Activity 35</b>)</li> <li>• The Great Dogsdog Race (<b>Activity 35</b>)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• Planting Seeds (<b>Activity 33</b>)</li> <li>• Math Makes Me Laugh (<b>Activities 35, 36</b>)</li> <li>• The Street Party (<b>Activities 35, 36</b>)</li> </ul>	<b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (<b>Activities 33, 34, 35</b>)</li> </ul> Developing Fluency of Addition and Subtraction Computation <ul style="list-style-type: none"> <li>- Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). (<b>Activity 32</b>)</li> <li>- Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). (<b>Activities 33, 34, 36</b>; <b>MED 7A: 1</b>; <b>MED 7B: 2</b>)</li> <li>- Fluently adds and subtracts with quantities to 20. (<b>Activities 34, 36</b>; <b>MED 7A: 2</b>; <b>MED 7B: 1, 2</b>)</li> <li>- Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. (<b>Activity 35</b>; <b>MED 7A: 2</b>)</li> <li>- Estimates sums and differences of multi-digit numbers. (<b>Activity 35</b>)</li> </ul> <b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations <ul style="list-style-type: none"> <li>- Decomposes and combines numbers in equations to make them easier to solve (e.g., <math>8 + 5 = 3 + 5 + 5</math>). (<b>Activities 34, 35, 36</b>)</li> </ul>

# Curriculum Correlation

## Number Cluster 7: Operational Fluency

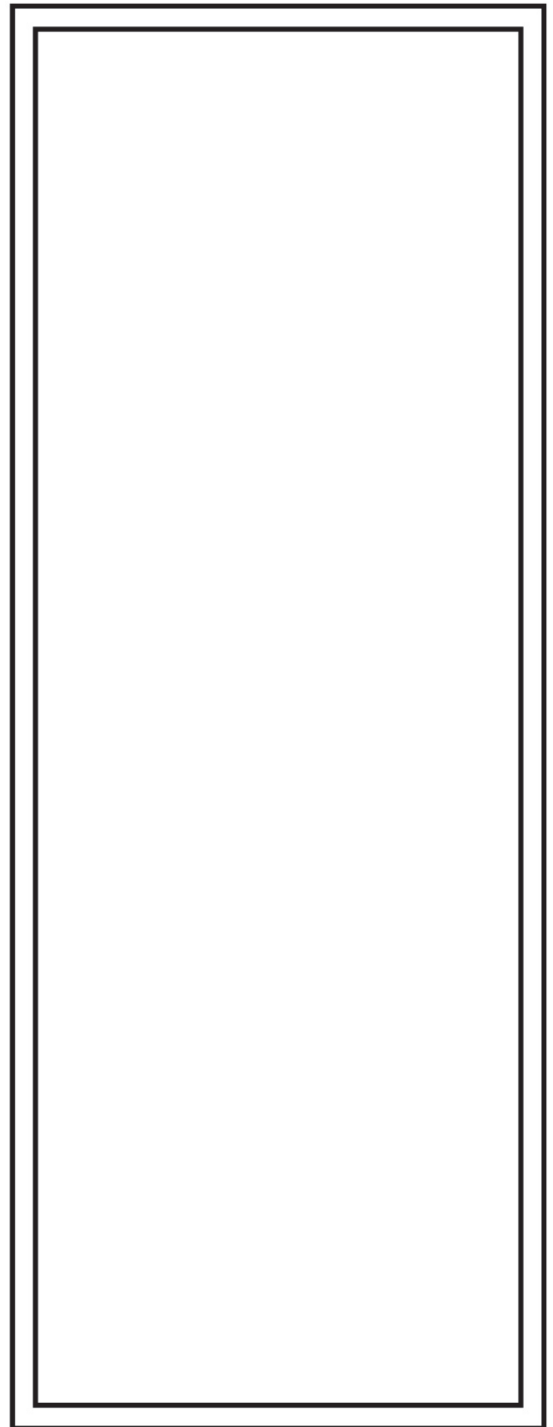
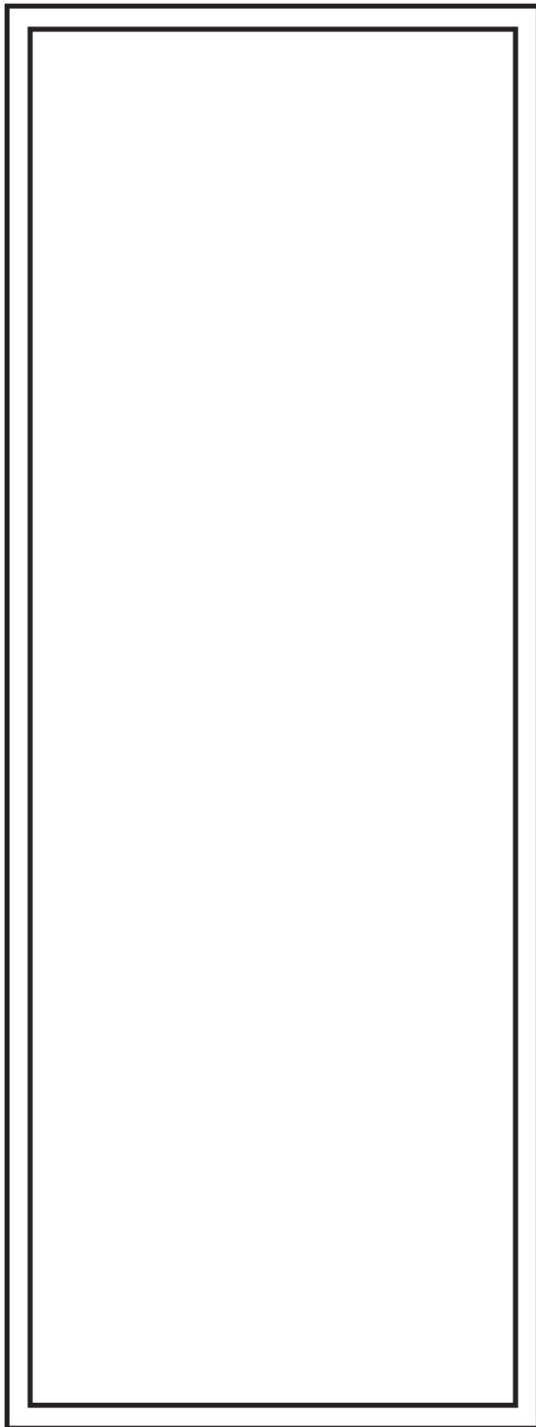
### Saskatchewan (continued)

<ul style="list-style-type: none"> <li>• <b>N2.2.6</b> analyzing the effect of the ordering of the quantities (addends, minuends, and subtrahends) in addition and subtraction statements.</li> </ul> <p><b>P2.3</b> Demonstrate understanding of equality and inequality concretely and pictorially (0 to 100) by:</p> <ul style="list-style-type: none"> <li>• <b>P2.3.1</b> relating equality and inequality to balance</li> <li>• <b>P2.3.2</b> comparing sets</li> <li>• <b>P2.3.3</b> recording equalities with an equal sign</li> <li>• <b>P2.3.4</b> recording inequalities with a not equal sign</li> <li>• <b>P2.3.5</b> solving problems involving equality and inequality.</li> </ul>		<p>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activity 32; MED 7A: 1)</p>
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Name \_\_\_\_\_ Date \_\_\_\_\_




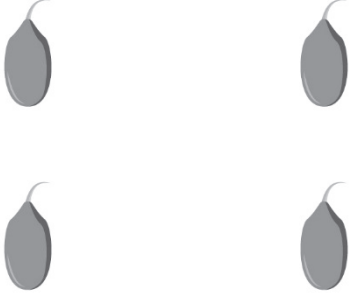
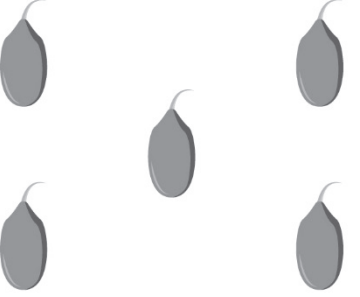
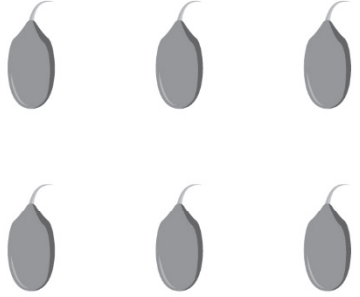



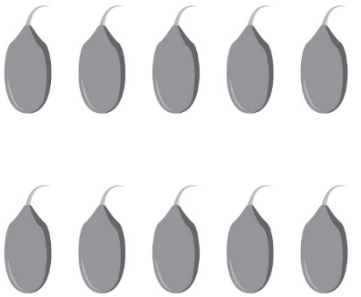
Master 84

# Planting Seeds



Master 85




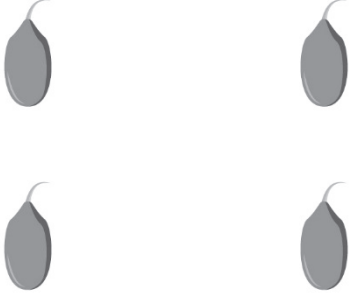
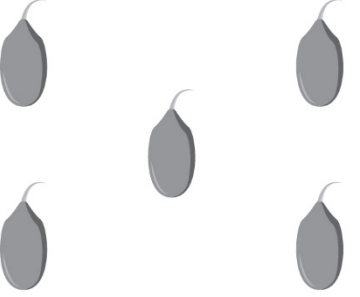
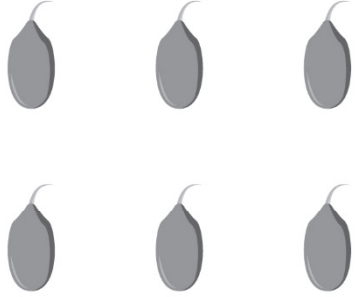



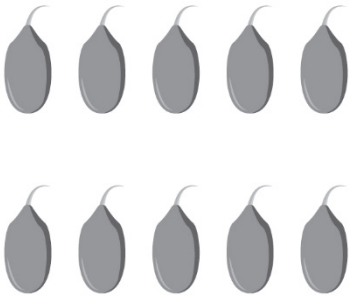
# Seed Cards (0–10)

No seeds		
		
		
		



Master 86a

# Seed Cards (0–20)

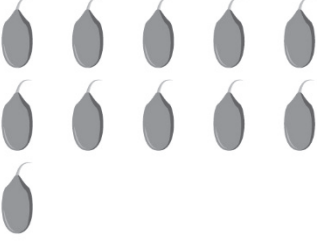









No seeds		
		
		
		



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 86b

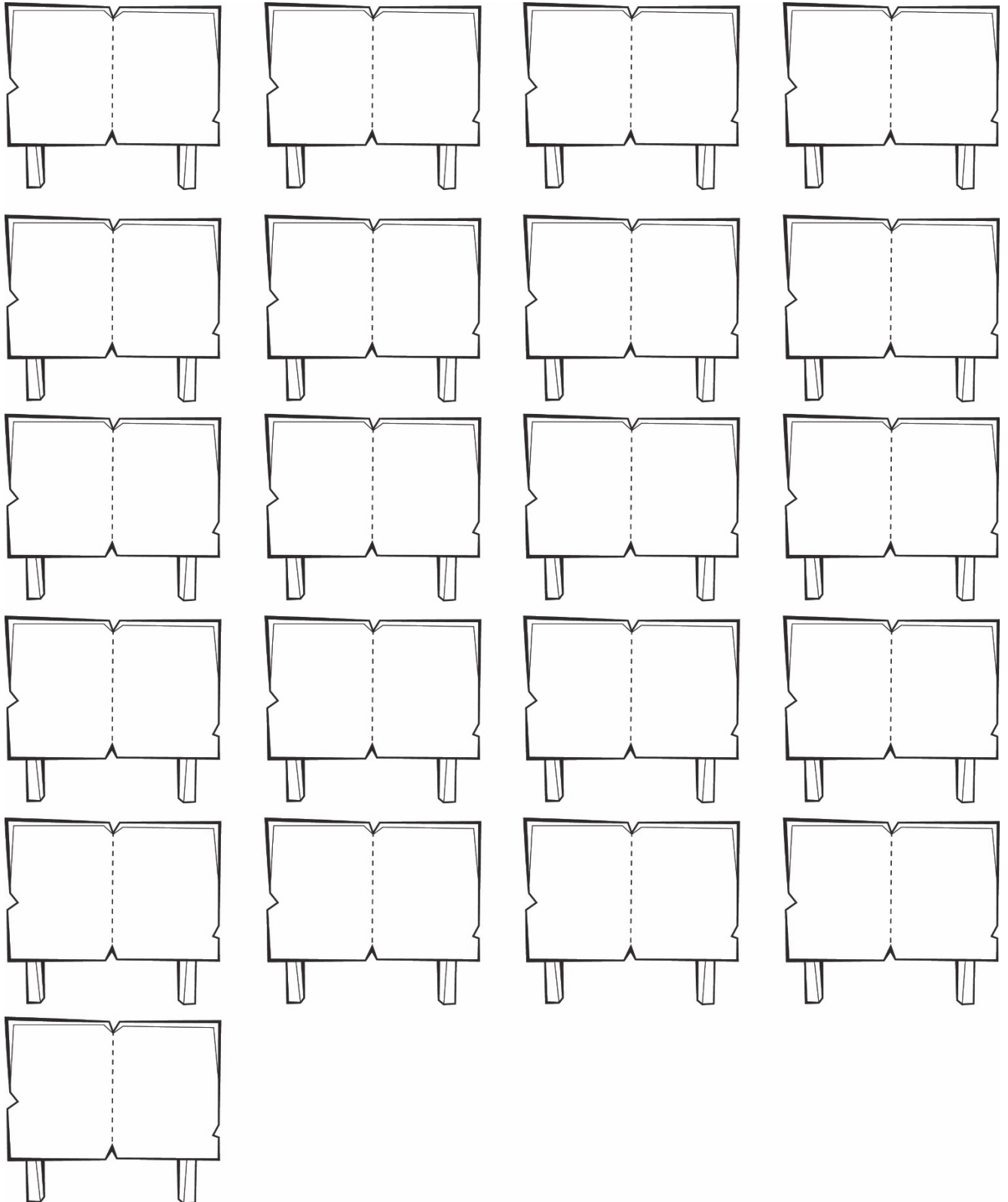
# Seed Cards (0–20)

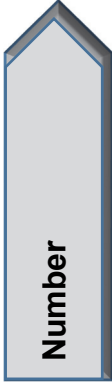


Master 87

# My 20 Garden

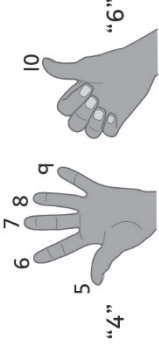
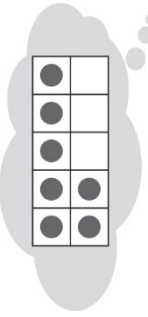






# Master 88: Activity 32 Assessment

## Complements of 10

Recalling Complements of 10 Behaviours/Strategies		
<p>1. Student says numbers randomly and is unable to find complements of 10.</p> <p>"4 seeds and 4 seeds"</p>	<p>2. Student finds complements of 10 by counting on with fingers.</p> 	<p>3. Student finds complements of 10 by visualizing a ten-frame.</p> 
Observations/Documentation		
<p>4. Student recalls many complements of 10, but struggles with 0.</p> <p>"I have 0 seeds. I don't know how many more are needed."</p>	<p>5. Student recalls complements of 10, but does not realize that the order of the numbers does not matter (e.g., 7 + 3 and 3 + 7 are the same).</p>	<p>6. Student fluently recalls complements of 10.</p>
Observations/Documentation		

Master 89a

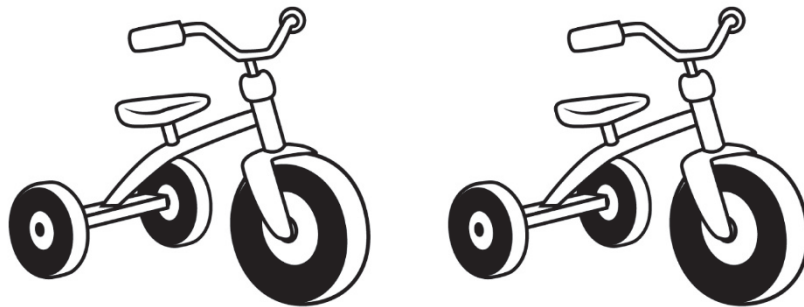
# Common Doubles



$$1 + 1 = 2$$



$$2 + 2 = 4$$

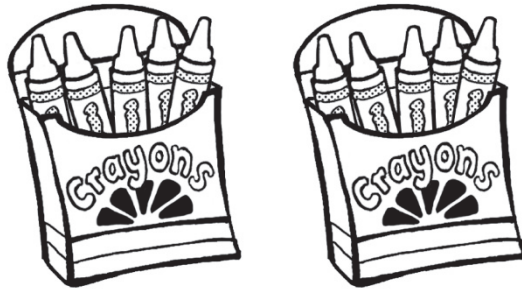


$$3 + 3 = 6$$

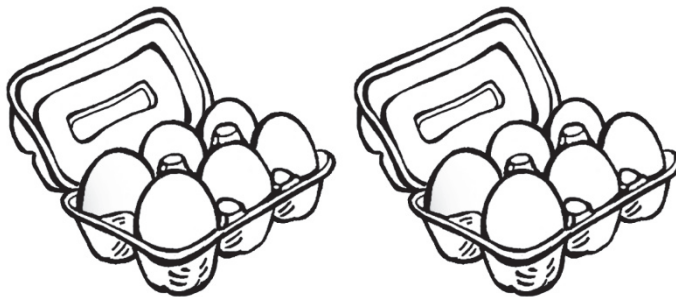
# Common Doubles



$$4 + 4 = 8$$



$$5 + 5 = 10$$



$$6 + 6 = 12$$

Master 89c

# Common Doubles



$$7 + 7 = 14$$



$$8 + 8 = 16$$

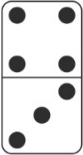
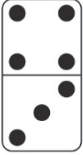
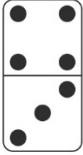

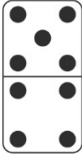
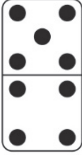


$$9 + 9 = 18$$



# Master 90: Activity 33 Assessment

## Using Doubles

Using Known Doubles Behaviours/Strategies			
<p>1. Student guesses and is unable to extend known sums to solve other equations.</p>  <p>"10"</p>	<p>2. Student counts all the dots by 1s and is unable to extend known sums to solve other equations.</p>  <p>"1, 2, 3, 4, 5, 6, 7"</p>	<p>3. Student counts on to find the number of dots and is unable to extend known sums to solve other equations.</p>  <p>"3"</p>	<p>4. Student extends known sums to solve other equations, but refers to doubles pictures.</p>  <p><math>5 + 5 = 10</math></p>
Observations/Documentation			
<p>5. Student has quick recall of known sums (doubles), but cannot extend them to solve other equations.</p>  <p>"I know 4 and 4 is 8."</p>	<p>6. Student extends known sums to solve other equations, but cannot explain strategy used.</p>  <p>"4 and 5 is 9."</p>	<p>7. Student fluently extends known sums to solve other equations, but struggles to write the number sentence.</p>	<p>8. Student fluently extends known sums to solve other equations and writes number sentences.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 91a

## Four in a Line Cards

$9 + 5$

$8 + 6$

$7 + 7$

$8 + 7$

$6 + 9$

$4 + 11$

$7 + 9$

$8 + 8$

$4 + 12$

$5 + 8$

$6 + 7$

$9 + 4$

$13 - 8$

$14 - 9$

$12 - 7$

$12 - 6$

$11 - 5$

$13 - 7$

$13 - 6$

$16 - 9$

$15 - 8$



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 91b

## Four in a Line Cards (for Combined Grades Extension)

$17 + 23$

$18 + 22$

$19 + 21$

$21 + 16$

$29 + 8$

$25 + 12$

$25 + 23$

$29 + 19$

$32 + 16$

$15 + 16$

$19 + 12$

$22 + 9$

$38 - 19$

$40 - 21$

$31 - 12$

$22 - 11$

$43 - 32$

$31 - 20$

$20 + 21$

$22 + 19$

$12 + 29$



Master 92

**Three in a Line Cards  
(for Accommodations)**

$2 + 8$

$3 + 7$

$6 + 4$

$2 + 3$

$1 + 4$

$10 - 5$

$1 + 3$

$2 + 2$

$10 - 6$

$3 + 3$

$4 + 2$

$8 - 2$

$6 + 1$

$3 + 4$

$9 - 2$

$4 + 4$

$9 - 1$

$5 + 3$

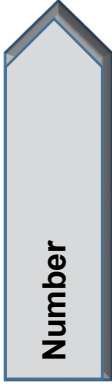




Master 93

### Four in a Line Game Board (for Combined Grades Extension)

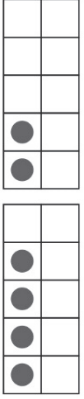
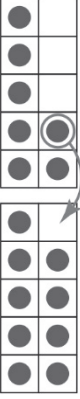
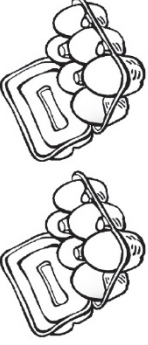
40	37	48	19	31
41	19	11	41	37
11	37	31	48	19
31	41	40	11	48
40	19	11	37	31
37	31	48	19	40
48	41	40	31	41
40	19	37	48	11



# Master 94: Activity 34 Assessment

## Fluency with 20

Number

Adding and Subtracting Numbers to 20 Behaviours/Strategies			
<p>1. Student uses ten-frames and counters to add and subtract with quantities to 20.</p>  <p>"1, 2, 3, 4, 5, 6"</p>	<p>2. Student counts on or back to add and subtract with quantities to 20.</p> <p>"7" "8, 9, 10, ..., 14, 15, 16"</p> <p><math>7 + 9</math></p>	<p>3. Student uses ten-frames and counters to make 10 when adding and subtracting with quantities to 20.</p> 	<p>4. Student refers to doubles pictures when extending known sums to add and subtract with quantities to 20.</p> <p>"6 + 7 = ?"</p>  <p><math>6 + 6 = 12</math></p>
Observations/Documentation			
<p>5. Student uses the same strategy in every situation when adding and subtracting with quantities to 20.</p> <p>"I like to count on!"</p>	<p>6. Student fluently adds with quantities to 20, but counts back by 1s to subtract.</p> <p><math>11 - 5 = ?</math></p> <p>"10, 9, 8, 7, 6"</p>	<p>7. Student adds and subtracts with quantities to 20 and extends known sums and differences to solve other equations, but struggles to explain thinking.</p>	<p>8. Student fluently adds and subtracts with quantities to 20, extends known sums and differences to solve other equations, and explains thinking.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 95a

## Question Cards

$$19 + 23$$

$$48 + 37$$

$$31 + 33$$

$$49 + 51$$

$$35 - 29$$

$$80 - 41$$

$$24 - 12$$

$$100 - 49$$



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 95b

## Question Cards (for Accommodations)

$$19 + 12$$

$$38 + 30$$

$$12 + 13$$

$$23 + 21$$

$$25 - 19$$

$$30 - 16$$

$$29 - 12$$

$$22 - 11$$



Name \_\_\_\_\_ Date \_\_\_\_\_

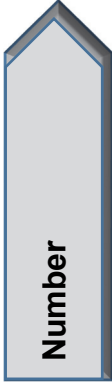
Master 96

## ***Multi-Digit Fluency* Recording Sheet**

**Our question:**

**Our estimate:**

**What we did:**



# Master 97: Activity 35 Assessment

## Multi-Digit Fluency

Estimating Sums and Differences Behaviours/Strategies			
1. Student guesses and is unable to estimate sums and differences. $49 + 51$ "500!"	2. Student estimates sums and differences, but estimate is unreasonable. $49 + 51$ "50"	3. Student estimates sums and differences, but changes estimate to match actual sum or difference.	4. Student successfully estimates sums and differences of multi-digit numbers.
<b>Observations/Documentation</b>			

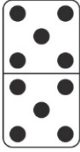
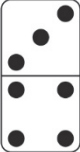
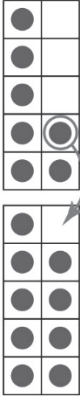

  

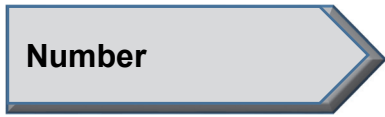
Adding and Subtracting with Multi-Digit Numbers Behaviours/Strategies			
1. Student counts and does not use efficient mental strategies to solve equations.	2. Student uses the same mental strategy to solve all equations with multi-digit numbers.	3. Student uses efficient mental strategies to solve addition equations with multi-digit numbers, but struggles with subtraction.	4. Student successfully uses efficient mental strategies to solve equations with multi-digit numbers.
<b>Observations/Documentation</b>			



# Master 98a: Activity 36 Assessment

## Operational Fluency: Consolidation

Adding and Subtracting Numbers to 20 Behaviours/Strategies			
<p>1. Student counts to add and subtract with quantities to 20.</p>  <p>"1, 2, 3, ..., 8, 9, 10"</p>	<p>2. Student counts on or back to add and subtract with quantities to 20.</p>  <p>"4" "5, 6, 7"</p>	<p>3. Student uses ten-frames and counters or other materials to show a strategy when adding and subtracting with quantities to 20.</p> 	<p>4. Student refers to doubles pictures when extending known sums to add and subtract with quantities to 20.</p> <p>"8 + 9 = ?"</p>  <p>8 + 8 = 16</p>
Observations/Documentation			
<p>5. Student uses the same strategy in every situation to add and subtract with quantities to 20.</p> <p>"I like to use doubles!"</p>	<p>6. Student fluently adds with quantities to 20, but counts back by 1s to subtract.</p>	<p>7. Student adds and subtracts with quantities to 20 and extends known sums to solve other equations, but struggles to explain thinking.</p>	<p>8. Student fluently adds and subtracts with quantities to 20, extends known sums to solve other equations, and explains thinking.</p>
Observations/Documentation			



# Master 98b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can find the complements of 10. <b>(Activity 32)</b>									
Student realizes that the order in which two numbers are added does not matter. <b>(Activity 32)</b>									
Student can use known doubles/sums/differences to find other sums/differences. <b>(Activities 33, 34, 36)</b>									
Student can write number sentences to represent addition and subtraction situations. <b>(Activities 33, 34)</b>									
Student can fluently add and subtract numbers to 20. <b>(Activities 34, 36)</b>									
Student can use mental strategies to estimate sums and differences. <b>(Activity 35)</b>									
Student uses efficient mental strategies to solve equations with multi-digit numbers. <b>(Activity 35)</b>									
Student uses math language to explain the strategies used to find answers. <b>(Activities 33, 34, 35, 36)</b>									



Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Finds the complements of 10. <b>(Activity 32)</b>			
Realizes that the order in which two numbers are added does not matter. <b>(Activity 32)</b>			
Uses known doubles/sums/differences to find other sums/differences. <b>(Activities 33, 34, 36)</b>			
Writes number sentences to represent addition and subtraction situations. <b>(Activities 33, 34)</b>			
Fluently adds and subtracts numbers to 20. <b>(Activities 34, 36)</b>			
Uses mental strategies to estimate sums and differences. <b>(Activity 35)</b>			
Uses efficient mental strategies to solve equations with multi-digit numbers. <b>(Activity 35)</b>			
Uses math language to explain the strategies used to find answers. <b>(Activities 33, 34, 35, 36)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 8: Early Multiplicative Thinking

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b></p> <p><b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division</p> <p><b>Cross Strand:</b> Patterning and Algebra</p> <p><b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p> <p><b>Expressions and Equality:</b> demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18</p>			
<p><b>N2.9</b> 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</p> <p><b>N2.14</b> represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of equal groups</p> <p><b>N2.15</b> represent and explain, through investigation using concrete materials and drawings, division as the sharing of a quantity equally</p> <p><b>P2.1</b> identify and describe, through investigation, growing patterns and shrinking</p>	<p><b>Below Grade: Intervention</b></p> <p>15: How Many Do You See?</p> <p>16: Messy and Organize It</p> <p><b>On Grade: Teacher Cards</b></p> <p>37: Grouping in 2s, 5s, and 10s (N2.9, N2.15, P2.8)</p> <p>38: Making Equal Shares (N2.15)</p> <p>39: Making Equal Groups (N2.15, P2.8)</p> <p>40: Exploring Repeated Addition (N2.9, N2.14, P2.1)</p> <p>41: Repeated Addition and Multiplication (N2.9, N2.14, P2.1)</p> <p>42: Early Multiplicative Thinking Consolidation (N2.9, N2.14, N2.15, P2.1, P2.8)</p> <p><b>On Grade: Math Every Day Card 8A:</b></p> <p>Counting Equal Groups to Find How Many (N2.9)</p> <p>I Spy (N2.9, N2.14, P2.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>How Many Is Too Many? (Activities 37, 39, 42)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>What Would You Rather? (Activity 37)</li> <li>Ways to Count (Activity 37)</li> <li>Family Fun Day (Activities 37, 39)</li> <li>The Best Birthday (Activity 38)</li> <li>Array's Birthday (Activities 38, 39, 40, 41, 42)</li> <li>Marbles, Alleys, Mibs, and Gull! (Activities 39, 40, 41, 42)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Calla's Jingle Dress (Activities 38, 39, 40, 41, 42)</li> <li>Sports Camp (Activities 40, 41, 42)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>Applying the Principles of Counting</li> <li>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)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <ul style="list-style-type: none"> <li>Unitizing Quantities and Comparing Units to the Whole</li> <li>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)</li> <li>Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39)</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.</b></p> <ul style="list-style-type: none"> <li>Developing Conceptual Meaning of Multiplication and Division</li> <li>Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2)</li> <li>Models and solves equal sharing problems to 100. (Activities 38, 42)</li> </ul>

# Curriculum Correlation

## Number Cluster 8: Early Multiplicative Thinking

### Ontario (continued)

<p>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</p> <p><b>P2.8</b> demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials</p>	<p><b>Card 8B:</b> How Many Blocks? (N2.9, N2.14, P2.1) How Many Ways? (N2.9, N2.14, P2.1, P2.8)</p>	<ul style="list-style-type: none"> <li>Planting Seeds (Activities 41, 42)</li> </ul>	<ul style="list-style-type: none"> <li>Models and solves equal grouping problems to 100. (Activities 39, 42)</li> <li>Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)</li> <li>Models equal groups and uses multiplication symbol (<math>\times</math>) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>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)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>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)</li> </ul>
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Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 100**

## ***Grouping Recording Sheet***




Write numbers in the chart depending on how they can be grouped.

Can be grouped in 2s	Can be grouped in 5s	Can be grouped in 10s



# Master 101: Activity 37 Assessment

## Grouping in 2s, 5s, and 10s

Grouping Items in 2s, 5s, and 10s Behaviours/Strategies		
<p>1. Student counts all items by 1s rather than grouping items in 2s, 5s, and 10s.</p>  <p>"1, 2, 3, ..., 8, 9, 10"</p>	<p>2. Student groups items in 2s, 5s, and 10s, but groups are not all equal.</p> 	<p>3. Student groups items in 2s, 5s, and 10s, but does not recognize that the quantity will be the same when the items are grouped in different ways.</p> <p>"When I grouped in 2s, there were 10. I'm not sure how many there would be if I grouped in 5s."</p>
Observations/Documentation		
<p>4. Student groups items in 2s, 5s, and 10s, but ignores the leftover(s).</p>  <p>"I can use 15 items to make groups of 2."</p>	<p>5. Student groups items in 2s, 5s, and 10s, but does not notice any patterns in the chart.</p>	<p>6. Student groups items in 2s, 5s, and 10s and notices patterns in the chart.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 102

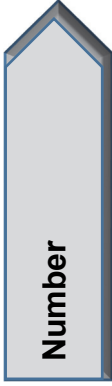
## Our Equal-Sharing Problem

\_\_\_\_\_ has \_\_\_\_\_.

\_\_\_\_\_ wants to share them equally among

\_\_\_\_\_ friends. How many will each friend get?

### Our Solution



# Master 103: Activity 38 Assessment

## Making Equal Shares

Solving Equal-Sharing Problems Behaviours/Strategies			
1. Student solves equal-sharing problem, but miscounts and does not start with the correct number of items.		2. Student solves equal-sharing problem, but does not share the items equally.	
3. Student solves equal-sharing problem, but does not share all of the items.		4. Student solves equal-sharing problem, but does not share the correct number of children.	
Observations/Documentation			
5. Student successfully solves equal-sharing problem by sharing items one at a time, but is only comfortable sharing between 2 children.		6. Student successfully solves equal-sharing problem by sharing items one at a time among any number of children.	
7. Student successfully solves equal-sharing problem by sharing more than one item at a time but, in his or her own problem, uses a number that cannot be shared equally.		8. Student successfully solves equal-sharing problem and, in her or his own problem, uses a number that can be shared equally.	
Observations/Documentation			
8. Student successfully solves equal-sharing problem and, in her or his own problem, uses a number that can be shared equally.		9. Student successfully solves equal-sharing problem and, in her or his own problem, uses a number that can be shared equally.	

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 104

# Making Equal Groups Recording Sheet

Number of Students: 24




Number of Groups	Group Size





# Master 105: Activity 39 Assessment

## Making Equal Groups

Solving Equal-Grouping Problems Behaviours/Strategies			
1. Student solves equal-grouping problem, but miscounts and does not start with 24 items.	2. Student solves equal-grouping problem, but not all groups are of the same size. 	3. Student solves equal-grouping problem, but ignores the fact that there are leftover items.  "I made 3 groups of 7."	4. Student solves equal-grouping problem in one way, but struggles to find other ways.  "I can't find another way."
Observations/Documentation			
5. Student solves equal grouping problem, but struggles to represent different ways on paper.	6. Student solves equal-grouping problem, but does not realize that as the number of items in a group increases, the number of equal groups decreases.	7. Student solves equal-grouping problem, but does not recognize the relationship between opposite groupings.	8. Student successfully solves equal-grouping problem and recognizes all patterns.
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 106

## *Our Repeated Addition Problems* Recording Sheet

Picture of Object



How many

\_\_\_\_\_ on \_\_\_\_\_ ?

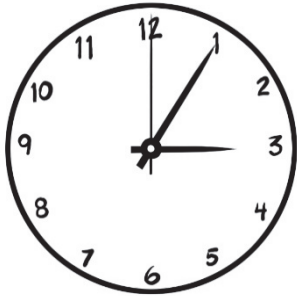
\_\_\_\_\_ on \_\_\_\_\_ ?

\_\_\_\_\_ on \_\_\_\_\_ ?

\_\_\_\_\_ on \_\_\_\_\_ ?

**Master 107**

# How Many? Objects



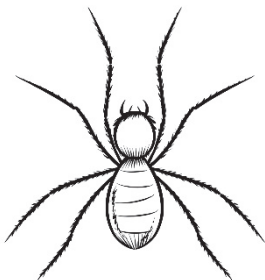
**1 clock has 3 hands.**



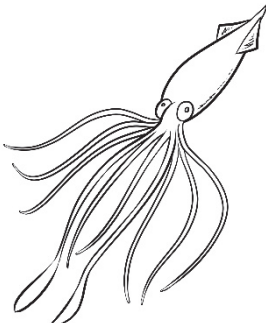
**1 insect has 6 legs.**

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7

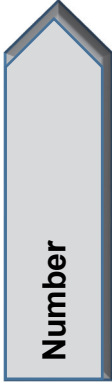
**1 week has 7 days.**



**1 spider has 8 legs.**

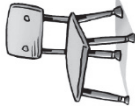





**1 squid has 10 limbs.**



# Master 108: Activity 40 Assessment

## Exploring Repeated Addition

Using Repeated Addition to Solve Problems Behaviours/Strategies		
<p>1. Student chooses a problem set, but miscounts or mixes up numbers in the counting sequence.</p>  <p>"1, 2, 3" "4, 5, 6, 7" "9, 10"</p>	<p>2. Student uses repeated addition of groups to solve problems, but loses track of the count when counting or skip-counting.</p> <p>"I'm not sure if I counted the wheels on 3 bicycles or 4 bicycles."</p>	<p>3. Student uses repeated addition of groups to solve problems, but counts all the items by 1s.</p>  <p>"1 2 3 4 5 6"</p>
Observations/Documentation		
<p>4. Student uses repeated addition of groups and skip-counts to solve problems, but struggles to write or match repeated addition sentences.</p>  <p>"2, 4, 6" "I don't know what to write."</p>	<p>5. Student uses repeated addition of groups, skip-counts to solve problems, and writes/matches repeated addition sentences.</p>  <p>"2, 4, 6" <math>2 + 2 + 2</math></p>	<p>6. Student uses repeated addition of groups to solve problems (using what is known from previous problems) and writes/matches repeated addition sentences.</p> <p>"There are 8 legs on 2 chairs, so there are 8 and 4 more legs, or 12 legs, on 3 chairs."</p>
Observations/Documentation		

Master 109a

# Repeated Addition Problems

**Side A**

There are 2 shoes in a pair.  
How many shoes are in 4 pairs?



**Side A**

There are 3 wheels on a tricycle.  
How many wheels are on 4 tricycles?



**Side A**

There are 4 wheels on a car.  
How many wheels are on 3 cars?



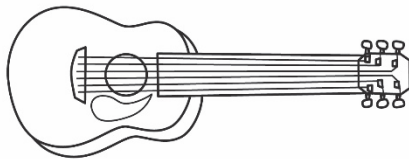
**Side A**

A glove has 5 fingers.  
How many fingers do 2 gloves have?



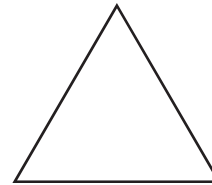
**Side A**

A guitar has 6 strings.  
How many strings do 2 guitars have?



**Side A**

There are 3 sides on a triangle.  
How many sides are on 3 triangles?



**Side B**

A star has 5 points.  
How many points do 5 stars have?



**Side B**

A wolf has 2 ears.  
How many ears do 7 wolves have?



**Master 109b**

# Repeated Addition Problems

**Side B**

There are 4 leaves on a four-leaf clover.  
How many leaves are on 6 four-leaf clovers?



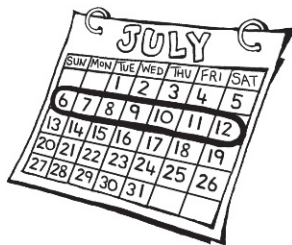
**Side B**

A muffin tin holds 6 muffins.  
How many muffins do 5 tins hold?



**Side B**

There are 7 days in a week.  
How many days are in 4 weeks?



**Side B**

A scorpion has 8 legs.  
How many legs do 3 scorpions have?



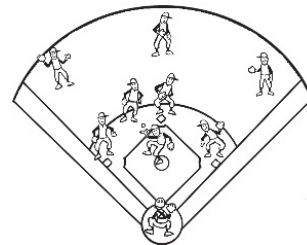
**Side B**

A stop sign has 8 sides.  
How many sides do 2 stop signs have?



**Side B**

A baseball team has 9 players.  
How many players do 3 teams have?



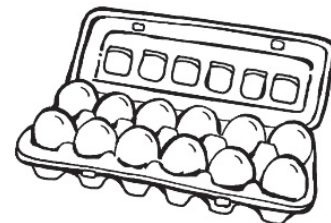
**Side B**

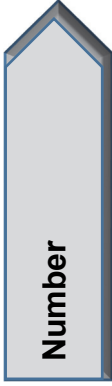
Wieners come in packages of 10.  
How many wieners are in 3 packages?



**Side B**

Eggs come in cartons of 12.  
How many eggs are in 2 cartons?





# Master 110: Activity 41 Assessment

## Repeated Addition and Multiplication

Repeated Addition and Multiplication Behaviours/Strategies			
<p>1. Student uses repeated addition of groups of cubes to solve the problem, but miscounts or makes groups of different sizes.</p> <p>"1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11"</p>	<p>2. Student uses repeated addition of groups to solve the problem by modelling with groups of cubes.</p>	<p>3. Student uses repeated addition of groups to solve the problem by modelling with one group of cubes.</p> <p>"1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12"</p> <p>Or "3, 6, 9, 12"</p>	<p>4. Student uses repeated addition of groups to solve the problem by placing trains of cubes on a number line and then counting by 1s or skip-counting.</p>
Observations/Documentation			
<p>5. Student uses repeated addition of groups to solve the problem by taking equal jumps on a number line, but mixes up the length of the arc with the number of items.</p>	<p>6. Student uses repeated addition of groups to solve the problem by taking equal jumps on a number line, but struggles to write a repeated addition sentence.</p> <p>"I don't know how to write an addition sentence."</p>	<p>7. Student uses repeated addition of groups to solve the problem by taking equal jumps on a number line, writes a repeated addition sentence, but struggles to write a multiplication sentence.</p> <p>"3 + 3 + 3 + 3 = 12. That's the only number sentence I can write."</p>	<p>8. Student successfully uses repeated addition of groups to solve the problem, writes a repeated addition sentence, and uses multiplication symbol to symbolize the operation.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 111a

## Item Cards

12	20	18
24	25	15





Name \_\_\_\_\_ Date \_\_\_\_\_

Master 111b

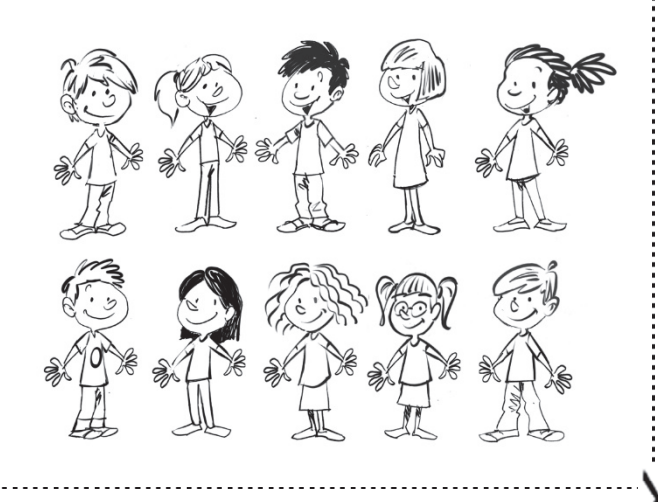
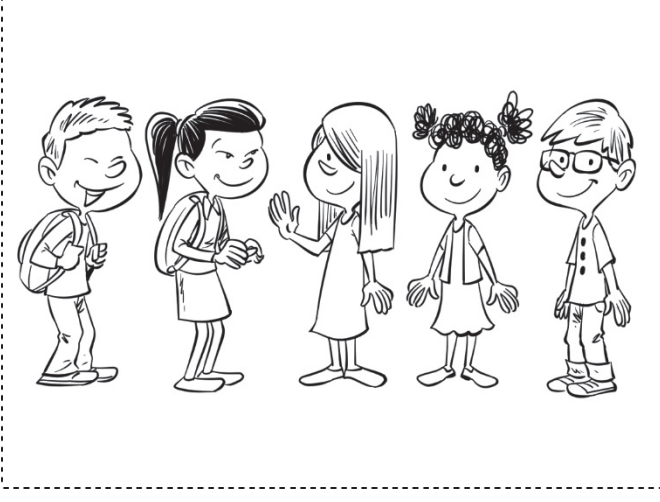
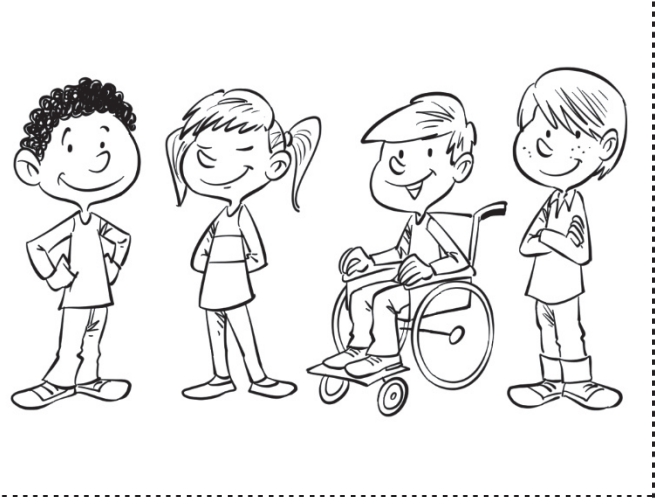
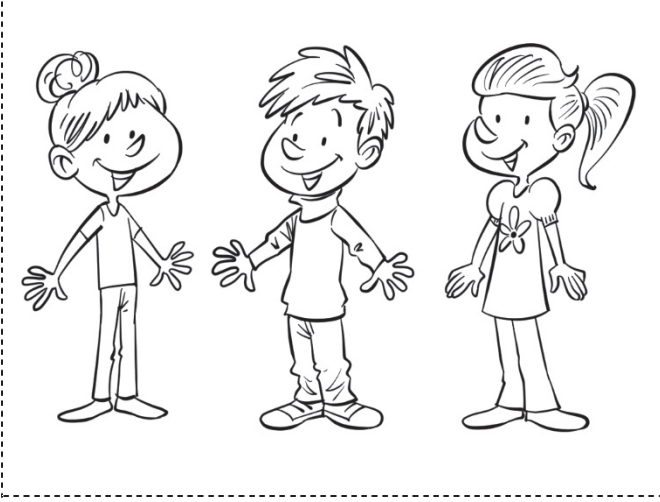
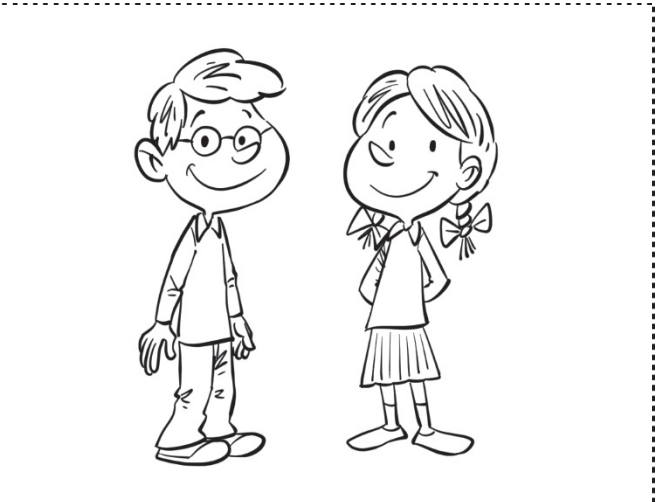
## Item Cards (for Combined Grades Extension)

60	100	48
36	31	45



Master 112

# People Cards

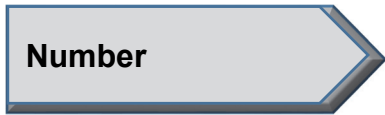




# Master 113a: Activity 42 Assessment

## Early Multiplicative Thinking: Consolidation

Equal Sharing Behaviours/Strategies			
1. Student turns over a card, but struggles to say the number name sequence forward and does not start with correct number of items.		2. Student shares items, but does not share the items equally.	4. Student successfully shares items equally by sharing more than one item at a time (partitive sharing).
Observations/Documentation			
Equal Grouping Behaviours/Strategies			
1. Student arranges objects in groups, but not all groups are of the same size.		2. Student arranges objects in equal groups, but ignores the leftovers.	4. Student successfully arranges objects in equal groups and writes a repeated addition and multiplication sentence.
Observations/Documentation			



# Master 113b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can group items in 2s, 5s, and 10s. <b>(Activities 37, 42)</b>									
Student realizes that the quantity will be the same when items are grouped in different ways. <b>(Activity 37)</b>									
Student can model and solve equal-sharing problems. <b>(Activities 38, 42)</b>									
Student can model and solve equal-grouping problems. <b>(Activities 39, 42)</b>									
Student recognizes that as the number of items in a group increases, the number of equal groups decreases. <b>(Activity 39)</b>									
Student can use repeated addition of groups to solve problems. <b>(Activity 40)</b>									
Student can write repeated addition/multiplication sentences to represent problems. <b>(Activities 40, 41, 42)</b>									
Student can relate repeated addition on a number line to multiplication. <b>(Activity 41)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Groups items in 2s, 5s, and 10s. <b>(Activities 37, 42)</b>			
Realizes that the quantity will be the same when items are grouped in different ways. <b>(Activity 37)</b>			
Models and solves equal-sharing problems. <b>(Activities 38, 42)</b>			
Models and solves equal-grouping problems. <b>(Activities 39, 42)</b>			
Recognizes that as the number of items in a group increases, the number of equal groups decreases. <b>(Activity 39)</b>			
Uses repeated addition of groups to solve problems. <b>(Activity 40)</b>			
Writes repeated addition/multiplication sentences to represent problems. <b>(Activities 40, 41, 42)</b>			
Relates repeated addition on a number line to multiplication. <b>(Activity 41)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b>  <b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢  <b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division  <b>Cross Strand:</b> Patterning and Algebra  <b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p>			
<p><b>N2.1</b> represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools</p> <p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.8</b> estimate, count, and represent (using the ¢ symbol) the value of a collection of coins with a maximum value of one dollar.</p> <p><b>N2.9</b> 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,</p>	<p><b>Below Grade: Intervention</b>            17: Counting Coins            18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b>            43: Estimating Money (N2.1, N2.8, N2.9, P2.1)            44: Earning Money (N2.3, N2.8, N2.9, N2.16, N2.17, P2.1)            45: Spending Money            46: Saving Regularly (N2.1, N2.8, N2.9, N2.16, N2.17)            47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b>            Collections of Coins (N2.8, N2.9)            Showing Money in Different Ways (N2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>Applying the Principles of Counting</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities (Multitude or Magnitude)</p> <ul style="list-style-type: none"> <li>Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46)</li> <li>Estimating Quantities and Numbers</li> <li>Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43)</li> <li>Decomposing Wholes into Parts and Composing Wholes from Parts</li> <li>Composes and decomposes quantities to 20. (Activity 45)</li> <li>Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</li> </ul>
<p><b>Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p>			

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

Master 114b

<p><b>Ontario (continued)</b> and 10</p> <p><b>N2.16</b> 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</p> <p><b>N2.17</b> add and subtract money amounts to 100¢, using a variety of tools (e.g., concrete materials, drawings) and strategies (e.g., counting on, estimating, representing using symbols).</p> <p><b>P2.1</b> 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</p>		<ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. <b>(Activities 45, 47)</b></li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. <b>(Activities 45, 46, 47)</b></li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). <b>(Activities 43, 44; MED 9:1)</b></li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). <b>(Activities 43, 44, 46, 47; MED 9:1)</b></li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). <b>(Activities 45, 47)</b></li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Ideas</b> Numbers to 100 represent quantities that can be decomposed into 10s and 1s. Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p>Number concepts to 100 Counting</p> <ul style="list-style-type: none"> <li>• <b>2.1</b> skip-counting by 2, 5, and 10:             <ul style="list-style-type: none"> <li>– <b>2.1a</b> using different starting points</li> <li>– <b>2.1b</b> increasing and decreasing (forward and backward)</li> </ul> </li> <li>• <b>2.2</b> Quantities to 100 can be arranged and recognized             <ul style="list-style-type: none"> <li>– <b>2.2a</b> comparing and ordering numbers to 100</li> </ul> </li> </ul> <p>Addition and subtraction to 20</p> <ul style="list-style-type: none"> <li>• <b>2.5</b> adding and subtracting numbers to 20</li> </ul> <p>Addition and subtraction to 100</p> <ul style="list-style-type: none"> <li>• <b>2.7</b> decomposing numbers to 100</li> <li>• <b>2.8</b> estimating sums and differences to 100</li> <li>• <b>2.12</b> using addition and subtraction in real-life</li> </ul>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (2.1, 2.2a, 2.8, 2.16, 2.32) 44: Earning Money (2.1, 2.7, 2.12, 2.16, 2.32, 2.33, 2.34) 45: Spending Money (2.5, 2.7, 2.21, 2.33, 2.34) 46: Saving Regularly (2.1, 2.2a, 2.5, 2.12, 2.16, 2.32, 2.33, 2.34) 47: Financial Literacy Consolidation (2.1, 2.5, 2.16, 2.21, 2.33, 2.34)</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (2.1, 2.16, 2.32) Showing Money in Different Ways (2.7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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 43, 44, 46, 47; MED 9:1)</p> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46) Estimating Quantities and Numbers - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activity 45) - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</p> <p><b>Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Uses symbols and equations to represent addition and subtraction situations. (Activities 45, 47)</p>



# Curriculum Correlation

## Number Cluster 9: Financial Literacy

### British Columbia/Yukon Territories (continued)

<p>contexts and problem-based situations</p> <p>Financial literacy — coin combinations to 100 cents, and spending and saving</p> <ul style="list-style-type: none"> <li>• <b>2.32</b> counting simple mixed combinations of coins to 100 cents</li> <li>• <b>2.33</b> introduction to the concepts of spending and saving, integrating the concept of wants and needs</li> <li>• <b>2.34</b> role-playing financial transactions (e.g., using bills and coins)</li> </ul> <p>Repeating and increasing patterns</p> <ul style="list-style-type: none"> <li>• <b>2.16</b> increasing patterns using manipulatives, sounds, actions, and numbers (0 to 100)</li> <li>• <b>2.21</b> Symbolic representation of equality and inequality</li> </ul>		<p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 45, 46, 47)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 43, 44; MED 9:1)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 45, 47)</li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Patterns)</p> <p><b>General Outcome</b> Use patterns to describe the world and solve problems.</p> <p><b>2N1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2N1.2</b> 10s using starting points from 1 to 9</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p> <p><b>2N6</b> Estimate quantities to 100 using referents.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1</p>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (<b>2N1.1, 2N4, 2N5, 2N6, 2PR2</b>) 44: Earning Money (<b>2N1.1, 2N4, 2N9.1, 2PR2</b>) 45: Spending Money 46: Saving Regularly (<b>2N1.1, 2N5, 2N9.1, 2PR2</b>) 47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (<b>2N1.1, 2N1.2, 2PR2</b>) Showing Money in Different Ways (<b>2N4</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Buy 1—Get 1 (<b>Activities 45, 47</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Money Jar (<b>Activities 43, 45, 47</b>)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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. (<b>Activities 43, 44, 46, 47; MED 9:1</b>)</p> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude) - Compares and orders quantities and written numbers using benchmarks. (<b>Activities 43, 46</b>) Estimating Quantities and Numbers - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (<b>Activities 43</b>) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (<b>Activity 45</b>) - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (<b>Activities 43, 44; MED 9:2</b>)</p> <p><b>Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Uses symbols and equations to represent addition and subtraction situations. (<b>Activities 45, 47</b>)</p>

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

<p>and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR2</b> Demonstrate an understanding of increasing patterns by using manipulatives, diagrams, sounds and actions (numbers to 100)</p>		<p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 45, 46, 47)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 43, 44; MED 9:1)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 45, 47)</li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Patterns)</p> <p><b>General Outcome</b> Use patterns to describe the world and solve problems.</p> <p><b>2.N.1</b> Say the number sequence from 0 to 100 by:</p> <ul style="list-style-type: none"> <li><b>2.N.1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li><b>2.N.1.2</b> 10s using starting points from 1 to 9</li> </ul> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially, and symbolically.</p> <p><b>2.N.5</b> Compare and order numbers up to 100.</p> <p><b>2.N.6</b> Estimate quantities to 100 using referents.</p> <p><b>2.N.9</b> Demonstrate an understanding of</p>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (2.N.1.1, 2.N.4, 2.N.5, 2.N.6, 2.PR.2) 44: Earning Money (2.N.1.1, 2.N.4, 2.N.9.1, 2.PR.2) 45: Spending Money 46: Saving Regularly (2.N.1.1, 2.N.5, 2.N.9.1, 2.PR.2) 47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (2.N.1.1, 2.N.1.2, 2.PR.2) Showing Money in Different Ways (2.N.4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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 43, 44, 46, 47; MED 9:1)</p> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46) Estimating Quantities and Numbers - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activity 45) - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</p>
			<b>Quantities and numbers can be added and</b>

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

### Manitoba (continued)

<p>addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2.PR.2</b> Demonstrate an understanding of increasing patterns by using manipulatives, diagrams, sounds and actions (numbers to 100)</p>		<p><b>subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Uses symbols and equations to represent addition and subtraction situations. (<b>Activities 45, 47</b>)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (<b>Activities 45, 46, 47</b>)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 43, 44; MED 9:1</b>)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 43, 44, 46, 47; MED 9:1</b>)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (<b>Activities 45, 47</b>)</li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to demonstrate number sense.</p> <p><b>Cross Strand: Patterns and Relations (Patterns)</b></p> <p><b>General Outcome</b> Students will be expected to use patterns to describe the world and solve problems.</p>			
<p><b>2N01</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li><b>2N01.2</b> 2s, forward and backward, starting from any point to 100</li> <li><b>2N01.3</b> 5s and 10s, forward and backward, using starting points that are multiples of 5 and 10 respectively to 100</li> <li><b>2N01.4</b> 10s, starting from any point, to 100</li> </ul> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N05</b> Students will be expected to compare and order numbers up to 100.</p> <p><b>2N06</b> Students will be expected to estimate</p>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (2N01.2, 2N01.3, 2N01.4, 2N04, 2N05, 2N06, 2PR02) 44: Earning Money (2N01.2, 2N01.3, 2N01.4, 2N04, 2N09.1, 2PR02) 45: Spending Money 46: Saving Regularly (2N01.2, 2N01.3, 2N01.4, 2N05, 2N09.1, 20PR02) 47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (2N01.2, 2N01.3, 2N01.4, 2PR02) Showing Money in Different Ways (2N04)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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 43, 44, 46, 47; MED 9:1)</p> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46) Estimating Quantities and Numbers - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activity 45) - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</p> <p><b>Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Uses symbols and equations to represent addition and subtraction situations. (Activities 45, 47)</p>

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

### Nova Scotia (continued)

<p>quantities to 100 by using referents.</p> <p><b>2N09</b> 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</p> <ul style="list-style-type: none"> <li>• <b>2N09.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR02</b> Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, and creating numerical patterns (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds, and actions.</p>		<p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 45, 46, 47)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 43, 44; MED 9:1)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 45, 47)</li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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
<p><b>General Outcome</b> Develop number sense</p> <p><b>Cross Strand:</b> Patterns and Relations (Patterns)</p> <p><b>General Outcome</b> Use patterns to describe the world and to solve problems.</p> <p><b>N1</b> Say the number sequence 0 to 100 by:</p> <ul style="list-style-type: none"> <li>• <b>2N1.1</b> 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively</li> <li>• <b>2N1.2</b> 10s, using starting points from 1 to 9</li> </ul> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N5</b> Compare and order numbers up to 100.</p> <p><b>2N6</b> Estimate quantities to 100, using referents.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit</p>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (2N1.1, 2N4, 2N5, 2N6, 2PR2) 44: Earning Money (2N1.1, 2N4, 2N9.1, 2PR2) 45: Spending Money 46: Saving Regularly (2N1.1, 2N5, 2N9.1, 2PR2) 47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (2N1.1, 2N1.2, 2PR2) Showing Money in Different Ways (2N4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b> 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 43, 44, 46, 47; MED 9:1)</p> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities (Multitude or Magnitude) - Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46) Estimating Quantities and Numbers - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43) Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activity 45) - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</p> <p><b>Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Uses symbols and equations to represent addition and subtraction situations. (Activities 45, 47)</p>



# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

<p>numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>2PR2</b> Demonstrate an understanding of increasing patterns by describing, reproducing, extending, creating numerical (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.</p>		<p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 45, 46, 47)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 43, 44; MED 9:1)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 45, 47)</li> </ul>
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# Curriculum Correlation

## Number Cluster 9: Financial Literacy

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

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour <b>Cross Strand:</b> Patterns and Relations</p>			
<p><b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by:</p> <ul style="list-style-type: none"> <li>• <b>N2.1.1</b> representing (including place value)</li> <li>• <b>N2.1.2</b> describing</li> <li>• <b>N2.1.3</b> skip counting</li> <li>• <b>N2.1.4</b> differentiating between odd and even numbers</li> <li>• <b>N2.1.5</b> estimating with referents</li> <li>• <b>N2.1.6</b> comparing two numbers</li> <li>• <b>N2.1.7</b> ordering three or more numbers</li> </ul>	<p><b>Below Grade: Intervention</b> 17: Counting Coins 18: Wants and Needs</p> <p><b>On Grade: Teacher Cards</b> 43: Estimating Money (N2.1.1, N2.1.3, N2.1.5, N2.1.6, P.2.2) 44: Earning Money (N2.1.1, N2.1.3, N2.2.4, P.2.2) 45: Spending Money 46: Saving Regularly (N2.1.3, N2.1.6, N2.2.4, P.2.2) 47: Financial Literacy Consolidation</p> <p><b>On Grade: Math Every Day Card 9:</b> Collections of Coins (N2.1.3, P.2.2) Showing Money in Different Ways (N2.1.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Buy 1—Get 1 (Activities 45, 47)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Money Jar (Activities 43, 45, 47)</li> </ul>	<p><b>Big Idea: Numbers tell us how many and how much.</b></p> <ul style="list-style-type: none"> <li>- Applying the Principles of Counting</li> <li>- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <ul style="list-style-type: none"> <li>- Comparing and Ordering Quantities (Multitude or Magnitude)</li> <li>- Compares and orders quantities and written numbers using benchmarks. (Activities 43, 46)</li> <li>- Estimating Quantities and Numbers</li> <li>- Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10). (Activities 43)</li> <li>- Decomposing Wholes into Parts and Composing Wholes from Parts</li> <li>- Composes and decomposes quantities to 20. (Activity 45)</li> <li>- Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). (Activities 43, 44; MED 9:2)</li> </ul>

# Curriculum Correlation

## Number Cluster 9: Financial Literacy

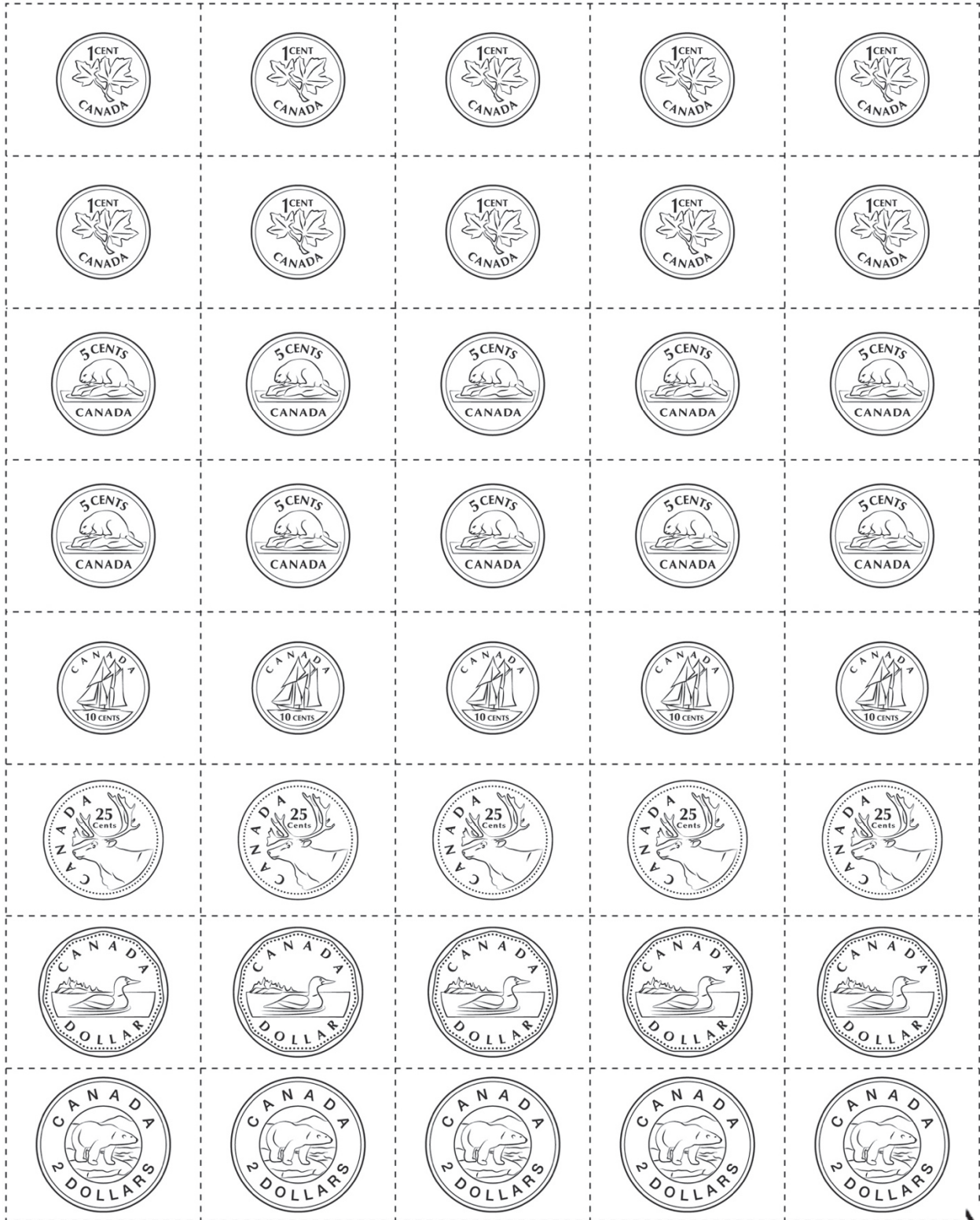
Saskatchewan (continued)

<p>addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>● <b>N2.2.4</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> </ul> <p><b>P2.2</b> Demonstrate understanding of increasing patterns by:</p> <ul style="list-style-type: none"> <li>● <b>P2.2.1</b> describing</li> <li>● <b>P2.2.2</b> reproducing</li> <li>● <b>P2.2.3</b> extending</li> <li>● <b>P2.2.4</b> creating patterns using manipulatives, pictures, sounds, and actions (numbers to 100).</li> </ul>		<p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 45, 46, 47)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 43, 44; MED 9:1)</li> </ul> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 43, 44, 46, 47; MED 9:1)</li> </ul> <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 45, 47)</li> </ul>
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Name \_\_\_\_\_ Date \_\_\_\_\_

Master 115a

# Money Cutouts

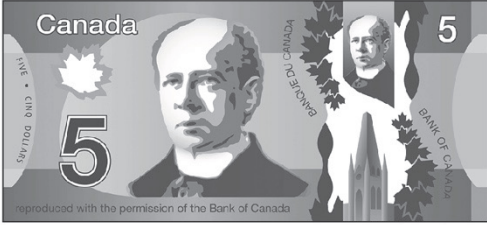


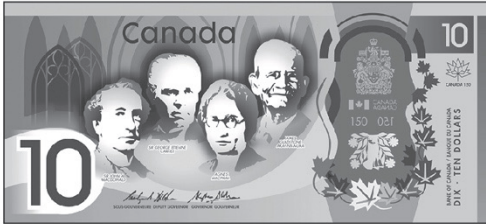
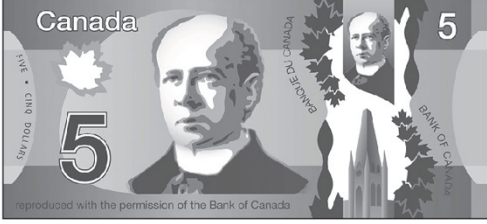
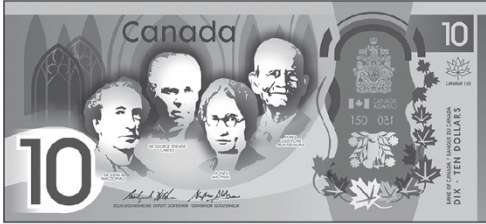



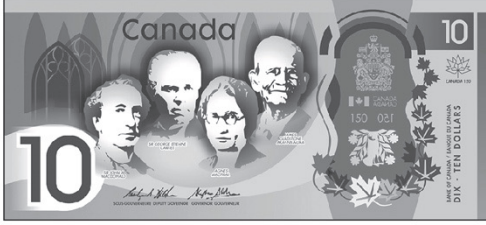

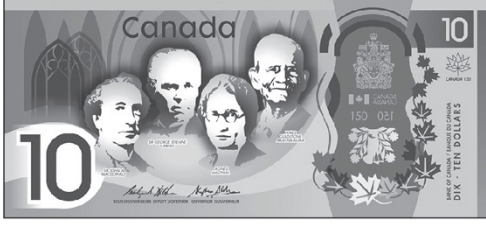


Name \_\_\_\_\_

Date \_\_\_\_\_

Master 115b

# Money Cutouts



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 116

# Estimating Money Recording Sheet

Savings Jar	Estimate	Actual Value
1		
2		
3		

Master 117

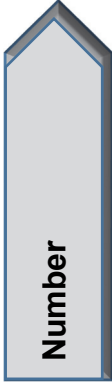
# Referent Jars



50¢







50¢



# Master 118: Activity 43 Assessment

## Estimating Money

Estimating Money Amounts Behaviours/Strategies			
1. Student guesses instead of using relevant benchmarks to estimate quantities.  "10 cents"	2. Student counts instead of using relevant benchmarks to estimate quantities.  "10, 20, 30, ..., 90, 100, 120 cents"	3. Student uses relevant benchmarks to estimate quantities, but estimates are unreasonable.  "There are more than 5 dimes, so 60 cents."	4. Student successfully uses relevant benchmarks to estimate quantities and makes reasonable estimates.  "About 100 cents."
<b>Observations/Documentation</b>			

Counting and Comparing Money Amounts Behaviours/Strategies			
1. Student places matching coins, but is unable to skip-count to find the value of the coins (unable to compose money amounts from parts).	2. Student successfully composes money amounts from parts, but struggles to compare and order quantities.	3. Student successfully composes money amounts from parts and compares and orders quantities, but does not realize that the number of coins does not affect the value.	4. Student successfully composes money amounts from parts and compares and orders quantities.
<b>Observations/Documentation</b>			



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 119a**





# Hire Me

\_\_\_\_\_ 's Services


Master 119b






# Hire Me (for Accommodations)

\_\_\_\_\_ 's Services

<p><b>Sort Socks 20¢</b></p> 	<p><b>Shovel Snow 50¢</b></p> 
<p><b>Take Out Garbage 35¢</b></p> 	<p><b>Vacuum 80¢</b></p> 

# Master 120: Activity 44 Assessment

## Earning Money

Decomposing Money Amounts Behaviours/Strategies			
<p>1. Student chooses jobs, but is unable to decompose money amounts into parts as he or she does not know the value of coins.</p>	<p>2. Student chooses jobs, but is unable to decompose money amounts into parts and chooses coins randomly.</p>  <p>“70 cents. I will use these coins.”</p>	<p>3. Student decomposes money amounts into parts, but always uses one denomination of coin.</p>  <p>“25 cents”</p>	<p>4. Student successfully decomposes money amounts into parts.</p>
Observations/Documentation			
Counting Money Amounts Behaviours/Strategies			
<p>1. Student takes money from partner, but is unable to skip-count to find the value of the coins (unable to compose money amounts from parts).</p>	<p>2. Student composes money amounts from parts, but struggles when coins are of mixed denominations.</p>  <p>“5, 10, 15, 20. I count 20 cents.”</p>	<p>3. Student composes money amounts from parts and skip-counts to count coins of different denominations.</p>  <p>“25, 35, 45, 50. I count 50 cents.”</p>	<p>4. Student successfully and flexibly composes money amounts from parts.</p>  <p>“25, 50. I count 50 cents.”</p>
Observations/Documentation			

Master 121

# Used Sports Equipment Store

**Baseball Bat \$6**



**Lacrosse Stick \$14**



**Soccer Ball \$3**



**Skates \$16**



**Hockey Stick \$7**



**Bike \$19**



Master 122

# Clothing Store

**Pants \$7**



**Dress \$8**



**Hoodie \$11**



**Jacket \$15**

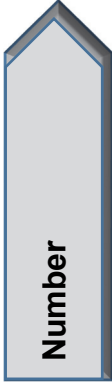


**T-shirt \$4**




**Socks \$2**





# Master 123: Activity 45 Assessment

## Spending Money

Decomposing Quantities to 20 Behaviours/Strategies			
1. Student uses play money, but struggles to model \$20 (unable to decompose quantities to 20). "I don't know what I need to make \$20."	2. Student models savings, but chooses money randomly to pay for an item (unable to decompose quantities to 20).  "\$7. I will use these bills."	3. Student decompose quantities to 20, but cannot find the exact amount in savings needed to pay for an item. "I can't make exactly \$4."	4. Student successfully and flexibly decomposes quantities to 20.
Observations/Documentation			

Subtracting Money Amounts Behaviours/Strategies			
1. Student uses money to pay for an item, but cannot subtract with quantities to 20 to determine how much is left in savings.	2. Student counts to determine how much is left in savings as he or she cannot subtract with quantities to 20.	3. Student subtracts with quantities to 20, but is unable to use symbols and equations to represent subtraction situations. "I can't write a number sentence."	4. Student subtracts with quantities to 20 and uses symbols and equations to represent subtraction situations. "20 - 7 = 13"
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 124

# Calendar

Month \_\_\_\_\_

My savings goal: \_\_\_\_\_ ¢

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

How much was saved? \_\_\_\_\_ ¢

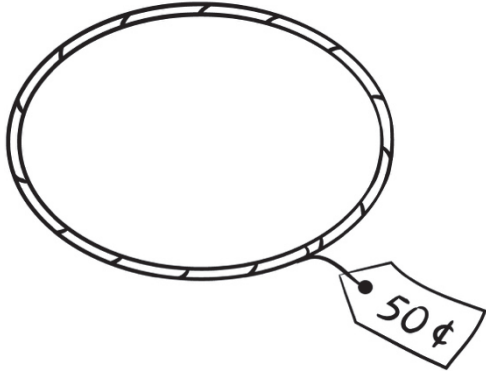
Was the goal met? Circle the answer.      YES                  NO

If the answer is NO, how much more money needs to be earned? \_\_\_\_\_ ¢

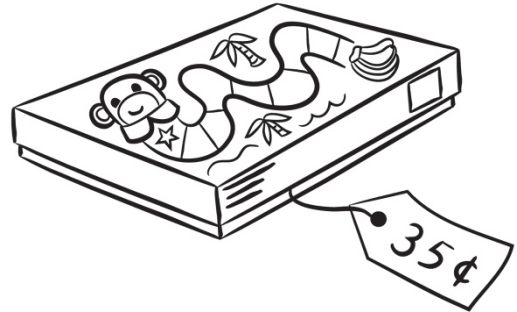
Master 125

# Items to Save For

**Hoola Hoop 50¢**



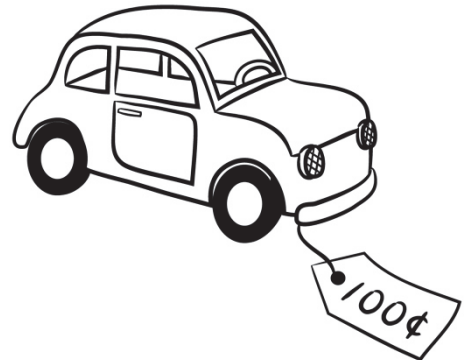
**Board Game 35¢**



**Package of Stickers 25¢**



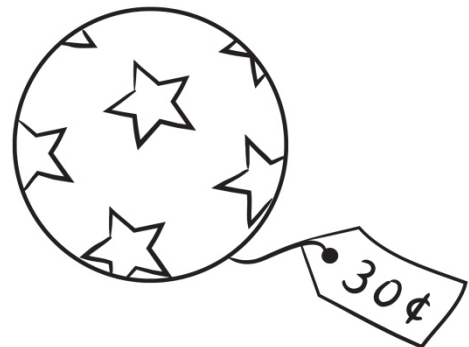
**Toy Car 100¢**



**Small Puppet 20¢**



**Bouncy Balls 30¢**





Master 126a

# Jobs to Save Money

**Water Plants 10¢**



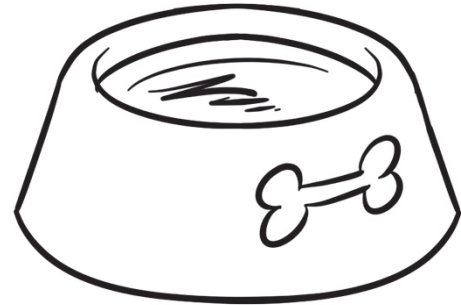
**Take Out Garbage 10¢**



**Make Bed 5¢**



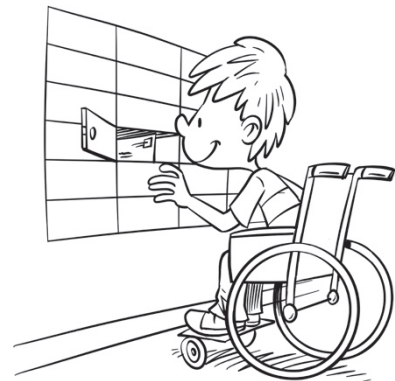
**Fill Water Bowl 5¢**



**Set Table 25¢**



**Get Mail 25¢**



Master 126b

# More Jobs to Save Money

(Extension and Combined Grades Extension)

Sort Socks 30¢



Put Away Groceries 40¢



Dry Dishes 45¢



Clean Your Room 55¢



Wash Car 70¢



Rake Leaves 80¢





# Master 127: Activity 46 Assessment

## Saving Regularly

Making a Savings Plan Behaviours/Strategies																								
<p>1. Student chooses an item to save for, but cannot make a savings plan as he or she does not associate the cost of an item to a savings goal.</p> <p>"I want the small puppet that is 20¢. What is my goal?"</p>	<p>2. Student chooses a job, but struggles to make a savings plan, as job will not allow savings goal to be met.</p> <p>Item: Toy Car, 100¢ Job: Fill Water Bowl, 5¢</p>	<p>3. Student makes a savings plan, but circles random dates, places wrong coin on calendar, or does not place same amount on each date.</p> <table border="1"> <tr> <td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td> </tr> <tr> <td></td><td></td><td></td><td></td><td>10¢</td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td>5¢</td><td></td><td></td> </tr> </table>	S	M	T	W	T	F	S					10¢							5¢			<p>4. Student successfully makes a savings plan that will allow a savings goal to be reached.</p> <p>Item: Toy Car, 100¢ Job: Get Mail, 25¢</p>
S	M	T	W	T	F	S																		
				10¢																				
				5¢																				
Observations/Documentation																								
Adding, Subtracting, and Comparing Money Amounts Behaviours/Strategies																								
<p>1. Student gathers coins, but cannot add quantities to 100 to determine total savings.</p> <p>"How do I find how much was saved?"</p>	<p>2. Student adds quantities to 100, but struggles to compare and order quantities to decide if goal was met.</p> <p>"How do I know if the goal was met?"</p>	<p>3. Student compares and orders quantities, but struggles to subtract quantities, to find how much more needs to be saved.</p> <p>"I need more but I don't know how much more."</p>	<p>4. Student successfully adds, subtracts, and compares and orders quantities to 100.</p> <p>Item: 25¢ Savings: 20¢ Need to earn 5¢ more.</p>																					
Observations/Documentation																								

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 128a

## Sample Jobs

<b>Job</b>	<b>Pay</b>
Walking Dog	\$1
Shovelling Snow	\$5
Pet Sitting	\$10
Mowing Lawn	\$2
Raking Leaves	\$5
Delivering Newspapers	\$10
Folding Laundry	\$2
Washing Car	\$5
Watering Plants	\$1
Planting Seeds	\$2

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 128b

## Sample Jobs (for Accommodations)

<b>Job</b>	<b>Pay</b>
Walk Dog	\$1
Fold Laundry	\$2
Set Table	\$2
Water Plants	\$2
Clean Up Toys	\$1
Carry In Groceries	\$1

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 129

# Our Savings Plan

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Money Student A saved: \_\_\_\_\_

Money Student B saved: \_\_\_\_\_

Total amount saved: \_\_\_\_\_ Money spent: \_\_\_\_\_

Amount left in savings: \_\_\_\_\_



# Master 130a: Activity 47 Assessment

## Financial Literacy: Consolidation

Making a Savings Plan Behaviours/Strategies																															
<p>1. Student chooses a job, but when making a savings plan, circles random dates, places wrong coin/bill on calendar, or does not place same amount on each date.</p> <table border="1"> <tr> <td>S</td> <td>M</td> <td>T</td> <td>W</td> <td>T</td> <td>F</td> <td>S</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>\$1</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>\$2</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	S	M	T	W	T	F	S					\$1							\$2										<p>2. Student makes a savings plan, but does not consider wants and needs.</p> <p>"I will buy all of the items!"</p>	<p>3. Student makes a savings plan, but requires support to revise the plan.</p> <p>"I don't have enough money. What do I do?"</p>	<p>4. Student successfully makes a savings plan and has enough money to buy all the items chosen.</p>
S	M	T	W	T	F	S																									
				\$1																											
				\$2																											
Observations/Documentation																															
Adding and Subtracting Money Amounts Behaviours/Strategies																															
<p>1. Student circles dates, but cannot add quantities to determine total savings.</p> <p>"How do I find how much I saved?"</p>	<p>2. Student chooses items for party, but cannot add quantities to determine total cost of items.</p> <p>"\$5, \$3, \$2" "How can I find the total?"</p>	<p>3. Student adds quantities, but struggles to subtract quantities to find how much is left in savings.</p> <p>"How do I find how much is left?"</p>	<p>4. Student successfully and flexibly adds and subtracts quantities.</p>																												
Observations/Documentation																															

# Master 130b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can use relevant benchmarks to estimate the value of a collection of coins. <b>(Activity 43)</b>									
Student can compare the values of collections of coins/bills. <b>(Activities 43, 46)</b>									
Student realizes that a collection of fewer coins can be worth more than a collection of more coins. <b>(Activity 43)</b>									
Student can decompose money amounts into parts. <b>(Activities 44, 45)</b>									
Student can skip-count to count coins/bills of different denominations. <b>(Activities 43, 44, 45, 46, 47)</b>									
Student can add and subtract dollar amounts to \$20. <b>(Activities 45, 47)</b>									
Student can distinguish between wants and needs. <b>(Activities 45, 46, 47)</b>									
Student can write a number sentence to represent an addition/subtraction situation. <b>(Activities 45, 47)</b>									
Student can add and subtract money amounts to 100¢. <b>(Activities 45, 46)</b>									



Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Uses relevant benchmarks to estimate the value of a collection of coins. <b>(Activity 43)</b>			
Compares the values of collections of coins/bills. <b>(Activities 43, 46)</b>			
Realizes that a collection of fewer coins can be worth more than a collection of more coins. <b>(Activity 43)</b>			
Decomposes money amounts into parts. <b>(Activities 44, 45)</b>			
Skip-counts to count coins/bills of different denominations. <b>(Activities 43, 44, 45, 46, 47)</b>			
Adds and subtracts dollar amounts to \$20. <b>(Activities 45, 47)</b>			
Distinguishes between wants and needs. <b>(Activities 45, 46, 47)</b>			
Writes a number sentence to represent an addition/subtraction situation. <b>(Activities 45, 47)</b>			
Adds and subtracts money amounts to 100¢. <b>(Activities 45, 46)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Overall Expectations</b> <b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns			
<p><b>P2.3</b> identify repeating, growing, and shrinking patterns found in real-life contexts</p> <p><b>P2.6</b> create a repeating pattern by combining two attributes (e.g., colour and shape; colour and size)</p> <p><b>P2.7</b> demonstrate, through investigation, an understanding that a pattern results from repeating an operation (e.g., addition, subtraction) or making a repeated change to an attribute (e.g., colour, orientation)</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Finding the Core</p> <p>2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Exploring Patterns</p> <p>2: Extending and Predicting</p> <p>3: Errors and Missing Elements</p> <p>4: Combining Attributes (P2.6, P2.7)</p> <p>5: Repeating Patterns Consolidation (P2.3, P2.6, P2.7)</p> <p><b>On Grade: Math Every Day Card 1:</b></p> <p>Show Another Way Repeating Patterns Around Us (P2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Midnight and Snowfall (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Pattern Quest (Activities 1, 2, 4, 5)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>Identifies the repeating unit (core) of a pattern. (Activities 1, 2, 3, 4, 5; MED 1: 1, 2)</li> <li>Predicts missing element(s) and corrects errors in repeating patterns. (Activities 2, 3, 5)</li> <li>Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (Activities 1, 2, 5)</li> <li>Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (Activities 1, 2, 4; MED 1: 1, 2)</li> <li>Compares repeating patterns and describes how they are alike and different. (Activity 4; MED 1: 1)</li> <li>Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (Activities 4, 5)</li> <li>Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (Activity 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> The regular change in increasing patterns can be identified and used to make generalizations.</p> <p>Repeating and increasing patterns</p> <ul style="list-style-type: none"> <li>• <b>2.14</b> exploring more complex repeating patterns (e.g., positional patterns, circular patterns)</li> <li>• <b>2.15</b> identifying the core of repeating patterns (e.g., the part of the pattern that repeats over and over)</li> <li>• <b>2.19</b> Online video and text: <i>Small Number Counts to 100</i> (mathcatcher.irmacs.sf.u.ca/story/small-number-counts-100)</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>1: Finding the Core</p> <p>2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Exploring Patterns (2.14, 2.15)</p> <p>2: Extending and Predicting (2.14, 2.15)</p> <p>3: Errors and Missing Elements (2.14, 2.15)</p> <p>4: Combining Attributes (2.14, 2.15)</p> <p>5: Repeating Patterns Consolidation (2.14, 2.15, 2.19)</p> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (2.14, 2.15) Repeating Patterns Around Us (2.14, 2.15)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Midnight and Snowfall (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Pattern Quest (Activities 1, 2, 4, 5)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>- Identifies the repeating unit (core) of a pattern. (Activities 1, 2, 3, 4, 5; MED 1: 1, 2)</li> <li>- Predicts missing element(s) and corrects errors in repeating patterns. (Activities 2, 3, 5)</li> <li>- Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (Activities 1, 2, 5)</li> <li>- Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (Activities 1, 2, 4; MED 1: 1, 2)</li> <li>- Compares repeating patterns and describes how they are alike and different. (Activity 4; MED 1: 1)</li> <li>- Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (Activities 4, 5)</li> <li>- Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (Activity 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use patterns to describe the world and solve problems.</p> <p><b>2PR1</b> Demonstrate an understanding of repeating patterns (three to five elements) by:</p> <ul style="list-style-type: none"> <li>• <b>2PR1.1</b> describing</li> <li>• <b>2PR1.2</b> extending</li> <li>• <b>2PR1.3</b> comparing</li> <li>• <b>2PR1.4</b> creating patterns using manipulatives, diagrams, sounds and actions</li> </ul>	<p><b>Below Grade: Intervention</b></p> <ol style="list-style-type: none"> <li>1: Finding the Core</li> <li>2: Representing Patterns</li> </ol> <p><b>On Grade: Teacher Cards</b></p> <ol style="list-style-type: none"> <li>1: Exploring Patterns (<b>2PR1.1</b>, <b>2PR1.2</b>, <b>2PR1.4</b>)</li> <li>2: Extending and Predicting (<b>2PR1.1</b>, <b>2PR1.2</b>, <b>2PR1.3</b>, <b>2PR1.4</b>)</li> <li>3: Errors and Missing Elements (<b>2PR1.1</b>, <b>2PR1.2</b>)</li> <li>4: Combining Attributes (<b>2PR1.1</b>, <b>2PR1.2</b>, <b>2PR1.3</b>, <b>2PR1.4</b>)</li> <li>5: Repeating Patterns Consolidation (<b>2PR1.1</b>, <b>2PR1.2</b>, <b>2PR1.4</b>)</li> </ol> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (<b>2PR1.1</b>, <b>2PR1.3</b>) Repeating Patterns Around Us (<b>2PR1.1</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Midnight and Snowfall (<b>Activities 1, 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Pattern Quest (<b>Activities 1, 2, 4, 5</b>)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>- Identifies the repeating unit (core) of a pattern. (<b>Activities 1, 2, 3, 4, 5; MED 1: 1, 2</b>)</li> <li>- Predicts missing element(s) and corrects errors in repeating patterns. (<b>Activities 2, 3, 5</b>)</li> <li>- Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (<b>Activities 1, 2, 5</b>)</li> <li>- Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (<b>Activities 1, 2, 4; MED 1: 1, 2</b>)</li> <li>- Compares repeating patterns and describes how they are alike and different. (<b>Activity 4; MED 1: 1</b>)</li> <li>- Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (<b>Activities 4, 5</b>)</li> <li>- Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (<b>Activity 2</b>)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use patterns to describe the world and solve problems.</p> <p><b>2.PR.1</b> Predict an element in a repeating pattern using a variety of strategies</p>	<p><b>Below Grade: Intervention</b> 1: Finding the Core 2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b> 1: Exploring Patterns (2.PR.1) 2: Extending and Predicting (2.PR.1) 3: Errors and Missing Elements (2.PR.1) 4: Combining Attributes (2.PR.1) 5: Repeating Patterns Consolidation (2.PR.1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (2.PR.1) Repeating Patterns Around Us (2.PR.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Midnight and Snowfall (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Pattern Quest (Activities 1, 2, 4, 5)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>Identifies the repeating unit (core) of a pattern. (Activities 1, 2, 3, 4, 5; MED 1: 1, 2)</li> <li>Predicts missing element(s) and corrects errors in repeating patterns. (Activities 2, 3, 5)</li> <li>Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (Activities 1, 2, 5)</li> <li>Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (Activities 1, 2, 4; MED 1: 1, 2)</li> <li>Compares repeating patterns and describes how they are alike and different. (Activity 4; MED 1: 1)</li> <li>Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (Activities 4, 5)</li> <li>Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (Activity 2)</li> </ul>

### Mathology 2

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to use patterns to describe the world and solve problems.</p>			
<p><b>2PR01</b> Students will be expected to demonstrate an understanding of repeating patterns (three to five elements) by describing, extending, comparing, and creating patterns using manipulatives, diagrams, sounds, and actions.</p>	<p><b>Below Grade: Intervention</b> 1: Finding the Core 2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b> 1: Exploring Patterns (2PR01) 2: Extending and Predicting (2PR01) 3: Errors and Missing Elements (2PR01) 4: Combining Attributes (2PR01) 5: Repeating Patterns Consolidation (2PR01)</p> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (2PR01) Repeating Patterns Around Us (2PR01)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Midnight and Snowfall (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Pattern Quest (Activities 1, 2, 4, 5)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>Identifies the repeating unit (core) of a pattern. (Activities 1, 2, 3, 4, 5; MED 1: 1, 2)</li> <li>Predicts missing element(s) and corrects errors in repeating patterns. (Activities 2, 3, 5)</li> <li>Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (Activities 1, 2, 5)</li> <li>Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (Activities 1, 2, 4; MED 1: 1, 2)</li> <li>Compares repeating patterns and describes how they are alike and different. (Activity 4; MED 1: 1)</li> <li>Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (Activities 4, 5)</li> <li>Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (Activity 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use patterns to describe the world and to solve problems.</p> <p><b>2PR1</b> Demonstrate an understanding of repeating patterns (three to five elements) by:</p> <ul style="list-style-type: none"> <li>• <b>2PR1.1</b> describing</li> <li>• <b>2PR1.2</b> extending</li> <li>• <b>2PR1.3</b> comparing</li> <li>• <b>2PR1.4</b> creating patterns using manipulatives, diagrams, sounds and actions</li> </ul>	<p><b>Below Grade: Intervention</b> 1: Finding the Core 2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b> 1: Exploring Patterns (<b>2PR1.1, 2PR1.2, 2PR1.4</b>) 2: Extending and Predicting (<b>2PR1.1, 2PR1.2, 2PR1.3, 2PR1.4</b>) 3: Errors and Missing Elements (<b>2PR1.1, 2PR1.2</b>) 4: Combining Attributes (<b>2PR1.1, 2PR1.2, 2PR1.3, 2PR1.4</b>) 5: Repeating Patterns Consolidation (<b>2PR1.1, 2PR1.2, 2PR1.4</b>)</p> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (<b>2PR1.1, 2PR1.3</b>) Repeating Patterns Around Us (<b>2PR1.1</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Midnight and Snowfall (<b>Activities 1, 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Pattern Quest (<b>Activities 1, 2, 4, 5</b>)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>- Identifies the repeating unit (core) of a pattern. (<b>Activities 1, 2, 3, 4, 5; MED 1: 1, 2</b>)</li> <li>- Predicts missing element(s) and corrects errors in repeating patterns. (<b>Activities 2, 3, 5</b>)</li> <li>- Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (<b>Activities 1, 2, 5</b>)</li> <li>- Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (<b>Activities 1, 2, 4; MED 1: 1, 2</b>)</li> <li>- Compares repeating patterns and describes how they are alike and different. (<b>Activity 4; MED 1: 1</b>)</li> <li>- Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (<b>Activities 4, 5</b>)</li> <li>- Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (<b>Activity 2</b>)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 1: Repeating Patterns

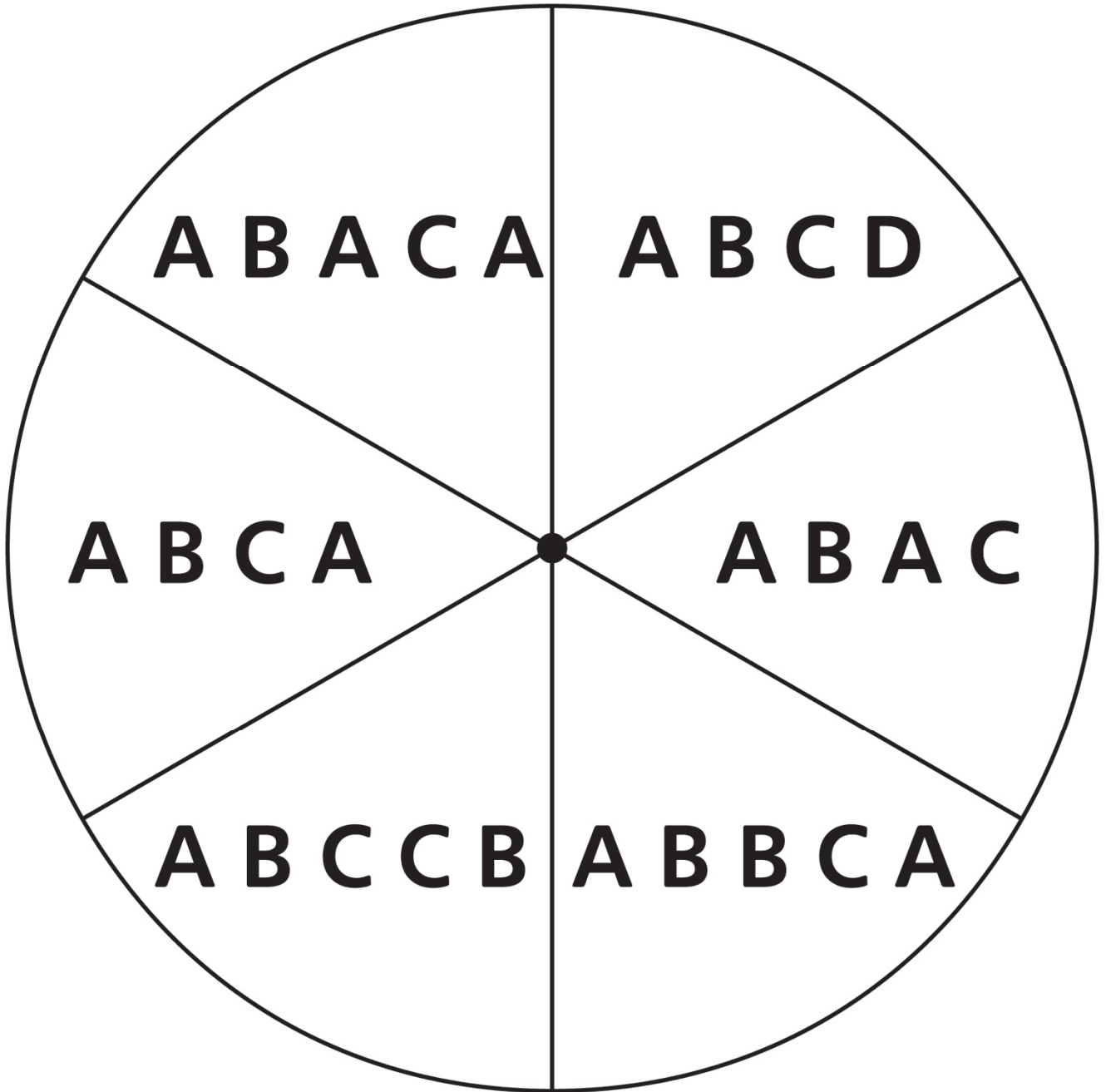
Saskatchewan








Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Number Sense, Logical Thinking, Spatial Sense, Mathematics as a Human Endeavour</p> <p><b>P2.1</b> Demonstrate understanding of repeating patterns (three to five elements) by:</p> <ul style="list-style-type: none"> <li>• <b>P2.1.1</b> describing</li> <li>• <b>P2.1.2</b> representing patterns in alternate modes</li> <li>• <b>P2.1.3</b> extending</li> <li>• <b>P2.1.4</b> comparing</li> <li>• <b>P2.1.5</b> creating patterns using manipulatives, pictures, sounds, and actions</li> </ul>	<p><b>Below Grade: Intervention</b> 1: Finding the Core 2: Representing Patterns</p> <p><b>On Grade: Teacher Cards</b> 1: Exploring Patterns (P2.1.1, P2.1.2, P2.1.3, P2.1.5) 2: Extending and Predicting (P2.1.1, P2.1.2, P2.1.3, P2.1.4, P2.1.5) 3: Errors and Missing Elements (P2.1.1, P2.1.3) 4: Combining Attributes (P2.1.1, P2.1.2, P2.1.3, P2.1.4, P2.1.5) 5: Repeating Patterns Consolidation (P2.1.1, P2.1.3, P2.1.5)</p> <p><b>On Grade: Math Every Day Card 1:</b> Show Another Way (P2.1.1, P2.1.2, P2.1.4) Repeating Patterns Around Us (P2.1.1, P2.1.2)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Midnight and Snowfall (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Pattern Quest (Activities 1, 2, 4, 5)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Reproducing, Extending, and Creating Patterns that Repeat</p> <ul style="list-style-type: none"> <li>- Identifies the repeating unit (core) of a pattern. (Activities 1, 2, 3, 4, 5; MED 1: 1, 2)</li> <li>- Predicts missing element(s) and corrects errors in repeating patterns. (Activities 2, 3, 5)</li> <li>- Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). (Activities 1, 2, 5)</li> <li>- Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). (Activities 1, 2, 4; MED 1: 1, 2)</li> <li>- Compares repeating patterns and describes how they are alike and different. (Activity 4; MED 1: 1)</li> <li>- Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). (Activities 4, 5)</li> <li>- Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D). (Activity 2)</li> </ul>



Master 2

### Our Cores (for Extension)



Using a Core to Create a Repeating Pattern Behaviours/Strategies		
<p>1. Student models the core and repeats only the last element as the repeating core.</p> <p>Core: </p> <p>Student's Pattern: </p>	<p>2. Student models the core, but places the elements in the wrong order when using copies of the core to create a repeating pattern.</p> <p>Core: </p> <p>Student's Pattern: </p>	<p>3. Student creates some repeating patterns based on copies of the core, but struggles when the last element in the core is the same as the first.</p> <p>Core: </p> <p>Student's Pattern: </p>
Observations/Documentation		
<p>4. Student creates repeating patterns based on copies of the repeating unit (core), but struggles to represent the core with letters.</p> <p>"I don't know how to show it with letters."</p>	<p>5. Student creates repeating patterns based on copies of the repeating unit (core) and represents the core with letters, but struggles to use math language when describing patterns.</p>	<p>6. Student successfully creates repeating patterns based on copies of the repeating unit (core), represents the core with letters, and uses math language to describe patterns.</p> <p>Core: ABCDC </p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4a

## Bracelet Cores

<b>ABCB</b>	<b>ABCC</b>
<b>AABC</b>	<b>ABCD</b>



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4b

## Bracelet Cores (for Accommodations)

**ABC**

**ABB**

**AAB**

**ABA**



Master 4c

# Bracelet Cores (for Extension)

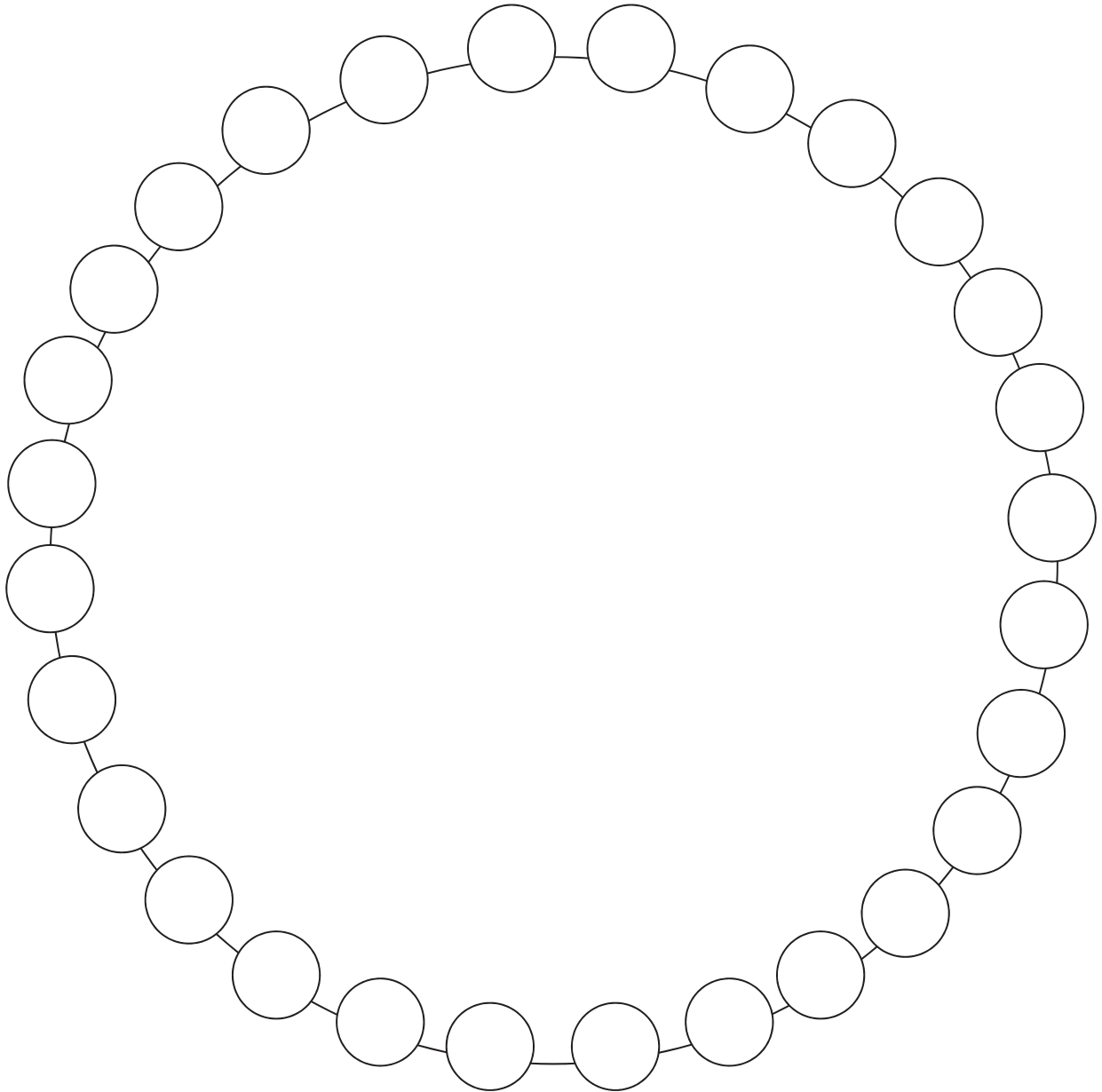
<b>ABBCD</b>	<b>AABCCD</b>
<b>ABCBC</b>	<b>ABCD CD</b>



Name \_\_\_\_\_ Date \_\_\_\_\_

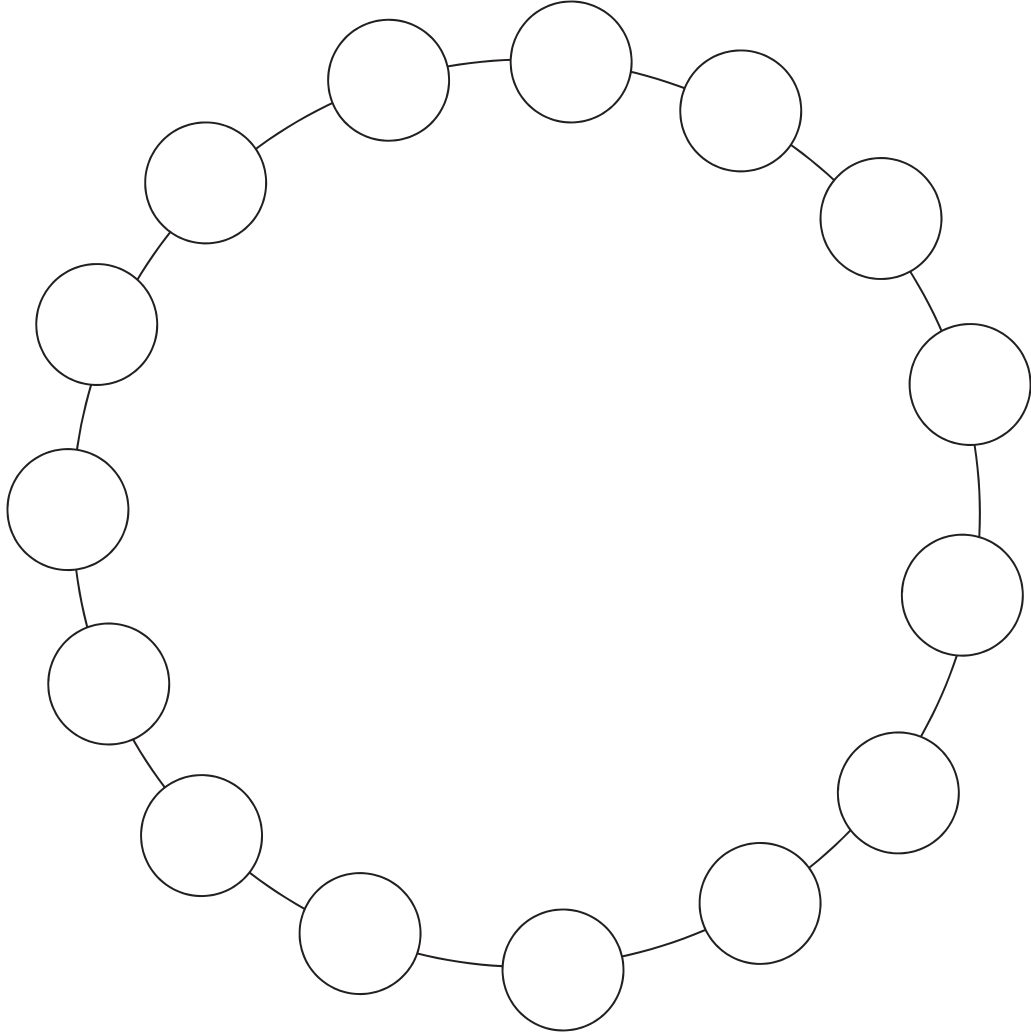
Master 5a

# My Bracelet Plan



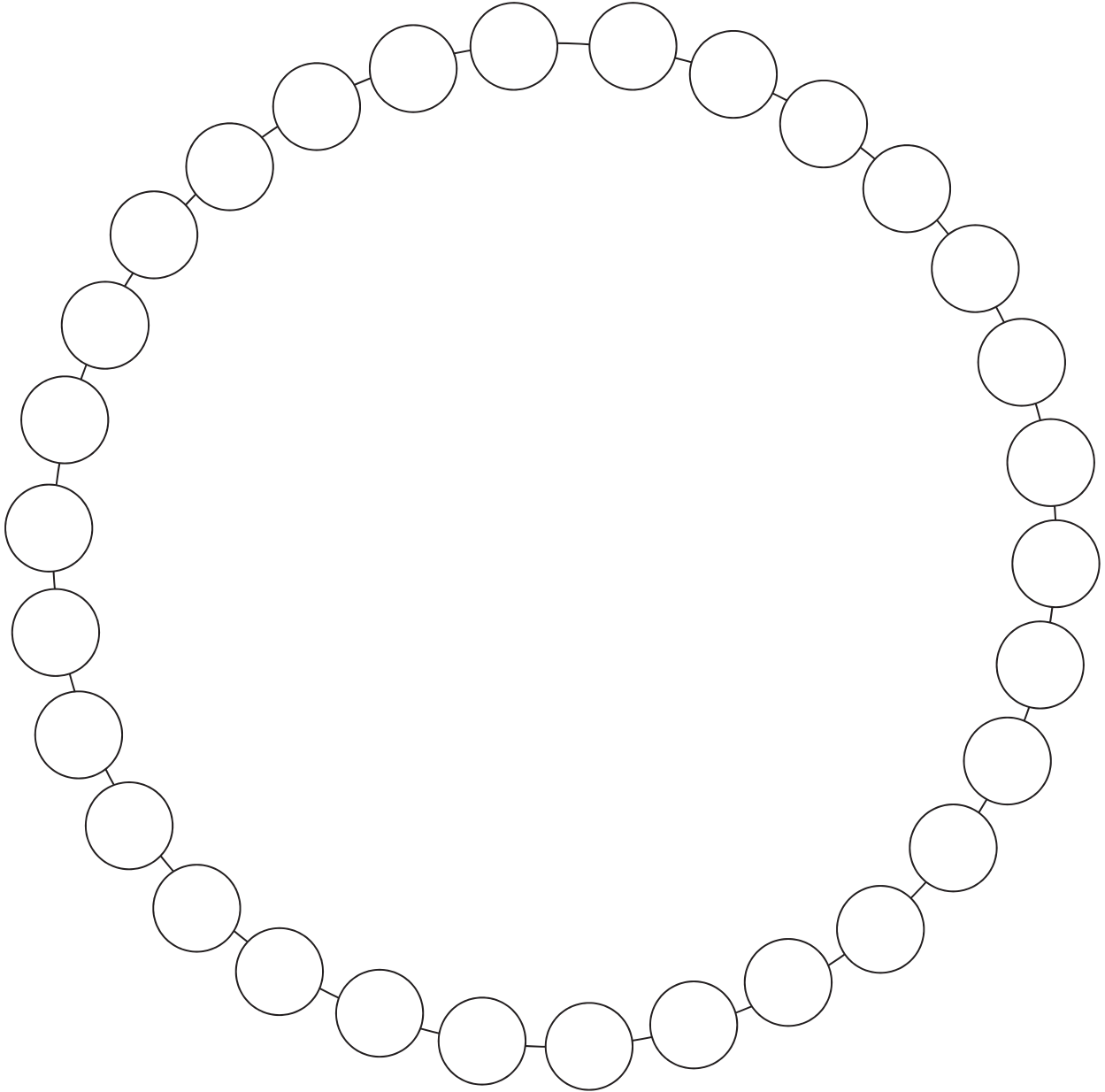
Master 5b

# My Bracelet Plan (for Accommodations)



Master 5c

# My Bracelet Plan (for Extension)











# Master 6: Activity 2 Assessment

## Extending and Predicting

Extending and Predicting Elements in Patterns Behaviours/Strategies		
<p>1. Student looks at the letter core, but has difficulty choosing beads to represent the core.</p>	<p>2. Student represents the core with beads, but struggles to use copies of the core to extend the pattern.</p> <p>Core: ABCB</p>  <p>"Now what do I do?"</p>	<p>3. Student represents the core with beads, but struggles to predict an element in the pattern.</p> <p>Core: ABCB</p>  <p>"I'm not sure what the 15th bead will be."</p>
Observations/Documentation		
<p>4. Student correctly predicts an element in the core, but struggles to justify prediction.</p> <p>Core: ABCB</p>  <p>"The 15th bead will be purple. I'm not sure why."</p>	<p>5. Student predicts an element in the core and justifies prediction, but does not realize that because the pattern is circular, the pattern core can be viewed differently, depending on the starting point.</p>	<p>6. Student successfully represents the core with beads, predicts element, justifies thinking, and is comfortable with circular patterns.</p>
Observations/Documentation		

# Master 7: Activity 3 Assessment

## Errors and Missing Elements

Predicting Missing Elements and Correcting Errors Behaviours/Strategies		
<p>1. Student chooses a pattern, but struggles to identify the repeating unit (core) of the pattern.</p> <p>“I don’t know what the core is.”</p>	<p>2. Student identifies the repeating unit (core) of some patterns, but struggles when there is a missing element or error near the beginning of the pattern.</p> <p>“I can’t find the core. The second cube is missing.”</p> 	<p>3. Student identifies the repeating unit (core) of a pattern, but struggles to find and correct the error.</p> <p>“I know the core, but I can’t find the error.”</p>
Observations/Documentation		
<p>4. Student identifies the repeating unit (core) of a pattern, but struggles to predict the missing element.</p> <p>“I know the core, but I don’t know what’s missing.”</p>	<p>5. Student successfully identifies missing element(s) and corrects errors in repeating patterns, but struggles to explain how an error or missing element was found.</p>	<p>6. Student successfully identifies the repeating unit (core) of a pattern, predicts missing element(s), and corrects errors in repeating patterns.</p>
Observations/Documentation		

**Master 8**

# Our Core Cards

<p><b>Core AB</b> Attributes changing: size and shape</p>	<p><b>Core AB</b> Attributes changing: colour and shape</p>
<p><b>Core ABA</b> Attributes changing: size and shape</p>	<p><b>Core AAB</b> Attributes changing: size and colour</p>
<p><b>Core ABC</b> Attributes changing: colour and orientation</p>	<p><b>Core AAB</b> Attributes changing: orientation and thickness</p>
<p><b>Core: ABBA</b> Attributes changing: colour and thickness</p>	<p><b>Core: ABBC</b> Attributes changing: number and orientation</p>



**Master 9a**

# Two Attributes Changing (Part 1)

What attributes change in each pattern? Circle the core.  
What is the pattern in each attribute?



Attributes changing:

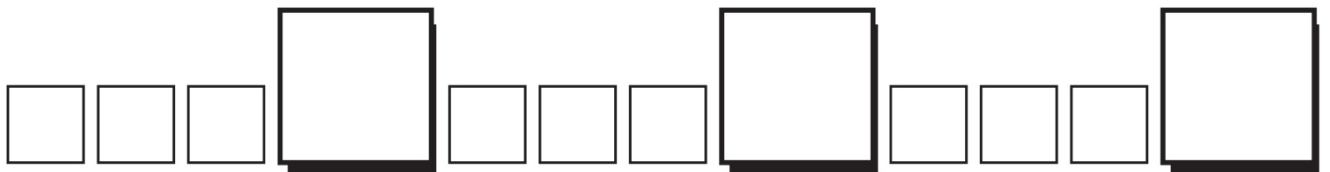
---

Pattern in first attribute:

---

Pattern in second attribute:

---



Attributes changing:

---

Pattern in first attribute:

---

Pattern in second attribute:

---

Master 9a

## Two Attributes Changing (Part 2)

What attributes change in each pattern? Circle the core.  
What is the pattern in each attribute?



Attributes changing:

---

Pattern in first attribute:

---

Pattern in second attribute:

---



Attributes changing:

---

Pattern in first attribute:

---

Pattern in second attribute:

---

Master 9b

# Two Attributes Changing

(for Accommodations)

Circle the core.



Size pattern:

\_\_\_\_\_

Colour pattern:

\_\_\_\_\_



Colour pattern:

\_\_\_\_\_

Shape pattern:

\_\_\_\_\_

Try this one on your own.

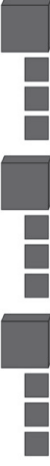






\_\_\_\_\_ :

\_\_\_\_\_

\_\_\_\_\_ :

\_\_\_\_\_

<b>Working with Patterns Involving Two Attributes Behaviours/Strategies</b>		
<p>1. Student chooses a pattern, but struggles to recognize repeating pattern and is unable to identify the two attributes that are changing.</p>  <p>“All the shapes are squares.”</p>	<p>2. Student recognizes two attributes that are changing in a repeating pattern, but struggles to identify the core.</p>  <p>“Core is small blue square and big blue square.”</p>	<p>3. Student recognizes repeating patterns, but struggles to create a core based on two attributes.</p> <p>Card: ABA; size and shape changing</p> <p>Core: </p>
<b>Observations/Documentation</b>		
<p>4. Student recognizes repeating patterns and creates a core based on two attributes, but struggles to extend the pattern.</p> <p>Card: ABA, size and shape changing</p> <p>Core: </p>	<p>5. Student recognizes, extends, and creates repeating patterns based on two attributes, but struggles to use math language when describing patterns.</p>	<p>6. Student successfully recognizes, extends, and creates repeating patterns based on two attributes and uses math language when describing patterns.</p> <p>Card: ABC; colour and orientation changing</p> <p>Pattern: </p>
<b>Observations/Documentation</b>		

**Master 11**

**Action Cards**

<p>2 attributes: colour and shape Core: 3 elements</p>	<p>2 attributes: size and orientation Core: 4 elements</p>
<p>Make 2 different patterns.</p>	<p>Predict 14th element. Extend to check.</p>
<p>Build the core. Use it to make a pattern.</p>	<p>Make an error in your pattern. Have your partner find the error.</p>
<p>Remove a part from your pattern. Have your partner find what's missing.</p>	<p>Make a circular pattern.</p>





Master 12

### Core Cards

**ABA**

**ABB**

**AABC**

**ABCB**

**ABCA**

**ABCC**

**ABCCB**

**ABCDB**



Master 13

# Repeating Patterns Around Us

## Wall Art



## Crosswalk







## Paving Stones



## Garden Path



<b>Repeating Patterns Behaviours/Strategies</b>		
<p>1. Student chooses a core card, but struggles to represent it with materials.</p> <p>Core: AABC</p> 	<p>2. Student represents the core with materials, but struggles to use copies of the core to extend/create the pattern.</p> <p>Core: ABCB</p> 	<p>3. Student represents the core with materials, but struggles to predict an element in the pattern.</p>  <p>“How do I know what the 14th element will be?”</p>
<b>Observations/Documentation</b>		
<b>Repeating Patterns Behaviours/Strategies</b>		
<p>4. Student identifies the repeating unit (core) of a pattern, but struggles to find errors or missing elements.</p>	<p>5. Student creates repeating patterns based on one attribute, but struggles to create a core based on two attributes.</p> <p>Card: 3 elements; colour and shape changing</p> <p>Core:</p> 	<p>6. Student creates and extends repeating patterns based on one or two attributes, and predicts missing element(s) and corrects errors.</p>
<b>Observations/Documentation</b>		

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can create repeating patterns based on copies of the core. <b>(Activities 1, 5)</b>									
Student can represent the core of a pattern with letters. <b>(Activities 1, 2, 4)</b>									
Student uses math language to describe patterns. <b>(Activities 1, 2, 3, 4, 5)</b>									
Student can identify the core of a repeating pattern. <b>(Activities 3, 4, 5)</b>									
Student can use the core of a pattern to make predictions. <b>(Activities 2, 5)</b>									
Student can extend a repeating pattern. <b>(Activities 2, 5)</b>									
Student can find and correct errors in a repeating pattern. <b>(Activities 3, 5)</b>									
Student can predict missing elements in a repeating pattern. <b>(Activities 3, 5)</b>									
Student can recognize, extend, and create repeating patterns involving two attributes. <b>(Activities 4, 5)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Creates repeating patterns based on copies of the core. <b>(Activities 1, 5)</b>			
Represents the core of a pattern with letters. <b>(Activities 1, 2, 4)</b>			
Uses math language to describe patterns. <b>(Activities 1, 2, 3, 4, 5)</b>			
Identifies the core of a repeating pattern. <b>(Activities 3, 4, 5)</b>			
Uses the core of a pattern to make predictions. <b>(Activities 2, 5)</b>			
Extends a repeating pattern. <b>(Activities 2, 5)</b>			
Finds and corrects errors in a repeating pattern. <b>(Activities 3, 5)</b>			
Predicts missing elements in a repeating pattern. <b>(Activities 3, 5)</b>			
Recognizes, extends, and creates repeating patterns involving two attributes. <b>(Activities 4, 5)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b>  <b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns  <b>Cross Strand: Number</b>  <b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division.</p>			
<p><b>P2.1</b> 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</p> <p><b>P2.2</b> identify, describe, and create, through investigation, growing patterns and shrinking patterns involving addition and subtraction, with and without the use of calculators</p> <p><b>P2.3</b> identify repeating, growing, and shrinking patterns found in real-life contexts</p> <p><b>P2.4</b> represent a given growing or shrinking pattern in a variety of ways</p>	<p><b>Below Grade: Intervention</b>                      3: Skip-Counting                      4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b>                      6: Increasing Patterns 1 (P2.2, P2.7)                      7: Increasing Patterns 2 (P2.2, P2.4, P2.7)                      8: Decreasing Patterns (P2.2, P2.4, P2.7)                      9: Extending Patterns (P2.2, P2.7)                      10: Reproducing Patterns (P2.4)                      11: Creating Patterns (P2.2, P2.3, P2.5, P2.7)                      12: Errors and Missing Terms (P2.2, P2.5, N2.12)                      13: Solving Problems (P2.2, P2.3, P2.4, N2.12)                      14: Increasing/Decreasing Patterns Consolidation (P2.2, P2.3, P2.4, P2.5, P2.7)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Namir's Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>



# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

### Ontario (continued)

<p><b>P2.5</b> create growing or shrinking patterns</p> <p><b>P2.7</b> demonstrate, through investigation, an understanding that a pattern results from repeating an operation (e.g., addition, subtraction) or making a repeated change to an attribute (e.g., colour, orientation).</p> <p><b>N2.12</b> solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies</p>	<p><b>On Grade: Math Every Day Card 2A:</b> How Many Can We Make? (P2.1, P2.2, P2.5, P2.7) Error Hunt (P2.2, P2.7) <b>Card 2B:</b> Making Increasing Patterns (P2.2, P2.7) Making Decreasing Patterns (P2.2, P2.7)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> The regular change in increasing patterns can be identified and used to make generalizations. <b>Cross Strand:</b> Number</p>			
<p>Repeating and increasing patterns  <b>2.16</b> increasing patterns using manipulatives, sounds, actions, and numbers (0 to 100)  <b>2.17</b> Metis finger weaving  <b>2.18</b> First Peoples head/armband patterning                      Addition and subtraction facts to 20  <b>2.5</b> adding and subtracting numbers to 20</p>	<p><b>Below Grade: Intervention</b>                      3: Skip-Counting                      4: Repeated Addition and Subtraction    <b>On Grade: Teacher Cards</b>                      6: Increasing Patterns 1 (2.15, 2.16)                      7: Increasing Patterns 2 (2.5, 2.16)                      8: Decreasing Patterns (not required by your curriculum)                      9: Extending Patterns (2.5, 2.16)                      10: Reproducing Patterns (2.5, 2.16)                      11: Creating Patterns (2.5, 2.16)                      12: Errors and Missing Terms (2.5, 2.16)                      13: Solving Problems (2.5, 2.16, 2.17, 2.18)                      14: Increasing/Decreasing Patterns Consolidation (2.5, 2.16)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Namir's Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b>                      Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

British Columbia/Yukon Territories (continued)

	<p><b>On Grade: Math Every Day</b>  <b>Card 2A:</b>          How Many Can We Make?          (2.5, 2.16)          Error Hunt (2.5, 2.16)  <b>Card 2B:</b>          Making Increasing Patterns          (2.5, 2.16)          Making Decreasing Patterns          (2.5, 2.16)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b>          Developing Fluency of Addition and Subtraction Computation          - Fluently adds and subtracts with quantities to 20.          (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use patterns to describe the world and solve problems. <b>Cross Strand:</b> Number Develop number sense.</p>			
<p><b>2PR2</b> Demonstrate an understanding of increasing patterns by:</p> <ul style="list-style-type: none"> <li>• <b>2PR2.1</b> describing</li> <li>• <b>2PR2.2</b> extending</li> <li>• <b>2PR2.3</b> comparing</li> <li>• <b>2PR2.4</b> creating patterns using manipulatives, diagrams, sounds and actions</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies to determine basic addition facts to 18 and related subtraction facts</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Skip-Counting 4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Increasing Patterns 1 (<b>2PR2.1, 2PR2.2, 2N10</b>) 7: Increasing Patterns 2 (<b>2PR2.1, 2PR2.2, 2N10</b>) 8: Decreasing Patterns (not required by your curriculum) 9: Extending Patterns (<b>2PR2.1, 2PR2.2, 2PR2.3, 2N10</b>) 10: Reproducing Patterns (<b>2PR2.1, 2PR2.2, 2N10</b>) 11: Creating Patterns (<b>2PR2.1, 2PR2.2, 2PR2.4, 2N10</b>) 12: Errors and Missing Terms (<b>2PR2.1, 2PR2.2, 2PR2.4, 2N10</b>) 13: Solving Problems (<b>2PR2.2, 2PR2.3, 2N10</b>)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Best Surprise (<b>Activities 6, 8, 9, 10, 11, 13, 14</b>)</li> <li>• Pattern Quest (<b>Activities 6, 10, 11, 14</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Namir's Marvellous Masterpieces (<b>Activities 6, 8, 10, 11, 13, 14</b>)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (<b>Activities 6, 7, 8, 9, 10, 13, 14</b>)</li> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (<b>Activities 7, 10, 13, 14</b>)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (<b>Activities 7, 8, 9, 10, 13, 14</b>)</li> <li>- Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (<b>Activities 12; MED 2A: 2</b>)</li> <li>- Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (<b>Activities 11, 14; MED 2A: 1; MED 2B: 1, 2</b>)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

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

	<p>14: Increasing/Decreasing Patterns Consolidation (2PR2.1, 2PR2.2, 2PR2.3, 2PR2.4, 2N10)</p> <p><b>On Grade: Math Every Day Card 2A:</b> How Many Can We Make? (2PR2.1, 2PR2.2, 2PR2.4, 2N10) Error Hunt (2PR2.1, 2N10)</p> <p><b>Card 2B:</b> Making Increasing Patterns (2PR2.1, 2PR2.4, 2N10) Making Decreasing Patterns (2PR2.1, 2PR2.4, 2N10)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Manitoba

	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use patterns to describe the world and solve problems.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2.PR.2</b> Demonstrate an understanding of increasing patterns by:</p> <ul style="list-style-type: none"> <li>• <b>2.PR.2.1</b> describing</li> <li>• <b>2.PR.2.2</b> reproducing</li> <li>• <b>2.PR.2.3</b> extending</li> <li>• <b>2.PR.2.4</b> creating patterns using manipulatives, diagrams, sounds, and actions (numbers to 100)</li> </ul> <p><b>2.N.10</b> Apply mental mathematics strategies to develop recall of basic addition facts to 18 and related subtraction facts</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Skip-Counting 4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Increasing Patterns 1 (2.PR.2.1, 2.PR.2.2, 2.PR.2.3, 2.N.10)</p> <p>7: Increasing Patterns 2 (2.PR.2.1, 2.PR.2.2, 2.PR.2.3, 2.N.10)</p> <p>8: Decreasing Patterns (not required by your curriculum)</p> <p>9: Extending Patterns (2.PR.2.1, 2.PR.2.2, 2.PR.2.3, 2.N.10)</p> <p>10: Reproducing Patterns (2.PR.2.1, 2.PR.2.2, 2.PR.2.3, 2N.10)</p> <p>11: Creating Patterns (2.PR.2.1, 2.PR.2.3, 2.PR.2.4, 2.N.10)</p> <p>12: Errors and Missing Terms (2.PR.2.1, 2.PR.2.3, 2.PR.2.4, 2.N.10)</p> <p>13: Solving Problems (2.PR.2.2, 2.PR.2.3, 2.N.10)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>• Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Namir’s Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>- Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>- Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>

Mathology 2

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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Manitoba (continued)

	<p>14: Increasing/Decreasing Patterns Consolidation (2.PR.2.1, 2.PR.2.2, 2.PR.2.3, 2.PR.2.4, 2.N.10)</p> <p><b>On Grade: Math Every Day Card 2A:</b> How Many Can We Make? (2.PR.2.1, 2.PR.2.3, 2.PR.2.4, 2.N.10) Error Hunt (2.PR.2.1, 2.N.10)</p> <p><b>Card 2B:</b> Making Increasing Patterns (2.PR.2.1, 2.PR.2.4, 2.N.10) Making Decreasing Patterns (2.PR.2.1, 2.PR.2.4, 2.N.10)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to use patterns to describe the world and solve problems.</p> <p><b>Cross Strand: Number</b> Students will be expected to develop number sense.</p>			
<p><b>2PR02</b> Students will be expected to demonstrate an understanding of increasing patterns by describing, extending, and creating numerical patterns (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds, and actions.</p> <p><b>2N10</b> Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts.</p>	<p><b>Below Grade: Intervention</b> 3: Skip-Counting 4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b> 6: Increasing Patterns 1 (2PR02, 2N10) 7: Increasing Patterns 2 (2PR02, 2N10) 8: Decreasing Patterns (not required by your curriculum) 9: Extending Patterns (2PR02, 2N10) 10: Reproducing Patterns (2PR02, 2N10) 11: Creating Patterns (2PR02, 2N10) 12: Errors and Missing Terms (2PR02, 2N10) 13: Solving Problems (2PR02, 2N10) 14: Increasing/Decreasing Patterns Consolidation (2PR02, 2N10)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Namir's Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>



# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Nova Scotia (continued)

	<p><b>On Grade: Math Every Day</b>  <b>Card 2A:</b>          How Many Can We Make?          (2PR02, 2N10)          Error Hunt (2PR02, 2N10)  <b>Card 2B:</b>          Making Increasing Patterns          (2PR02, 2N10)          Making Decreasing Patterns          (2PR02, 2N10)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b>          Developing Fluency of Addition and Subtraction Computation          - Fluently adds and subtracts with quantities to 20.          (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b></p> <p>Use patterns to describe the world and to solve problems.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2PR2</b> Demonstrate an understanding of increasing patterns by:</p> <ul style="list-style-type: none"> <li>• <b>2PR2.1</b> describing</li> <li>• <b>2PR2.2</b> reproducing</li> <li>• <b>2PR2.3</b> extending</li> <li>• <b>2PR2.4</b> creating numerical (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Skip-Counting 4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Increasing Patterns 1 (2PR2.1, 2PR2.2, 2PR2.3, 2N10) 7: Increasing Patterns 2 (2PR2.1, 2PR2.2, 2PR2.3, 2N10) 8: Decreasing Patterns (not required by your curriculum) 9: Extending Patterns (2PR2.1, 2PR2.2, 2PR2.3, 2N10) 10: Reproducing Patterns (2PR2.1, 2PR2.2, 2PR2.3, 2N10) 11: Creating Patterns (2PR2.1, 2PR2.3, 2PR2.4, 2N10) 12: Errors and Missing Terms (2PR2.1, 2PR2.3, 2PR2.4, 2N10) 13: Solving Problems (2PR2.2, 2PR2.3, 2N10)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>• Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Namir's Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>- Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>- Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Alberta/Northwest Territories/Nunavut (continued)

	<p>14: Increasing/Decreasing Patterns Consolidation (2PR2.1, 2PR2.2, 2PR2.3, 2PR2.4, 2N10)</p> <p><b>On Grade: Math Every Day Card 2A:</b> How Many Can We Make? (2PR2.1, 2PR2.3, 2PR2.4, 2N10) Error Hunt (2PR2.1, 2N10)</p> <p><b>Card 2B:</b> Making Increasing Patterns (2PR2.1, 2PR2.4, 2N10) Making Decreasing Patterns (2PR2.1, 2PR2.4, 2N10)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b>                      Number Sense, Logical Thinking, Spatial Sense, Mathematics as a Human Endeavour  <b>Cross Strand:</b> Number</p>			
<p><b>P2.2</b> Demonstrate understanding of increasing patterns by:</p> <ul style="list-style-type: none"> <li>• <b>P2.2.1</b> describing</li> <li>• <b>P2.2.2</b> reproducing</li> <li>• <b>P2.2.3</b> extending</li> <li>• <b>P2.2.4</b> creating patterns using manipulatives, pictures, sounds, and actions (numbers to 100).</li> </ul> <p><b>N2.2</b> Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction.</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Skip-Counting                      4: Repeated Addition and Subtraction</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Increasing Patterns 1 (P2.2.1, P2.2.2, P2.2.3, N2.2)                      7: Increasing Patterns 2 (P2.2.1, P2.2.2, P2.2.3, N2.2)                      8: Decreasing Patterns (not required by your curriculum)                      9: Extending Patterns (P2.2.1, P2.2.2, P2.2.3, N2.2)                      10: Reproducing Patterns (P2.2.1, P2.2.2, P2.2.3, N2.2)                      11: Creating Patterns (P2.2.1, P2.2.3, P2.2.4, N2.2)                      12: Errors and Missing Terms (P2.2.1, P2.2.3, P2.2.4, N2.2)                      13: Solving Problems (P2.2.2, P2.2.3, N2.2)</p> <p>14: Increasing/Decreasing Patterns Consolidation (P2.2.1, P2.2.2, P2.2.3, P2.2.4, N2.2)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• The Best Surprise (Activities 6, 8, 9, 10, 11, 13, 14)</li> <li>• Pattern Quest (Activities 6, 10, 11, 14)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Namir's Marvellous Masterpieces (Activities 6, 8, 10, 11, 13, 14)</li> </ul>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> <li>- Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap clap, etc.). (Activities 6, 7, 8, 9, 10, 13, 14)</li> <li>- Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 7, 10, 13, 14)</li> <li>- Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. (Activities 7, 8, 9, 10, 13, 14)</li> <li>- Extends number patterns and finds missing elements (e.g., 1, 3, 5, __, 9, ...). (Activities 12; MED 2A: 2)</li> <li>- Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. (Activities 11, 14; MED 2A: 1; MED 2B: 1, 2)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 2: Increasing/Decreasing Patterns

Saskatchewan (continued)

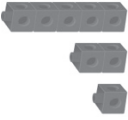
	<p><b>On Grade: Math Every Day Card 2A:</b> How Many Can We Make? (P2.2.1, P2.2.3, P2.2.4, N2.2) Error Hunt (P2.2.1, N2.2)</p> <p><b>Card 2B:</b> Making Increasing Patterns (P2.2.1, P2.2.4, N2.2) Making Decreasing Patterns (P2.2.1, P2.2.4, N2.2)</p>	<p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 6, 7, 8, 9, 10, 11, 12, 13, 14, MED 2A: 1, 2; MED 2B: 1, 2)</p>
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**Master 16**

# Increasing Patterns

Choose an increasing pattern below.  
 Careful! One pattern is not an increasing pattern. Can you find it?



<b>Identifying and Reproducing Increasing Patterns Behaviours/Strategies</b>		
1. Student chooses a pattern, but cannot identify it as an increasing pattern.	2. Student identifies increasing patterns, but struggles to reproduce them concretely (is unable to build the pattern with cubes).	3. Student identifies increasing patterns and attempts to reproduce the patterns, but does not add the correct number of cubes each time or miscounts the cubes.
		
<b>Observations/Documentation</b>		
4. Student identifies and reproduces increasing patterns concretely, but struggles to describe the patterns (cannot write pattern rules).  "The pattern rule is: Add 2 cubes."	5. Student identifies and reproduces increasing patterns concretely and describes the patterns pictorially.  "I can't draw a cube."	6. Student successfully identifies and reproduces increasing patterns concretely and pictorially and describes the patterns.
<b>Observations/Documentation</b>		

Master 18

# More Increasing Patterns

The dashed box contains three rows of patterns:


- Row 1:** Four patterns. The first is a 2x2 square with a square below the center. The second is a 3x3 square with a square below the center. The third is a 4x4 square with a square below the center. The fourth is a 5x5 square with a square below the center.
- Row 2:** Three patterns. The first is a 2x2 square. The second is a 3x3 square. The third is a 4x4 square.
- Row 3:** Three patterns. The first is a 2x1 vertical bar. The second is a 1x3 horizontal bar with a square on top of the middle square. The third is a 1x5 horizontal bar with a square on top of the third square.





# Master 19: Activity 7 Assessment

## Increasing Patterns 2

Identifying and Reproducing Increasing Patterns Numerically Behaviours/Strategies		
<p>1. Student identifies increasing patterns, but struggles to reproduce them concretely (is unable to build the patterns with tiles).</p>	<p>2. Student identifies and reproduces increasing patterns concretely, but miscounts when counting the number of tiles in each term.</p> <div style="text-align: center;">  <p>“6 tiles”</p> </div>	<p>3. Student identifies and reproduces increasing patterns concretely and numerically, but struggles to describe the patterns (cannot write pattern rules).</p> <p style="text-align: center;">Add 4 tiles”</p>
Observations/Documentation		
<p>4. Student identifies and reproduces increasing patterns concretely and numerically and describes the patterns, but struggles to predict the number of tiles in the next term.</p> <p>“How do I know how many tiles are in the next term?”</p>	<p>5. Student identifies increasing patterns numerically and describes the patterns, but does not see the relation to skip-counting or repeated addition.</p> <p>“5, 9, 13 I don't see how this is like adding or skip-counting.”</p>	<p>6. Student successfully identifies and reproduces increasing patterns pictorially and numerically and describes the patterns.</p> <p>“5, 9, 13 Start at 5. Add 4 each time. This is like skip-counting by 4s from 5.”</p>
Observations/Documentation		

Master 20

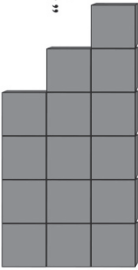
# More Decreasing Patterns

The image contains six grid patterns arranged in two rows of three, enclosed in a dashed-line box. The top row shows a decreasing pattern of vertical columns: the first has 5 columns of height 5, the second has 4 columns of height 4, and the third has 3 columns of height 3. The bottom row shows a decreasing pattern of cross shapes: the first has a 5x5 grid with a central column and row, the second has a 4x4 grid with a central column and row, and the third has a 3x3 grid with a central column and row.






# Master 21: Activity 8 Assessment

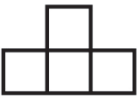
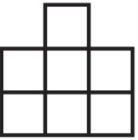
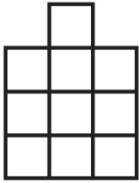
## Decreasing Patterns



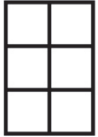
<b>Identifying and Reproducing Decreasing Patterns Behaviours/Strategies</b>		
<p>1. Student identifies decreasing patterns, but struggles to reproduce them concretely (is unable to build the patterns with tiles).</p>	<p>2. Student identifies and reproduces decreasing patterns concretely, but miscounts when counting the number of tiles in each term.</p>  <p style="text-align: center;">"16 tiles"</p>	<p>3. Student identifies and reproduces decreasing patterns concretely and numerically, but struggles to describe the patterns (cannot write pattern rules).</p> <p style="text-align: center;">"Take away 3 tiles"</p>
<b>Observations/Documentation</b>		
<p>4. Student identifies and reproduces decreasing patterns concretely and numerically and describes the patterns, but struggles to predict the number of tiles in the next term.</p> <p style="text-align: center;">"How do I know how many tiles are in the next term?"</p>	<p>5. Student identifies decreasing patterns numerically and describes the patterns, but does not see the relation to skip-counting backward or repeated subtraction.</p> <p style="text-align: center;">"10, 8, 6 I don't see how this is like subtracting or skip-counting."</p>	<p>6. Student successfully identifies and reproduces decreasing patterns concretely, pictorially, and numerically and describes the patterns.</p> <p style="text-align: center;">"10, 8, 6 Start at 10. Take away 2 each time. This is like skip-counting backward by 2s from 10."</p>
<b>Observations/Documentation</b>		

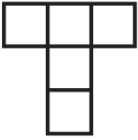
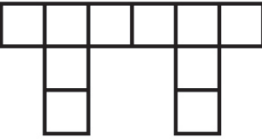
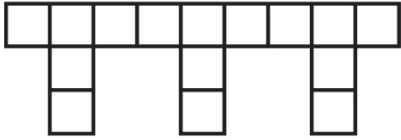
Master 22

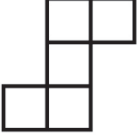

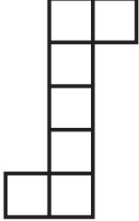
# Increasing Pattern Cards

Row 1:   



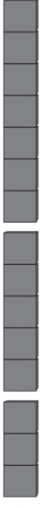

Row 2:   

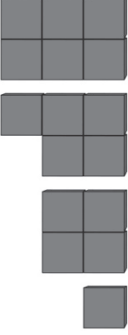
Row 3:   

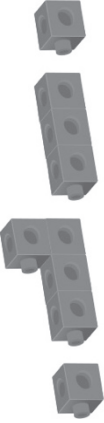

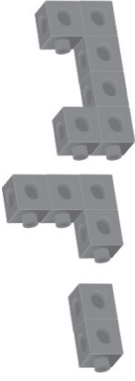
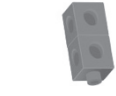
Row 4:   

Row 5:   



<b>Reproducing and Extending Increasing Patterns Behaviours/Strategies</b>		
<p>1. Student reproduces increasing patterns, but is unable to extend patterns and adds tiles randomly.</p> 	<p>2. Student reproduces increasing patterns, but struggles to extend them and does not add the same amount each time.</p>  <p>...</p>	<p>3. Student reproduces increasing patterns and attempts to extend them by adding the same amount each time, but the amount added is incorrect.</p>  <p>...</p>
<b>Observations/Documentation</b>		
<p>4. Student extends increasing patterns by adding the same amount each time, but shape of patterns is not maintained.</p> 	<p>5. Student reproduces and extends increasing patterns, but is unable to write the pattern rule.</p>	<p>6. Student successfully reproduces and extends increasing patterns and explains the rules.</p>
<b>Observations/Documentation</b>		

<b>Reproducing Increasing Patterns in Different Ways Behaviours/Strategies</b>		
<p>1. Student chooses an increasing pattern, but struggles to reproduce it in different ways and randomly performs actions (gives no thought to number of actions).</p> <p style="text-align: center;">Pattern: 1, 3, 5, 7 "Clap-clap-clap-clap-clap-clap-clap"</p>	<p>2. Student reproduces the same increasing pattern in some ways, but is unable to represent the pattern with numbers or write the pattern rule.</p>	<p>3. Student reproduces the same increasing pattern in different ways, but does not have the correct number of items in some of the terms.</p> <div style="text-align: center;">  <p>Pattern: 1, 3, 5, 7</p> </div>
<b>Observations/Documentation</b>		
<p>4. Student reproduces the same increasing pattern in different ways, matching the number of items in each term to the number pattern.</p> <p style="text-align: center;">1, 3, 5, 7 "All the numbers match."</p>	<p>5. Student successfully reproduces the same increasing pattern in different ways, but cannot prove that all ways are the same.</p> <p style="text-align: center;">"I just know they all show the same pattern."</p>	<p>6. Student successfully reproduces the same increasing pattern in different ways.</p>
<b>Observations/Documentation</b>		

Creating Increasing Patterns Behaviours/Strategies		
<p>1. Student chooses materials, but struggles to create an increasing pattern and randomly groups items or creates a repeating pattern.</p> 	<p>2. Student chooses materials and attempts to create an increasing pattern, but does not add the same number of items each time.</p> 	<p>3. Student creates an increasing pattern, but items are not added in the same way each time.</p> 
Observations/Documentation		
<p>4. Student creates an increasing pattern, but struggles to write the pattern rule.</p>  <p>“Add 2”</p>	<p>5. Student creates an increasing pattern, but is not sure if partner’s pattern rule is correct.</p> <p>“I’m not sure if it’s right.”</p>	<p>6. Student successfully identifies and creates an increasing pattern and explains the pattern rule.</p>
Observations/Documentation		

Master 26




# What's Wrong?

○  
○ ○  
○ ○ ○ ○

2, 4, \_\_, 8, 10





Finding Errors and Missing Terms Behaviours/Strategies		
<p>1. Student takes linking cubes, but struggles to create an increasing pattern.</p>	<p>2. Student makes an increasing pattern with missing terms or errors, but cannot identify the pattern rule of partner's pattern to predict missing term(s) and correct errors.</p> 	<p>3. Student explains the rule, but has difficulty predicting missing term(s) in an increasing pattern.</p>  <p>"Start at 2. Add 1 each time."</p>
Observations/Documentation		
<p>4. Student explains the rule, but has difficulty correcting errors in an increasing pattern.</p>  <p>"Start at 1. Add 2 each time."</p>		
Observations/Documentation		
<p>5. Student predicts missing term(s) and corrects errors in increasing patterns, but struggles to explain how an error or missing term was found.</p>		<p>6. Student successfully predicts missing term(s) and corrects errors in increasing patterns and justifies thinking.</p>

Master 28

# Beaded Belt



## Master 29

**Beading Story: Smooth Beads**

By Amanda Norton and Jillian Laursen



I loved going to my Noohkoom's (grandmother's) house up north. The smell of leather and the sight of cookie tins filled with beads would wake up my senses. Even as a young child, I remember running my fingertips over the tightly beaded leather pieces in my Noohkoom's home. How delicate and fine they were.

Her fingers would move so quickly as she created patterns of flowers in her mind. She would use two needles on the leather—stringing a needle with two and sometimes five beads at a time, and then using the second needle to tack them down.

Her patterns grew with every movement, and her hand would begin to move faster. Her hand would only leave the leather to stop and sip her warm mug of tea. When she was finished, we would sit back and look at the beautiful pieces. Our family, our friends, and people from all over the community admired Noohkoom's beadwork.

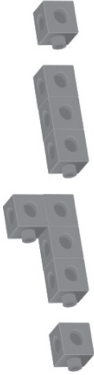


Photo taken by: Amanda Norton

<b>Solving Problems Involving Increasing Patterns Behaviours/Strategies</b>		
<p>1. Student reproduces an increasing pattern concretely, but is unable to identify and explain the pattern rule.</p>	<p>2. Student identifies and reproduces an increasing pattern, but guesses to solve the problem (gives no thought to pattern).  "I guess 200!"</p>	<p>3. Student identifies and reproduces an increasing pattern, but struggles to use rule to make prediction.    "I know the rule, but I don't know what to do."</p>
<b>Observations/Documentation</b>		
<p>4. Student identifies and reproduces an increasing pattern and uses rule to make prediction, but struggles to extend the pattern to check.  </p>	<p>5. Student identifies, reproduces, and extends an increasing pattern to solve problem, but does not use math language to explain thinking.</p>	<p>6. Student successfully identifies, reproduces, and extends an increasing pattern to solve problem and uses math language to explain thinking.</p>
<b>Observations/Documentation</b>		

# Master 31a: Activity 14 Assessment

## Increasing/Decreasing Patterns: Consolidation

Increasing Patterns Behaviours/Strategies		
<p>1. Student chooses materials, but struggles to create an increasing pattern and randomly groups items together.</p> 	<p>2. Student creates an increasing pattern, but struggles to explain rule for partner's pattern.</p>	<p>3. Student creates an increasing pattern, but struggles to examine partner's pattern for errors or missing terms.</p>
Observations/Documentation		
<p>4. Student identifies and creates an increasing pattern, but struggles to extend the pattern by two terms.</p>	<p>5. Student identifies, creates, and extends an increasing pattern, but struggles to reproduce the pattern another way.</p>	<p>6. Student successfully identifies, creates, reproduces, and extends an increasing pattern and explains the pattern rule.</p>
Observations/Documentation		

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can identify and reproduce increasing patterns. <b>(Activities 6, 7, 9, 13, 14)</b>									
Student can identify/explain the pattern rule for an increasing/decreasing pattern. <b>(Activities 6, 7, 8, 9, 10, 11, 12, 13, 14)</b>									
Student sees the relation between an increasing/ decreasing pattern and skip-counting or repeated addition/subtraction. <b>(Activities 7, 8)</b>									
Student can identify and reproduce decreasing patterns. <b>(Activities 8, 11, 12, 14)</b>									
Student can extend an increasing pattern. <b>(Activities 9, 13)</b>									
Student can show an increasing pattern in different ways. <b>(Activities 10, 13)</b>									
Student can create an increasing pattern. <b>(Activities 11, 12, 14)</b>									
Student can predict missing terms and correct errors in increasing patterns. <b>(Activities 12, 14)</b>									
Student can solve problems involving increasing patterns. <b>(Activity 13)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Identifies and reproduces increasing patterns. <b>(Activities 6, 7, 9, 13, 14)</b>			
Identifies/explains the pattern rule for an increasing/decreasing pattern. <b>(Activities 6, 7, 8, 9, 10, 11, 12, 13, 14)</b>			
Sees the relation between an increasing/decreasing pattern and skip-counting or repeated addition/subtraction. <b>(Activities 7, 8)</b>			
Identifies and reproduces decreasing patterns. <b>(Activities 8, 11, 12, 14)</b>			
Extends an increasing pattern. <b>(Activities 9, 13)</b>			
Shows an increasing pattern in different ways. <b>(Activities 10, 13)</b>			
Creates an increasing pattern. <b>(Activities 11, 12, 14)</b>			
Predicts missing terms and corrects errors in increasing patterns. <b>(Activities 12, 14)</b>			
Solves problems involving increasing patterns. <b>(Activity 13)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b>  <b>Expressions and Equality:</b> demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18.  <b>Cross Strand:</b> Number  <b>Quantity Relationships:</b> read, represent, compare, and order whole numbers to 100, and use concrete materials to represent fractions and money amounts to 100¢.  <b>Operational Sense:</b> solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division.</p>			
<p><b>P2.8</b> demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials</p> <p><b>P2.9</b> represent, through investigation with concrete materials and pictures, two number expressions that are equal, using the equal sign</p> <p><b>P2.10</b> determine the missing number in equations involving addition and subtraction to 18, using a variety of tools and strategies</p>	<p><b>Below Grade: Intervention</b>            5: Exploring 10            6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b>            15: Equal and Unequal Sets            16: Equal or Not Equal? (P2.9, N2.12)            17: Exploring Number Sentences (P2.8, P2.9, N2.12)            18: Exploring Properties (P2.11, P2.12, N2.12)            19: Missing Numbers (P2.10, N2.12)            20: Equality and Inequality Consolidation (P2.8, P2.9, P2.11, P2.12, N2.3, N2.12)</p> <p><b>On Grade: Math Every Day Card 3A:</b>            Equal or Not Equal? (P2.9, N2.12)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> </ul>



# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Ontario (continued)

<p><b>P2.11</b> identify, through investigation, and use the commutative property of addition to facilitate computation with whole numbers</p> <p><b>P2.12</b> identify, through investigation, the properties of zero in addition and subtraction</p> <p><b>N2.3</b> compose and decompose two-digit numbers in a variety of ways, using concrete materials</p> <p><b>N2.12</b> solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies</p>	<p>How Many Ways? (P2.8, P2.9, N2.3)  <b>Card 3B:</b>                  Which One Doesn't Belong? (P2.9, N2.12)                  What's Missing? (P2.10, N2.12)</p>	<p>- Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</p> <p><b>Big Idea: Numbers are related in many ways.</b>                  Decomposing Wholes into Parts and Composing Wholes from Parts                  - Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</p> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p>
		<p>Developing Conceptual Meaning of Addition and Subtraction</p> <p>- Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1)</p> <p>- Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20; MED 3A: 1, 2; MED 3B: 1)</p> <p>Developing Fluency of Addition and Subtraction Computation</p> <p>- Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</p>

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> The regular change in increasing patterns can be identified and used to make generalizations.</p> <p><b>Cross Strand:</b> Number</p>			
<p>Change in quantity using pictorial and symbolic representation</p> <p><b>2.20</b> numerically describing a change in quantity (e.g., for <math>6 + n = 10</math>, visualize the change in quantity by using ten-frames, hundred charts, etc.)</p> <p><b>2.21</b> Symbolic representation of equality and inequality</p> <p><b>2.5</b> adding and subtracting numbers to 20</p> <p>Addition and subtraction to 100</p> <p><b>2.7</b> decomposing numbers to 100</p> <p><b>2.13</b> whole-class number talks</p>	<p><b>Below Grade: Intervention</b></p> <p>5: Exploring 10</p> <p>6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b></p> <p>15: Equal and Unequal Sets</p> <p>16: Equal or Not Equal? (2.21, 2.5)</p> <p>17: Exploring Number Sentences (2.21, 2.5)</p> <p>18: Exploring Properties</p> <p>19: Missing Numbers (2.20, 2.5)</p> <p>20. Equality and Inequality Consolidation (2.21, 2.5, 2.7)</p> <p><b>On Grade: Math Every Day Card 3A:</b></p> <p>Equal or Not Equal? (2.21, 2.5)</p> <p>How Many Ways? (2.21, 2.7)</p> <p><b>Card 3B:</b></p> <p>Which One Doesn't Belong? (2.21, 2.5)</p> <p>What's Missing? (2.20, 2.5, 2.13)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

British Columbia/Yukon Territories (continued)

		<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</p> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1) - Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20; MED 3A: 1, 2; MED 3B: 1)</p> <p>Developing Fluency of Addition and Subtraction Computation - Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Represent algebraic expressions in multiple ways. <b>Cross Strand:</b> Number Develop number sense.</p>			
<p><b>2PR3</b> Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).</p> <p><b>2PR4</b> Record equalities and inequalities symbolically using the equal symbol or the not equal symbol.</p> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100</p>	<p><b>Below Grade: Intervention</b> 5: Exploring 10 6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b> 15: Equal and Unequal Sets (2PR3) 16: Equal or Not Equal? (2PR3, 2PR4, 2N10) 17: Exploring Number Sentences (2PR4, 2N10) 18: Exploring Properties (2N8, 2N9.3, 2N9.4, 2N10) 19: Missing Numbers 20. Equality and Inequality Consolidation (2PR3, 2PR4, 2N4, 2N8, 2N9.3, 2N10)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Equal or Not Equal? (2PR3, 2PR4, 2N10) <b>How Many Ways? (2N4, 2PR4)</b> <b>Card 3B:</b> Which One Doesn't Belong? (2PR4, 2N10) What's Missing?</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

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

<p>and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> explaining that the order in which numbers are added does not affect the sum</li> <li>• <b>2N9.4</b> explaining that the order in which numbers are subtracted may affect the difference.</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies to determine basic addition facts to 18 and related subtraction facts.</p>		<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1)</li> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20; MED 3A: 1, 2; MED 3B: 1)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</li> </ul>
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# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Represent algebraic expressions in multiple ways.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2.PR.3</b> Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).</p> <p><b>2.PR.4</b> Record equalities and inequalities symbolically using the equal symbol or the not-equal symbol.</p> <p><b>2.N.4</b> Represent and describe numbers to 100, concretely, pictorially, and symbolically.</p> <p><b>2.N.8</b> Demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2.N.9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100</p>	<p><b>Below Grade: Intervention</b> 5: Exploring 10 6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b> 15: Equal and Unequal Sets (2.PR.3) 16: Equal or Not Equal? (2.PR.3, 2.PR.4, 2.N.10) 17: Exploring Number Sentences (2.PR.4, 2.N.10) 18: Exploring Properties (2.N.8, 2.N.9.3, 2.N.9.4, 2.N.10) 19: Missing Numbers 20. Equality and Inequality Consolidation (2.PR.3, 2.PR.4, 2.N.4, 2.N.8, 2.N.9.3, 2.N.10)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Equal or Not Equal? (2.PR.3, 2.PR.4, 2.N.10) How Many Ways? (2.PR.4, 2.N.4) <b>Card 3B:</b> Which One Doesn't Belong? (2.PR.4, 2.N.10)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>

### Mathology 2

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Manitoba (continued)

<p>and the corresponding subtraction by</p> <ul style="list-style-type: none"> <li>• <b>2.N.9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2.N.9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2.N.9.3</b> explaining that the order in which numbers are added does not affect the sum</li> <li>• <b>2.N.9.4</b> explaining that the order in which numbers are subtracted may affect the difference</li> </ul> <p><b>2.N.10</b> Apply mental mathematics strategies to develop recall of basic addition facts to 18 and related subtraction facts</p>	<p>What's Missing?</p>	<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</p> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1) - Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20, MED 3A: 1, 2; MED 3B: 1)</p> <p>Developing Fluency of Addition and Subtraction Computation - Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to represent algebraic expressions in multiple ways.</p> <p><b>Cross Strand: Number</b> Students will be expected to develop number sense.</p>			
<p><b>2PR03</b> Students will be expected to demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100).</p> <p><b>2PR04</b> Students will be expected to record equalities and inequalities symbolically, using the equal symbol or the not equal symbol.</p> <p><b>2N04</b> Students will be expected to represent and partition numbers to 100.</p> <p><b>2N08</b> Students will be expected to demonstrate and explain the effect of adding zero to or subtracting zero from any number.</p> <p><b>2N09</b> Students will be expected to</p>	<p><b>Below Grade: Intervention</b> 5: Exploring 10 6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b> 15: Equal and Unequal Sets (2PR03) 16: Equal or Not Equal? (2PR03, 2PR04, 2N10) 17: Exploring Number Sentences (2PR04, 2N10) 18: Exploring Properties (2N08, 2N09.3, 2N09.4, 2N10) 19: Missing Numbers 20. Equality and Inequality Consolidation (2PR03, 2PR04, 2N04, 2N08, 2N09.3, 2N10)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Equal or Not Equal? (2PR03, 2PR04, 2N10) <b>How Many Ways? (2PR04, 2N04) Card 3B:</b> Which One Doesn't Belong? (2PR04, 2N10)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b></p> <p>Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>



# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Nova Scotia (continued)

<p>demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by</p> <ul style="list-style-type: none"> <li>• <b>2N09.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N09.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N09.3</b> explaining and demonstrating that the order in which numbers are added does not affect the sum</li> <li>• <b>2N09.4</b> explaining and demonstrating that the order in which numbers are subtracted matters when finding a difference</li> </ul> <p><b>2N10</b> Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts.</p>	<p>What's Missing?</p>	<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</p> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1) - Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20, MED 3A: 1, 2; MED 3B: 1)</p> <p>Developing Fluency of Addition and Subtraction Computation - Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</p>
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# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Represent algebraic expressions in multiple ways. <b>Cross Strand:</b> Number Develop number sense.</p>			
<p><b>2PR4</b> Demonstrate and explain the meaning of equality and inequality, concretely and pictorially.</p> <p><b>2PR5</b> Record equalities and inequalities symbolically, using the equal symbol or the not equal symbol.</p> <p><b>2N4</b> Represent and describe numbers to 100, concretely, pictorially and symbolically.</p> <p><b>2N8</b> Demonstrate and explain the effect of adding zero to, or subtracting zero from, any number.</p> <p><b>2N9</b> Demonstrate an understanding of addition (limited to 1- and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Nutty and Wolfy (Activities 15, 16, 20)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<p><b>Below Grade:</b></p> <p>5: Exploring 10 6: Balancing Sets</p> <p><b>On Grade: Teacher Cards</b> 15: Equal and Unequal Sets (2PR4) 16: Equal or Not Equal? (2PR4, 2PR5, 2N10) 17: Exploring Number Sentences (2PR5, 2N10) 18: Exploring Properties (2N8, 2N9.3, 2N9.5, 2N10) 19: Missing Numbers 20. Equality and Inequality Consolidation (2PR4, 2PR5, 2N4, 2N8, 2N9.3, 2N10)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Equal or Not Equal? (2PR4, 2PR5, 2N10) <b>How Many Ways? (2PR5, 2N4)</b> <b>Card 3B:</b> Which One Doesn't Belong? (2PR5, 2N10) What's Missing?</p>	<p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations</p> <ul style="list-style-type: none"> <li>Compares sets to determine more/less or equal. (Activity 15)</li> <li>Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> <li>Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

Alberta/Northwest Territories/Nunavut (continued)

<ul style="list-style-type: none"> <li>• <b>2N9.1</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>2N9.2</b> creating and solving problems that involve addition and subtraction</li> <li>• <b>2N9.3</b> using the commutative property of addition (the order in which numbers are added does not affect the sum)</li> <li>• <b>2N9.4</b> using the associative property of addition (grouping a set of numbers in different ways does not affect the sum)</li> <li>• <b>2N9.5</b> explaining that the order in which numbers are subtracted may affect the difference.</li> </ul> <p><b>2N10</b> Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.</p>		<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts</p> <ul style="list-style-type: none"> <li>- Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</li> </ul> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b></p> <p>Developing Conceptual Meaning of Addition and Subtraction</p> <ul style="list-style-type: none"> <li>- Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1)</li> <li>- Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20; MED 3A: 1, 2; MED 3B: 1)</li> </ul> <p>Developing Fluency of Addition and Subtraction Computation</p> <ul style="list-style-type: none"> <li>- Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</li> </ul>
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# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

### Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Goals</b> Number Sense, Logical Thinking, Spatial Sense, Mathematics as a Human Endeavour <b>Cross Strand:</b> Number			
<b>P2.3</b> Demonstrate understanding of equality and inequality concretely and pictorially (0 to 100) by: <ul style="list-style-type: none"> <li>• <b>P2.3.1</b> relating equality and inequality to balance</li> <li>• <b>P2.3.2</b> comparing sets</li> <li>• <b>P2.3.3</b> recording equalities with an equal sign</li> <li>• <b>P2.3.4</b> recording inequalities with a not equal sign</li> <li>• <b>P2.3.5</b> solving problems involving equality and inequality</li> </ul>	<b>Below Grade: Intervention</b> 5: Exploring 10 6: Balancing Sets  <b>On Grade: Teacher Cards</b> 15: Equal and Unequal Sets (P2.3.1, P2.3.2) 16: Equal or Not Equal? (P2.3.1, P2.3.3, P2.3.4, P2.3.5, N2.2.4) 17: Exploring Number Sentences (P2.3.1, P2.3.3, P2.3.4, P2.3.5, N2.2.4) 18: Exploring Properties (N2.2.4, N2.2.5, N2.2.6) 19: Missing Numbers 20: Equality and Inequality Consolidation (P2.3.1, P2.3.3, P2.3.4, N2.1.1, N2.2.4, N2.2.5, N2.2.6)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• Nutty and Woify (Activities 15, 16, 20)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• Kokum's Bannock (Activities 15, 16, 17, 18, 19, 20)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• A Week of Challenges (Activities 17, 18, 19, 20)</li> </ul>	<b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</b> Understanding Equality and Inequality, Building on Generalized Properties of Numbers and Operations <ul style="list-style-type: none"> <li>- Compares sets to determine more/less or equal. (Activity 15)</li> <li>- Creates a set that is more/less or equal to a given set. (Activity 15)</li> <li>- Models and describes equality (balance; the same as) and inequality (imbalance; not the same as). (Activities 16, 17, 20, MED 3A: 1)</li> <li>- Records different expressions of the same quantity as equalities (e.g., <math>2 + 4 = 5 + 1</math>). (Activities 20, MED 3A: 1, 2)</li> <li>- Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition). (Activities 18, 20)</li> </ul> Using Symbols, Unknowns, and Variables to Represent Mathematical Relations <ul style="list-style-type: none"> <li>- Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 16, 17, 19, 20)</li> <li>- Understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions. (Activities 16, 17, 19, 20; MED 3A: 1)</li> <li>- Solves for an unknown value in a one-step addition and subtraction problem (e.g., <math>n + 5 = 15</math>). (Activity 19)</li> </ul>

# Curriculum Correlation

## Patterning and Algebra Cluster 3: Equality and Inequality

Saskatchewan (continued)

<p><b>N2.2</b> Demonstrate understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:</p> <ul style="list-style-type: none"> <li>• <b>N2.2.1</b> representing strategies for adding and subtracting concretely, pictorially, and symbolically</li> <li>• <b>N2.2.2</b> creating and solving problems involving addition and subtraction</li> <li>• <b>N2.2.3</b> estimating</li> <li>• <b>N2.2.4</b> using personal strategies for adding and subtracting with and without the support of manipulatives</li> <li>• <b>N2.2.5</b> analyzing the effect of adding or subtracting zero</li> <li>• <b>N2.2.6</b> analyzing the effect of the ordering of the quantities (addends, minuends, and subtrahends) in addition and subtraction statements.</li> </ul>	<p><b>Card 3B:</b> Which One Doesn't Belong? (P2.3.3, P2.3.4, N2.2.4) What's Missing?</p>	<p><b>Big Idea: Numbers are related in many ways.</b> Decomposing Wholes into Parts and Composing Wholes from Parts - Composes and decomposes quantities to 20. (Activities 20, MED 3A: 2)</p> <p><b>Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.</b> Developing Conceptual Meaning of Addition and Subtraction - Models add-to and take-from situations with quantities to 10. (Activities 17, 18, 20, MED 3A: 1) - Uses symbols and equations to represent addition and subtraction situations. (Activities 16, 17, 18, 20, MED 3A: 1, 2; MED 3B: 1)</p> <p>Developing Fluency of Addition and Subtraction Computation - Fluently adds and subtracts with quantities to 20. (Activities 16, 17, 18, 19, 20; MED 3A: 1; MED 3B: 1, 2)</p>
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Name \_\_\_\_\_ Date \_\_\_\_\_

Master 33a

# Equal and Unequal Sets Recording Sheet

## Equal Sets

Player A's Set	Player B's Set

Player A's Set	Player B's Set

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 33b

# Equal and Unequal Sets Recording Sheet

## Unequal Sets

Player A's Set	Player B's Set

Player A's Set	Player B's Set

# Master 34: Activity 15 Assessment

## Equal and Unequal Sets

<b>Creating Equal and Unequal Sets Behaviours/Strategies</b>			
1. Student guesses to create a set that is more/less than or equal to a given set.	2. Student creates a set that is equal to a given set, but thinks the sets must be identical (e.g., uses the same number of each colour of cube and/or arranges the cubes in the same way).	3. Student creates a set that is more/less than or equal to a given set, but struggles to use the pan balance to check.	4. Student successfully creates sets that are more/less than or equal to a given set.
<b>Observations/Documentation</b>			
<b>Identifying the Unequal Set Behaviours/Strategies</b>			
1. Student guesses and is unable to compare sets to identify the unequal set.	2. Student uses one-to-one matching to compare sets and identify the unequal set.	3. Student counts to compare sets and identify the unequal set, but is unable to explain thinking.	4. Student successfully compares sets to identify the unequal set and explains thinking.
<b>Observations/Documentation</b>			



Master 35a

### Equal or Not Equal? Cards

$$5 + 2 \square 3 + 4$$

$$1 + 6 \square 2 + 4$$

$$9 + 3 \square 8 + 5$$

$$5 + 6 \square 7 + 4$$

$$8 + 4 \square 5 + 7$$

$$6 + 2 \square 4 + 4$$

$$6 + 8 \square 7 + 9$$

$$9 + 7 \square 8 + 8$$



Master 35b

### Equal or Not Equal? Cards (for Accommodations)

$$5 + 2 \square 7$$

$$7 \square 2 + 4$$

$$3 + 3 \square 5$$

$$6 \square 2 + 3$$

$$8 \square 4 + 4$$

$$1 + 7 \square 9$$

$$3 + 5 \square 8$$

$$9 \square 4 + 5$$



Master 35c

**Equal or Not Equal? Cards  
(for Extension)**

$5 + 2 + 1 \square 3 + 4$

$2 + 6 + 2 \square 9 + 1$

$9 + 3 + 4 \square 8 + 7$

$5 + 9 \square 7 + 4 + 3$

$8 + 4 + 5 \square 6 + 9$

$6 + 2 + 3 \square 4 + 8$

$6 + 8 \square 5 + 7 + 3$

$9 + 7 \square 8 + 6 + 2$



Master 35d

**Equal or Not Equal? Cards**  
**(for Combined Grades Extension)**

$19 + 5 \square 18 + 4$

$15 + 4 \square 5 + 13$

$12 + 9 \square 18 + 3$

$5 + 17 \square 13 + 8$

$18 + 4 \square 15 + 7$

$6 + 16 \square 4 + 17$

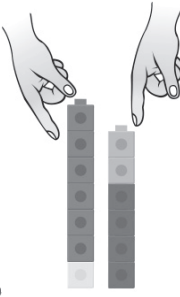


$14 + 8 \square 3 + 19$

$17 + 7 \square 9 + 14$



# Master 36: Activity 16 Assessment

## Equal or Not Equal?

Identifying Equal and Not Equal Number Sentences Behaviours/Strategies		
<p>1. Student turns over a card, but struggles to model equality and inequality with cubes (miscounts) or only models one number on each side.</p>	<p>2. Student models each side of number sentence with cubes and compares expressions (cubes) using one-to-one matching.</p> 	<p>3. Student models each side of number sentence with cubes and compares expressions (cubes) using counting.</p> <p>“1, 2, 3, 4, 5, 6, 7”  “1, 2, 3, 4, 5, 6” </p> <p>“The sides are not equal.”</p>
Observations/Documentation		
<p>4. Student models equality and inequality with cubes, but struggles to interpret the pan balance.</p>	<p>5. Student models equality and inequality with cubes and compares expressions, but does not understand when to use the equal (=) and not equal (≠) symbols.</p> <p>“I’m not sure which sign to use.”</p>	<p>6. Student models and describes equality and inequality, and understands and uses the equal (=) and not equal (≠) symbols when comparing expressions.</p>
Observations/Documentation		

Master 37

# Tent Cards

Fold here

Fold here

			≠
			≠
			≠
			≠



**Equal or Not Equal? Number Sentences**Write = or  $\neq$  in each box.

$9 + 3$	<input type="text"/>	15
17	<input type="text"/>	$8 + 9$
$7 + 9$	<input type="text"/>	$10 + 6$
$12 + 0$	<input type="text"/>	12
$11 - 2$	<input type="text"/>	$8 + 0$
$11 + 3$	<input type="text"/>	$16 - 2$
$13 - 5$	<input type="text"/>	$7 + 2$



Master 38b

**Equal or Not Equal? Number Sentences  
(for Accommodations)**Write = or  $\neq$  in each box.

$5 + 3$	<input type="checkbox"/>	7
8	<input type="checkbox"/>	$2 + 6$
$3 + 2$	<input type="checkbox"/>	$1 + 4$
$2 + 0$	<input type="checkbox"/>	2
$5 - 2$	<input type="checkbox"/>	$1 + 3$
$3 + 3$	<input type="checkbox"/>	$7 - 1$
$6 - 2$	<input type="checkbox"/>	$4 + 1$





Master 38c

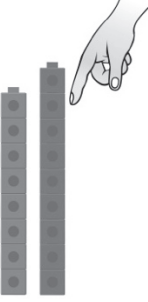

**Equal or Not Equal? Number Sentences  
(for Combined Grades Extension)**Write = or  $\neq$  in each box.

$12 + 13$	<input type="checkbox"/>	27
27	<input type="checkbox"/>	$21 + 6$
$5 + 21$	<input type="checkbox"/>	$14 + 14$
$12 + 20$	<input type="checkbox"/>	$11 + 31$
$33 - 12$	<input type="checkbox"/>	$17 + 3$
$21 + 3$	<input type="checkbox"/>	$26 - 2$
$38 - 7$	<input type="checkbox"/>	$39 - 9$



# Master 39: Activity 17 Assessment

## Exploring Number Sentences

Exploring Number Sentences Behaviours/Strategies		
<p>1. Student chooses a number sentence, but struggles to compare expressions and compares one number on each side (e.g., compares 13 and 7 for <math>13 - 5 = 7 + 2</math>).</p>	<p>2. Student takes cubes, but struggles to model add-to and take-from situations with cubes.</p>	<p>3. Student models add-to and take-from situations with cubes and compares expressions by comparing lengths or using one-to-one matching.</p> 
Observations/Documentation		
<p>4. Student models add-to and take-from situations with cubes and compares expressions by counting. "1, 2, 3, ..., 6, 7, 8"  "The sides are not equal."</p>	<p>5. Student models add-to and take-from situations with cubes and compares expressions, but does not understand when to use the equal (=) and not equal (<math>\neq</math>) symbols. "I'm not sure which sign to use."</p>	<p>6. Student models add-to and take-from situations with cubes, and understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions.</p>
Observations/Documentation		

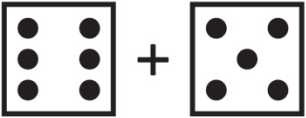






Master 40

# Equal Match Board

$=$
$=$
$=$
$=$
$=$
$=$
$=$
$=$
$=$
$=$

**Master 41a**






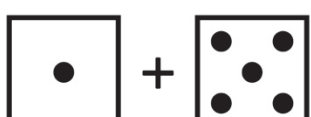

**Equal Match Cards**

<p>A</p> 	<p>B</p> 
<p>A</p> <p style="text-align: center;"><math>9 + 0</math></p>	<p>B</p> <p style="text-align: center;"><math>0 + 9</math></p>
<p>A</p> 	<p>B</p> 
<p>A</p> <p style="text-align: center;"><math>12 +</math> </p>	<p>B</p> <p style="text-align: center;"><math>3 + 12</math></p>
<p>A</p> 	<p>B</p> <p style="text-align: center;"><math>9 + 5</math></p>
<p>A</p> 	<p>B</p> <p style="text-align: center;"><math>15 - 0</math></p>
<p>A</p> <p style="text-align: center;"><math>17 - 0</math></p>	<p>B</p> <p style="text-align: center;"><math>15 + 2</math></p>
<p>A</p> <p style="text-align: center;"><math>13 + 5</math></p>	<p>B</p> <p style="text-align: center;"><math>5 + 13</math></p>
<p>A</p> <p style="text-align: center;"><math>9 + 6</math></p>	<p>B</p> <p style="text-align: center;"><math>5 + 4 + 6</math></p>



Master 41b

### Equal Match Cards (for Accommodations)

<p>A</p> 	<p>B</p> $2 + 3$
<p>A</p> $8 + 0$	<p>B</p> $8$
<p>A</p> 	<p>B</p> $4 + 2$
<p>A</p> 	<p>B</p> $5 + 2$
<p>A</p> $4$	<p>B</p>  $+ 0$
<p>A</p> $3 - 0$	<p>B</p> $3$
<p>A</p>  $+ 0$	<p>B</p> $5$
<p>A</p> 	<p>B</p> $5 + 1$
<p>A</p> 	<p>B</p> $4 + 1$



<b>Exploring Properties of Addition and Subtraction Behaviours/Strategies</b>		
<p>1. Student turns over a card, but struggles to explore properties of addition and subtraction (e.g., adding or subtracting zero, commutativity of addition) and does not know how to represent adding or subtracting zero with counters.</p> <p>“How do I show adding zero with counters?”</p>	<p>2. Student explores properties of addition and subtraction, but thinks matching expressions must have the same numbers in the same order and the same operation(s).</p> <p>“How can <math>17 - 0</math> and <math>15 + 2</math> match?”</p>	<p>3. Student explores properties of addition and subtraction and represents expressions with counters, but struggles to compare counters.</p>
<b>Observations/Documentation</b>		
<p>4. Student explores properties of addition and subtraction, but does not match a card with two addends to a card with three addends.</p> <p>“They can’t match. This one has two numbers and that one has three numbers.”</p>	<p>5. Student explores properties of addition and subtraction, but does not recognize any patterns in matching cards.</p> <p>“I don’t see any patterns.”</p>	<p>6. Student successfully explores properties of addition and subtraction (e.g., adding or subtracting zero, commutativity of addition) and recognizes patterns.</p> <p>“It doesn’t matter what order you add the numbers. Adding or subtracting zero doesn’t make a difference.”</p>
<b>Observations/Documentation</b>		

Master 43a

## Find the Missing Number Cards

$$10 = \square + 7$$

$$8 + \square = 15$$

$$5 + \square = 12$$

$$14 = 3 + \square$$

$$12 = 15 - \square$$

$$13 = \square - 6$$

$$18 - \square = 9$$

$$\square - 7 = 4$$



Master 43b

## Find the Missing Number Cards

$$3 + 5 = \square + 2$$

$$\square + 1 = 3 + 7$$

$$5 + \square = 9 + 3$$

$$6 + 8 = 9 + \square$$

$$4 + 8 = 15 - \square$$

$$5 + 6 = \square - 5$$

$$12 - \square = 4 + 5$$

$$\square - 8 = 7 + 2$$





Master 43c

## Find the Missing Number Cards (for Accommodations)

$$3 = \square + 1$$

$$2 + \square = 4$$

$$7 = 6 + \square$$

$$3 + \square = 5$$

$$4 = 6 - \square$$

$$2 = \square - 5$$

$$\square = 5 - 1$$

$$\square - 2 = 3$$



Master 43d

**Find the Missing Number Cards  
(for Combined Grades Extension)**

$$10 + \square = 18 + 5$$

$$\square + 21 = 15 + 9$$

$$19 + 9 = \square + 20$$

$$8 + 18 = 12 + \square$$

$$14 + 8 = 27 - \square$$

$$11 + 12 = \square - 5$$

$$21 - \square = 7 + 11$$

$$\square - 7 = 7 + 8$$



Finding the Missing Number Behaviours/Strategies		
1. Student uses a pan balance to solve for an unknown value in an addition problem, adding cubes until the pans balance (gives no thought to numbers).	2. Student turns over a card, but focuses on one side of the equation, giving no thought to the other side, and is unable to solve for an unknown value in an addition problem. $3 + 5 = 8 + 2$	3. Student solves for an unknown value in some addition problems, but struggles when the unknown number is in certain positions (e.g., at the start). $\square + 1 = 3 + 7$ "How do I find the missing number?"
Observations/Documentation		
4. Student successfully solves for an unknown value in addition problems, but struggles when the problems involve subtraction. $4 + 8 = 15 - \square$ "I can't do subtraction."		
Observations/Documentation		
5. Student successfully solves for an unknown value in addition and subtraction problems regardless of its position, and explains thinking.	4. Student successfully solves for an unknown value in addition and subtraction problems regardless of its position, but struggles to explain thinking.	5. Student successfully solves for an unknown value in addition and subtraction problems regardless of its position, and explains thinking.
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 45

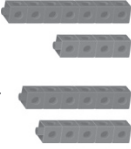


## Number Sentence Recording Sheet

Our number: \_\_\_\_\_

$$\square + \square = \square + \square$$

$$\square + \square = \square + \square$$

$$\square + \square \neq \square + \square$$

<b>Expressing Equality and Inequality Behaviours/Strategies</b>		
<p>1. Student chooses a number, but struggles to decompose number into two parts and model it with cubes.</p>	<p>2. Student models equality with cubes, but struggles to record different expressions of the same quantity as equalities (cannot write number sentence).</p>  <p>“What do I write?”</p>	<p>3. Student models equality, but does not consider zero, or thinks the same cubes in the opposite order is not an equality.</p>  <p>“How can these be equal?”</p>
<b>Observations/Documentation</b>		
<p>4. Student models equality, but struggles to model inequality.</p>	<p>5. Student models inequality, but struggles to use the not equal symbol when comparing expressions.</p>  <p><math>5 + 6 = 4</math></p>	<p>6. Student models equality and inequality, records different expressions of the same quantity as equalities, and understands and uses the equal (=) and not equal (<math>\neq</math>) symbols when comparing expressions.</p> <p><math>5 + 6 = 4 + 7</math> <math>5 + 6 \neq 4 + 5</math></p>
<b>Observations/Documentation</b>		

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can create equal and unequal sets. <b>(Activity 15)</b>									
Student can compare sets to identify the unequal set. <b>(Activity 15)</b>									
Student can identify equal and unequal number sentences. <b>(Activity 16)</b>									
Student knows when to use the equal and not equal signs. <b>(Activities 16, 17, 20)</b>									
Student can model equality and inequality. <b>(Activities 16, 20)</b>									
Student can model a number sentence/ expression with manipulatives. <b>(Activities 16, 17, 18, 19)</b>									
Student realizes that the order in which numbers are added does not matter. <b>(Activities 18, 20)</b>									
Student realizes that adding or subtracting zero does not affect the number. <b>(Activities 18, 20)</b>									
Student can find the missing number in a number sentence. <b>(Activities 19)</b>									
Student can write different expressions of the same quantity as equalities. <b>(Activity 20)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Creates equal and unequal sets. <b>(Activity 15)</b>			
Compares sets to identify the unequal set. <b>(Activity 15)</b>			
Identifies equal and unequal number sentences. <b>(Activity 16)</b>			
Knows when to use the equal and not equal signs. <b>(Activities 16, 17, 20)</b>			
Models equality and inequality. <b>(Activities 16, 20)</b>			
Models a number sentence/ expression with manipulatives. <b>(Activities 16, 17, 18, 19)</b>			
Realizes that the order in which numbers are added does not matter. <b>(Activities 18, 20)</b>			
Realizes that adding or subtracting zero does not affect the number. <b>(Activities 18, 20)</b>			
Finds the missing number in a number sentence. <b>(Activities 19)</b>			
Writes different expressions of the same quantity as equalities. <b>(Activity 20)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b>  <b>Attributes, Units, and Measurement Sense:</b> estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units  <b>Measurement Relationships:</b> compare, describe, and order objects, using attributes measured in non-standard units and standard units.  <b>Cross Strand:</b> Number  <b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p>			
<p><b>M2.2</b> estimate and measure length, height, and distance, using standard units (i.e., centimetre, metre) and non-standard units</p> <p><b>M2.3</b> record and represent measurements of length, height, and distance in a variety of ways (e.g., written, pictorial, concrete)</p> <p><b>M2.5</b> estimate, measure, and record the distance around objects, using non-standard units</p> <p><b>M2.6</b> estimate, measure, and record area, through investigation using a variety of non-standard units</p>	<p><b>Below Grade: Intervention</b>                      1: Exploring Length                      2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b>                      1: Measuring Length 1 (M2.2, M2.3, N2.9)                      2: Measuring Length 2 (M2.2, M2.3, N2.9)                      3: Measuring Distance Around (M2.5, N2.9)                      4: Measuring Mass (M2.7, M2.13, N2.9)                      5: Measuring Area (M2.6, N2.9)                      6: Measuring Capacity (M2.7, M2.13, N2.9)                      7: Using Non-Standard Units Consolidation (M2.2, M2.3, M2.5, M2.6, M2.7, N2.9)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>The Amazing Seed (Activities 1, 2, 7)</li> <li>Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by                             <ul style="list-style-type: none"> <li>using an intermediary object (Activities 6, 7)</li> <li>using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p>



# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

### Ontario (continued)

<p><b>M2.7</b> estimate, measure, and record the capacity and/or mass of an object, using a variety of non-standard units</p> <p><b>M2.13</b> compare and order a collection of objects by mass and/or capacity, using non-standard units</p> <p><b>N2.9</b> 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</p>	<p><b>On Grade: Math Every Day Card 1:</b>                      Estimation Scavenger Hunt (M2.2, M2.5, M2.6, M2.7)                      Estimation Station (M2.2, M2.5, M2.6, M2.7, N2.9)</p>	<p>- Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</p> <p>- Understands conservation of length (e.g., a string is the same length when straight and not straight), capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). (Activities 5, 6)</p> <p>- Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activity 3)</p> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <p>- Says the number name sequence forward through the teen numbers. (Activities 1, 2, 3, 4, 5, 6, 7)</p>
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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct or indirect measurement to solve problems.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p>			
<p><b>2SS2</b> Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight).</p> <p><b>2SS3</b> Compare and order objects by length, height, distance around and mass (weight) using nonstandard units, and make statements of comparison.</p> <p><b>2SS4</b> Measure length to the nearest non-standard unit by:</p> <ul style="list-style-type: none"> <li>• <b>2SS4.1</b> using multiple copies of a unit</li> <li>• <b>2SS4.2</b> using a single copy of a unit (iteration process).</li> </ul> <p><b>2SS5</b> Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Exploring Length 2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Measuring Length 1 (2SS2, 2SS3, 2SS4.1, 2SS5, 2N1)</p> <p>2: Measuring Length 2 (2SS2, 2SS3, 2SS4.2, 2N1)</p> <p>3: Measuring Distance Around (2SS3, 2N1)</p> <p>4: Measuring Mass (2SS2, 2SS3, 2N1)</p> <p>5: Measuring Area</p> <p>6: Measuring Capacity</p> <p>7: Using Non-Standard Units Consolidation (2SS2, 2SS3, 2SS4.1, 2SS4.2, 2N1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Estimation Scavenger Hunt (2SS3) Estimation Station (2SS3, 2N1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Amazing Seed (Activities 1, 2, 7)</li> <li>• Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>• The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>- Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>- Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by             <ul style="list-style-type: none"> <li>• using an intermediary object (Activities 6, 7)</li> <li>• using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>• iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>- Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>- Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>- Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</li> <li>- Understands conservation of length (e.g., a string is the same length when straight and not straight),</li> </ul>

# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

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

<p><b>2N1</b> Say the number sequence, 0 to 100.</p>		<p>capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). (Activities 5, 6)</p> <p>- Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activity 3)</p> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <p>- Says the number name sequence forward through the teen numbers. (Activities 1, 2, 3, 4, 5, 6, 7)</p>
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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct or indirect measurement to solve problems.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p>			
<p><b>2.SS.2</b> Relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass (weight).</p> <p><b>2.SS.3</b> Compare and order objects by length, height, distance around, and mass (weight) using non-standard units, and make statements of comparison.</p> <p><b>2.SS.4</b> Measure length to the nearest non-standard unit by</p> <ul style="list-style-type: none"> <li>• <b>2.SS.4.1</b> using multiple copies of a unit</li> <li>• <b>2.SS.4.2</b> using a single copy of a unit (iteration process)</li> </ul> <p><b>2.SS.5</b> Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.</p>	<p><b>Below Grade: Intervention</b> 1: Exploring Length 2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b> 1: Measuring Length 1 (2.SS.2, 2.SS.3, 2.SS.4.1, 2.SS.5, 2.N.1) 2: Measuring Length 2 (2.SS.2, 2.SS.3, 2.SS.4.2, 2.N.1) 3: Measuring Distance Around (2.SS.3, 2.N.1) 4: Measuring Mass (2.SS.2, 2.SS.3, 2.N.1) 5: Measuring Area 6: Measuring Capacity 7: Using Non-Standard Units Consolidation (2.SS.2, 2.SS.3, 2.SS.4.1, 2.SS.4.2, 2.N.1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Estimation Scavenger Hunt (2.SS.3) Estimation Station (2.SS.3, 2.N.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Amazing Seed (Activities 1, 2, 7)</li> <li>• Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>• The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>- Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>- Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by             <ul style="list-style-type: none"> <li>• using an intermediary object (Activities 6, 7)</li> <li>• using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>• iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>- Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>- Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>- Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</li> <li>- Understands conservation of length (e.g., a string is the same length when straight and not straight),</li> </ul>

Mathology 2

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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

### Manitoba (continued)

<p><b>2.N.1</b> Say the number sequence, 0 to 100.</p>		<p>capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area).  <b>(Activities 5, 6)</b>                      - Extends understanding of length to other linear measurements (e.g., height, width, distance around).  <b>(Activity 3)</b></p> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting                      - Says the number name sequence forward through the teen numbers. <b>(Activities 1, 2, 3, 4, 5, 6, 7)</b></p>
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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to use direct and indirect measure to solve problems.</p> <p><b>Cross Strand: Number</b> Students will be expected to develop number sense.</p>			
<p><b>2M02</b> Students will be expected to relate the size of a unit of measure to the number of units (limited to non-standard units) used to measure length and mass.</p> <p><b>2M03</b> Students will be expected to compare and order objects by length, height, distance around, and mass using non-standard units and make statements of comparison.</p> <p><b>2M04</b> Students will be expected to measure length to the nearest non-standard unit by using multiple copies of a unit and using a single copy of a unit (iteration process).</p> <p><b>2M05</b> Students will be expected to demonstrate that changing the position of an object does not alter the</p>	<p><b>Below Grade: Intervention</b> 1: Exploring Length 2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b> 1: Measuring Length 1 (2M02, 2M03, 2M04, 2M05, 2N01.1) 2: Measuring Length 2 (2M02, 2M03, 2M04, 2N01.1) 3: Measuring Distance Around (2M03, 2N01.1) 4: Measuring Mass (2M02, 2M03, 2N01.1) 5: Measuring Area 6: Measuring Capacity 7: Using Non-Standard Units Consolidation (2M02, 2M03, 2M04, 2N01.1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Estimation Scavenger Hunt (2M03) Estimation Station (2M03, 2N01.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>The Amazing Seed (Activities 1, 2, 7)</li> <li>Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by             <ul style="list-style-type: none"> <li>using an intermediary object (Activities 6, 7)</li> <li>using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</li> <li>Understands conservation of length (e.g., a string is the same length when straight and not straight),</li> </ul>

# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

### Nova Scotia (continued)

<p>measurements of its attributes.</p> <p><b>2N01.1</b> Students will be expected to say the number sequence by</p> <ul style="list-style-type: none"> <li>• 1s, forward and backward, starting from any point to 200</li> </ul>		<p>capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). (Activities 5, 6)</p> <p>- Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activity 3)</p> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <p>- Says the number name sequence forward through the teen numbers. (Activities 1, 2, 3, 4, 5, 6, 7)</p>
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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct and indirect measurement to solve problems.</p> <p><b>Cross Strand: Number</b> Develop number sense.</p>			
<p><b>2SS2</b> Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight).</p> <p><b>2SS3</b> Compare and order objects by length, height, distance around and mass (weight), using nonstandard units, and make statements of comparison.</p> <p><b>2SS4</b> Measure length to the nearest non-standard unit by:</p> <ul style="list-style-type: none"> <li>• <b>2SS4.1</b> using multiple copies of a unit</li> <li>• <b>2SS4.2</b> using a single copy of a unit (iteration process)</li> </ul> <p><b>2SS5</b> Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Exploring Length 2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Measuring Length 1 (2SS2, 2SS3, 2SS4.1, 2SS5, 2N1)</p> <p>2: Measuring Length 2 (2SS2, 2SS3, 2SS4.2, 2N1)</p> <p>3: Measuring Distance Around (2SS3, 2N1)</p> <p>4: Measuring Mass (2SS2, 2SS3, 2N1)</p> <p>5: Measuring Area</p> <p>6: Measuring Capacity</p> <p>7: Using Non-Standard Units Consolidation (2SS2, 2SS3, 2SS4.1, 2SS4.2, 2N1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Estimation Scavenger Hunt (2SS3) Estimation Station (2SS3, 2N1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Amazing Seed (Activities 1, 2, 7)</li> <li>• Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>• The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>- Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>- Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by             <ul style="list-style-type: none"> <li>• using an intermediary object (Activities 6, 7)</li> <li>• using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>• iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>- Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>- Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>- Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</li> <li>- Understands conservation of length (e.g., a string is the same length when straight and not straight),</li> </ul>



# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

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

<p><b>2N1</b> Say the number sequence 0 to 100.</p>			<p>capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). (Activities 5, 6)</p> <p>- Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activity 3)</p> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <p>- Says the number name sequence forward through the teen numbers. (Activities 1, 2, 3, 4, 5, 6, 7)</p>
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# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Number Sense, Mathematics as a Human Endeavour <b>Cross Strand:</b> Number</p> <p><b>SS2.1</b> Demonstrate understanding of non-standard units for linear measurement by:</p> <ul style="list-style-type: none"> <li><b>SS2.1.1</b> describing the choice and appropriate use of non-standard units</li> <li><b>SS2.1.2</b> estimating</li> <li><b>SS2.1.3</b> measuring</li> <li><b>SS2.1.4</b> comparing and analyzing measurements.</li> </ul> <p><b>SS2.2</b> Demonstrate understanding of non-standard units for measurement of mass by:</p> <ul style="list-style-type: none"> <li><b>SS2.2.1</b> describing the choice and appropriate use of non-standard units</li> <li><b>SS2.2.2</b> estimating</li> <li><b>SS2.2.3</b> measuring</li> <li><b>SS2.2.4</b> comparing and analyzing measurements.</li> </ul>	<p><b>Below Grade: Intervention</b> 1: Exploring Length 2: Conserving Area</p> <p><b>On Grade: Teacher Cards</b> 1: Measuring Length 1 (SS2.1.1., SS2.1.2, SS2.1.3, SS2.1.4, N2.1.3) 2: Measuring Length 2 (SS2.1.1., SS2.1.2, SS2.1.3, SS2.1.4, N2.1.3) 3: Measuring Distance Around (SS2.1.1., SS2.1.2, SS2.1.3, SS2.1.4, N2.1.3) 4: Measuring Mass (SS2.2.1, SS2.2.2, SS2.2.3, SS2.2.4, N2.1.3) 5: Measuring Area 6: Measuring Capacity 7: Using Non-Standard Units Consolidation (SS2.1.1., SS2.1.2, SS2.1.3, SS2.1.4, SS2.2.1, SS2.2.2, SS2.2.3, SS2.2.4, N2.1.3)</p> <p><b>On Grade: Math Every Day Card 1:</b> Estimation Scavenger Hunt</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>The Amazing Seed (Activities 1, 2, 7)</li> <li>Animal Measures (Activities 1, 2, 7)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 1, 2, 3, 7)</li> <li>The Discovery (Activities 2, 3, 5, 7)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b> Selecting and Using Non-Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>- Understands that there should be no gaps or overlaps when measuring. (Activities 1, 2, 3, 5, 7)</li> <li>- Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by             <ul style="list-style-type: none"> <li>• using an intermediary object (Activities 6, 7)</li> <li>• using multiple copies of a unit (Activities 1, 3, 4, 5, 7)</li> <li>• iterating a single unit (Activities 2, 3, 5, 7)</li> </ul> </li> <li>- Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. (Activity 7; MED 1: 1, 2)</li> </ul> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>- Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass). (Activities 1, 4)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b> Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>- Understands that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). (Activity 7)</li> <li>- Understands conservation of length (e.g., a string is the same length when straight and not straight), capacity (e.g., two differently shaped containers may</li> </ul>

# Curriculum Correlation

## Measurement Cluster 1: Using Non-Standard Units

### Saskatchewan (continued)

<p><b>N2.1</b> Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by:</p> <ul style="list-style-type: none"> <li>• <b>N2.1.3</b> skip counting</li> </ul>	<p>(SS2.1.2, SS2.1.4, SS2.2.2, SS2.2.4)                      Estimation Station                      (SS2.1.2, SS2.1.3, SS2.2.2, SS2.2.3, N2.1.3)</p>	<p>hold the same amount), and area (e.g., two surfaces of different shapes can have the same area).                      (Activities 5, 6)                      - Extends understanding of length to other linear measurements (e.g., height, width, distance around).                      (Activity 3)</p> <p><b>Big Idea: Numbers tell us how many and how much.</b>                      Applying the Principles of Counting                      - Says the number name sequence forward through the teen numbers. (Activities 1, 2, 3, 4, 5, 6, 7)</p>
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Name \_\_\_\_\_ Date \_\_\_\_\_

Master 2a

## Measuring Carrots Recording Sheet

### Measuring with Centicubes

Carrot Number	Estimate	Measure
1		
2		
3		
4		
5		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 2b

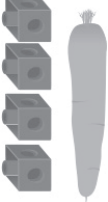


## Measuring Carrots Recording Sheet

### Measuring with Paper Clips

Carrot Number	Estimate	Measure
1		
2		
3		
4		
5		

# Master 3: Activity 1 Assessment

## Measuring Length 1

Estimating and Measuring Length Behaviours/Strategies		
<p>1. Student estimates objects by length with nonstandard units, but estimates are extreme/unreasonable.</p> <p>“About 100 cubes!”</p>	<p>2. Student measures objects by length using multiple copies of a non-standard unit, but units are not placed end-to-end.</p> 	<p>3. Student measures objects by length using multiple copies of a non-standard unit, but does not align the base of the first unit with the end of the object being measured.</p> 
Observations/Documentation		
<p>4. Student measures objects by length using multiple copies of a non-standard unit, measures with cubes, and assumes the same count for paper clips.</p>	<p>5. Student measures objects by length using multiple copies of a non-standard unit, but thinks turning an object will affect its length.</p>	<p>6. Student successfully estimates and measures objects by length using multiple copies of a non-standard unit and realizes that turning an object does not affect its length.</p>  <p>“It is 5 cubes long.”</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4

## Which is Longer? Recording Sheet

	Estimate	Measure
Wolf paw print		
My hand		

Which is longer? \_\_\_\_\_

# Master 5: Activity 2 Assessment

## Measuring Length 2

Estimating, Measuring, and Comparing Length Behaviours/Strategies			
1. Student estimates objects by length with non-standard units, but estimates are very large or very small. "About 100 cubes!"	2. Student measures objects by length by iterating a single non-standard unit, but there are many gaps or overlaps.	3. Student measures objects by length by iterating a single non-standard unit, but has difficulty tracking the length of the cube while measuring.	4. Student measures objects by length by iterating a single non-standard unit, but has difficulty keeping track of the count. "I forget how many times I moved the cube."
Observations/Documentation			
5. Student measures objects by length by iterating a single non-standard unit, but forgets to include the unit when stating the measure. "It is 5 long."	6. Student measures objects by length by iterating a single non-standard unit, but gives the length as a whole number and ignores the leftover amount. "It is 5 cubes long."	7. Student successfully estimates and measures objects by length by iterating a single non-standard unit, but struggles to compare lengths. "I'm not sure which is longer."	8. Student successfully estimates, measures, and compares objects by length by iterating a single non-standard unit. "My hand is longer. It is a little more than 6 cubes long."
Observations/Documentation			



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 6

### How Big Around? Recording Sheet




Can	Estimate	Measure
1		
2		
3		

Order cans from least to greatest distance around:

\_\_\_\_\_

# Master 7: Activity 3 Assessment

## Measuring Distance Around

Estimating, Measuring, and Comparing Distance Around Behaviours/Strategies			
<p>1. Student attempts to estimate objects by length (distance around) with non-standard units, but estimates are extreme/unreasonable.</p> <p>"About 100 paper clips!"</p>	<p>2. Student estimates objects by length (distance around) with non-standard units, but struggles to use string to measure.</p> 	<p>3. Student measures objects by length (distance around) using multiple copies of a non-standard unit, but units are not placed end-to-end (there are gaps or overlaps).</p> 	<p>4. Student measures objects by length (distance around) using multiple copies of a non-standard unit, but does not align the base of the first unit with the end of the object being measured.</p> 
Observations/Documentation			
<p>5. Student measures objects by length (distance around) by iterating a single non-standard unit, but has difficulty tracking the length of the paper clip or loses track of the count.</p> <p>"I forget how many times I moved the paper clip."</p>	<p>6. Student measures objects by length (distance around) with non-standard units, but forgets to include the unit when stating the measure.</p> <p>"It is 8 long."</p>	<p>7. Student measures objects by length (distance around) with non-standard units, but struggles to compare and order objects.</p>	<p>8. Student successfully estimates, measures, compares, and orders objects by length (distance around) with non-standard units.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 8

### Measuring Mass Recording Sheet

Use estimates to order objects from lightest to heaviest:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

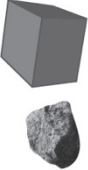

	Linking cubes	Centicubes
Object measured as a class:	Estimate: _____ Measure: _____	Estimate: _____ Measure: _____
Object:	Estimate: _____ Measure: _____	Estimate: _____ Measure: _____
Object:	Estimate: _____ Measure: _____	Estimate: _____ Measure: _____

Use measures to order objects from lightest to heaviest:

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

# Master 9: Activity 4 Assessment

## Measuring Mass

Estimating, Measuring, and Comparing Mass Behaviours/Strategies		
<p>1. Student struggles to estimate and compare objects by mass with non-standard units and thinks a larger object has a greater mass.</p>  <p>“The blue block is heavier because it’s bigger.”</p>	<p>2. Student measures and compares objects by mass with non-standard units, but thinks the heavier object is in the higher pan of the pan balance.</p>  <p>“This one is heavier.”</p>	<p>3. Student measures and compares objects by mass with non-standard units, but struggles with the technical use of the pan balance (e.g., has accuracy issues or thinks the arrangement of objects in the pans will impact the mass).</p>
Observations/Documentation		
<p>4. Student estimates and measures objects by mass with non-standard units, but struggles to order the objects from lightest to heaviest.</p>	<p>5. Student estimates, measures, compares, and orders objects by mass with non-standard units, but struggles to see a relationship between the size of the unit and the number of units.</p>	<p>6. Student successfully estimates, measures, compares, and orders objects by mass with non-standard units, and sees a relationship between the units.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 10

# My Friend's Garden



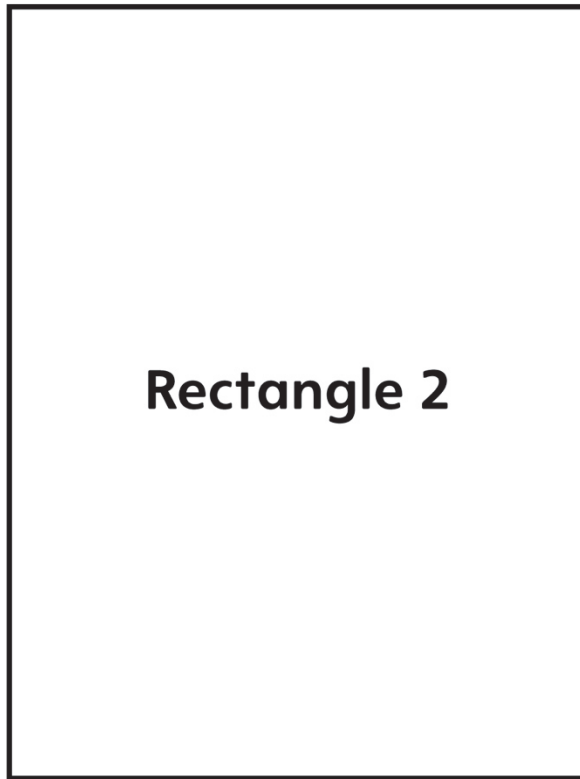
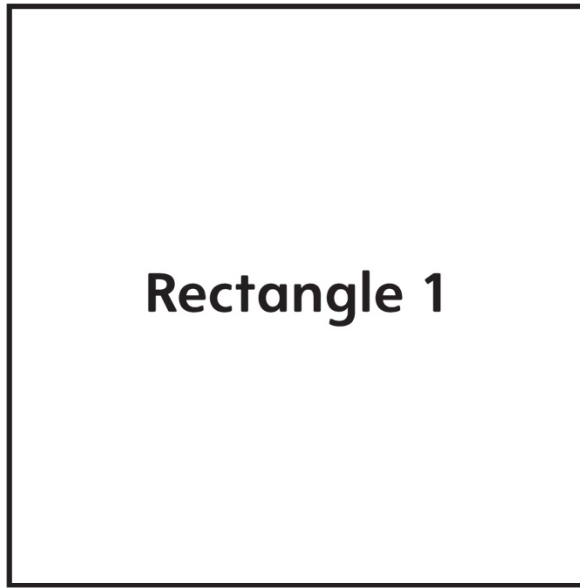
**Master 11**

**Garden Designs**

Which rectangle do you think is the biggest?

Circle one:

1      2      3



Name \_\_\_\_\_ Date \_\_\_\_\_


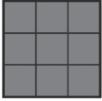
Master 12

## Garden Designs Recording Sheet

Rectangle	Estimate	Measure
1		
2		
3		

# Master 13: Activity 5 Assessment

## Measuring Area

Estimating, Measuring, and Comparing Area Behaviours/Strategies		
<p>1. Student estimates objects by area with non-standard units, but estimates are extreme/unreasonable.</p> <p>“About 100 tiles!”</p>	<p>2. Student measures objects by area by iterating a single non-standard unit, but randomly slides the unit along the surface without tracking where one unit would end and the next unit would begin.</p>	<p>3. Student measures objects by area using multiple copies of a non-standard unit, but randomly covers the rectangle with tiles (has gaps or overlaps).</p> 
Observations/Documentation		
<p>4. Student measures objects by area using multiple copies of a non-standard unit, but counts the tiles by 1s.</p>  <p>“1, 2, 3, ..., 7, 8, 9”</p>	<p>5. Student estimates and measures objects by area with non-standard units, but struggles to compare areas.</p> <p>“These rectangles look different. They can’t have the same area.”</p>	<p>6. Student successfully estimates, measures, and compares objects by area with non-standard units and recognizes that shapes that look different can have the same area.</p>
Observations/Documentation		



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 14

## How Many Cups? Recording Sheet

Container 1: \_\_\_\_\_ Container 2: \_\_\_\_\_

Container 3: \_\_\_\_\_

Look at the containers. Order them from least to greatest capacity.

\_\_\_\_\_


Container	Estimate	Measure
1		
2		
3		

Look at your measures.  
Order them from least to greatest capacity.

\_\_\_\_\_

# Master 15: Activity 6 Assessment

## Measuring Capacity

Estimating, Measuring, Comparing, and Ordering Capacity Behaviours/Strategies		
<p>1. Student estimates objects by capacity using an intermediary object, but estimates are extreme/unreasonable.</p> <p>“About 100 cups!”</p>	<p>2. Student uses an intermediary object to measure objects by capacity, but randomly fills containers, paying no attention to the count.</p>	<p>3. Student measures objects by capacity using an intermediary object, but does not fill the containers.</p> 
Observations/Documentation		
<p>4. Student measures objects by capacity using an intermediary object, but has difficulty keeping track of the count or is unsure how to deal with a partial cup.</p> <p>“There is still room for more cubes, but a whole cup won't fit.”</p>		
Observations/Documentation		
<p>5. Student measures objects by capacity using an intermediary object, but struggles to order the containers from least to greatest capacity.</p> <p>“How do I order the containers?”</p>		<p>6. Student successfully estimates, measures, compares, and orders objects by capacity using an intermediary object.</p>

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 16a

### Measurement Recording Sheet

Object 1: \_\_\_\_\_ Object 2: \_\_\_\_\_

Object 3: \_\_\_\_\_

Object	Attribute Measured	Tool or Unit Used	Estimate	Measure
1				
2				
3				

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 16b

## Measurement Recording Sheet

Write one thing that is important to remember when measuring:

Length: \_\_\_\_\_

\_\_\_\_\_

Mass: \_\_\_\_\_

\_\_\_\_\_

Area: \_\_\_\_\_


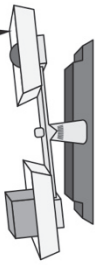
\_\_\_\_\_

Capacity: \_\_\_\_\_

\_\_\_\_\_

# Master 17a: Activity 7 Assessment

## Using Non-Standard Units: Consolidation

Measuring Behaviours/Strategies			
1. Student estimates objects by length, area, capacity, and mass using non-standard units, but estimates are unreasonable.	2. Student chooses an attribute, but does not select an appropriate non-standard unit to measure.  "I will use the pan balance to measure area."	3. Student measures objects using non-standard units, but focuses on one attribute.  "I like to measure length."	4. Student measures objects by length and area using non-standard units, but leaves gaps or overlaps.  
Observations/Documentation			
5. Student measures objects by capacity using non-standard units, but does not fill the container.	6. Student measures objects by mass with non-standard units, but thinks the heavier object is in the higher pan of the pan balance.  "This one is heavier." 	7. Student successfully measures objects by length, area, capacity, and mass using non-standard units, but does not include a unit with the measure.  "Its area is 6."	8. Student successfully measures objects by length, area, capacity, and mass using non-standard units.
Observations/Documentation			

# Master 17b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can use non-standard units to estimate, compare, and measure objects by length/distance around. <b>(Activities 1, 3, 7)</b>									
Student realizes that turning an object does not affect its length. <b>(Activity 1)</b>									
Student can measure objects by length by iterating a single non-standard unit. <b>(Activities 2, 3, 7)</b>									
Student can use a pan balance to measure and compare masses. <b>(Activities 4, 7)</b>									
Student can use non-standard units to estimate, measure, and compare objects by area. <b>(Activities 5, 7)</b>									
Student can use an intermediary object to estimate, measure, compare, and order objects by capacity. <b>(Activities 6, 7)</b>									
Student can choose an appropriate unit to measure a given attribute. <b>(Activity 7)</b>									
Student measures objects by length and area leaving no gaps or overlaps. <b>(Activities 1, 2, 3, 5, 7)</b>									
Student includes a unit with all measures. <b>(Activities 1, 2, 3, 4, 5, 6, 7)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Uses non-standard units to estimate, compare, and measure objects by length/distance around. <b>(Activities 1, 3, 7)</b>			
Realizes that turning an object does not affect its length. <b>(Activity 1)</b>			
Measures objects by length by iterating a single non-standard unit. <b>(Activities 2, 3, 7)</b>			
Uses a pan balance to measure and compare masses. <b>(Activities 4, 7)</b>			
Uses non-standard units to estimate, measure, and compare objects by area. <b>(Activities 5, 7)</b>			
Uses an intermediary object to estimate, measure, compare, and order objects by capacity. <b>(Activities 6, 7)</b>			
Chooses an appropriate unit to measure a given attribute. <b>(Activity 7)</b>			
Measures objects by length and area leaving no gaps or overlaps. <b>(Activities 1, 2, 3, 5, 7)</b>			
Includes a unit with all measures. <b>(Activities 1, 2, 3, 4, 5, 6, 7)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Measurement Cluster 2: Using Standard Units

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b>  <b>Attributes, Units, and Measurement Sense:</b> estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units  <b>Cross Strand:</b> Number  <b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p>			
<p><b>M2.1</b> choose benchmarks – in this case, personal referents – for a centimetre and a metre to help them perform measurement tasks</p> <p><b>M2.2</b> estimate and measure length, height, and distance, using standard units (i.e., centimetre, metre) and non-standard units</p> <p><b>M2.3</b> record and represent measurements of length, height, and distance in a variety of ways (e.g., written, pictorial, concrete)</p> <p><b>M2.4</b> select and justify the choice of a standard unit (i.e., centimetre or metre) or a nonstandard unit to measure length</p>	<p><b>Below Grade: Intervention</b>                      3: Iterating the Unit                      4: Using a Centicube Ruler</p> <p><b>On Grade: Teacher Cards</b>                      8: Benchmarks and Estimation (M2.1, M2.2, M2.3, N2.9)                      9: The Metre (M2.2, M2.3, N2.9)                      10: The Centimetre (M2.2, M2.3, N2.9)                      11: Metres or Centimetres? (M2.2, M2.3, M2.4, N2.9)                      12: Using Standard Units Consolidation (M2.2, M2.3, M2.4, N2.9)</p> <p><b>On Grade: Math Every Day Card 2:</b>                      What Am I? (M2.2)                      Which Unit? (M2.4)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Discovery (Activities 8, 9, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Measurements About YOU! (Activities 8, 9, 10, 12)</li> <li>The Bunny Challenge (Activities 9, 10, 12)</li> <li>Goat Island (Activities 9, 10, 12)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b>                      Selecting and Using Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by                             <ul style="list-style-type: none"> <li>using an intermediary object of a known measure</li> <li>using multiple copies of a unit (Activity 10)</li> <li>iterating a single unit (Activities 9, 11, 12)</li> </ul> </li> <li>Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time. (Activities 9, 10, 11, 12; MED 2: 1, 2)</li> <li>Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units. (Activities 8, 9, 10, 12; MED 2: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b>                      Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Understands that some things have more than one attribute that can be measured. (Activities 8, 9, 10, 11, 12)</li> <li>Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activities 9, 11, 12)</li> </ul>



# Curriculum Correlation

## Measurement Cluster 2: Using Standard Units

Ontario (continued)

<p><b>N2.9</b> 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</p>		<p><b>Big Idea: Numbers tell us how many and how much.</b>          Applying the Principles of Counting          - Says the number name sequence forward through the teen numbers. (Activities 8, 9, 10, 11, 12)</p>
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# Curriculum Correlation

## Measurement Cluster 2: Using Standard Units

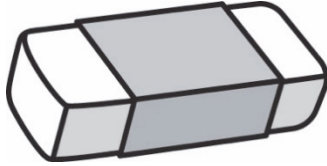
British Columbia

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Objects and shapes have attributes that can be described, measured, and compared.</p> <p><b>Cross Strand:</b> Number</p> <p>Direct linear measurement, introducing standard metric units</p> <p><b>2.22</b> centimetres and metres</p> <p><b>2.23</b> estimating length</p> <p><b>2.24</b> measuring and recording length, height, and width using standard units</p> <p>Number concepts to 100</p> <p><b>2.1</b> Counting</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Iterating the Unit</p> <p>4: Using a Centicube Ruler</p> <p><b>On Grade: Teacher Cards</b></p> <p>8: Benchmarks and Estimation (2.22, 2.23, 2.1)</p> <p>9: The Metre (2.22, 2.23, 2.24, 2.1)</p> <p>10: The Centimetre (2.22, 2.23, 2.24, 2.1)</p> <p>11: Metres or Centimetres? (2.22, 2.24, 2.1)</p> <p>12: Using Standard Units Consolidation (2.22, 2.23, 2.24, 2.1)</p> <p><b>On Grade: Math Every Day Card 2:</b> What Am I? (2.23) Which Unit? (2.22)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>The Discovery (Activities 8, 9, 12)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Measurements About YOU! (Activities 8, 9, 10, 12)</li> <li>The Bunny Challenge (Activities 9, 10, 12)</li> <li>Goat Island (Activities 9, 10, 12)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Selecting and Using Standard Units to Estimate, Measure, and Make Comparisons</p> <ul style="list-style-type: none"> <li>- Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by             <ul style="list-style-type: none"> <li>• using an intermediary object of a known measure</li> <li>• using multiple copies of a unit (Activity 10)</li> <li>• iterating a single unit (Activities 9, 11, 12)</li> </ul> </li> <li>- Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time. (Activities 9, 10, 11, 12; MED 2: 1, 2)</li> <li>- Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units. (Activities 8, 9, 10, 12; MED 2: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>- Understands that some things have more than one attribute that can be measured. (Activities 8, 9, 10, 11, 12)</li> <li>- Extends understanding of length to other linear measurements (e.g., height, width, distance around). (Activities 9, 11, 12)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>- Says the number name sequence forward through the teen numbers. (Activities 8, 9, 10, 11, 12)</li> </ul>

**Master 19a**

**Measurement Hunt**

**Length of Eraser**



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

**Length of Teacher's Desk**



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

**Length of Pencil**



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

**Length of Book**



Our estimate is

\_\_\_\_\_

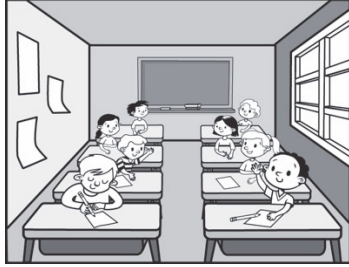
Our measure is

\_\_\_\_\_

**Master 19b**

# Measurement Hunt

## Length of Classroom Floor



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## Length of Lockers



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## You Choose!

I chose this object:

Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## You Choose!

I chose this object:

Our estimate is


\_\_\_\_\_

Our measure is

\_\_\_\_\_

# Master 20: Activity 8 Assessment

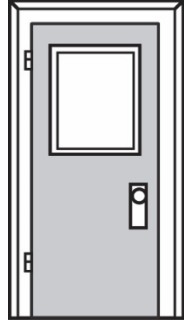
## Benchmarks and Estimation

Using Benchmarks to Estimate and Measure Length Behaviours/Strategies		
<p>1. Student finds object in classroom, but struggles to use benchmarks to estimate length in standard units (estimate is extreme or unreasonable).</p>  <p>“About 100 fingers!”</p>	<p>2. Student estimates length in standard units, but does not use appropriate benchmark to estimate and measure.</p> <p>“I am using my finger to measure the length of the floor.”</p>	<p>3. Student selects and uses appropriate benchmarks to estimate and measure length in standard units, but leaves gaps or overlaps or has difficulty tracking the finger/step while measuring.</p>
Observations/Documentation		
<p>4. Student uses the measurement of familiar objects as benchmarks to estimate and measure length in standard units, but loses track of the count when measuring.</p> <p>“I forget how many fingers I used.”</p>	<p>5. Student uses the measurement of familiar objects as benchmarks to estimate and measure length in standard units, but forgets to include the unit when stating the measure.</p> <p>“It is 7 long.”</p>	<p>6. Student successfully uses the measurement of familiar objects as benchmarks to estimate and measure length in standard units and includes units with measures.</p> <p>“The length of the classroom floor is about 8 big steps, or about 8 metres.”</p>
Observations/Documentation		

**Master 21a**

### How Many Metres? (Part 1)

#### Height of Classroom Door



Our estimate is

---

Our measure is

---

#### Length of Teacher's Desk



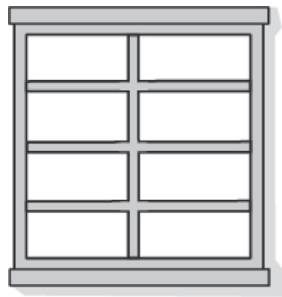
Our estimate is

---

Our measure is

---

#### Width of Window



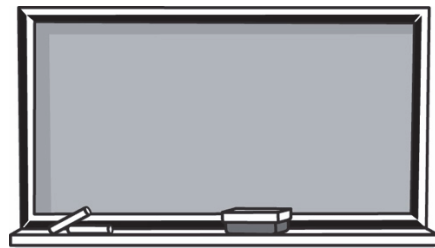
Our estimate is

---

Our measure is

---

#### Length of Blackboard



Our estimate is

---

Our measure is

---

**Master 21b**

### How Many Metres? (Part 2)

#### Width of Hallway



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

#### Length of Whiteboard



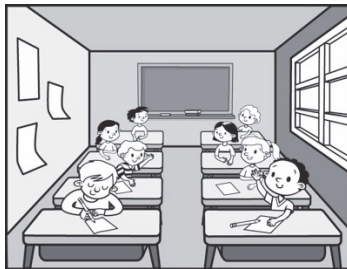
Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

#### Length of Classroom



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

#### Length of Bookshelf



Our estimate is


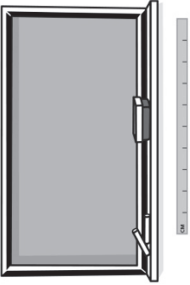
\_\_\_\_\_

Our measure is

\_\_\_\_\_

# Master 22: Activity 9 Assessment

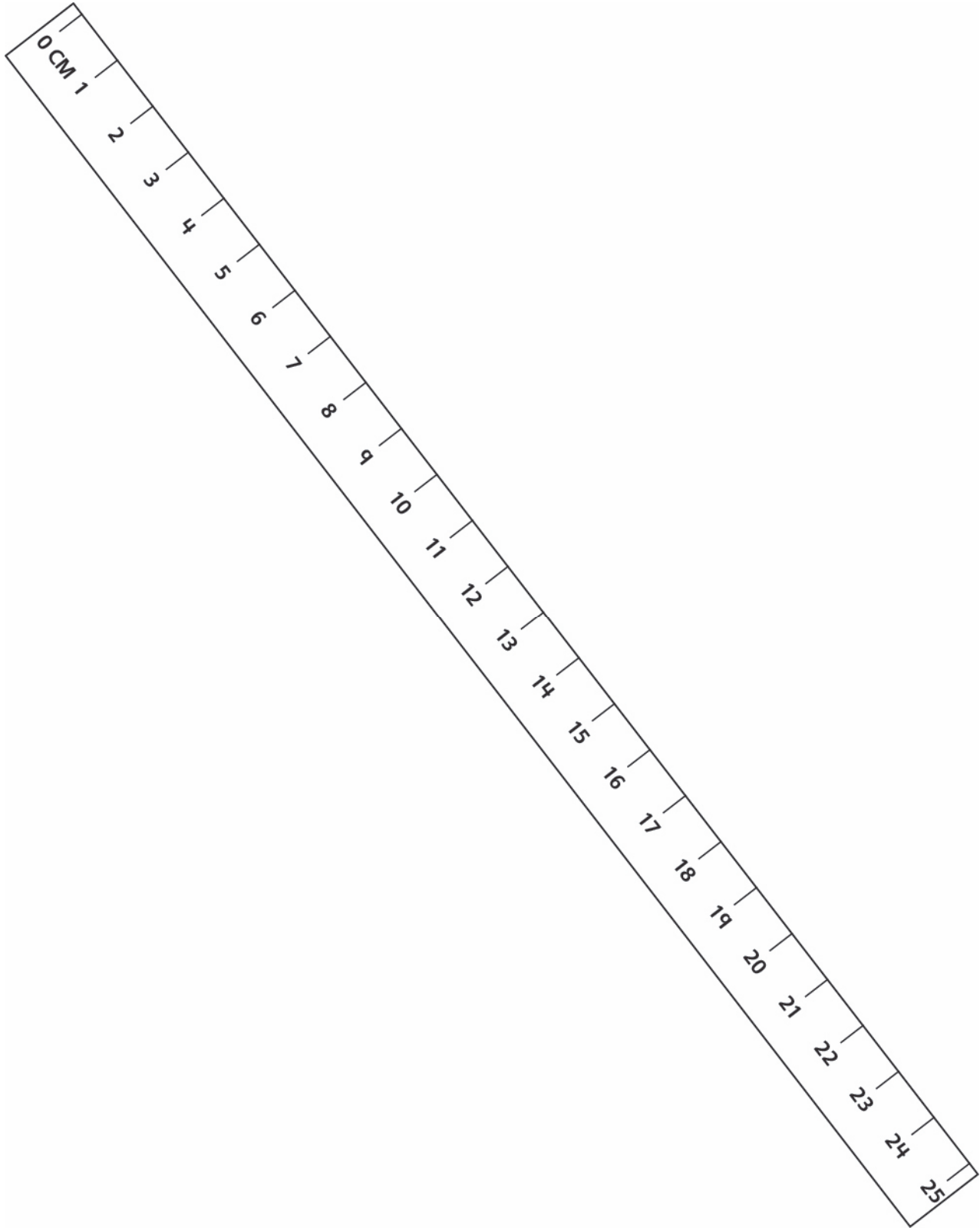
## The Metre

Measuring Length in Metres Behaviours/Strategies		
<p>1. Student struggles to estimate length using a standard unit (metre), and the estimate is extreme or unreasonable.</p>  <p>“About 100 metres long!”</p>	<p>2. Student measures length using a standard unit (metre), but does not line up the end of the metre stick with the end of the object being measured.</p> 	<p>3. Student measures length using a standard unit (metre), but struggles to iterate the metre stick (leaves gaps or overlaps, or has difficulty tracking the metre stick while measuring).</p>
Observations/Documentation		
<p>4. Student measures length using a standard unit (metre), but loses track of the count when measuring.</p> <p>“I forget how many metre sticks I used.”</p>	<p>5. Student measures length using a standard unit (metre), but forgets to include the unit when stating the measure or ignores leftover.</p> <p>“It is 7 long.”</p>	<p>6. Student successfully estimates and measures length using a standard unit (metre) and includes units with measures.</p> <p>“The whiteboard is a little less than 3 metres long.”</p>
Observations/Documentation		



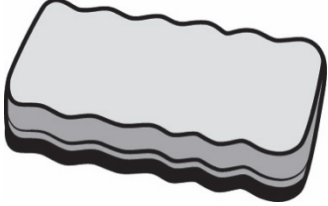

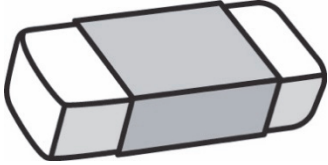
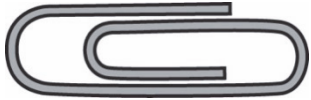
Master 23

# Centimetre Ruler



Master 24a

# How Many Centimetres?

<p><b>Whiteboard Eraser</b></p>  <p>Our estimate is _____</p> <p>Our measure is _____</p>	<p><b>Marker</b></p>  <p>Our estimate is _____</p> <p>Our measure is _____</p>
<p><b>Eraser</b></p>  <p>Our estimate is _____</p> <p>Our measure is _____</p>	<p><b>Large Paper Clip</b></p>  <p>Our estimate is _____</p> <p>Our measure is _____</p>

Master 24b

# How Many Centimetres?

## Small Scissors



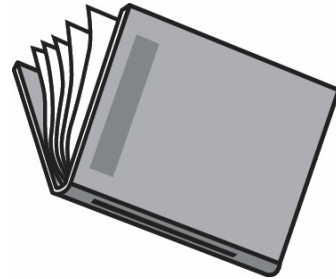
Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## Length of Book



Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## Length of Crayon



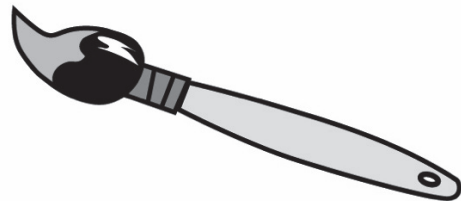
Our estimate is

\_\_\_\_\_

Our measure is

\_\_\_\_\_

## Length of Paint Brush



Our estimate is

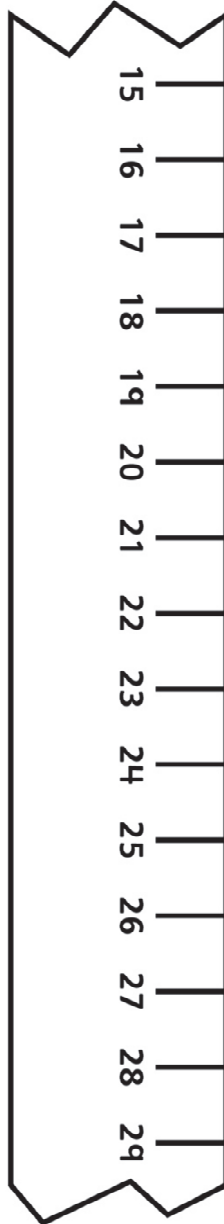
\_\_\_\_\_

Our measure is

\_\_\_\_\_



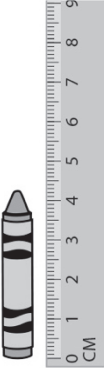

Master 25

# Broken Ruler (for Combined Grades Extension)



# Master 26: Activity 10 Assessment

## The Centimetre

Measuring Length in Metres Behaviours/Strategies		
<p>1. Student struggles to estimate length using a standard unit (centimetre) and the estimate is extreme or unreasonable.</p>  <p>“About 30 centimetres long!”</p>	<p>2. Student measures length using a standard unit (centimetre), but lines up 1 on the ruler with the end of the object being measured.</p> 	<p>3. Student measures length using a standard unit (centimetre), but counts tick marks instead of the units between the marks.</p>
Observations/Documentation		
<p>4. Student measures length using a standard unit (centimetre), but struggles to deal with part of a centimetre (ignores leftover).</p>  <p>“It’s 4 centimetres long.”</p>	<p>5. Student measures length using a standard unit (centimetre), but forgets to include the unit when stating the measure.</p> <p>“It is 7 long.”</p>	<p>6. Student successfully estimates and measures length using a standard unit (centimetre) and includes units with measures.</p>  <p>“It is a little less than 5 centimetres long”</p>
Observations/Documentation		



# Master 26: Activity 10 Assessment

## The Centimetre

**Master 27a**

# Metres or Centimetres?

## Length of Pen



We will use

**centimetres** or **metres**

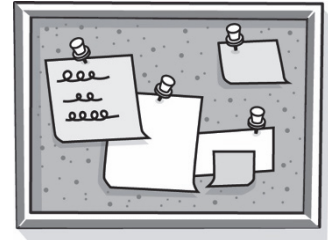
We will use

**ruler** or **metre stick**

Our measure is

\_\_\_\_\_

## Length of Bulletin Board



We will use

**centimetres** or **metres**

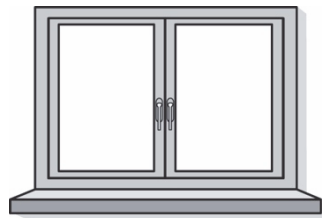
We will use

**ruler** or **metre stick**

Our measure is

\_\_\_\_\_

## Length of Window Ledge



We will use

**centimetres** or **metres**

We will use

**ruler** or **metre stick**

Our measure is

\_\_\_\_\_

## Glue Stick



We will use

**centimetres** or **metres**

We will use


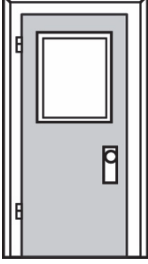

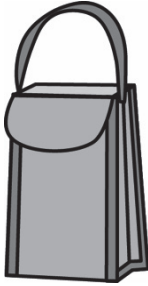
**ruler** or **metre stick**

Our measure is

\_\_\_\_\_

Master 27b

# Metres or Centimetres? (for Extension)

<p><b>Length of Your Shoe</b></p>  <p>We will use <b>centimetres</b> or <b>metres</b></p> <p>We will use <b>ruler</b> or <b>metre stick</b></p> <p>Our measure is _____</p>	<p><b>Height of Classroom Door</b></p>  <p>We will use <b>centimetres</b> or <b>metres</b></p> <p>We will use <b>ruler</b> or <b>metre stick</b></p> <p>Our measure is _____</p>
<p><b>Height of a Classmate</b></p>  <p>We will use <b>centimetres</b> or <b>metres</b></p> <p>We will use <b>ruler</b> or <b>metre stick</b></p> <p>Our measure is _____</p>	<p><b>Height of Lunch Bag</b></p>  <p>We will use <b>centimetres</b> or <b>metres</b></p> <p>We will use <b>ruler</b> or <b>metre stick</b></p> <p>Our measure is _____</p>





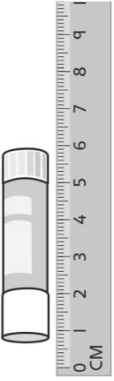
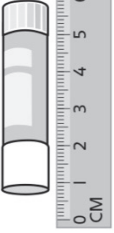

# Master 28: Activity 11 Assessment

## Metres or Centimetres?

### Choosing an Appropriate Standard Unit Behaviours/Strategies

<p>1. Student chooses an object, but struggles to select an appropriate standard unit to measure length. "I'll use metres for the glue stick."</p>	<p>2. Student selects an appropriate standard unit to measure length, but chooses the wrong tool. "I chose metres, so I will use the ruler."</p>	<p>3. Student selects an appropriate standard unit and tool to measure length, but cannot justify choice. "I just know metres is what I should use."</p>	<p>4. Student successfully selects an appropriate standard unit to measure length and justifies choice. "I will use metres because the object is long."</p>
<p><b>Observations/Documentation</b></p>			

### Measuring Length in Standard Units Behaviours/Strategies

<p>1. Student measures length using standard units, but does not line up the object with the baseline of the measuring tool. </p>	<p>2. Student measures length using standard units, but struggles to iterate the measuring tool. </p>	<p>3. Student measures length using standard units, but forgets to include the unit when stating the measure or ignores leftover. </p>	<p>4. Student successfully measures length using standard units and includes units with measures.</p>
<p><b>Observations/Documentation</b></p>			

Master 29a

## Outdoor Measurement Hunt

**Find something you would measure in centimetres.**

Draw a picture of it.

Estimate: \_\_\_\_\_

Measure: \_\_\_\_\_

**Find something you would measure in centimetres.**

Draw a picture of it.

Estimate: \_\_\_\_\_

Measure: \_\_\_\_\_

Master 29b

## Outdoor Measurement Hunt

**Find something you would measure in metres.**

Draw a picture of it.

Estimate: \_\_\_\_\_

Measure: \_\_\_\_\_

**Find something you would measure in metres.**



Draw a picture of it.

Estimate: \_\_\_\_\_

Measure: \_\_\_\_\_

# Master 30a: Activity 12 Assessment

## Using Standard Units: Consolidation

Choosing an Appropriate Unit and Estimating Length Behaviours/Strategies			
<p>1. Student chooses an object, but struggles to select an appropriate standard unit to measure length.</p> <p>"I will use centimetres to measure the length of the teeter-totter."</p>	<p>2. Student selects an appropriate standard unit and tool to measure length, but cannot justify choice.</p> <p>"I just know metres is what I should use."</p>	<p>3. Student selects an appropriate standard unit, but the estimate is extreme or unreasonable.</p>	<p>4. Student successfully selects an appropriate standard unit to measure length, and estimates are reasonable.</p>
Observations/Documentation			
Measuring Length in Standard Units Behaviours/Strategies			
<p>1. Student measures length using standard units, but does not line up the object with the baseline of the measuring tool.</p> 	<p>2. Student measures length using standard units, but struggles to iterate the measuring tool.</p>	<p>3. Student measures length using standard units, but forgets to include the unit when stating the measure or ignores leftover.</p>  <p>"The feather is 5 long."</p>	<p>4. Student successfully measures length using standard units and includes units with measures.</p> <p>"The feather is a little more than 5 centimetres long."</p>
Observations/Documentation			

# Master 30b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can use benchmarks to estimate and measure length in centimetres and metres. <b>(Activities 8, 9, 10, 12)</b>									
Student can use the metre to estimate and measure length. <b>(Activity 9, 11, 12)</b>									
Student can use the centimetre to estimate and measure length. <b>(Activities 10, 11, 12)</b>									
Student includes a unit with all measures. <b>(Activities 8, 9, 10, 11, 12)</b>									
Student can choose an appropriate benchmark or standard unit/tool to measure length. <b>(Activities 8, 11, 12)</b>									
Student lines up the object being measured with the baseline of the measuring tool. <b>(Activities 9, 10, 11, 12)</b>									
Student can iterate the measuring tool accurately. <b>(Activity 8, 9, 10, 11, 12)</b>									
Student can deal with lengths that are not a whole number of metres/centimetres long. <b>(Activities 9, 10, 11, 12)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Uses benchmarks to estimate and measure length in centimetres and metres. <b>(Activities 8, 9, 10, 12)</b>			
Uses the metre to estimate and measure length. <b>(Activity 9, 11, 12)</b>			
Uses the centimetre to estimate and measure length. <b>(Activities 10, 11, 12)</b>			
Includes a unit with all measures. <b>(Activities 8, 9, 10, 11, 12)</b>			
Chooses an appropriate benchmark or standard unit/tool to measure length. <b>(Activities 8, 11, 12)</b>			
Lines up the object being measured with the baseline of the measuring tool. <b>(Activities 9, 10, 11, 12)</b>			
Iterates the measuring tool accurately. <b>(Activity 8, 9, 10, 11, 12)</b>			
Deals with lengths that are not a whole number of metres/centimetres long. <b>(Activities 9, 10, 11, 12)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b>  <b>Attributes, Units, and Measurement Sense:</b> estimate, measure, and record length, perimeter, area, mass, capacity, time, and temperature, using non-standard units and standard units  <b>Measurement Relationships:</b> compare, describe, and order objects, using attributes measured in non-standard units and standard units.  <b>Cross Strand:</b> Number  <b>Counting:</b> demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p>			
<p><b>M2.8</b> tell and write time to the quarter-hour, using demonstration digital and analogue clocks</p> <p><b>M2.9</b> construct tools for measuring time intervals in non-standard units</p> <p><b>M2.10</b> describe how changes in temperature affect everyday experiences</p> <p><b>M2.11</b> use a standard thermometer to determine whether temperature is rising or falling</p> <p><b>M2.14</b> determine, through investigation, the relationship between days and weeks and between months and years.</p>	<p><b>Below Grade: Intervention</b>                      5: Months of the Year                      6: Telling Time</p> <p><b>On Grade: Teacher Cards</b>                      13: Days and Weeks (M2.14, N2.9)                      14: Months in a Year (M2.14, N2.9)                      15: Measuring Time (M2.9, N2.9)                      16: Time to the Quarter-Hour (M2.8, N2.9)                      17: Changes in Temperature (M2.10, M2.11)                      18: Time and Temperature Consolidation (M2.8, M2.10, M2.11, M2.14, N2.9)</p> <p><b>On Grade: Math Every Day Card 3A:</b>                      Hula Hoop Clock (M2.8, N2.9)                      Calendar Questions (M2.14, N2.9)</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b>                      Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2, MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b>                      Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b>                      Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul>

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

### Ontario (continued)

<p><b>N2.9</b> 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</p>	<p><b>Card 3B:</b> Monthly Mix-Up (M2.14; N2.9) Thermometer Drop or Pop (M2.10, M2.11)</p>	<p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities - Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</p>
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# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct or indirect measurement to solve problems. <b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2SS1</b> Relate the number of days to a week and the number of months to a year in a problem-solving context.</p> <p><b>2N3</b> Describe order or relative position using ordinal numbers (up to tenth)</p>	<p><b>Below Grade: Intervention</b> 5: Months of the Year 6: Telling Time</p> <p><b>On Grade: Teacher Cards</b> 13: Days and Weeks (2SS1, 2N3) 14: Months in a Year (2SS1, 2N3) 15: Measuring Time 16: Time to the Quarter-Hour 17: Changes in Temperature 18: Time and Temperature Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Hula Hoop Clock Calendar Questions (2SS1, 2N3) <b>Card 3B:</b> Monthly Mix-Up (2SS1, 2N3) Thermometer Drop or Pop</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b> Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b> Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities</p> <ul style="list-style-type: none"> <li>Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul>

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct or indirect measurement to solve problems. <b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2.SS.1</b> Relate the number of days to a week and the number of months to a year in a problem-solving context.</p> <p><b>2.N.3</b> Describe order or relative position using ordinal numbers.</p>	<p><b>Below Grade: Intervention</b> 5: Months of the Year 6: Telling Time</p> <p><b>On Grade: Teacher Cards</b> 13: Days and Weeks (2.SS.1, 2.N.3) 14: Months in a Year (2.SS.1, 2.N.3) 15: Measuring Time 16: Time to the Quarter-Hour 17: Changes in Temperature 18: Time and Temperature Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Hula Hoop Clock Calendar Questions (2.SS.1, 2.N.3) <b>Card 3B:</b> Monthly Mix-Up (2.SS.1, 2.N.3) Thermometer Drop or Pop</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b> Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2, MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b> Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities</p> <ul style="list-style-type: none"> <li>Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul>

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to use direct and indirect measure to solve problems.</p> <p><b>Cross Strand: Number</b> Students will be expected to develop number sense.</p> <p><b>2M01</b> Students will be expected to demonstrate an understanding of the calendar and the relationships among days, weeks, months, and years.</p> <p><b>2N03</b> Students will be expected to describe order or relative position using ordinal numbers (up to tenth).</p>	<p><b>Below Grade: Intervention</b> 5: Months of the Year 6: Telling Time</p> <p><b>On Grade: Teacher Cards</b> 13: Days and Weeks (2M01, 2N03) 14: Months in a Year (2M01, 2N03) 15: Measuring Time 16: Time to the Quarter-Hour 17: Changes in Temperature 18: Time and Temperature Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Hula Hoop Clock Calendar Questions (2M01, 2N03) <b>Card 3B:</b> Monthly Mix-Up (2M01, 2N03) Thermometer Drop or Pop</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b> Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2, MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b> Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities</p> <ul style="list-style-type: none"> <li>Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul>

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Use direct and indirect measurement to solve problems.</p> <p><b>Cross Strand:</b> Number Develop number sense.</p> <p><b>2SS1</b> Relate the number of days to a week and the number of months to a year in a problem-solving context.</p> <p><b>2N3</b> Describe order or relative position, using ordinal numbers (up to tenth)</p>	<p><b>Below Grade: Intervention</b> 5: Months of the Year 6: Telling Time</p> <p><b>On Grade: Teacher Cards</b> 13: Days and Weeks (2SS1, 2N3) 14: Months in a Year (2SS1, 2N3) 15: Measuring Time 16: Time to the Quarter-Hour 17: Changes in Temperature 18: Time and Temperature Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Hula Hoop Clock Calendar Questions (2SS1, 2N3) <b>Card 3B:</b> Monthly Mix-Up (2SS1, 2N3) Thermometer Drop or Pop</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b> Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2, MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b> Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b> Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b> Comparing and Ordering Quantities</p> <ul style="list-style-type: none"> <li>Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul>

# Curriculum Correlation

## Measurement Cluster 3: Time and Temperature

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Number Sense, Mathematics as a Human Endeavour</p> <p><b>Cross Strand:</b> Number</p> <p><b>Note:</b> Teacher Cards 13 and 14 are not required by your curriculum. However, they are recommended to help prepare students for the work they will do with the passage of time in Grade 3.</p>	<p><b>Below Grade: Intervention</b> 5: Months of the Year 6: Telling Time</p> <p><b>On Grade: Teacher Cards</b> 13: Days and Weeks 14: Months in a Year 15: Measuring Time 16: Time to the Quarter-Hour 17: Changes in Temperature 18: Time and Temperature Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Hula Hoop Clock Calendar Questions</p> <p><b>Card 3B:</b> Monthly Mix-Up Thermometer Drop or Pop</p>	<p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Getting Ready for School (Activities 15, 18)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Goat Island (Activities 14, 15, 17, 18)</li> </ul>	<p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p>Understanding Relationships Among Measurement Units</p> <ul style="list-style-type: none"> <li>Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul> <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p>Understanding Attributes That Can Be Measured</p> <ul style="list-style-type: none"> <li>Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). (Activities 15, 16, 17, 18; MED 3A: 1; MED 3B: 2)</li> </ul> <p><b>Big Idea: Numbers tell us how many and how much.</b></p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> <li>Says the number name sequence forward through the teen numbers. (Activities 13, 14, 15, 18; MED 3A: 2; MED 3B: 1)</li> <li>Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 16, 18; MED 3A: 1)</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p>Comparing and Ordering Quantities</p> <ul style="list-style-type: none"> <li>Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March). (Activities 13, 14, 18; MED 3A: 2; MED 3B: 1)</li> </ul>

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 32

# Calendar Page

	Saturday					
	Friday					
	Thursday					
	Wednesday					
	Tuesday					
	Monday					
	Sunday					

# June Calendar Page

<b>June</b>							
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
			1	2	3	4	
5	6 Zoo Trip	7	8	9	10	11	
12	13	14	15	16 Charlie's Birthday	17	18	
19	20	21 National Indigenous Peoples Day	22	23	24	25	
26	27 Fun Day	28	29	30 Last Day of School			

Master 34a

# Calendar Puzzle Cards

I am the 3rd day of the week.	I am the 5th day of the week.	I am the 1st day of the week.	I am the 7th day of the week.
I am the day before Wednesday the 8th	I am the day after Friday the 10th.	I am the day before Thursday the 2nd.	I am the day after Saturday the 4th.
I am the second Wednesday in the month.	I am the fifth Thursday in the month.	I am the third Monday in the month.	I am the fourth Sunday in the month.
I am 1 week after the field trip to the zoo.	I am 1 week before Charlie's birthday.	I am 1 week after National Indigenous Peoples Day.	I am 1 week before the last day of school.






Master 34b

## Calendar Puzzle Cards (for Accommodations)

I am the 3rd day of the week.	I am the 5th day of the week.	I am the 1st day of the week.	I am the 7th day of the week.
I am the 2nd day of the week.	I am the 4th day of the week.	I am the 6th day of the week.	I am the day after Saturday the 4th.
I am the day before Wednesday the 8th.	I am the day after Friday the 10th.	I am the day before Thursday the 2nd.	I am the day after Sunday the 19th.



Master 34c

## Calendar Puzzle Cards (for Extension)

I am 2 weeks after Thursday the 9th.	I am 3 weeks after Tuesday the 7th.	I am 2 weeks before Friday the 24th.	I am 3 weeks before Monday the 27th.
I am 3 days before Wednesday the 8th.	I am 4 days after Friday the 10th.	I am 4 days before Thursday the 9th.	I am 5 days after Saturday the 4th.
I am 2 days after the 2nd Wednesday in the month.	I am 3 days before the 5th Thursday in the month.	I am 4 days after the 3rd Monday in the month.	I am 2 weeks before the 4th Sunday in the month.
I am 5 days before the field trip to the zoo.	I am 6 days before Charlie's birthday.	I am 5 days after National Indigenous Peoples Day.	I am 4 days before the last day of school.



# Master 35: Activity 13 Assessment

## Days and Weeks

Relating Days and Weeks Behaviours/Strategies		
<p>1. Student chooses a card, but does not know or cannot read the days of the week on the calendar.</p>	<p>2. Student reads the days on the calendar, but struggles with the use of ordinal numbers in context.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>I am the second Wednesday in the month.</p> </div> <p>“I don’t know what second means.”</p>	<p>3. Student chooses a card, but struggles to count forward or backward 7 from a given number to count on or back one week.</p>
Observations/Documentation		
<p>4. Student understands the attributes of a calendar, but does not recognize patterns on a calendar page.</p>	<p>5. Student understands the attributes of a calendar, but does not provide a complete description when providing a date.</p> <p>“Monday 6th” or “Monday 6”</p>	<p>6. Student understands the relationship of units of time (e.g., days and weeks) and successfully solves all calendar problems.</p>
Observations/Documentation		

# Full-Year Calendar

Cut out each row and tape them together to make a linear arrangement.

JANUARY	S	M	T	W	T	F	S								
FEBRUARY	S	M	T	W	T	F	S								
MARCH	S	M	T	W	T	F	S								
APRIL	S	M	T	W	T	F	S								
MAY	S	M	T	W	T	F	S								
JUNE	S	M	T	W	T	F	S								
JULY	S	M	T	W	T	F	S								
AUGUST	S	M	T	W	T	F	S								
SEPTEMBER	S	M	T	W	T	F	S								
OCTOBER	S	M	T	W	T	F	S								
NOVEMBER	S	M	T	W	T	F	S								
DECEMBER	S	M	T	W	T	F	S								



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 37a

# Month Clue Cards

1st month <hr/>	Last month <hr/>	Month between September and November <hr/>	3rd month <hr/>
Month before August <hr/>	5th month <hr/>	Month between January and March <hr/>	Ninth month <hr/>
Month before December <hr/>	Sixth month <hr/>	Month after March <hr/>	Eighth month <hr/>



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 37b

# Month Clue Cards (for Accommodations)

1st month _____	12th month _____	10th month _____	3rd month _____
7th month _____	5th month _____	2nd month _____	9th month _____
11th month _____	6th month _____	4th month _____	8th month _____



# Master 38: Activity 14 Assessment

## Months in a Year

Relating Months and Years Behaviours/Strategies		
<p>1. Student chooses a card, but does not know the months of the year.</p>	<p>2. Student reads the months on the calendar, but struggles with the use of ordinal numbers in context.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Ninth month</p> </div> <p>“I don’t know what ninth means.”</p>	<p>3. Student understands the use of ordinal numbers in context, but struggles to say the number name sequence starting with 1 and counting forward.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Ninth month</p> </div> <p>“1, 2, 3, 5, 6, 8, 9” “July.”</p>
Observations/Documentation		
<p>4. Student understands the use of ordinal numbers in context, but relies on a calendar to answer clue cards.</p>	<p>5. Student understands the use of ordinal numbers in context, but is unable to order the months without referring to a calendar.</p>	<p>6. Student understands the relationship of units of time (e.g., months and years), successfully answers all clue cards, and orders the cards by month.</p>
Observations/Documentation		

## How to Make a Pendulum

### Materials (per student)

- Length of string/yarn (about 40 cm)
- 4 pony beads
- Tape

**Note:** Give each student a length of string taped at one end (makes it easier to put the beads on)

### Instructions

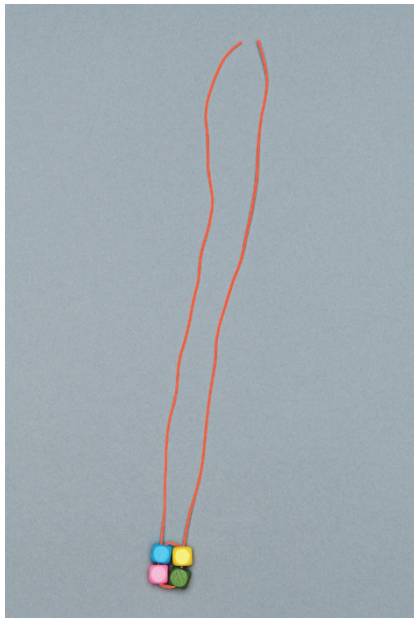
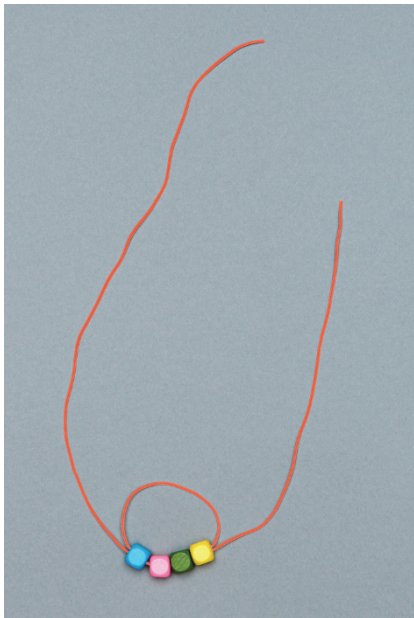
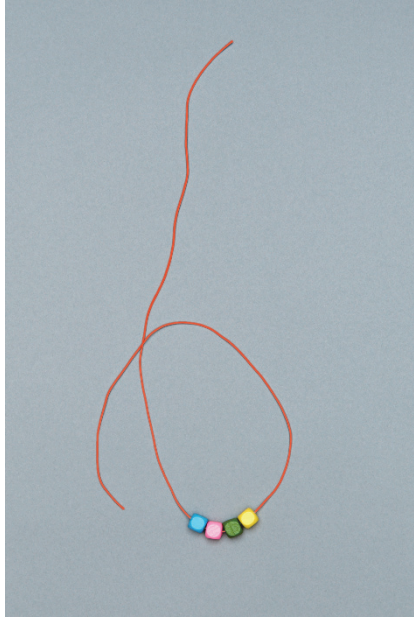
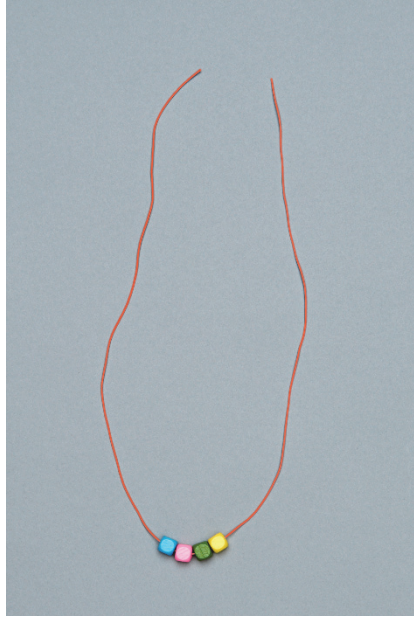
Put four beads of different colours on the string. Move them to the middle of the string.

- Thread the string back through all four beads to make a circle. (See pictures).
- Pull each end of the string.
- Tie a knot to secure the beads.
- Tie the two ends of the string together (optional).



Master 39b

# How to Make a Pendulum



Master 40

# Pendulum Activity Cards

<p>Tie your shoes.</p> <p>Number of swings:</p> <p>_____</p>	<p>Draw a tree.</p> <p>Number of swings:</p> <p>_____</p>	<p>Get a drink.</p> <p>Number of swings:</p> <p>_____</p>
<p>Do 5 jumping jacks.</p> <p>Number of swings:</p> <p>_____</p>	<p>Write your name.</p> <p>Number of swings:</p> <p>_____</p>	<p>Take your shoes off and then put them on.</p> <p>Number of swings:</p> <p>_____</p>
<p>Say the alphabet.</p> <p>Number of swings:</p> <p>_____</p>	<p>Draw a self-portrait.</p> <p>Number of swings:</p> <p>_____</p>	<p>Make a tower of 10 linking cubes.</p> <p>Number of swings:</p> <p>_____</p>



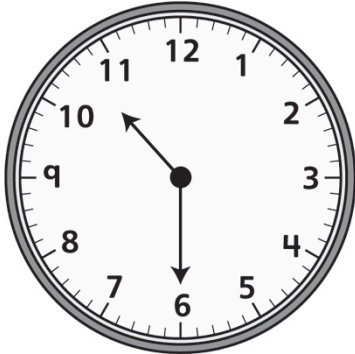
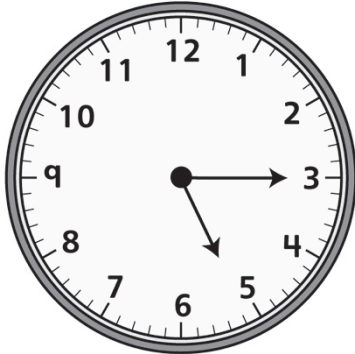
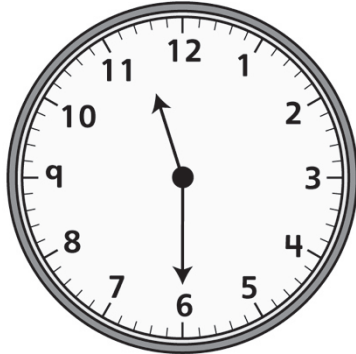



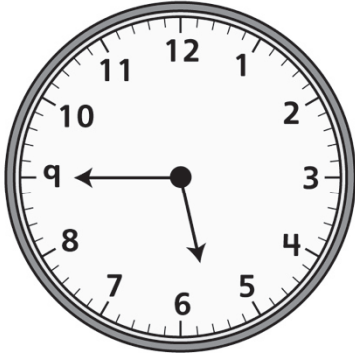
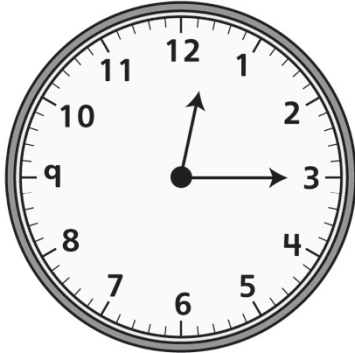
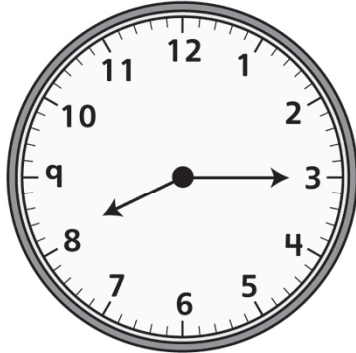



# Master 41: Activity 15 Assessment

## Measuring Time

Measuring Time Intervals Behaviours/Strategies		
<p>1. Student explores measurement of non-visible attributes (time), but starts the pendulum before or after partner starts the activity.</p>	<p>2. Student starts the pendulum, but struggles to say the number name sequence starting with 1 and counting forward.</p> <p>“1, 2, 3, 5, 6, 8, 9”</p>	<p>3. Student explores measurement of non-visible attributes (time), but when counting pendulum swings, loses track of the count.</p> <p>“I forget what swing I am at.”</p>
Observations/Documentation		
<p>4. Student explores measurement of non-visible attributes (time), but thinks the time it takes to do an activity should be the same for everyone.</p> <p>“It took 8 swings for me to do the activity. It should take everyone 8 swings.”</p>	<p>5. Student explores measurement of non-visible attributes (time), but struggles to determine which activity took the longest.</p> <p>“8 swings, 15 swings, 12 swings, 14 swings, 20 swings, 11 swings. How do I know which activity took the longest?”</p>	<p>6. Student successfully explores measurement of non-visible attributes (time) and determines which activity took the longest.</p>
Observations/Documentation		

Master 42a

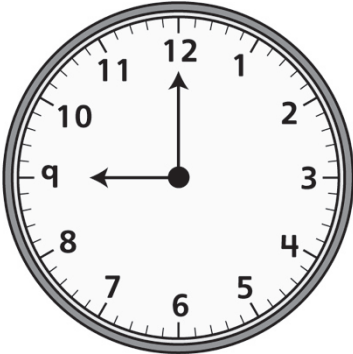
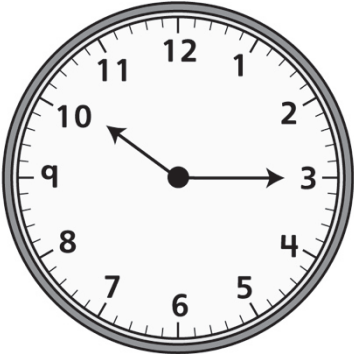
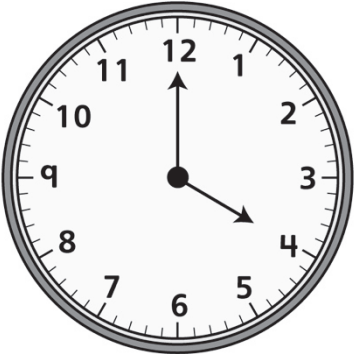



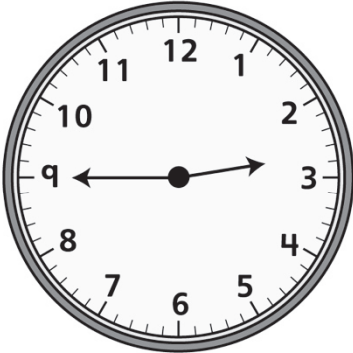
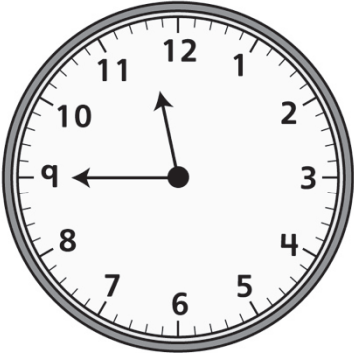
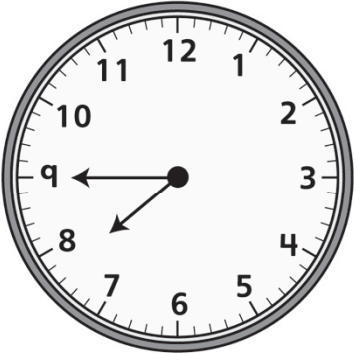



# Analogue Clock Cards (Part 1)



Master 42a

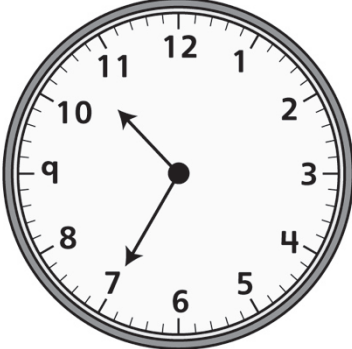
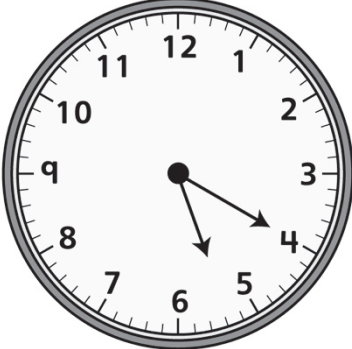
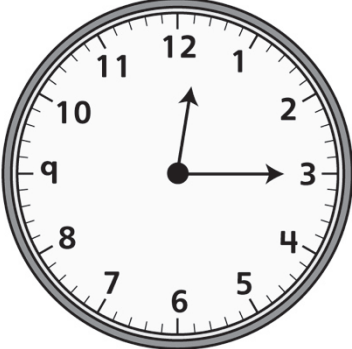



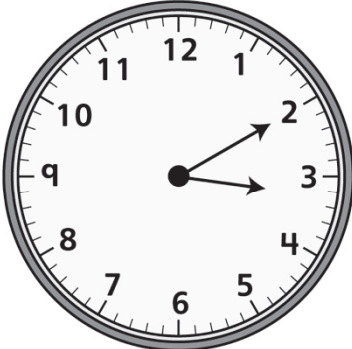
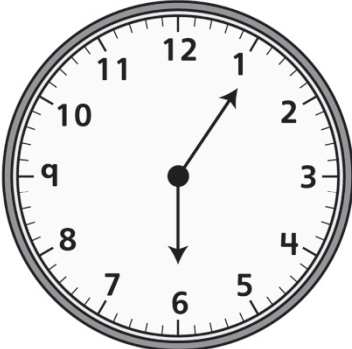
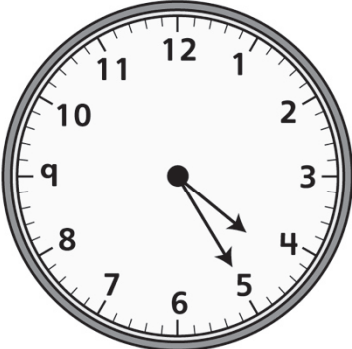



# Analogue Clock Cards (Part 2)



Master 42b


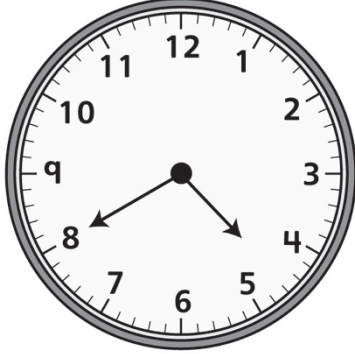
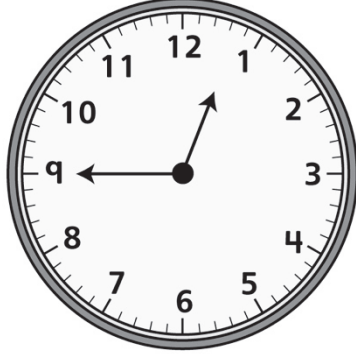




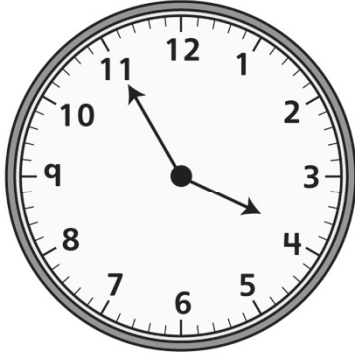
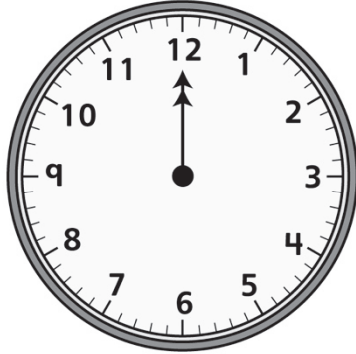



# Analogue Clock Cards (for Combined Grades Extension) (Part 1)



Master 42b

### Analogue Clock Cards (for Combined Grades Extension) (Part 2)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 43a

# Digital Clock Cards

10:30	5:15	11:30
5:45	12:15	8:15
9:00	10:15	4:00
2:45	11:45	7:45





Name \_\_\_\_\_ Date \_\_\_\_\_

Master 43b

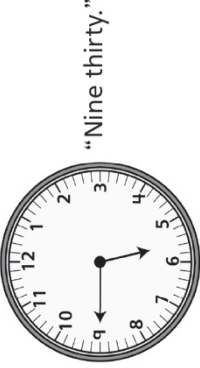

# Digital Clock Cards (for Combined Grades Extension)

10:35	5:20	12:15
3:10	6:05	4:25
6:30	4:40	12:45
10:50	3:55	12:00



# Master 44: Activity 16 Assessment

## Time to the Quarter-Hour

Telling and Writing Time to the Quarter-Hour Behaviours/Strategies		
<p>1. Student explores measurement of non-visible attributes (time), but does not realize that each number on the analogue clock represents 5 minutes.</p>	<p>2. Student explores measurement of non-visible attributes (time), but struggles to skip-count by 5s.</p> <p>“5, 10, 20, 30”</p>	<p>3. Student explores measurement of non-visible attributes (time), but mixes up the hour and minute hands on the analogue clock.</p>  <p>“Nine thirty.”</p>
Observations/Documentation		
<p>4. Student explores measurement of non-visible attributes (time), but struggles when the hour hand is between two numbers.</p>	<p>5. Student explores measurement of non-visible attributes (time), tells time on an analogue clock, but struggles to read or write time on a digital clock.</p>  <p>“The time is nine zero zero.”</p>	<p>6. Student successfully explores measurement of non-visible attributes (time), and reads and writes time to the quarter-hour on analogue and digital clocks.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 45







# Thermometer (for Before)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 46a

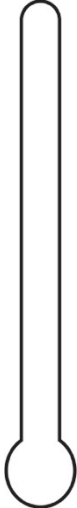

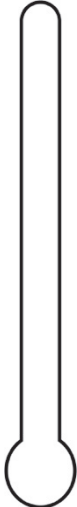

# Cold, Warm, or Hot?

Cold	Warm	Hot
		
		

Name \_\_\_\_\_ Date \_\_\_\_\_

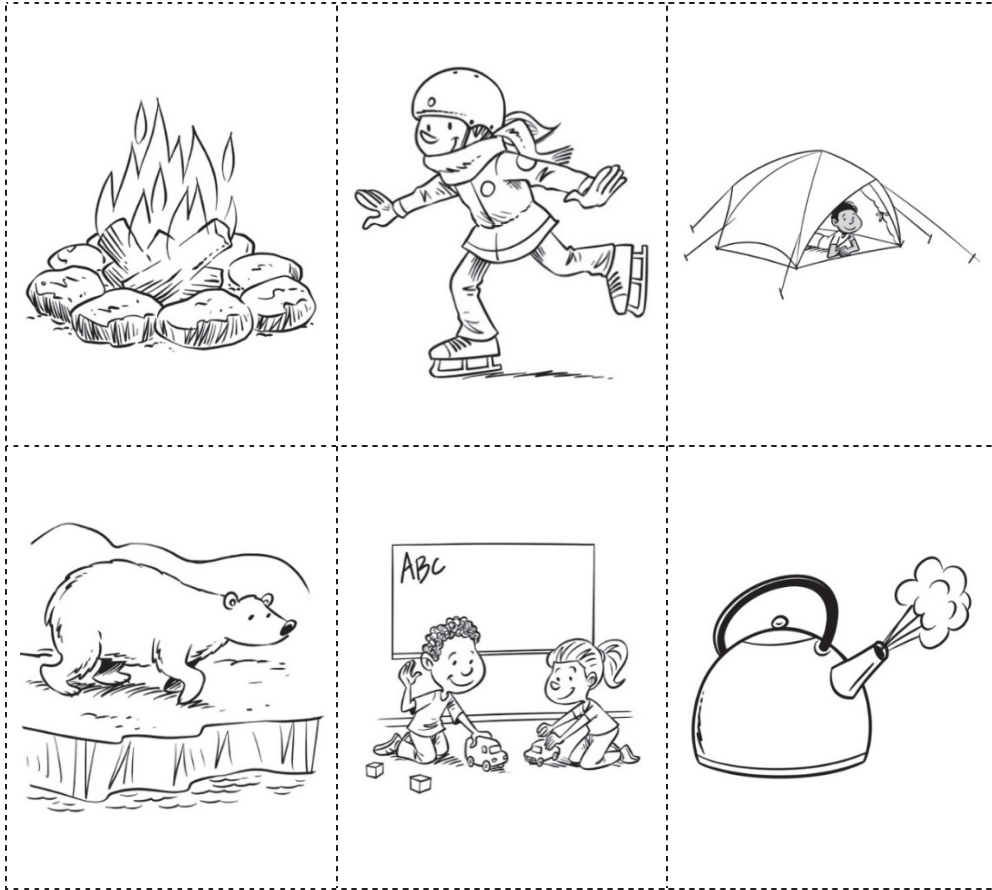
Master 46b

# Cold, Warm, or Hot? (for Accommodations)

Cold	Hot
	
	

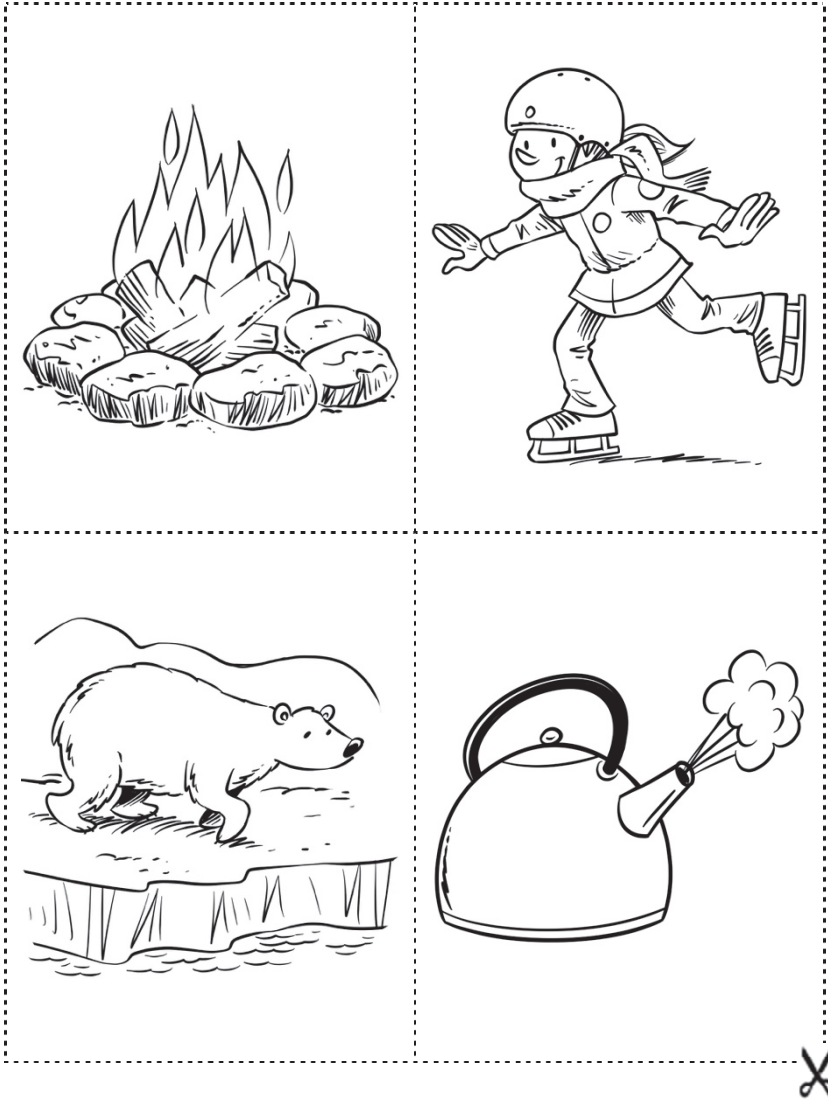
Master 47a

# Pictures for Cold, Warm, or Hot?



Master 47b

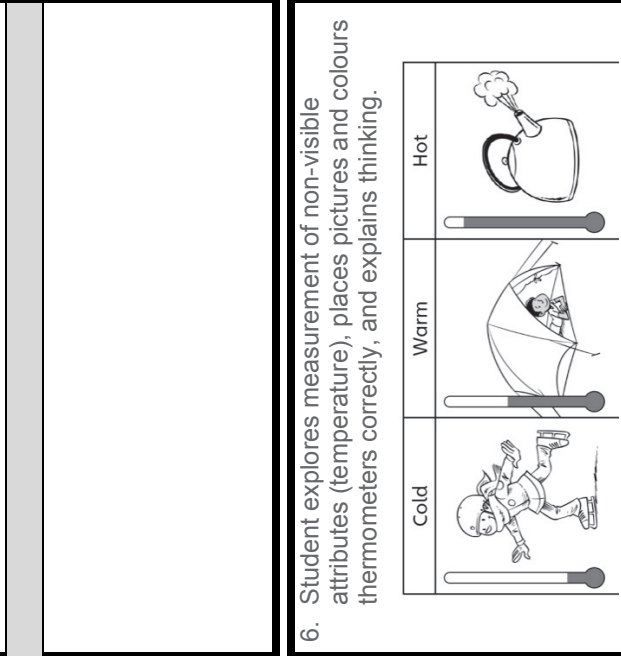
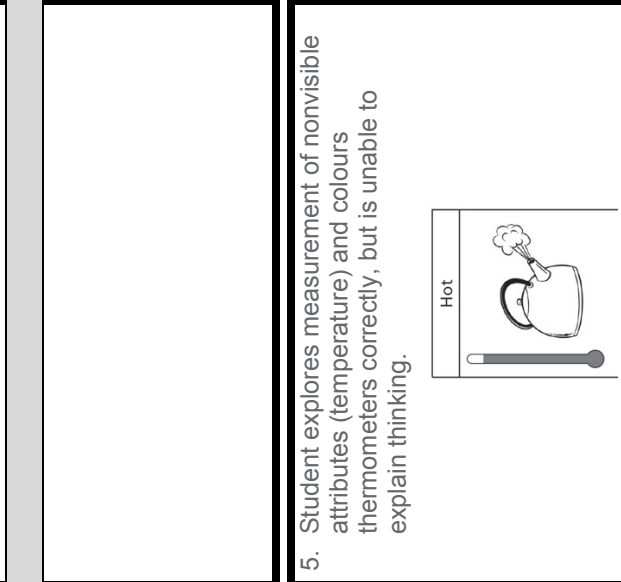
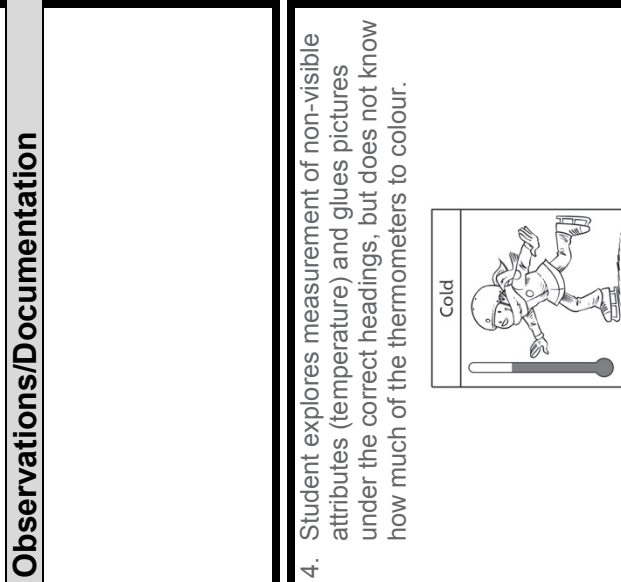
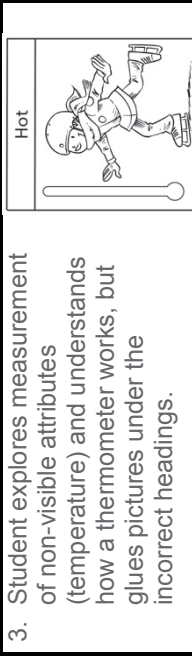
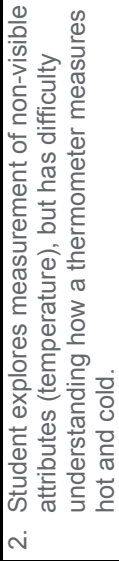
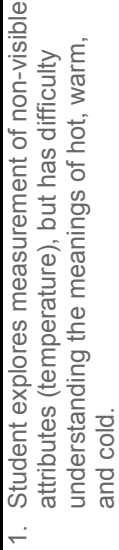
# Pictures for Cold, Warm, or Hot? (for Accommodations)



# Master 48: Activity 17 Assessment

## Changes in Temperature


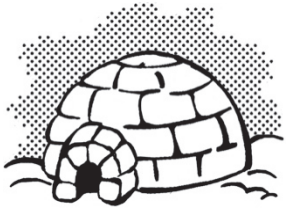




Identifying Changes in Temperature Behaviours/Strategies	
1. Student explores measurement of non-visible attributes (temperature), but has difficulty understanding the meanings of hot, warm, and cold.	2. Student explores measurement of non-visible attributes (temperature), but has difficulty understanding how a thermometer measures hot and cold.
<b>Observations/Documentation</b>	
4. Student explores measurement of non-visible attributes (temperature) and glues pictures under the correct headings, but does not know how much of the thermometers to colour.	3. Student explores measurement of non-visible attributes (temperature) and understands how a thermometer works, but glues pictures under the incorrect headings.
<b>Observations/Documentation</b>	
5. Student explores measurement of non-visible attributes (temperature) and colours thermometers correctly, but is unable to explain thinking.	6. Student explores measurement of non-visible attributes (temperature), places pictures and colours thermometers correctly, and explains thinking.
<b>Observations/Documentation</b>	





**Master 49a**





**Time and Temperature Game Board**

	<p>Monday</p>	<p>Month after August</p>	
<p>January</p>		<p>Day after Tuesday</p>	<p>8:30</p>
<p>Saturday</p>	<p>Third month</p>	<p>2:45</p>	
<p>2:15</p>		<p>1st day of the week</p>	<p>April</p>
			<p>Thursday</p>

Name \_\_\_\_\_ Date \_\_\_\_\_


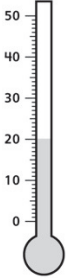



Master 49b

# Time and Temperature Game Board (for Accommodations)

	Monday	9th month	
		January	8:30
Day after Friday	March	2:30	10 o'clock





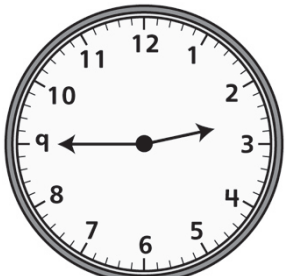



Master 49c

## Time and Temperature Game Board (for Combined Grades Extension)

	<p>Monday</p>	<p>Two months after July</p>	
<p>Water starts to freeze</p> 	<p>Month after December</p>	<p>Three days after Sunday</p>	<p>8:05</p>
<p>Saturday</p>	<p>Three months before July</p>		<p>Water starts to boil</p> 
<p>2:55</p>	<p>March</p>	<p>1st day of the week</p>	<p>July</p>
<p>June</p>	<p>Warm</p>		<p>Thursday</p>

Master 50a







# Time and Temperature Cards

10:45	2nd day of the week	September	
		Wednesday	
6th day of the week	March		
	February	Sunday	Fourth month
July		12 o'clock	Day before Friday



Master 50b






### Time and Temperature Cards (for Accommodations)

8:00	2nd day of the week	September	
	February		
Saturday	3rd month		



Master 50c

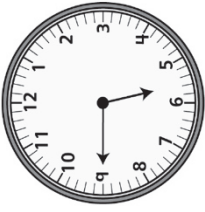

## Time and Temperature Cards (for Combined Grades Extension)

10:35	Day before Tuesday	September	Very cold
	January	Wednesday	
7 days after Saturday	April	Hot	100°C
	Spring Break	Sunday	One month after June
		12:20	Day before Friday



# Master 51a: Activity 18 Assessment

## Time and Temperature: Consolidation

Time and Temperature Measurement Behaviours/Strategies			
1. Student chooses a card, but cannot read the days of the week or months of the year on the calendar.	2. Student chooses a clue card, but struggles to say the number name sequence starting with 1 and counting forward.  6th day of the week "1, 2, 4, 5, 6" "Thursday"	3. Student reads the days/months on the calendar, but struggles with the use of ordinal numbers in context.  3rd month "I don't know what 3rd means."	4. Student understands the use of ordinal numbers in context, but relies on a calendar to match cards.
Observations/Documentation			
5. Student explores measurement of non-visible attributes (time), but struggles to skip-count by 5s.  "5, 10, 20, 30"	6. Student explores measurement of non-visible attributes (time), but mixes up the hour and minute hands on the analogue clock.   "Nine thirty."	7. Student explores measurement of non-visible attributes (temperature), but does not know how much of a thermometer should be coloured.   "I know it is very hot, but what does hot look like on a thermometer?"	8. Student understands the relationship of units of time (e.g., days and weeks, months and years), and successfully explores measurement of non-visible attributes (time, temperature).
Observations/Documentation			

# Master 51b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can read and identify the days of the week. <b>(Activities 13, 18)</b>									
Student can use ordinal numbers to identify a day in the month/month in the year. <b>(Activity 13, 14, 18)</b>									
Student understands the relationship of days and weeks. <b>(Activities 13, 18)</b>									
Student understands the relationship of months and years. <b>(Activities 14, 18)</b>									
Student can say the months of the year in order. <b>(Activities 14, 18)</b>									
Student can use a pendulum to measure time intervals. <b>(Activity 15)</b>									
Student can tell and write time to the quarter-hour on analogue and digital clocks. <b>(Activity 16, 18)</b>									
Student can relate a temperature to the level of liquid in a thermometer. <b>(Activities 17, 18)</b>									



Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Reads and identifies the days of the week. <b>(Activities 13, 18)</b>			
Uses ordinal numbers to identify a day in the month/month in the year. <b>(Activity 13, 14, 18)</b>			
Understands the relationship of days and weeks. <b>(Activities 13, 18)</b>			
Understands the relationship of months and years. <b>(Activities 14, 18)</b>			
Says the months of the year in order. <b>(Activities 14, 18)</b>			
Uses a pendulum to measure time intervals. <b>(Activity 15)</b>			
Tells and writes time to the quarter-hour on analogue and digital clocks. <b>(Activity 16, 18)</b>			
Relates a temperature to the level of liquid in a thermometer. <b>(Activities 17, 18)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

### Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Geometric Properties:</b> identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties</p> <p><b>Cross Strand: Patterning and Algebra</b></p> <p><b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p> <p><b>G2.1</b> distinguish between the attributes of an object that are geometric properties (e.g., number of sides, number of faces) and the attributes that are not geometric properties (e.g., colour, size, texture), using a variety of tools (e.g., attribute blocks, geometric solids, connecting cubes).</p> <p><b>G2.2</b> identify and describe various polygons (i.e., triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons) and sort and classify them by their geometric properties (i.e., number of sides or number of vertices), using concrete materials and pictorial representations.</p> <p><b>G2.5</b> locate the line of symmetry in a two-dimensional shape (e.g., by paper folding; by using a Mira).</p>	<p><b>Mathology Grade 2 Classroom Activity Kit</b></p> <p><b>Below Grade: Intervention</b></p> <p>1: Sorting Shapes</p> <p>2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Sorting 2-D Shapes (<b>G2.1</b>, <b>G2.2</b>)</p> <p>2: Exploring 2-D Shapes (<b>G2.1</b>, <b>G2.2</b>)</p> <p>3: Constructing 2-D Shapes (<b>G2.5</b>)</p> <p>4: Symmetry in 2-D Shapes (<b>G2.1</b>, <b>G2.2</b>, <b>G2.5</b>)</p> <p>5: 2-D Shapes Consolidation (<b>G2.1</b>, <b>G2.2</b>, <b>G2.5</b>)</p> <p><b>On Grade: Math Every Day Card 1:</b></p> <p>Visualizing Shapes (<b>G2.1</b>)</p> <p>Comparing Shapes (<b>G2.1</b>)</p>	<p><b>Mathology Little Books</b></p> <p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (<b>Activities 1, 2, 5</b>)</li> <li>• The Tailor Shop (<b>Activities 1, 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (<b>Activities 1, 2, 5</b>)</li> <li>• Sharing Our Stories (<b>Activities 4, 5</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (<b>Activities 4, 5</b>)</li> </ul>	<p><b>Pearson Canada K-3 Mathematics Learning Progression</b></p> <p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (<b>Activities 1, 3, 5, MED 1: 2</b>)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Classifies and names 2-D shapes based on common attributes. (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (<b>Activity 3</b>)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (<b>Activities 4, 5</b>)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (<b>Activity 5</b>)</li> <li>- Sorts a set of objects based on two attributes. (<b>Activities 1, 5</b>)</li> </ul>

### Mathology 2

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Objects and shapes have attributes that can be described, measured, and compared.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p>Multiple attributes of 2D shapes and 3D objects  <b>2.25</b> sorting 2D shapes and 3D objects using two attributes, and explaining the sorting rule</p> <p><b>2.26</b> describing, comparing, and constructing 2D shapes, including triangles, squares, rectangles, circles</p>	<p><b>Below Grade: Intervention</b>            1: Sorting Shapes            2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b>            1: Sorting 2-D Shapes (2.25)            2: Exploring 2-D Shapes (2.26)            3: Constructing 2-D Shapes (2.26)            4: Symmetry in 2-D Shapes            5: 2-D Shapes Consolidation (2.25, 2.26)</p> <p><b>On Grade: Math Every Day Card 1:</b>            Visualizing Shapes (2.26)            Comparing Shapes (2.26)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 1, 2, 5)</li> <li>• The Tailor Shop (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 1, 2, 5)</li> <li>• Sharing Our Stories (Activities 4, 5)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 4, 5)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (Activities 1, 3, 5, MED 1: 2)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Classifies and names 2-D shapes based on common attributes. (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (Activity 3)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (Activities 4, 5)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 5)</li> <li>- Sorts a set of objects based on two attributes. (Activities 1, 5)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe 3-D objects and 2-D shapes, and analyze the relationships</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p><b>2SS6</b> Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.</p> <p><b>2SS8</b> Describe, compare and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>1: Sorting Shapes</p> <p>2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Sorting 2-D Shapes (<b>2SS6, 2SS8</b>)</p> <p>2: Exploring 2-D Shapes (<b>2SS8</b>)</p> <p>3: Constructing 2-D Shapes (<b>2SS8</b>)</p> <p>4: Symmetry in 2-D Shapes</p> <p>5: 2-D Shapes Consolidation (<b>2SS6, 2SS8</b>)</p> <p><b>On Grade: Math Every Day Card 1:</b></p> <p>Visualizing Shapes (<b>2SS8</b>)</p> <p>Comparing Shapes (<b>2SS8</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (<b>Activities 1, 2, 5</b>)</li> <li>• The Tailor Shop (<b>Activities 1, 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (<b>Activities 1, 2, 5</b>)</li> <li>• Sharing Our Stories (<b>Activities 4, 5</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (<b>Activities 4, 5</b>)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (<b>Activities 1, 3, 5, MED 1: 2</b>)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Classifies and names 2-D shapes based on common attributes. (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (<b>Activity 3</b>)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (<b>Activities 4, 5</b>)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (<b>Activity 5</b>)</li> <li>- Sorts a set of objects based on two attributes. (<b>Activities 1, 5</b>)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>Cross Strand: Patterns and Relations</b></p> <p><b>2.SS.6</b> Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.</p> <p><b>2.SS.8</b> Describe, compare, and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul>	<p><b>Below Grade: Intervention</b></p> <p>1: Sorting Shapes</p> <p>2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Sorting 2-D Shapes (<b>2.SS.6, 2.SS.8</b>)</p> <p>2: Exploring 2-D Shapes (<b>2.SS.8</b>)</p> <p>3: Constructing 2-D Shapes (<b>2.SS.8</b>)</p> <p>4: Symmetry in 2-D Shapes</p> <p>5: 2-D Shapes Consolidation (<b>2.SS.6, 2.SS.8</b>)</p> <p><b>On Grade: Math Every Day Card 1:</b> Visualizing Shapes (<b>2.SS.8</b>) Comparing Shapes (<b>2.SS.8</b>)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (<b>Activities 1, 2, 5</b>)</li> <li>• The Tailor Shop (<b>Activities 1, 2, 5</b>)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (<b>Activities 1, 2, 5</b>)</li> <li>• Sharing Our Stories (<b>Activities 4, 5</b>)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (<b>Activities 4, 5</b>)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (<b>Activities 1, 3, 5, MED 1: 2</b>)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Classifies and names 2-D shapes based on common attributes. (<b>Activities 1, 2, 3, 5, MED 1: 1</b>)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (<b>Activity 3</b>)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (<b>Activities 4, 5</b>)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (<b>Activity 5</b>)</li> <li>- Sorts a set of objects based on two attributes. (<b>Activities 1, 5</b>)</li> </ul>

### Mathology 2

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to describe the characteristics of 3-D objects and 2-D shapes and analyze the relationships among them.</p> <p><b>Cross Strand: Patterns and Relations</b></p>			
<p><b>2G01</b> Students will be expected to sort 2-D shapes and 3-D objects using two attributes and explain the sorting rule.</p> <p><b>2G03</b> Students will be expected to recognize, name, describe, compare, and build 2-D shapes, including triangles, squares, rectangles, and circles.</p>	<p><b>Below Grade: Intervention</b> 1: Sorting Shapes 2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b> 1: Sorting 2-D Shapes (2G01, 2G03) 2: Exploring 2-D Shapes (2G03) 3: Constructing 2-D Shapes (2G03) 4: Symmetry in 2-D Shapes 5: 2-D Shapes Consolidation (2G01, 2G03)</p> <p><b>On Grade: Math Every Day Card 1:</b> Visualizing Shapes (2G03) Comparing Shapes (2G03)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 1, 2, 5)</li> <li>• The Tailor Shop (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 1, 2, 5)</li> <li>• Sharing Our Stories (Activities 4, 5)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 4, 5)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b> Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (Activities 1, 3, 5, MED 1: 2)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Classifies and names 2-D shapes based on common attributes. (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (Activity 3)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b> Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (Activities 4, 5)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b> Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 5)</li> <li>- Sorts a set of objects based on two attributes. (Activities 1, 5)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p><b>2SS6</b> Sort 2-D shapes and 3-D objects, using two attributes, and explain the sorting rule.</p> <p><b>2SS8</b> Describe, compare and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <p><b>2PR3</b> Sort a set of objects, using two attributes, and explain the sorting rule.</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Sorting Shapes</p> <p>2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Sorting 2-D Shapes (2SS6, 2SS8, 2PR3)</p> <p>2: Exploring 2-D Shapes (2SS8)</p> <p>3: Constructing 2-D Shapes (2SS8)</p> <p>4: Symmetry in 2-D Shapes</p> <p>5: 2-D Shapes Consolidation (2SS6, 2SS8, 2PR3)</p> <p><b>On Grade: Math Every Day Card 1:</b> Visualizing Shapes (2SS8) Comparing Shapes (2SS8)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 1, 2, 5)</li> <li>• The Tailor Shop (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 1, 2, 5)</li> <li>• Sharing Our Stories (Activities 4, 5)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 4, 5)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (Activities 1, 3, 5, MED 1: 2)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Classifies and names 2-D shapes based on common attributes. (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (Activity 3)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (Activities 4, 5)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 5)</li> <li>- Sorts a set of objects based on two attributes. (Activities 1, 5)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 1: 2-D Shapes

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p><b>SS2.4</b> Describe, compare, and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <p><b>SS2.5</b> Demonstrate understanding of the relationship between 2-D shapes and 3-D objects.</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Sorting Shapes</p> <p>2: Analyzing 2-D Shapes</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Sorting 2-D Shapes (SS2.4)</p> <p>2: Exploring 2-D Shapes (SS2.4)</p> <p>3: Constructing 2-D Shapes (SS2.4)</p> <p>4: Symmetry in 2-D Shapes</p> <p>5: 2-D Shapes Consolidation (SS2.4, SS2.5)</p> <p><b>On Grade: Math Every Day Card 1:</b> Visualizing Shapes (SS2.4) Comparing Shapes (SS2.4)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 1, 2, 5)</li> <li>• The Tailor Shop (Activities 1, 2, 5)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 1, 2, 5)</li> <li>• Sharing Our Stories (Activities 4, 5)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 4, 5)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes to find the similarities and differences. (Activities 1, 3, 5, MED 1: 2)</li> <li>- Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Classifies and names 2-D shapes based on common attributes. (Activities 1, 2, 3, 5, MED 1: 1)</li> <li>- Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). (Activity 3)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Identifies line(s) of symmetry on regular 2-D shapes. (Activities 4, 5)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 5)</li> <li>- Sorts a set of objects based on two attributes. (Activities 1, 5)</li> </ul>



Master 2a

### Attribute Cards for Activity 2

<b>Blue</b>	<b>Yellow</b>	<b>Red</b>
<b>3 sides</b>	<b>4 sides</b>	<b>No sides</b>
<b>6 sides</b>	<b>Small</b>	<b>Big</b>
<b>3 vertices</b>	<b>More than 3 vertices</b>	<b>No vertices</b>



Master 2b

### Attribute Cards for Activity 2 (for Combined Grades Extension)




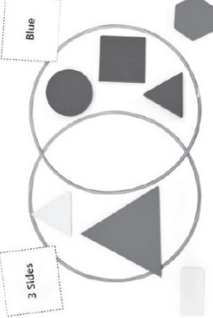
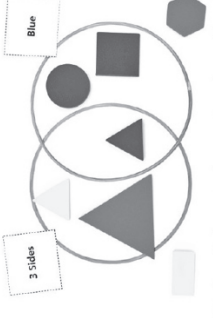
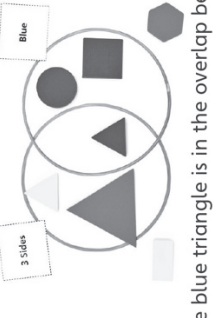
<b>2 equal sides</b>	<b>4 equal sides</b>	<b>No equal sides</b>
<b>More than 4 sides</b>	<b>1 right angle</b>	<b>No right angles</b>
<b>4 right angles</b>	<b>3 interior angles</b>	<b>4 interior angles</b>
<b>More than 4 interior angles</b>		





# Master 3: Activity 1 Assessment

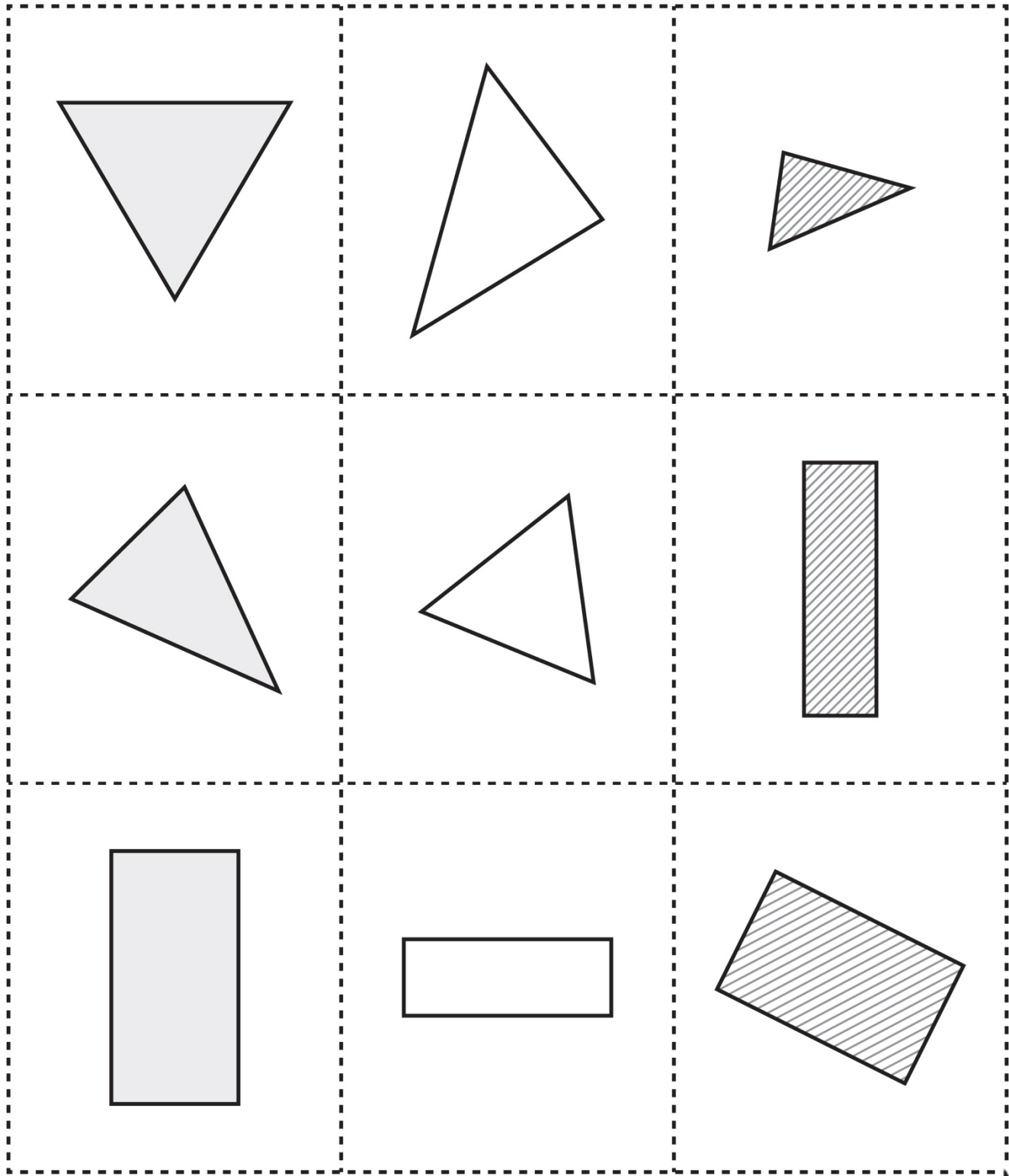
## Sorting 2-D Shapes

Sorting Shapes Using Two Attributes Behaviours/Strategies		
<p>1. Student chooses a block, but struggles to analyze the attributes of the block.</p>  <p>"It's flat."</p>	<p>2. Student analyzes the attributes of the blocks, but is unable to name the shape.</p>  <p>"It has 4 sides, 4 vertices, and it is red. I forget what it is called."</p>	<p>3. Student analyzes the attributes of the blocks, but is unable to describe how two shapes are similar/different.</p>  <p>"I don't know how they are alike."</p>
Observations/Documentation		
<p>4. Student sorts the blocks using a single attribute at a time, but is unable to sort using two attributes simultaneously (ignores overlap).</p> 	<p>5. Student sorts a set of blocks based on two attributes, but has difficulty describing the sort.</p>  <p>"I don't know how to describe it. It looks like this."</p>	<p>6. Student analyzes geometric attributes of shapes, sorts them using two attributes, and uses mathematical language to describe the sort.</p>  <p>"The blue triangle is in the overlap because it has both attributes."</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4a

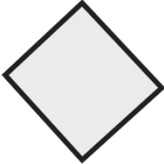
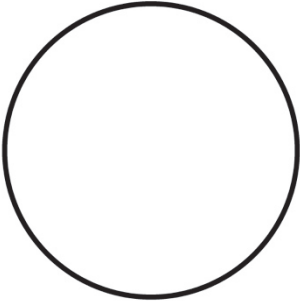
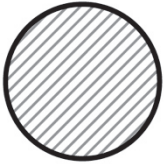
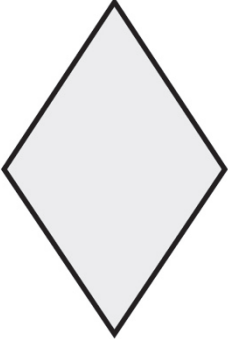
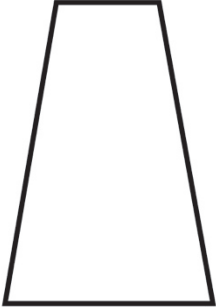
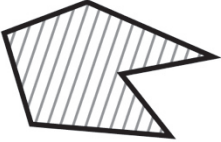
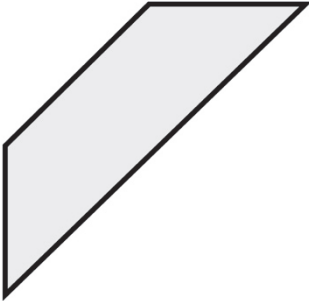
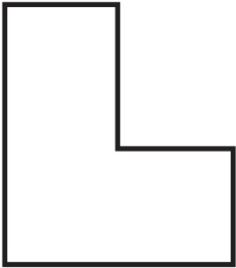
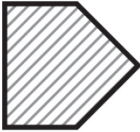
# Shape Cards



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4b

# Shape Cards

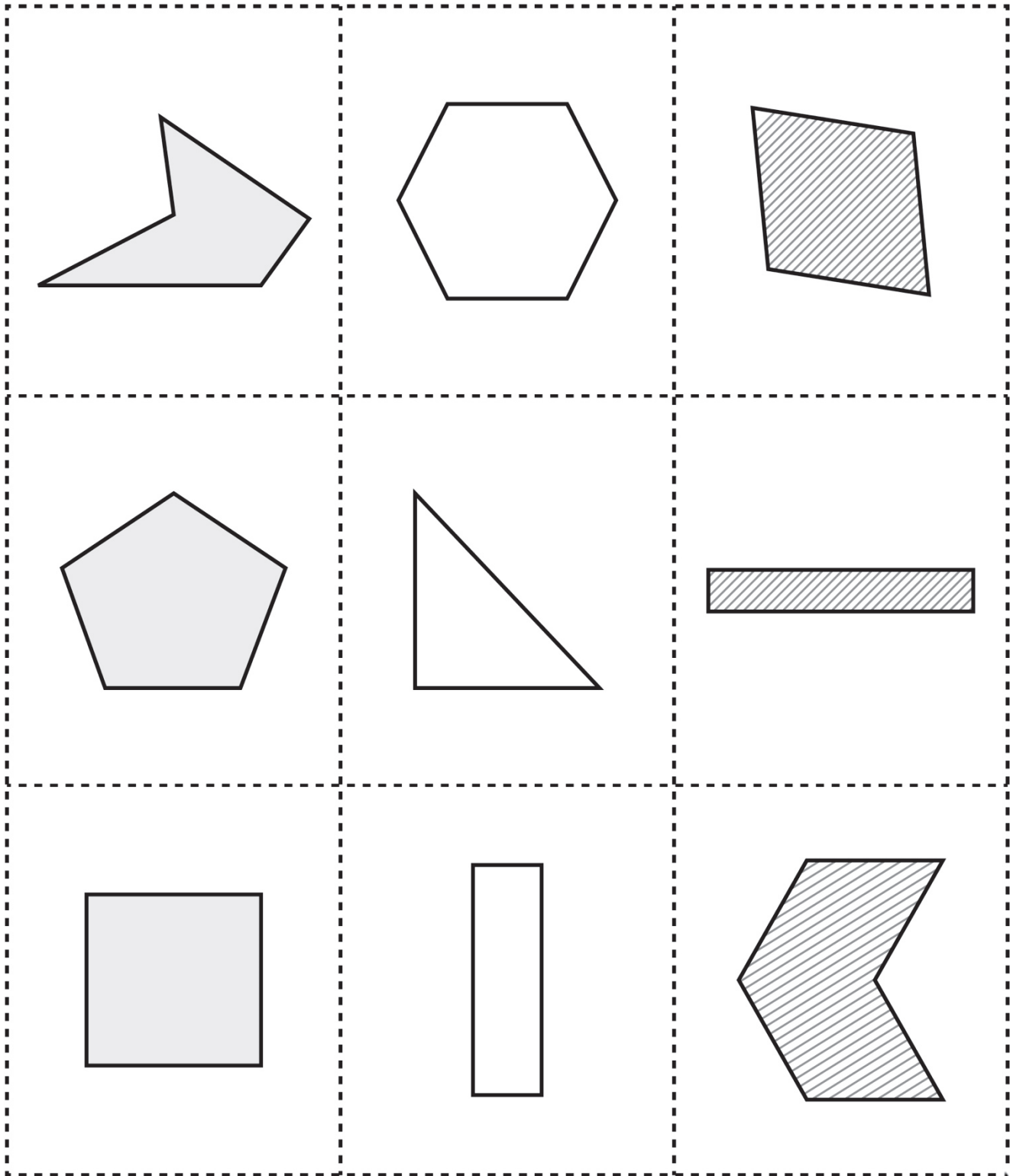
		
		
		



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4c

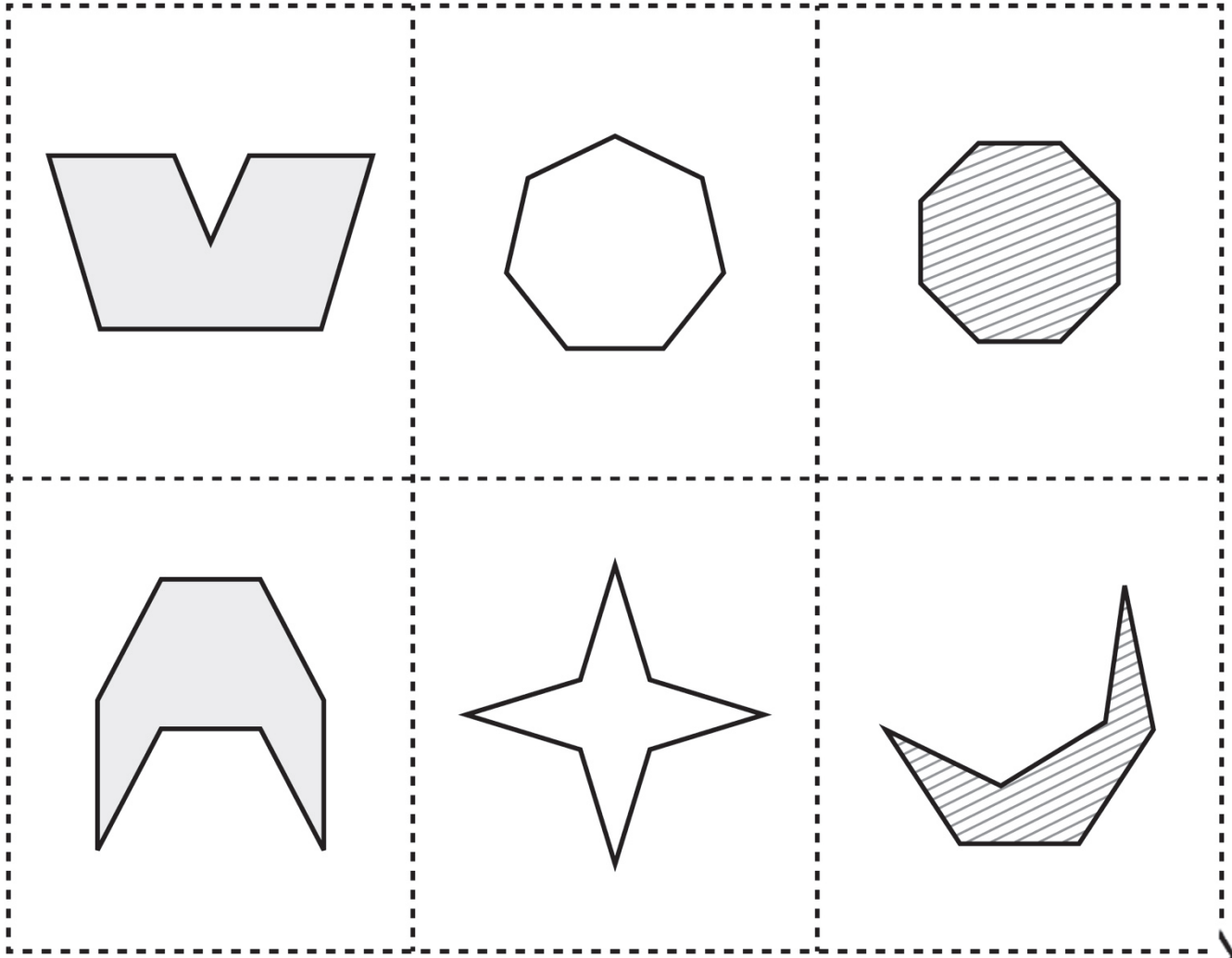
# Shape Cards



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 4d



# Shape Cards





# Master 5: Activity 2 Assessment

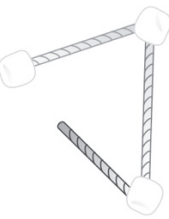
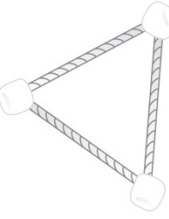
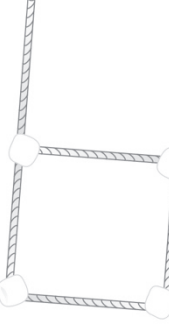
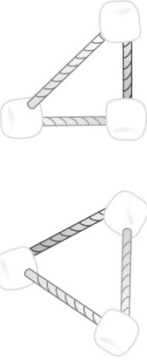
## Exploring 2-D Shapes

Analyzing and Identifying 2-D Shapes Behaviours/Strategies			
1. Student secretly picks a shape, but struggles to analyze the attributes of the shape and answers questions randomly.	2. Student analyzes attributes of 2-D shapes and answers questions thoughtfully. Partner asks repetitive questions.  “Does the shape have 3 sides? Does the shape have 3 vertices?”	3. Student asks questions, but ignores the answers and guesses (unable to identify the 2-D shape).	4. Student asks questions, but they focus on non-geometric attributes (unable to identify the 2-D shape).  “Is the shape red?”
Observations/Documentation			
5. Student asks questions to identify 2-D shapes, but uses non-mathematical language.  “Does it have points? Does it look like a hockey card?”			
6. Student asks questions to identify 2-D shapes, but questions are asked in a random order (does not appear to have a strategy).  “Does it have 3 sides?” Yes “Does it have 4 vertices?” No “Does it have straight sides?” No		7. Student recognizes 2-D shapes, but cannot name some of them.	8. Student successfully identifies 2-D shapes and names them.
		 “I don’t know what this is called.”	 “A rectangle”



## Master 6: Activity 3 Assessment

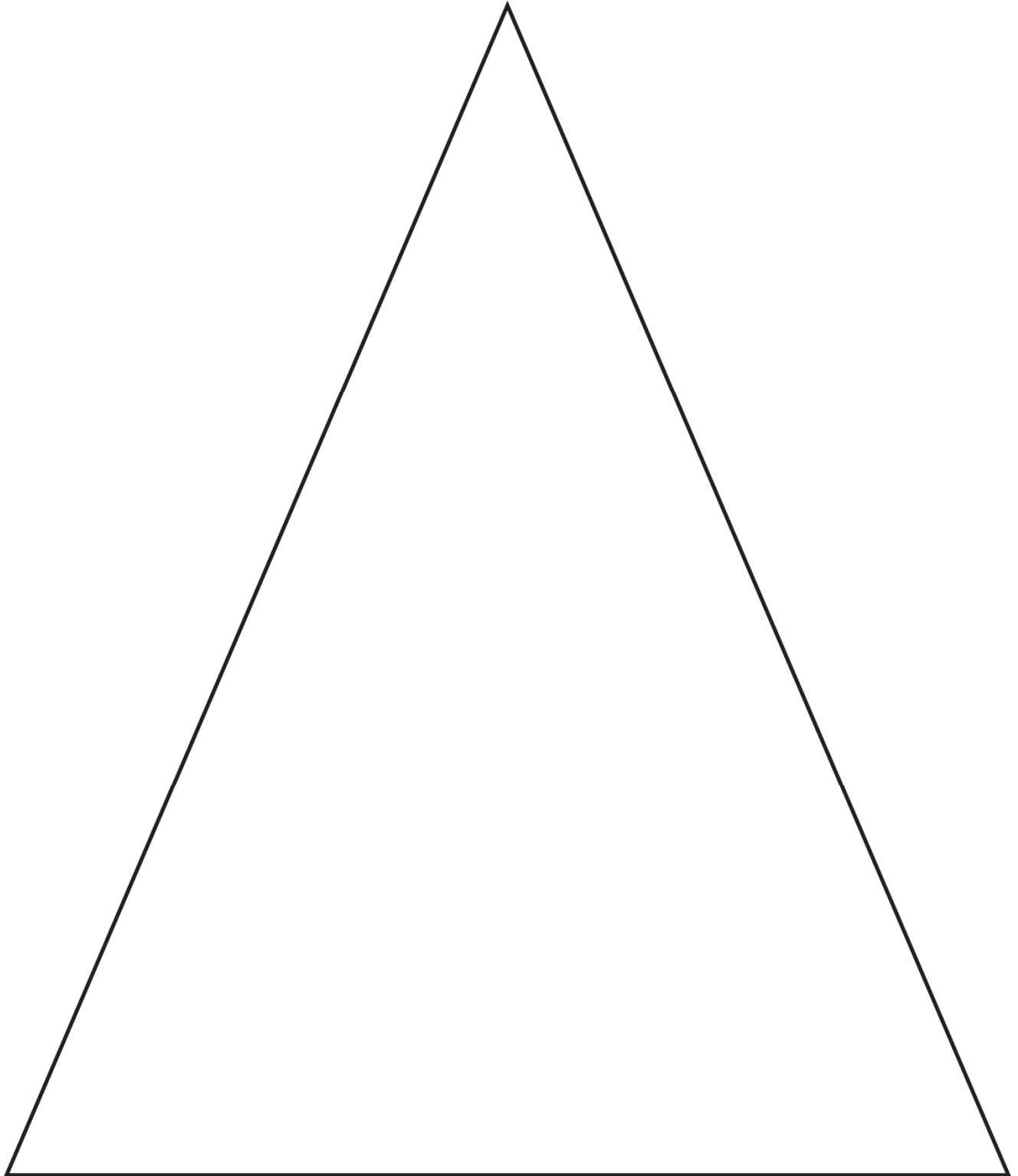
### Constructing 2-D Shapes

<b>Constructing 2-D Shapes Behaviours/Strategies</b>		
<p>1. Student chooses materials, but struggles to construct 2-D shapes with given attributes (e.g., makes an open shape).</p> <div style="text-align: center;">  <p>“This shape has 3 sides.”</p> </div>	<p>2. Student constructs 2-D shapes with given attributes, but makes typical shapes (e.g., equilateral triangle).</p> <div style="text-align: center;">  <p>“This shape has 3 sides.”</p> </div>	<p>3. Student constructs some 2-D shapes with given attributes, but struggles when the shape has more than 4 sides.</p> <div style="text-align: center;">  </div>
<b>Observations/Documentation</b>		
<p>4. Student constructs 2-D shapes with given attributes, but cannot describe how shapes are alike and how they are different.</p> <div style="text-align: center;">  </div>	<p>5. Student constructs 2-D shapes with given attributes, but does not use math language to describe how shapes are alike and how they are different.</p> <p style="text-align: center;">“They both have 3 points. One looks like a pizza slice and the other doesn't.”</p>	<p>6. Student constructs 2-D shapes with given attributes and uses math language to describe how shapes are alike and how they are different.</p>
<b>Observations/Documentation</b>		

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 7a

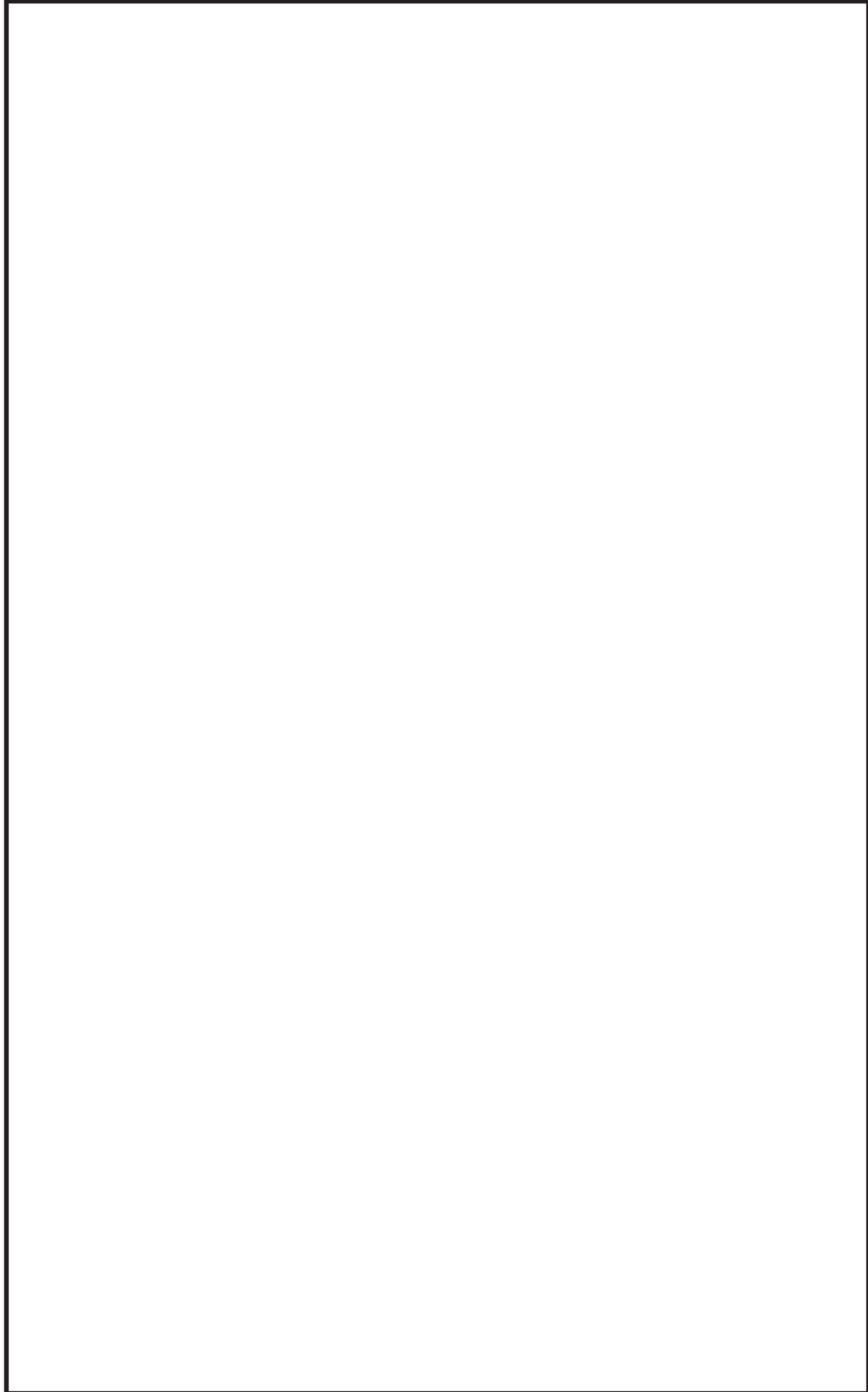
## Large Shapes (for Before)



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 7b**

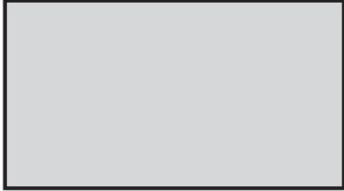
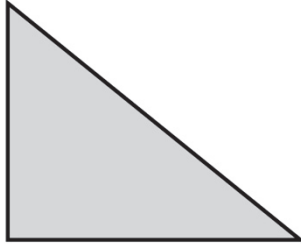
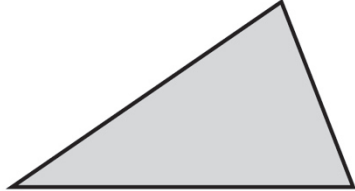
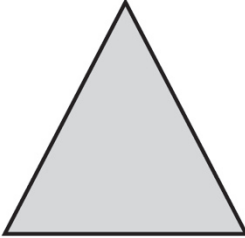
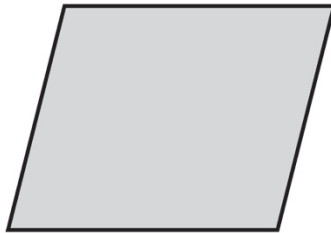

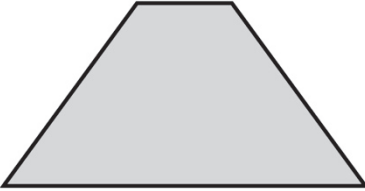
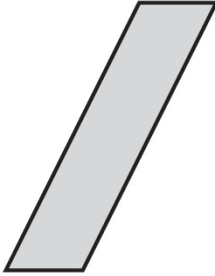

## Large Shapes (for Before)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 8a

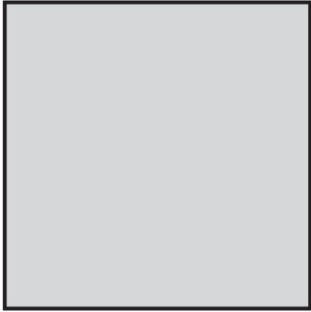
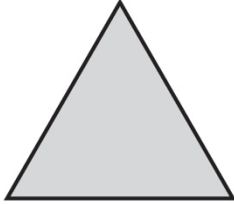
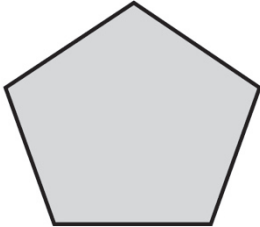
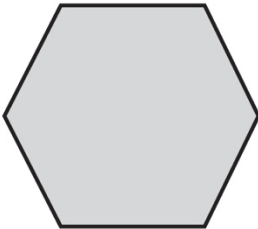
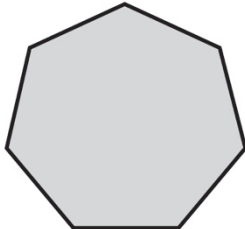
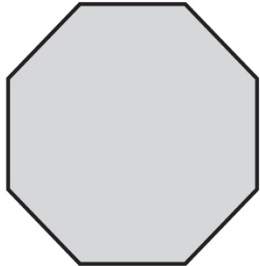
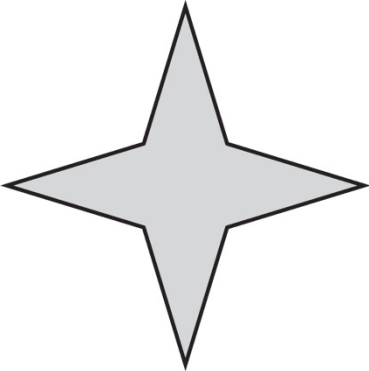
# Symmetry Cards



Master 8b

### Symmetry Cards (for Extension)



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 9**

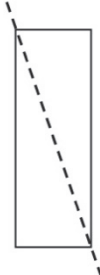




### Symmetry Sorting Mat

<b>No Lines of Symmetry</b>	<b>One Line of Symmetry</b>	<b>More Than One Line of Symmetry</b>



# Master 10: Activity 4 Assessment


## Symmetry in 2-D Shapes

Identifying Lines of Symmetry Behaviours/Strategies	
<p>1. Student turns over a card, but is unable to identify a line of symmetry on the 2-D shape.</p> <p>"I don't know how to find it."</p>	<p>2. Student identifies and draws what he or she thinks is a line of symmetry, but does not fold the shape to check.</p> 
<p>3. Student identifies a line of symmetry, but does not realize that the shape has more than one line of symmetry.</p> 	
Observations/Documentation	
<p>4. Student identifies lines of symmetry on most 2-D shapes, but does not realize that a shape can have no lines of symmetry.</p>  <p>"I am having trouble."</p>	<p>5. Student identifies all lines of symmetry on 2-D shapes, but struggles to sort the shapes on the sorting mat.</p>  <p>"Where do I put it?"</p>
<p>6. Student successfully identifies all lines of symmetry on 2-D shapes and sorts them on the sorting mat.</p>  <p>"The rectangle has more than one line of symmetry."</p>	
Observations/Documentation	

Master 11a

## Consolidation Attribute Cards

<b>Has 3 sides</b>	<b>Has 0 sides</b>
<b>Has 4 sides</b>	<b>Has 5 sides</b>
<b>Has 6 sides</b>	<b>Has more than 4 sides</b>
<b>Has 3 vertices</b>	<b>Has 4 vertices</b>
<b>Has more than 4 vertices</b>	<b>Has all sides equal</b>





Master 11b

## Consolidation Attribute Cards


<b>Has 2 sides equal</b>	<b>Has no sides equal</b>
<b>Has 0 lines of symmetry</b>	<b>Has 1 line of symmetry</b>
<b>Has 2 lines of symmetry</b>	<b>Has more than 2 lines of symmetry</b>



Master 11c


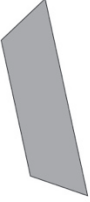
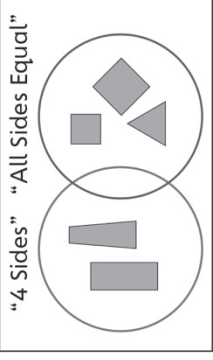
## Consolidation Attribute Cards (for Combined Grades Extension)

<b>Has 0 right angles</b>	<b>Has 1 right angle</b>
<b>Has 2 right angles</b>	<b>Has more than 2 right angles</b>
<b>Are regular polygons</b>	<b>Are irregular polygons</b>



# Master 12a: Activity 5 Assessment

## 2-D Shapes: Consolidation

Sorting Shapes Using Two Attributes Behaviours/Strategies	
<p>1. Student randomly places shapes without thinking about attributes and is unable to sort set of shapes based on two attributes.</p> <p>"I didn't know where to put the shapes."</p>	<p>2. Student chooses a shape, but is unable to analyze its geometric attributes and is unable to sort shapes based on two attributes.</p>  <p>"It's grey and looks like a pizza slice."</p>
<p>3. Student sorts some shapes based on two attributes, but struggles when orientation or shapes are unfamiliar.</p>  <p>"This shape doesn't have 4 sides."</p>	<p>4. Student sorts a set of shapes based on single attributes, but struggles to sort using both attributes simultaneously (ignores overlap).</p>  <p>"4 Sides" "All Sides Equal"</p>
Observations/Documentation	
<p>5. Student sorts a set of shapes based on two attributes, but struggles to explain why the shapes were placed where they were.</p> <p>"I just know they go where I put them."</p>	<p>6. Student sorts a set of shapes based on two attributes, but struggles to identify the sorting rules used to sort the shapes.</p> <p>"I don't know what attributes they used."</p>
<p>7. Student sorts a set of shapes based on two attributes and identifies the sorting rules in given sorts, but has difficulty communicating them.</p> <p>"I can't explain it."</p>	<p>8. Student sorts a set of shapes based on two attributes and identifies and describes the sorting rules in given sorts.</p>

# Master 12b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can identify geometric and non-geometric attributes of shapes. <b>(Activities 1, 2, 3, 4, 5)</b>									
Student can sort shapes using two attributes or by numbers of lines of symmetry. <b>(Activities 1, 4, 5)</b>									
Student can name familiar 2-D shapes. <b>(Activities 1, 2, 3, 4, 5)</b>									
Student can identify a shape from its attributes. <b>(Activities 2, 5)</b>									
Student can construct 2-D shapes with given attributes. <b>(Activity 3)</b>									
Student can use math language to describe shapes. <b>(Activities 1, 2, 3, 4, 5)</b>									
Student can describe how 2 shapes are alike and how they are different. <b>(Activities 1, 3, 5)</b>									
Student can identify lines of symmetry on 2-D shapes. <b>(Activities 4, 5)</b>									
Student can identify the attributes used to sort a given sort. <b>(Activity 5)</b>									

# Master 12c: Cluster Assessment Individual

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Identifies geometric and non-geometric attributes of shapes. <b>(Activities 1, 2, 3, 4, 5)</b>			
Sorts shapes using two attributes or by numbers of lines of symmetry. <b>(Activities 1, 4, 5)</b>			
Names familiar 2-D shapes. <b>(Activities 1, 2, 3, 4, 5)</b>			
Identifies a shape from its attributes. <b>(Activities 2, 5)</b>			
Constructs 2-D shapes with given attributes. <b>(Activity 3)</b>			
Uses math language to describe shapes. <b>(Activities 1, 2, 3, 4, 5)</b>			
Describes how 2 shapes are alike and how they are different. <b>(Activities 1, 3, 5)</b>			
Identifies lines of symmetry on 2-D shapes. <b>(Activities 4, 5)</b>			
Identifies the attributes used to sort a given sort. <b>(Activity 5)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Geometric Properties:</b> identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties</p> <p><b>Cross Strand: Patterning and Algebra</b></p> <p><b>Patterns and Relationships:</b> identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p> <p><b>G2.1</b> distinguish between the attributes of an object that are geometric properties (e.g., number of sides, number of faces) and the attributes that are not geometric properties (e.g., colour, size, texture), using a variety of tools (e.g., attribute blocks, geometric solids, connecting cubes).</p> <p><b>G2.3</b> identify and describe various three-dimensional figures (i.e., cubes, prisms, pyramids) and sort and classify them by their geometric properties (i.e., number and shape of faces), using concrete materials.</p> <p><b>G2.4</b> create models and skeletons of prisms and pyramids, using concrete materials (e.g., cardboard; straws and modelling clay), and describe their geometric properties (i.e., number and shape of faces, number of edges).</p>	<p><b>Mathology Grade 2 Classroom Activity Kit</b></p> <p><b>Below Grade: Intervention</b></p> <p>3: Sorting Solids</p> <p>4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Sorting 3-D Solids (G2.1, G2.3)</p> <p>7: 3-D Solids Around Us (G2.3)</p> <p>8: Constructing 3-D Solids (G2.4)</p> <p>9: Constructing Skeletons (G2.4)</p> <p>10: 3-D Solids Consolidation (G2.3, G2.4)</p> <p><b>On Grade: Math Every Day Card 2A:</b></p> <p>Geometry in Poetry (G2.3)</p> <p>What Do You See? (G2.3)</p> <p><b>Card 2B:</b></p> <p>Solids Around Us (G2.3)</p> <p>Which Solid Does Not Belong? (G2.3)</p>	<p><b>Mathology Little Books</b></p> <p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Pearson Canada K-3 Mathematics Learning Progression</b></p> <p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

Mathology 2

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# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Objects and shapes have attributes that can be described, measured, and compared.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p>Multiple attributes of 2D shapes and 3D objects  <b>2.25</b> sorting 2D shapes and 3D objects using two attributes, and explaining the sorting rule</p> <p><b>2.27</b> identifying 2D shapes as part of 3D objects</p>	<p><b>Below Grade: Intervention</b>            3: Sorting Solids            4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b>            6: Sorting 3-D Solids (2.25, 2.27)            7: 3-D Solids Around Us            8: Constructing 3-D Solids            9: Constructing Skeletons            10: 3-D Solids Consolidation (2.25, 2.27)</p> <p><b>On Grade: Math Every Day Card 2A:</b>            Geometry in Poetry            What Do You See? (2.27)</p> <p><b>Card 2B:</b>            Solids Around Us            Which Solid Does Not Belong? (2.25)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe 3-D objects and 2-D shapes, and analyze the relationships</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p><b>2SS6</b> Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.</p> <p><b>2SS7</b> Describe, compare and construct 3-D objects, including:</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <p><b>2SS9</b> Identify 2-D shapes as parts of 3-D objects in the environment.</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Sorting Solids</p> <p>4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Sorting 3-D Solids (2SS6, 2SS7)</p> <p>7: 3-D Solids Around Us (2SS7, 2SS9)</p> <p>8: Constructing 3-D Solids (2SS7)</p> <p>9: Constructing Skeletons (2SS7)</p> <p>10: 3-D Solids Consolidation (2SS6, 2SS7, 2SS9)</p> <p><b>On Grade: Math Every Day Card 2A:</b></p> <p>Geometry in Poetry (2SS7, 2SS9)</p> <p>What Do You See? (2SS7, 2SS9)</p> <p><b>Card 2B:</b></p> <p>Solids Around Us (2SS7, 2SS9)</p> <p>Which Solid Does Not Belong? (2SS7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8; MED 2B: 2)</li> <li>- Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>- Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>- Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>- Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>- Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>



# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p><b>2.SS.6</b> Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.</p> <p><b>2.SS.7</b> Describe, compare, and construct 3-D objects, including</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• prisms</li> <li>• pyramids.</li> </ul> <p><b>2.SS.9</b> Identify 2-D shapes as parts of 3-D objects in the environment.</p>	<p><b>Below Grade: Intervention</b> 3: Sorting Solids 4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b> 6: Sorting 3-D Solids (2.SS.6, 2.SS.7) 7: 3-D Solids Around Us (2.SS.7, 2.SS.9) 8: Constructing 3-D Solids (2.SS.7) 9: Constructing Skeletons (2.SS.7) 10: 3-D Solids Consolidation (2.SS.6, 2.SS.7, 2.SS.9)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Geometry in Poetry (2.SS.7, 2.SS.9) What Do You See? (2.SS.7, 2.SS.9)</p> <p><b>Card 2B:</b> Solids Around Us (2.SS.7, 2.SS.9) Which Solid Does Not Belong? (2.SS.7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>- Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>- Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>- Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>- Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>- Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

### Mathology 2

# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to describe the characteristics of 3-D objects and 2-D shapes and analyze the relationships among them.</p> <p><b>Cross Strand: Patterns and Relations</b></p>			
<p><b>2G01</b> Students will be expected to sort 2-D shapes and 3-D objects using two attributes and explain the sorting rule.</p> <p><b>2G02</b> Students will be expected to recognize, name, describe, compare, and build 3-D objects, including cubes and other prisms, spheres, cones, cylinders, and pyramids.</p> <p><b>2G04</b> Students will be expected to identify 2-D shapes as part of 3-D objects in the environment.</p>	<p><b>Below Grade: Intervention</b> 3: Sorting Solids 4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b> 6: Sorting 3-D Solids (2G01, 2G02) 7: 3-D Solids Around Us (2G02, 2G04) 8: Constructing 3-D Solids (2G02) 9: Constructing Skeletons (2G02) 10: 3-D Solids Consolidation (2G01, 2G02, 2G04)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Geometry in Poetry (2G02, 2G04) What Do You See? (2G02, 2G04)</p> <p><b>Card 2B:</b> Solids Around Us (2G02, 2G04) Which Solid Does Not Belong? (2G02)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p><b>2SS6</b> Sort 2-D shapes and 3-D objects, using two attributes, and explain the sorting rule.</p> <p><b>2SS7</b> Describe, compare and construct 3-D objects, including:</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <p><b>2SS9</b> Identify 2-D shapes as parts of 3-D objects in the environment.</p> <p><b>2PR3</b> Sort a set of objects, using two attributes, and explain the sorting rule.</p>	<p><b>Below Grade: Intervention</b></p> <p>3: Sorting Solids</p> <p>4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b></p> <p>6: Sorting 3-D Solids (2SS6, 2SS7, 2PR3)</p> <p>7: 3-D Solids Around Us (2SS7, 2SS9)</p> <p>8: Constructing 3-D Solids (2SS7)</p> <p>9: Constructing Skeletons (2SS7)</p> <p>10: 3-D Solids Consolidation (2SS6, 2SS7, 2SS9, 2PR3)</p> <p><b>On Grade: Math Every Day Card 2A:</b></p> <p>Geometry in Poetry (2SS7, 2SS9)</p> <p>What Do You See? (2SS7, 2SS9)</p> <p><b>Card 2B:</b></p> <p>Solids Around Us (2SS7, 2SS9)</p> <p>Which Solid Does Not Belong? (2SS7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• WONDERful Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>- Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>- Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>- Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>- Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>- Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 2: 3-D Solids

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour</p> <p><b>Cross Strand:</b> Patterns and Relations</p> <p><b>SS2.3</b> Describe, compare, and construct 3-D objects, including:</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <p><b>SS2.5</b> Demonstrate understanding of the relationship between 2-D shapes and 3-D objects.</p>	<p><b>Below Grade: Intervention</b> 3: Sorting Solids 4: Attributes of Solids</p> <p><b>On Grade: Teacher Cards</b> 6: Sorting 3-D Solids (SS2.3) 7: 3-D Solids Around Us (SS2.3, SS2.5) 8: Constructing 3-D Solids (SS2.3) 9: Constructing Skeletons (SS2.3) 10: 3-D Solids Consolidation (SS2.3, SS2.5)</p> <p><b>On Grade: Math Every Day Card 2A:</b> Geometry in Poetry (SS2.3, SS2.5) What Do You See? (SS2.3, SS2.5)</p> <p><b>Card 2B:</b> Solids Around Us (SS2.3, SS2.5) Which Solid Does Not Belong? (SS2.3)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• What Was Here? (Activities 6, 7, 10)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 6, 7, 9, 10)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• WONDERFUL Buildings (Activities 6, 7, 8, 10)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 3-D solids to find the similarities and differences. (Activities 6, 7, 8, 9; MED 2B: 2)</li> <li>- Analyzes geometric attributes of 3-D solids (e.g., number of edges, faces, corners). (Activities 6, 7, 8, 9, 10; MED 2A: 1, 2; MED 2B: 2)</li> <li>- Identifies 2-D shapes in 3-D objects in the environment. (Activities 7, 10; MED 2A: 1, 2; MED 2B: 1)</li> <li>- Classifies and names 3-D solids based on common attributes. (Activities 6, 7, 8, 9, 10)</li> <li>- Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces). (Activities 8, 9, 10)</li> </ul> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically (e.g., Number of Sides, Shape, Size)</p> <ul style="list-style-type: none"> <li>- Identifies the sorting rule used to sort sets. (Activity 6)</li> <li>- Sorts a set of objects based on two attributes. (Activities 6, 10)</li> </ul>

Master 14

### Attribute Cards for 3-D Solids


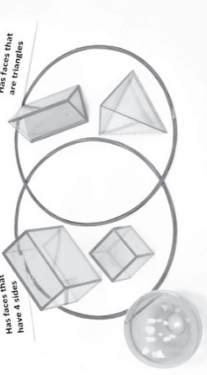
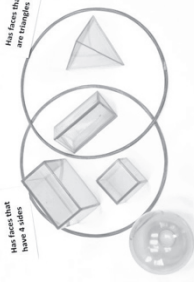
Has no faces	Has faces, but 4 or fewer	Has more than 4 faces
Has no vertices	Has vertices, but 4 or fewer	Has more than 4 vertices
Has no edges	Has edges	Has flat faces
Has faces that are circles	Has faces that have 4 sides	Has faces that are triangles





# Master 15: Activity 6 Assessment

## Sorting 3-D Solids

Sorting 3-D Solids Using Two Attributes Behaviours/Strategies		
<p>1. Student chooses a 3-D solid, but struggles to analyze its geometric attributes and name the solid.</p>  <p>"It is like an upside-down ice cream cone."</p>	<p>2. analyzes some geometric attributes of solids, but struggles to sort them based on two attributes.</p> <p>"I don't know what to do."</p>	<p>3. Student sorts the solids using a single attribute at a time, but is unable to sort using two attributes simultaneously (ignores overlap).</p>  <p>Has faces that have 4 sides</p> <p>Has faces that are triangles</p>
Observations/Documentation		
<p>4. Student sorts the solids using two attributes, but has difficulty justifying placement of solids.</p>	<p>5. Student sorts the solids using two attributes, but cannot identify the sorting rule.</p>	<p>6. Student successfully analyzes geometric attributes of solids, sorts them based on two attributes, and identifies the sorting rule.</p>  <p>Has faces that have 4 sides</p> <p>Has faces that are triangles</p> <p>"Has faces that have 4 sides and has faces that are triangles."</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_





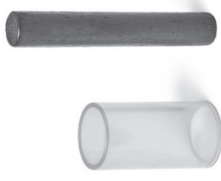

Master 16

### Exploring Solids Recording Sheet

	Number of Faces	Number of Edges	Number of Vertices	Shapes of Faces
Solid				
Object 1				
Object 2				
Object 3				

# Master 17: Activity 7 Assessment

## 3-D Solids Around Us

<b>Identifying 3-D Solids in the Environment Behaviours/Strategies</b>		
<p>1. Student looks at a solid, but struggles to analyze its geometric attributes.</p> <div style="text-align: center;">  <p>“It looks like a ball.”</p> </div>	<p>2. Student analyzes geometric attributes of 3-D solids, but cannot name the solids.</p> <div style="text-align: center;">  <p>“I forget what this is called.”</p> </div>	<p>3. Student identifies some 3-D solids in the environment, but struggles when the orientation of an object does not match his or her mental image of the solid.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<b>Observations/Documentation</b>		
<p>4. Student identifies some 3-D solids in the environment, but struggles when the size of an object does not match the size of the given solid.</p> <div style="text-align: center;">  </div>	<p>5. Student identifies 3-D solids in the environment, but struggles to explain why an object in the classroom is an example of the given 3-D solid.</p>	<p>6. Student successfully analyzes geometric attributes of 3-D solids, identifies 3-D solids in the environment, and explains thinking.</p> <div style="text-align: center;">  <p>“The water cooler cup is a cone. When it is full, it has one face and one vertex.”</p> </div>
<b>Observations/Documentation</b>		



Master 18

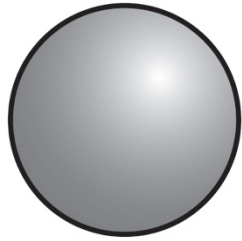
### Photo of Roof



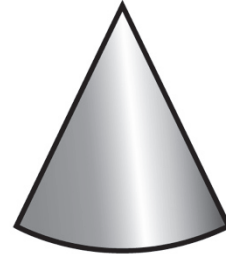
Master 19

Solid Cards

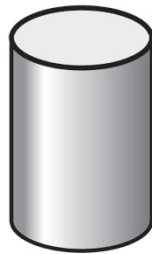
Sphere



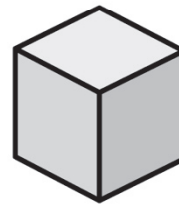
Cone



Cylinder



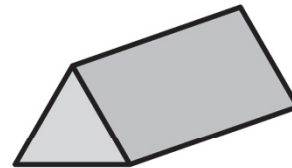
Cube



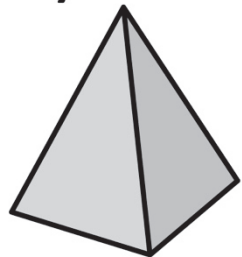
Prism



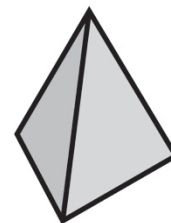
Prism



Pyramid

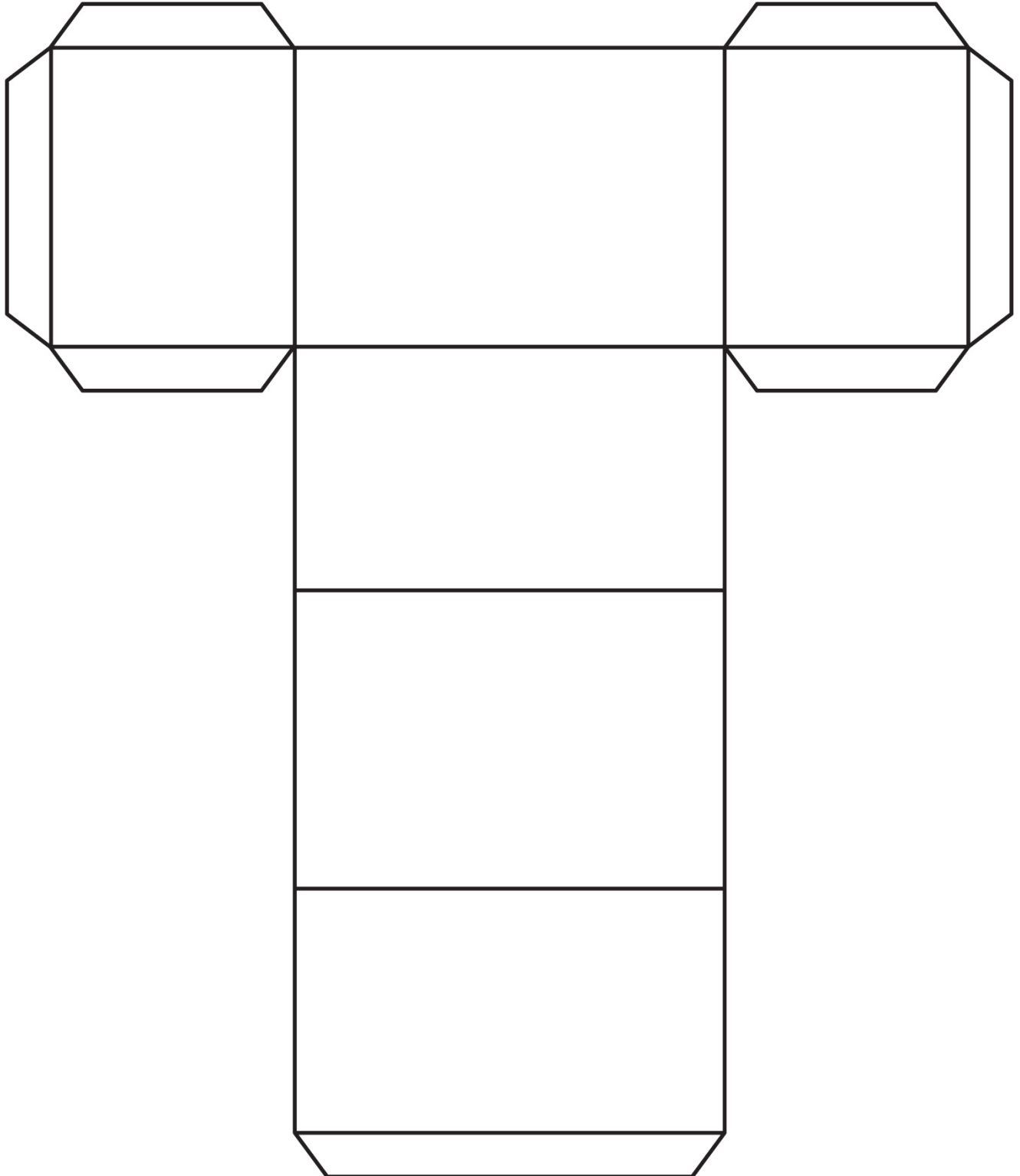


Pyramid



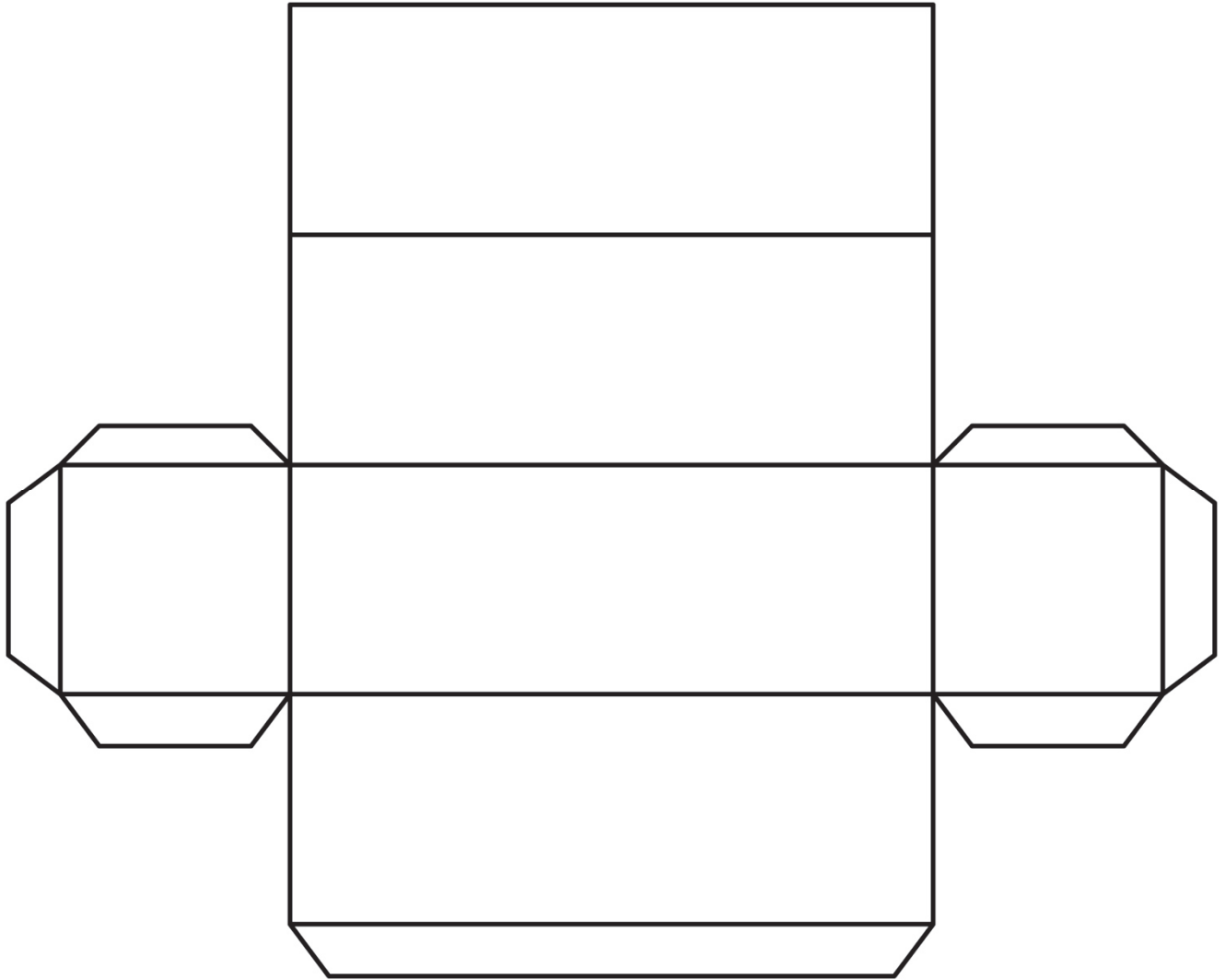
Master 20a

# Nets of Rectangular Prisms (for Combined Grades Extension)



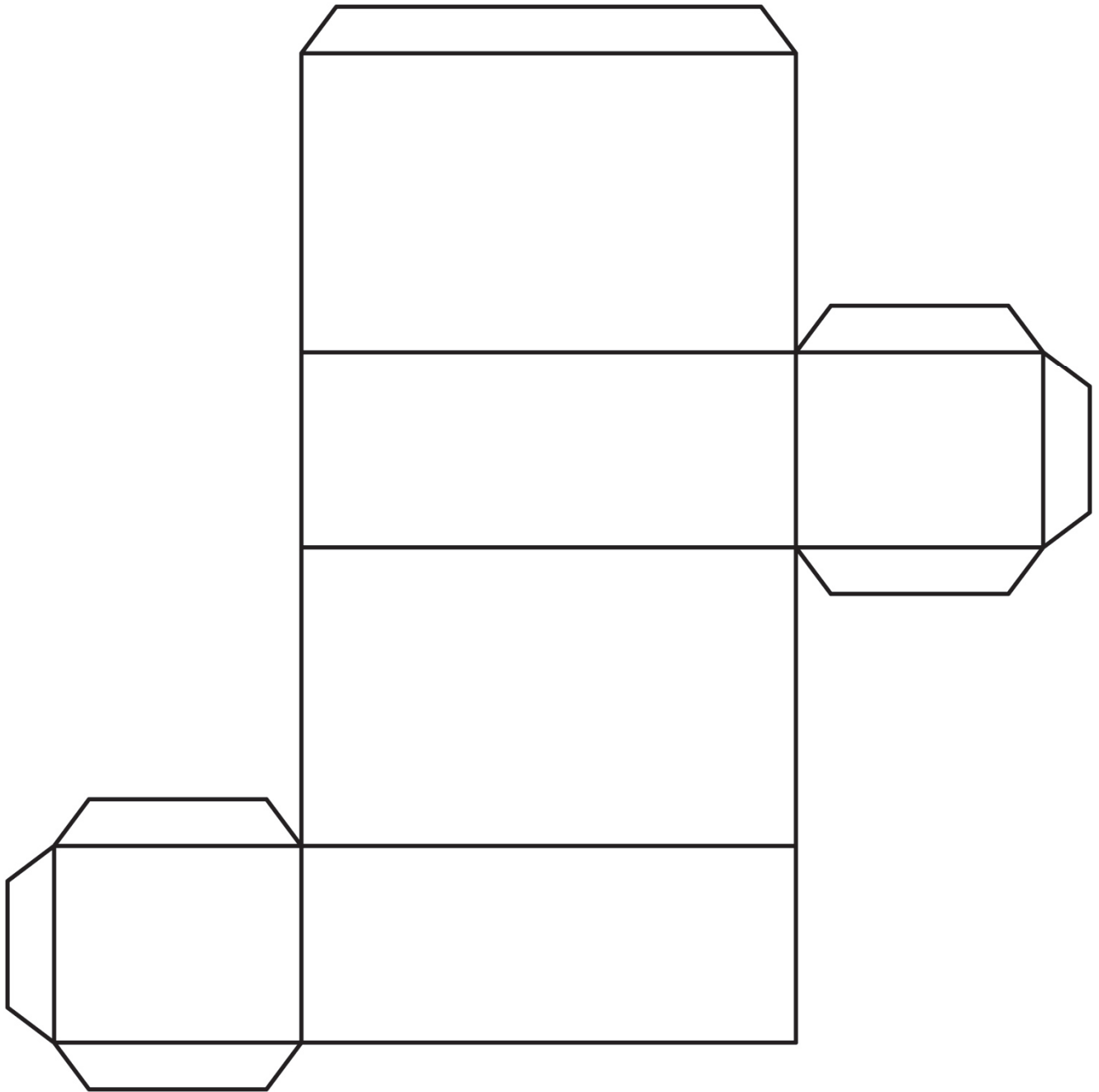
Master 20b

# Nets of Rectangular Prisms (for Combined Grades Extension)



Master 20c

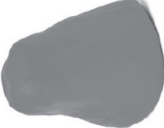


# Nets of Rectangular Prisms (for Combined Grades Extension)





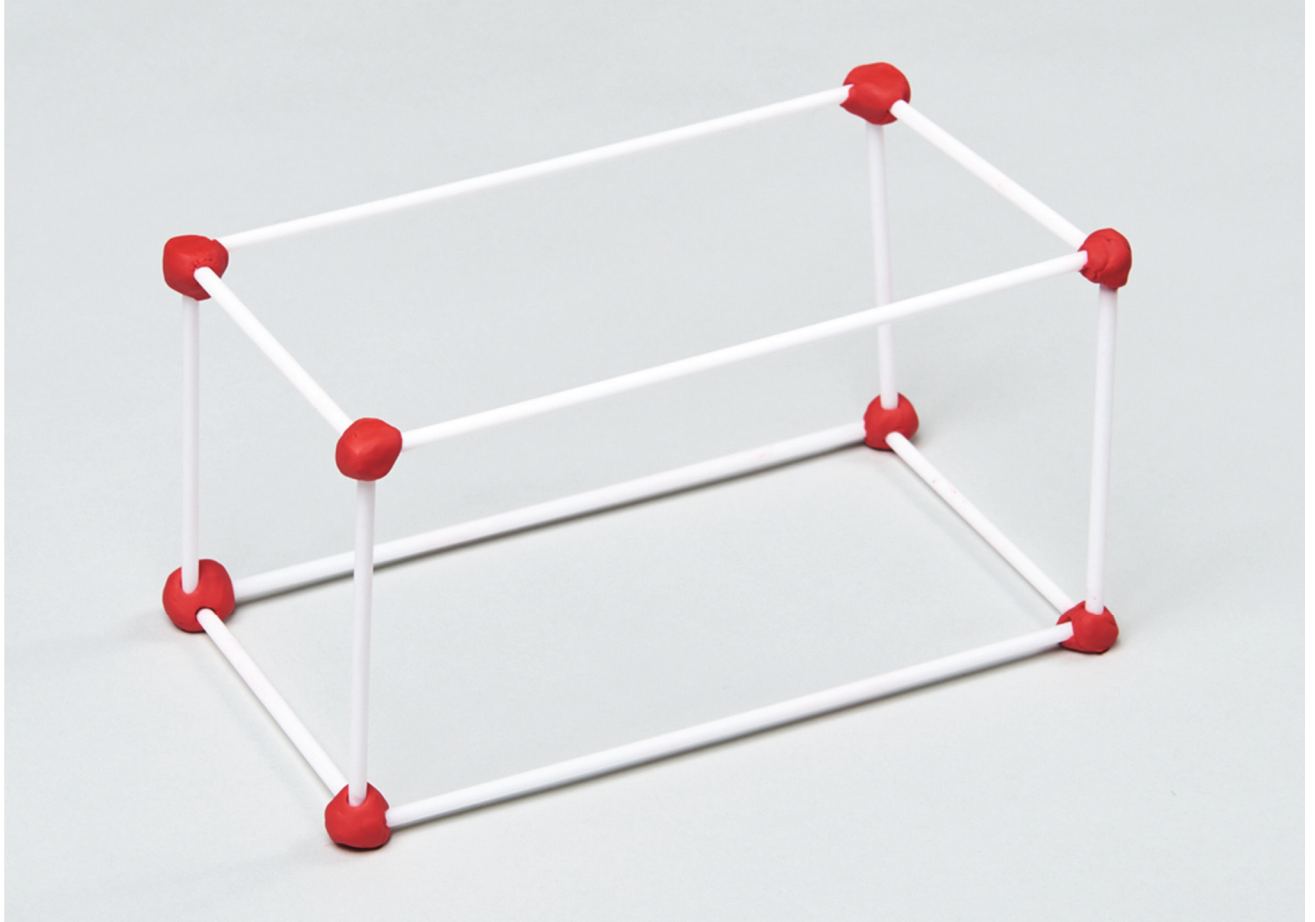
# Master 21: Activity 8 Assessment

## Constructing 3-D Solids

Constructing 3-D Solids Behaviours/Strategies		
<p>1. Student takes a card, but struggles to analyze the geometric attributes of the solid.</p>	<p>2. Student analyzes the geometric attributes of the solid, but chooses inappropriate materials to construct the solid.</p> <p>"I am going to use cubes to make a sphere."</p>	<p>3. Student chooses appropriate materials, but struggles to construct the solid with given attributes.</p>  <p>"This is my pyramid."</p>
Observations/Documentation		
<p>4. Student constructs solid with given attributes, but thinks model must have same size and orientation as solid in reference set.</p> 	<p>5. Student constructs 3-D solid with given attributes, but struggles to compare solids.</p>	<p>6. Student successfully constructs and compares 3-D solids with given attributes.</p>  <p>"I made a cube and a cylinder."</p>
Observations/Documentation		




Master 22

## Photo of Skeleton of Rectangular Prism (for Before)



## Master 23: Activity 9 Assessment


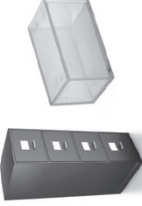
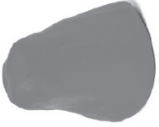

### Constructing Skeletons

<b>Constructing Skeletons of 3-D Solids Behaviours/Strategies</b>		
<p>1. Student chooses a solid, but struggles to analyze its geometric attributes.</p>	<p>2. Student analyzes geometric attributes of the solid, but struggles to construct the skeleton and does not know where to start.</p> <p style="text-align: center;">"I don't know what to do."</p>	<p>3. Student analyzes geometric attributes of the solid, but makes error(s) constructing the skeleton.</p> 
<b>Observations/Documentation</b>		
<p>4. Student analyzes geometric attributes of the solid and constructs the skeleton, but struggles to determine if partner's skeleton is correct.</p> <p style="text-align: center;">"I'm not sure if this skeleton is correct."</p> 	<p>5. Student analyzes geometric attributes of the solid and constructs the skeleton, but struggles to compare the solid and its skeleton.</p>  <p style="text-align: center;">"I'm not sure how they are alike. They look different."</p>	<p>6. Student successfully analyzes geometric attributes of the solid, constructs the skeleton, and compares the solid and its skeleton.</p>
<b>Observations/Documentation</b>		



# Master 24a: Activity 10 Assessment

## 3-D Solids: Consolidation

<b>Identifying 3-D Solids Behaviours/Strategies</b>			
<p>1. Student looks at a 3-D solid, but struggles to analyze its geometric attributes.</p>  <p style="text-align: center;">“It looks like a ball.”</p>	<p>2. Student identifies some 3-D solids in the environment, but struggles when orientation or size of object does not match his or her mental image of solid.</p> 	<p>3. Student identifies 3-D solids in the environment, but struggles to explain why an object is an example of the given 3-D solid.</p>	<p>4. Student successfully analyzes geometric attributes of 3-D solids, identifies 3-D solids in the environment, and explains the environment, and explains thinking.</p>
<b>Observations/Documentation</b>			
<b>Constructing 3-D Solids and Their Skeletons Behaviours/Strategies</b>			
<p>1. Student chooses materials, but struggles to construct the solid with given attributes.</p>  <p style="text-align: center;">“This is my pyramid.”</p>	<p>2. Student looks at a 3-D solid, but struggles to construct skeleton and does not know where to start.</p> <p style="text-align: center;">“I don’t know what to do.”</p>	<p>3. Student analyzes geometric attributes of a 3-D solid, but makes error(s) constructing skeleton.</p> 	<p>4. Student successfully constructs model and skeleton of a 3-D solid with given attributes.</p>
<b>Observations/Documentation</b>			

# Master 24b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can identify geometric and non-geometric attributes of solids. <b>(Activities 6, 7, 8, 9, 10)</b>									
Student can sort solids using two attributes. <b>(Activities 6, 10)</b>									
Student can name familiar 3-D solids. <b>(Activities 6, 7, 8, 9, 10)</b>									
Student can find examples of 3-D solids in the world around them. <b>(Activity 7, 10)</b>									
Student can identify the sorting rule for a sort. <b>(Activity 6)</b>									
Student can build a model of a 3-D solid. <b>(Activities 8, 10)</b>									
Student can explain how two solids are alike and how they are different. <b>(Activities 6, 7, 8, 9, 10)</b>									
Student can build a skeleton of a 3-D solid. <b>(Activities 9, 10)</b>									
Student uses math language when talking about 3-D solids. <b>(Activities 6, 7, 8, 9, 10)</b>									

# Master 24c: Cluster Assessment Individual

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Identifies geometric and non-geometric attributes of solids. <b>(Activities 6, 7, 8, 9, 10)</b>			
Sorts solids using two attributes. <b>(Activities 6, 10)</b>			
Names familiar 3-D solids. <b>(Activities 6, 7, 8, 9, 10)</b>			
Finds examples of 3-D solids in the world around them. <b>(Activity 7, 10)</b>			
Identifies the sorting rule for a sort. <b>(Activity 6)</b>			
Builds a model of a 3-D solid. <b>(Activities 8, 10)</b>			
Explains how two solids are alike and how they are different. <b>(Activities 6, 7, 8, 9, 10)</b>			
Builds a skeleton of a 3-D solid. <b>(Activities 9, 10)</b>			
Uses math language when talking about 3-D solids. <b>(Activities 6, 7, 8, 9, 10)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Geometric Properties:</b> identify two-dimensional shapes and three-dimensional figures and sort and classify them by their geometric properties</p> <p><b>Geometric Relationships:</b> compose and decompose two-dimensional shapes and three-dimensional figures</p> <p><b>Location and Movement:</b> describe and represent the relative locations of objects, and represent objects on a map.</p> <p><b>G2.3</b> identify and describe various three-dimensional figures (i.e., cubes, prisms, pyramids) and sort and classify them by their geometric properties (i.e., number and shape of faces), using concrete materials.</p> <p><b>G2.4</b> create models and skeletons of prisms and pyramids, using concrete materials (e.g., cardboard; straws and modelling clay), and describe their geometric properties (i.e., number and shape of faces, number of edges).</p> <p><b>G2.6</b> compose and describe pictures, designs, and patterns by combining two-dimensional shapes.</p> <p><b>G2.7</b> compose and decompose two-dimensional shapes.</p>	<p><b>Below Grade: Intervention</b></p> <p>5: Covering Outlines</p> <p>6: Describing Solids</p> <p><b>On Grade: Teacher Cards</b></p> <p>11: Making Shapes (G2.7, G2.8)</p> <p>12: Building with Solids (G2.9)</p> <p>13: Visualizing Shapes and Solids (G2.4)</p> <p>14: Creating Pictures and Designs (G2.6)</p> <p>15: Covering Outlines (G2.8)</p> <p>16: Creating Symmetrical Designs (G2.12)</p> <p>17: Geometric Relationships: Consolidation (G2.4, G2.6, G2.7, G2.8, G2.9, G2.12)</p> <p><b>On Grade: Math Every Day Card 3A:</b> Fill Me In! (G2.8) Make Me a Picture (G2.6)</p> <p><b>Card 3B:</b> Name the Solid (G2.3) Draw the Shape (G2.6)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>The Tailor Shop (Activities 14, 17)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>I Spy Awesome Buildings (Activities 12, 17)</li> <li>Sharing Our Stories (Activities 14, 17)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Gallery Tour (Activities 16, 17)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> <p>Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition</p> <ul style="list-style-type: none"> <li>Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>

Mathology 2

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# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

### Ontario (continued)

**G2.8** cover an outline puzzle with two-dimensional shapes in more than one way.

**G2.9** build a structure using three-dimensional figures, and describe the two-dimensional shapes and three-dimensional figures in the structure.

**G2.12:** create and describe symmetrical designs using a variety of tools (e.g., pattern blocks, tangrams, paper and pencil).

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# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Objects and shapes have attributes that can be described, measured, and compared.</p> <p>Multiple attributes of 2D shapes and 3D objects  <b>2.26</b> describing, comparing, and constructing 2D shapes, including triangles, squares, rectangles, circles  <b>2.27</b> identifying 2D shapes as part of 3D objects</p>	<p><b>Below Grade: Intervention</b>                      5: Covering Outlines                      6: Describing Solids</p> <p><b>On Grade: Teacher Cards</b>                      11: Making Shapes                      12: Building with Solids                      13: Visualizing Shapes and Solids (2.26)                      14: Creating Pictures and Designs                      15: Covering Outlines                      16: Creating Symmetrical Designs                      17: Geometric Relationships: Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b>                      Fill Me In!                      Make Me a Picture</p> <p><b>Card 3B:</b>                      Name the Solid (2.27)                      Draw the Shape</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>The Tailor Shop (Activities 14, 17)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>I Spy Awesome Buildings (Activities 12, 17)</li> <li>Sharing Our Stories (Activities 14, 17)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Gallery Tour (Activities 16, 17)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> <p>Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition</p> <ul style="list-style-type: none"> <li>Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>General Outcome</b> Describe 3-D objects and 2-D shapes, and analyze the relationships.			
<b>2SS7</b> Describe, compare and construct 3-D objects, including: <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <b>2SS8</b> Describe, compare and construct 2-D shapes, including: <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <b>2SS9</b> Identify 2-D shapes as parts of 3-D objects in the environment	<b>Below Grade: Intervention</b> 5: Covering Outlines 6: Describing Solids  <b>On Grade: Teacher Cards</b> 11: Making Shapes 12: Building with Solids (2SS9) 13: Visualizing Shapes and Solids (2SS7, 2SS8, 2SS9) 14: Creating Pictures and Designs 15: Covering Outlines 16: Creating Symmetrical Designs 17: Geometric Relationships: Consolidation  <b>On Grade: Math Every Day Card 3A:</b> Fill Me In! Make Me a Picture  <b>Card 3B:</b> Name the Solid (2SS7) Draw the Shape (2SS8)	<b>Below Grade:</b> <ul style="list-style-type: none"> <li>• The Tailor Shop (Activities 14, 17)</li> </ul> <b>On Grade:</b> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 12, 17)</li> <li>• Sharing Our Stories (Activities 14, 17)</li> </ul> <b>Above Grade:</b> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 16, 17)</li> </ul>	<b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b> Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids <ul style="list-style-type: none"> <li>- Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>- Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition <ul style="list-style-type: none"> <li>- Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>- Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>- Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>- Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul>
<b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b> Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids <ul style="list-style-type: none"> <li>- Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>			

# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

### Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>2.SS.7</b> Describe, compare, and construct 3-D objects, including</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• prisms</li> <li>• pyramids.</li> </ul> <p><b>2.SS.8</b> Describe, compare, and construct 2-D shapes, including</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <p><b>2.SS.9</b> Identify 2-D shapes as parts of 3-D objects in the environment.</p>	<p><b>Below Grade: Intervention</b> 5: Covering Outlines 6: Describing Solids</p> <p><b>On Grade: Teacher Cards</b> 11: Making Shapes 12: Building with Solids (2.SS.9) 13: Visualizing Shapes and Solids (2.SS.7, 2.SS.8, 2.SS.9) 14: Creating Pictures and Designs 15: Covering Outlines 16: Creating Symmetrical Designs 17: Geometric Relationships: Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Fill Me In! Make Me a Picture</p> <p><b>Card 3B:</b> Name the Solid (2.SS.7) Draw the Shape (2.SS.8)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Tailor Shop (Activities 14, 17)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 12, 17)</li> <li>• Sharing Our Stories (Activities 14, 17)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 16, 17)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>- Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> <p>Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition</p> <ul style="list-style-type: none"> <li>- Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>- Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>- Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>- Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>

### Mathology 2



# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>General Outcome</b> Students will be expected to describe the characteristics of 3-D objects and 2-D shapes and analyze the relationships among them.			
<b>2G02</b> Students will be expected to recognize, name, describe, compare, and build 3-D objects, including cubes and other prisms, spheres, cones, cylinders, and pyramids.	<b>Below Grade: Intervention</b> 5: Covering Outlines 6: Describing Solids  <b>On Grade: Teacher Cards</b> 11: Making Shapes 12: Building with Solids (2G04) 13: Visualizing Shapes and Solids (2G02, 2G03, 2G04) 14: Creating Pictures and Designs 15: Covering Outlines 16: Creating Symmetrical Designs 17: Geometric Relationships: Consolidation	<b>Below Grade:</b> • The Tailor Shop (Activities 14, 17)  <b>On Grade:</b> • I Spy Awesome Buildings (Activities 12, 17) • Sharing Our Stories (Activities 14, 17)  <b>Above Grade:</b> • Gallery Tour (Activities 16, 17)	<b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b> Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids - Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12) - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1) Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition - Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2) - Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17) - Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1) - Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)
<b>2G03</b> Students will be expected to recognize, name, describe, compare and build 2-D shapes, including triangles, squares, rectangles, and circles.			
<b>2G04</b> Students will be expected to identify 2-D shapes as part of 3-D objects in the environment.	<b>On Grade: Math Every Day Card 3A:</b> Fill Me In! Make Me a Picture  <b>Card 3B:</b> Name the Solid (2G02) Draw the Shape (2G03)		<b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b> Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids - Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)

# Curriculum Correlation

## Geometry Cluster 3: Geometric Relationships

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>2SS7</b> Describe, compare and construct 3-D objects, including:</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <p><b>2SS8</b> Describe, compare and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <p><b>2SS9</b> Identify 2-D shapes as parts of 3-D objects in the environment.</p>	<p><b>Below Grade: Intervention</b> 5: Covering Outlines 6: Describing Solids</p> <p><b>On Grade: Teacher Cards</b> 11: Making Shapes 12: Building with Solids (2SS9) 13: Visualizing Shapes and Solids (2SS7, 2SS8, 2SS9) 14: Creating Pictures and Designs 15: Covering Outlines 16: Creating Symmetrical Designs 17: Geometric Relationships: Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Fill Me In! Make Me a Picture</p> <p><b>Card 3B:</b> Name the Solid (2SS7) Draw the Shape (2SS8)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Tailor Shop (Activities 14, 17)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 12, 17)</li> <li>• Sharing Our Stories (Activities 14, 17)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 16, 17)</li> </ul>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>- Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> <p>Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition</p> <ul style="list-style-type: none"> <li>- Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>- Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>- Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>- Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>

# Curriculum Correlation

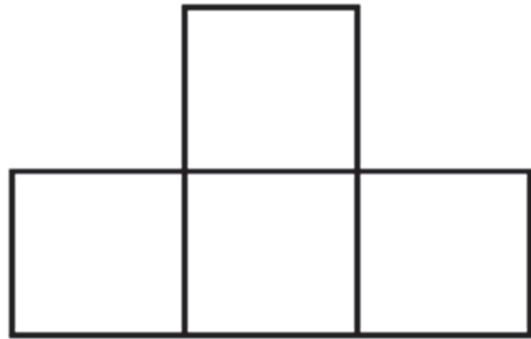
## Geometry Cluster 3: Geometric Relationships

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour</p>			
<p><b>SS2.3</b> Describe, compare, and construct 3-D objects, including:</p> <ul style="list-style-type: none"> <li>• cubes</li> <li>• spheres</li> <li>• cones</li> <li>• cylinders</li> <li>• pyramids.</li> </ul> <p><b>SS2.4</b> Describe, compare, and construct 2-D shapes, including:</p> <ul style="list-style-type: none"> <li>• triangles</li> <li>• squares</li> <li>• rectangles</li> <li>• circles.</li> </ul> <p><b>SS2.5</b> Demonstrate understanding of the relationship between 2-D shapes and 3-D objects.</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• The Tailor Shop (Activities 14, 17)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• I Spy Awesome Buildings (Activities 12, 17)</li> <li>• Sharing Our Stories (Activities 14, 17)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Gallery Tour (Activities 16, 17)</li> </ul>	<p><b>Below Grade:</b></p> <p><b>Below Grade: Intervention</b></p> <p>5: Covering Outlines 6: Describing Solids</p> <p><b>On Grade: Teacher Cards</b></p> <p>11: Making Shapes 12: Building with Solids (SS2.3) 13: Visualizing Shapes and Solids (SS2.3, SS2.4, SS2.5) 14: Creating Pictures and Designs 15: Covering Outlines 16: Creating Symmetrical Designs 17: Geometric Relationships: Consolidation</p> <p><b>On Grade: Math Every Day Card 3A:</b> Fill Me In! Make Me a Picture</p> <p><b>Card 3B:</b> Name the Solid (SS2.3) Draw the Shape (SS2.4)</p>	<p><b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.</b></p> <p>Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Compares 2-D shapes and 3-D solids to find the similarities and differences. (Activity 12)</li> <li>- Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). (Activities 12, 13, 14, 17; MED 3B: 1)</li> </ul> <p>Investigating 2-D Shapes, 3-D Solids, and their Attributes Through Composition and Decomposition</p> <ul style="list-style-type: none"> <li>- Constructs composite pictures or structures with 2-D shapes and 3-D solids. (Activities 12, 14, 17; MED 3A: 2)</li> <li>- Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. (Activities 11, 17)</li> <li>- Completes a picture outline with shapes in more than one way. (Activities 15, 17; MED 3A: 1)</li> <li>- Constructs composite 2-D shapes and 3-D solids from verbal instructions, visualization, and memory. (Activity 13; MED 3B: 2)</li> </ul> <p><b>Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b></p> <p>Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids</p> <ul style="list-style-type: none"> <li>- Constructs and completes 2-D/3-D symmetrical designs. (Activities 16, 17)</li> </ul>

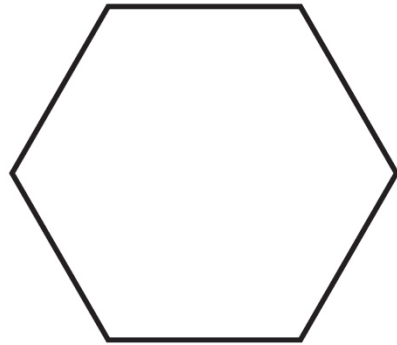
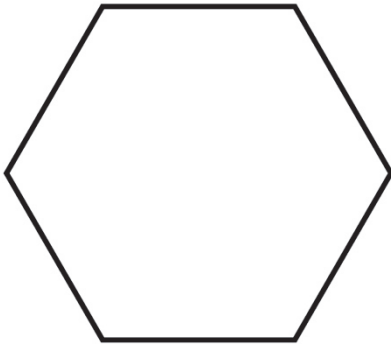
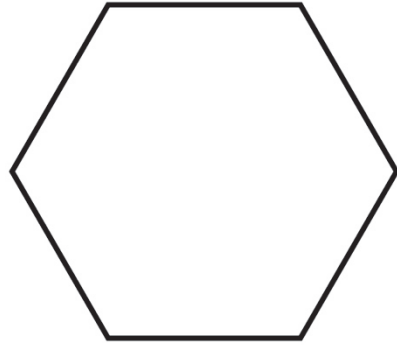
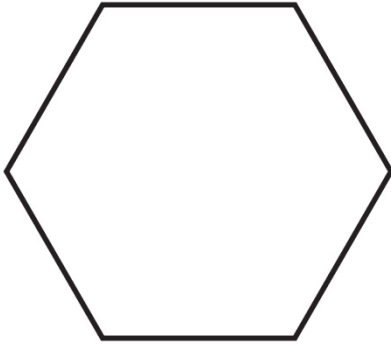
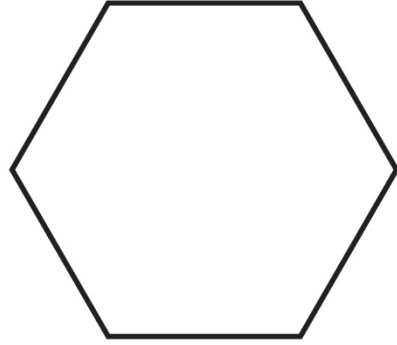
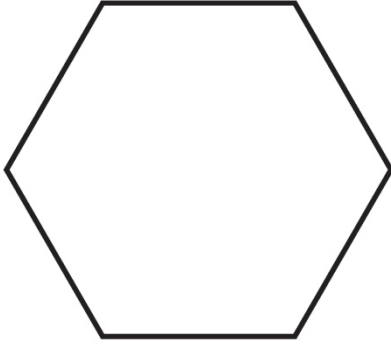
Master 26

# Shapes from Squares



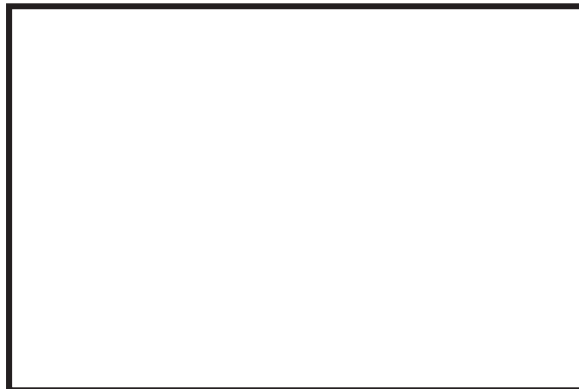
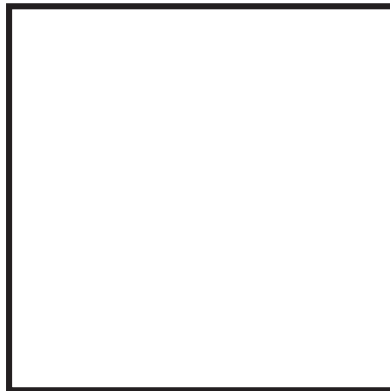
**Master 27**

### Fill the Hexagons



Master 28


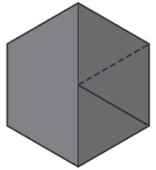
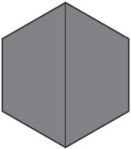
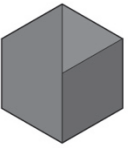
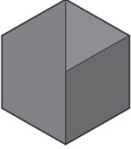
### Fill the Rectangles





# Master 29: Activity 11 Assessment

## Making Shapes

Constructing 2-D Shapes from Other Shapes Behaviours/Strategies	
<p>1. Student looks at the outline, but does not know which 2-D shapes to use to construct a composite shape (hexagon).</p>	<p>2. Student places blocks randomly with no thought to the outline to construct a composite shape (hexagon) from other 2-D shapes.</p> 
<p>3. Student constructs a composite shape (hexagon) from other 2-D shapes, but leaves gaps or overlaps when using blocks to cover hexagon.</p> 	
Observations/Documentation	
<p>4. Student constructs a composite shape (hexagon) from other 2-D shapes, but cannot construct it in a different way.</p> 	
<p>5. Student constructs a composite shape (hexagon) from other 2-D shapes, but struggles to describe and identify shapes used.</p>  <p>“I used a red, a green, and a blue block.”</p>	
<p>6. Student constructs a composite shape (hexagon) from other 2-D shapes in different ways and identifies shapes used.</p>  <p>“I used a trapezoid, a rhombus, and a triangle.”</p>	
Observations/Documentation	

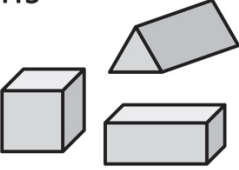
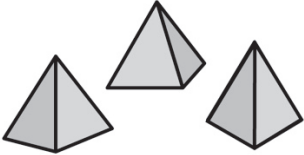



**Master 30a**

**Our Structure**

**Stations 1 and 2**

We built \_\_\_\_\_

Circle the solids you used.

Solid	Number Used	Shapes of Faces You See on Structure
<p>Prisms</p> 		
<p>Pyramids</p> 		
<p>Cone</p> 		
<p>Cylinder</p> 		
<p>Sphere</p> 		




Name \_\_\_\_\_ Date \_\_\_\_\_

Master 30b

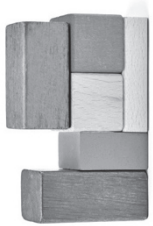
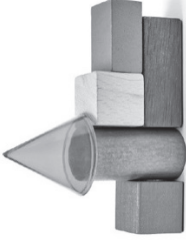
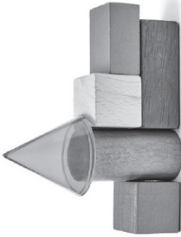
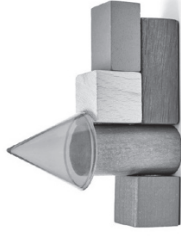
## Our Structure

### Station 3

We built \_\_\_\_\_

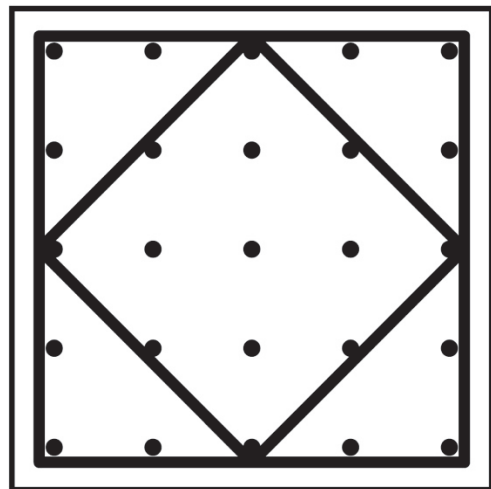
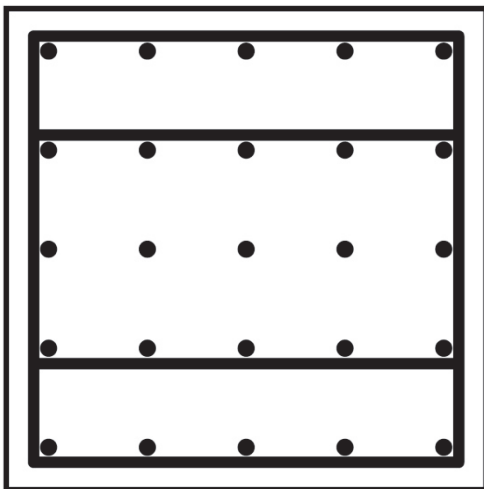
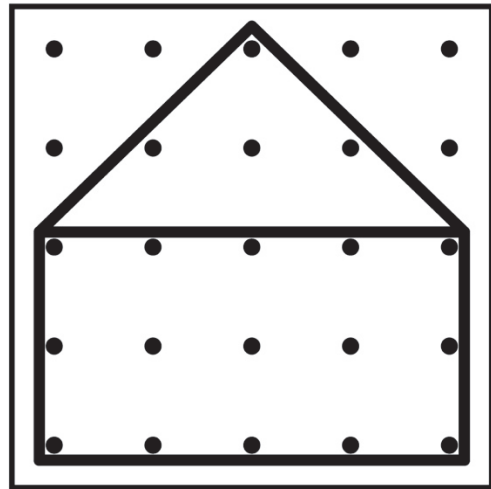
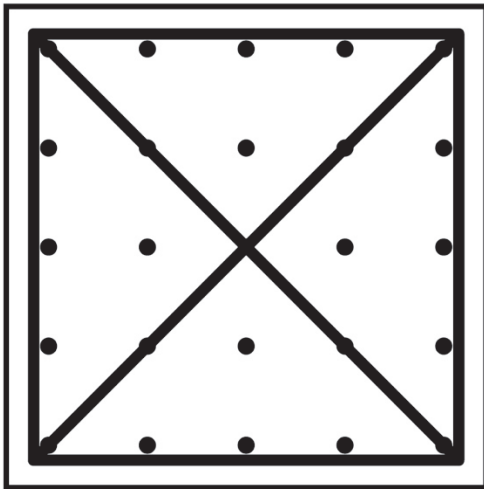
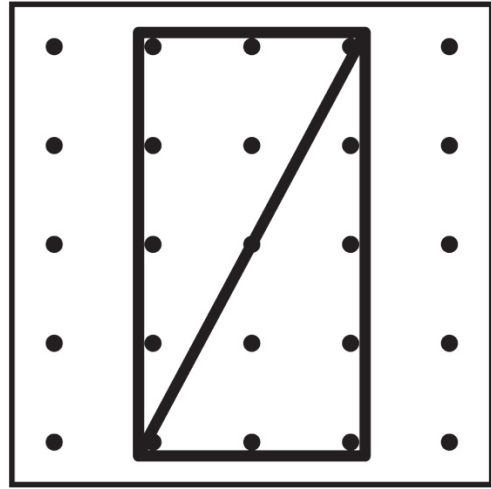
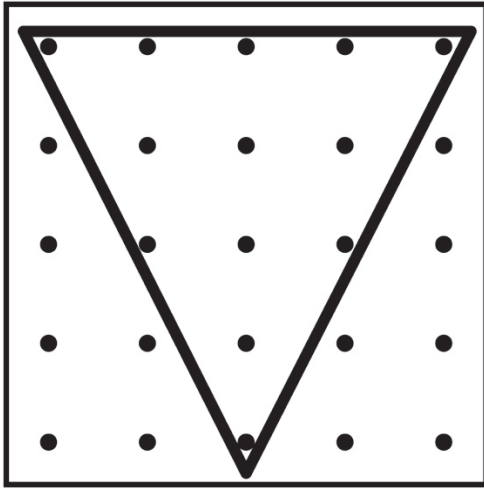
Solid	Number of Linking Cubes Used	Shapes of Faces You See
<p>Prisms</p> 		

## Master 31: Activity 12 Assessment Building with Solids

<b>Building Composite Structures Behaviours/Strategies</b>		
<p>1. Student plays with 3-D solids, but does not know which solids to use to construct a composite structure.</p>	<p>2. Student constructs a composite structure with 3-D solids, but uses only one type of solid or only uses solids with square or rectangular faces.</p>	<p>3. Student constructs a composite structure with 3-D solids, but struggles to identify the solids used.</p>
		<p>“I put a pointed solid on the top.”</p>
<b>Observations/Documentation</b>		
<p>4. Student constructs a composite structure with 3-D solids and identifies the solids used, but struggles to name the shapes of visible faces.</p>	<p>5. Student constructs a composite structure with 3-D solids and identifies solids and faces, but struggles to compare structures.</p>	<p>6. Student successfully constructs a composite structure with 3-D solids, identifies solids and faces, and compares structures.</p>
		<p>“I used a cone, cylinder, two prisms, and two cubes. There are faces that are squares, rectangles, and circles.”</p>
<b>Observations/Documentation</b>		



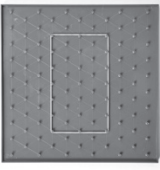

Master 32

# Geoboard Shapes



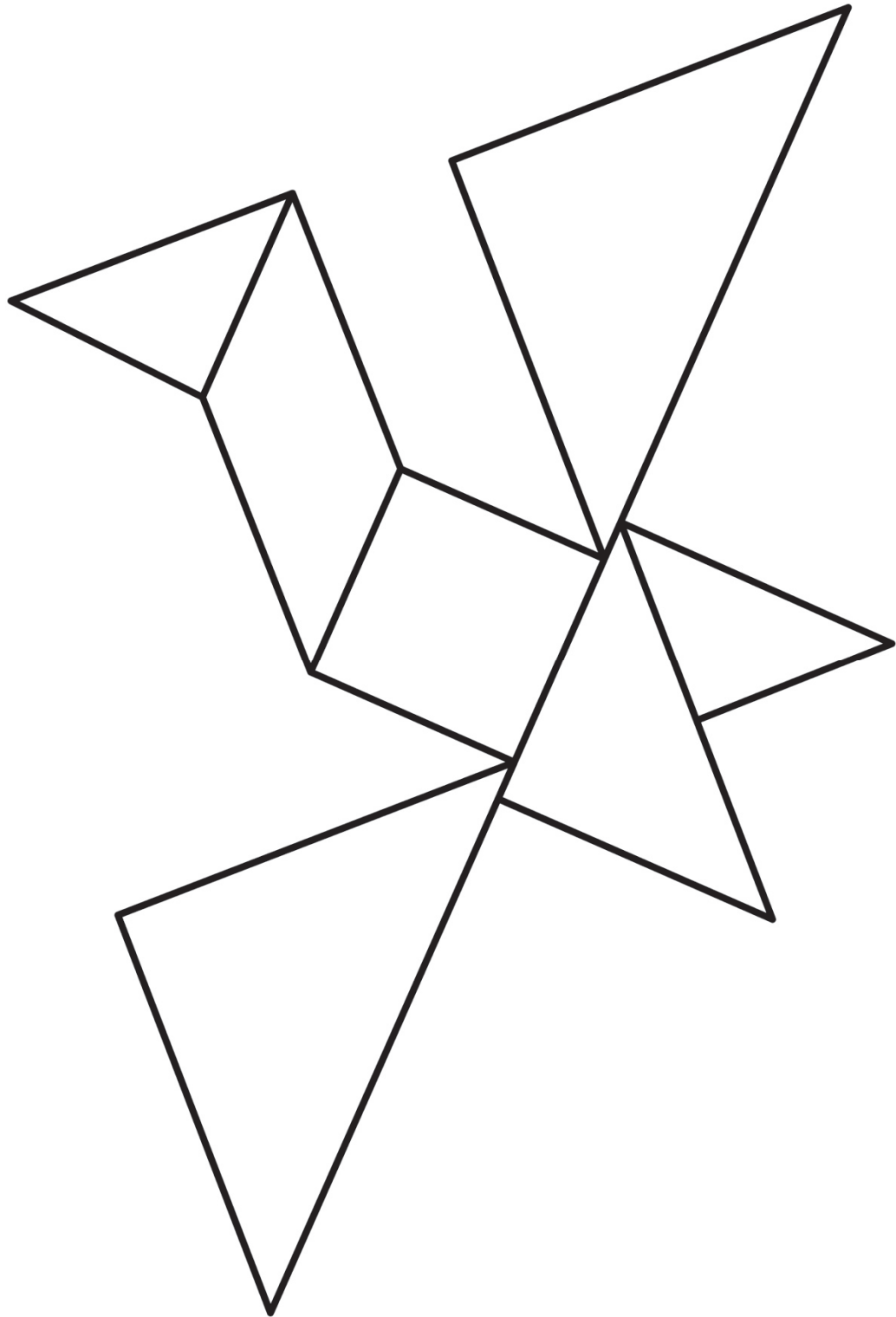
# Master 33: Activity 13 Assessment

## Visualizing Shapes and Solids

<b>Describing Attributes of Shapes and Solids Behaviours/Strategies</b>			
<p>1. Student chooses a shape/solid, but has difficulty analyzing it and describing its attributes.</p>	<p>2. Student analyzes geometric attributes of a shape/solid, but uses non-math language to describe it.</p> <div style="text-align: center;">  <p>“It feels like a paper towel roll.”</p> </div>	<p>3. Student analyzes geometric attributes of a shape/solid, but gives a general description.</p> <div style="text-align: center;">  <p>“It has sides and vertices.”</p> </div>	<p>4. Student successfully analyzes geometric attributes of 2-D shapes and 3-D solids and uses math language to describe them.</p>
<b>Observations/Documentation</b>			
<b>Visualizing and Creating Shapes and Solids Behaviours/Strategies</b>			
<p>1. Student creates a shape/solid, but guesses and ignores partner’s description.</p>	<p>2. Student creates a shape/solid, but focuses on only part of the description and creates incorrect shape/solid.</p>	<p>3. Student creates shapes and solids from description and visualization, but struggles to identify them.</p> <div style="text-align: center;">  <p>“I forget what this is called.”</p> </div>	<p>4. Student successfully creates and identifies shapes and solids from description and visualization.</p> <div style="text-align: center;">  <p>“I made a cube.”</p> </div>
<b>Observations/Documentation</b>			

Master 34

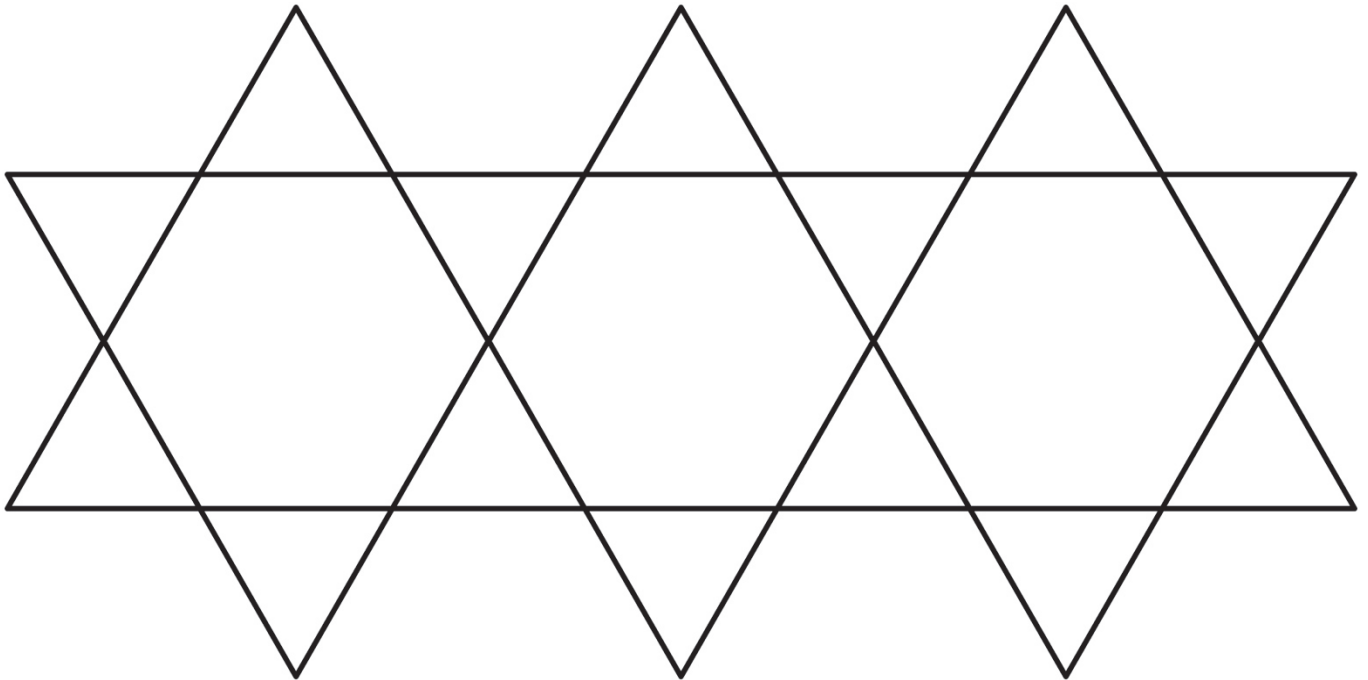
# Shape Picture



Name \_\_\_\_\_ Date \_\_\_\_\_

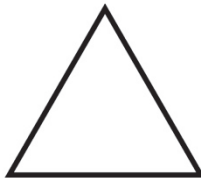
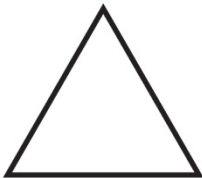
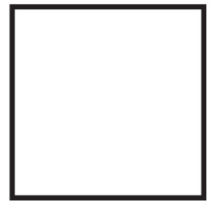
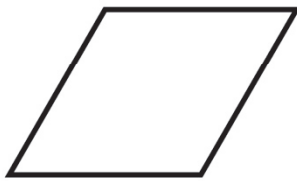
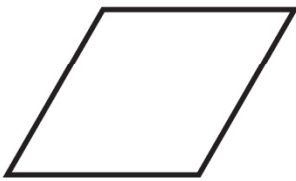
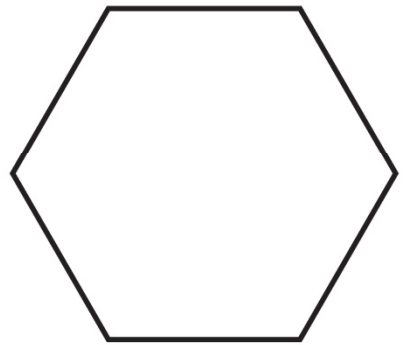
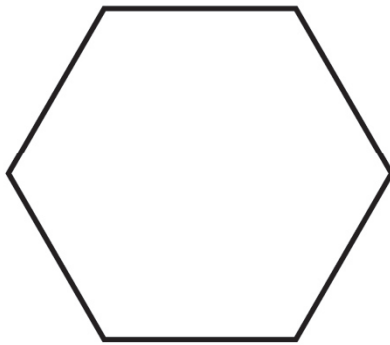
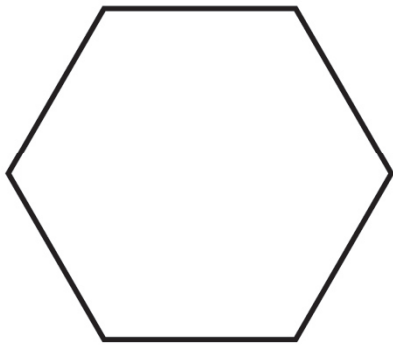
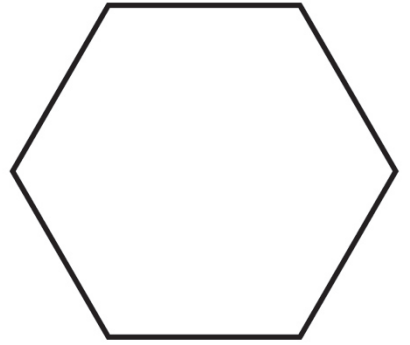
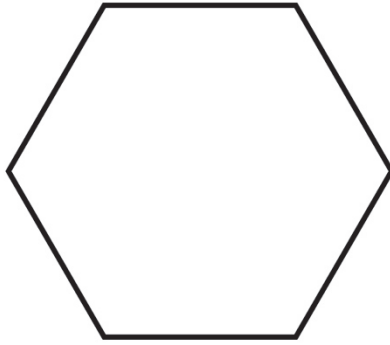
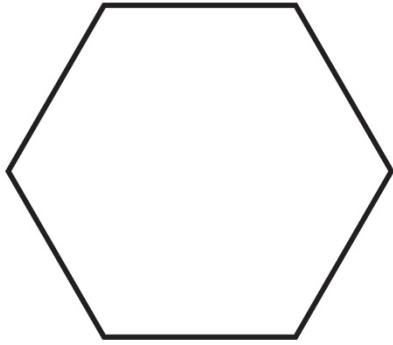
Master 35

# Shape Design



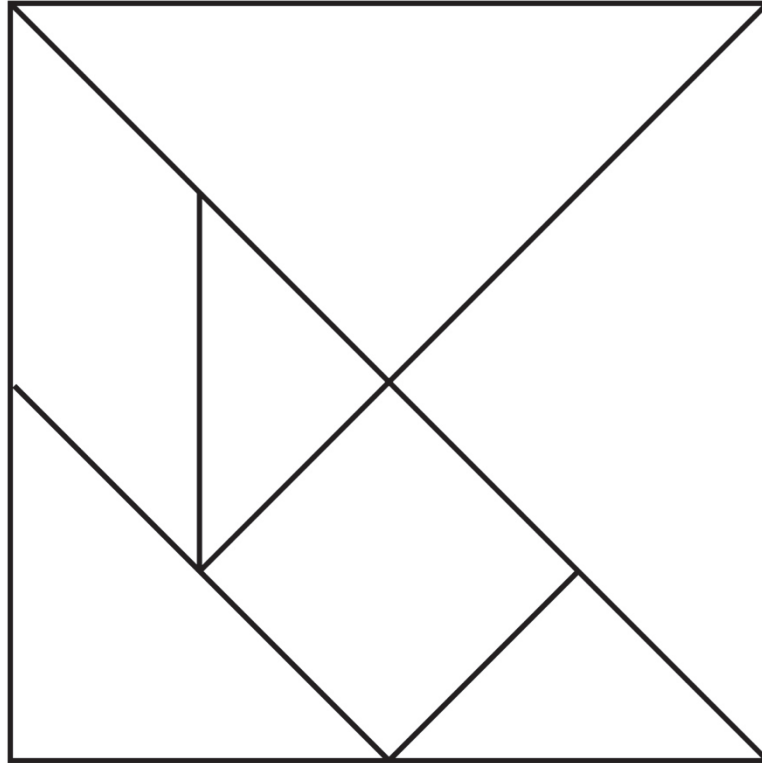
Master 36

### Pattern Block Cutouts



Master 37



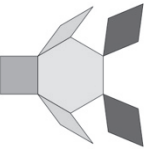
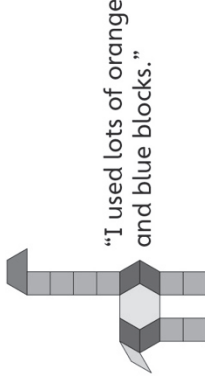
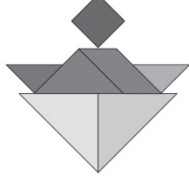
# Tangram Cutouts



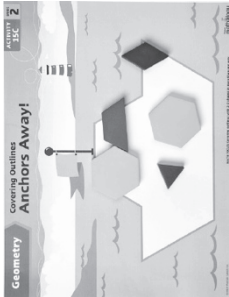
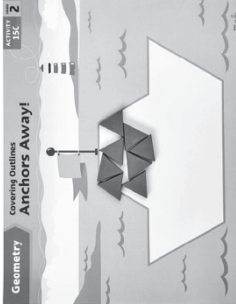
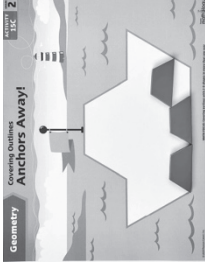
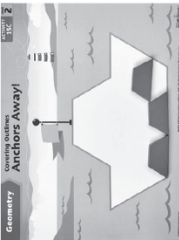
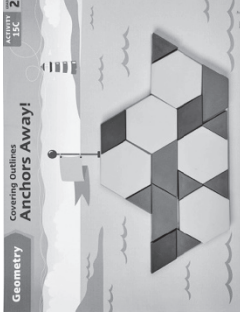


# Master 38: Activity 14 Assessment

## Creating Pictures and Designs

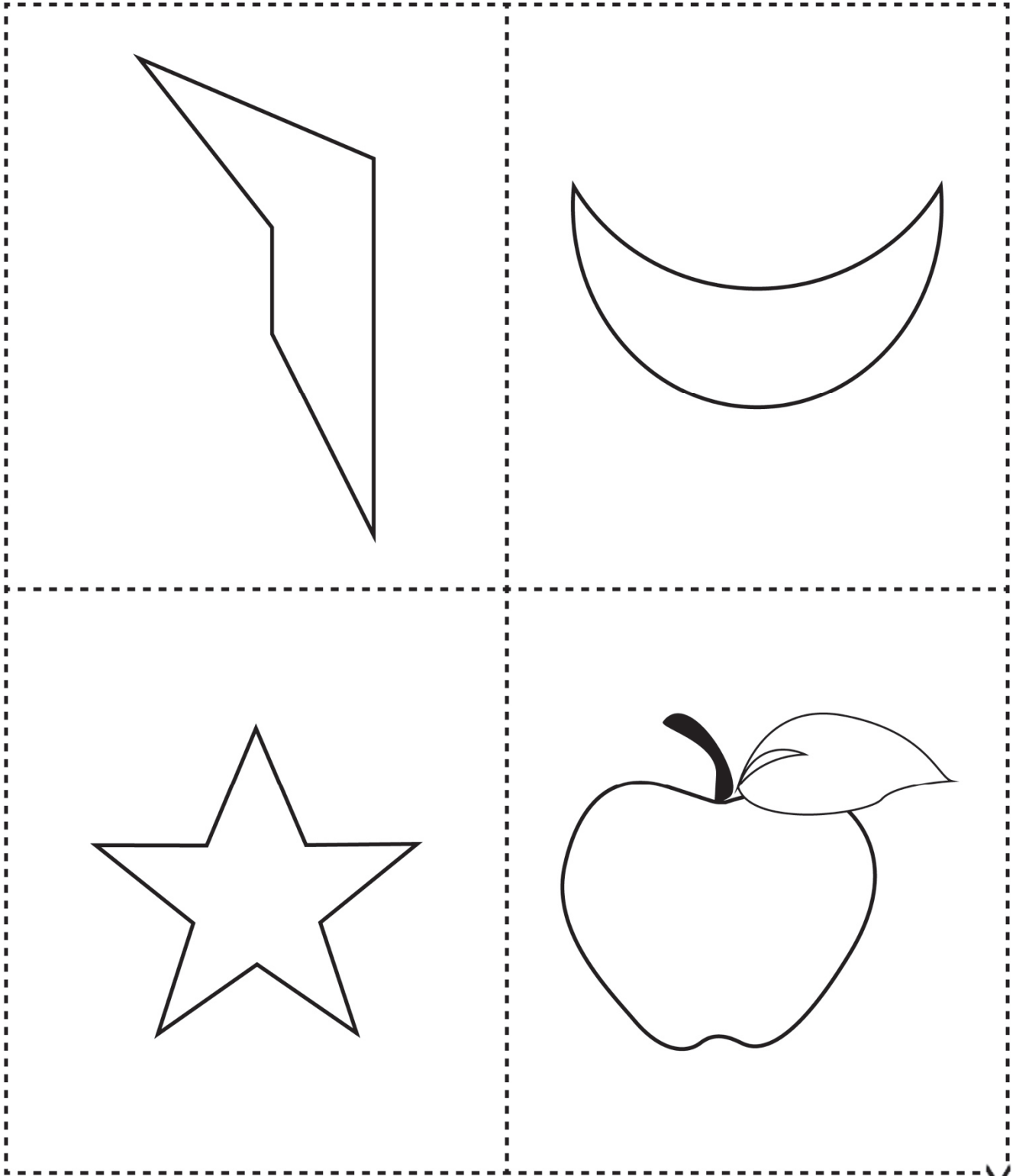
<b>Making Pictures and Designs with 2-D Shapes Behaviours/Strategies</b>		
<p>1. Student constructs a composite picture/design with 2-D shapes, but shapes do not touch.</p> 	<p>2. Student constructs a composite picture with 2-D shapes, but uses only one shape.</p> 	<p>3. Student constructs a composite picture with 2-D shapes, but each shape represents a part of an object (shapes are not combined).</p> 
<b>Observations/Documentation</b>		
<p>4. Student constructs a composite picture with 2-D shapes and combines shapes to represent parts of the picture, but cannot identify the shapes used.</p> 	<p>5. Student constructs a composite picture/design with 2-D shapes, but struggles to explain how it was created.</p> 	<p>6. Student successfully constructs a composite picture/design with 2-D shapes, explains how it was created, and identifies shapes used.</p>
<b>Observations/Documentation</b>		

## Master 39: Activity 15 Assessment Covering Outlines

<b>Covering Outlines with 2-D Shapes Behaviours/Strategies</b>		
<p>1. Student covers a picture outline with shapes, but places blocks randomly with no thought to outline.</p> 	<p>2. Student covers a picture outline with shapes, but leaves gaps or overlaps.</p> 	<p>3. Student covers a picture outline with shapes, but always tries to place matching blocks in the same relative position.</p>  <p style="text-align: center;">"I don't see a shape that will fit."</p>
<b>Observations/Documentation</b>		
<p>4. Student covers a picture outline with shapes and uses guess and test to fill a space.</p>  <p style="text-align: center;">"Let me try all the blocks to see which one fits."</p>	<p>5. Student successfully completes a picture outline with shapes, but thinks there is only one way to cover it.</p> 	<p>6. Student successfully completes a picture outline with shapes in one way and sees more than one way to cover it.</p>
<b>Observations/Documentation</b>		

Master 40a

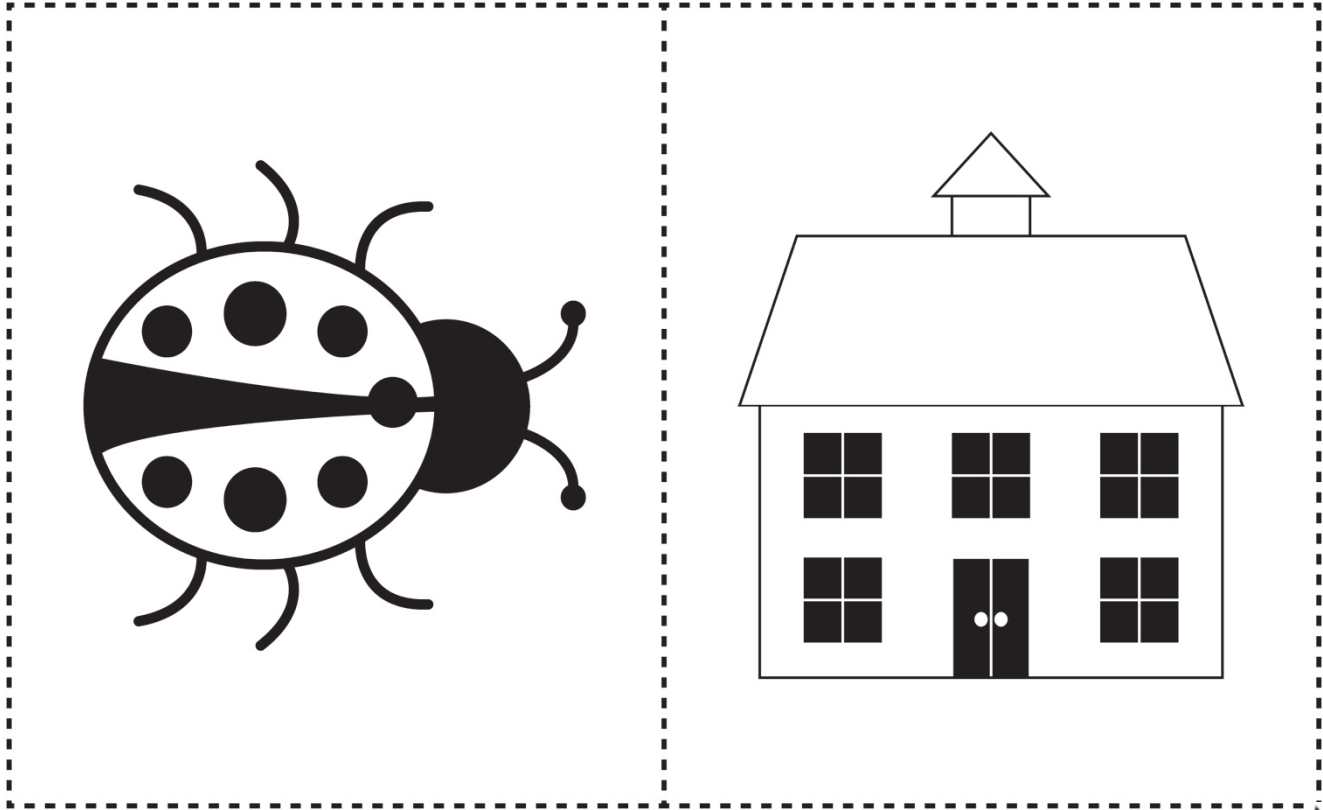
### Pictures for Symmetry



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 40b

# Pictures for Symmetry



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 41a

## Make It Symmetrical

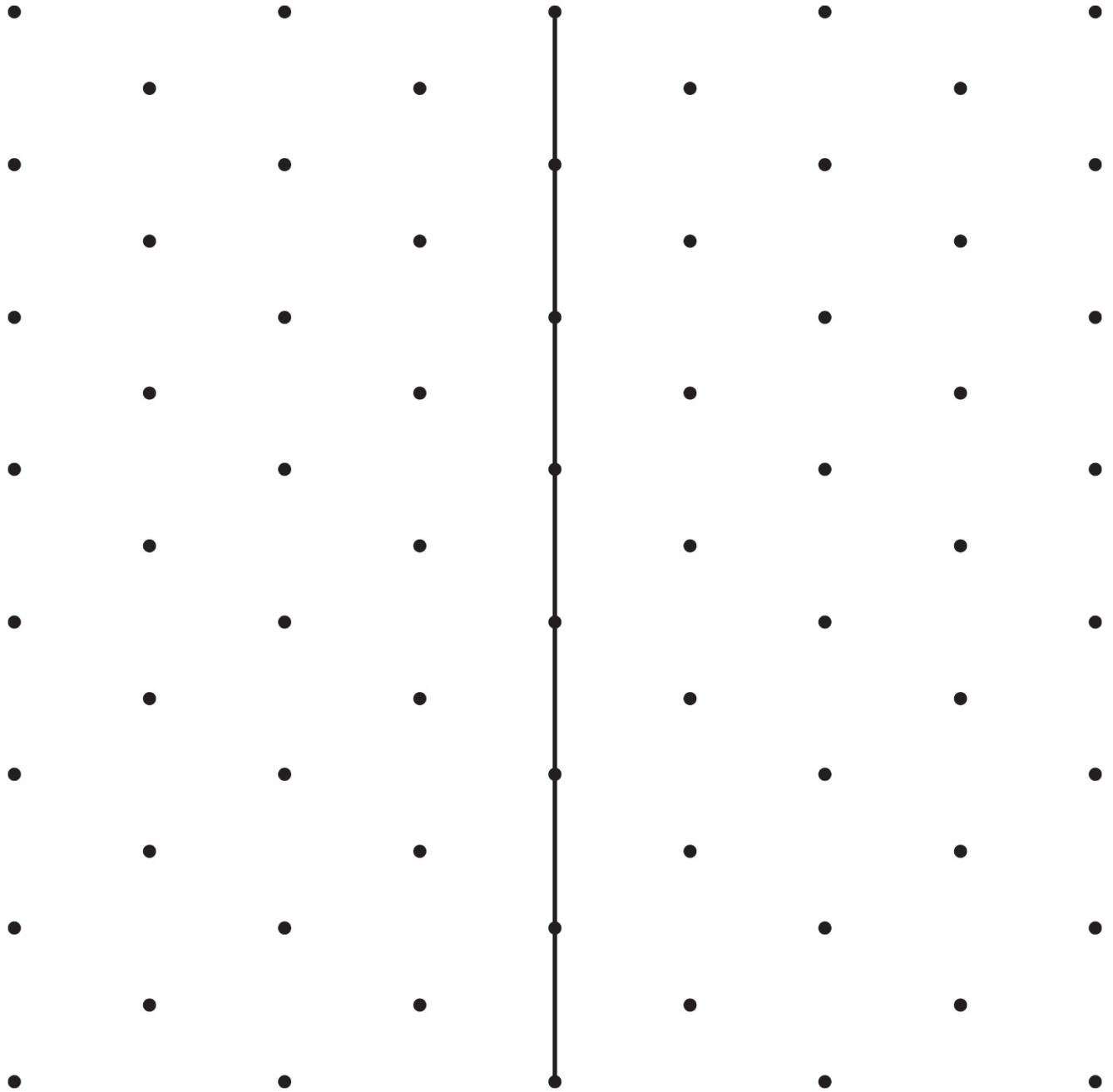
Create a symmetrical design.



Master 41b

# Make It Symmetrical (for Accommodations)

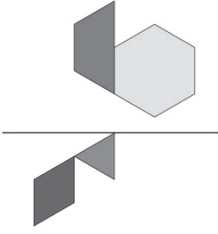
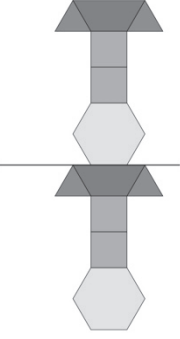
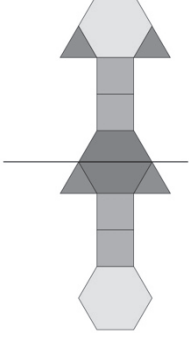
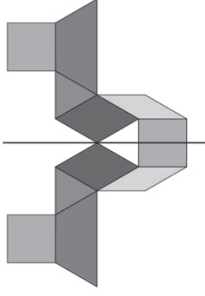
Create a symmetrical design.





# Master 42: Activity 16 Assessment

## Creating Symmetrical Designs

Creating Symmetrical Designs Behaviours/Strategies		
<p>1. Student constructs a 2-D design, but places blocks randomly and creates an unsymmetrical design.</p> 	<p>2. Student constructs a 2-D design, but places the same blocks with the same orientation on each side of the line.</p> 	<p>3. Student constructs a 2-D design, but places one or more Pattern Blocks incorrectly.</p> 
Observations/Documentation		
<p>4. Student constructs a 2-D symmetrical design, but cannot decide if partner's design is symmetrical.</p>  <p>"I don't know if it is symmetrical."</p>	<p>5. Student constructs a 2-D symmetrical design and decides if partner's design is symmetrical, but struggles to describe her or his own design.</p>	<p>6. Student successfully constructs a 2-D symmetrical design, decides if partner's design is symmetrical, and talks about his or her own design using math language.</p>
Observations/Documentation		

**Master 43a**

**Task Cards**

**Note:** Task cards are grouped by type. For example, all cards labelled A focus on using shapes to create other shapes.

**A.**

Use Pattern Blocks to create a hexagon.

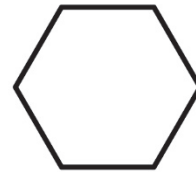


Use 3 yellow blocks and 3 blue blocks.



**A.**

Use Pattern Blocks to create a hexagon.

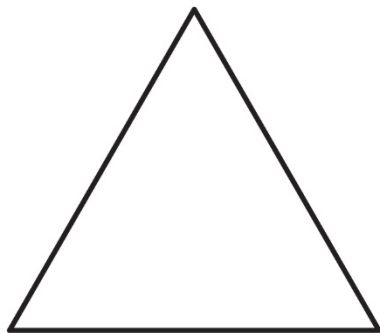


Use 1 yellow block and 6 red blocks.



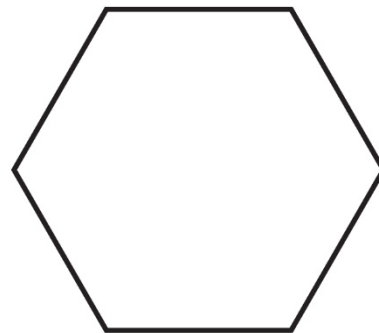
**A.**

Use Pattern Blocks.  
Create a triangle in two different ways.



**A.**

Use Pattern Blocks.  
Create a hexagon in three different ways.





**Master 43b**

**Task Cards**

**A.**

Use 3 Tangram pieces.  
Create a rectangle.



**A.**

Use Tangram pieces.  
Create a square in two  
different ways.



**B.**

Use 12 linking cubes.  
Make two different  
rectangular prisms.

**B.**

Use 27 linking cubes.  
Make a cube.

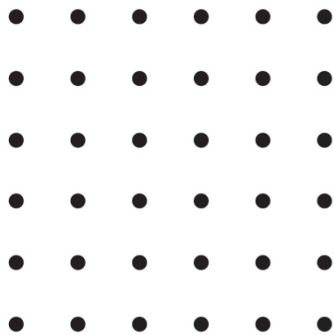


Master 43c

Task Cards

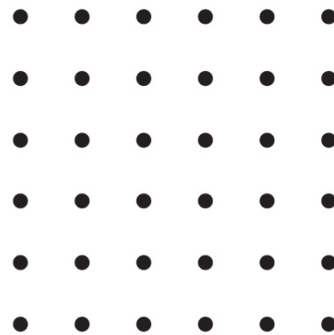
C

I have 4 vertices and 4 equal sides. Create me on a geoboard.



C

I have 3 vertices and 3 sides. Create two of me on a geoboard.



C

I have 8 edges and 5 vertices. I have 4 faces that are triangles and 1 face that is a square.

Use building materials to create me.

C

I have 12 edges and 8 vertices. I have 6 faces that are rectangles.


Use building materials to create me.



**Master 43d**

**Task Cards**

<p>D.</p> <p>Use Patterns Blocks. Make a picture of an animal.</p>	<p>D.</p> <p>Use Patterns Blocks. Make a picture of a flower.</p>
<p>D.</p> <p>Use Tangram pieces. Make a picture of an animal.</p>	<p>D.</p> <p>Use Tangram pieces. Make a design.</p>

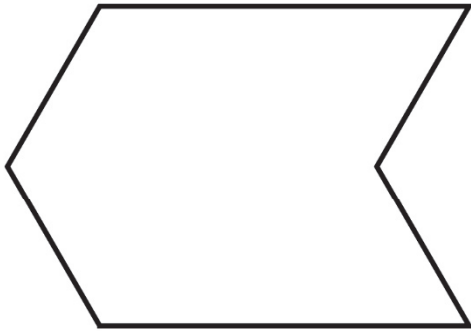


**Master 43e**

**Task Cards**

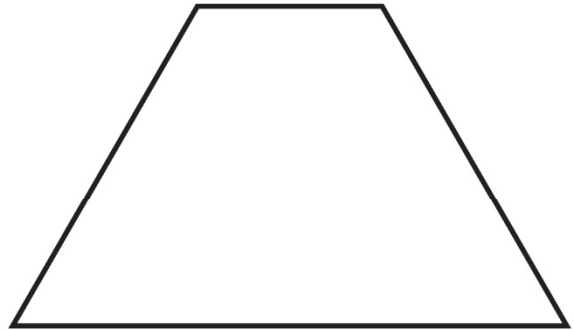
**E.**

Use Pattern Blocks.  
Fill the outline in two ways.



**E.**

Use Pattern Blocks.  
Fill the outline in two ways.



**E.**

Use 10 Pattern Blocks.  
Create a symmetrical  
design.

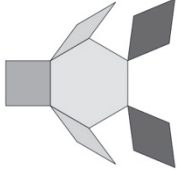
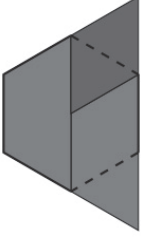
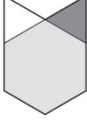
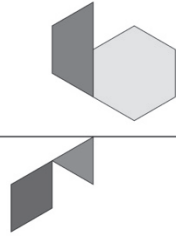
**E.**

Use 16 Pattern Blocks.  
Create a symmetrical  
design.



# Master 44a: Activity 17 Assessment

## Geometric Relationships: Consolidation

<b>Geometric Relationship Tasks Behaviours/Strategies</b>			
<p>1. Student uses blocks or pieces, but struggles to construct new 2-D shapes as a composite of other 2-D shapes.</p>	<p>2. Student constructs a composite picture with 2-D shapes, but each shape represents a part of an object (shapes are not combined).</p> 	<p>3. Student covers a picture outline with shapes, but picture has gaps or overlaps.</p> 	<p>4. Student covers a picture outline with shapes, but always tries to place matching blocks in the same relative position.</p>  <p>“I don’t see a shape that will fit.”</p>
<b>Observations/Documentation</b>			
<p>5. Student constructs a new 2-D shape as a composite of other shapes and covers outlines, but thinks only one way is possible.</p>		<p>7. Student creates shape/solid, but focuses on only part of the description and creates an incorrect shape/solid.</p>	<p>8. Student successfully constructs 2-D shapes and solids, composite pictures, and symmetrical designs, and covers outlines in more than one way.</p>

# Master 44b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can construct 2-D shapes from other shapes. <b>(Activities 11, 17)</b>									
Student can construct a composite structure with 3-D solids. <b>(Activities 12, 17)</b>									
Student can name familiar 2-D shapes and 3-D solids. <b>(Activities 11, 12, 13, 14, 15, 16, 17)</b>									
Student can identify the shapes of the faces of 3-D solids. <b>(Activities 12, 13, 17)</b>									
Student can create shapes and solids from given attributes. <b>(Activities 13, 17)</b>									
Student uses math language to describe the attributes of shapes and solids. <b>(Activities 11, 12, 13, 14, 15, 16, 17)</b>									
Student can construct pictures and designs with 2-D shapes. <b>(Activities 14, 17)</b>									
Student can cover an outline with 2-D shapes in more than one way. <b>(Activities 15, 17)</b>									
Student can construct and describe 2-D symmetrical designs. <b>(Activities 16, 17)</b>									

# Master 44c: Cluster Assessment Individual

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Constructs 2-D shapes from other shapes. <b>(Activities 11, 17)</b>			
Constructs a composite structure with 3-D solids. <b>(Activities 12, 17)</b>			
Names familiar 2-D shapes and 3-D solids. <b>(Activities 11, 12, 13, 14, 15, 16, 17)</b>			
Identifies the shapes of the faces of 3-D solids. <b>(Activities 12, 13, 17)</b>			
Creates shapes and solids from given attributes. <b>(Activities 13, 17)</b>			
Uses math language to describe the attributes of shapes and solids. <b>(Activities 11, 12, 13, 14, 15, 16, 17)</b>			
Constructs pictures and designs with 2-D shapes. <b>(Activities 14, 17)</b>			
Covers an outline with 2-D shapes in more than one way. <b>(Activities 15, 17)</b>			
Constructs and describes 2-D symmetrical designs. <b>(Activities 16, 17)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Geometry Cluster 4: Location and Movement

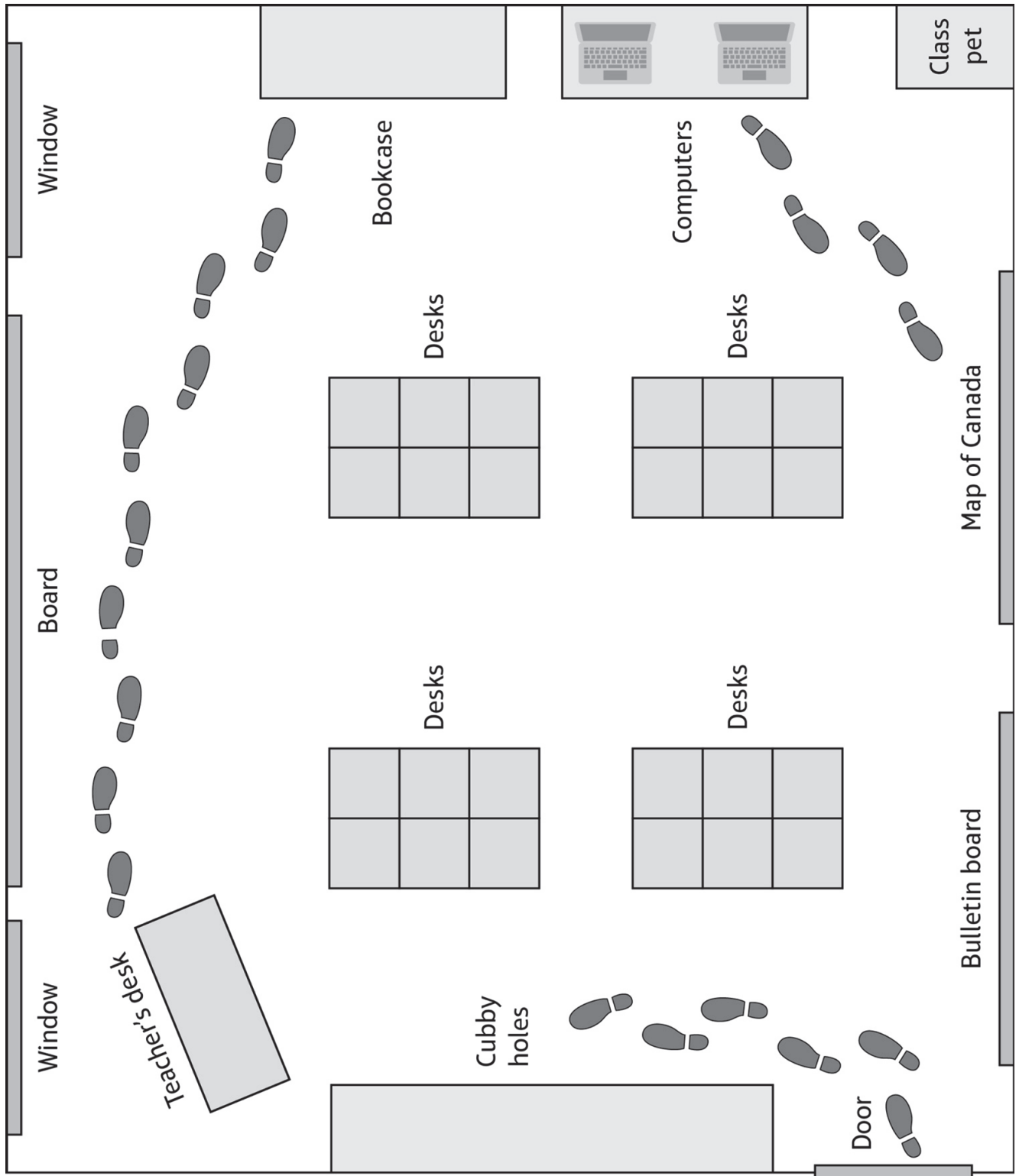
Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b>  <b>Location and Movement:</b> describe and represent the relative locations of objects, and represent objects on a map.</p>			
<p><b>G2.10</b> describe the relative locations (e.g., beside, two steps to the right of) and the movements of objects on a map</p> <p><b>G2.11</b> draw simple maps of familiar settings, and describe the relative locations of objects on the maps.</p>	<p><b>Below Grade: Intervention</b>                      7: Tower Views                      8: Direction Buddies</p> <p><b>On Grade: Teacher Cards</b>                      18: Reading Maps (G2.10)                      19: Drawing a Map (G2.11)                      20: Perspective Taking                      21: Location and Movement: Consolidation (G2.10)</p> <p><b>On Grade: Math Every Day Card 4A:</b>                      Our Design (G2.10)                      Treasure Map (G2.10, G2.11)</p> <p><b>Card 4B:</b>                      Crazy Creatures                      Perspective Matching Game</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Memory Book (Activities 18, 21)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Robo (Activities 18, 21)</li> </ul>	<p><b>Big Idea: Objects can be located in space and viewed from multiple perspectives.</b></p> <p>Locating and Mapping Objects in Space</p> <ul style="list-style-type: none"> <li>Uses relative positions to describe the location and order of objects (e.g., between, beside, next, before). (Activities 18, 19, 21; MED 4A: 1)</li> <li>Provides instructions to locate an object in the environment (e.g., listing instructions to find a hidden object in classroom). (Activities 18, 21; ME 4A: 2)</li> <li>Makes simple maps based on familiar settings. (Activity 19)</li> </ul> <p>Viewing and Representing Objects from Multiple Perspectives</p> <ul style="list-style-type: none"> <li>Recognizes 3-D solids from multiple perspectives. (MED 4B: 1)</li> <li>Visualizes and describes the view of a 3-D solid from multiple perspectives (e.g., top/front/side views). (Activities 20, 21, MED 4B: 2)</li> </ul>



Master 46

# Classroom Map



Master 47

# I Spy Cards

I am beside the pool.	I am over the road.
I am in front of a building.	I am between the school and the grass.
I am to the left of the cat.	I am under the bridge.
I am on top of the grass.	I am to the right of the cat.



Master 48

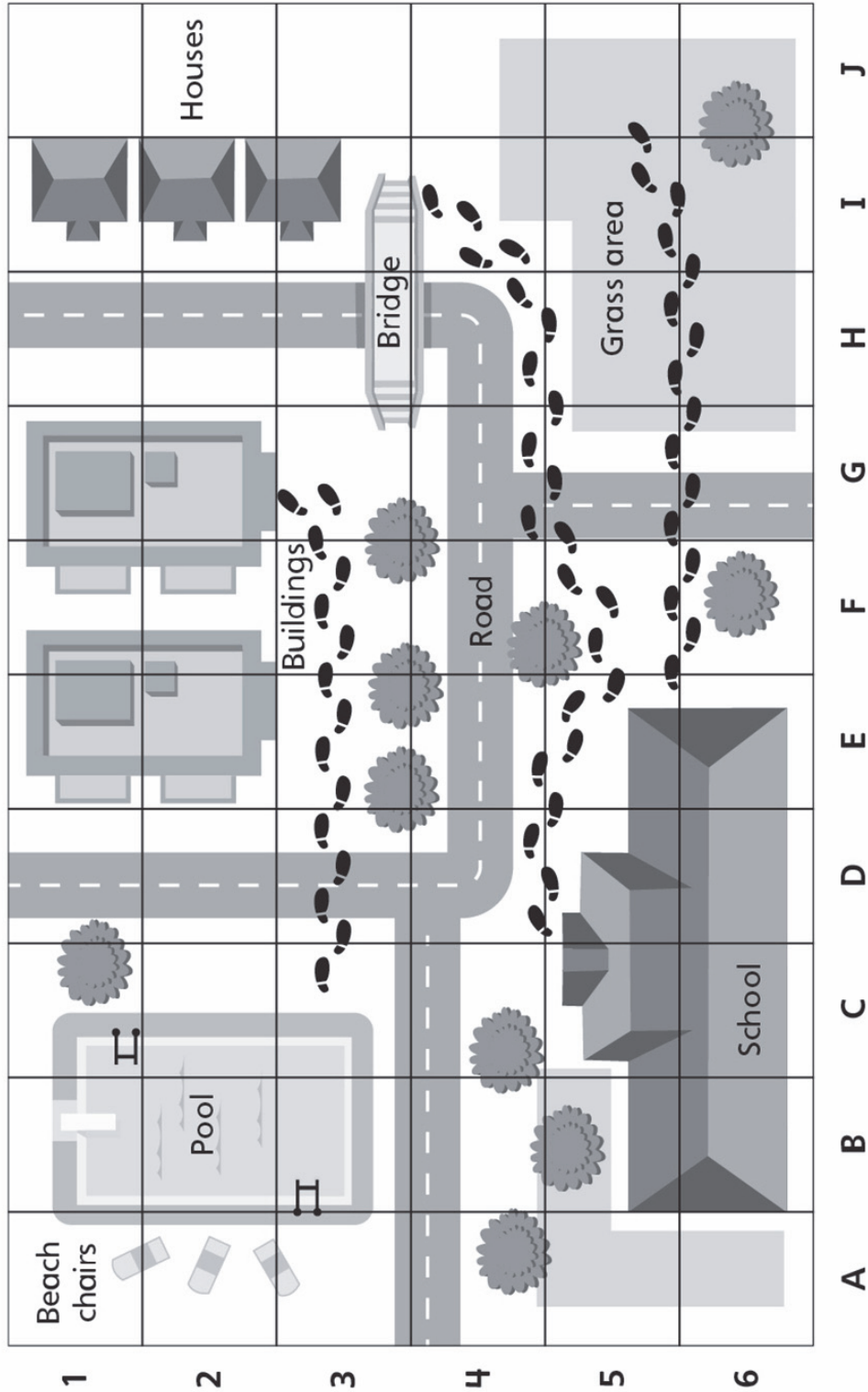
### Path Cards

Start at the cat. How do you get to the picnic table?	Start at the school. How do you get to the bridge?
Start at the pool. How do you get to the building on the right?	Start at the bridge. How do you get to the school?
Start at the school. How do you get to the houses?	Start at the cat. How do you get to the houses?
Start at the cat. How do you get to the picnic table?	Start at the school. How do you get to the bridge?



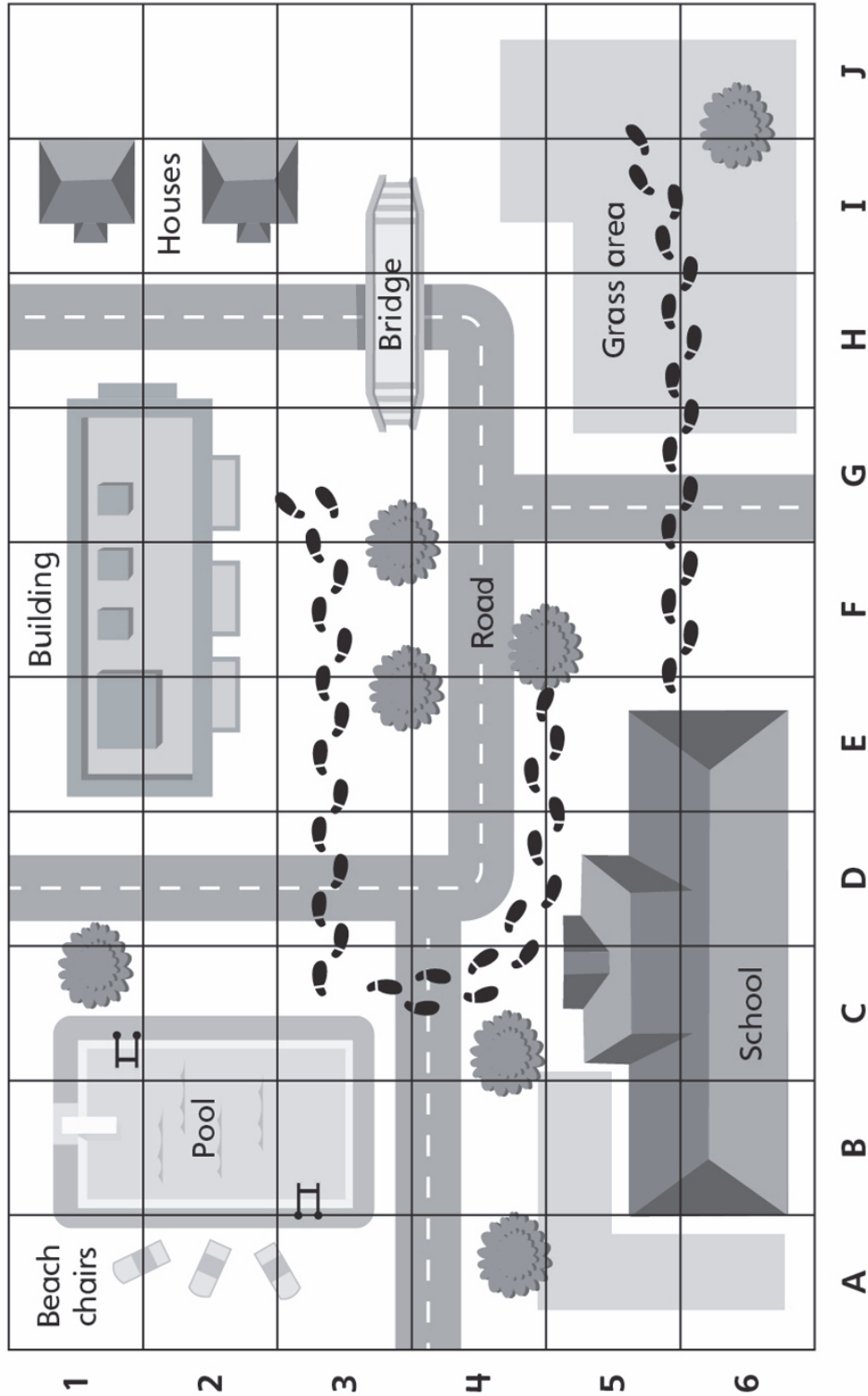
**Master 49a**

**Maps with Grid**



**Master 49b**

**Maps with Grid**



Master 50

### Position Words

Above	Between
Beside	Behind
In front	On top





# Master 51: Activity 18 Assessment

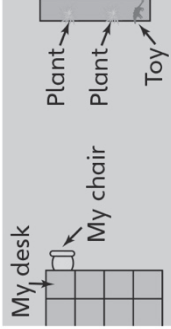

## Reading Maps

Reading Maps Behaviours/Strategies		
1. Student chooses a card, but struggles to locate objects on a map, as maps are not familiar to student.	2. Student chooses a card, but struggles to understand positional language and cannot locate objects on the map.  "I don't know what <i>beside</i> , <i>in front</i> , and <i>between</i> mean."	3. Student has some knowledge of positional language, but has difficulty using it to describe the locations of objects on a map.
Observations/Documentation		
4. Student follows instructions to locate most, but not all, objects on a map.	5. Student provides instructions to locate objects on a map, but struggles to describe paths.	6. Student successfully uses relative positions to describe the locations of objects, and provides and follows instructions to locate objects on a map.
Observations/Documentation		



# Master 52: Activity 19 Assessment

## Drawing a Map

Drawing Maps Behaviours/Strategies	
1. Student draws outline to make a simple map based on a familiar setting (classroom), but has trouble placing objects on the map.	2. Student makes a simple map based on a familiar setting (classroom) and locates and represents some, but not all, objects on the map.
3. Student makes a simple map based on a familiar setting (classroom) and places most objects on the map, but struggles with accuracy or relative sizes.  "I don't know how big to draw the bookcase."	
Observations/Documentation	
4. Student makes a simple map based on a familiar setting (classroom) and places objects accurately, but omits important features in favour of unimportant or personal features. 	5. Student makes a simple map based on a familiar setting (classroom), but omits labels or places labels incorrectly. 
6. Student successfully makes a simple map based on a familiar setting (classroom).	
Observations/Documentation	



Master 53a

# Multiple Views

## Cow



Front view



Top view



Side view



Side view



Master 53b

# Multiple Views

## Toy Bus



Front view



Side view



Bottom view



Back view



Master 53c

# Multiple Views

## Cup



Front view



Top view



Side view



Back view



Master 53d

# Multiple Views

## Chair



\_\_\_\_\_ view



\_\_\_\_\_ view



\_\_\_\_\_ view



\_\_\_\_\_ view



Master 54


### Perspective Recording Sheet

<p>Object</p> <hr/>	<p>Object</p> <hr/>	<p>Object</p> <hr/>
<p>View</p> <hr/>	<p>View</p> <hr/>	<p>View</p> <hr/>
<p>Object</p> <hr/>	<p>Object</p> <hr/>	<p>Object</p> <hr/>
<p>View</p> <hr/>	<p>View</p> <hr/>	<p>View</p> <hr/>



# Master 55: Activity 20 Assessment

## Perspective Taking

Describing Different Perspectives Behaviours/Strategies		
1. Student chooses an object, but does not show understanding of the concept of perspective.	2. Student chooses an object, but struggles to view the object from different perspectives (cannot isolate a particular view).	3. Student views objects from different perspectives, but struggles to describe the perspectives.
Observations/Documentation		
4. Student views objects from different perspectives and uses gestures to describe the perspectives, but struggles to describe them with words.  "Looking this way!"	5. Student views objects from different perspectives and describes the perspectives, but struggles to describe what the objects might look like from a different perspective.	6. Student successfully views and describes views of objects from multiple perspectives.
Observations/Documentation		



# Master 56a: Activity 21 Assessment

## Location and Movement: Consolidation

<b>Describing Location Behaviours/Strategies</b>		
1. Student has some knowledge of positional language, but has difficulty using it to describe the locations of objects on a map.	2. Student follows instructions to locate some objects on the map, but struggles with other objects.	3. Student successfully uses relative positions to describe the locations of objects, and provides and follows instructions to locate objects on a map.
<b>Observations/Documentation</b>		
<b>Identifying Perspectives Behaviours/Strategies</b>		
1. Student chooses a photo, but struggles to view the object from different perspectives (cannot isolate a particular view).	2. Student views objects from different perspectives, but struggles to describe the perspectives.	3. Student successfully views and describes objects from multiple perspectives.
<b>Observations/Documentation</b>		

# Master 56b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can locate objects on a map. <b>(Activities 18, 21)</b>									
Student can follow instructions to move along a path on a map. <b>(Activities 18, 21)</b>									
Student can use positional language to describe movement and the locations of objects on a map. <b>(Activities 18, 21)</b>									
Student can make a simple map of a familiar setting. <b>(Activity 19)</b>									
Student can describe views of objects from multiple perspectives. <b>(Activities 20, 21)</b>									
Student can isolate a particular view of an object to distinguish perspective. <b>(Activities 20, 21)</b>									
Student uses positional language to describe perspective. <b>(Activities 20, 21)</b>									



# Master 56c: Cluster Assessment Individual

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Locates objects on a map. <b>(Activities 18, 21)</b>			
Follows instructions to move along a path on a map. <b>(Activities 18, 21)</b>			
Uses positional language to describe movement and the locations of objects on a map. <b>(Activities 18, 21)</b>			
Makes a simple map of a familiar setting. <b>(Activity 19)</b>			
Describes views of objects from multiple perspectives. <b>(Activities 20, 21)</b>			
Isolates a particular view of an object to distinguish perspective. <b>(Activities 20, 21)</b>			
Uses positional language to describe perspective. <b>(Activities 20, 21)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Geometry Cluster 5: Coding

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectation</b>  <b>Location and Movement:</b> describe and represent the relative locations of objects, and represent objects on a map.  <b>Cross Strand:</b> Number</p> <p><b>G2.10</b> describe the relative locations (e.g., beside, two steps to the right of) and the movements of objects on a map</p>	<p><b>Below Grade: Intervention</b>            9: I Spy            10: Five Questions</p> <p><b>On Grade: Teacher Cards</b>            22: Exploring Coding (G2.10)            23: Coding on a Grid (G2.10)            24: Number Codes (G2.10)            25: Coding: Consolidation (G2.10)</p> <p><b>On Grade: Math Every Day Card 5:</b>            Code of the Day (G2.10)            Wandering Animals (G2.10)</p>		<p><b>Big Idea: Objects can be located in space and viewed from multiple perspectives.</b>            Locating and Mapping Objects in Space</p> <ul style="list-style-type: none"> <li>- Uses positional language and gesture to describe locations and movement, and give simple directions (e.g., in, on, around, right, left). (Activities 22, 25)</li> <li>- Provides instructions to locate an object in the environment (e.g., listing instructions to find a hidden object in classroom). (Activity 25; MED 5: 2)</li> <li>- Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down). (Activities 23, 24, 25; MED 5: 1, 2)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 5: Coding

### British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Concrete items can be represented, compared, and interpreted pictorially in graphs.</p> <p><b>Cross Strand:</b> Number</p> <p>Number concepts to 100</p> <ul style="list-style-type: none"> <li>Counting           <ul style="list-style-type: none"> <li>2.1 skip-counting by 2, 5, and 10:               <ul style="list-style-type: none"> <li>2.1a using different starting points</li> <li>2.1b increasing and decreasing (forward and backward)</li> </ul> </li> </ul> </li> </ul> <p>Pictorial representation of concrete graphs using one-to-one correspondence</p> <ul style="list-style-type: none"> <li>2.29 collecting data, creating a concrete graph, and representing the graph using a pictorial representation through grids, stamps, drawings</li> </ul> <p>2.30 one-to-one correspondence</p>	<p><b>Mathology Grade 2 Classroom Activity Kit</b></p> <p><b>Below Grade: Intervention</b></p> <p>9: I Spy 10: Five Questions</p> <p><b>On Grade: Teacher Cards</b></p> <p>22: Exploring Coding (2.1a, 2.1b, 2.30)</p> <p>23: Coding on a Grid (2.1a, 2.1b, 2.29, 2.30)</p> <p>24: Number Codes (2.1a, 2.1b, 2.29, 2.30)</p> <p>25: Coding: Consolidation (2.1a, 2.1b, 2.29, 2.30)</p> <p><b>On Grade: Math Every Day Card 5:</b> Code of the Day (2.1a, 2.1b, 2.29, 2.30) Wandering Animals (2.1a, 2.1b, 2.29, 2.30)</p>	<p><b>Mathology Little Books</b></p>	<p><b>Pearson Canada K-3 Mathematics Learning Progression</b></p> <p><b>Big Idea: Objects can be located in space and viewed from multiple perspectives.</b></p> <p>Locating and Mapping Objects in Space</p> <ul style="list-style-type: none"> <li>Uses positional language and gesture to describe locations and movement, and give simple directions (e.g., in, on, around, right, left). (Activities 22, 25)</li> <li>Provides instructions to locate an object in the environment (e.g., listing instructions to find a hidden object in classroom). (Activity 25; MED 5: 2)</li> <li>Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down). (Activities 23, 24, 25; MED 5: 1, 2)</li> </ul>

# Curriculum Correlation

## Geometry Cluster 5: Coding

New Brunswick/Prince Edward Island/Newfoundland and Labrador/Manitoba/Nova Scotia/Alberta/  
Northwest Territories/Nunavut/Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Cross Strand:</b> Number			
Optional but recommended	<p><b>Below Grade: Intervention</b></p> <p>9: I Spy 10: Five Questions</p> <p><b>On Grade: Teacher Cards</b></p> <p>22: Exploring Coding 23: Coding on a Grid 24: Number Codes 25: Coding: Consolidation</p> <p><b>On Grade: Math Every Day Card 5:</b> Code of the Day Wandering Animals</p>		<p><b>Big Idea: Objects can be located in space and viewed from multiple perspectives.</b></p> <p>Locating and Mapping Objects in Space</p> <ul style="list-style-type: none"> <li>- Uses positional language and gesture to describe locations and movement, and give simple directions (e.g., in, on, around, right, left). (<b>Activities 22, 25</b>)</li> <li>- Provides instructions to locate an object in the environment (e.g., listing instructions to find a hidden object in classroom). (<b>Activity 25; MED 5: 2</b>)</li> <li>- Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down). (<b>Activities 23, 24, 25; MED 5: 1, 2</b>)</li> </ul>



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 59a

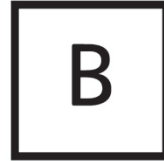
# My Cube Path



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 59b

# My Cube Path (For Accommodations)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 59c

# My Cube Path (For Extension)



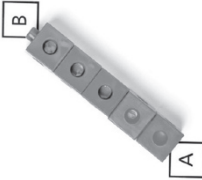
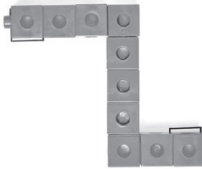
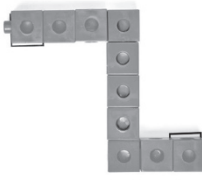




# Master 60: Activity 22 Assessment

## Exploring Coding

Geometry

Describing Paths with Codes Behaviours/Strategies	
<p>1. Student creates a path with cubes on a diagonal and struggles to write a code to describe the path.</p> 	<p>2. Student creates a path with cubes, but struggles to use positional language to write a code to describe the path.</p>  <p>"3 cubes, 4 cubes, 3 cubes"</p>
<p>3. Student creates a path with cubes and uses positional language to write a code to describe the path, but counts the same cube twice.</p>  <p>"3 cubes up, 5 cubes right, 4 cubes up"</p>	<p><b>Observations/Documentation</b></p>
<p>4. Student creates a path with cubes and uses positional language to write a code to describe the path from A to B, but starts over to write a code from B to A.</p> <p>"I don't know what to do to write a code to go from B to A. I'll start over."</p>	<p>5. Student creates a path with cubes and uses positional language to write codes to describe the paths from A to B and B to A, but starts over to find another path.</p> <p>"Let me take all the cubes off and start over."</p>
<p>6. Student creates different paths with cubes and successfully uses positional language to write codes to describe the paths from A to B and B to A.</p>	<p><b>Observations/Documentation</b></p>

Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 61**

### 4 × 4 Grid (for Before)


Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 62**

# Grid A

Write a code using arrows to move from Start to Finish.

		Finish	
	Start		
Code:			

Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 63**

**Grid B**

Player A: Place “Start” and “Finish” cutouts in any squares.

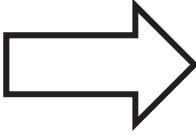
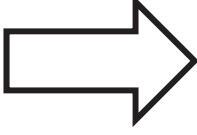
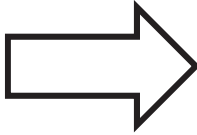
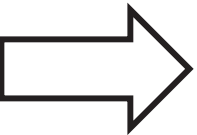
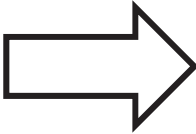
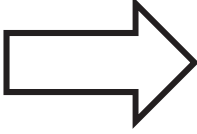
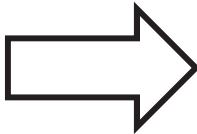
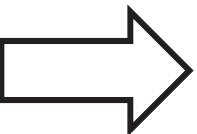
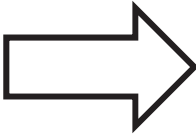
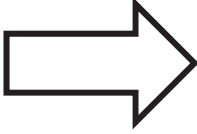
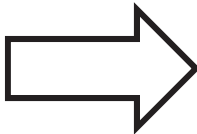
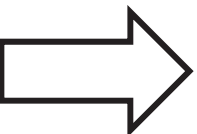
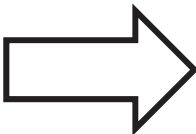
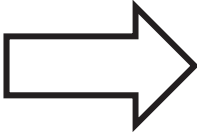
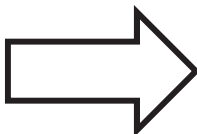
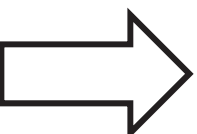
Player B: Use arrow cutouts to write a code to move from Start to Finish.

Player A: Check the code.


Code:

Master 64

# Cutouts

			
			
			
			
Start	Finish		





# Master 65: Activity 23 Assessment

## Coding on a Grid

Reading and Writing Code on Grids Behaviours/Strategies		
<p>1. Student describes the movement from one location to another on a grid, but code is not accurate.</p>	<p>2. Student describes the movement from one location to another on a grid, but writes code by counting squares instead of steps, resulting in one extra arrow.</p>	<p>3. Student describes the movement from one location to another on a grid and accurately writes code, but struggles to check if partner's code is correct.</p> <p>"Is this correct?"</p>
Observations/Documentation		
<p>4. Student describes the movement from one location to another on a grid and writes accurate code, but struggles to write code from memory.</p> <p>"How can I write the code without seeing the grid?"</p>		
Observations/Documentation		
		<p>6. Student describes the movement from one location to another on a grid and writes accurate codes, with and without seeing a grid.</p>

Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 66**

# Grid 1

Write “Start” and “Finish” in any squares.

Take turns to write a different code to move from Start to Finish.

Check each other’s codes.


Code 1:

Code 2:

Code 3:

Code 4:

**Master 67**

**Grid 2: Code Breakers**

Write “Start” and “Finish” in any squares.

Write three correct codes and one wrong code to move from Start to Finish.


Code 1:

Code 2:

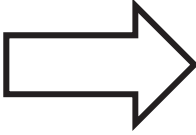
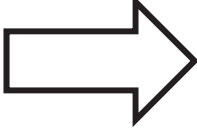
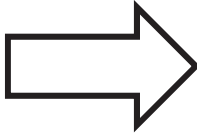
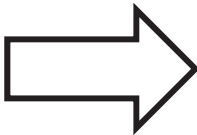
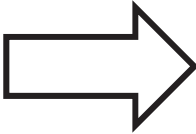
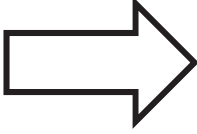
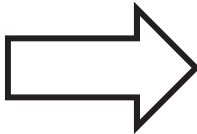
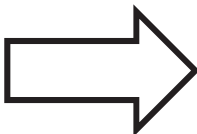
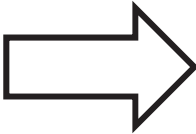
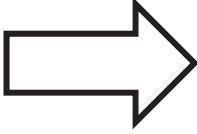
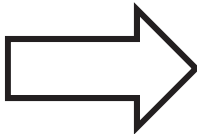
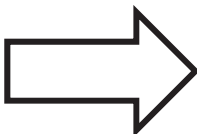
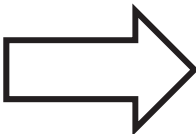
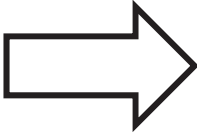
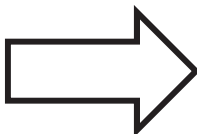
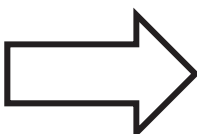
Code 3:

Code 4:



**Master 68**

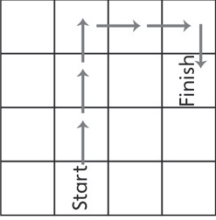
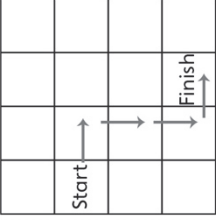
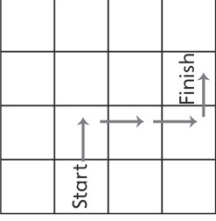
# Cutouts

			
			
			
			
Start	Finish		



# Master 69: Activity 24 Assessment

## Number Codes

<b>Reading and Writing Codes with Numbers and Arrows Behaviours/Strategies</b>		
<p>1. Student describes the movement from one location to another on a grid and uses arrows on the grid to show a path, but struggles to write code.</p> <div style="text-align: center;">  <p style="margin-top: 10px;">→, →, →, ↑, ↑, ←</p> </div>	<p>2. Student describes the movement from one location to another on a grid, but writes code by counting squares instead of steps, resulting in extra arrows.</p> <div style="text-align: center;">  <p style="margin-top: 10px;">2 →, 3 ↓, 2 →</p> </div>	<p>3. Student describes the movement from one location to another on a grid, but writes incorrect code.</p> <div style="text-align: center;">  <p style="margin-top: 10px;">2 ↓, 2 →</p> </div>
<b>Observations/Documentation</b>		
<p>4. Student describes the movement from one location to another on a grid and writes code, but struggles to read code.</p>	<p>5. Student describes the movement from one location to another on a grid and reads and writes codes, but cannot spot the incorrect code.</p> <p style="margin-left: 20px;">1 →, 2 ↑, 1 →, 1 ↑ 3 →, 3 ↑, 1 → 1 ↑, 2 →, 2 ↑ 1 →, 3 ↑, 1 →</p>	<p>6. Student describes the movement from one location to another on a grid, reads and writes codes, and spots the incorrect code.</p>
<b>Observations/Documentation</b>		

Name \_\_\_\_\_ Date \_\_\_\_\_

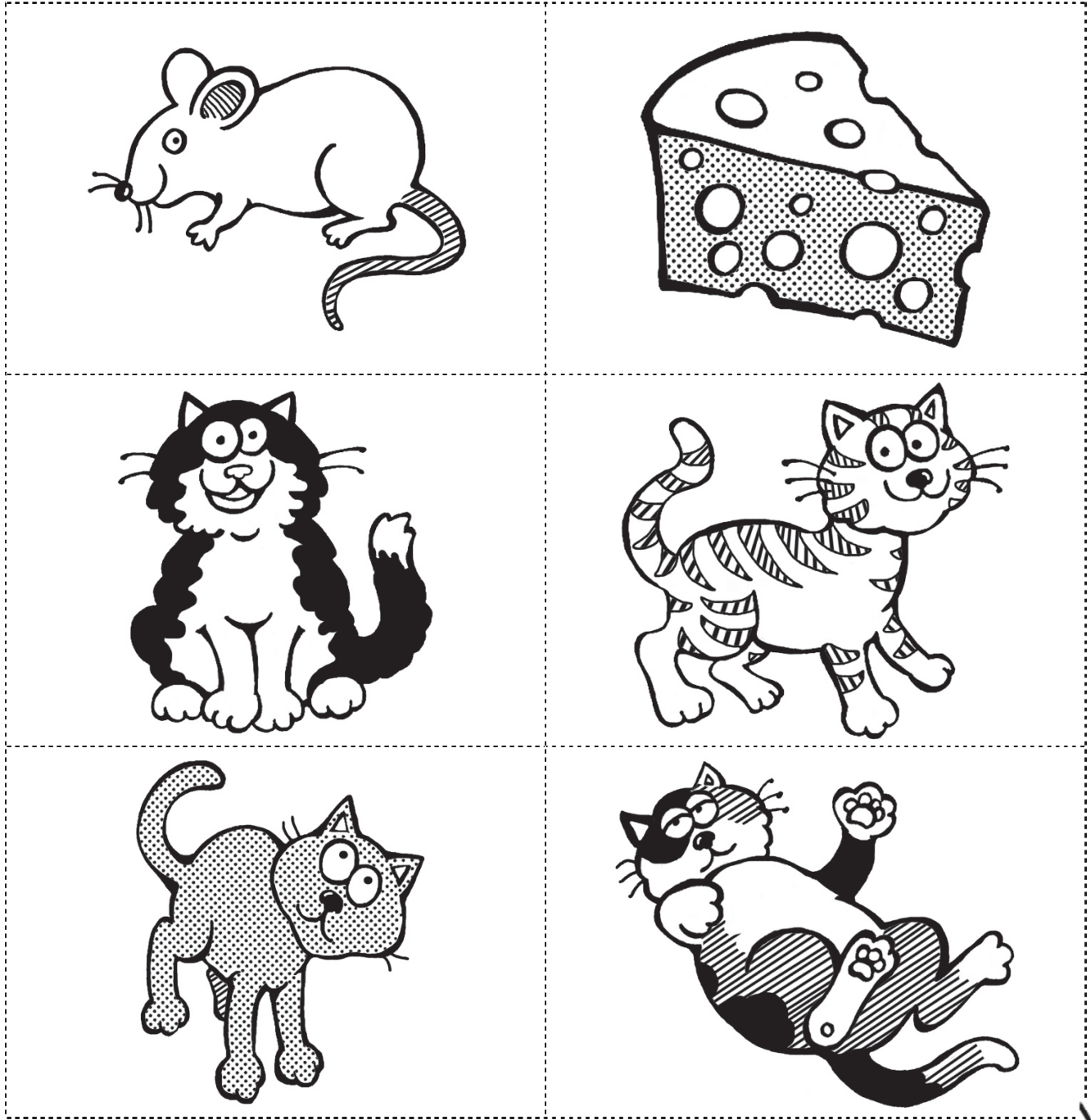
Master 70

### 6 × 6 Grid


Master 71a

### Consolidation Cutouts

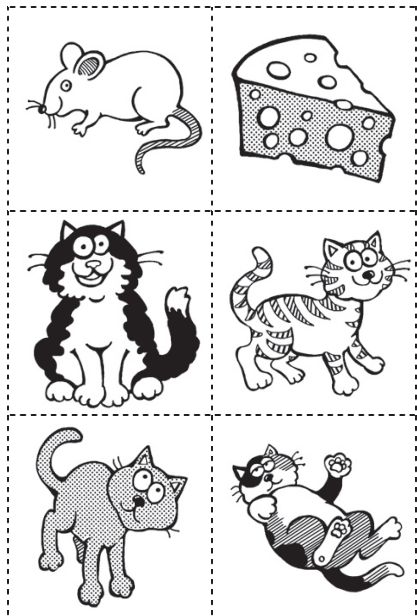
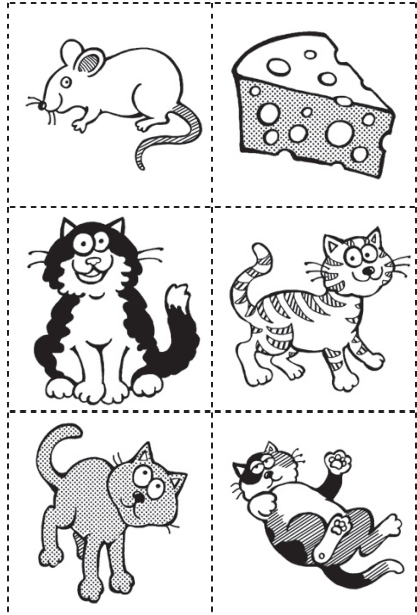
Use these cutouts if using grids on the floor.



Master 71b

# Consolidation Cutouts

Use these cutouts if using grid on Master 70.



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 72**

## **Recording Sheet**

Code from mouse to cheese:

Code for avoiding 1 cat:

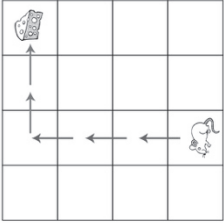
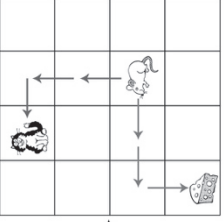
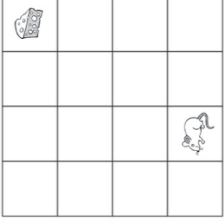
Code for avoiding 2 cats:

Code for avoiding 3 cats:

Code for avoiding 4 cats:

# Master 73a: Activity 25 Assessment

## Coding: Consolidation

Reading and Writing Codes Behaviours/Strategies		
<p>1. Student describes the movement from one location to another on a grid, but struggles to write it as a code.</p>  <p>1.f.f.2 ←</p>	<p>2. Student describes the movement from one location to another on a grid and writes code, but makes perspective errors.</p>  <p>2↓, 1 →</p>	<p>3. Student describes the movement from one location to another on a grid and writes code that is accurate in direction, but not in quantity.</p>  <p>4↑, 3 →</p>
Observations/Documentation		
<p>4. Student describes the movement from one location to another on a grid and writes accurate code, but starts over to make a code to avoid the cat.</p>	<p>5. Student describes the movement from one location to another on a grid and writes accurate code, but makes errors in where or how to adjust the code.</p>	<p>6. Student describes the movement from one location to another on a grid, reads and writes code, and accurately adjusts code to avoid cats.</p>
Observations/Documentation		

# Master 73b: Cluster Assessment

## Whole Class

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can make paths and write codes to describe them. <b>(Activity 22)</b>									
Student can write codes for movements on a grid. <b>(Activities 23, 24, 25)</b>									
Student can read code to move on a grid. <b>(Activities 23, 24, 25)</b>									
Student can write code from memory. <b>(Activity 23)</b>									
Student can write code using numbers and arrows. <b>(Activities 24, 25)</b>									
Student can identify the incorrect code amongst a group of codes. <b>(Activity 24)</b>									
Student can adjust a code to avoid an obstacle. <b>(Activity 25)</b>									
Student can write a code for someone who has a different perspective of the grid. <b>(Activity 25)</b>									



Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Makes paths and writes codes to describe them. <b>(Activity 22)</b>			
Writes codes for movements on a grid. <b>(Activities 23, 24, 25)</b>			
Reads code to move on a grid. <b>(Activities 23, 24, 25)</b>			
Writes code from memory. <b>(Activity 23)</b>			
Writes code using numbers and arrows. <b>(Activities 24, 25)</b>			
Identifies the incorrect code amongst a group of codes. <b>(Activity 24)</b>			
Adjusts a code to avoid an obstacle. <b>(Activity 25)</b>			
Writes a code for someone who has a different perspective of the grid. <b>(Activity 25)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Overall Expectations</b></p> <p><b>Collection and Organization of Data:</b> collect and organize categorical or discrete primary data and display the data, using tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with labels ordered appropriately along horizontal axes, as needed</p> <p><b>Data Relationships:</b> read and describe primary data presented in tally charts, concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers</p> <p><b>Cross Strand:</b> Patterning and Algebra</p> <p><b>D2.2</b> gather data to answer a question, using a simple survey with a limited number of responses</p> <p><b>D2.3</b> collect and organize primary data that is categorical or discrete, and display the data using one-to-one correspondence in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers, with appropriate titles and labels and with labels ordered appropriately along horizontal axes, as needed</p> <p><b>D2.4</b> read primary data presented in concrete graphs, pictographs, line plots, simple bar graphs,</p>	<p><b>Below Grade: Intervention</b></p> <p>1: Interpreting Pictographs</p> <p>2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b></p> <p>1: Interpreting Graphs 1 (D2.4, D2.5, D2.7)</p> <p>2: Interpreting Graphs 2 (D2.4, D2.5, D2.7)</p> <p>3: Creating a Survey (D2.2, D2.5, D2.6)</p> <p>4: Making Graphs 1 (D2.3, D2.4, D2.5, D2.7)</p> <p>5: Making Graphs 2 (D2.3, D2.4, D2.5, D2.7)</p> <p>6: Data Management Consolidation (D2.2, D2.3, D2.4, D2.5, D2.7)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> <li>Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> <li>Creates Graphical Displays of Collected Data</li> <li>Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> <li>Reads and Interpreting Data Displays</li> <li>Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Master 1b

### Ontario (continued)

<p>and other graphic organizers, and describe the data using mathematical language</p> <p><b>D2.5</b> pose and answer questions about class-generated data in concrete graphs, pictographs, line plots, simple bar graphs, and tally charts</p> <p><b>D2.6</b> distinguish between numbers that represent data values and numbers that represent the frequency of an event</p> <p><b>D2.7</b> demonstrate an understanding of data displayed in a graph, by comparing different parts of the data and by making statements about the data as a whole</p>	<p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (D2.2, D2.5) Reading and Interpreting Graphs (D2.4, D2.7)</p>	<p>- Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</p> <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <p>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</p>
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# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

British Columbia/Yukon Territories

Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Concrete items can be represented, compared, and interpreted pictorially in graphs.</p> <p><b>Cross Strand:</b> Patterns and Relations</p>			
<p>Pictorial representation of concrete graphs using one-to-one correspondence</p> <ul style="list-style-type: none"> <li>• <b>2.29</b> collecting data, creating a concrete graph, and representing the graph using a pictorial representation through grids, stamps, drawings)</li> <li>• <b>2.30</b> one-to-one correspondence</li> </ul>	<p><b>Below Grade: Intervention</b></p> <ol style="list-style-type: none"> <li>1: Interpreting Pictographs</li> <li>2: Sorting Objects</li> </ol> <p><b>On Grade: Teacher Cards</b></p> <ol style="list-style-type: none"> <li>1: Interpreting Graphs 1 (2.29, 2.30)</li> <li>2: Interpreting Graphs 2</li> <li>3: Creating a Survey (2.29, 2.30)</li> <li>4: Making Graphs 1 (2.29, 2.30)</li> <li>5: Making Graphs 2</li> <li>6: Data Management Consolidation (2.29, 2.30)</li> </ol> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (2.29, 2.30) Reading and Interpreting Graphs (2.29, 2.30)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>• Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>- Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Collecting Data and Organizing it into Categories</p> <ul style="list-style-type: none"> <li>- Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Creating Graphical Displays of Collected Data</p> <ul style="list-style-type: none"> <li>- Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>- Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>- Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> </ul> <p>Reading and Interpreting Data Displays</p> <ul style="list-style-type: none"> <li>- Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>- Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

British Columbia/Yukon Territories (continued)

<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b>)</li> </ul>		

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

New Brunswick/Prince Edward Island/Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Collect, display and analyze data to solve problems. <b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems.</p> <ul style="list-style-type: none"> <li>• <b>2SP1</b> Gather and record data about self and others to answer questions.</li> <li>• <b>2SP2</b> Construct and interpret concrete graphs and pictographs to solve problems.</li> </ul>	<p><b>Below Grade: Intervention</b> 1: Interpreting Pictographs 2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b> 1: Interpreting Graphs 1 (2SP2) 2: Interpreting Graphs 2 3: Creating a Survey (2SP1) 4: Making Graphs 1 (2SP2) 5: Making Graphs 2 6: Data Management Consolidation (2SP1, 2SP2)</p> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (2SP1) Reading and Interpreting Graphs (2SP2)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>• Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>• Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>• Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>- Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> <li>- Collecting Data and Organizing it into Categories</li> <li>- Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> <li>- Creating Graphical Displays of Collected Data</li> <li>- Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>- Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>- Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> <li>- Reading and Interpreting Data Displays</li> <li>- Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>- Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

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

		<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Manitoba

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Collect, display, and analyze data to solve problems. <b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems.</p> <p><b>2.SP.1</b> Gather and record data about self and others to answer questions.</p> <p><b>2.SP.2</b> Construct and interpret concrete graphs and pictographs to solve problems.</p>	<p><b>Below Grade: Intervention</b> 1: Interpreting Pictographs 2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b> 1: Interpreting Graphs 1 (2.SP.2) 2: Interpreting Graphs 2 3: Creating a Survey (2.SP.1) 4: Making Graphs 1 (2.SP.2) 5: Making Graphs 2 6: Data Management Consolidation (2.SP.1, 2.SP.2)</p> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (2.SP.1) Reading and Interpreting Graphs (2.SP.2)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Collecting Data and Organizing it into Categories</p> <ul style="list-style-type: none"> <li>Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Creating Graphical Displays of Collected Data</p> <ul style="list-style-type: none"> <li>Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> </ul> <p>Reading and Interpreting Data Displays</p> <ul style="list-style-type: none"> <li>Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

Mathology 2



# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Manitoba (continued)

			<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

### Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Students will be expected to collect, display, and analyze data to solve problems.</p> <p><b>Cross Strand:</b> Patterns and Relations Students will be expected to use patterns to describe the world and solve problems.</p> <p><b>2SP01</b> Students will be expected to gather and record data about self and others to answer questions.</p> <p><b>2SP02</b> Students will be expected to construct and interpret concrete graphs and pictographs to solve problems.</p>	<p><b>Below Grade: Intervention</b> 1: Interpreting Pictographs 2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b> 1: Interpreting Graphs 1 (2SP02) 2: Interpreting Graphs 2 3: Creating a Survey (2SP01) 4: Making Graphs 1 (2SP02) 5: Making Graphs 2 6: Data Management Consolidation (2SP01, 2SP02)</p> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (2SP01) Reading and Interpreting Graphs (2SP02)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Collecting Data and Organizing it into Categories</p> <ul style="list-style-type: none"> <li>Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> </ul> <p>Creating Graphical Displays of Collected Data</p> <ul style="list-style-type: none"> <li>Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> </ul> <p>Reading and Interpreting Data Displays</p> <ul style="list-style-type: none"> <li>Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6; MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Nova Scotia (continued)

			<b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b> Identifying, Sorting, and Classifying Attributes and Patterns Mathematically - Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). ( <b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b> )
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# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Alberta/Northwest Territories/Nunavut

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>General Outcome</b> Collect, display, and analyze data to solve problems. <b>Cross Strand:</b> Patterns and Relations Use patterns to describe the world and solve problems.</p> <p><b>2SP1</b> Gather and record data about self and others to answer questions.</p> <p><b>2SP2</b> Construct and interpret concrete graphs and pictographs to solve problems.</p> <p><b>2PR3</b> Sort a set of objects, using two attributes, and explain the sorting rule.</p>	<p><b>Below Grade: Intervention</b> 1: Interpreting Pictographs 2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b> 1: Interpreting Graphs 1 (2SP2) 2: Interpreting Graphs 2 3: Creating a Survey (2SP1) 4: Making Graphs 1 (2SP2, 2PR3) 5: Making Graphs 2 6: Data Management Consolidation (2SP1, 2SP2)</p> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (2SP1) Reading and Interpreting Graphs (2SP2)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> <li>Collecting Data and Organizing it into Categories</li> <li>Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> <li>Creating Graphical Displays of Collected Data</li> <li>Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> <li>Reading and Interpreting Data Displays</li> <li>Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Alberta/Northwest Territories/Nunavut (continued)

			<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b>)</li> </ul>
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# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Goals</b> Spatial Sense, Number Sense, Logical Thinking, Mathematics as a Human Endeavour</p> <p><b>Cross Strand:</b> Patterns and Relations Spatial Sense, Logical Thinking, Mathematics as a Human Endeavour</p> <p><b>SP2.1</b> Demonstrate understanding of concrete graphs and pictographs.</p>	<p><b>Below Grade: Intervention</b> 1: Interpreting Pictographs 2: Sorting Objects</p> <p><b>On Grade: Teacher Cards</b> 1: Interpreting Graphs 1 (SP2.1) 2: Interpreting Graphs 2 3: Creating a Survey (SP2.1) 4: Making Graphs 1 (SP2.1) 5: Making Graphs 2 6: Data Management Consolidation (SP2.1)</p> <p><b>On Grade: Math Every Day Card 1:</b> Conducting Surveys (SP2.1) Reading and Interpreting Graphs (SP2.1)</p>	<p><b>Below Grade:</b></p> <ul style="list-style-type: none"> <li>Graph It! (Activities 1, 4, 6)</li> </ul> <p><b>On Grade:</b></p> <ul style="list-style-type: none"> <li>Big Buddy Days (Activities 1, 3, 4, 6)</li> <li>Marsh Watch (Activities 2, 3, 5, 6)</li> </ul> <p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>Welcome to the Nature Park (Activities 2, 5, 6)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Formulating Questions to Learn About Groups, Collections, and Events by Collecting Relevant Data</p> <ul style="list-style-type: none"> <li>Formulates questions that can be addressed through simple surveys. (Activities 3, 5, 6; MED 1: 1)</li> <li>Collecting Data and Organizing it into Categories</li> <li>Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies). (Activities 3, 5, 6; MED 1: 1)</li> <li>Creating Graphical Displays of Collected Data</li> <li>Creates displays using objects or simple pictographs (may use symbol for data). (Activities 4, 6)</li> <li>Creates one-to-one displays (e.g., line plot, dot plot, bar graph). (Activities 5, 6)</li> <li>Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). (Activities 4, 5, 6)</li> <li>Reading and Interpreting Data Displays</li> <li>Interprets displays by noting how many more/less than other categories. (Activities 1, 2, 4, 5, 6, MED 1: 2)</li> </ul> <p>Drawing Conclusions by Making Inferences and Justifying Decisions Based on Collected Data</p> <ul style="list-style-type: none"> <li>Poses and answers questions about data collected and displayed. (Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2)</li> </ul>

# Curriculum Correlation

## Data Management and Probability Cluster 1: Data Management











Saskatchewan (continued)

		<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p>Identifying, Sorting, and Classifying Attributes and Patterns Mathematically</p> <ul style="list-style-type: none"> <li>- Sorts a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). (<b>Activities 1, 2, 3, 4, 5, 6; MED 1: 1, 2</b>)</li> </ul>
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**Master 2**

**Sample Pictograph**

**Birds Olivia Saw on Her Way to School**

				<b>Sparrow</b>
				<b>Cardinal</b>
				<b>Crow</b>
				<b>Blue Jay</b>



# Master 3: Activity 1 Assessment

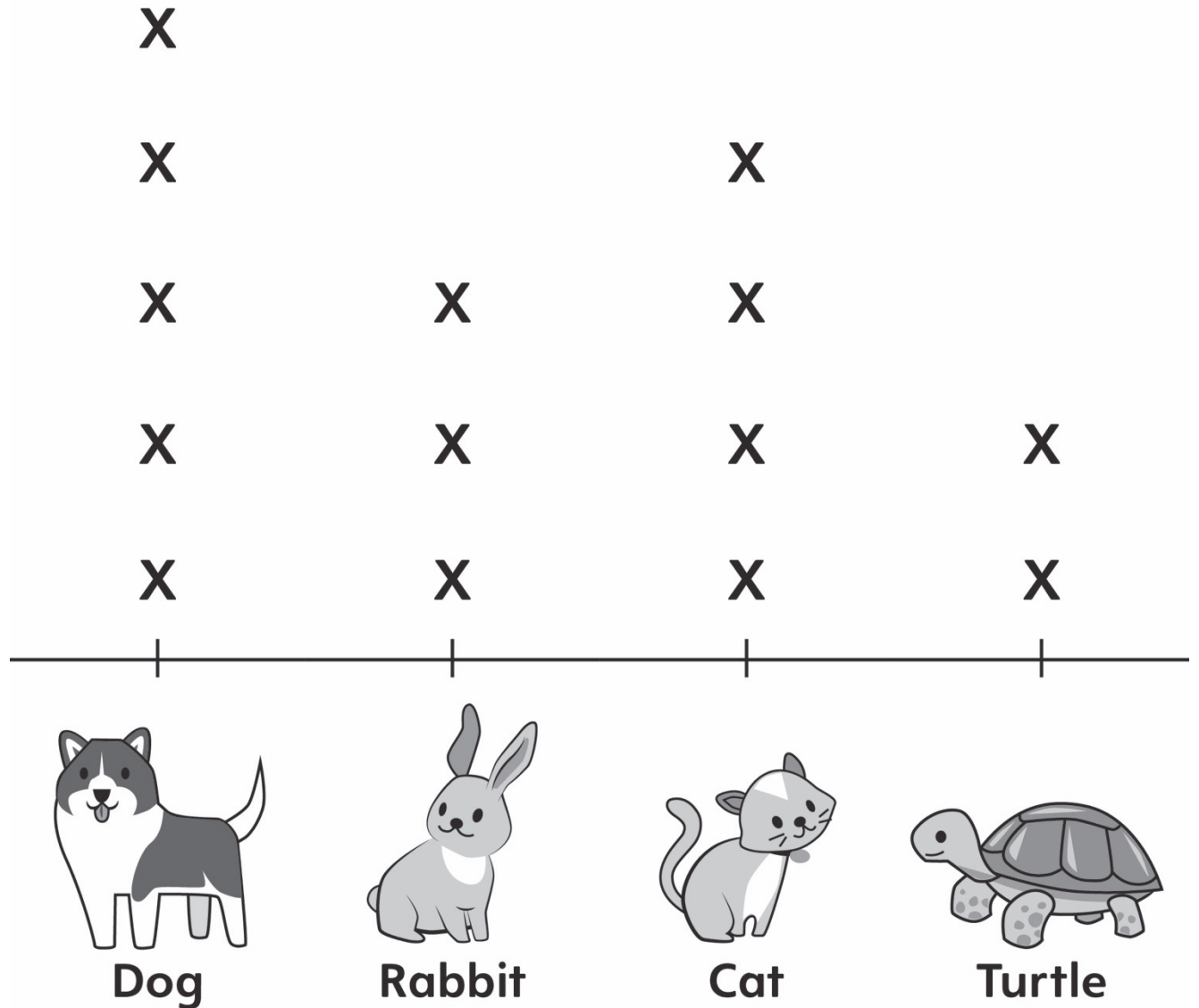
## Interpreting Graphs 1

Interpreting Pictographs Behaviours/Strategies		
1. Student looks at pictograph, but does not know where to start.	2. Student reads pictographs, but counts one picture twice or mixes up the number word sequence.  "1, 2, 3, 5, 6"	3. Student reads pictographs, but struggles to interpret data to answer "how many" questions.
Observations/Documentation		
4. Student reads pictographs, but struggles to interpret data to answer comparison questions (e.g., how many more/less).  "How do I know how many more squirrels there are?"	5. Student reads pictographs and interprets displays by noting how many more/less than other categories, but struggles to compare the two graphs to see how the information displayed is alike and how it is different.	6. Student successfully reads pictographs and interprets displays by noting how many more/less than other categories and compares graphs using math language.
Observations/Documentation		

Master 4

# Sample Line Plot

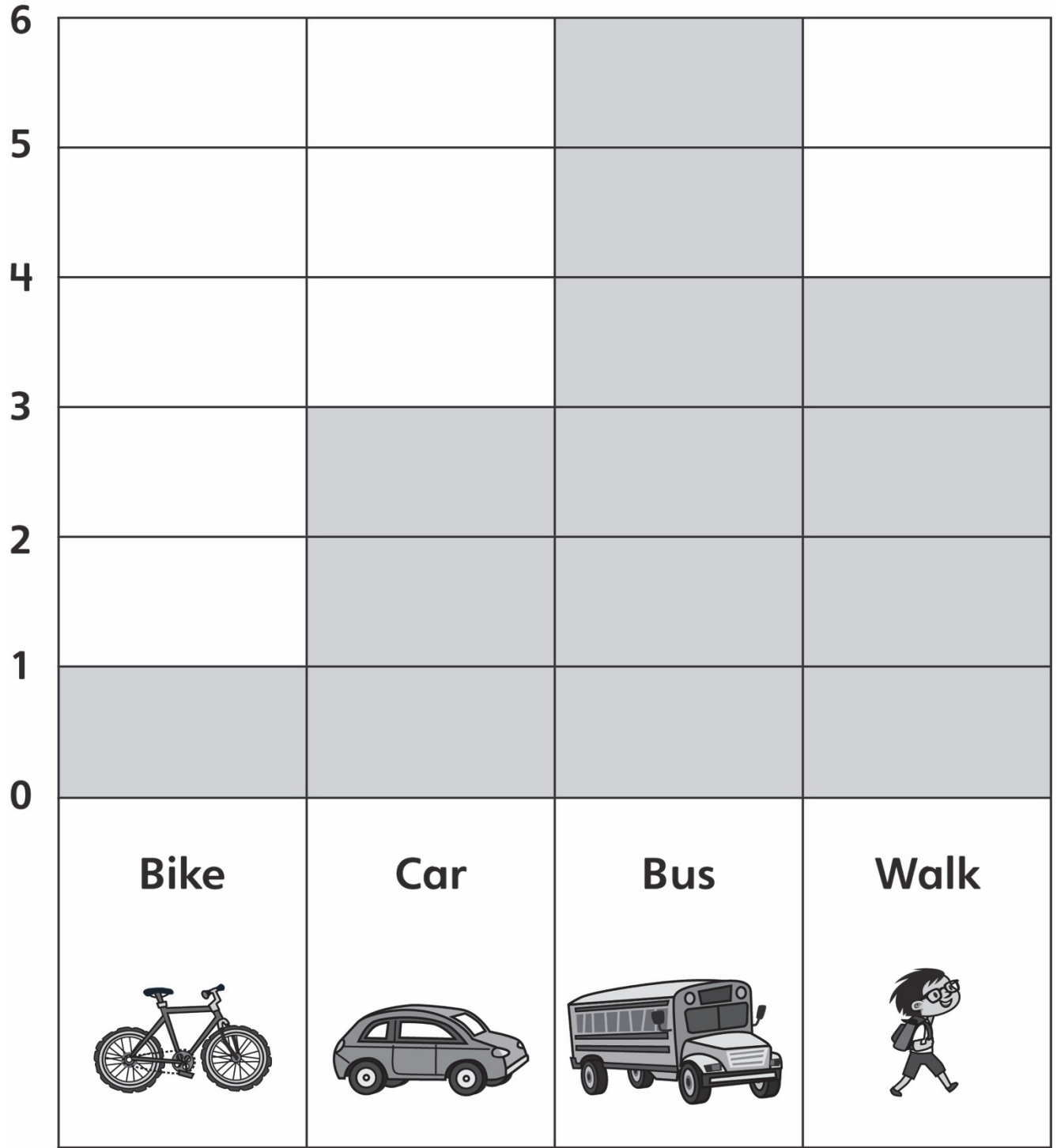
## Favourite Pets of Some Children



Master 5

# Sample Bar Graph

## How Some Students Get to School



# Master 6: Activity 2 Assessment

## Interpreting Graphs 2

<b>Reading and Interpreting Line Plots and Bar Graphs Behaviours/Strategies</b>			
1. Student looks at graphs, but does not know where to start.	2. Student reads line plot, but counts one X twice or mixes up the number word sequence.  "1, 2, 4, 5"	3. Student looks at bar graph, but struggles to read data (e.g., counts instead of using scale).	4. Student reads displays, but struggles to interpret data.
<b>Observations/Documentation</b>			
5. Student reads displays, but struggles to interpret data to answer "how many" questions.	6. Student reads displays, but struggles to interpret data to answer comparison questions (e.g., how many more/less).	7. Student reads and interprets displays by noting how many more/less than other categories, but struggles to determine whether graphs show same data.	8. Student successfully interprets displays by noting how many more/less than other categories and determines whether graphs show same data.
<b>Observations/Documentation</b>			

Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 7**

## Our Survey

Our question:

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Possible answers:

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Our findings:

What this tells us:

# Master 8: Activity 3 Assessment

## Creating a Survey

Conducting Surveys Behaviours/Strategies		
<p>1. Student thinks of a topic, but is unable to formulate a question that can be addressed through a survey.</p> <p>"My favourite animal is a panda."</p>	<p>2. Student formulates a question that can be addressed through a survey, but does not include sample responses or includes unreasonable responses.</p> <p>"Which fruit do you like best?"</p>	<p>3. Student formulates a question that can be addressed through a survey, but when collecting data, asks some students more than once.</p>
Observations/Documentation		
<p>4. Student formulates a question that can be addressed through a survey, but when collecting data, struggles to record responses using simple records.</p>  <p>"Which fruit do you like best: apples, oranges, strawberries?"</p>		
Observations/Documentation		
<p>6. Student successfully formulates a question that can be addressed through a survey, collects data using simple records, and uses data to draw conclusions.</p>	<p>5. Student formulates a question that can be addressed through a survey and collects data using simple records, but struggles to use data to draw conclusions.</p>	
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 9a**

## Graphing Mat (Columns Divided)

**Note:** Choose a graphing mat with columns divided or with columns not divided, depending on students' needs.


Name \_\_\_\_\_ Date \_\_\_\_\_

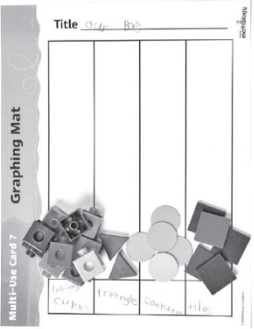
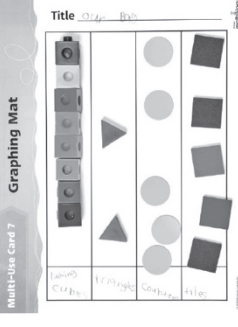
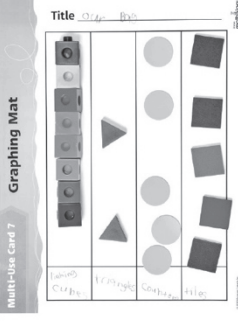
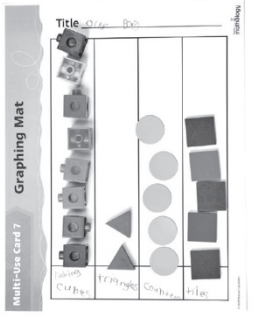
**Master 9b**

# Graphing Mat (Columns not Divided)




# Master 10: Activity 4 Assessment

## Making Graphs 1

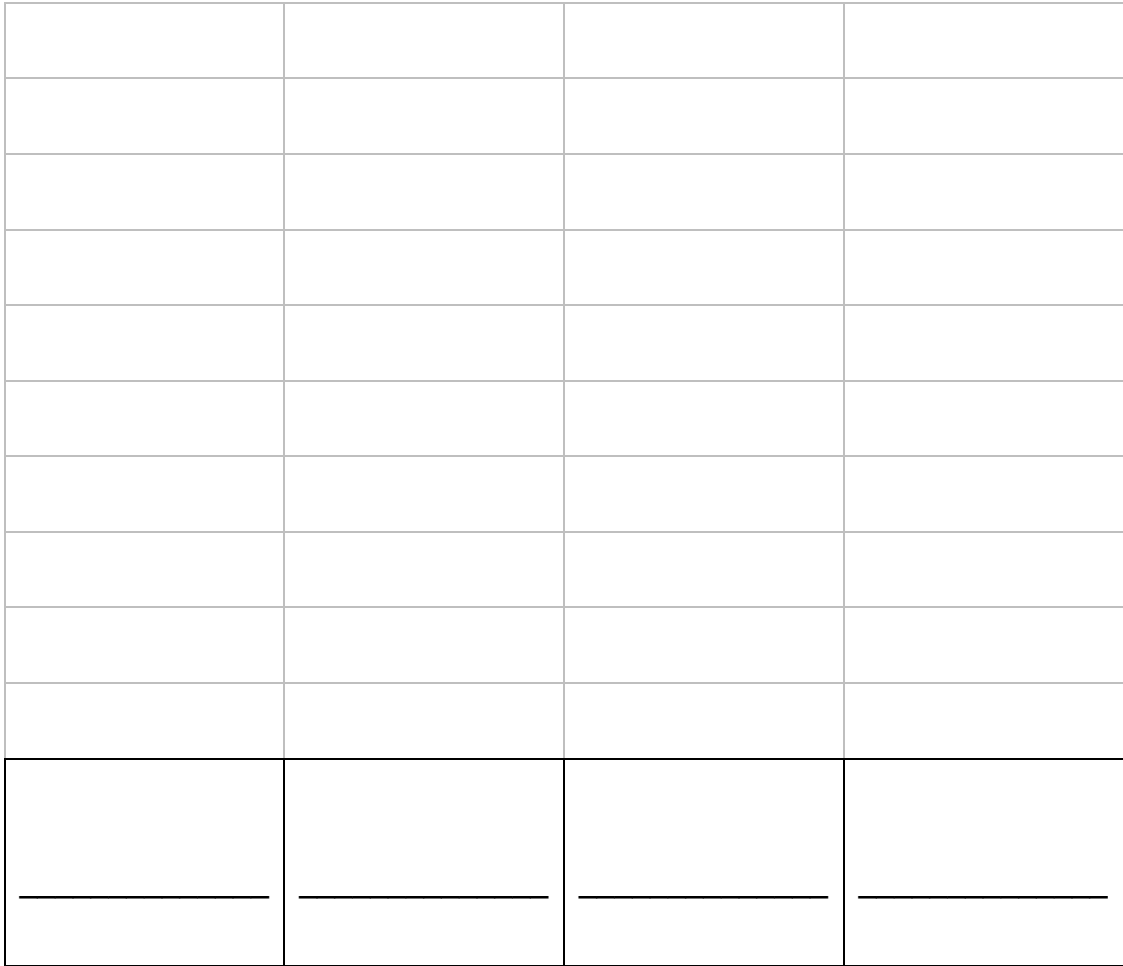
<b>Making Concrete Graphs and Pictographs Behaviours/Strategies</b>			
<p>1. Student labels columns, but is unable to sort objects to create display.</p>		<p>2. Student creates display, but objects/pictures are not equally spaced and aligned or pictures have different sizes.</p> 	<p>3. Student creates display, but objects/pictures are not equally spaced and aligned or pictures have different sizes.</p> 
<p>4. Student successfully creates displays using objects or simple pictographs.</p> 			
<b>Observations/Documentation</b>			
<b>Reading and Interpreting Graphs Behaviours/Strategies</b>			
<p>1. Student reads displays, but counts objects/pictures twice or mixes up the number word sequence.</p>	<p>2. Student reads displays, but struggles to interpret data to answer "how many" questions.</p>	<p>3. Student reads displays, but struggles to interpret data to answer comparison questions (e.g., how many more/less).</p>	<p>4. Student successfully interprets displays by noting how many more/less than other categories.</p>
<b>Observations/Documentation</b>			

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 11

# Line Plot Template

Graph title: \_\_\_\_\_

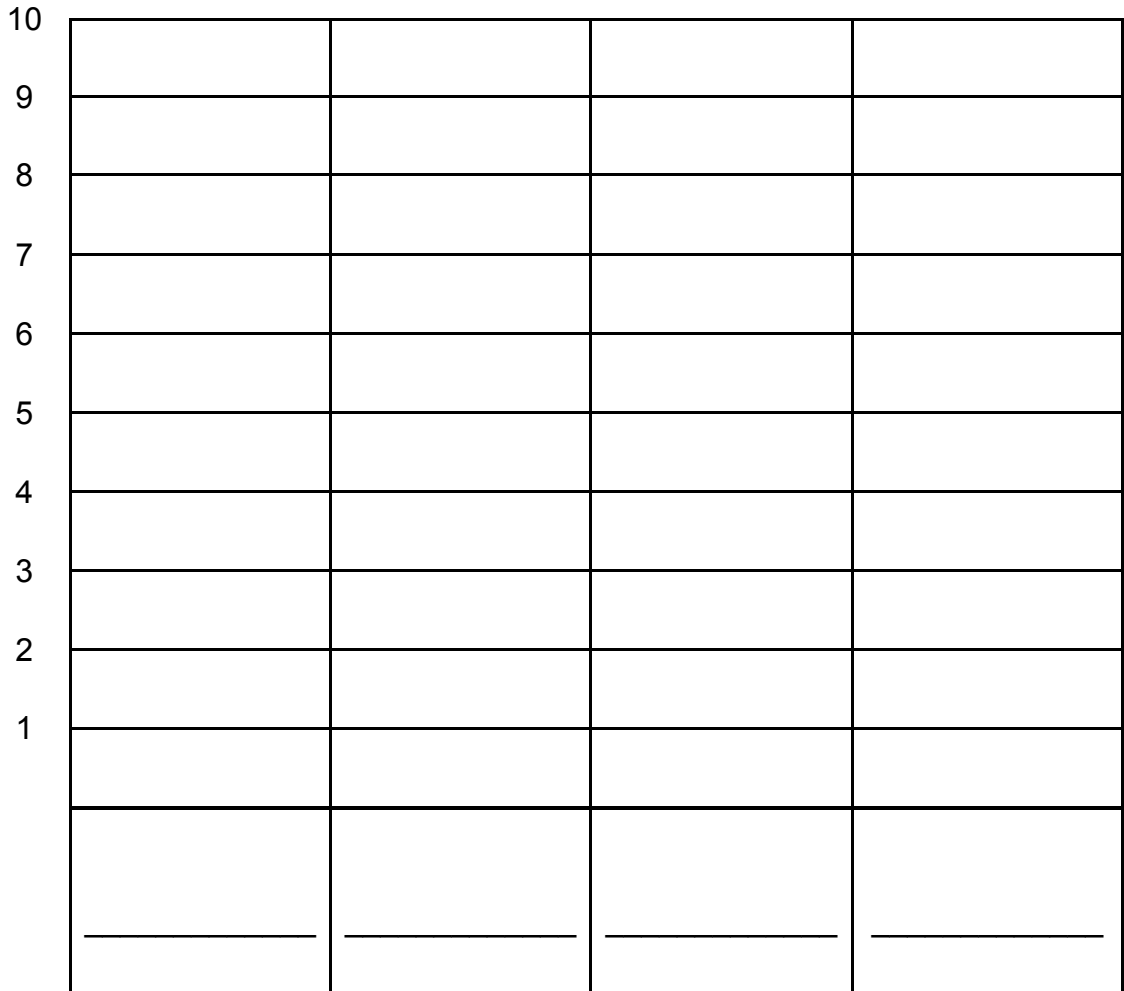


Name \_\_\_\_\_ Date \_\_\_\_\_

Master 12

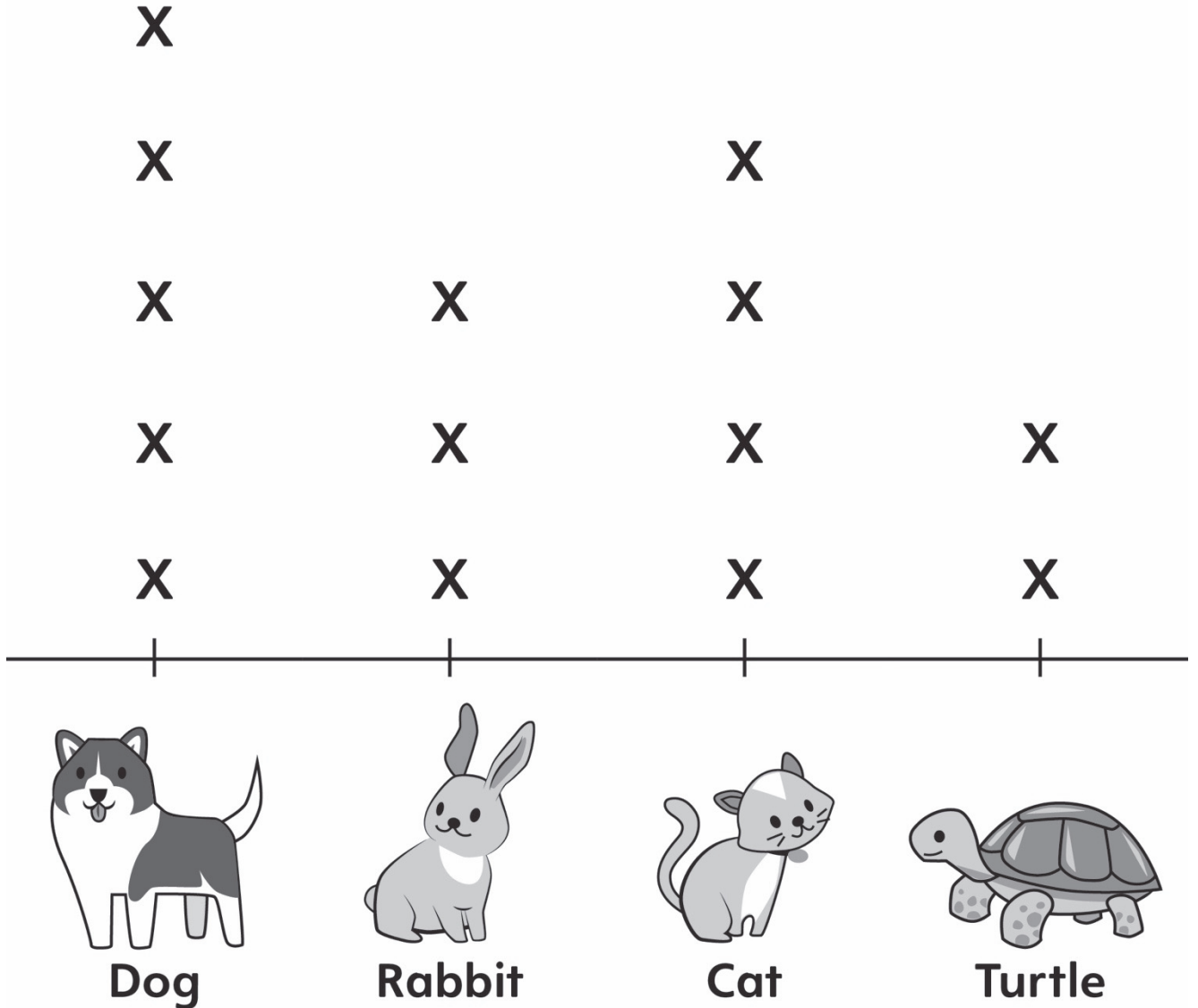
# Bar Graph Template

Graph title: \_\_\_\_\_



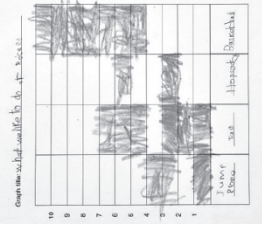
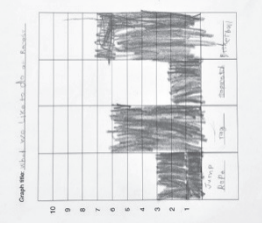
# Sample Line Plot

## Favourite Pets of Some Children









# Master 14: Activity 5 Assessment

## Making Graphs 2

<b>Making Line Plots and Bar Graphs Behaviours/Strategies</b>			
<p>1. Student chooses a template and attempts to create a one-to-one display (e.g., line plot, bar graph), but does not include labels.</p>	<p>2. Student creates a one-to-one display, but struggles to translate information from tally chart to graph (i.e., numbers in tally chart and graph do not match).</p>	<p>3. Student creates a one-to-one display, but bunches Xs together or does not space Xs or shaded rectangles equally.</p> 	<p>4. Student successfully creates one-to-one displays (e.g., line plot, bar graph).</p> 
<b>Observations/Documentation</b>			
<b>Reading and Interpreting Graphs Behaviours/Strategies</b>			
<p>1. Student reads displays, but counts Xs or coloured rectangles twice or mixes up the number word sequence. "1, 2, 3, 5, 6"</p>	<p>2. Student reads displays, but struggles to interpret data to answer "how many" questions.</p>	<p>3. Student reads displays, but struggles to interpret data to answer comparison questions (e.g., how many more/less).</p>	<p>4. Student successfully interprets displays by noting how many more/less than other categories.</p>
<b>Observations/Documentation</b>			


Master 15

# Trees Planted

<p><b>Black Spruce</b></p> 	<p><b>Jack Pine</b></p> 	<p><b>Oak</b></p> 
		

# Master 16a: Activity 6 Assessment

## Data Management: Consolidation

<b>Conducting Surveys Behaviours/Strategies</b>			
1. Student thinks of a topic, but is unable to formulate a question or does not include sample responses. "My favourite animal is a dog."	2. Student formulates a question, but struggles to record responses using simple records.  "Which fruit do you like best: apples, oranges, grapes?"	3. Student formulates a question that can be addressed through a survey and collects data, but struggles to use data to draw conclusions.	4. Student successfully formulates a question that can be addressed through a survey, collects data using simple records, and uses data to draw conclusions.
<b>Observations/Documentation</b>			
<b>Making, Reading, and Interpreting Graphs Behaviours/Strategies</b>			
1. Student creates a display, but struggles to translate information from tally chart to graph (i.e., numbers in tally chart and graph do not match).	2. Student creates a display, but bunches items together or does not space items or shaded rectangles equally.	3. Student reads displays, but struggles to interpret data to answer questions.	4. Student successfully interprets displays by noting how many more/less than other categories.
<b>Observations/Documentation</b>			

Big Idea	Indicators from Learning Progression									
Curriculum Expectations addressed										
Student Names										
Student can read and interpret concrete graphs and pictographs. <b>(Activities 1, 4, 6)</b>										
Student can read and interpret line plots and bar graphs. <b>(Activities 2, 5, 6)</b>										
Student can write a survey question with a limited number of reasonable responses. <b>(Activities 3, 6)</b>										
Student can ask a survey question to collect data, and can use collected data to draw conclusions. <b>(Activities 3, 6)</b>										
Student can create concrete graphs and pictographs to display data. <b>(Activities 4, 6)</b>										
Student can create line plots and bar graphs to display data. <b>(Activities 5, 6)</b>										
Student uses math language when answering questions and comparing data. <b>(Activity 1, 2, 3, 4, 5, 6)</b>										
Student can decide whether two graphs show the same data. <b>(Activities 2, 5)</b>										



Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Reads and interprets concrete graphs and pictographs. <b>(Activities 1, 4, 6)</b>			
Reads and interprets line plots and bar graphs. <b>(Activities 2, 5, 6)</b>			
Writes a survey question with a limited number of reasonable responses. <b>(Activities 3, 6)</b>			
Asks a survey question to collect data, and uses collected data to draw conclusions. <b>(Activities 3, 6)</b>			
Creates concrete graphs and pictographs to display data. <b>(Activities 4, 6)</b>			
Creates line plots and bar graphs to display data. <b>(Activities 5, 6)</b>			
Uses math language when answering questions and comparing data. <b>(Activity 1, 2, 3, 4, 5, 6)</b>			
Decides whether two graphs show the same data. <b>(Activities 2, 5)</b>			

Strengths:

Next Steps:

# Curriculum Correlation

## Data Management and Probability Cluster 2: Probability and Chance

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<b>Overall Expectation</b> <b>Probability:</b> describe probability in everyday situations and simple games.			
<b>D2.8</b> describe probability as a measure of the likelihood that an event will occur, using mathematical language (i.e., <i>impossible, unlikely, less likely, equally likely, more likely, certain</i> )	<b>Below Grade: Intervention</b> 3: The Language of Chance 4: More or Less Likely?  <b>On Grade: Teacher Cards</b> 7: Likelihood of Events (D2.8) 8: Conducting Experiments (D2.8, D2.9) 9: Probability and Chance Consolidation (D2.8, D2.9)	<b>Above Grade:</b> <ul style="list-style-type: none"> <li>Chance (Activities 7, 8, 9)</li> </ul>	<b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b>  Using the Language of Chance to Describe and Predict Events <ul style="list-style-type: none"> <li>- Describes the likelihood of an event (e.g., impossible, unlikely, certain). (Activities 7, 8, 9; MED 2: 2)</li> <li>- Makes predictions based on the question, context, and data presented. (Activities 8, 9; MED 2: 1)</li> <li>- Compares the likelihood of two events (e.g., more likely, less likely, equally likely). (Activities 7, 8, 9; MED 2: 2)</li> <li>- Predicts the likelihood of an outcome in simple probability experiments or games. (Activities 8, 9; MED 2: 1)</li> </ul>
<b>D2.9</b> describe the probability that an event will occur (e.g., getting heads when tossing a coin, landing on red when spinning a spinner), through investigation with simple games and probability experiments and using mathematical language	<b>On Grade: Math Every Day Card 2:</b> What's in the Bag? (D2.8, D2.9) Word of the Day (D2.8)		

# Curriculum Correlation


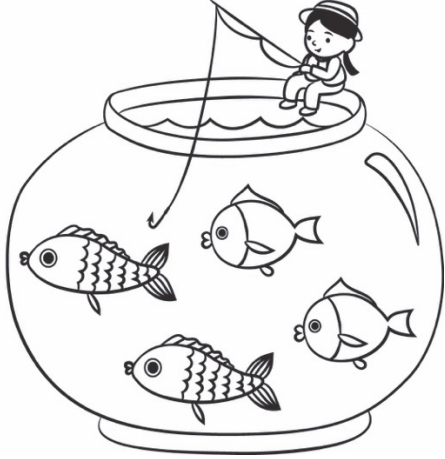
## Data Management and Probability Cluster 2: Probability and Chance


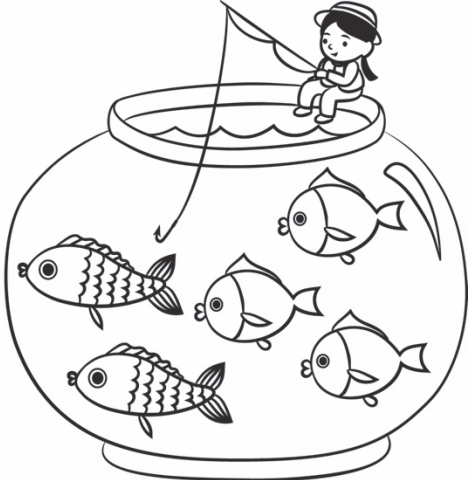
British Columbia/Yukon Territories


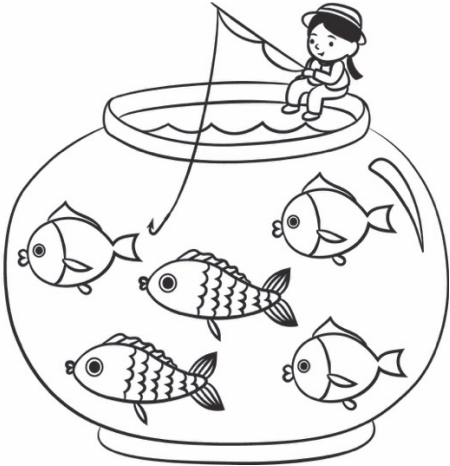
Learning Standards	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p><b>Big Idea</b> Concrete items can be represented, compared, and interpreted pictorially in graphs.</p> <p>Likelihood of familiar life events using comparative language</p> <ul style="list-style-type: none"> <li>• <b>2.31</b> using comparative language (e.g., certain, uncertain; more, less, or equally likely)</li> </ul>	<p><b>Below Grade: Intervention</b> 3: The Language of Chance 4: More or Less Likely?</p> <p><b>On Grade: Teacher Cards</b> 7: Likelihood of Events (2.31) 8: Conducting Experiments 9: Probability and Chance Consolidation</p> <p><b>On Grade: Math Every Day Card 2:</b> What's in the Bag? Word of the Day (2.31)</p>	<p><b>Above Grade:</b></p> <ul style="list-style-type: none"> <li>• Chance (Activities 7, 8, 9)</li> </ul>	<p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p>Using the Language of Chance to Describe and Predict Events</p> <ul style="list-style-type: none"> <li>- Describes the likelihood of an event (e.g., impossible, unlikely, certain). (Activities 7, 8, 9; MED 2: 2)</li> <li>- Makes predictions based on the question, context, and data presented. (Activities 8, 9; MED 2: 1)</li> <li>- Compares the likelihood of two events (e.g., more likely, less likely, equally likely). (Activities 7, 8, 9; MED 2: 2)</li> <li>- Predicts the likelihood of an outcome in simple probability experiments or games. (Activities 8, 9; MED 2: 1)</li> </ul>


Master 18a

# Value-Line Events (Part 1)

**Catch**  


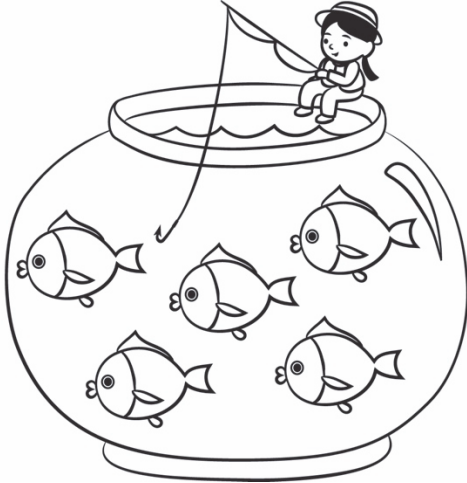
**Catch**  


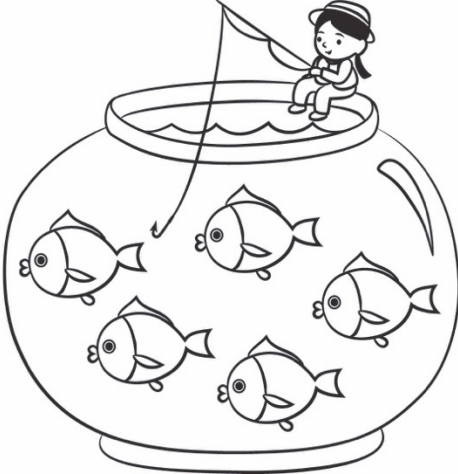
**Catch**  

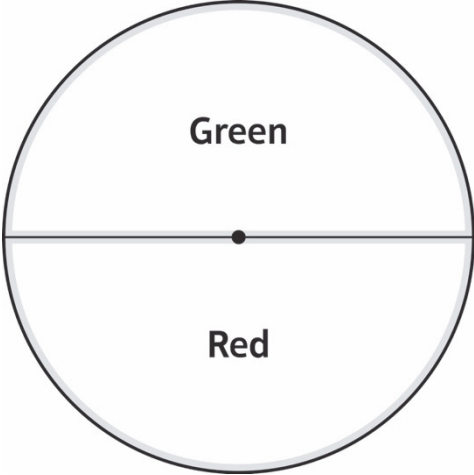


Master 18a

# Value-Line Events (Part 2)

**Catch**  

**Catch**  

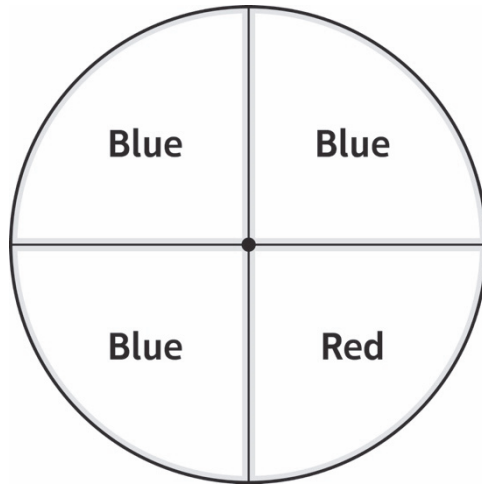
**Land on red** 



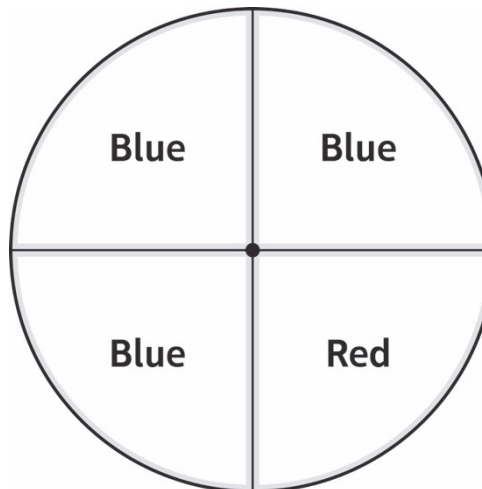
Master 18a

### Value-Line Events (Part 3)

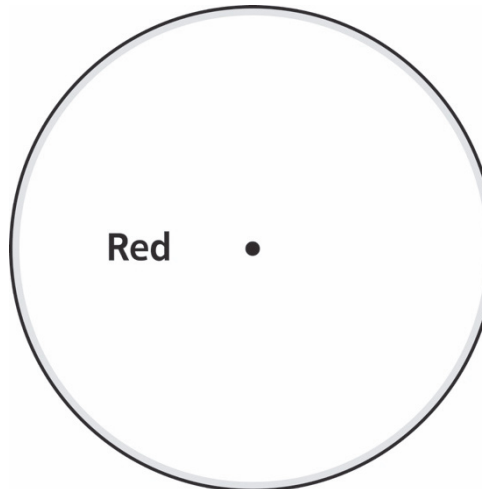
**Land on blue**



**Land on red**



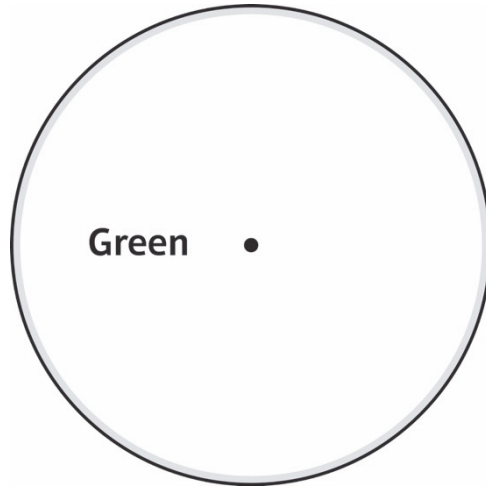
**Land on red**



Master 18a

# Value-Line Events (Part 4)

**Land on  
yellow**



**Get a green  
marble**

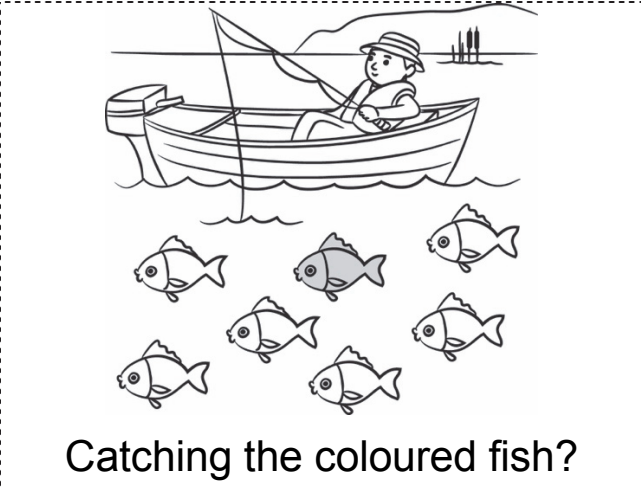


**Get a yellow  
marble**

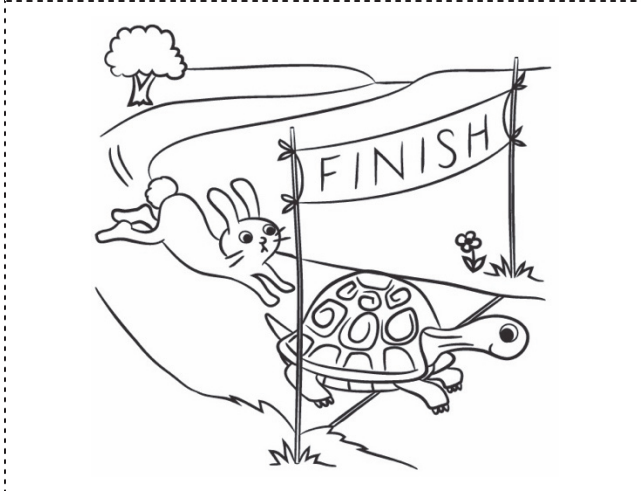


Master 18b

# Value-Line Events (Part 1) (for Accommodations)



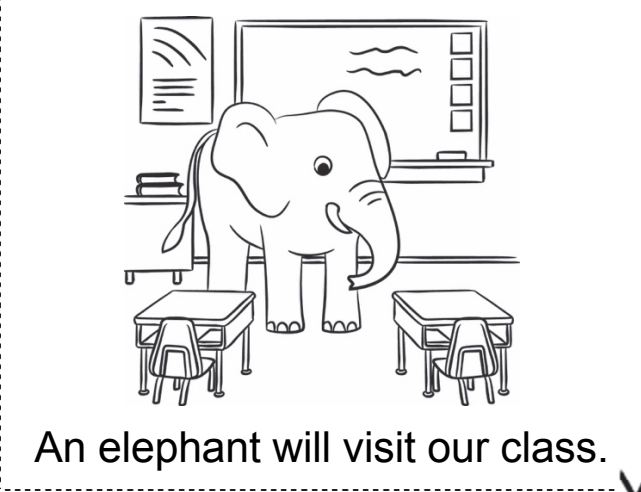
Catching the coloured fish?



We will have recess today.



We will have lunch today.



An elephant will visit our class.



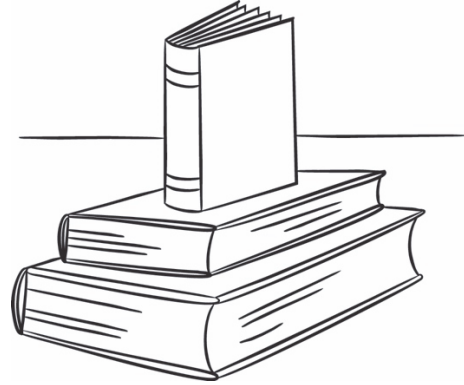


Master 18b

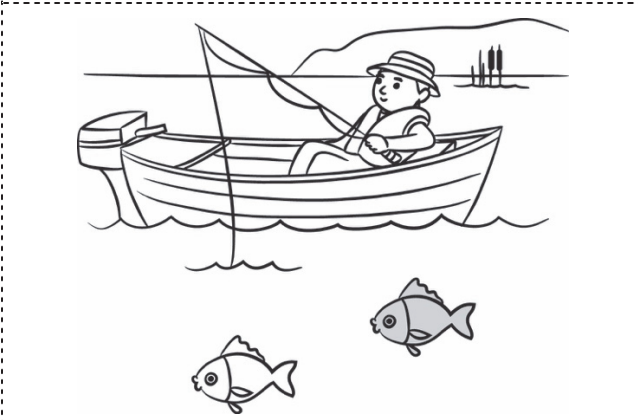
# Value-Line Events (Part 2) (for Accommodations)



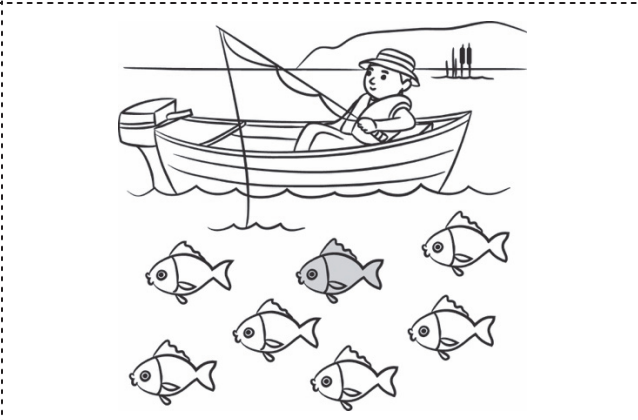
You will ride a school bus today.



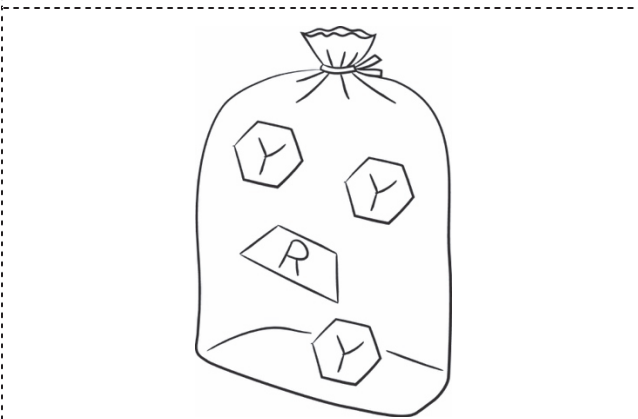
We will read today.



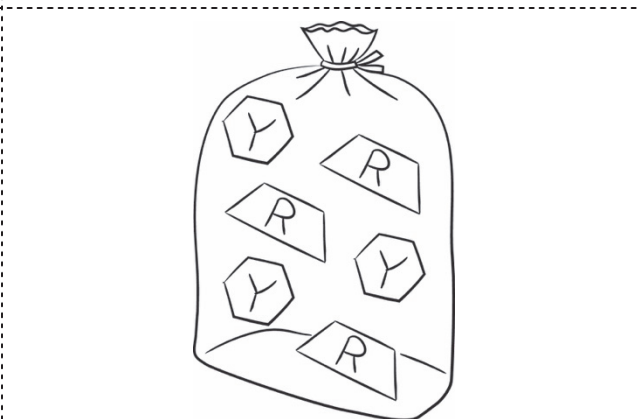
Catching the coloured fish?



Catching the coloured fish?



Pulling a red trapezoid?



Pulling a red trapezoid?



Master 19

# Sample Value Line



Always/Certain

More Likely

Equally Likely

Less Likely

Never/Impossible

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 20a

## Value-Line Words

**Impossible**

**Certain**



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 20b

## Value-Line Words

**Never**

**Always**



Master 20c

## Value-Line Words

**More Likely**

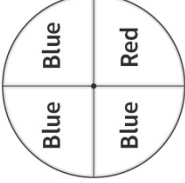
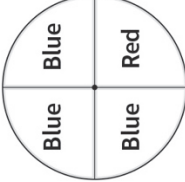


**Less Likely**

**Equally Likely**



# Master 21: Activity 7 Assessment

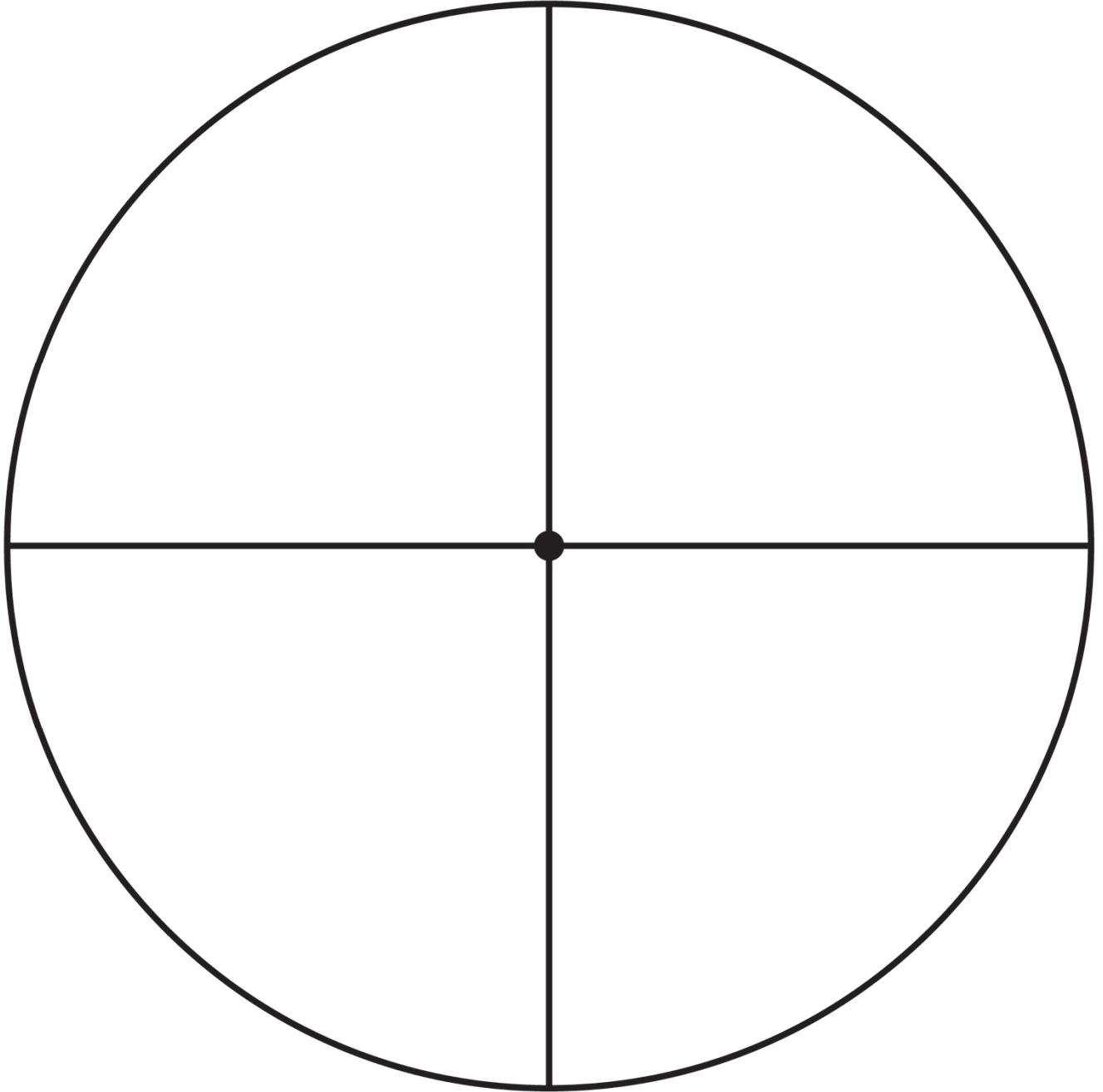
## Likelihood of Events

Describing the Likelihood of Events Behaviours/Strategies	
<p>1. Student draws pictures randomly along the line and is unable to describe the likelihood of events.</p>	<p>2. Student attempts to describe the likelihood of events, but decision is based on beliefs or what he or she wants to happen.</p>  <p>“This spinner will land on red because red is my favourite colour.”</p>
<p>3. Student describes the likelihood of some events, but mixes up or misuses some chance words (e.g., mixes up <i>less likely</i> and <i>impossible</i>).</p>  <p>“I know it is more likely to land on blue, but I can't explain why.”</p>	
Observations/Documentation	
<p>4. Student describes the likelihood of impossible/never and certain/always events, but struggles with those that involve the comparison of events.</p> <p>“I'm not sure what to draw for more likely.”</p>	
Observations/Documentation	
<p>5. Student describes the likelihood of events and compares the likelihood of two events, but struggles to justify thinking.</p>  <p>“I drew this for less likely because it is less likely that a dinosaur will visit our class today than the principal.”</p>	
<p>6. Student describes the likelihood of events, compares the likelihood of two events, and justifies thinking.</p>  <p>“I drew a coin for equally likely because there is one head and one tail.”</p>	

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 22a

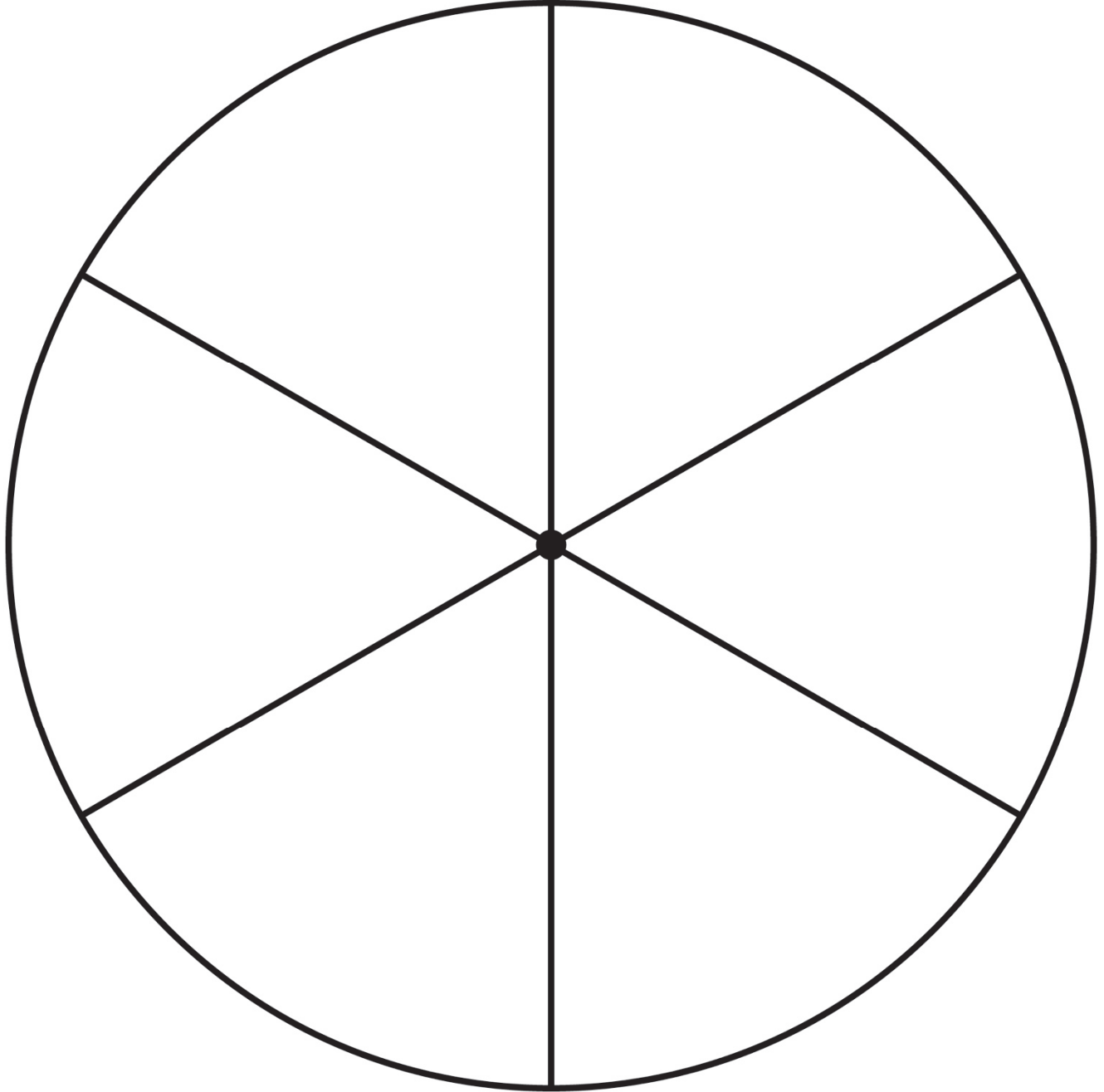
# Spinner Templates



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 22b

# Spinner Templates

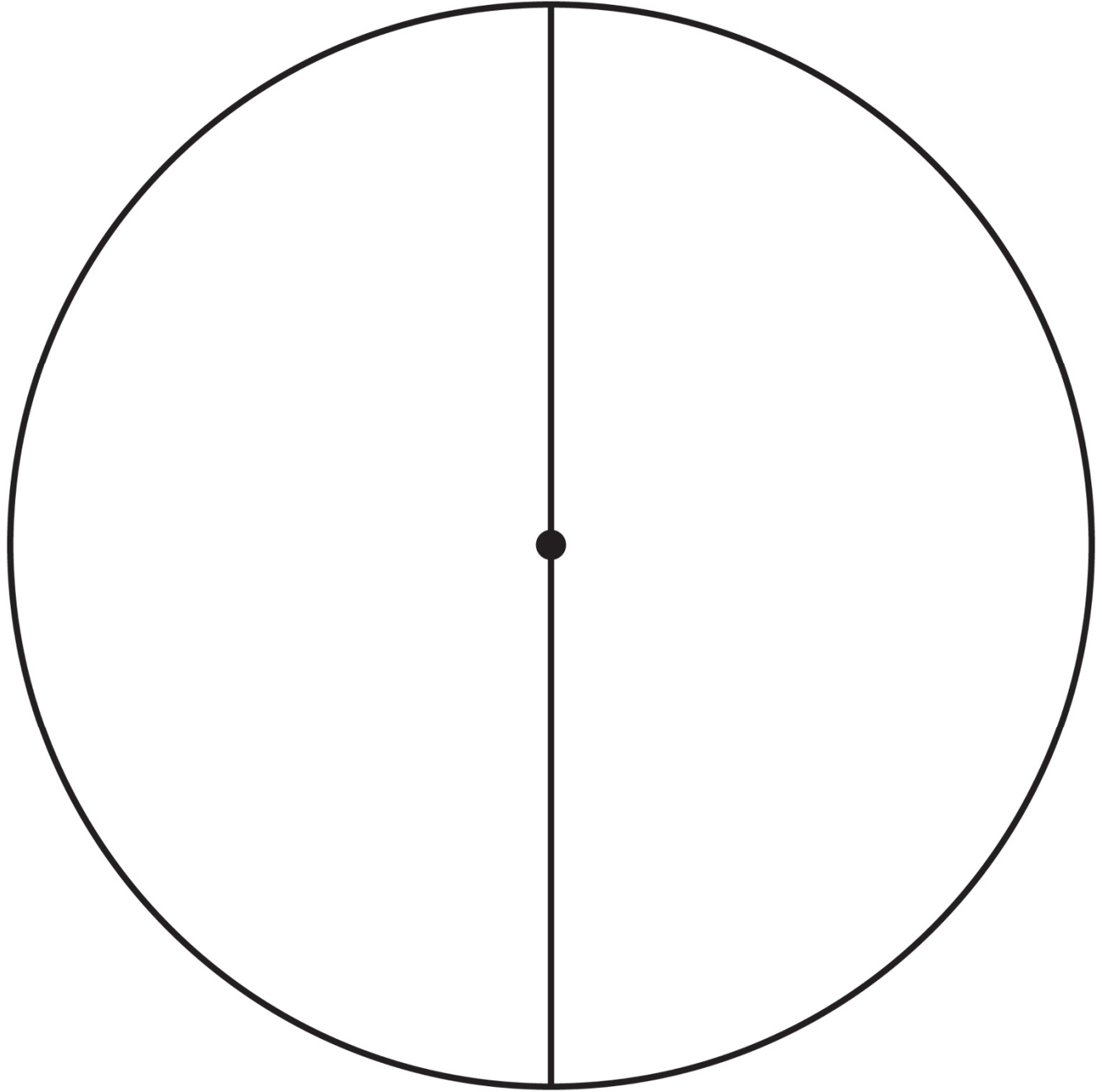




Name \_\_\_\_\_ Date \_\_\_\_\_

Master 22c

# Spinner Templates



Name \_\_\_\_\_ Date \_\_\_\_\_

**Master 23**

# Recording Sheet

<b>Colour</b>	<b>Tally</b>	<b>Total</b>

**Show your thinking using pictures or words:**

Master 24

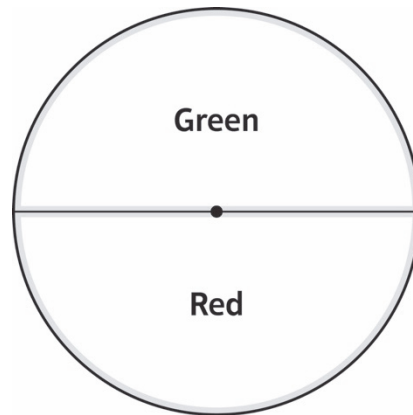
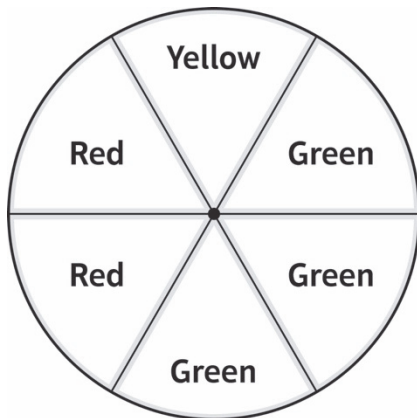
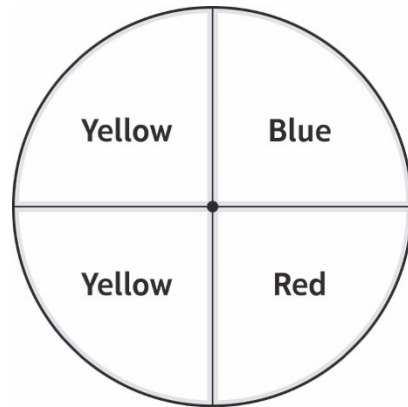
# Probability Cards

**Note:** Cards for bags of counters are for Part A of activity.  
Cards for spinners are for Part B of activity.

- Bag with
- 5 red counters
  - 5 yellow counters

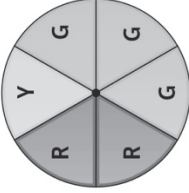
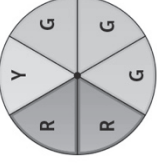
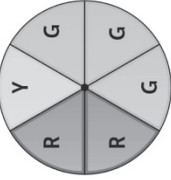
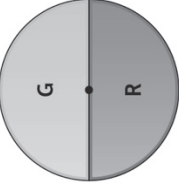
- Bag with
- 2 blue counters
  - 8 green counters

- Bag with
- 3 yellow counters
  - 1 blue counter
  - 6 green counters



# Master 25: Activity 8 Assessment

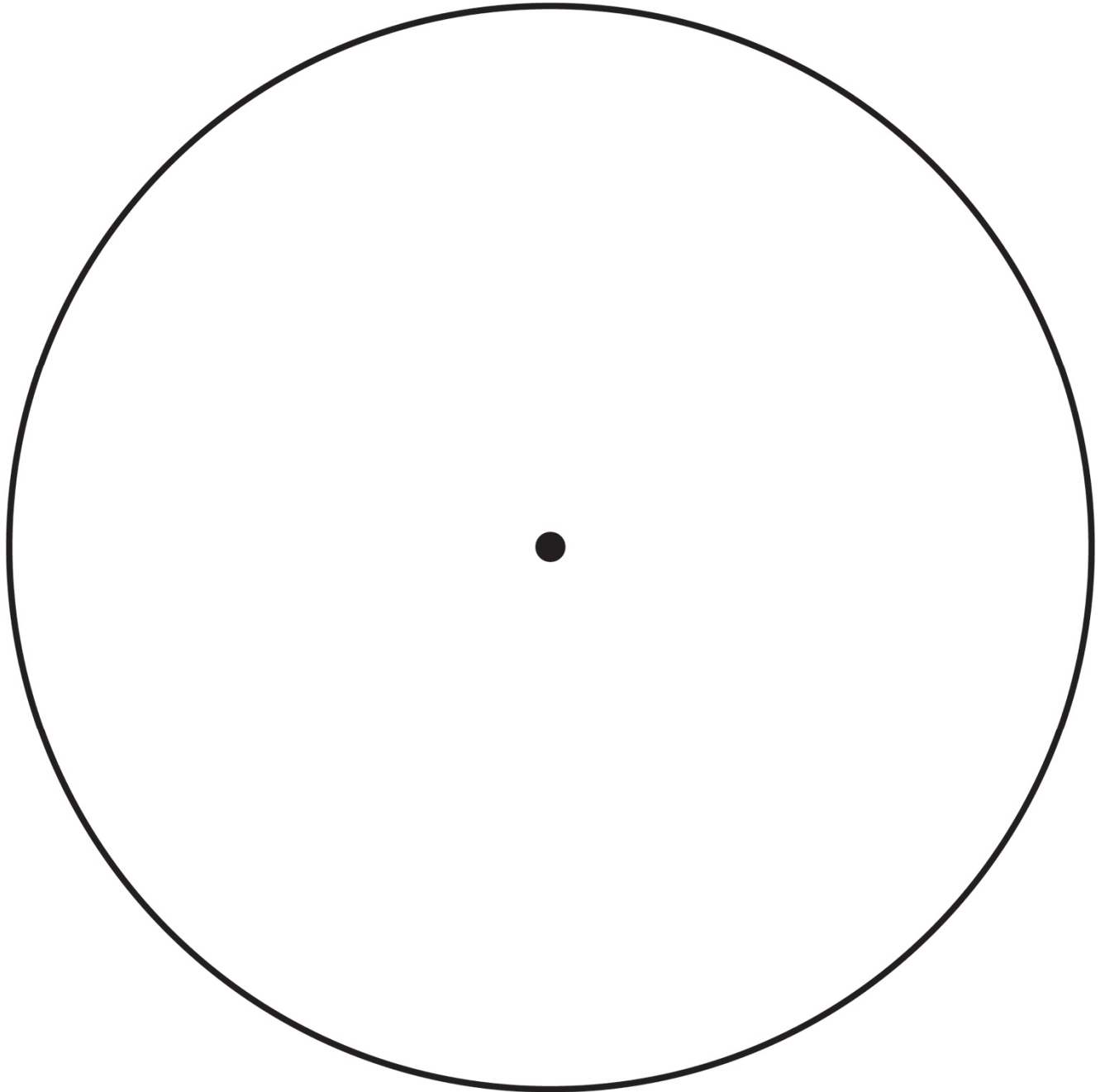
## Conducting Experiments

Exploring the Likelihood of Events Behaviours/Strategies	
<p>1. Student creates a bag or spinner, but is unable to use a chance word to describe the likelihood of events.</p> 	<p>2. Student uses a chance word to describe the likelihood of events, but decision is based on beliefs or what he or she wants to happen.</p> <p>“It is more likely that the pointer will land on yellow because yellow is my favourite colour.”</p>
<p>3. Student uses a chance word to describe the likelihood of events, but always uses <i>impossible</i> or misuses some chance words (e.g., mixes up <i>more likely</i> and <i>certain</i>).</p>  <p>“It is certain that the pointer will land on green because there are more green parts.”</p>	
Observations/Documentation	
<p>4. Student uses a chance word to describe the likelihood of events, but struggles to justify thinking.</p>  <p>“It is more likely that the pointer will land on green, but I don’t know how to explain it.”</p>	
<p>5. Student describes the likelihood of events, but does not understand why results of experiment do not match prediction.</p>  <p>“It is equally likely, but I got 12 green and 8 red. What did I do wrong?”</p>	
<p>6. Student successfully describes the likelihood of events and performs simple experiments to verify predictions.</p>	
Observations/Documentation	

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 26a

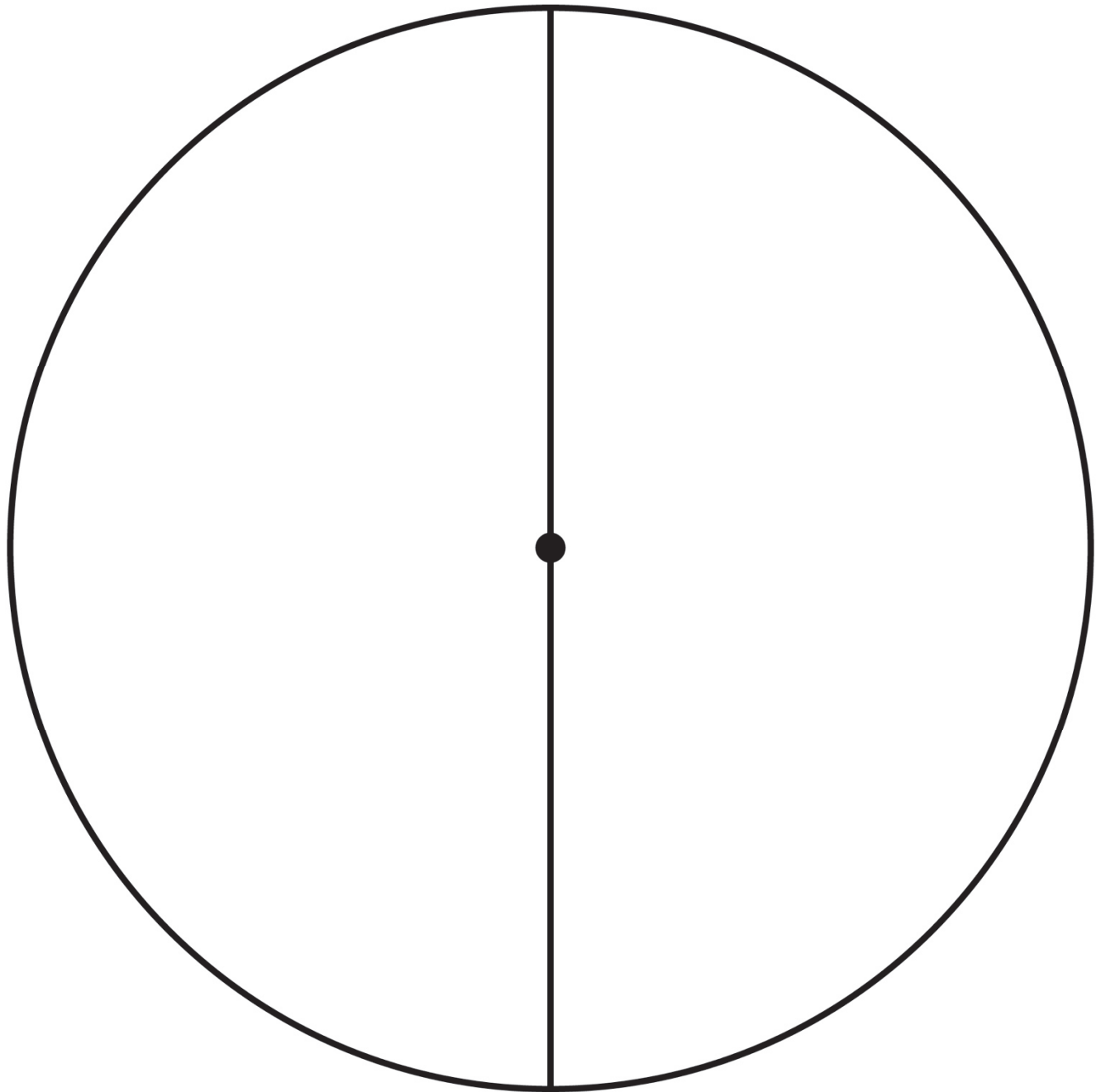
# Spinner Templates (for Extension)



Name \_\_\_\_\_ Date \_\_\_\_\_

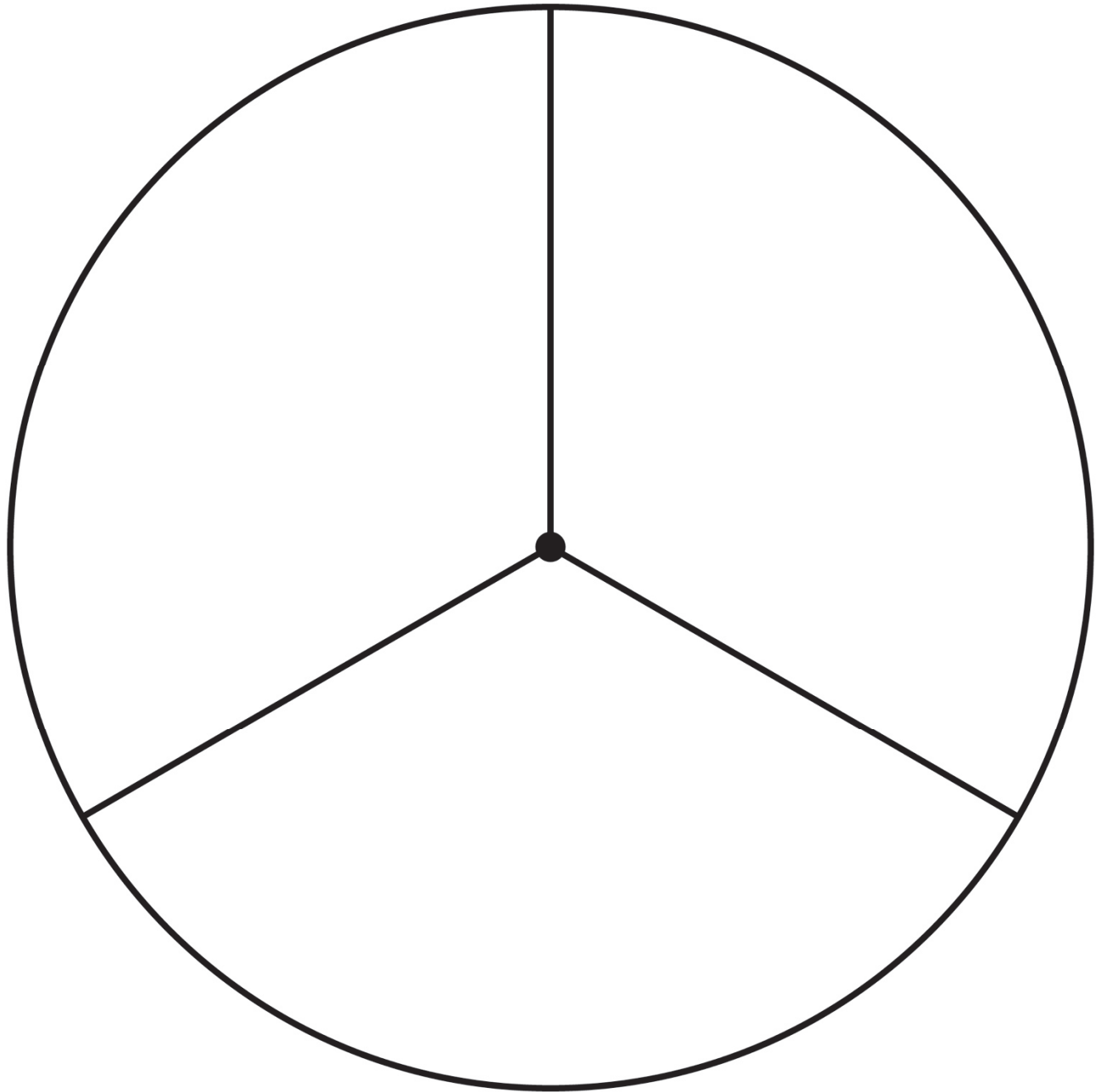
Master 26b

# Spinner Templates (for Extension)



Master 26c

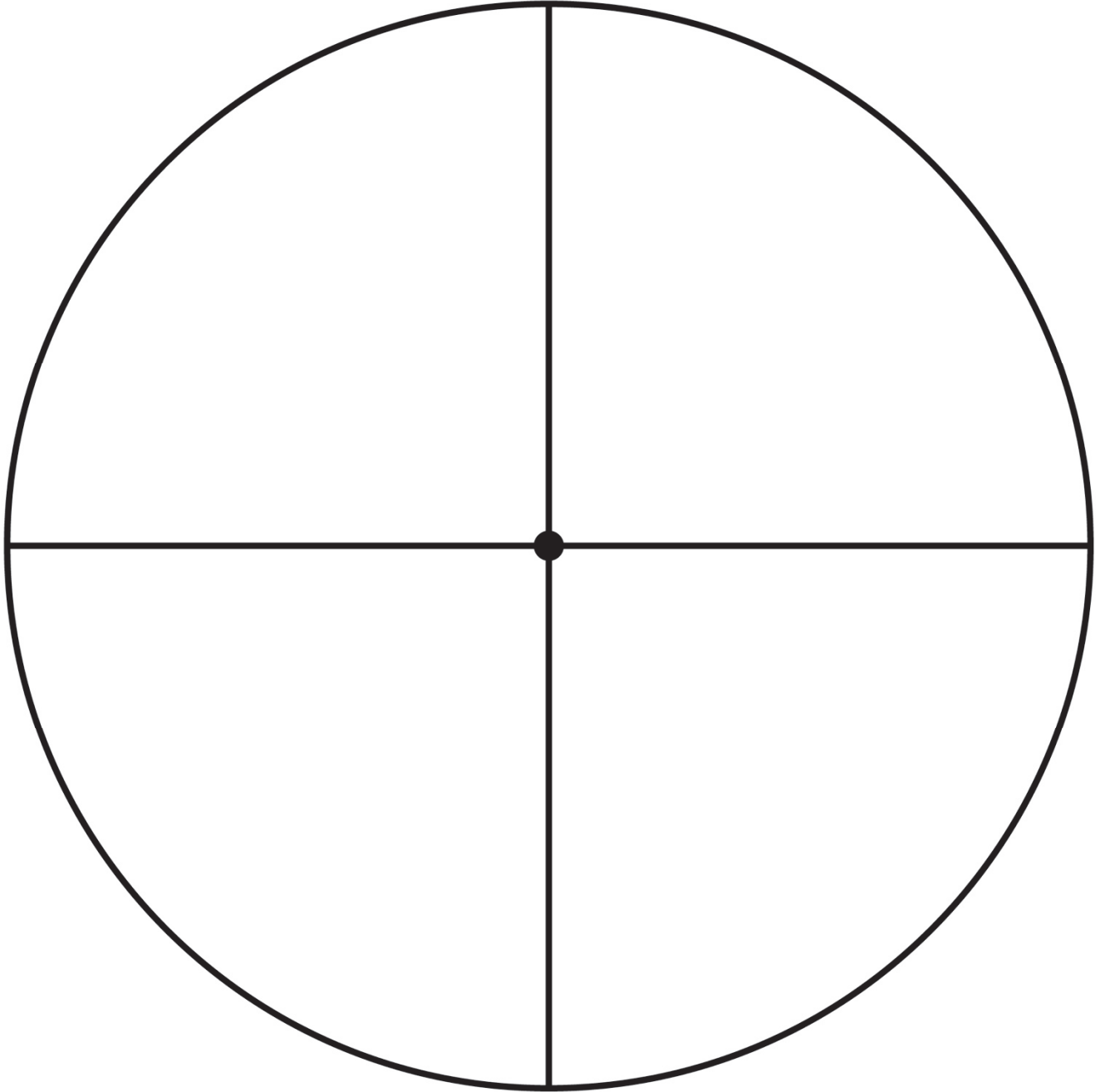
# Spinner Templates (for Extension)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 26d

# Spinner Templates (for Extension)

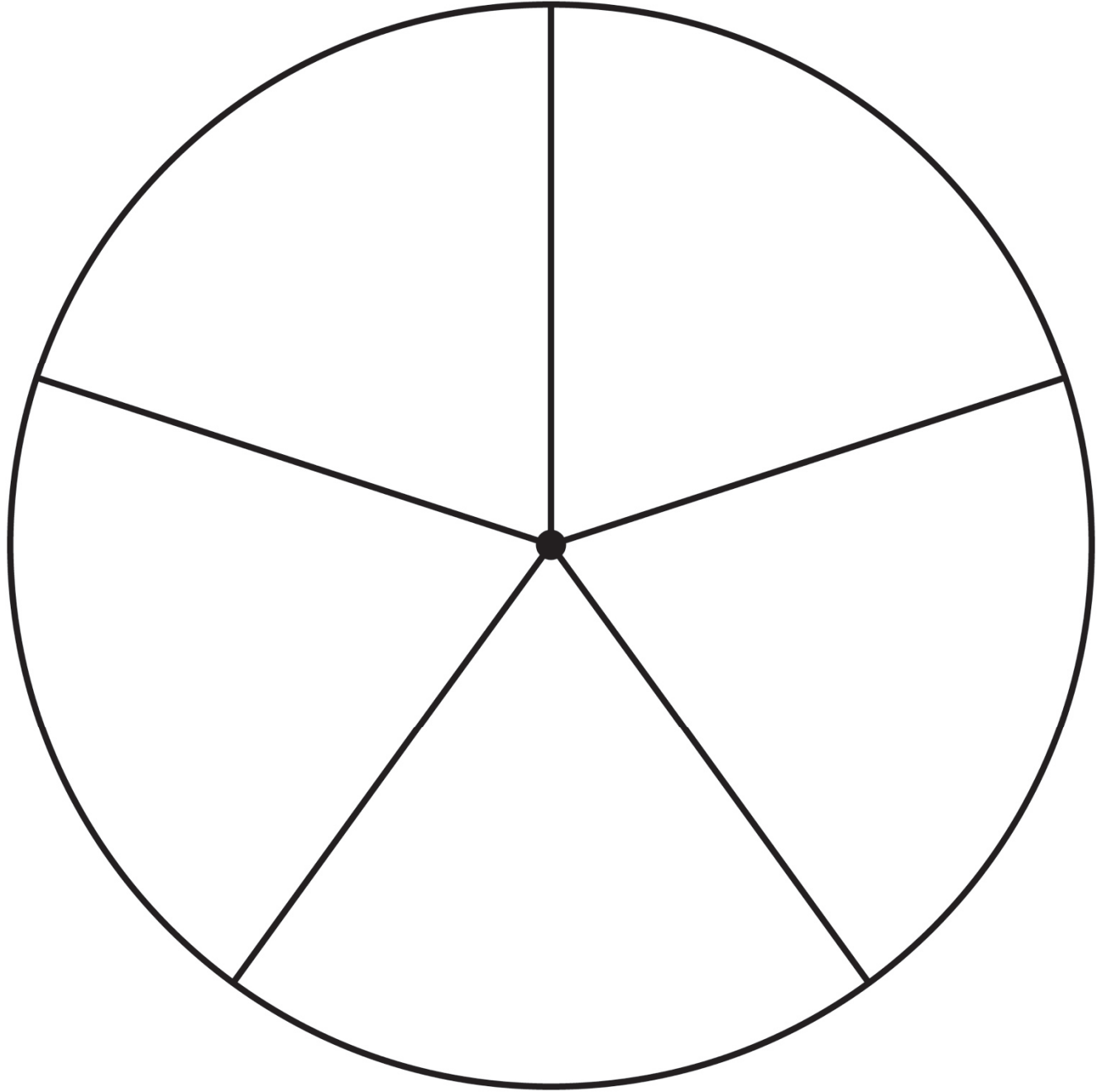




Name \_\_\_\_\_ Date \_\_\_\_\_

Master 26e

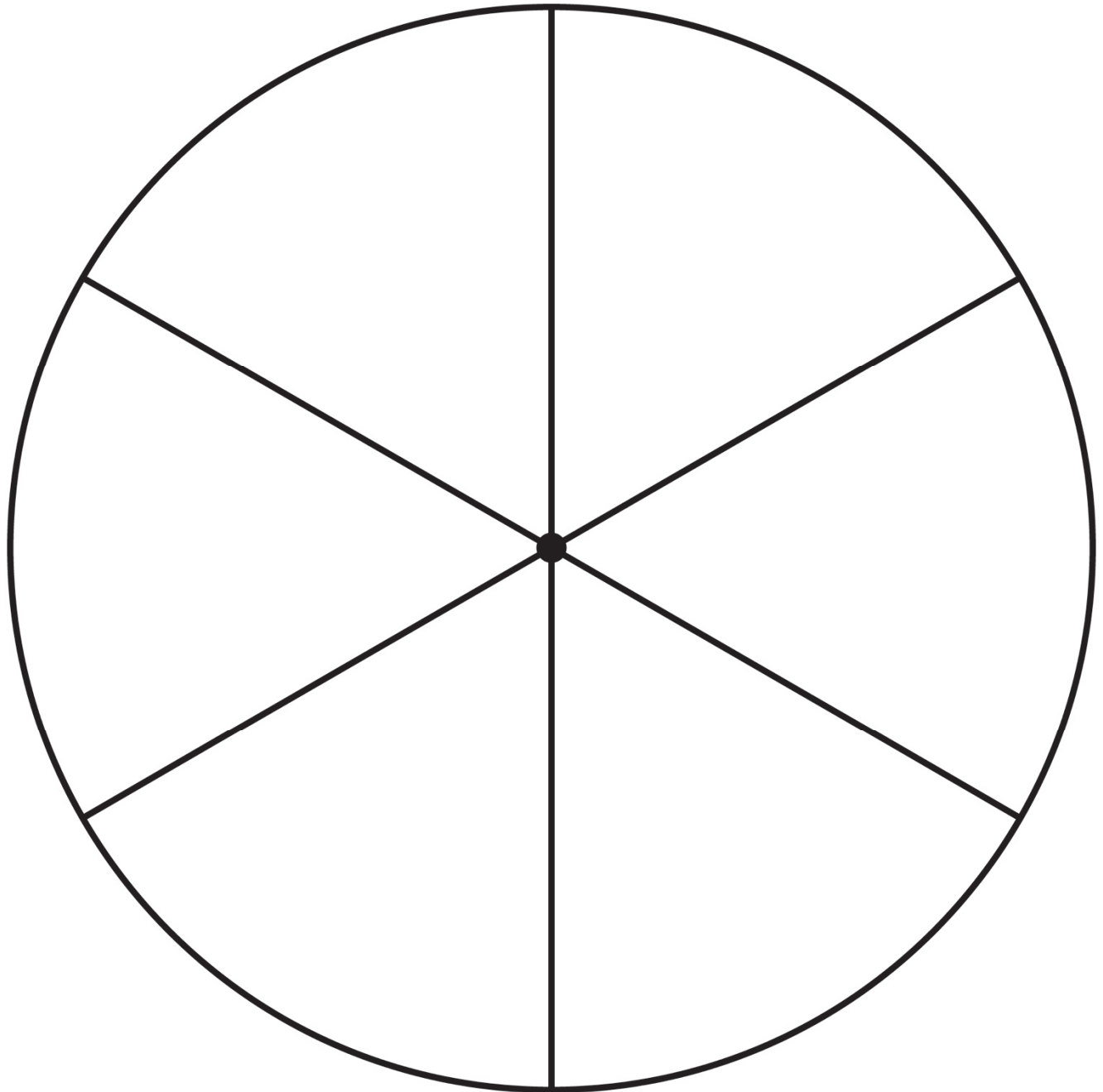
# Spinner Templates (for Extension)



Name \_\_\_\_\_ Date \_\_\_\_\_

Master 26f

# Spinner Templates (for Extension)



Master 27a

# Chance Cards

<p>Make a bag where the likelihood of taking a red counter is <b>impossible</b>.</p>	<p>Make a bag where the likelihood of taking a red counter is <b>certain</b>.</p>
<p>Make a bag where the likelihood of taking a red counter is <b>less likely</b>.</p>	<p>Make a bag where the likelihood of taking a red counter is <b>more likely</b>.</p>
<p>Make a bag where the likelihood of taking a red counter is <b>equally likely</b>.</p>	



Master 27b

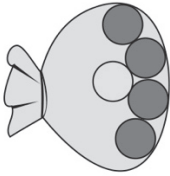
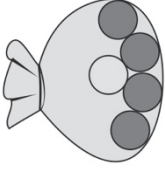
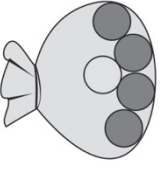
## Chance Cards (for Extension)

<p>Make a spinner where the likelihood of landing on blue is <b>impossible</b>.</p>	<p>Make a spinner where the likelihood of landing on blue is <b>certain</b>.</p>
<p>Make a spinner where the likelihood of landing on blue is <b>less likely</b>.</p>	<p>Make a spinner where the likelihood of landing on blue is <b>more likely</b>.</p>
<p>Make a spinner where the likelihood of landing on blue is <b>equally likely</b>.</p>	



# Master 28a: Activity 9 Assessment

## Probability and Chance: Consolidation

Exploring the Likelihood of Events Behaviours/Strategies		
<p>1. Student reads card, but struggles to understand chance word used to describe likelihood of event.</p>	<p>2. Student knows chance word used to describe likelihood of event, but does not know where to start to make matching bag.</p> <p>“How do I to make a bag where a red counter is more likely?”</p>	<p>3. Student knows chance word and makes matching bag, but thinks only one bag is possible.</p>  <p>“My friend has the same card and he made a different bag. He’s wrong.”</p>
Observations/Documentation		
<p>4. Student describes the likelihood of events and makes matching bag, but struggles to justify thinking.</p>  <p>“I made this bag to show red is more likely, but I can’t explain why.”</p>	<p>5. Student successfully describes the likelihood of events and makes matching bag, but does not understand why results of experiment do not match prediction.</p>  <p>“I know it is more likely to get a red counter, but I got 11 red and 9 yellow. It’s almost the same.”</p>	<p>6. Student successfully describes the likelihood of events, makes matching bag, and performs simple experiments to verify predictions.</p>
Observations/Documentation		

Big Idea					Indicators from Learning Progression				
Curriculum Expectations addressed									
Student Names									
Student can create an event/pair of events to match each chance word. <b>(Activities 7)</b>									
Student can compare events to decide which event is more/less likely or whether they are equally likely. <b>(Activities 7, 8, 9)</b>									
Student can use the language of chance to describe the likelihood of events. <b>(Activities 7, 8, 9)</b>									
Student can place events along a value line in the appropriate positions. <b>(Activities 7)</b>									
Student can use a chance word to describe a bag of counters or a spinner. <b>(Activities 8)</b>									
Student can conduct a simple probability experiment to check his or her prediction. <b>(Activities 8, 9)</b>									
Student can make a bag of counters to match an event. <b>(Activities 9)</b>									

Name: \_\_\_\_\_

	Not Observed	Sometimes	Consistently
Creates an event/pair of events to match each chance word. <b>(Activities 7)</b>			
Compares events to decide which event is more/less likely or whether they are equally likely. <b>(Activities 7, 8, 9)</b>			
Uses the language of chance to describe the likelihood of events. <b>(Activities 7, 8, 9)</b>			
Places events along a value line in the appropriate positions. <b>(Activities 7)</b>			
Uses a chance word to describe a bag of counters or a spinner. <b>(Activities 8)</b>			
Conducts a simple probability experiment to check his or her prediction. <b>(Activities 8, 9)</b>			
Makes a bag of counters to match an event. <b>(Activities 9)</b>			

Strengths:

Next Steps:

Intervention: Master 1

## ***Memories of Mooshoom and Noohkoom*** (A Métis Story)

**By Amanda Norton and Jillian Laursen**

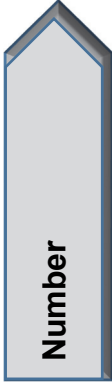
When I was a young girl, I would go up north to visit my Mooshoom (grandfather) and Noohkoom (grandmother). Many of my fondest memories are when we would go fishing together.

My Mooshoom would throw out his net; it was amazing. He would catch 40 or more fish in a morning. My siblings and I would line up the fish. We counted them by 2s to help us count faster. The fish just kept coming in.

My Noohkoom would take two fish and put them on two birch branches. She would cook them on the open fire. With the fish, we always ate Noohkoom's famous bannock.


While Noohkoom was making lunch, we would help Mooshoom clean the fish. We put them in packages of 5 to sell when we returned to the city.





# Master 2: Intervention Activity 1 Assessment

## Skip-Counting with Objects

Skip-Counting with Objects Behaviours/Strategies		
1. Student successfully counts by 1s, but struggles to partition into and skip-count by equal-sized units as he or she does not associate the skip-counting number with a quantity.  "Why do I count by 5s?"	2. Student partitions into and skip-counts by equal-sized units to 10, but struggles to know which number comes next.  "2, 4, 6, 8, 10, ?"	3. Student partitions into and skip-counts by equal-sized units, but mixes up the numbers in the skip-counting sequence.  "10, 20, 40, 30, 50"
Observations/Documentation		
4. Student partitions into and skip-counts by equal-sized units, but does not recognize that the last counting number tells how many.  "10, 20, 30, 40, 50 I'm not sure how many there are."	5. Student partitions into and skip-counts by equal-sized units, but does not recognize that the results will be the same no matter how the objects are counted.  "There were 50 when I counted by 2s. I'm not sure how many there will be when I count by 5s."	6. Student partitions into and skip-counts by equal-sized units and recognizes that the results will be the same no matter how the objects are counted.
Observations/Documentation		

Intervention: Master 3

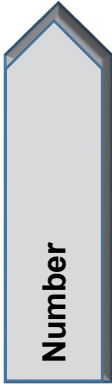
### Three Rows of Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Intervention: Master 4

## Five Rows of Hundred Chart

1	11	21	31	41
2	12	22	32	42
3	13	23	33	43
4	14	24	34	44
5	15	25	35	45
6	16	26	36	46
7	17	27	37	47
8	18	28	38	48
9	19	29	39	49
10	20	30	40	50



# Master 5: Intervention Activity 2 Assessment

## Skip-Counting Backward

Skip-Counting Backward Behaviours/Strategies																						
<p>1. Student takes away counters, but struggles to skip-count backward by factors of 10 (i.e., 2, 5) as he or she does not associate the skip-counting number with a quantity.</p>	<p>2. Student counts back by 1s instead of skip-counting backward by factors of 10.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td> </tr> <tr> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td> </tr> </table> <p>"19, 18, 17, 16, 15"</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	16	17	18	19	20
●	●	●	●	●	●	●	●	●	●													
●	●	●	●	●	●	16	17	18	19	20												
<b>Observations/Documentation</b>																						
<p>3. Student skip-counts backward by factors of 10, but does not recognize that the last counting number tells how many.</p> <p>"I'll count the number of counters left on the chart by 1s."</p>																						
<p>4. Student skip-counts backward by factors of 10, but relies on the numbers shown on the chart.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td> </tr> <tr> <td>●</td><td>●</td><td>●</td><td>●</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td> </tr> </table> <p>"20, 15"</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	15	16	17	18	19	20	<p>5. Student skip-counts backward by factors of 10, but finds one sequence (2s or 5s) easier than the other.</p> <p>"It's harder to count back by 2s."</p>	
●	●	●	●	●	●	●	●	●	●													
●	●	●	●	15	16	17	18	19	20													
<b>Observations/Documentation</b>																						
<p>6. Student fluently skip-counts backward by factors of 10 (i.e., 2, 5).</p> <p>"20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0" "30, 25, 20, 15, 10, 5, 0"</p>																						

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 6

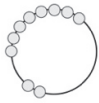
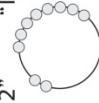
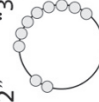

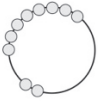

## My 10 Bracelet Recording Sheet

Number of Beads on One Side	Number of Beads on Other Side	Total Number of Beads



# Master 7: Intervention Activity 3 Assessment

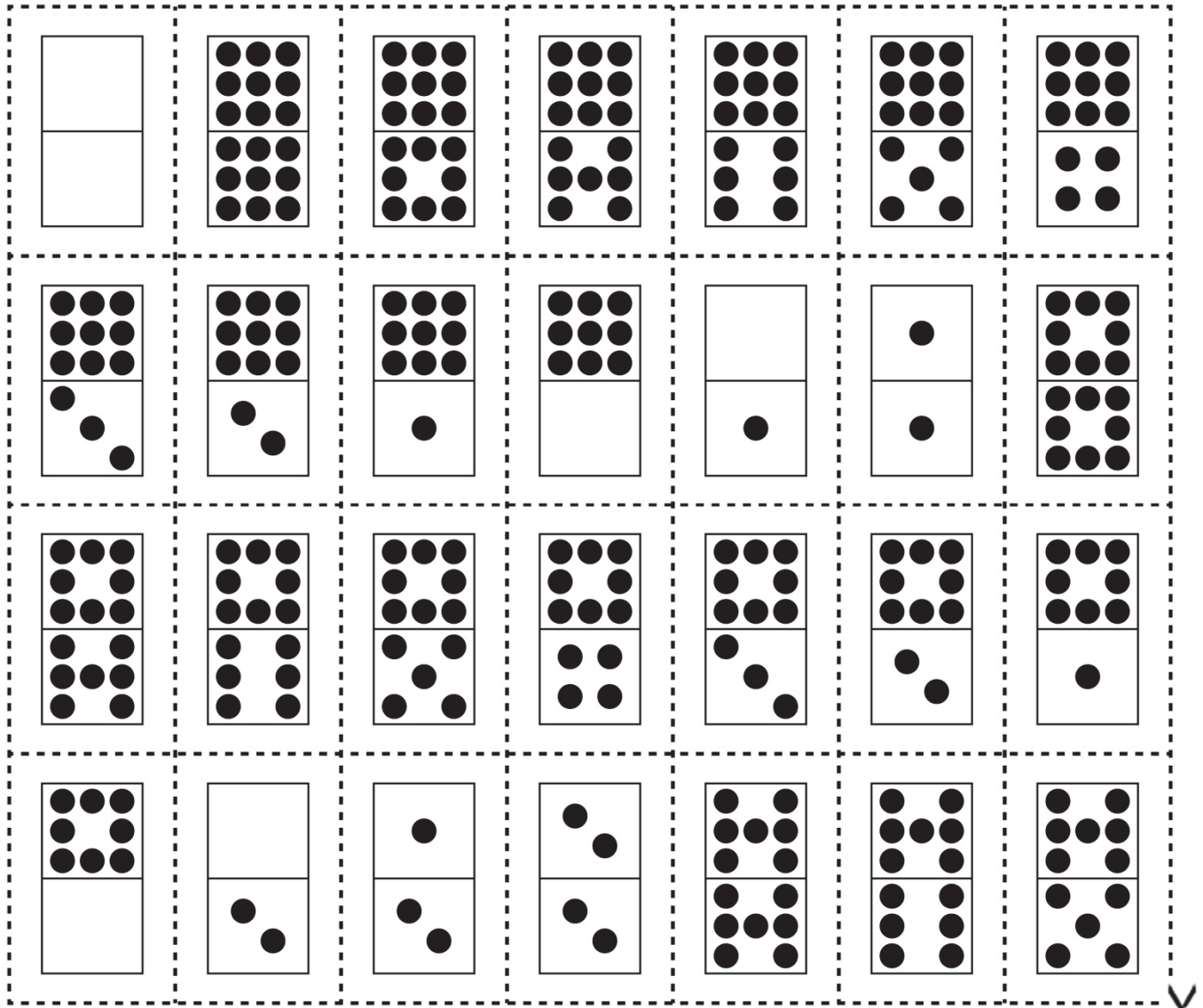
## My 10 Bracelet

Decomposing 10 Behaviours/Strategies			
<p>1. Student places 10 beads on bracelet, but does not know that rearranging the beads does not change the quantity (conservation of number).</p>  <p>"I'm not sure how many there are."</p>	<p>2. Student decomposes 10 into two parts, but does not remember the whole (counts three times to say how many).</p> <p>"1, 2" "1, 2, 3, ..., 6, 7, 8"</p>  <p>"1, 2, 3, ..., 8, 9, 10"</p>	<p>3. Student decomposes 10 into two parts, but does not remember the whole (counts on from a part to say how many).</p> <p>"2" "3, 4, 5, ..., 8, 9, 10"</p> 	<p>4. Student decomposes 10 into two parts, but starts again to find a new way.</p>  <p>"I'll push all the beads together and try again."</p>
Observations/Documentation			
<p>5. Student decomposes 10 into two parts, but moves beads randomly to find different ways.</p>  <p>"2 and 8, then 5 and 5."</p>	<p>6. Student finds possible ways to decompose 10 into two parts, but does not consider zero.</p>	<p>7. Student uses patterns to successfully find different ways to decompose 10 into two parts.</p> 	<p>8. Student uses known number relationships to successfully find all possible ways to decompose 10 into two parts.</p> <p> <math>0 + 10 = 10</math>   <math>6 + 4 = 10</math>  <math>1 + 9 = 10</math>   <math>7 + 3 = 10</math>  <math>2 + 8 = 10</math>   <math>8 + 2 = 10</math>  <math>3 + 7 = 10</math>   <math>9 + 1 = 10</math>  <math>4 + 6 = 10</math>   <math>10 + 0 = 10</math>  <math>5 + 5 = 10</math> </p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 8a

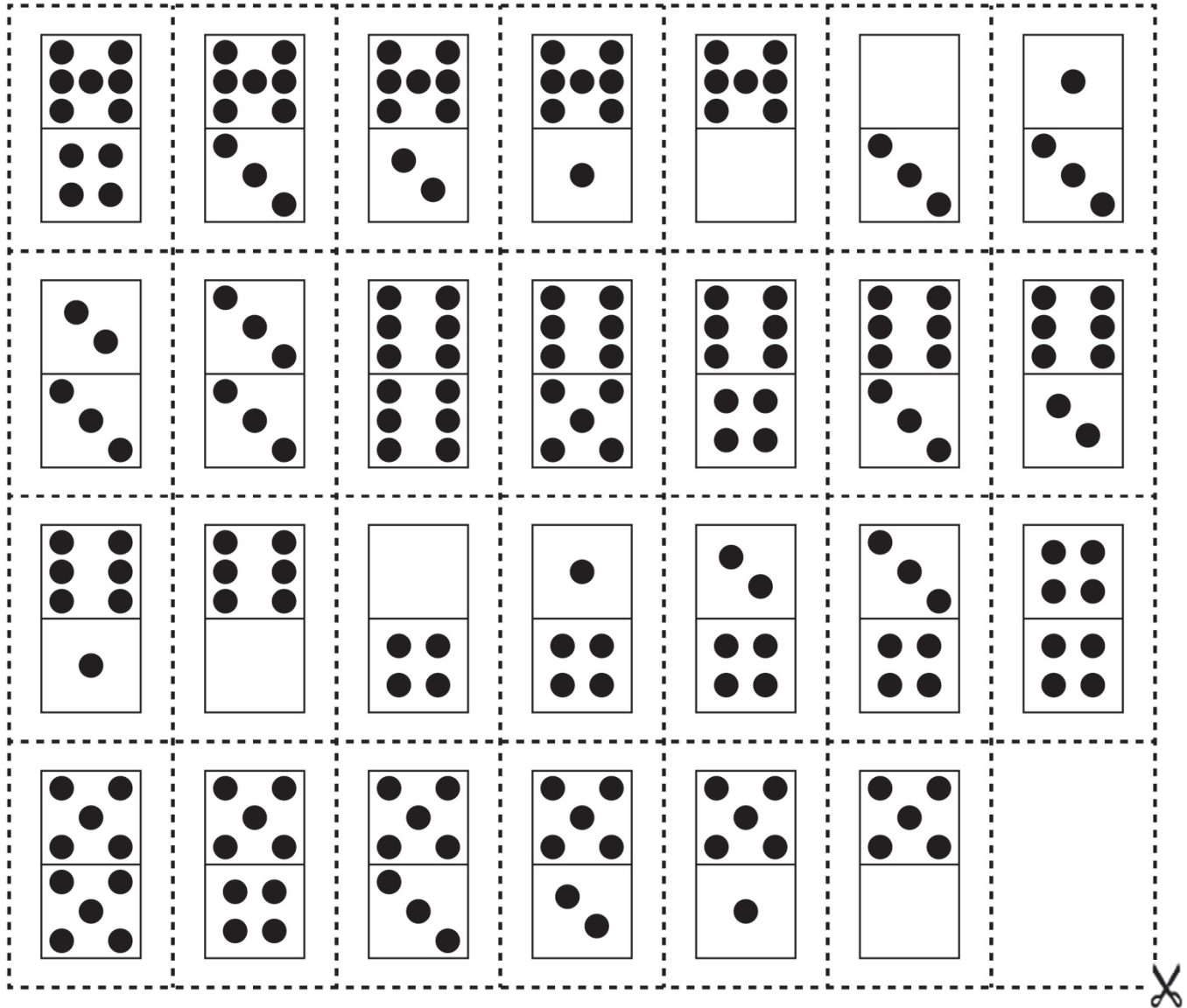
# Domino Cards



Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 8b

# Domino Cards

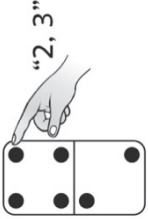
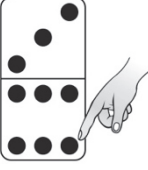
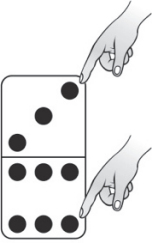
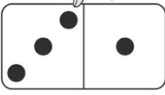
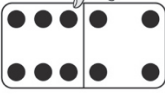
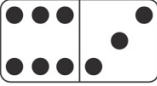
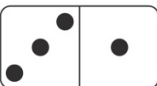






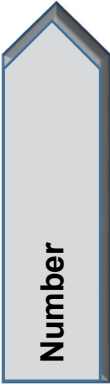


# Master 9: Intervention Activity 4 Assessment

## Who Has More?



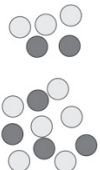

Comparing Quantities to 10 Behaviours/Strategies	
<p>1. Student turns over a domino, but struggles to say the number sequence starting with 1 and counting forward.</p> <p>"1, 2, 4, 6, 5, 7"</p>	<p>2. Student says the number sequence forward, but struggles to coordinate number words with counting actions (e.g., loses track of the count, misses dots in the count, or counts dots more than once).</p> <p>"2, 3"</p> 
<p>3. Student perceptually compares the quantities.</p>  <p>"This side looks like it has more."</p>	<p>4. Student compares quantities using one-to-one matching.</p> 
Observations/Documentation	
<p>5. Student compares quantities using counting.</p>  <p>"1, 2, 3"</p>  <p>"1, 2, 3, 4, 5, 6"</p>	<p>6. Student uses grouping to compare quantities without counting by 1s (conceptual subitizing).</p> <p>"2 groups of 3 dots" "3 dots"</p>  
<p>7. Student compares quantities using benchmarks.</p>  <p>"6 is 1 more than 5. 3 is 2 less than 5."</p>	<p>8. Student uses mental strategies to successfully and efficiently compare quantities to 10.</p>  <p>"6 comes after 3 on a number line."</p>
Observations/Documentation	





# Master 11: Intervention Activity 5 Assessment

## Adding Tens

Determining 10 or Multiples of 10 More Behaviours/Strategies																															
<p>1. Student counts three times to determine 10 or multiples of 10 more than a number (models with counters/cubes).</p>  <p>"1, 2, 3, ..., 13, 14, 15"</p>  <p>"1, 2, 3, ..., 8, 9, 10"</p> <p>"1, 2, 3, ..., 23, 24, 25"</p>	<p>2. Student counts on to determine 10 or multiples of 10 more than a number (models with counters/cubes).</p>  <p>"16, 17, 18, ..., 23, 24, 25"</p>																														
<p>3. Student counts on by ones on a hundred chart to determine 10 or multiples of 10 more than a number.</p>  <p>"24 and 20 is 44."</p>																															
Observations/Documentation																															
<p>4. Student takes jumps of 10 forward on a hundred chart to determine 10 or multiples of 10 more than a number, but does not recognize how the tens digit changes.</p> <table border="1"> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> </table> <p>"24 and 2 tens is 44. I don't see any patterns."</p>	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
21	22	23	24	25	26	27	28	29	30																						
31	32	33	34	35	36	37	38	39	40																						
41	42	43	44	45	46	47	48	49	50																						
<p>5. Student takes jumps of 10 forward on a hundred chart to determine 10 or multiples of 10 more than a number and recognizes that the tens digit increases by 1 for each ten added.</p> <table border="1"> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> </table> <p>"I added 2 tens and the tens digit increased by 2."</p>	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
21	22	23	24	25	26	27	28	29	30																						
31	32	33	34	35	36	37	38	39	40																						
41	42	43	44	45	46	47	48	49	50																						
<p>6. Student fluently determines 10 or multiples of 10 more than a number without using the hundred chart.</p>																															
Observations/Documentation																															

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 12


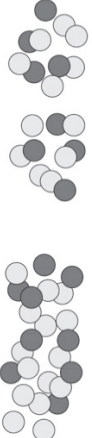

# Taking Away Tens Recording Sheet

Start Number	Number of Tens Taken Away	End Number



# Master 13: Intervention Activity 6 Assessment

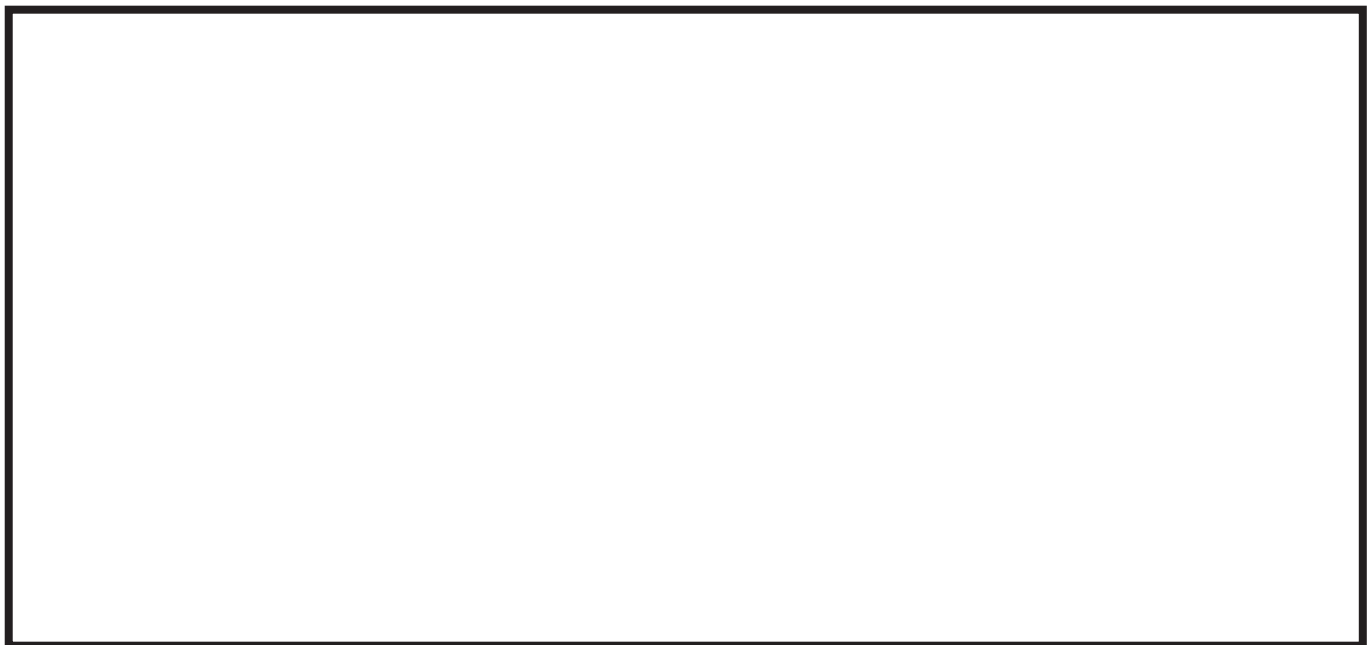
## Taking Away Tens

Determining 10 or Multiples of 10 Less Behaviours/Strategies																																																														
<p>1. Student counts three times to determine 10 or multiples of 10 less than a number (models with counters/cubes).</p>  <p>"1, 2, 3, ..., 42, 43, 44" "1, 2, 3, ..., 18, 19, 20" "1, 2, 3, ..., 22, 23, 24"</p>	<p>2. Student counts back to determine 10 or multiples of 10 less than a number (models with counters/cubes).</p>  <p>"44" "43, 42, 41, ..., 26, 25, 24"</p>	<p>3. Student counts back by ones on a hundred chart to determine 10 or multiples of 10 less than a number.</p>  <p>"76 take away 20 is 56."</p>																																																												
Observations/Documentation																																																														
<p>4. Student takes jumps of 10 backward on a hundred chart to determine 10 or multiples of 10 less than a number, but does not recognize how the tens digit changes.</p> <table border="1"> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> </table> <p>"76 take away 2 tens is 56. I don't see any patterns."</p>	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	<p>5. Student takes jumps of 10 backward on a hundred chart to determine 10 or multiples of 10 less than a number and recognizes that the tens digit decreases by 1 for each ten taken away.</p> <table border="1"> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> </table> <p>"I took away 2 tens and the tens digit decreased by 2."</p>	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	<p>6. Student fluently determines 10 or multiples of 10 less than a number without using the hundred chart.</p>
51	52	53	54	55	56	57	58	59	60																																																					
61	62	63	64	65	66	67	68	69	70																																																					
71	72	73	74	75	76	77	78	79	80																																																					
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61	62	63	64	65	66	67	68	69	70																																																					
71	72	73	74	75	76	77	78	79	80																																																					
Observations/Documentation																																																														

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 14

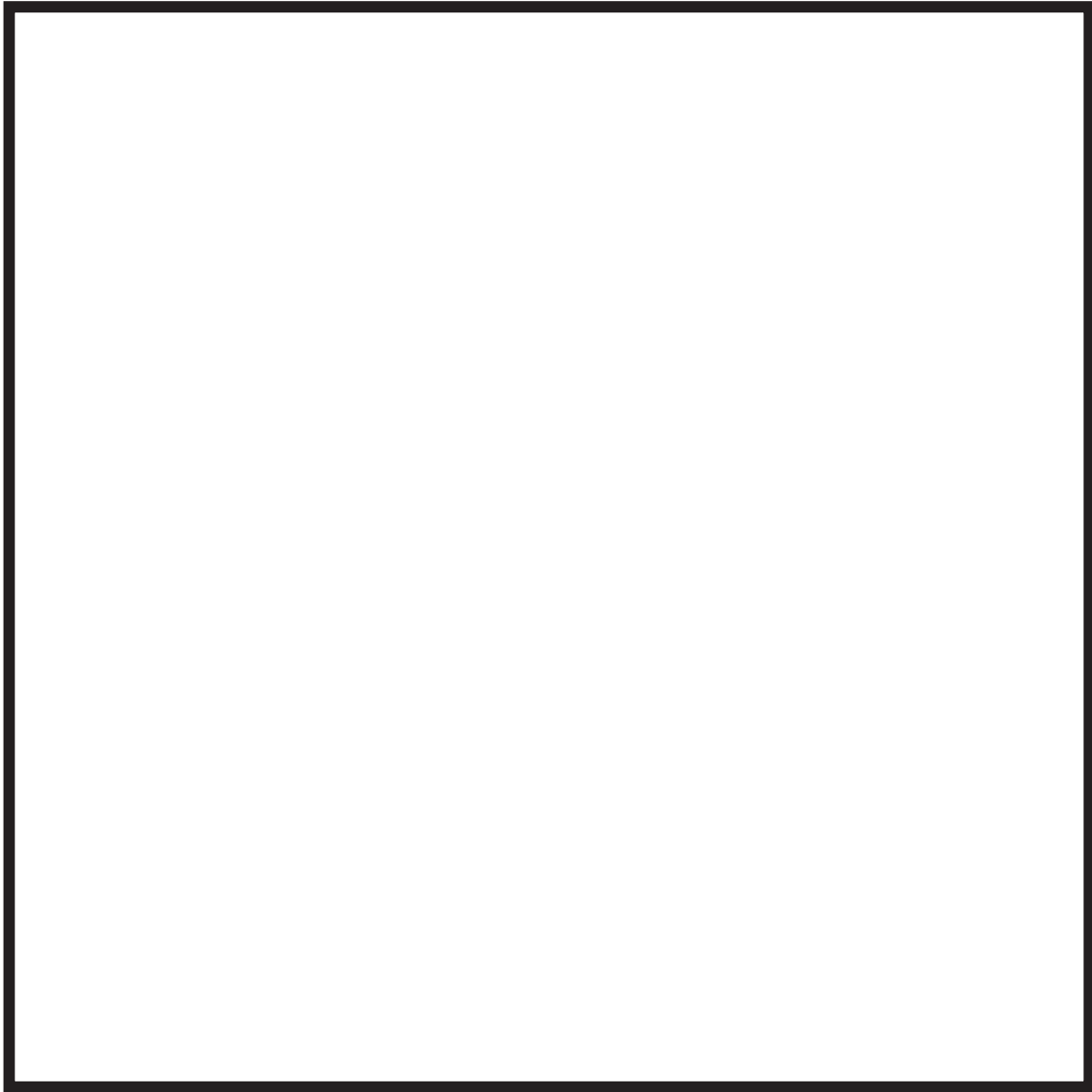
# Rectangles



Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 15

# Paper Square

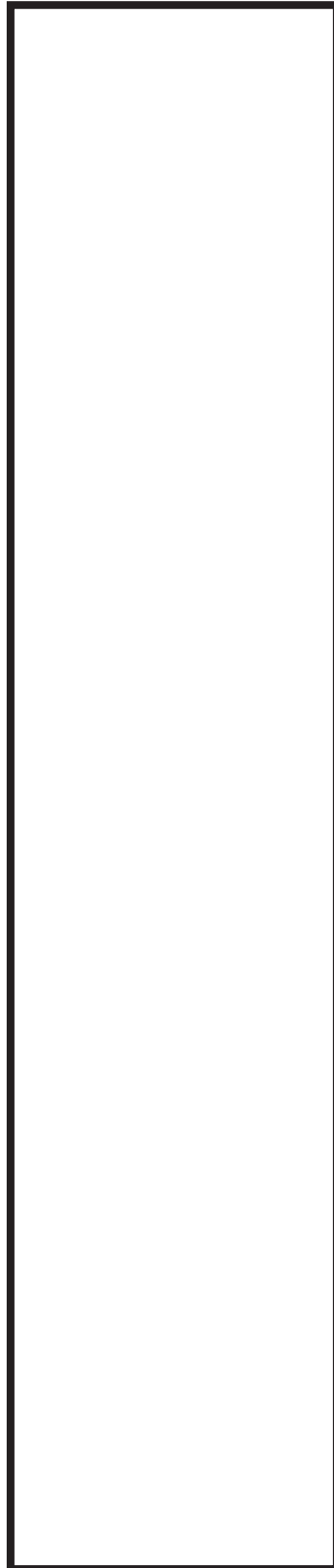


Name \_\_\_\_\_

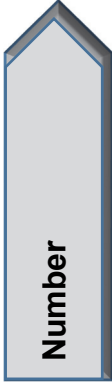
Date \_\_\_\_\_

Intervention: Master 16

## Paper Strip











# Master 17: Intervention Activity 7 Assessment

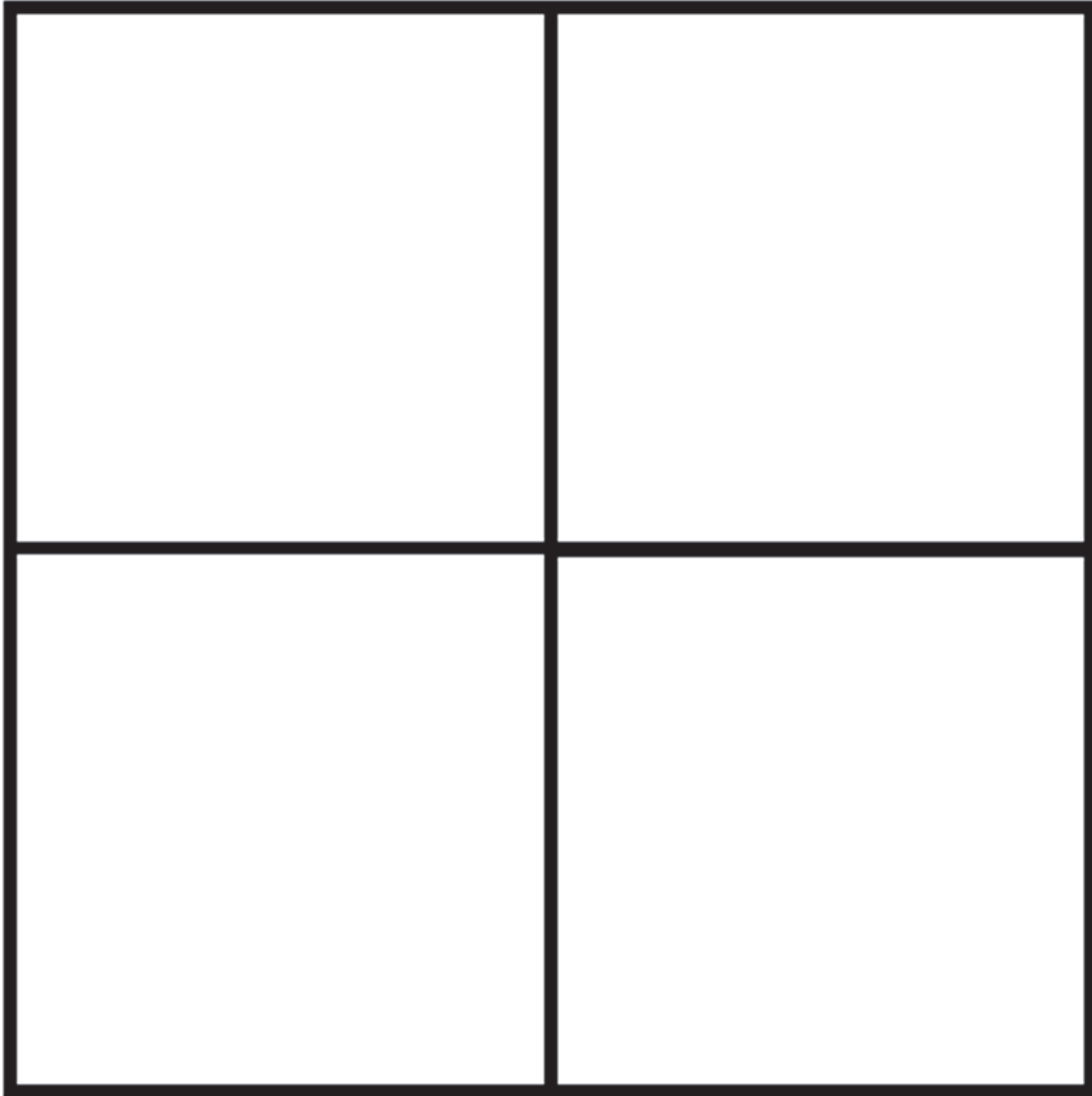
## Exploring Equal Parts

Partitioning Wholes into Equal Parts Behaviours/Strategies		
<p>1. Student chooses an item, but struggles to partition it into equal parts, and parts are not all equal.</p> 	<p>2. Student partitions wholes into equal parts, but thinks that when the parts are not equal, they still represent halves, fourths, and eighths.</p>  <p>"I folded it into 4 unequal fourths."</p>	<p>3. Student partitions wholes into 2 and 4 equal parts, but struggles to partition wholes into 8 equal parts.</p>
Observations/Documentation		
<p>4. Student partitions wholes into equal parts, but struggles to name the unit (does not know fraction words).</p>  <p>"I don't know what each part is."</p>	<p>5. Student partitions wholes into equal parts, but thinks that equal parts of different wholes should be the same size.</p>  <p>"They both show fourths, so they should be the same size."</p>	<p>6. Student successfully partitions wholes into equal parts and names the unit.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 18

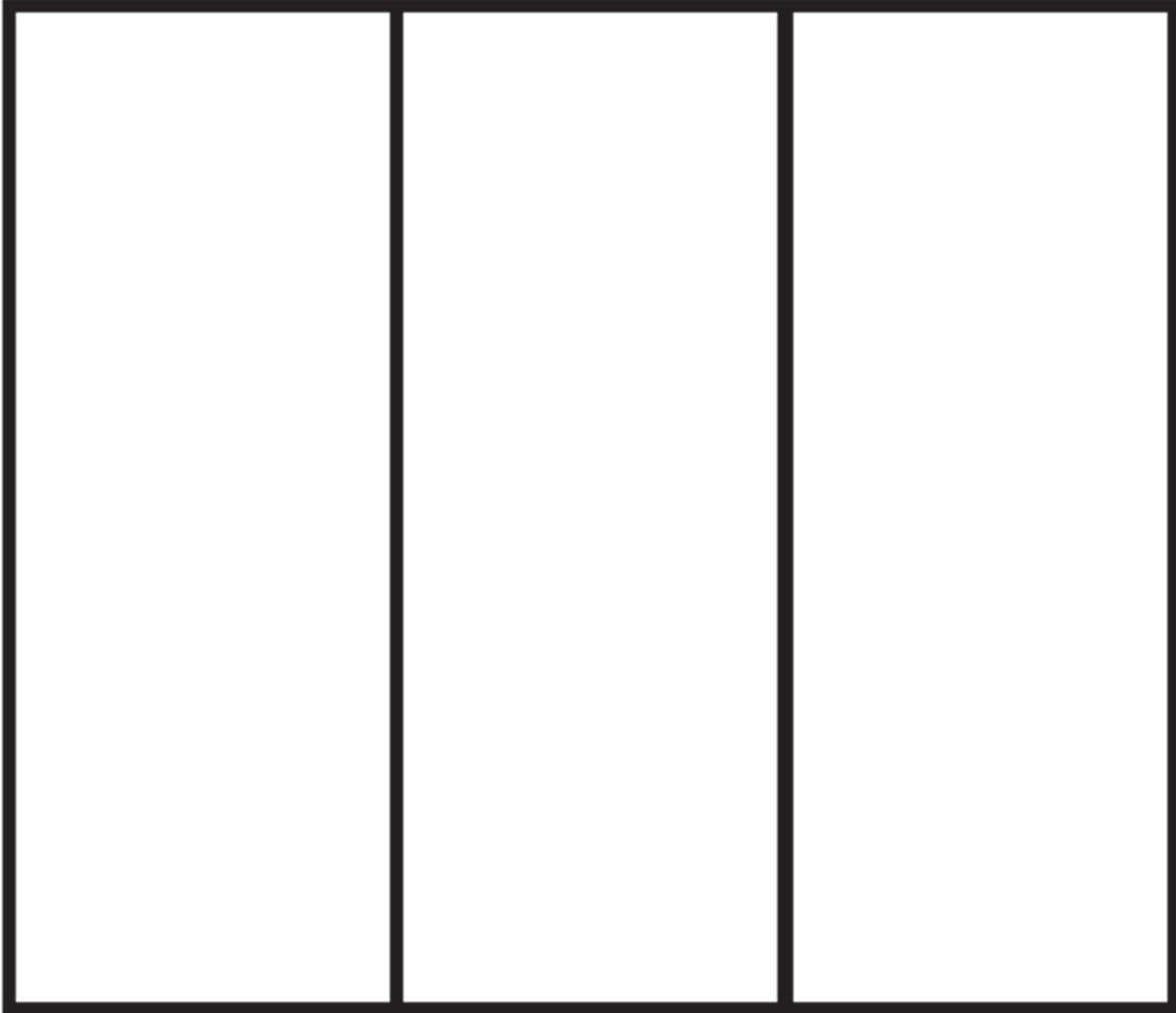
# Paper Square Showing Fourths



Name \_\_\_\_\_ Date \_\_\_\_\_

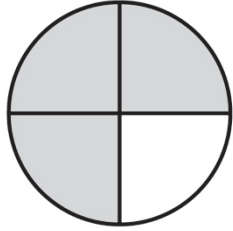
Intervention: Master 19

# Paper Rectangle Showing Thirds

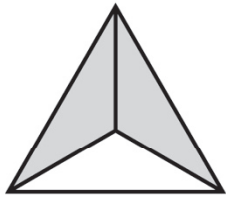


Intervention: Master 20a

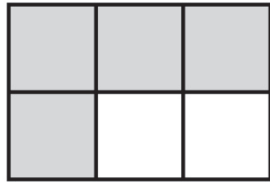
# Matching Cards



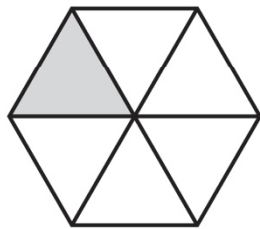
Three fourths



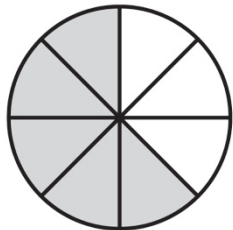
Two thirds



Four sixths



One sixth

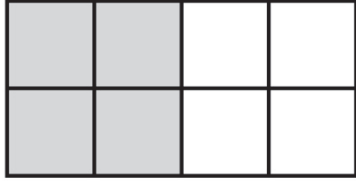


Five eighths

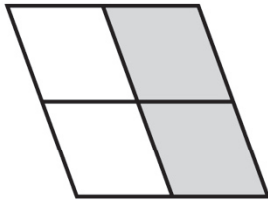


Intervention: Master 20b

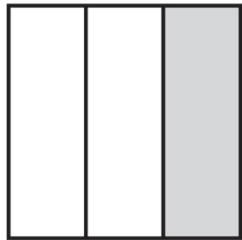
# Matching Cards



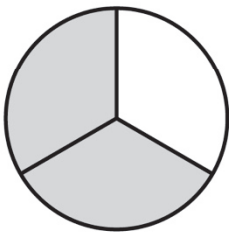
Four eighths



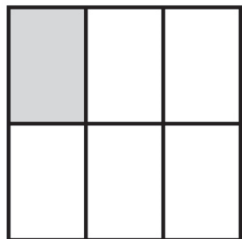
Two fourths



One third



Two thirds

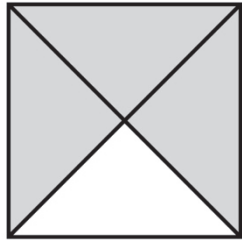


One sixth

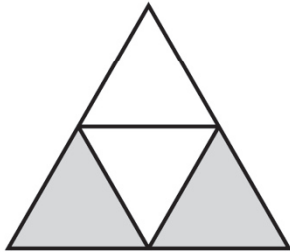


Intervention: Master 20c

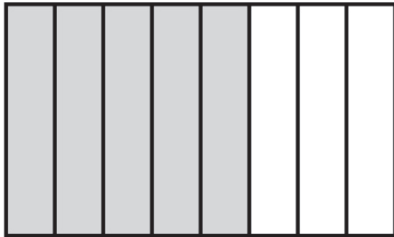
# Matching Cards



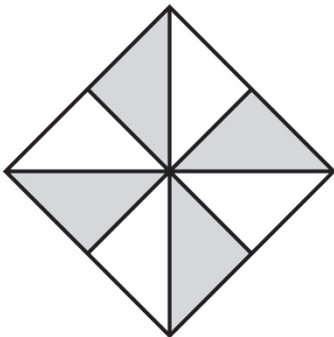
Three fourths



Two fourths



Five eighths





Four eighths





# Master 21: Intervention Activity 8 Assessment

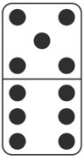

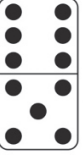
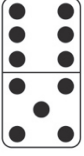

## Naming Fractional Amounts

Naming Fractional Amounts Behaviours/Strategies		
1. Student turns over two cards, but struggles to visually compare fraction sizes and name fractional amounts as he or she cannot name the unit (i.e., does not know fraction words).	2. Student turns over two cards, but struggles to visually compare fraction sizes and name fractional amounts, and matches number of shaded parts to first word on card.  "Four eighths"	3. Student visually compares fraction sizes and names some fractional amounts, but struggles with sixths and eighths.
Observations/Documentation		
4. Student visually compares fraction sizes and names fractional amounts, but struggles to explain thinking.	5. Student visually compares fraction sizes and names fractional amounts, but does not realize that each shape can represent two fractional amounts.  "This shows four sixths only."	6. Student successfully visually compares fraction sizes, names fractional amounts, and explains thinking using math language.
Observations/Documentation		



# Master 22: Intervention Activity 9 Assessment

## Making 20

Composing Quantities from Parts Behaviours/Strategies			
<p>1. Student counts three times to compose quantities from parts.</p> <p>"1, 2, 3, 4, 5, 6" "1, 2, 3, 4, 5"</p>  <p>"1, 2, 3, ..., 9, 10, 11"</p>	<p>2. Student skip-counts by 2s to compose quantities from parts.</p>  <p>"2, 4, 6, 8, 10, 11"</p>	<p>3. Student instantly recognizes one of the parts (perceptual subitizing), and then counts on to compose quantities from parts.</p>  <p>"5" "6, 7, 8, 9, 10, 11"</p>	<p>4. Student uses number relationships to compose quantities from parts.</p>  <p>"I know 5 and 5 is 10, so 5 and 6 is 1 more, or 11."</p>
Observations/Documentation			
Decomposing the Whole Behaviours/Strategies			
<p>1. Student chooses randomly to find dominoes with parts that make the same whole.</p> <p>"Let's try this one."</p>	<p>2. Student finds dominoes with parts that make the same whole when the whole is small, but struggles when the whole is large.</p>  <p>"I don't know how to find another with this whole. There are too many dots."</p>	<p>3. Student finds all dominoes with parts that make the same whole, but does not see patterns in the parts.</p> <p>"I sorted them, but I don't see any patterns."</p>	<p>4. Student uses patterns to systematically find all dominoes with parts that make the same whole.</p>
Observations/Documentation			











# Master 24: Intervention Activity 10 Assessment

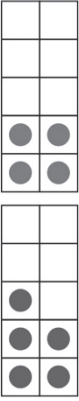
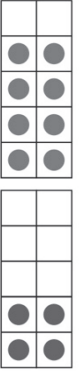
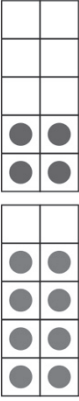
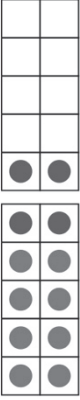
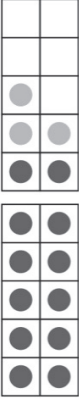



## The Other Part of 10

Finding the Unknown Part Behaviours/Strategies		
<p>1. To find a part given the whole and another part, student guesses, adds that many cubes, and then counts all from 1 to check.</p> <p>"Guess 4"</p>  <p>"1, 2, 3, ..., 9, 10. Il. Too many."</p>	<p>2. To find a part given the whole and another part, student counts on from the part as cubes are added, and then counts the added cubes.</p>  <p>"7" "8, 9, 10"</p> <p>"1, 2, 3 cubes were added."</p>	<p>3. To find a part given the whole and another part, student counts on from the part as cubes are added and uses fingers to track the count.</p>  <p>"7" "8, 9, 10"</p> <p>"3 cubes were added."</p>
Observations/Documentation		
<p>4. To find a part given the whole and another part, student counts on from the part or back from the whole, using fingers to track the count.</p>  <p>"5"</p>	<p>5. Student starts with parts of different sizes, but does not consider starting with a part of 0 or 10.</p>	<p>6. Student efficiently finds the unknown part given the whole and another part.</p>
Observations/Documentation		



# Master 25: Activity 11 Assessment

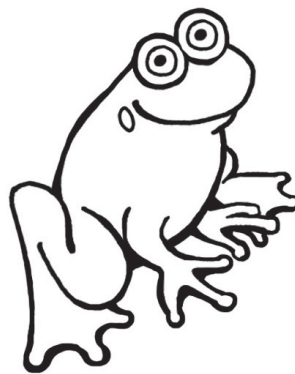
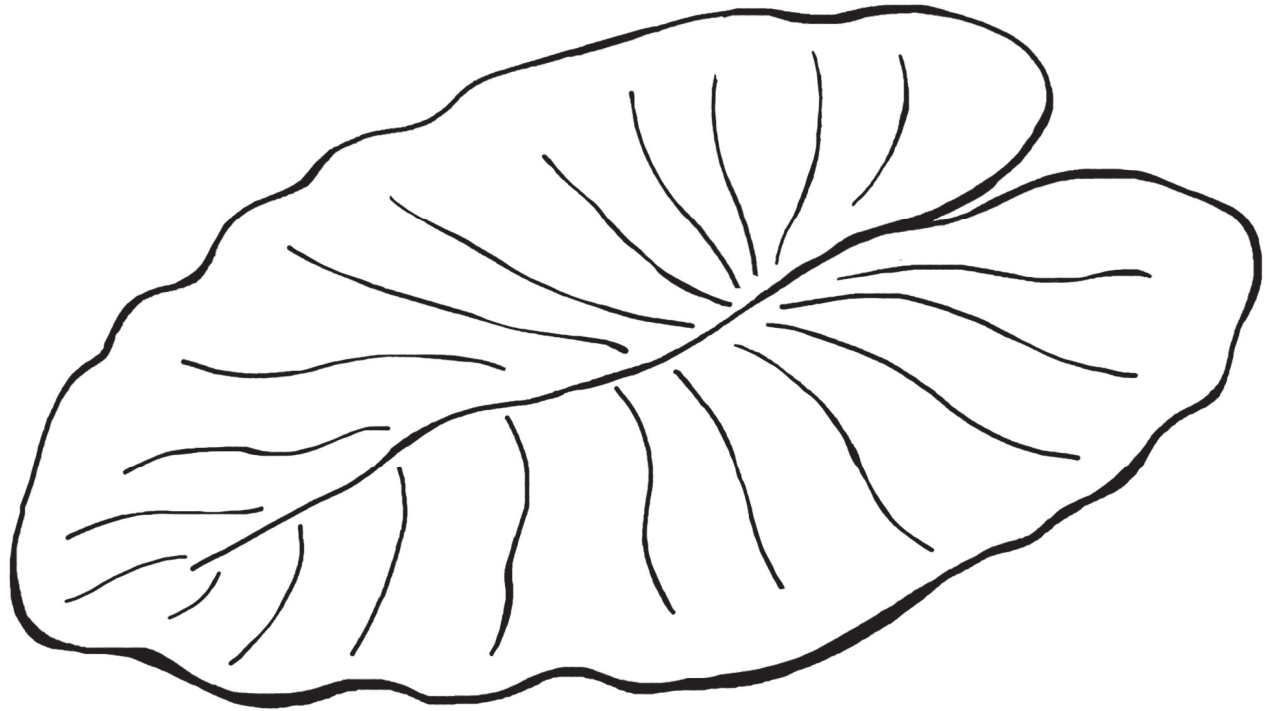
## Adding and Subtracting to 20

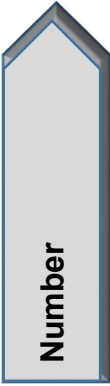
Addition Computational Behaviours/Strategies			
<p>1. Student counts three times to add quantities.</p>  <p>"1, 2, 3, 4, 5" "1, 2, 3, 4" "1, 2, 3, ..., 7, 8, 9"</p>	<p>2. Student counts on from the smaller set to add quantities.</p>  <p>"4" "5, 6, 7, ..., 10, 11, 12"</p>	<p>3. Student counts on from the larger set to add quantities.</p>  <p>"8" "9, 10, 11, 12"</p>	<p>4. Student fluently adds quantities and demonstrates an understanding of addition.</p>  <p>"10" "11, 12"</p>
<b>Observations/Documentation</b>			
Subtraction Computational Behaviours/Strategies			
<p>1. Student counts three times to subtract quantities (e.g., counts counters in ten-frames, counts to remove counters, and then counts the leftover counters from 1).</p>  <p>"15, 14, 13"</p>	<p>2. Student counts back to subtract quantities, but begins the count with the number of counters in the ten-frames.</p>  <p>"I took away 6 counters and there are none left."</p>	<p>3. Student counts back to subtract quantities, but removes more counters than there are.</p>  <p>"I can't take away 6 because I only have 4."</p>	<p>4. Student fluently subtracts quantities and demonstrates an understanding of subtraction.</p>  <p>"I can't take away 6 because I only have 4."</p>
<b>Observations/Documentation</b>			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 26





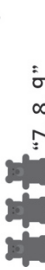


# My Frog Story





# Master 27: Intervention Activity 12 Assessment

## Solving Story Problems

Conceptualizing Addition and Subtraction Behaviours/Strategies			
<p>1. Student plays with toy animals, but has difficulty using them to create an addition or subtraction problem. Story is not a math problem.</p> <p>"Bears live in trees in the day. Bears sleep in caves at night."</p>	<p>2. Student attempts to create an addition or subtraction problem, but does not ask a question.</p> <p>"There are 8 bears in the trees. 3 bears come from the cave to join them."</p>	<p>3. Student creates an addition or subtraction problem and acts it out, but cannot use symbols and equations to represent it.</p>	<p>4. Student creates an addition or subtraction problem, acts it out, and uses symbols and equations to represent it.</p> <p>"There are 4 bears in the cave. 2 bears climb down the trees to join them. How many bears are now in the cave?" "4 + 2 = 6"</p>
<b>Observations/Documentation</b>			
Addition and Subtraction Computational Behaviours/Strategies			
<p>1. Student counts three times to add or subtract quantities.</p> <p>"1, 2, 3, 4" </p> <p>"1, 2, 3, 4, 5, 6, 7" </p> <p>"1, 2, 3, ..., 9, 10, 11" </p>	<p>2. Student counts on or back to add or subtract, but begins the count with the number of objects in a part or the whole.</p> <p> "7"  "7, 8, 9"</p>	<p>3. Student counts on or back with concrete materials to add or subtract quantities.</p> <p>"11"  "10, 9, 8"</p>	<p>4. Student counts on or counts back fluently to add or subtract quantities.</p> <p>9 10 "11" </p>
<b>Observations/Documentation</b>			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 28



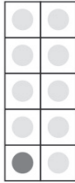
## *Ten on a Bus* Recording Sheet

<b>Dogs</b>	<b>Cats</b>



# Master 29: Intervention Activity 13 Assessment

## Making 10

Decomposing 10 into Parts Behaviours/Strategies	
<p>1. Student selects counters randomly to decompose 10 into parts.</p>	<p>2. Student decomposes 10 into parts, but counts three times to confirm how many.</p>  <p>"1, 2, 3, 4, 5, 6, 7"</p> <p>"1, 2, 3"</p> <p>"1, 2, 3, ..., 8, 9, 10"</p>
<p>3. Student decomposes 10 into parts, but removes all counters and starts again to find a new way.</p>	 
Observations/Documentation	
<p>4. Student decomposes 10 into parts, but does not find all the ways.</p>	<p>5. Student finds many ways to decompose 10 into parts, but does not consider 0 and 10.</p>
<p>6. Student uses patterns to systematically find all ways to decompose 10 into parts.</p>	
Observations/Documentation	

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 30

## Number Cards (1–10)

1

2

3

4

5

6

7

8

9

10

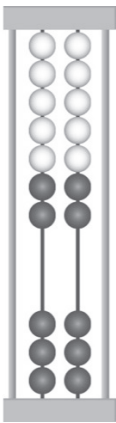
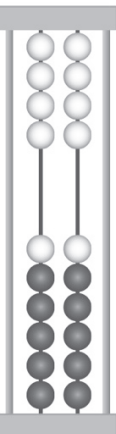










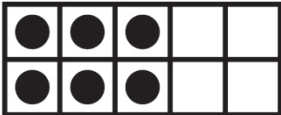


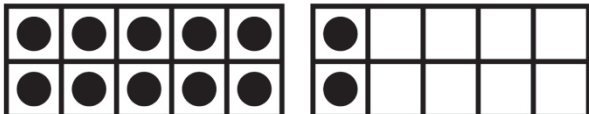

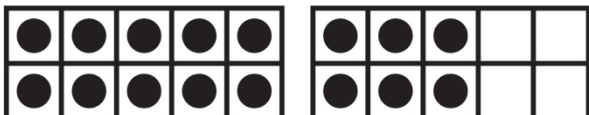
# Master 31: Intervention Activity 14 Assessment

## Finding Doubles

Adding to Determine Doubles to 10 Behaviours/Strategies		
<p>1. Student counts three times to determine doubles when adding with quantities to 20.</p> <p>"1, 2, 3" "1, 2, 3"</p>  <p>"1, 2, 3, 4, 5, 6"</p>	<p>2. Student counts on to determine doubles when adding with quantities to 20.</p>  <p>"6"</p> <p>"7, 8, 9, 10, 11, 12"</p>	<p>3. Student makes 10 and counts all to determine doubles when adding with quantities to 20.</p>  <p>"1, 2, 3, ..., 10, 11, ..., 14, 15, 16"</p>
Observations/Documentation		
<p>4. Student makes 10 and counts on to determine doubles when adding with quantities to 20.</p>  <p>"10"</p> <p>"11, 12, 13, ..., 16, 17, 18"</p>	<p>5. Student fluently adds with quantities to 20 to determine doubles, but struggles to write the addition sentence.</p> <p>"I don't know what to write."</p>	<p>6. Student fluently adds with quantities to 20 to determine doubles and writes addition sentences.</p>
Observations/Documentation		

Intervention: Master 32

# Ten-Frame Cards

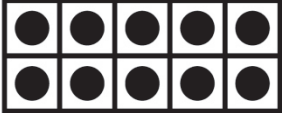
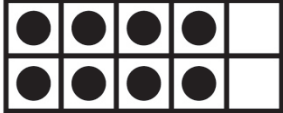
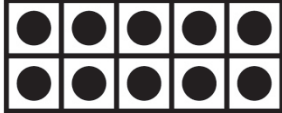
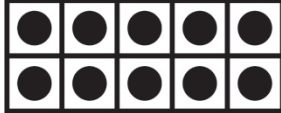




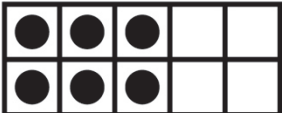
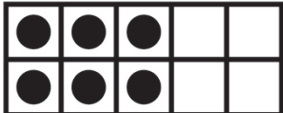
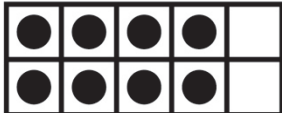
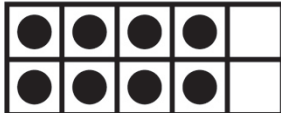
	
	
	
	



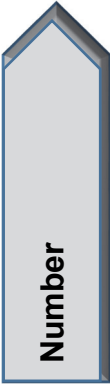
Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 32

# Ten-Frame Cards






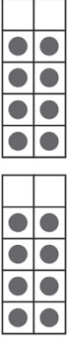
			
			
			

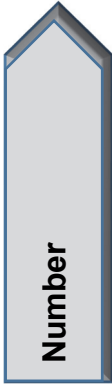




# Master 33: Intervention Activity 15 Assessment



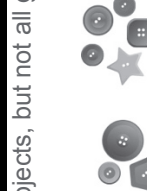


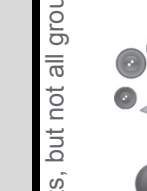
## How Many Do You See?

Grouping Objects to Find How Many Behaviours/Strategies		
<p>1. Student counts by 1s rather than grouping objects, but mixes up number sequence or does not coordinate number words with counting actions.</p>  <p>"1, 2, 3, 5, 6, 7"</p>	<p>2. Student accurately counts by 1s, but does not group objects.</p>  <p>"1, 2, 3, 4, 5, 6"</p>	<p>3. Student groups objects by 2s and skip-counts.</p>  <p>"2, 4, 6"</p>
Observations/Documentation		
<p>4. Student groups some objects and subitizes, and then counts on by 1s.</p>  <p>"6" "7, 8"</p>	<p>5. Student groups objects by 10s (uses structure of ten-frame to determine how many).</p>  <p>"10 and 8 more is 18."</p>	<p>6. Student groups objects flexibly and uses number relationships to determine how many.</p>  <p>"I can move 2 counters to the first ten-frame. That leaves 6 counters in the second ten-frame. 10 and 6 is 16."</p>
Observations/Documentation		



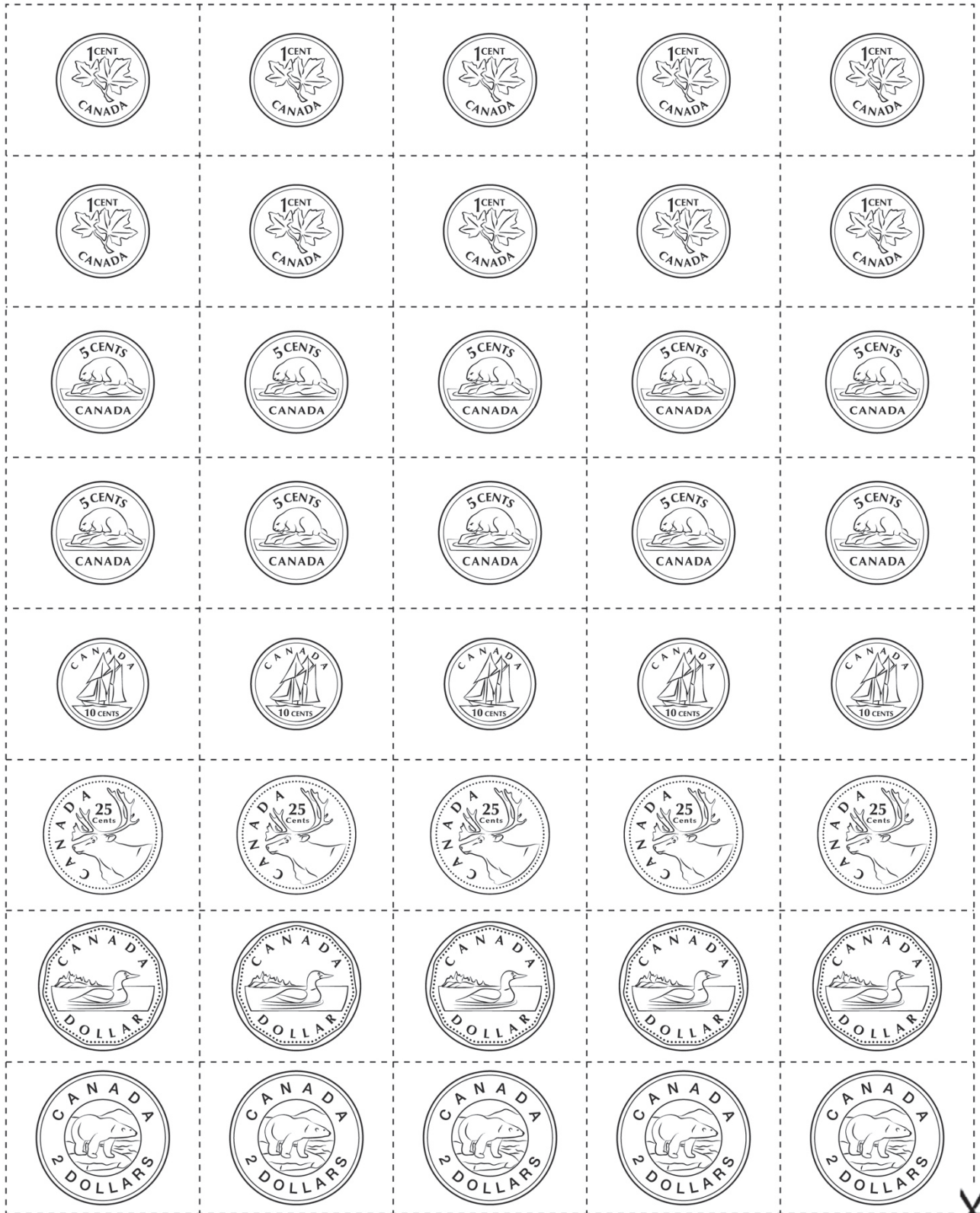
# Master 34: Intervention Activity 16 Assessment

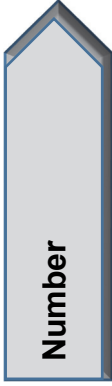
## Messy and Organize It

Grouping Objects Behaviours/Strategies		
<p>1. Student counts by 1s rather than grouping objects, but mixes up number sequence.</p> <p>"1, 2, 3, 5"</p> 	<p>2. Student counts by 1s rather than grouping objects, but does not coordinate number words with counting actions (e.g., misses items in the count, or counts items more than once).</p> <p>"4, 5"</p> 	<p>3. Student groups objects, but not all groups are equal.</p> 
Observations/Documentation		
<p>4. Student groups objects, but always makes groups of 2 regardless of the quantity.</p> 	<p>5. Student groups objects in 2s, 5s, and 10s, but ignores the leftover items.</p> <p>"5, 10, 15. There are 15 items."</p> 	
Observations/Documentation		
<p>6. Student flexibly groups objects in 2s, 5s, and 10s, and includes any leftover items in the total.</p> <p>"5, 10, 15, 16, 17. There are 17 items."</p> 		

Intervention: Master 35


# Coin Cutouts





# Master 36: Intervention Activity 17 Assessment

## Counting Coins

Identifying and Sorting Coins Behaviours/Strategies			
<p>1. Student looks at coins, but is unable to sort them using a single attribute.</p>	<p>2. Student sorts a set of objects (coins) using a single attribute, but puts coins in wrong jars.</p> 	<p>3. Student sorts a set of objects (coins) using a single attribute, but does not remember the values of the coins.</p> <p>“I don’t remember how much a nickel is worth.”</p>	<p>4. Student successfully sorts a set of objects (coins) using a single attribute and associates each coin with a value.</p>
Observations/Documentation			
Determining the Value of a Collection of Coins Behaviours/Strategies			
<p>1. Student sorts coins, but is unable to find value of coins as he or she does not associate value of coin with a skip-counting number.</p> <p>“A dime is 10 cents. What number do I skip-count by?”</p>	<p>2. Student sorts coins, but is unable to skip-count by factors of 10 or 100.</p> <p>“10, 20, 30, 50, 60”</p>	<p>3. Student skip-counts by factors of 10, but struggles to skip-count by factors of 100 (e.g., 25).</p> <p>“25, ?”</p>	<p>4. Student successfully skip-counts by factors of 10 and 100.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 37

## Activity Choices

Camping

Skating

Swimming

Skiing

Snowshoeing

Canoeing









# Master 38: Intervention Activity 18 Assessment

## Wants and Needs






<b>Distinguishing Between Wants and Needs Behaviours/Strategies</b>			
1. Student chooses activity, but struggles to draw appropriate items and cannot identify the difference between wants and needs.	2. Student draws items that are needs, but struggles to draw items that are wants.	3. Student draws items that are wants or needs, but is unable to explain why they are wants or needs.	4. Student draws items that are wants or needs and confidently explains why they are wants or needs.
<b>Observations/Documentation</b>			



<b>Identifying the Core Behaviours/Strategies</b>		
<p>1. Student chooses a pattern, but struggles to identify the core of the pattern and cannot identify the attribute that is changing.</p>	<p>2. Student identifies the attribute that is changing, but struggles to identify the core of the pattern.</p>	<p>3. Student identifies the core of a pattern when it involves colour or shape, but struggles when the attribute that is changing is size, thickness, or number.</p>  <p>“This is hard. They are all yellow triangles.”</p>
<b>Observations/Documentation</b>		
<p>4. Student identifies the core of a pattern, but struggles to identify what would come next in the pattern.</p>  <p>“Yellow would come next.”</p>	<p>5. Student identifies the core of a pattern and what comes next in the pattern, but struggles to use math language to describe the core.</p>	<p>6. Student successfully identifies the core of a pattern and what comes next in the pattern, and uses math language to explain thinking.</p>
<b>Observations/Documentation</b>		

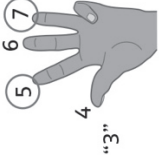
# Master 40: Intervention Activity 2 Assessment

## Representing Patterns

<b>Representing Patterns in Different Ways Behaviours/Strategies</b>		
<p>1. Student chooses a pattern, but struggles to identify the core of the pattern.</p> <p style="text-align: center;">“How do I find the core?”</p>	<p>2. Student identifies the core of the pattern, but struggles to represent the core with letters.</p> <div style="text-align: center; margin: 10px 0;">  <p>Core: ABC</p> </div>	<p>3. Student identifies the core of the pattern and represents the core with letters, but has difficulty selecting objects to make another pattern.</p>
<b>Observations/Documentation</b>		
<p>4. Student identifies the core of the pattern and represents the core with letters, but has difficulty using the core to make another pattern using different materials.</p> <div style="text-align: center; margin: 10px 0;">  <p>My pattern:</p>  </div>	<p>5. Student represents the same pattern in different ways, but struggles to use math language to explain how the patterns are alike and how they are different.</p>	<p>6. Student successfully identifies the core of a pattern, represents the same pattern in different ways, and uses math language to explain how the patterns are alike and how they are different.</p> <div style="text-align: center; margin: 10px 0;"> <p>Core: ABB</p>  <p>My pattern:</p>  </div>
<b>Observations/Documentation</b>		

# Master 41: Intervention Activity 3 Assessment

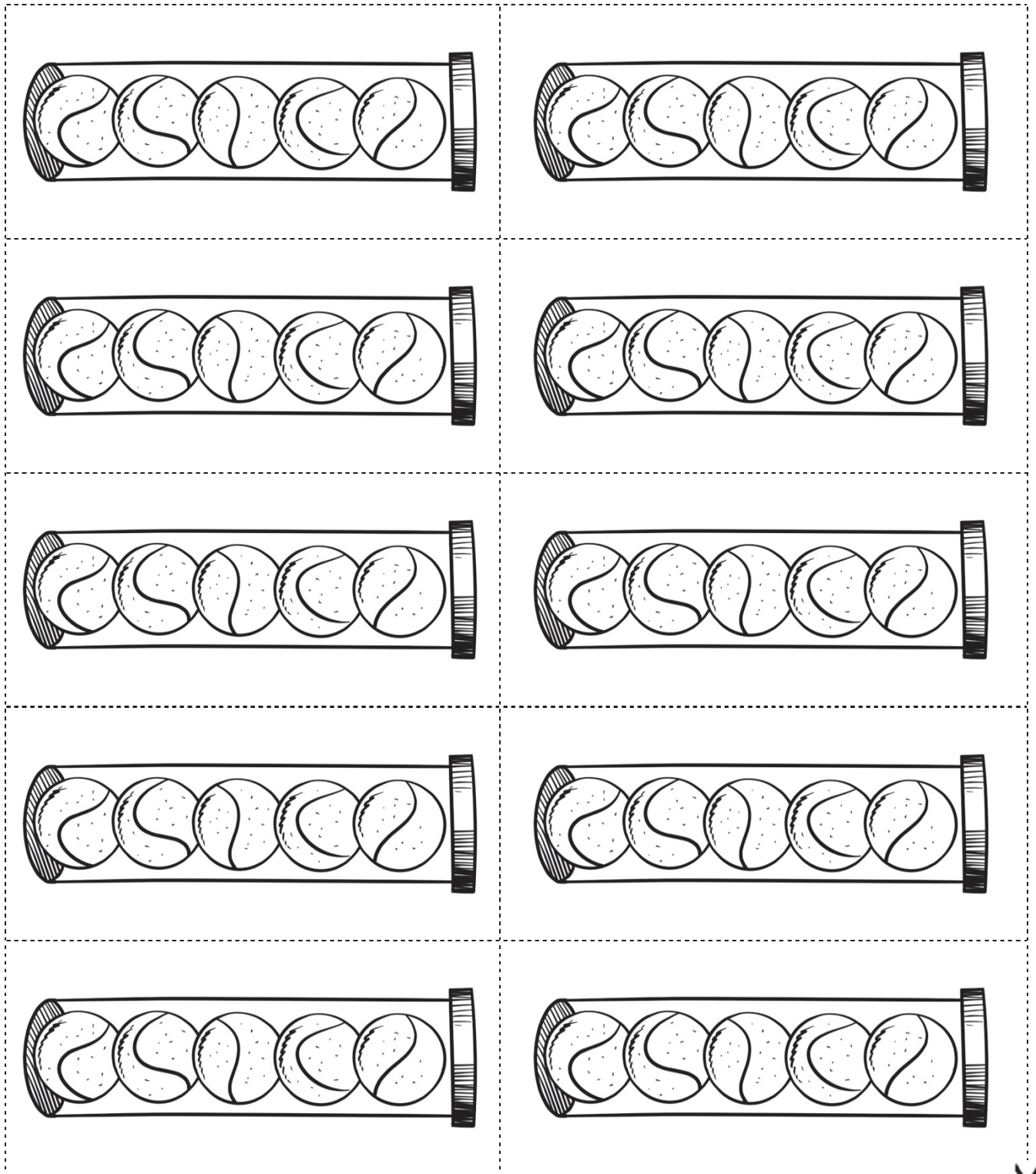
## Skip-Counting

Skip-Counting Forward Behaviours/Strategies			
<p>1. Student enters numbers into calculator, but struggles to skip-count by factors of 10 (e.g., 2, 5, 10) and mixes up the numbers or omits numbers in the skip-counting sequence.</p> <p>“10, 20, 40, 50, 70”</p>	<p>2. Student skip-counts by factors of 10, but struggles when the start number is not a multiple of the number.</p> <p>“3, 10, 20, 30, ...”</p>	<p>3. Student skip-counts by factors of 10 from any given number, but uses fingers or hundred chart to help.</p> 	<p>4. Student fluently skip-counts by factors of 10 (e.g., 2, 5, 10) from any given number.</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

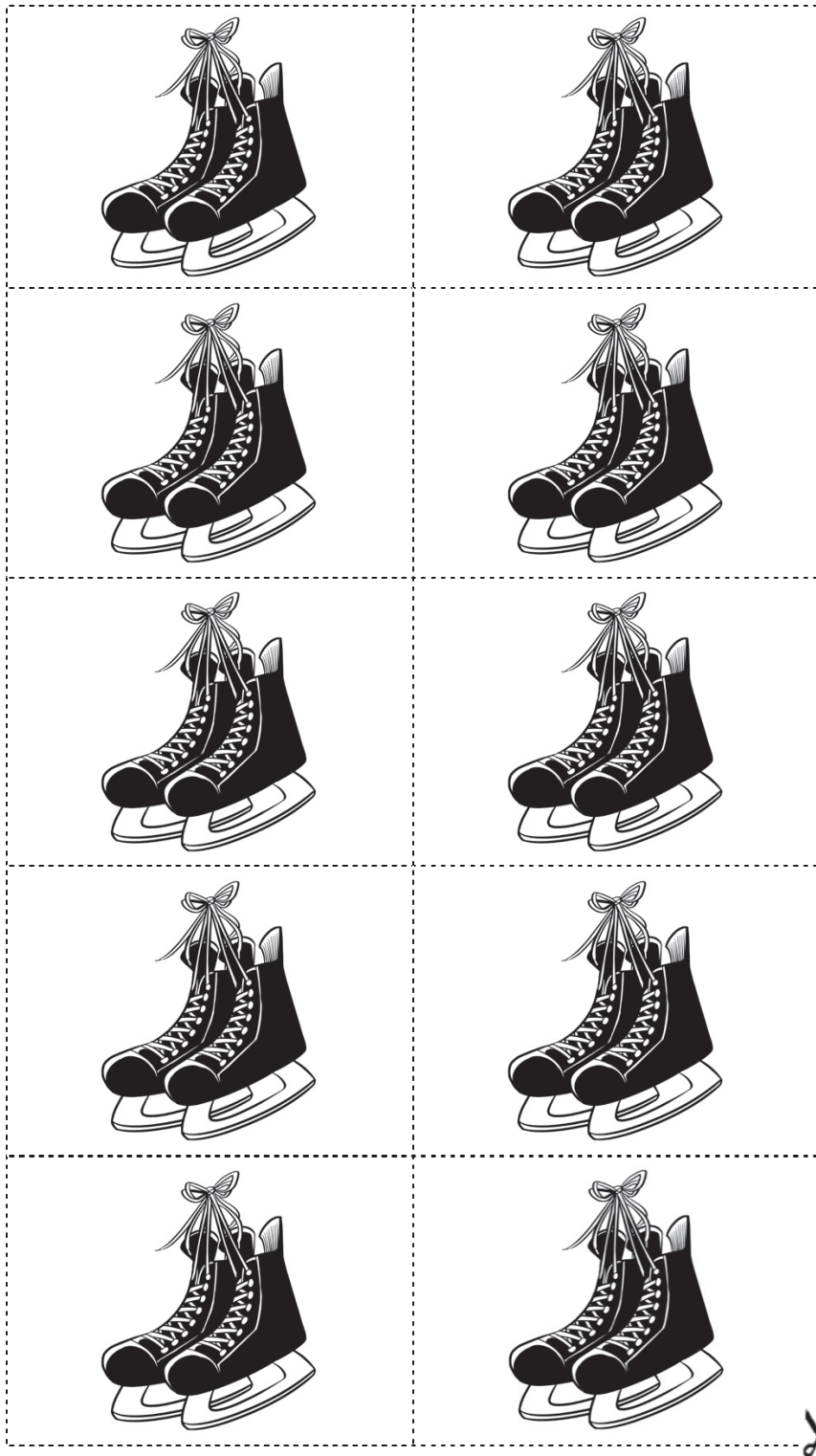
Intervention: Master 42a

# On and Off the Shelf Cards






Intervention: Master 42b

# On and Off the Shelf Cards



# Master 43: Intervention Activity 4 Assessment

## Repeated Addition and Subtraction

<b>Using Repeated Addition and Subtraction Behaviours/Strategies</b>		
<p>1. Student counts all items by 1s and does not recognize number patterns in repeated units.</p> <div style="text-align: center;">  <p>"1, 2, 3, 4, 5, 6"</p> </div>	<p>2. Student counts on or back to count items and does not recognize number patterns in repeated units.</p> <div style="text-align: center;">  <p>"4", "5, 6"</p> </div>	<p>3. Student recognizes number patterns in repeated units and skip-counts forward or backward to find how many.</p> <div style="text-align: center;">  <p>"4", "6"</p> </div>
<b>Observations/Documentation</b>		
<p>4. Student recognizes number patterns in repeated units and uses addition or subtraction to find how many, but does not see relation to repeated addition or subtraction.</p>	<p>5. Student recognizes number patterns in repeated units and uses repeated addition or subtraction of groups to solve problems, but is unable to use math language to explain thinking.</p>	<p>6. Student recognizes number patterns in repeated units and uses repeated addition or subtraction of groups to solve problems.</p>
<b>Observations/Documentation</b>		

Intervention: Master 44

# Spill and Fill


\_\_\_\_\_ + \_\_\_\_\_

=


\_\_\_\_\_ + \_\_\_\_\_


\_\_\_\_\_ + \_\_\_\_\_

=


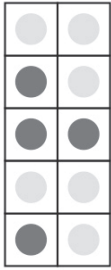
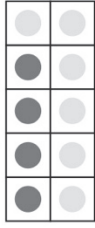

\_\_\_\_\_ + \_\_\_\_\_


\_\_\_\_\_ + \_\_\_\_\_

=

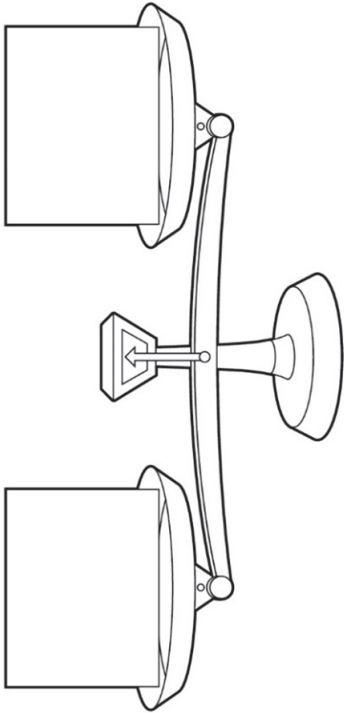
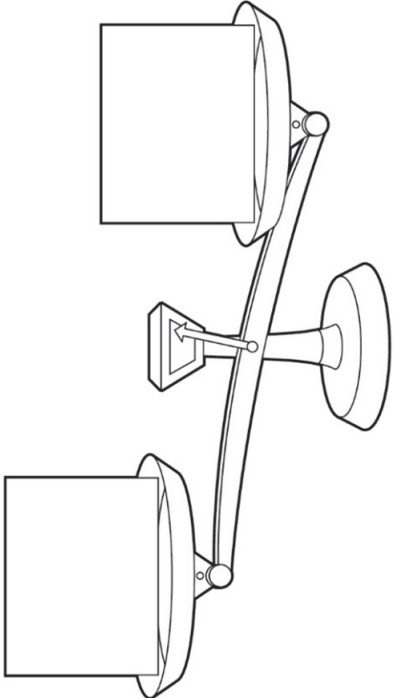
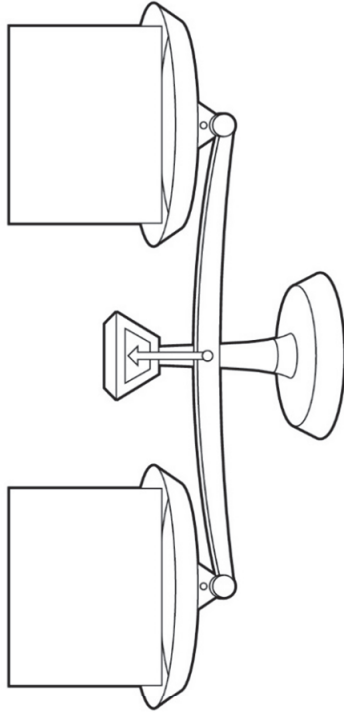
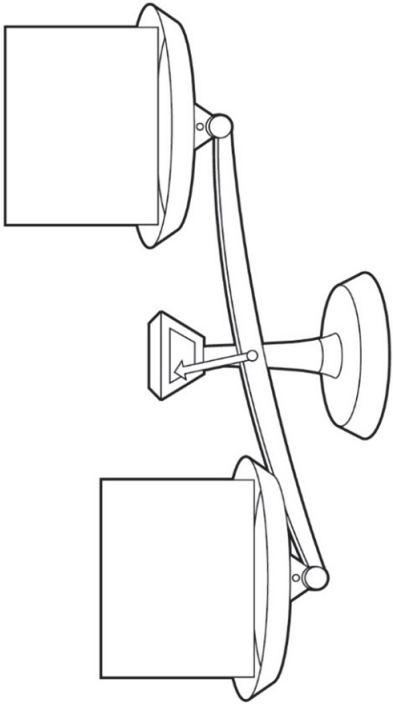

\_\_\_\_\_ + \_\_\_\_\_



<b>Decomposing 10 to Write Equalities Behaviours/Strategies</b>		
<p>1. Student spills counters, but does not understand conservation of number (rearranging counters does not change the quantity) and counts each time the counters are spilled</p>  <p style="text-align: center;">“1, 2, 3, ..., 8, 9, 10”</p>	<p>2. Student places counters randomly on ten frames and struggles to count the number of each colour.</p> 	<p>3. Student groups counters of the same colour together on ten-frames and counts all counters by 1s.</p>  <p style="text-align: center;">“1, 2, 3, 4”</p> <p style="text-align: center;">“1, 2, 3, 4, 5, 6”</p>
<b>Observations/Documentation</b>		
<p>4. Student counts or subitizes counters, but struggles to understand equality (does not associate two full ten-frames with equality).</p>	<p>5. Student understands equality, but has difficulty recording different expressions of the same quantity as equalities (cannot write number sentence).</p>	<p>6. Student understands equality and successfully records different expressions of the same quantity as equalities.</p> $3 + 7 = 4 + 6$ $2 + 8 = 5 + 5$
<b>Observations/Documentation</b>		




Intervention: Master 46

# Balancing Sets Recording Sheet

# Master 47: Intervention Activity 6 Assessment

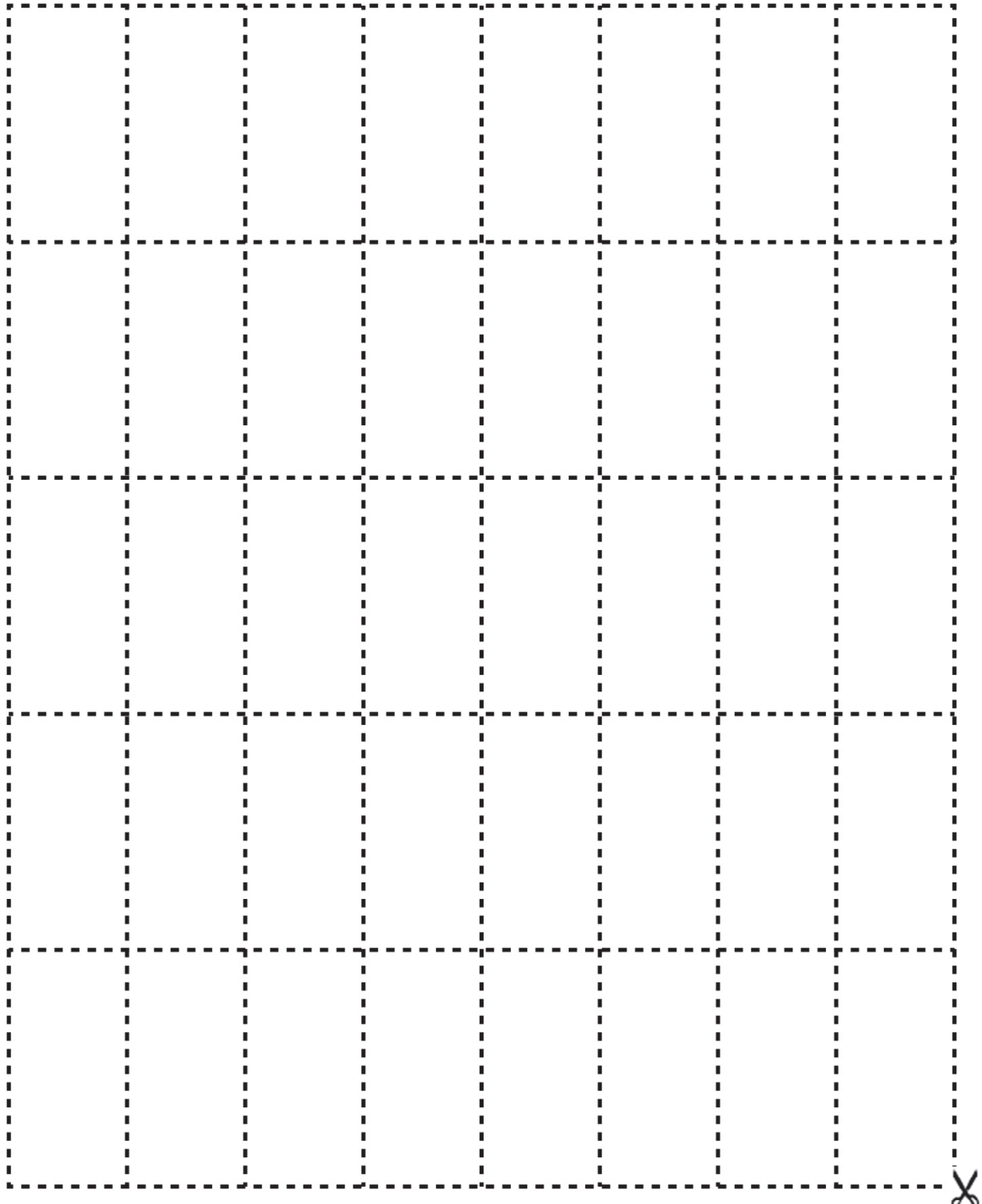
## Balancing Sets

Creating Equal Sets Behaviours/Strategies			
<p>1. Student places cubes in one pan, but struggles to create an equal set and randomly puts cubes in the other pan.</p>	<p>2. Student creates a set that is equal to a given set, but thinks the sets must be identical (e.g., uses same number of each colour of cube).</p> 	<p>3. Student creates a set that is equal to a given set (e.g., counting or matching), but does not associate equal with balanced pans.</p>	<p>4. Student successfully creates a set that is equal to a given set.</p> 
Observations/Documentation			
Creating Not Equal Sets Behaviours/Strategies			
<p>1. Student places cubes in one pan, but struggles to create a not equal set and randomly puts cubes in the other pan.</p>	<p>2. Student creates a set that is not equal to a given set, but does not know whether the new set has more or fewer cubes.</p>	<p>3. Student creates a set that is not equal to a given set and knows which set has more, but does not associate more with the heights of the pans.</p>	<p>4. Student successfully creates a set that is not equal to a given set.</p> 
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

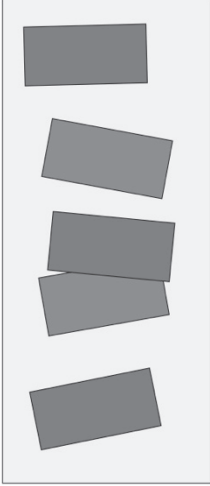

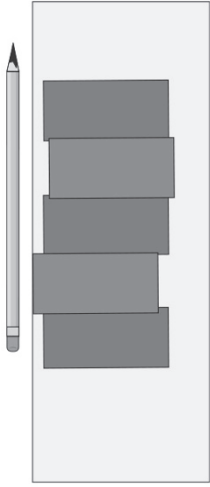
Intervention: Master 48

# Uniform Units



# Master 49: Intervention Activity 1 Assessment

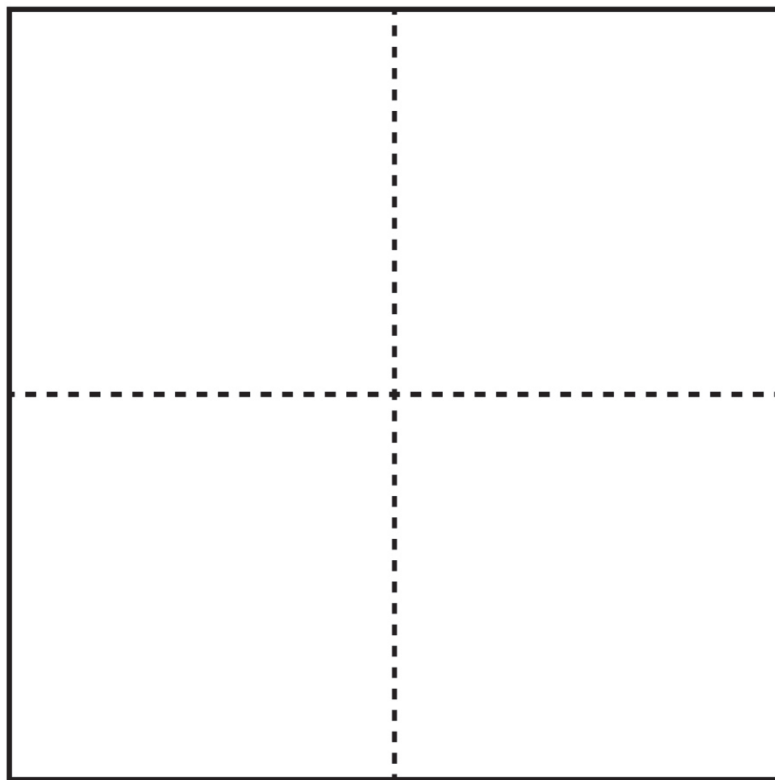
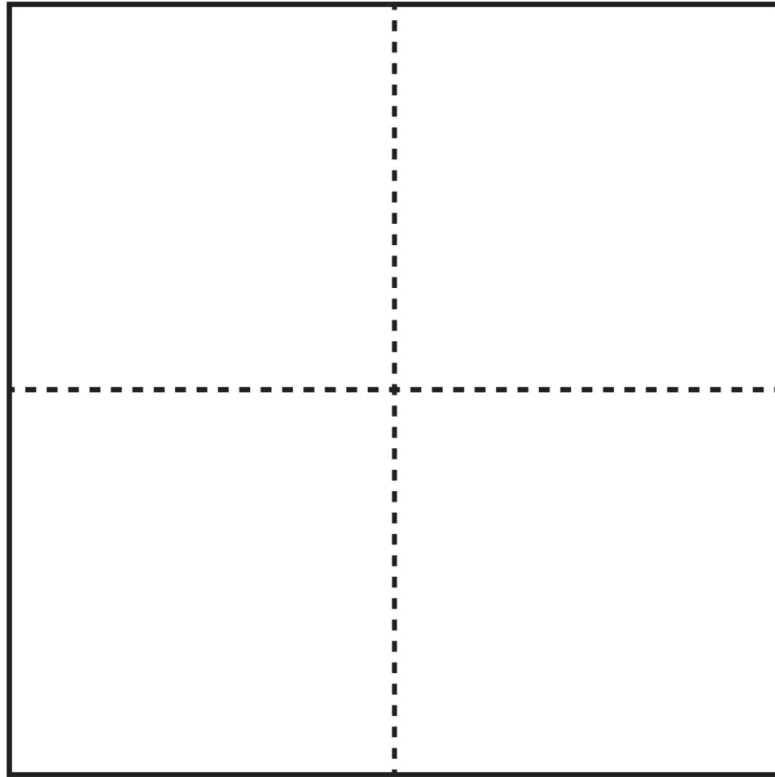
## Exploring Length

Measuring Length with Non-Standard Units Behaviours/Strategies		
<p>1. Student measures objects by length using multiple copies of a non-standard unit, but ruler has big gaps or overlaps.</p> 	<p>2. Student measures objects by length using multiple copies of a non-standard unit, but ruler has some gaps or overlaps.</p> 	<p>3. Student measures objects by length using multiple copies of a non-standard unit, but does not align the base of the first unit with the end of the object being measured.</p> 
Observations/Documentation		
<p>4. Student measures objects by length using multiple copies of a non-standard unit, but loses count when measuring.</p>	<p>5. Student measures objects by length using multiple copies of a non-standard unit, but forgets to include the unit when stating the measures.</p> <p>“It is 6 long.”</p>	<p>6. Student successfully measures objects by length using multiple copies of a non-standard unit and includes the unit in measures.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

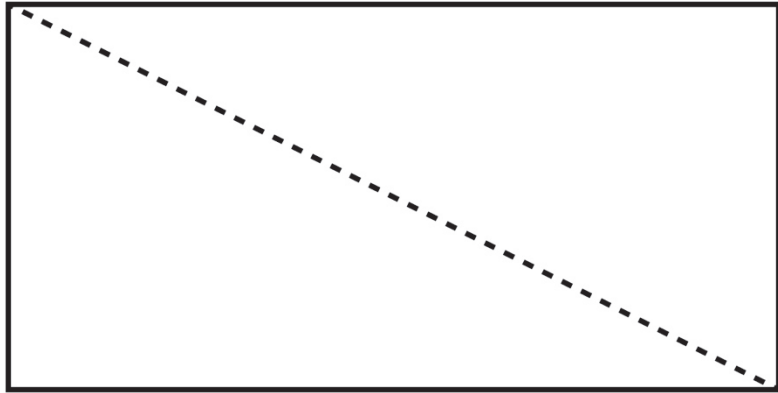
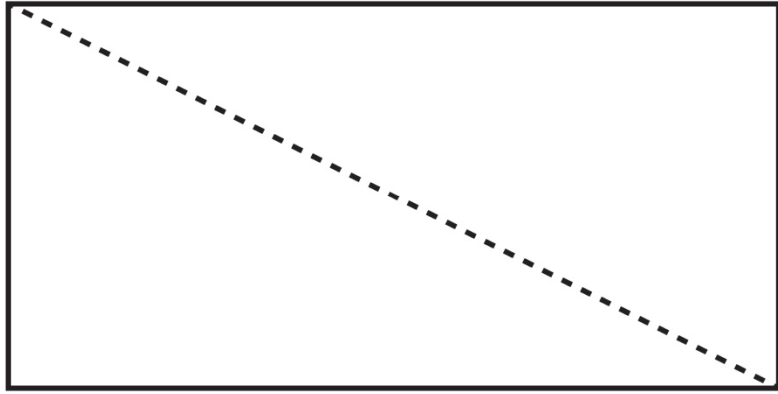
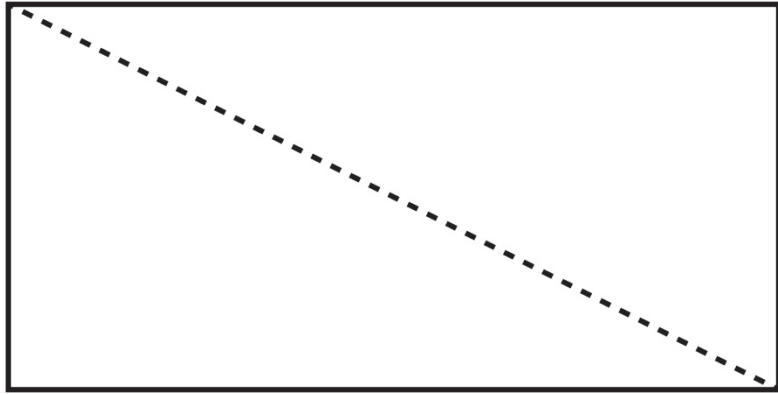
Intervention: Master 50

# Large Squares



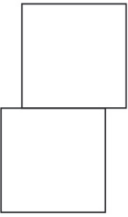

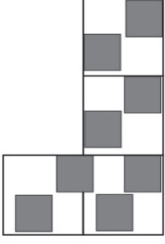
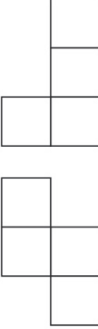
Intervention: Master 51

# Large Rectangles (for Extension)



# Master 52: Intervention Activity 2 Assessment

## Conserving Area

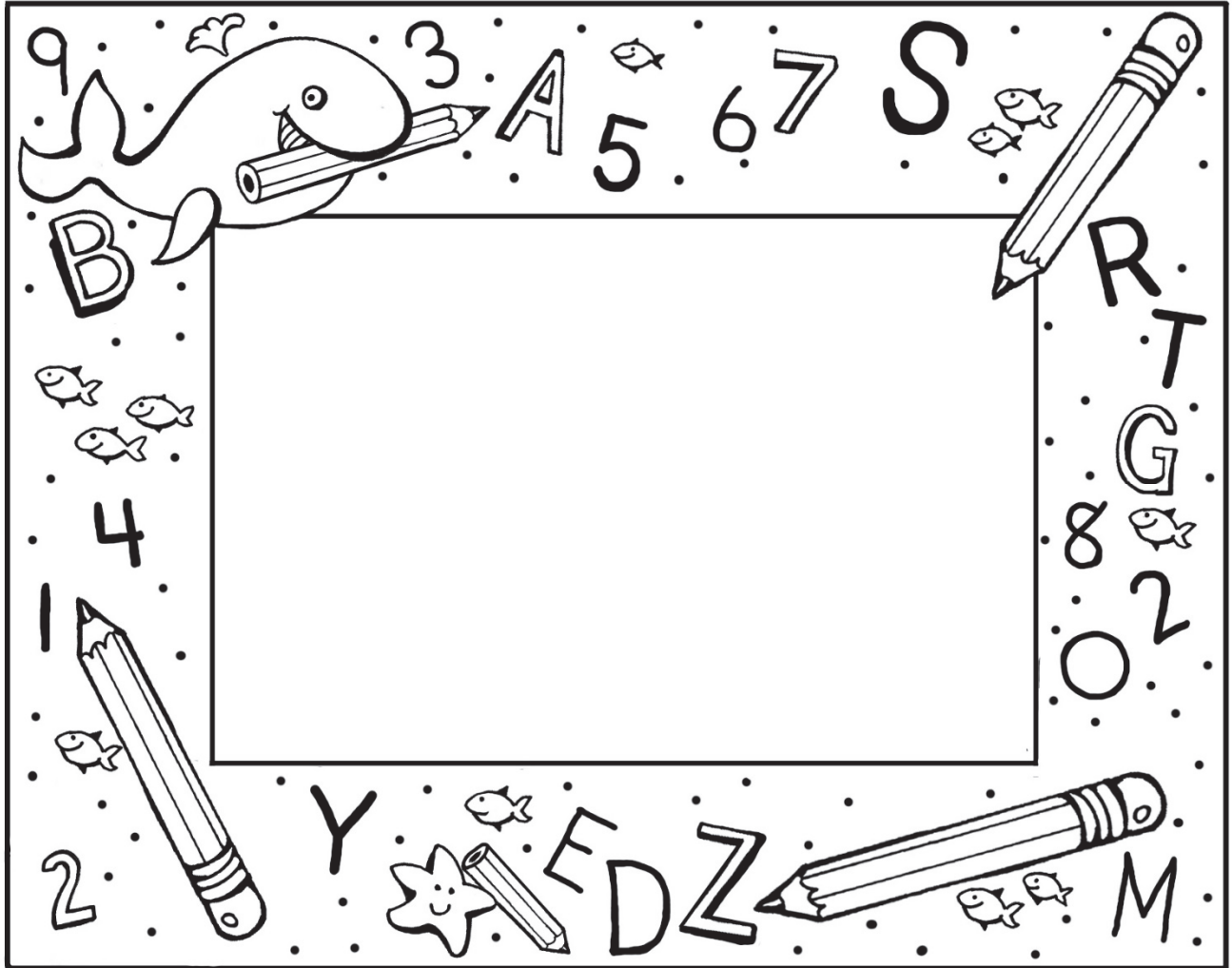
Conserving Area Behaviours/Strategies		
<p>1. Student explores area, but struggles to match sides of squares exactly.</p> 	<p>2. Student explores area, but believes more than 4 new shapes are possible.</p>  <p>“These shapes are different.”</p>	<p>3. Student measures shapes by area using multiple copies of a non-standard unit, but randomly covers the shapes with tiles (has gaps or overlaps).</p> 
Observations/Documentation		
<p>4. Student measures shapes by area using multiple copies of a non-standard unit, but struggles to describe area.</p>	<p>5. Student measures shapes by area using multiple copies of a non-standard unit, but thinks two shapes that look different cannot have the same area.</p>  <p>“The second shape is bigger.”</p>	<p>6. Student successfully measures and describes shapes by area with non-standard units and understands that shapes that look different can have the same area (conservation).</p>
Observations/Documentation		



Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 53

# Picture Frame

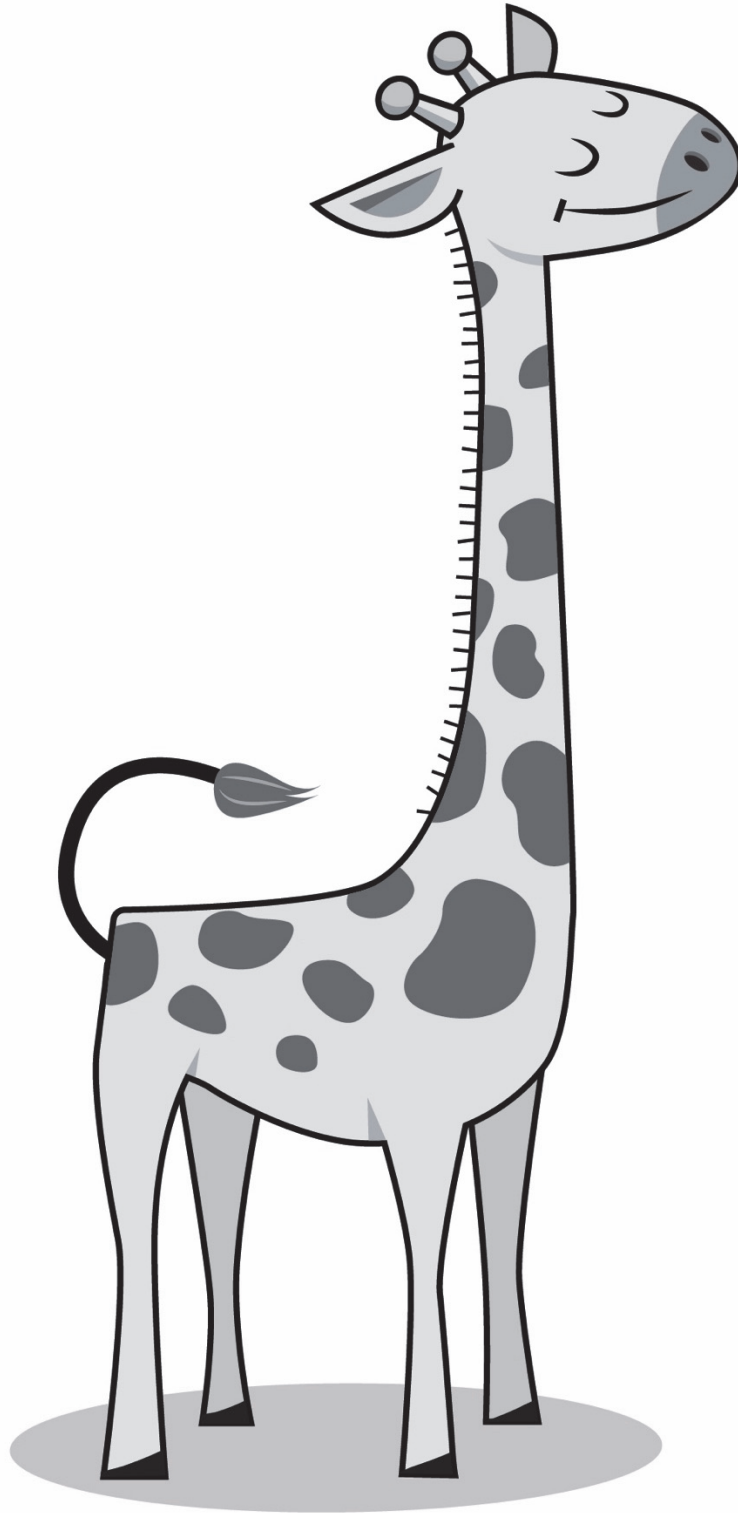


Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 54a

## Measuring Other Animals

How long is my neck?

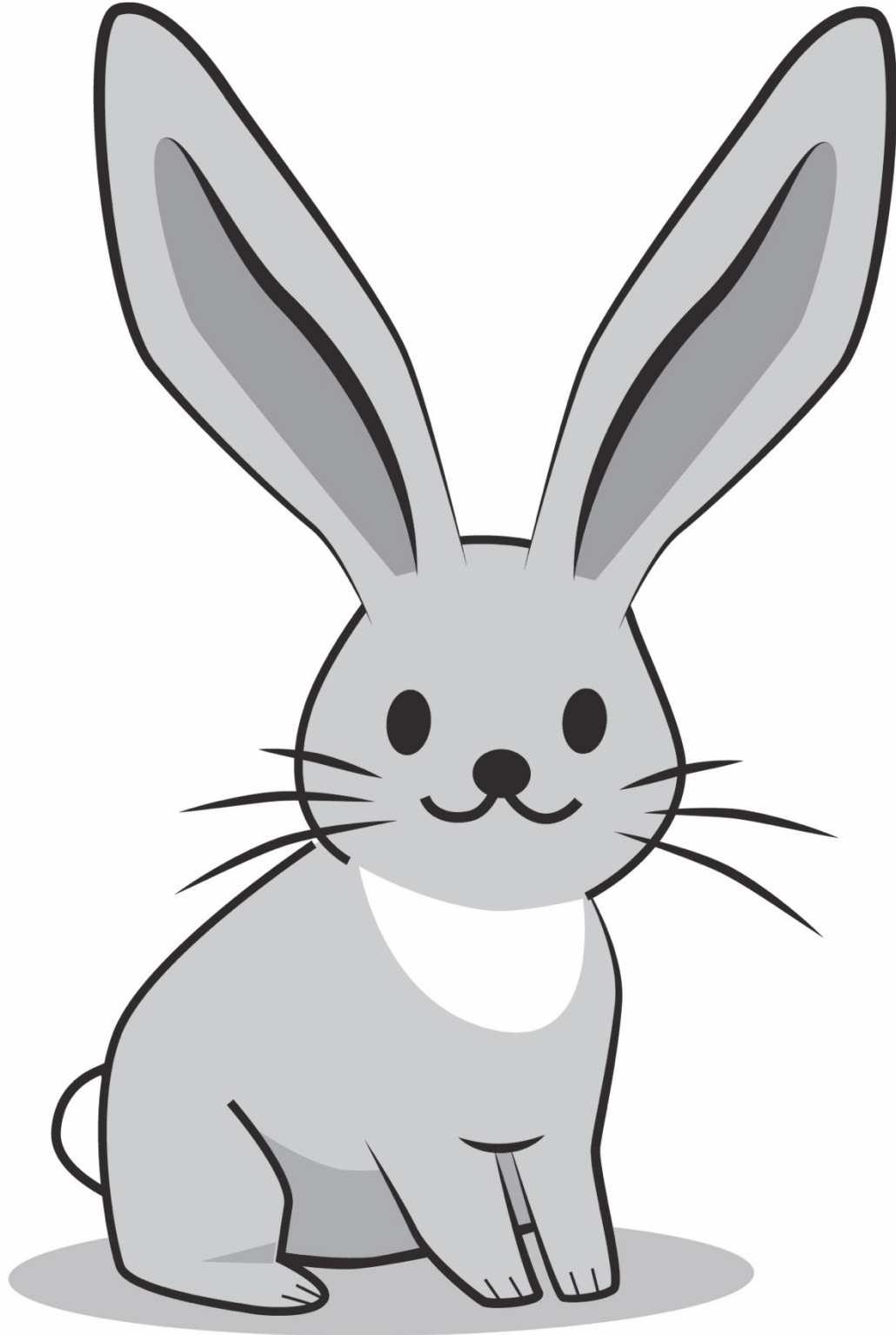


Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 54b

## Measuring Other Animals

How long are my ears?

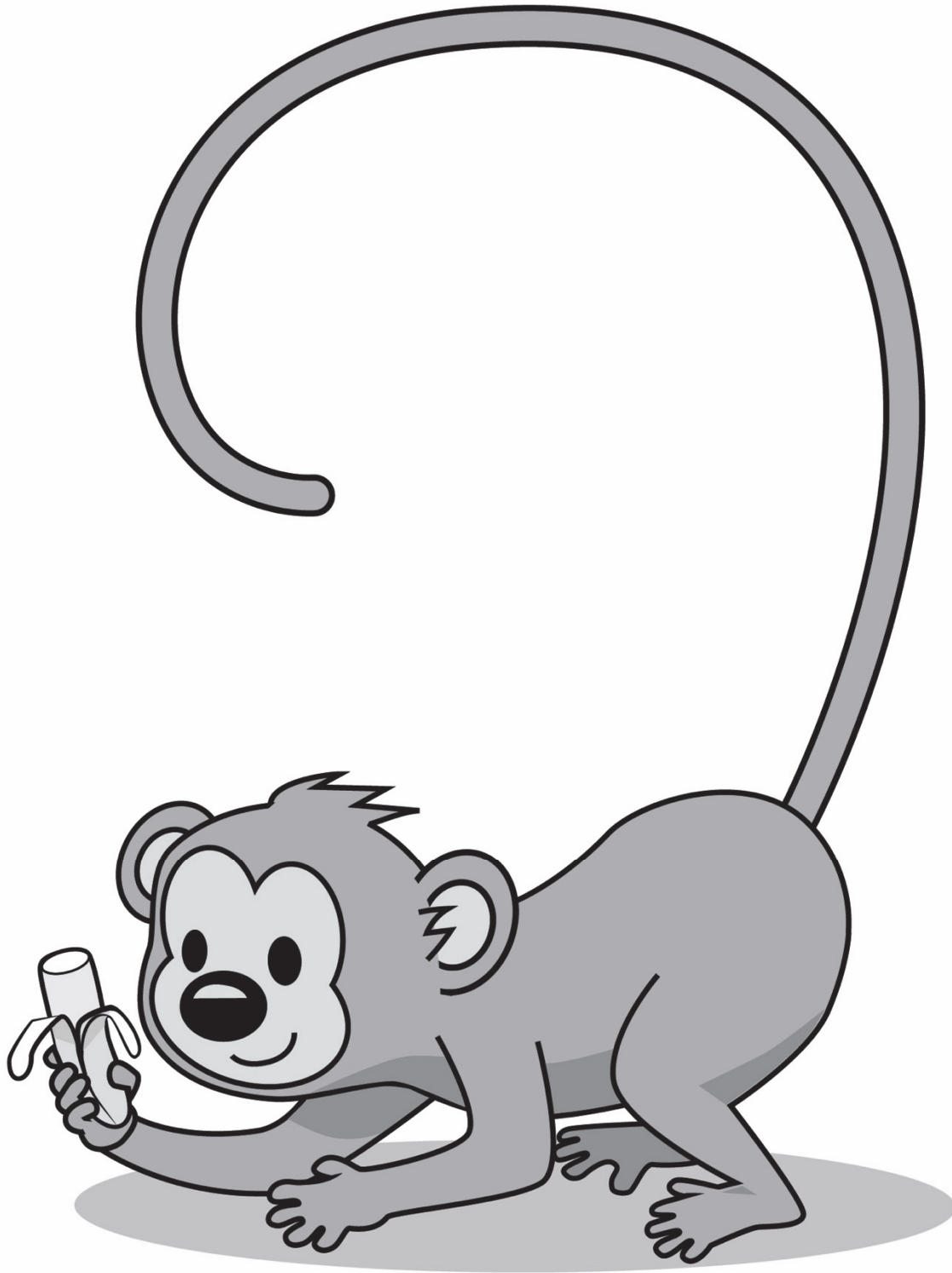


Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 54c


## Measuring Other Animals

How long is my tail?



# Master 55: Intervention Activity 3 Assessment

## Iterating the Unit

Iterating the Unit to Measure Length Behaviours/Strategies		
<p>1. Student looks at the tail, but struggles to estimate its length with non-standard units.</p> <p>“About 200 paper clips!”</p>	<p>2. Student measures length by iterating a single non-standard unit, but struggles to iterate the unit (leaves gaps or overlaps).</p>	<p>3. Student measures length by iterating a single non-standard unit, but has difficulty keeping track of the count.</p> <p>“I am not sure how many paper clips I used.”</p>
Observations/Documentation		
 <p>Measurement Measuring the Raccoon Lesson 3 of 2 “3 paper clips”</p>		
<p>4. Student measures length by iterating a single non-standard unit, but ignores leftover amount.</p>	<p>5. Student measures length by iterating a single non-standard unit, but forgets to include the unit when stating the measure.</p> <p>“It is about 3 long.”</p>	<p>6. Student successfully measures length by iterating a single non-standard unit and includes units with measures.</p> <p>“It is a little more than 3 paper clips long.”</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_


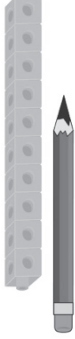

**Intervention: Master 56**

# Recording Sheet

<b>Object</b>	<b>Estimate</b>	<b>Measure</b>

# Master 57: Intervention Activity 4 Assessment

## Using a Centicube Ruler

Measuring Length with Standard-Sized Objects Behaviours/Strategies		
<p>1. Student records object, but struggles to estimate its length with standard-sized objects.</p> <p>"About 100 cubes!"</p>	<p>2. Student uses standard-sized objects to measure, but does not join cubes and leaves gaps or overlaps.</p> 	<p>3. Student uses standard-sized objects to measure (e.g., 10-centricube rod), but does not line up the base of the first cube with the end of the object being measured.</p> 
Observations/Documentation		
<p>4. Student uses standard-sized objects to measure (e.g., 10-centricube rod), but ignores the leftover amount.</p>  <p>"8 centicubes"</p>	<p>5. Student uses standard-sized objects to measure (e.g., 10-centricube rod), but forgets to include the unit when stating the measure.</p> <p>"It is 8 long."</p>	<p>6. Student successfully uses standard-sized objects to measure (e.g., 10-centricube rod), and includes the unit with the measure.</p> <p>"It is a little more than 8 centicubes long."</p>
Observations/Documentation		

Intervention: Master 58

# Full-Year Calendar

<b>JANUARY</b>	S	M	T	W	T	F	S										
<b>FEBRUARY</b>	S	M	T	W	T	F	S										
<b>MARCH</b>	S	M	T	W	T	F	S										
<b>APRIL</b>	S	M	T	W	T	F	S										
<b>MAY</b>	S	M	T	W	T	F	S										
<b>JUNE</b>	S	M	T	W	T	F	S										
<b>JULY</b>	S	M	T	W	T	F	S										
<b>AUGUST</b>	S	M	T	W	T	F	S										
<b>SEPTEMBER</b>	S	M	T	W	T	F	S										
<b>OCTOBER</b>	S	M	T	W	T	F	S										
<b>NOVEMBER</b>	S	M	T	W	T	F	S										
<b>DECEMBER</b>	S	M	T	W	T	F	S										





Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 59a

## Months of the Year Game Board

1	2	3	4
5	6	7	8
9	10	11	12

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 59b

## Months of the Year Game Board (for Extension)

Sixth	First	Eleventh	Third
Seventh	Ninth	Eighth	Twelfth
Fifth	Tenth	Fourth	Second

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 60

## Month Cards

July	September	May	December
March	June	January	October
February	August	November	April





# Master 61: Intervention Activity 5 Assessment

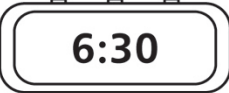
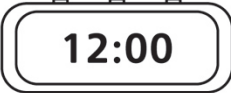
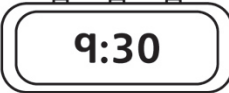
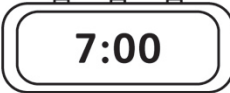
## Months of the Year

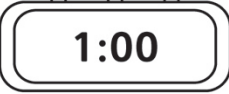
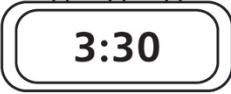
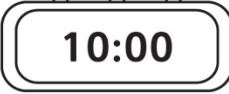
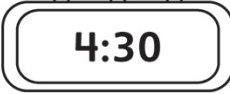
Ordering Months of the Year Behaviours/Strategies			
<p>1. Student understands the attributes of a calendar (months in a year), but cannot say the months in order.</p>	<p>2. Student understands the attributes of a calendar (months in a year) and says the months in order, but loses track of the count.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 10px 0;">September</div> <p>“January, February, March, ... How many months have I said?”</p>	<p>3. Student understands the attributes of a calendar (months in a year) and orders the months, but is unable to name things he or she might do in a particular month.</p> <p>“I don’t know what I do in June.”</p>	<p>4. Student understands the attributes of a calendar (months in a year), successfully orders the months, and associates months with events/activities.</p>
Observations/Documentation			

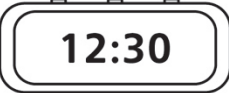
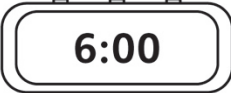
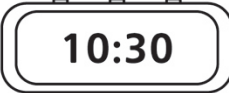
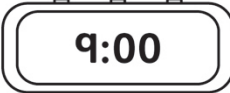
Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 62a

# What Time Is It? Game Board

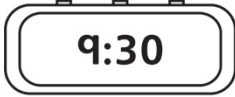
			

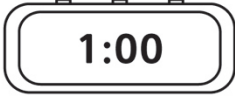
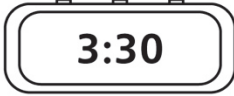
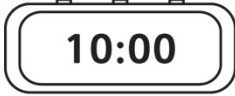
			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 62b

## What Time Is It? Game Board (for Accommodations)

 6:30	 12:00	 9:30

 1:00	 3:30	 10:00

Name \_\_\_\_\_ Date \_\_\_\_\_

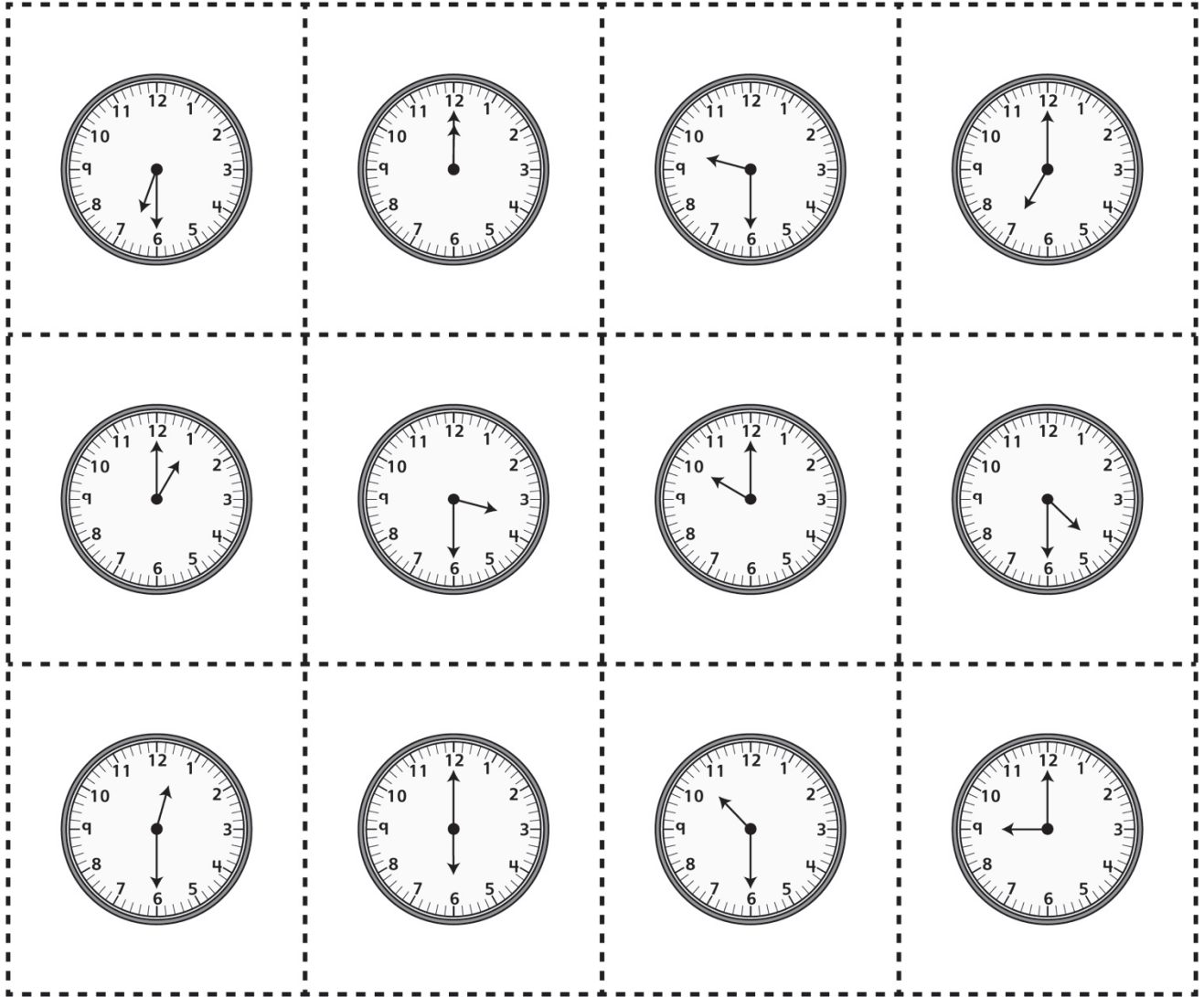
Intervention: Master 62c

## What Time Is It? Game Board (for Extension)

:	:	:	:
:	:	:	:
:	:	:	:

Intervention: Master 63a

# Clock Cards

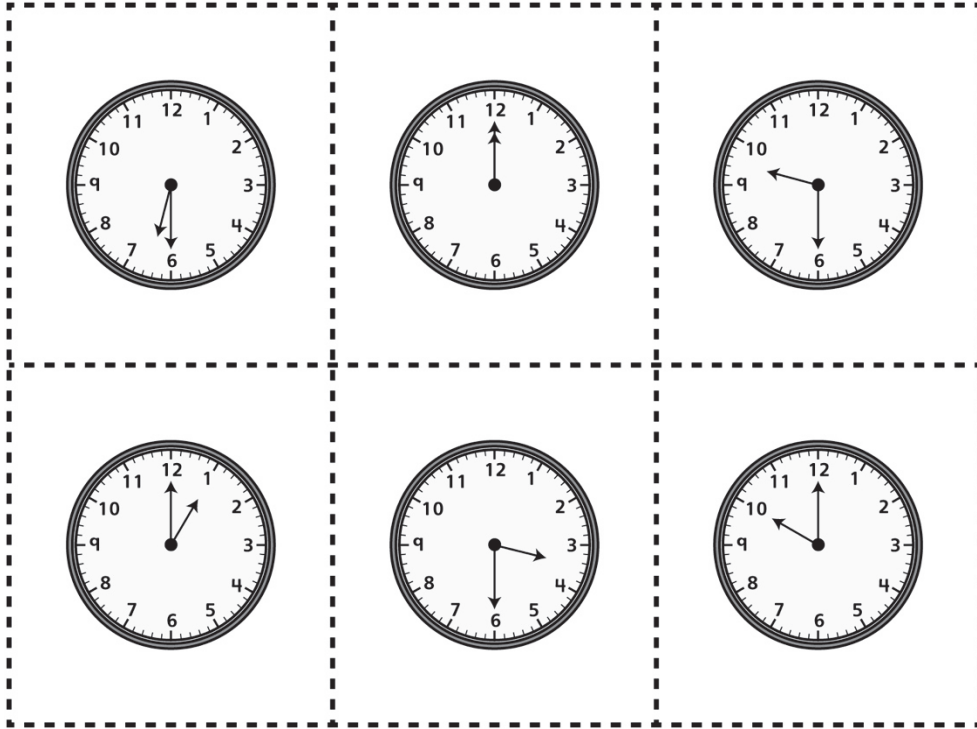




Name \_\_\_\_\_ Date \_\_\_\_\_

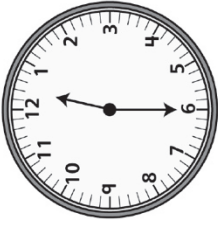

Intervention: Master 63b

# Clock Cards (for Accommodations)



# Master 64: Intervention Activity 6 Assessment


## Telling Time

Telling Time to the Hour and Half-Hour Behaviours/Strategies	
<p>1. Student explores measurement of non-visible attributes (time), but does not realize that each number on the analogue clock represents 5 minutes.</p>	<p>2. Student explores measurement of non-visible attributes (time), but struggles to skip-count by 5s.</p> <p>“5, 10, 20, 30”</p>
<p>3. Student explores measurement of non-visible attributes (time), but mixes up the hour and minute hands on the analogue clock.</p> 	
Observations/Documentation	
<p>4. Student explores measurement of non-visible attributes (time), but struggles to read time on a digital clock.</p>  <p>“The time is nine zero zero.”</p>	
Observations/Documentation	
<p>5. Student explores measurement of non-visible attributes (time), but struggles to explain thinking.</p>	
<p>6. Student successfully explores measurement of non-visible attributes (time) and reads time to the hour and half-hour on analogue and digital clocks.</p>	

Intervention: Master 65




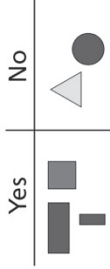
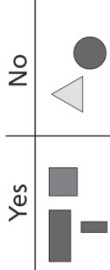
## Attribute Cards for Intervention Activity 1

<b>Choose a size</b>	<b>Choose a colour</b>
<b>Choose a shape</b>	<b>Choose a number of sides</b>
<b>Choose a number of vertices</b>	<b>Your choice</b>



# Master 66: Intervention Activity 1 Assessment

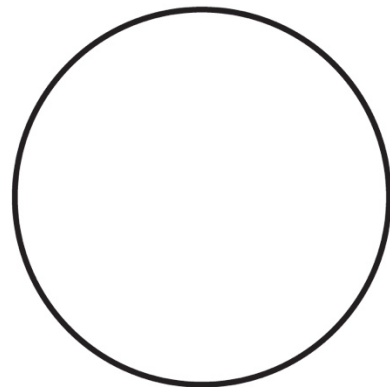
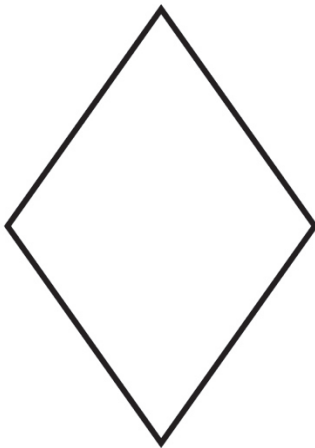
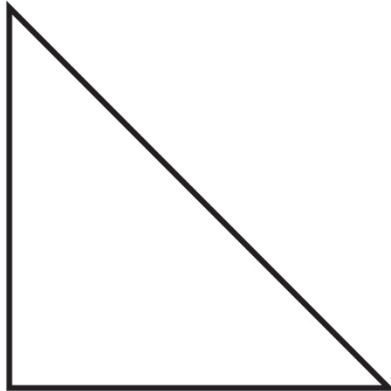
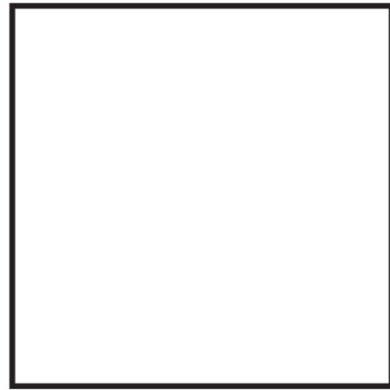
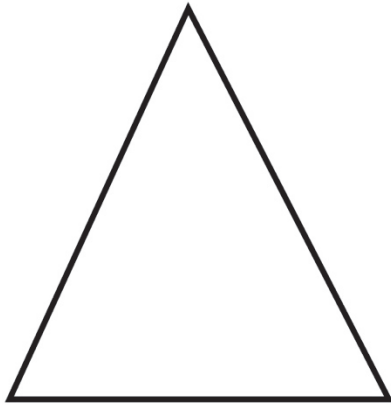
## Sorting Shapes

Sorting Shapes Using One Attribute Behaviours/Strategies	
<p>1. Student chooses a familiar 2-D shape, but is unable to name it.</p>  <p>"It looks like a ball."</p>	<p>2. Student names familiar 2-D shapes, but struggles to analyze their non-geometric and geometric attributes.</p>  <p>"It's a rectangle and all I know is that it is red."</p>
<p>3. Student names familiar 2-D shapes and analyzes their attributes, but struggles to compare shapes to find similarities and differences.</p>  <p>"I'm not sure how they are alike."</p>	
Observations/Documentation	
<p>4. Student sorts a set of 2-D shapes in different ways using a single attribute, but always uses a non-geometric attribute.</p> <p>"I like to sort by colour or size."</p>	<p>5. Student successfully sorts a set of 2-D shapes in different ways using a single attribute, but struggles to describe the sort.</p>  <p>"These are the Yes shapes and these are the No shapes."</p>
Observations/Documentation	
<p>6. Student successfully sorts a set of 2-D shapes in different ways using a single attribute and describes the sort using math language.</p>  <p>"The Yes shapes have 4 vertices and the No shapes do not."</p>	

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 67

## 2-D Shapes



Intervention: Master 68






## Attribute Cards for Shape Bin

<b>Has 3 sides</b>	<b>Has 4 sides</b>	<b>Has more than 5 sides</b>
<b>Has 3 vertices</b>	<b>Has 4 vertices</b>	<b>Has 5 vertices</b>
<b>Has 0 vertices</b>	<b>Has all sides same length</b>	<b>Has 2 sides same length</b>
<b>Does not have straight sides</b>	<b>Is a triangle</b>	



# Master 69: Intervention Activity 2 Assessment

## Analyzing 2-D Shapes

Analyzing Geometric Attributes of 2-D Shapes Behaviours/Strategies		
<p>1. Student analyzes geometric attributes of 2-D shapes, but is only able to identify one shape with a given attribute.</p>  <p>“This is the only shape with 4 sides.”</p>	<p>2. Student analyzes geometric attributes of 2-D shapes, but thinks that shapes that are oriented differently do not have the attribute.</p>  <p>“This does not have 4 vertices.”</p>	<p>3. Student analyzes geometric attributes of 2-D shapes, but only identifies familiar shapes as having the given attribute.</p>  <p>“Does not have 4 sides”</p>  <p>“Has 4 sides”</p>
Observations/Documentation		
<p>4. Student analyzes geometric attributes of 2-D shapes (number of sides), but struggles to identify shapes by number of vertices.</p>  <p>“It has 3 sides. I don’t know how many vertices it has.”</p>	<p>5. Student successfully analyzes geometric attributes of 2-D shapes, but struggles to draw another shape that has the given geometric attribute.</p> <p>“I don’t know what to draw.”</p>	<p>6. Student successfully analyzes geometric attributes of 2-D shapes and draws another shape that has the given geometric attribute.</p>
Observations/Documentation		

Intervention: Master 70

## Attribute Cards for Intervention Activity 3

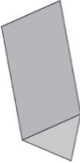
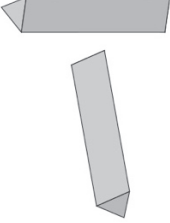
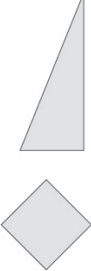
<b>Has vertices</b>	<b>Has edges</b>	<b>Has faces that are circles</b>
<b>Has faces that are squares</b>	<b>Has faces that are rectangles</b>	<b>Has faces that are triangles</b>
<b>Slides</b>	<b>Rolls</b>	<b>Stacks</b>





# Master 71: Intervention Activity 3 Assessment

## Sorting Solids

Sorting 3-D Solids Using One Attribute Behaviours/Strategies		
<p>1. Student turns over an attribute card, but struggles to sort a set of solids using a single attribute and places solids randomly.</p>	<p>2. Student sorts a set of solids using some attributes, but when the attribute involves faces, student struggles to identify the faces of solids.</p>  <p>“What are the faces?”</p>	<p>3. Student sorts a set of solids using some attributes, but when the attribute involves faces, student does not realize that more than one shape can be a face of a solid.</p>  <p>“I see a triangle here. It only has faces that are triangles.”</p>
Observations/Documentation		
<p>4. Student sorts a set of solids using some attributes, but when the attribute involves faces, student does not recognize a shape when it does not match his or her mental image of the shape.</p>  <p>“I don’t know what these are called.”</p>	<p>5. Student successfully sorts a set of solids in different ways using a single attribute, but struggles to explain why a solid was put in the column it was.</p>	<p>6. Student successfully sorts a set of solids in different ways using a single attribute and justifies the sort.</p>
Observations/Documentation		

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 72

## Identifying Solids: Questions You Might Ask

Does the solid \_\_\_\_\_ (roll, slide, stack)?

Does it have \_\_\_\_\_ (vertices, edges)?

Does it have \_\_\_\_\_ (faces, edges, vertices)?

Does it have faces that are \_\_\_\_\_ (circles, rectangles, squares, triangles)?



Does it have \_\_\_\_\_ vertices?  
(number)

Does it have \_\_\_\_\_ edges?  
(number)



# Master 73: Intervention Activity 4 Assessment

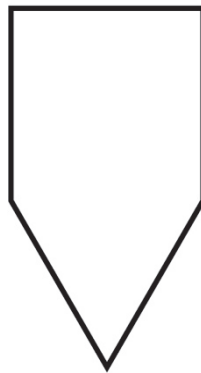
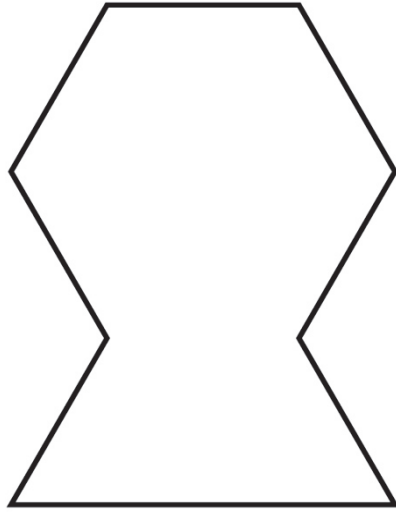
## Attributes of Solids

Analyzing and Identifying 3-D Solids Behaviours/Strategies	
1. Student struggles to analyze attributes of 3-D solids and answers questions randomly.	3. Student attempts to identify 3-D solids, but uses non-math language when asking questions.  "Does it have points? Does it look like a ball?"
Observations/Documentation	
4. Student attempts to identify 3-D solids, but asks questions in a random order and does not appear to have a strategy.  "Does the solid have vertices?" No "Does the solid have edges?" No "Does the solid have faces?" No	6. Student successfully analyzes attributes of 3-D solids, identifies 3-D solids, and names them.    "It's a cylinder."
Observations/Documentation	
5. Student recognizes 3-D solids, but cannot name some of them.    "I don't know what this is called."	

Name \_\_\_\_\_ Date \_\_\_\_\_

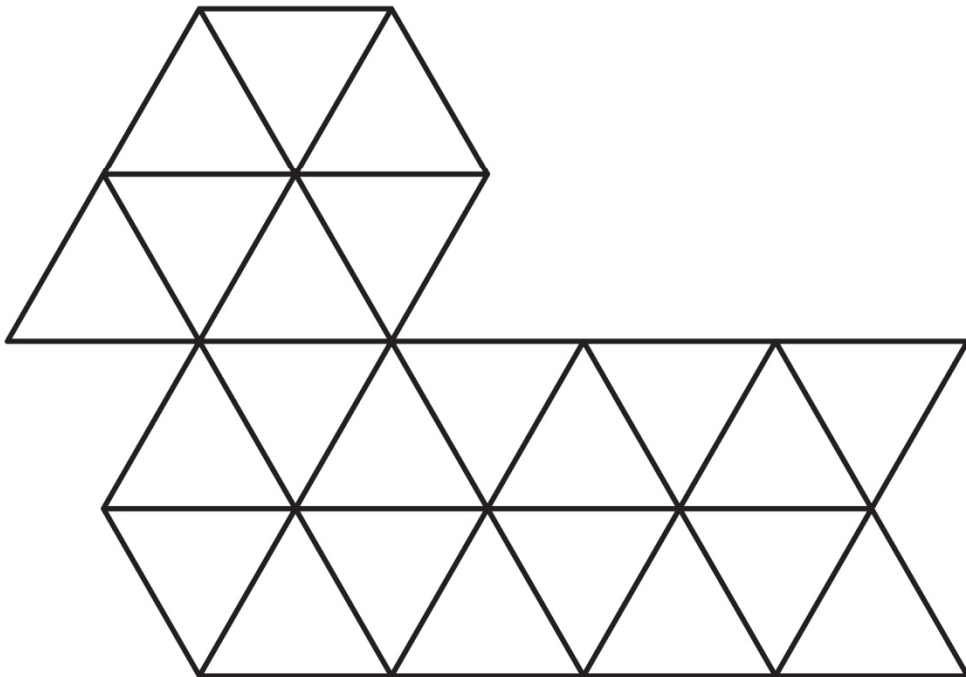
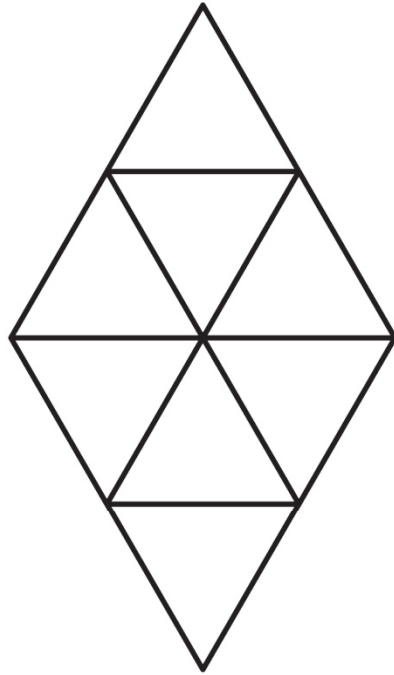
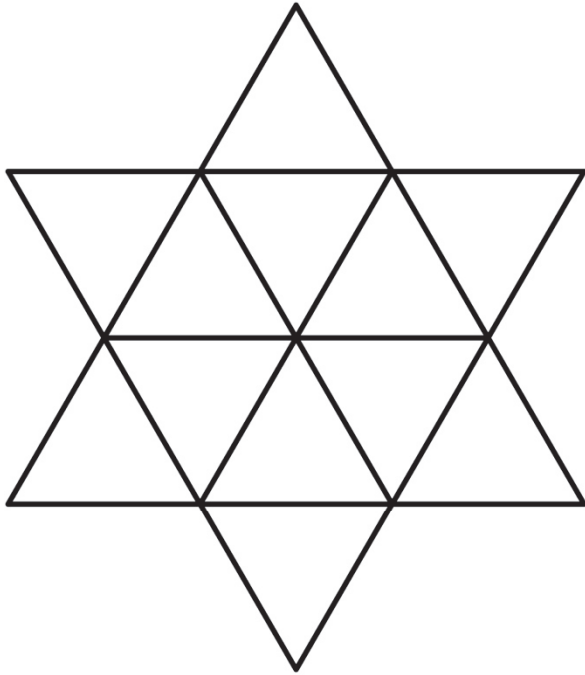
Intervention: Master 74

## Pattern Block Outlines (for Before)



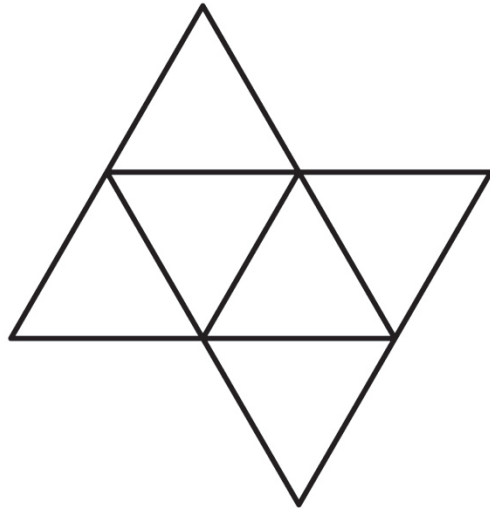
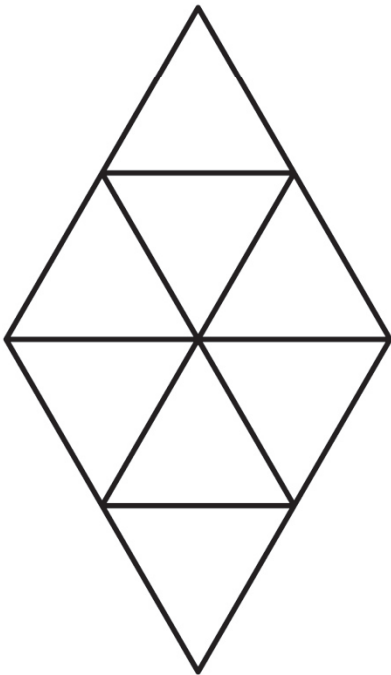
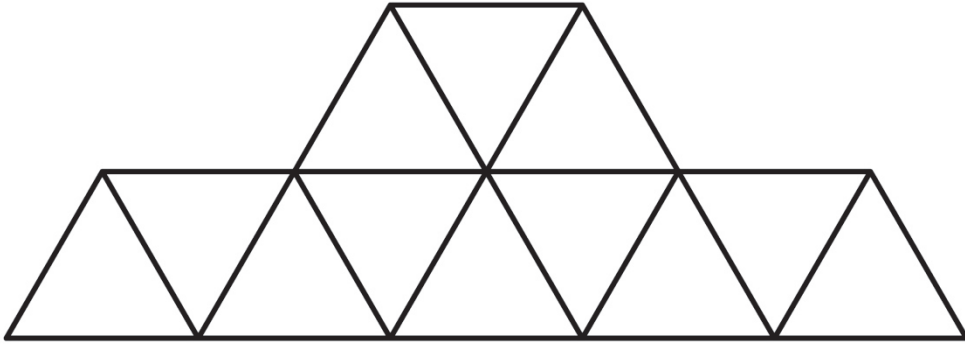
**Intervention: Master 75a**

**Fill Me!**



Intervention: Master 75b

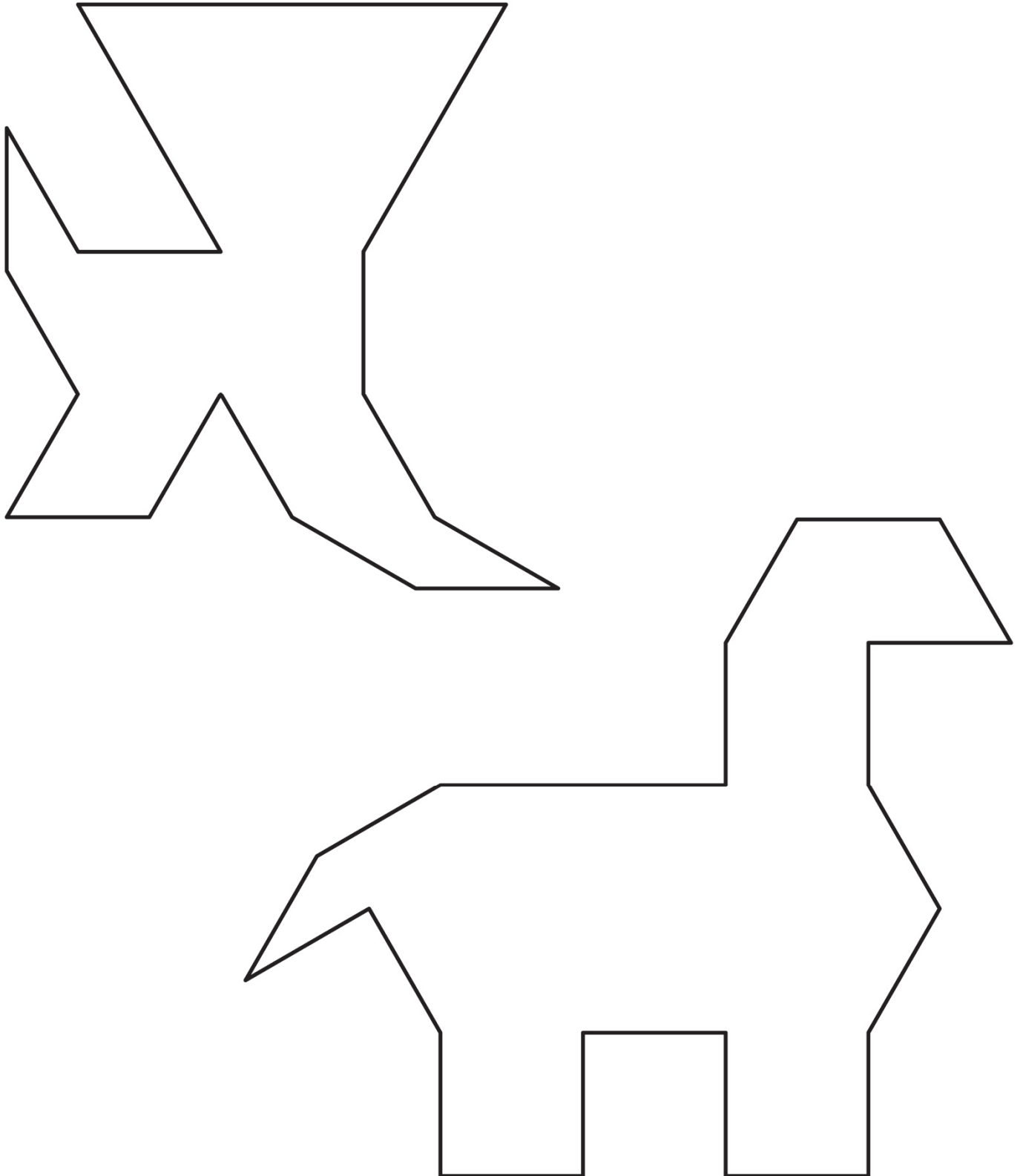
# Fill Me! (for Accommodations)



Name \_\_\_\_\_ Date \_\_\_\_\_

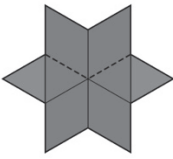




Intervention: Master 75c

# Fill Me! (for Extension)



# Master 76: Intervention Activity 5 Assessment

## Covering Outlines

<b>Covering Outlines in Different Ways Behaviours/Strategies</b>		
<p>1. Student covers a picture outline with shapes, but places blocks randomly or with gaps/overlaps.</p> 	<p>2. Student covers a picture outline with shapes, but always tries to place matching blocks in the same relative position.</p>  <p style="text-align: center;">“I don’t see shapes that will fit.”</p>	<p>3. Student covers a picture outline with shapes, but uses all green triangles.</p> 
<b>Observations/Documentation</b>		
<p>4. Student successfully completes a picture outline with shapes in one way, but removes all blocks to show another way.</p> 	<p>5. Student successfully completes a picture outline with shapes in one way and trades blocks to show another way, but struggles to describe/name the shapes used.</p>	<p>6. Student successfully completes a picture outline with shapes in more than one way and uses math language to describe/name shapes used.</p> 
<b>Observations/Documentation</b>		





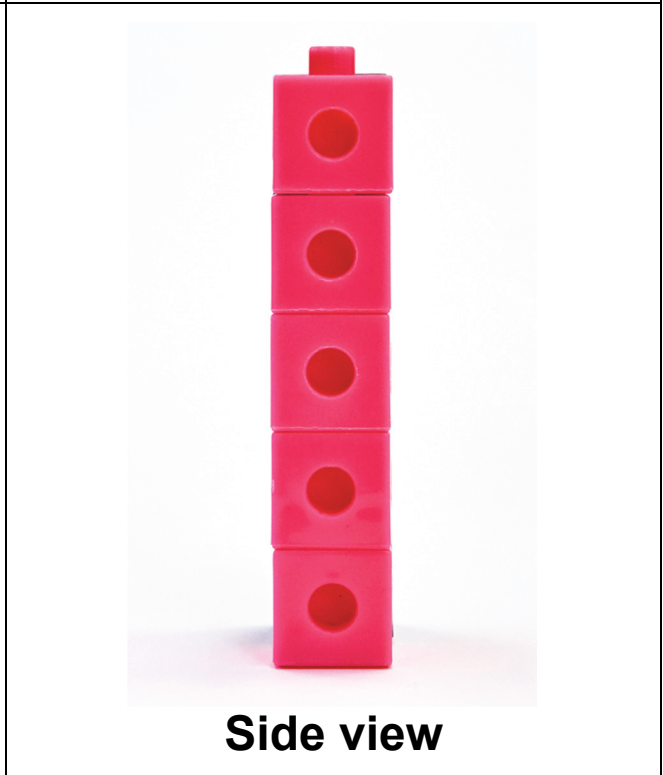
# Master 77: Intervention Activity 6 Assessment

## Describing Solids

<b>Building Structures with 3-D Solids Behaviours/Strategies</b>			
1. Student chooses solids randomly to construct a structure and gives no thought to the attributes of the solids.  "I'll start with the sphere."	2. Student constructs a structure with 3-D solids, but only uses solids with rectangular or square faces.	3. Student constructs a structure with 3-D solids, but it does not match original structure.	4. Student successfully constructs a structure with 3-D solids.
<b>Observations/Documentation</b>			
<b>Describing and Identifying 3-D Solids Behaviours/Strategies</b>			
1. Student chooses a solid, but uses gestures or non-geometric attributes to describe it.  "The solid has faces that are shaped like hockey cards."	2. Student describes geometric attributes of solid, but provides an incomplete description.  "The solid has faces that are squares."	3. Student describes geometric attributes of solid, but partner ignores description or focuses on only part of the description.	4. Student describes geometric attributes of solids, and partner identifies them with ease.
<b>Observations/Documentation</b>			

Intervention: Master 78

# Tower Views



Intervention: Master 79a

# Structure Recording Sheets



**Structure 1**

Blank area for drawing the front view of the structure.

**Front view**

Blank area for drawing the top view of the structure.

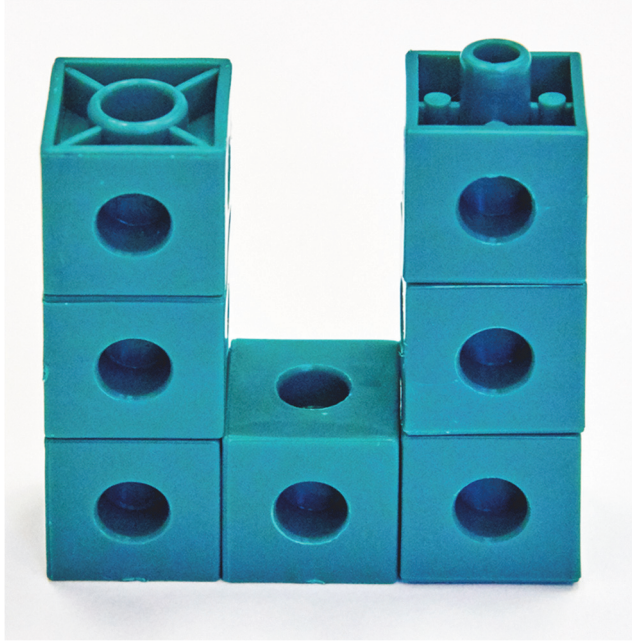
**Top view**

Blank area for drawing the side view of the structure.

**Side view**

Intervention: Master 79b

# Structure Recording Sheets



**Structure 2**

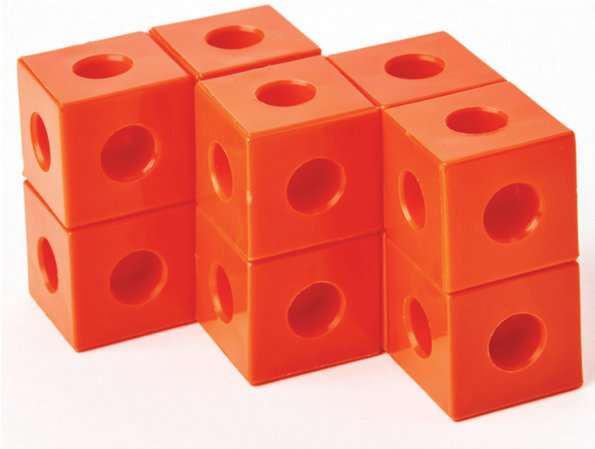
**Front view**

**Top view**

**Side view**

Intervention: Master 79c

# Structure Recording Sheets



**Structure 3**

**Front view**

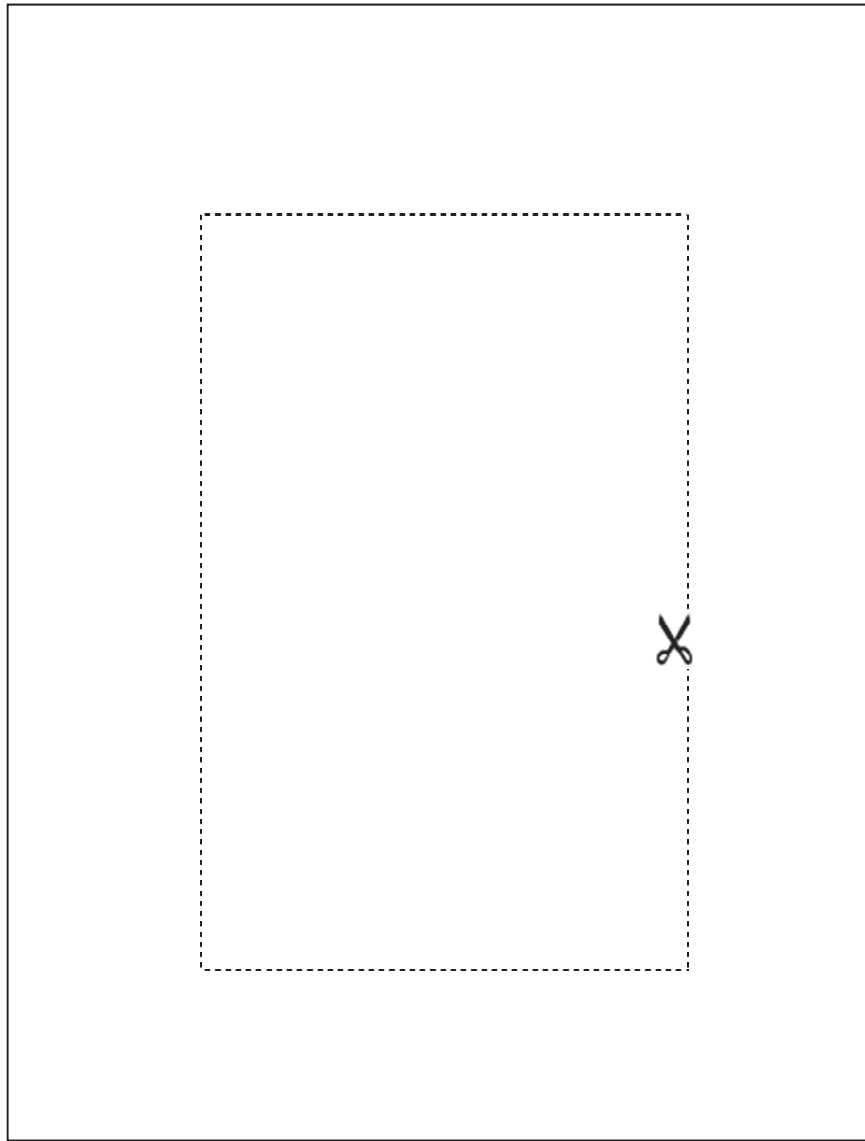
**Top view**

**Side view**

Intervention: Master 80

## Viewing Frame




**Cut out the window.**  
**Look at the cube structure through the window.**





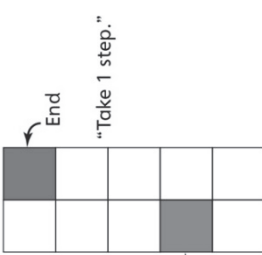
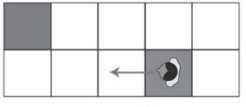
# Master 81: Intervention Activity 7 Assessment

## Tower Views

Drawing Perspective Diagrams Behaviours/Strategies		
<p>1. Student builds a structure, but struggles to create 2-D representations of it (e.g., top/front/side views).</p>	<p>2. Student creates one 2-D representation of a structure (e.g., top, front, or side view), but is confused by the other views.</p> <p>"I drew the front. It only has one view."</p>	<p>3. Student accurately creates 2-D representations (e.g., top/front/side views) of 3-D objects.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Front view</p> </div> <div style="text-align: center;">  <p>Top view</p> </div> <div style="text-align: center;">  <p>Side view</p> </div> </div>
Observations/Documentation		
Visualizing Different Perspectives Behaviours/Strategies		
<p>1. Student builds a structure, but does not show understanding of the concept of perspective.</p>	<p>2. Student builds a structure, but struggles to visualize and describe the views of the structure from multiple perspectives, as he or she cannot isolate a particular view or distinguish different views.</p>	<p>3. Student successfully visualizes and describes the views of a 3-D solid from multiple perspectives (e.g., top/front/side views).</p>
Observations/Documentation		

# Master 82: Intervention Activity 8 Assessment

## Direction Buddies

<b>Giving Directions Behaviours/Strategies</b>		
<p>1. Student looks at the ten-frame, but struggles to give simple directions, and directions are incomplete or incorrect.</p> 	<p>2. Student gives simple directions, but does not adjust them for partner's perspective.</p> 	<p>3. Student gives accurate simple directions and considers partner's perspective.</p> <p>“Take 3 steps forward. Take 1 step right. Take 1 step back.”</p>
<b>Observations/Documentation</b>		
<b>Following Directions Behaviours/Strategies</b>		
<p>1. Student stands on start, but struggles to follow simple directions or miscounts steps.</p>	<p>2. Student follows simple directions, but relies on the direction buddy to move left or right.</p> <p>“I need the direction buddy to help.”</p>	<p>3. Student follows simple directions to move quickly and easily to the end.</p>
<b>Observations/Documentation</b>		



Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 83

## Left/Right Visual



Left




Right



# Master 84: Intervention Activity 9 Assessment

## I Spy

Using Positional Language Behaviours/Strategies			
<p>1. Student chooses an object, but is unable to use relative positions to describe the location of the object (does not know positional language).</p>	<p>2. Student uses gestures to describe the locations of objects, but is uncomfortable with most positional language.</p>  <p>“That side!”</p>	<p>3. Student uses relative positions to describe the locations of objects, but struggles with a few positional words such as <i>right</i> and <i>left</i>.</p> <p>“To the left. No, to the right.”</p>	<p>4. Student fluently uses relative positions to describe the locations of objects.</p> <p>“Beside the desk, on <i>your left</i>.” “The only thing <i>above</i> the flag.”</p>
Observations/Documentation			

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 85

## Sample Questions

- Is your mystery letter to the right of \_\_\_\_\_?
- Is your mystery letter directly to the left of \_\_\_\_\_?
- Is your mystery letter 2 above \_\_\_\_\_?
- Is your mystery letter 1 column to the right of \_\_\_\_\_?

Name \_\_\_\_\_ Date \_\_\_\_\_

**Intervention: Master 86**

# Blank Grid

Write your own letters anywhere in the grid.


Intervention: Master 87

# Direction Visuals



Left



Right




Row


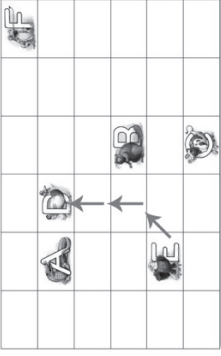


Column



# Master 88: Intervention Activity 10 Assessment

## Five Questions






Using Positional Language Behaviours/Strategies	
<p>1. Student asks questions, but is uncomfortable with positional language and uses gestures (points) or asks questions that are not <i>yes/no</i> questions.</p>  <p>“Is it this way from C?” “How many squares up from C is it?”</p>	<p>2. Student uses positional language in questions, but struggles with a few positional words, such as <i>right</i> and <i>left</i>.</p> <p>“I don’t know if that is right or left.”</p>
<p>3. Student uses positional language in questions, but makes counting errors or counts on the diagonal.</p>  <p>“Is it 1 right and 2 up from E?”</p>	
Observations/Documentation	
<p>4. Student uses positional language in questions, but asks random questions that do not eliminate possible letters.</p>	<p>5. Student uses positional language in questions, but is unable to keep track of which letters were eliminated by earlier questions.</p>
<p>6. Student asks thoughtful questions using positional language and correctly identifies the mystery letter.</p>	
Observations/Documentation	

Name \_\_\_\_\_ Date \_\_\_\_\_

Intervention: Master 89

## Do You Like Dogs? (for Before)









### Do You Like Dogs?

	
	
	
	
<b>Yes</b>	<b>No</b>

Intervention: Master 90

# Children in Evening Art Class

## Children in Evening Art Class

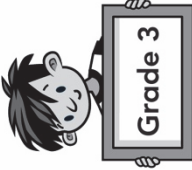





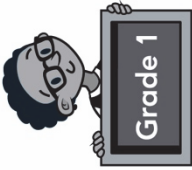
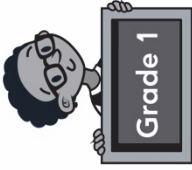
	
	
	
	
	
<b>Monday</b>	<b>Thursday</b>



Intervention: Master 91

# Students in Science Club

Students in Science Club

				<b>Grade 3</b>
				<b>Grade 2</b>
				<b>Grade 1</b>

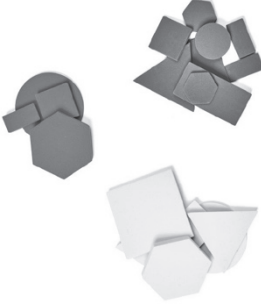
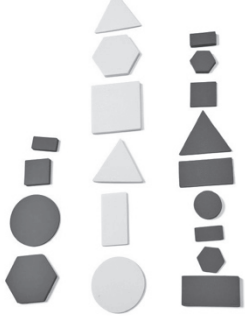
# Master 92: Intervention Activity 1 Assessment

## Interpreting Pictographs

Interpreting Pictographs Behaviours/Strategies		
1. Student looks at pictographs, but does not know where to start.	2. Student reads pictographs, but counts one picture twice or mixes up the number word sequence.  "1, 2, 3, 5, 6"	3. Student reads pictographs, but struggles to interpret data to answer "how many" questions.
Observations/Documentation		
4. Student reads pictographs, but struggles to interpret data to answer comparison questions (e.g., how many more/less).  "How do I know how many more children go to art class on Thursdays?"	5. Student reads pictographs and interprets displays by noting how many more/less than other categories, but struggles to use math language when making comparisons.	6. Student successfully reads pictographs and interprets displays by noting how many more/less than other categories and uses math language to make comparisons.
Observations/Documentation		

# Master 93: Intervention Activity 2 Assessment

## Sorting Objects

Sorting Objects Behaviours/Strategies			
<p>1. Student sorts a set of objects, but can only sort by colour (cannot sort in different ways).</p>	<p>2. Student sorts a set of objects in different ways, but struggles to determine which group has the most objects.</p> 	<p>3. Student sorts a set of objects in different ways and aligns objects to compare, but thinks the longer line always has more.</p> 	<p>4. Student successfully sorts a set of objects in different ways using a single attribute and makes comparisons.</p>
Observations/Documentation			

**Intervention: Master 94a**

# Event Cards

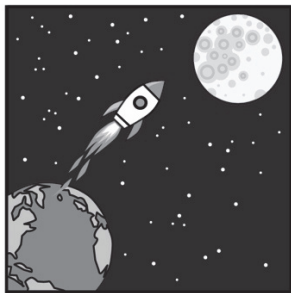
**Note:** The likelihood of events may vary by location, present circumstances, and student experiences. These cards provide examples of events. Consider creating cards related to events in your school or community, or of interest to your students.



**Brush teeth today**



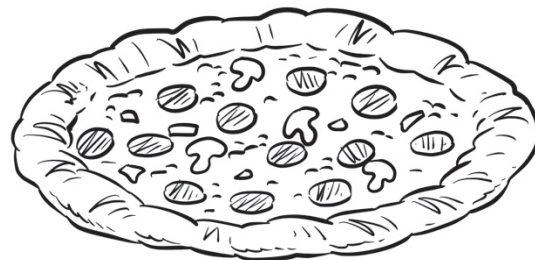
**Drink milk today**



**Go to the moon  
on the weekend**



**See a monkey  
driving a car**



**Have pizza for lunch**

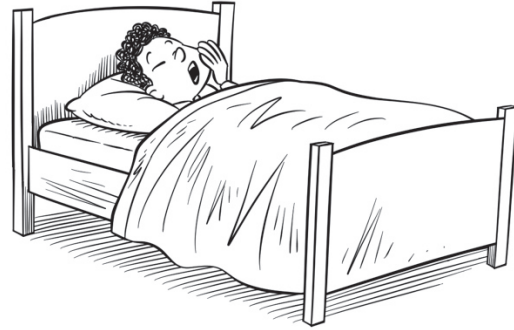


Intervention: Master 94b

## Event Cards



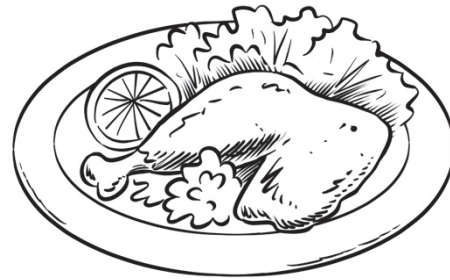
**Play soccer**



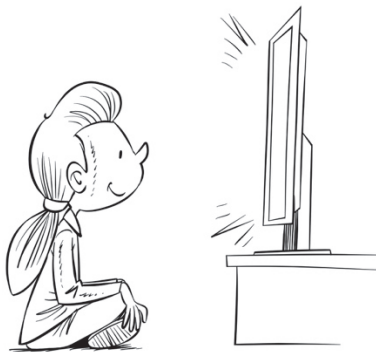
**Go to bed tonight**



**Ride a camel**



**Have chicken  
for dinner**



**Watch television**



**Learn math**



Intervention: Master 94c

# Event Cards



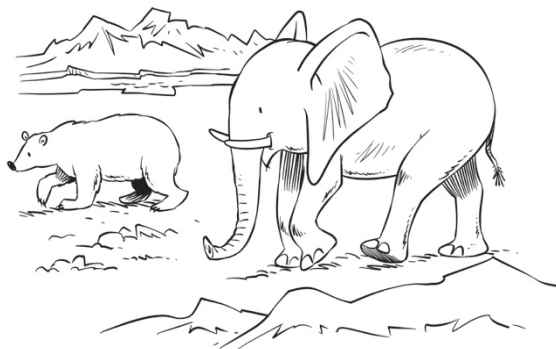
**Later today**



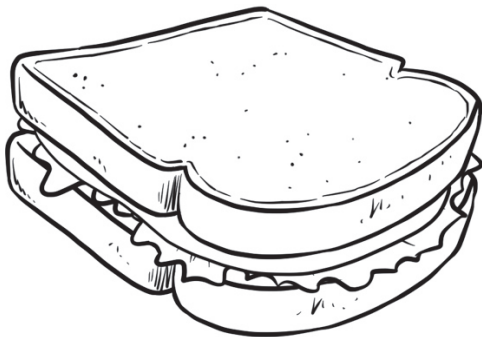
**Rain cats and dogs**



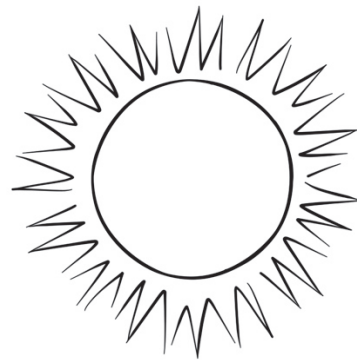
**See a money tree**



**Elephant in the Arctic**



**In my lunch today**



**Later today**



Intervention: Master 95

## Word Cards

<b>Impossible</b>	<b>Impossible</b>	<b>Impossible</b>
<b>Impossible</b>	<b>Impossible</b>	<b>Impossible</b>
<b>Impossible</b>	<b>Unlikely</b>	<b>Unlikely</b>
<b>Unlikely</b>	<b>Unlikely</b>	<b>Unlikely</b>
<b>Unlikely</b>	<b>Unlikely</b>	<b>Certain</b>
<b>Certain</b>	<b>Certain</b>	<b>Certain</b>
<b>Certain</b>	<b>Certain</b>	<b>Certain</b>



Intervention: Master 95

# Word Cards

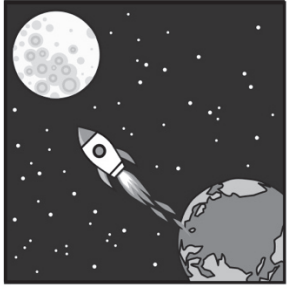

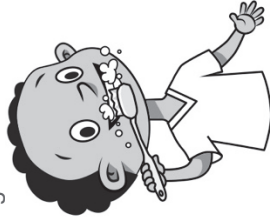
<b>Never</b>	<b>Never</b>	<b>Never</b>
<b>Never</b>	<b>Never</b>	<b>Never</b>
<b>Never</b>	<b>Sometimes</b>	<b>Sometimes</b>
<b>Sometimes</b>	<b>Sometimes</b>	<b>Sometimes</b>
<b>Sometimes</b>	<b>Sometimes</b>	<b>Always</b>
<b>Always</b>	<b>Always</b>	<b>Always</b>
<b>Always</b>	<b>Always</b>	<b>Always</b>





# Master 96: Intervention Activity 3 Assessment

## The Language of Chance

Using the Language of Chance Behaviours/Strategies		Observations/Documentation			
<p>1. Student struggles to describe the likelihood of an event and chooses words randomly.</p>	<p>2. Student describes the likelihood of an event, but decision is based on beliefs or what she or he wants to happen.</p>  <p>"I am certain to go to the moon because I love spaceships."</p>	<p>3. Student describes the likelihood of an event, but cannot justify thinking.</p>  <p>"I will never see a monkey driving a car, but I don't know why."</p>	<p>4. Student successfully describes the likelihood of an event and justifies thinking.</p>  <p>"I am certain to brush my teeth today because I always brush my teeth when I get up in the morning and before I go to bed at night."</p>		

# More or Less Likely? Events

**I will wear skates.**



**Or**

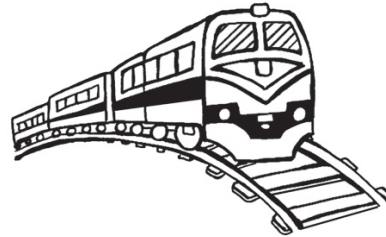


**I will wear running shoes.**

**I will ride in a car.**



**Or**



**I will ride in a train.**

**I will eat an apple.**



**Or**



**I will eat a pineapple.**

**I will see a cat wearing winter boots.**



**Or**



**I will see a dog wearing winter boots.**



Intervention: Master 97b

# More or Less Likely? Events

I will sneeze today.



Or

I will lose my voice today.



It will snow today.

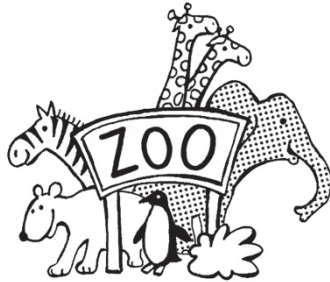


Or

It will rain today.



I will go to the zoo today.



Or

I will go to the park today.



I will see a plane in the sky.



Or

I will see a full moon.



# More or Less Likely? Events

**I will play the piano today.**



**Or**



**I will read a story today.**

**I will go to school tomorrow.**



**Or**



**I will be sick tomorrow.**

**I will wear a winter coat today.**



**Or**



**I will wear rain boots today.**

**I will ride a bus tomorrow.**



**Or**



**I will ride a rollercoaster tomorrow.**



Intervention: Master 97d

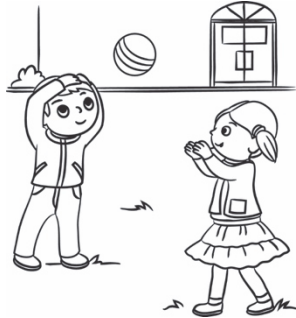
# More or Less Likely? Events

**We will have indoor recess today.**



Or

**We will play in the schoolyard today.**

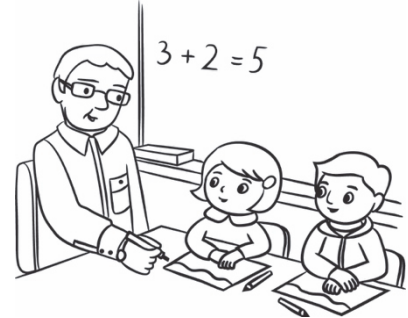


**I will go skiing today.**



Or

**I will learn math today.**



**I will play the violin today.**



Or

**I will play tag today.**



**I will drink water today.**



Or

**I will drink coffee today.**



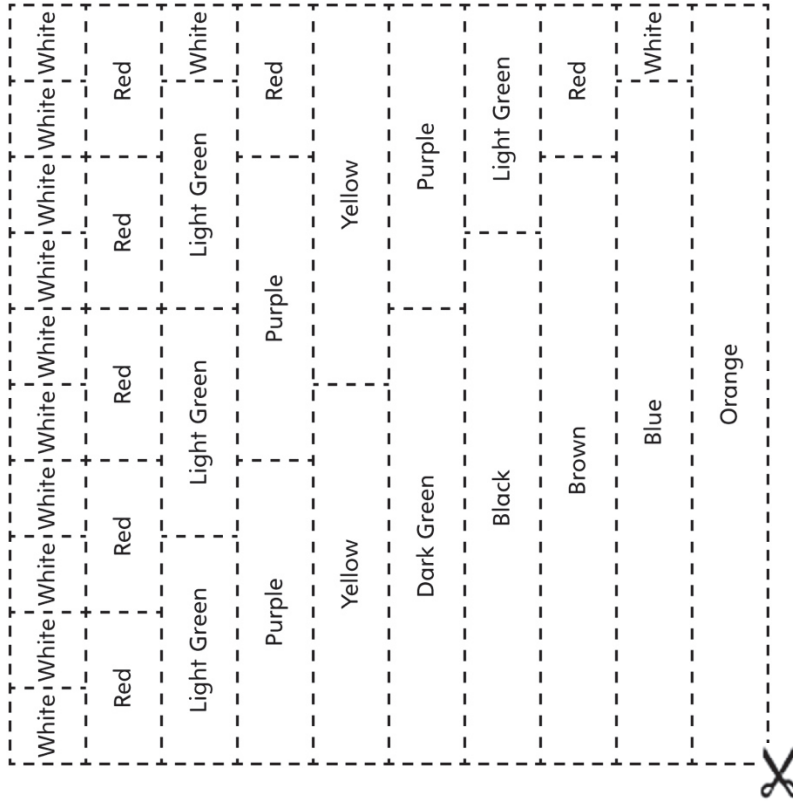
# Master 98: Intervention Activity 4 Assessment

## More or Less Likely?

<b>Comparing the Likelihood of Two Events Behaviours/Strategies</b>			
<p>1. Student struggles to compare the likelihood of two events and chooses events randomly.</p>	<p>2. Student compares the likelihood of two events, but decision is based on beliefs or what he or she wants to happen.  "It is more likely that I will ride a roller coaster tomorrow because I love to go on rides."</p>	<p>3. Student compares the likelihood of two events, but cannot justify thinking.  "It is more likely that it will snow today, but I don't know why."</p>	<p>4. Student successfully compares the likelihood of two events and justifies thinking.  "It is more likely that I will ride a bus tomorrow because tomorrow is a school day and I take the bus to school."</p>
<b>Observations/Documentation</b>			

**Math Every Day: Master 1**

# Coloured Rods

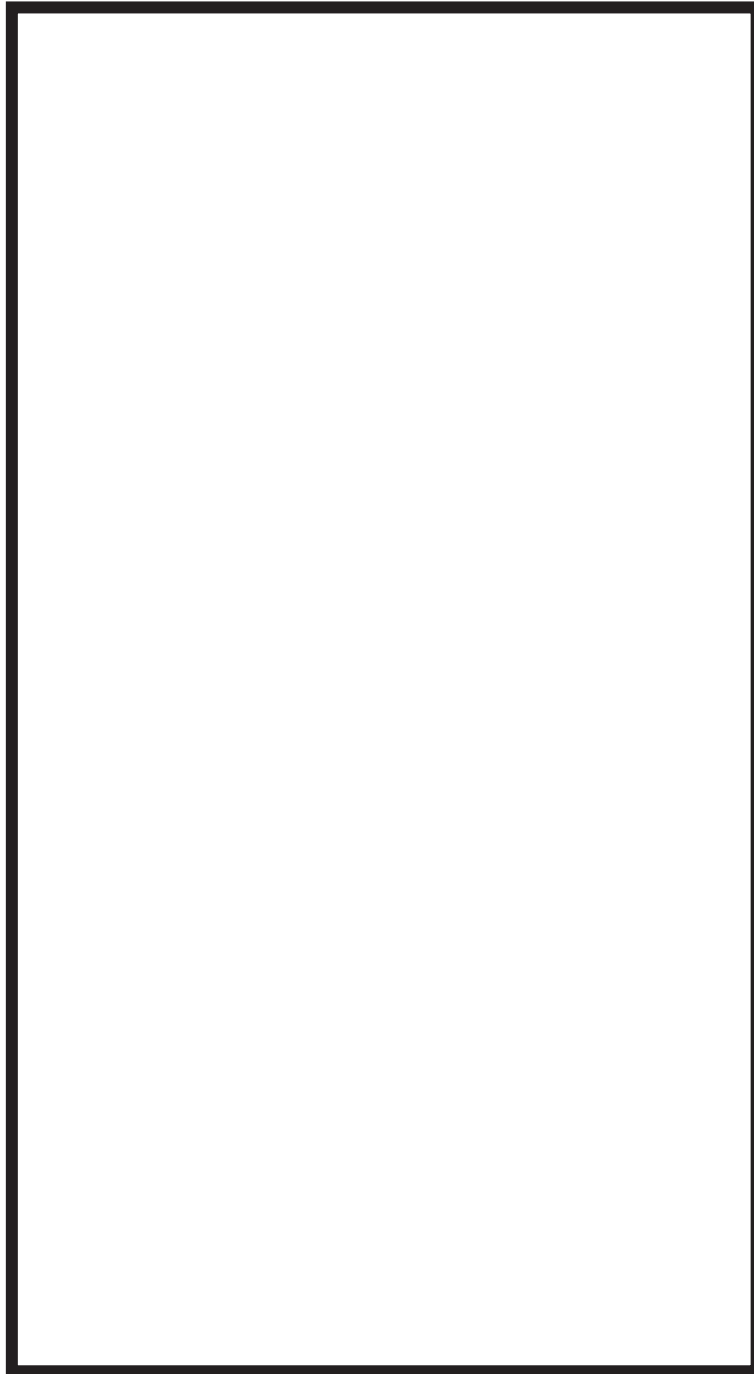


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 2a

# Paper Shapes

## Rectangle



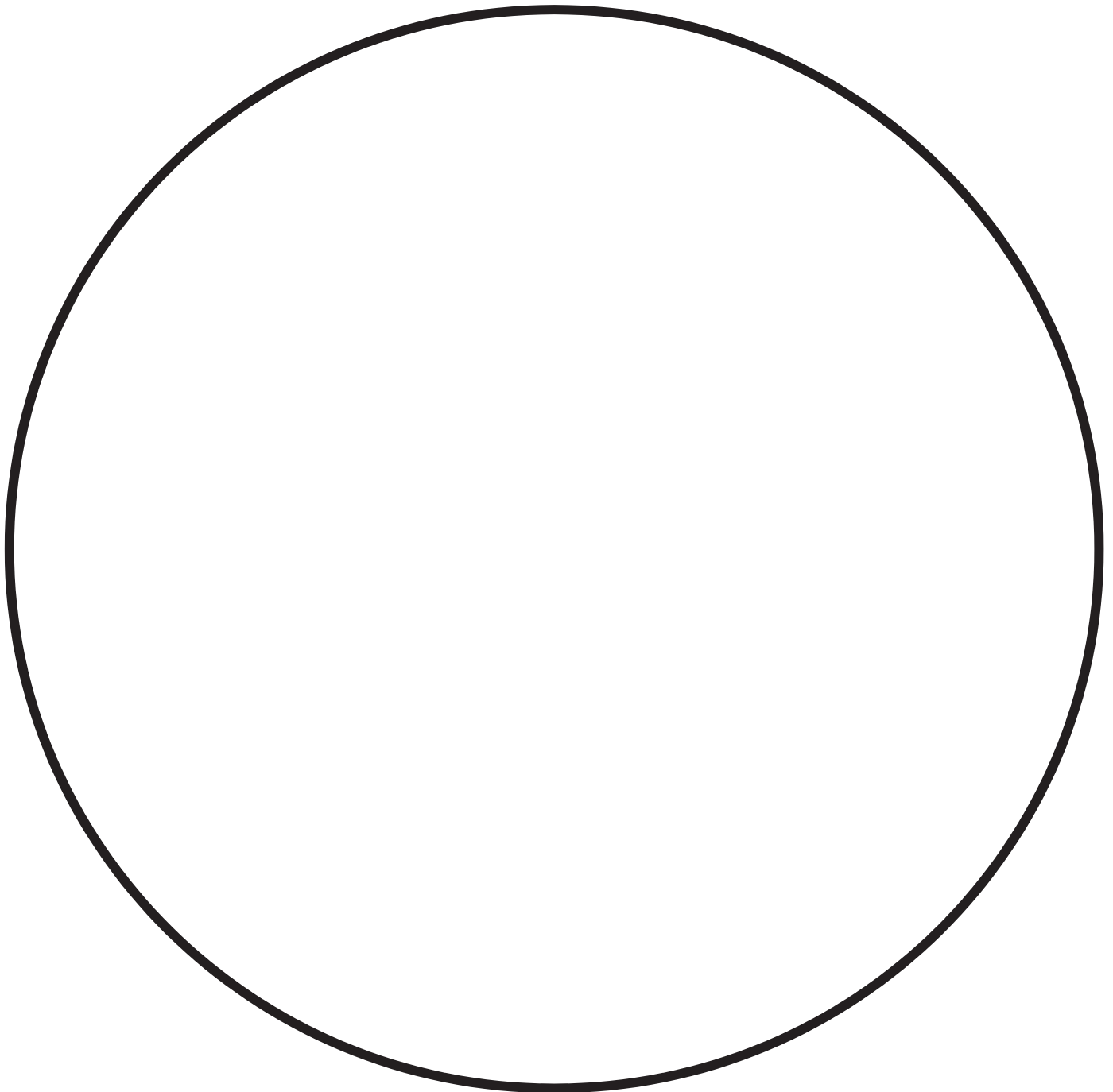


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 2b

# Paper Shapes

## Circle

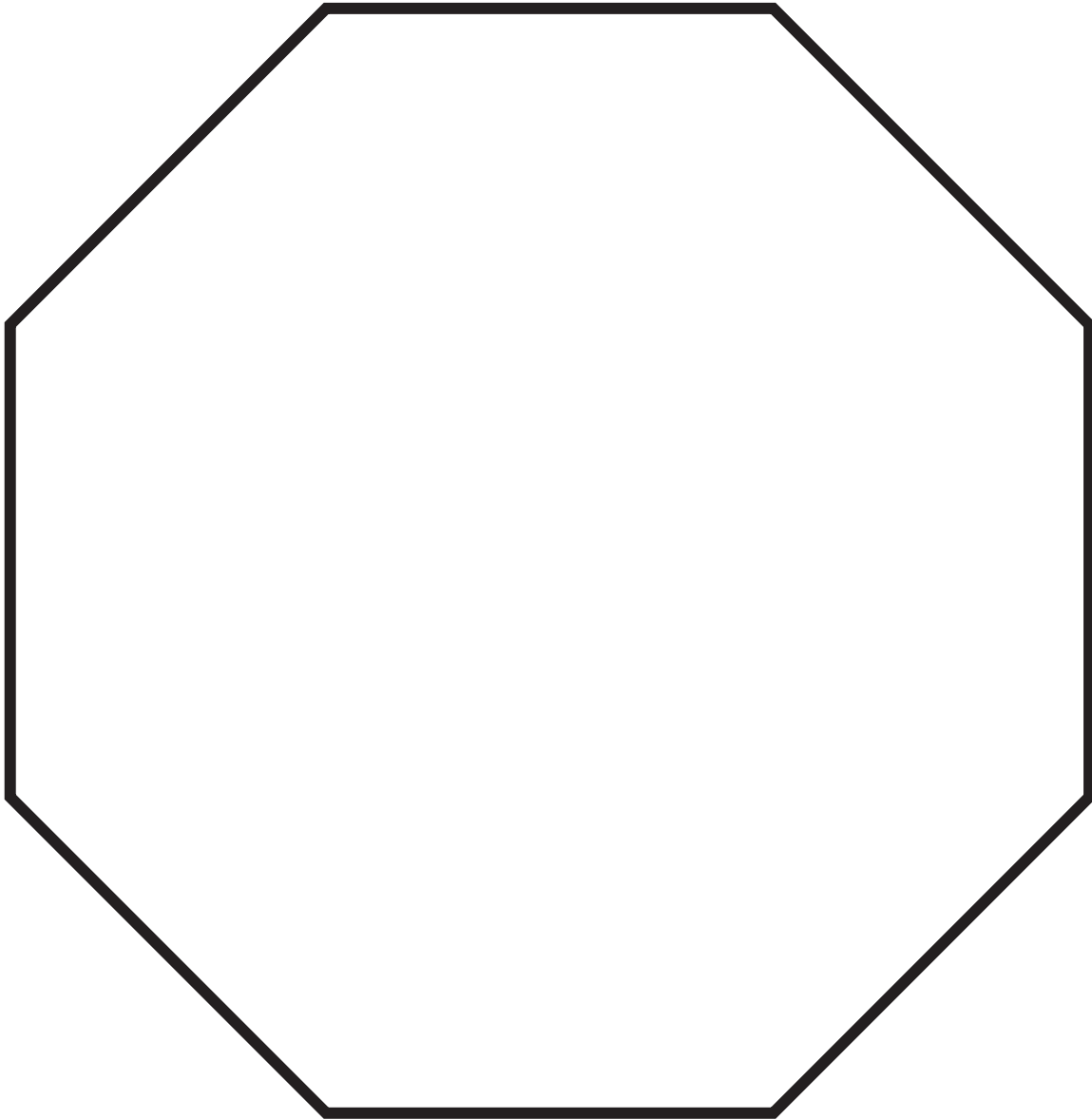


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 2c

# Paper Shapes

## Octagon

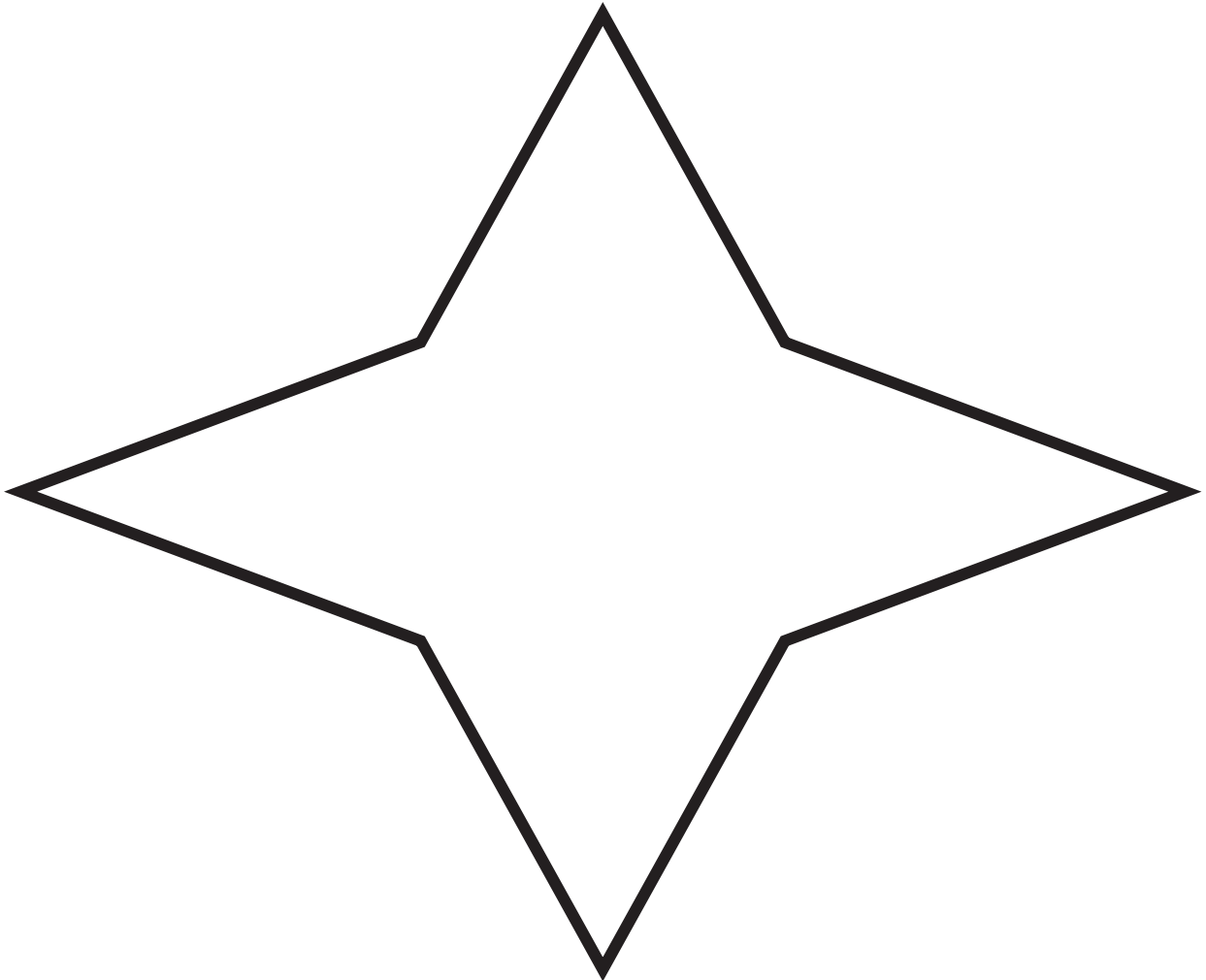


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 2d

# Paper Shapes

## 8-Sided Shape



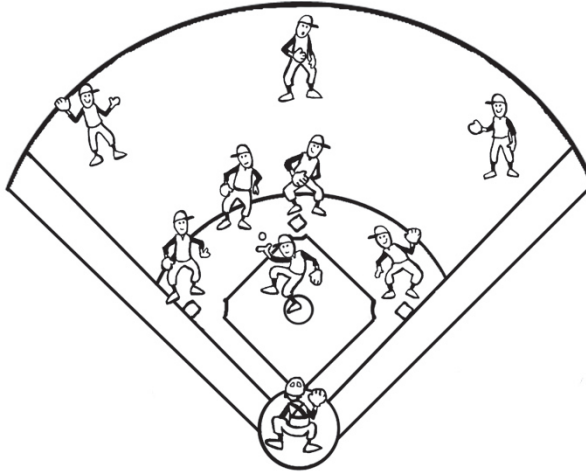
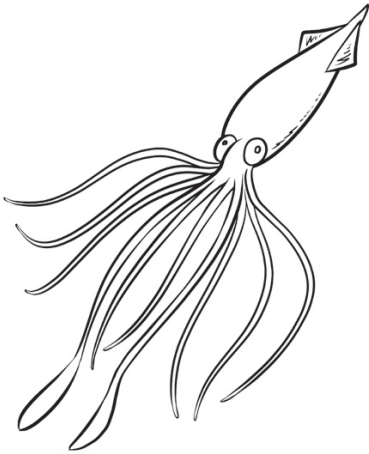
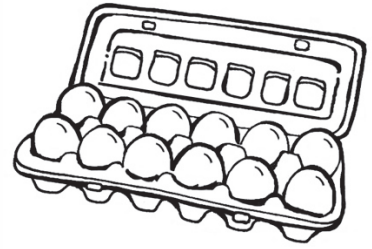
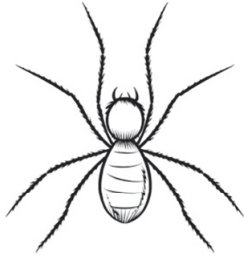
**Math Every Day: Master 3**

# At the Beach

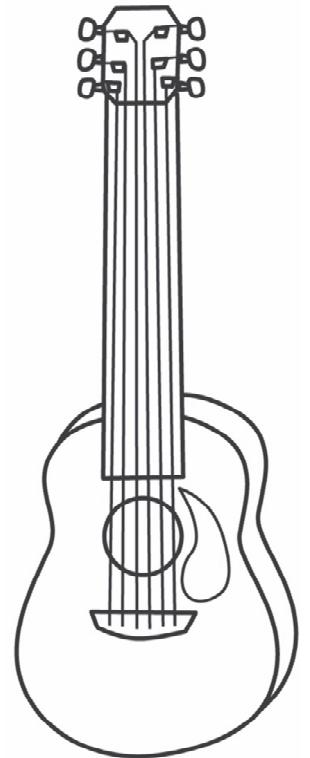
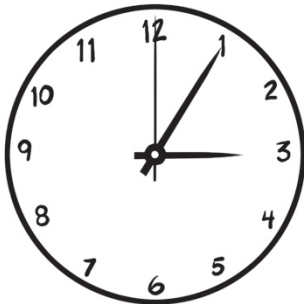


**Math Every Day: Master 4**

**Images of Everyday Items**

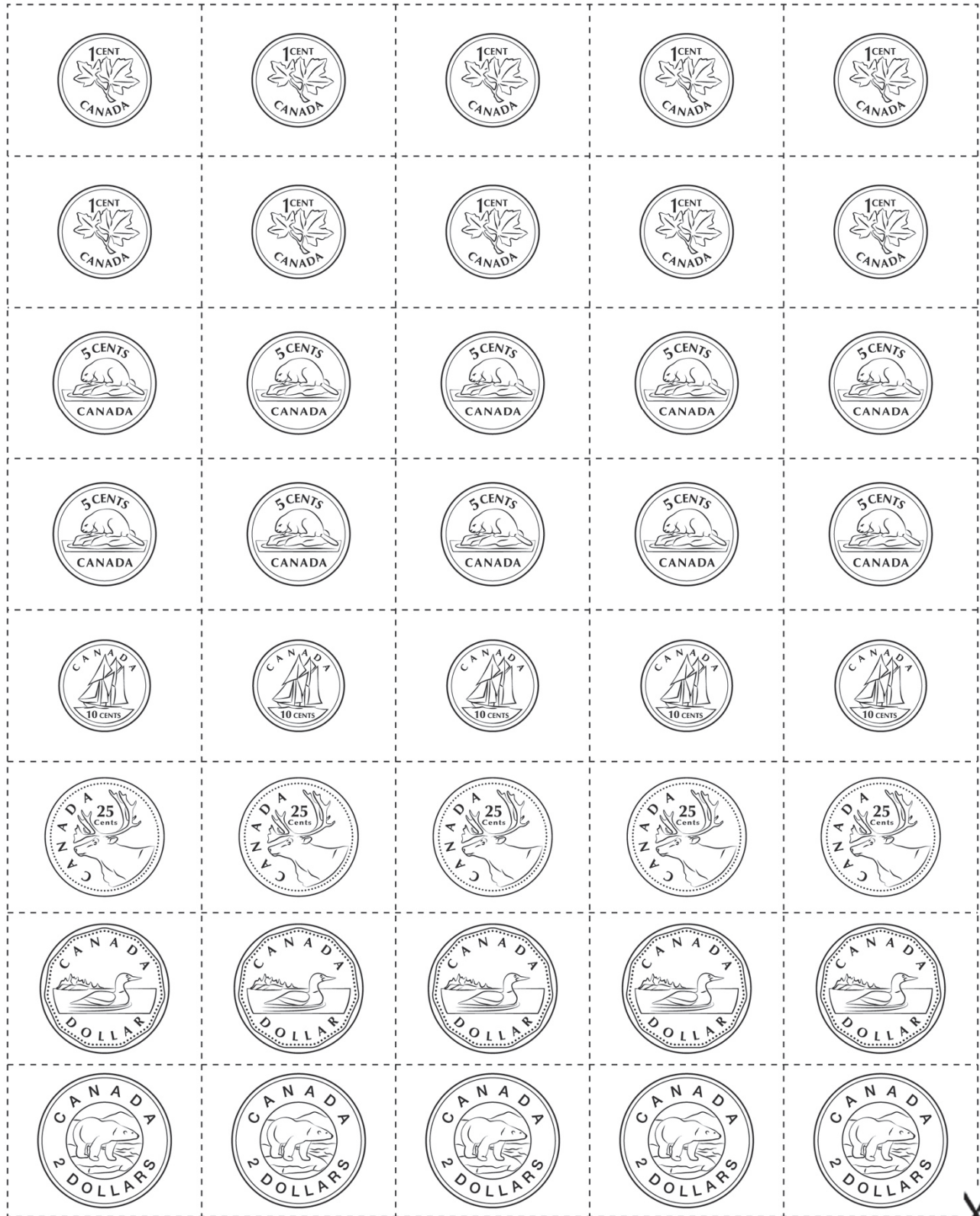


SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7



Math Every Day: Master 5

# Coin Cutouts



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 6

# Repeating Patterns Around Us

## Wall Art



## Crosswalk



## Paving Stones





## Garden Path



## Math Every Day: Master 7

**What's Missing?  
Number Sentences**

$$3 + 6 = \square$$

$$3 + 6 = 4 + \square$$

$$3 + 2 + \square = 4 + 5$$

$$3 + \square + 5 = 6 + 3$$

$$3 + 3 + 3 = 2 + \square + 3$$

$$8 + \square = 15$$

$$\square + 3 + 7 = 4 + 11$$

$$\square + 10 = 11 + 4$$

$$5 + 3 + 7 = 2 + \square + 4$$

$$5 + 10 = 2 + \square$$

$$\square - 5 = 4$$

$$9 - 5 = 3 + \square$$

$$9 - \square - 1 = 1 + 3$$

$$\square - 1 = 2 + 2$$

$$4 = \square - 3 + 2$$

$$5 + 5 = \square + 4$$

$$5 + \square + 3 = 4 + 2 + 4$$

$$7 + 3 = 2 + \square$$

$$\square - 2 + 3 = 2 + 9 - 1$$

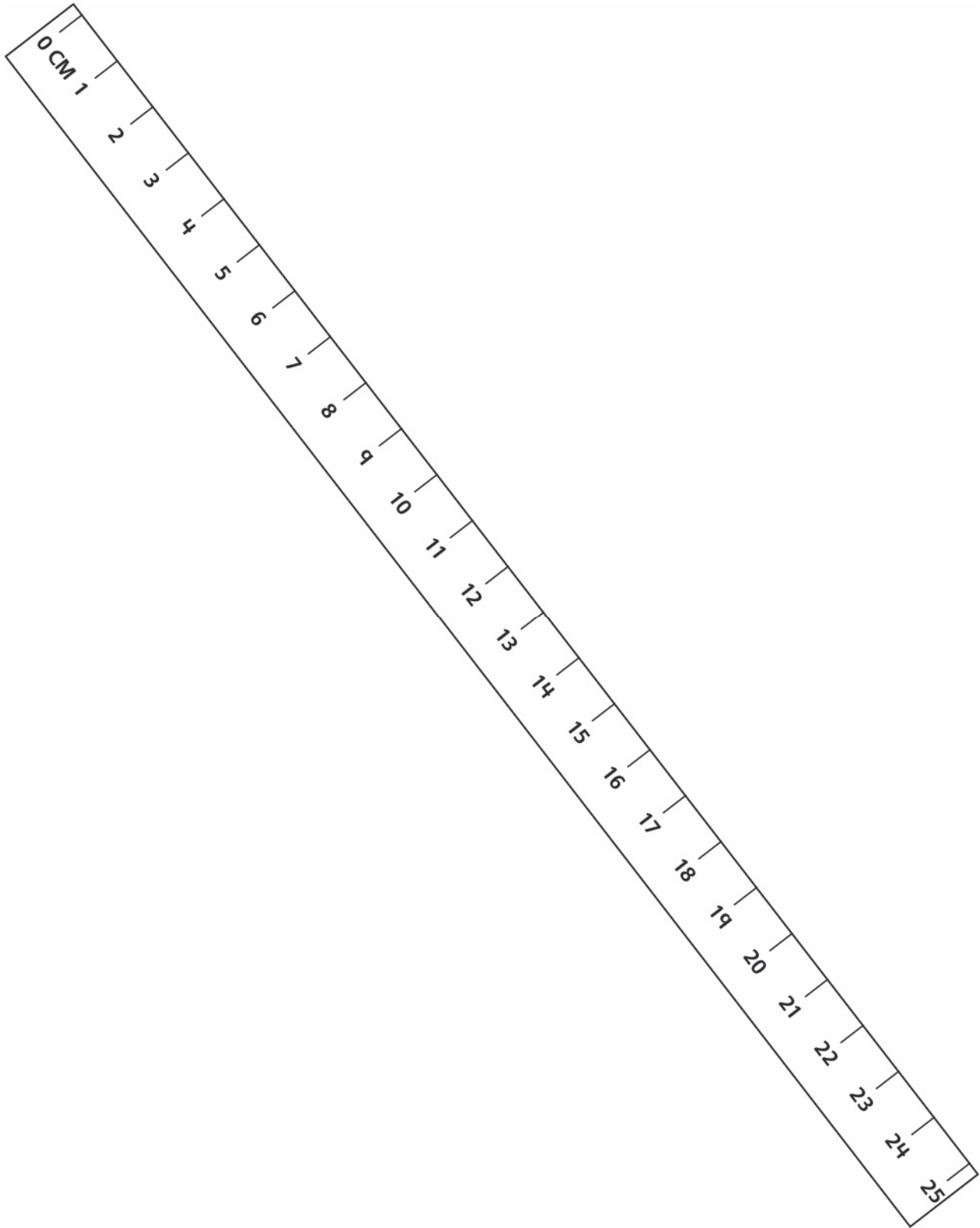
$$12 - 2 = \square + 9$$



Name \_\_\_\_\_ Date \_\_\_\_\_

**Math Every Day: Master 8**

# Centimetre Ruler



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 9a

## Number Cards (1–12)

1

2

3

4

5

6



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 9b

## Number Cards (1–12)

7

8

9

10

11

12



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 10a

## Ordinal Number Cards (1st–12th)

**First**

**Second**

**Third**

**Fourth**

**Fifth**

**Sixth**



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 10b

## Ordinal Number Cards (1st–12th)

**Seventh**

**Eighth**

**Ninth**

**Tenth**

**Eleventh**

**Twelfth**



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 11a

## Month Cards

**January**

**February**

**March**

**April**

**May**

**June**





Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 11b

## Month Cards

**July**

**August**

**September**

**October**

**November**

**December**



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 12a

## Calendar Clue Cards

Month between  
December and  
February

Month before  
March

Month after  
April

Month before  
July

Month after  
August

Month before  
November



## Calendar Clue Cards

Month after  
February

Month between  
March and May

Month after  
June

Month between  
July and  
September

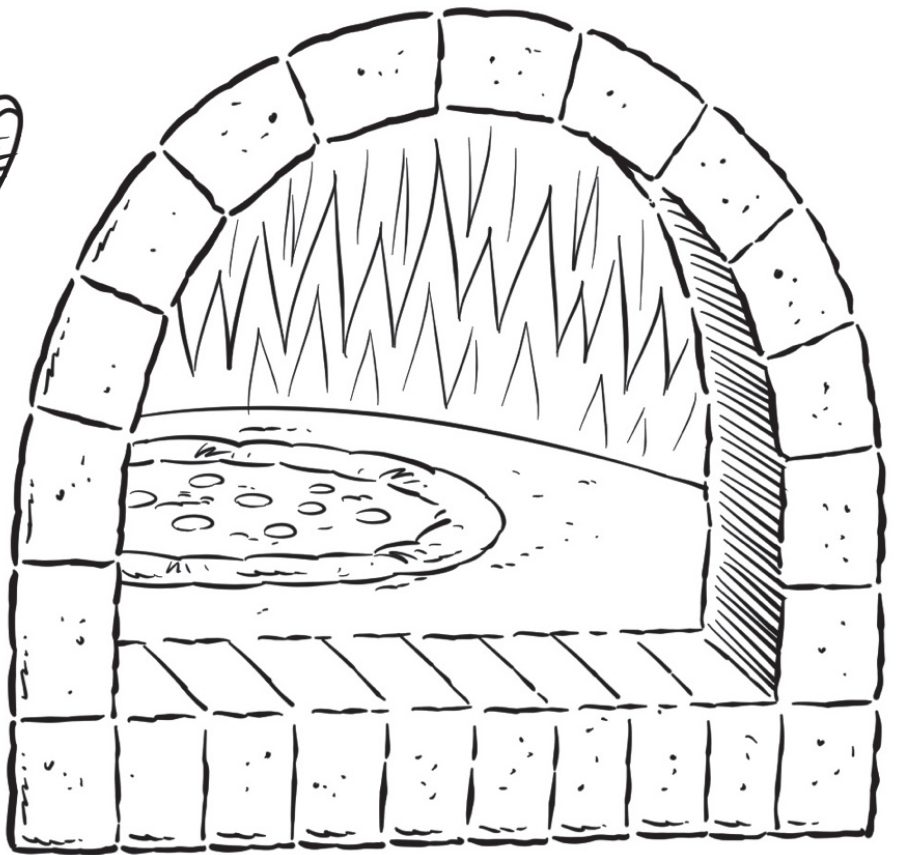
Month before  
December

Month between  
November and  
January



Math Every Day: Master 13a

# Hot and Cold Images



# Hot and Cold Images



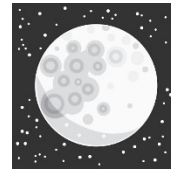
# Geometry Poem

Solids aren't flat, they're fat.

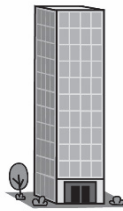
**A cone is** like a pointy hat.



**A sphere is** like a full moon in the sky.



**A prism is** a building high.



**A cylinder is** like a tall flag pole.



**A cube is** something fun you roll.

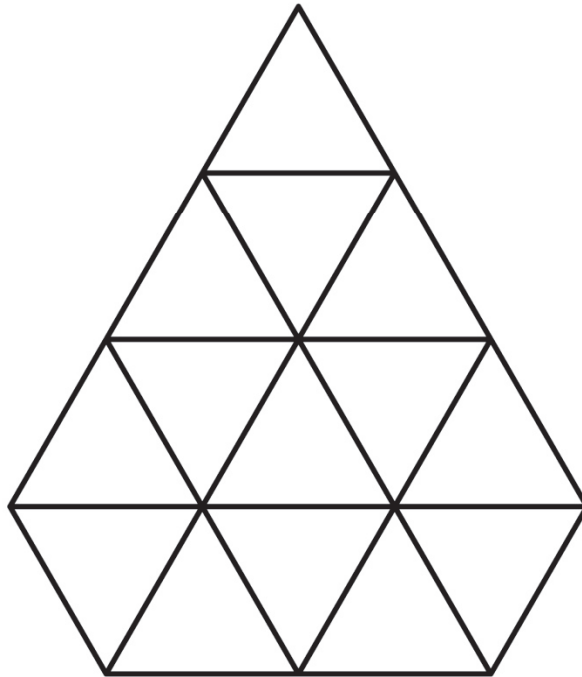
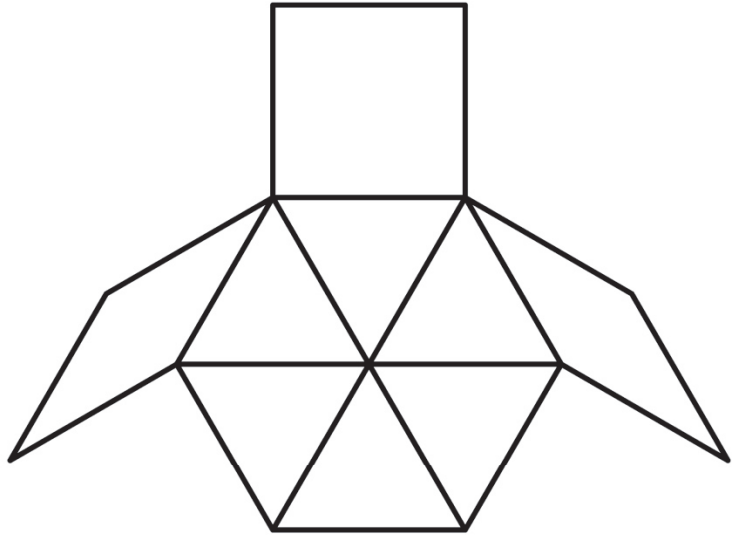
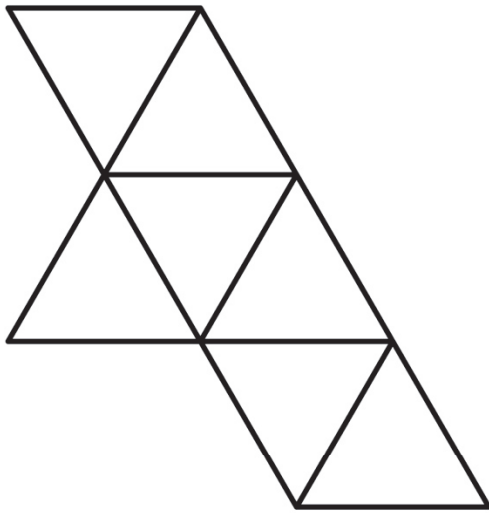


Solids are here. Solids are there.

Solids are almost everywhere.

Math Every Day: Master 15a

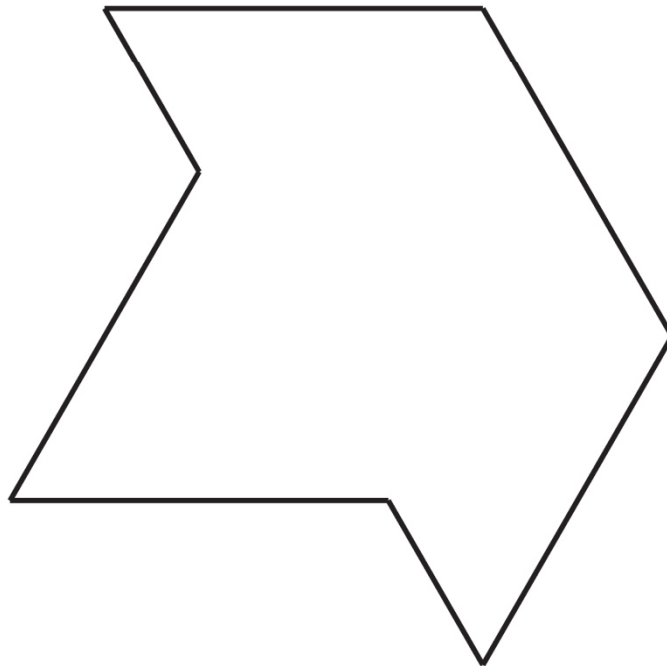
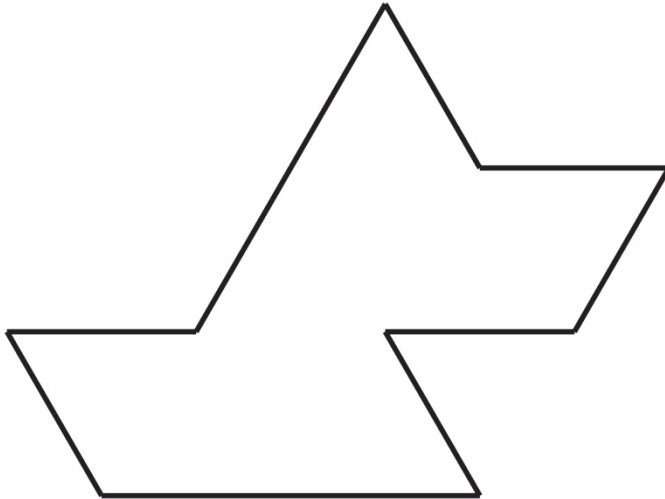
# Fill Me In! Pattern Block Outlines



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 15b

# Fill Me In! Pattern Block Outlines

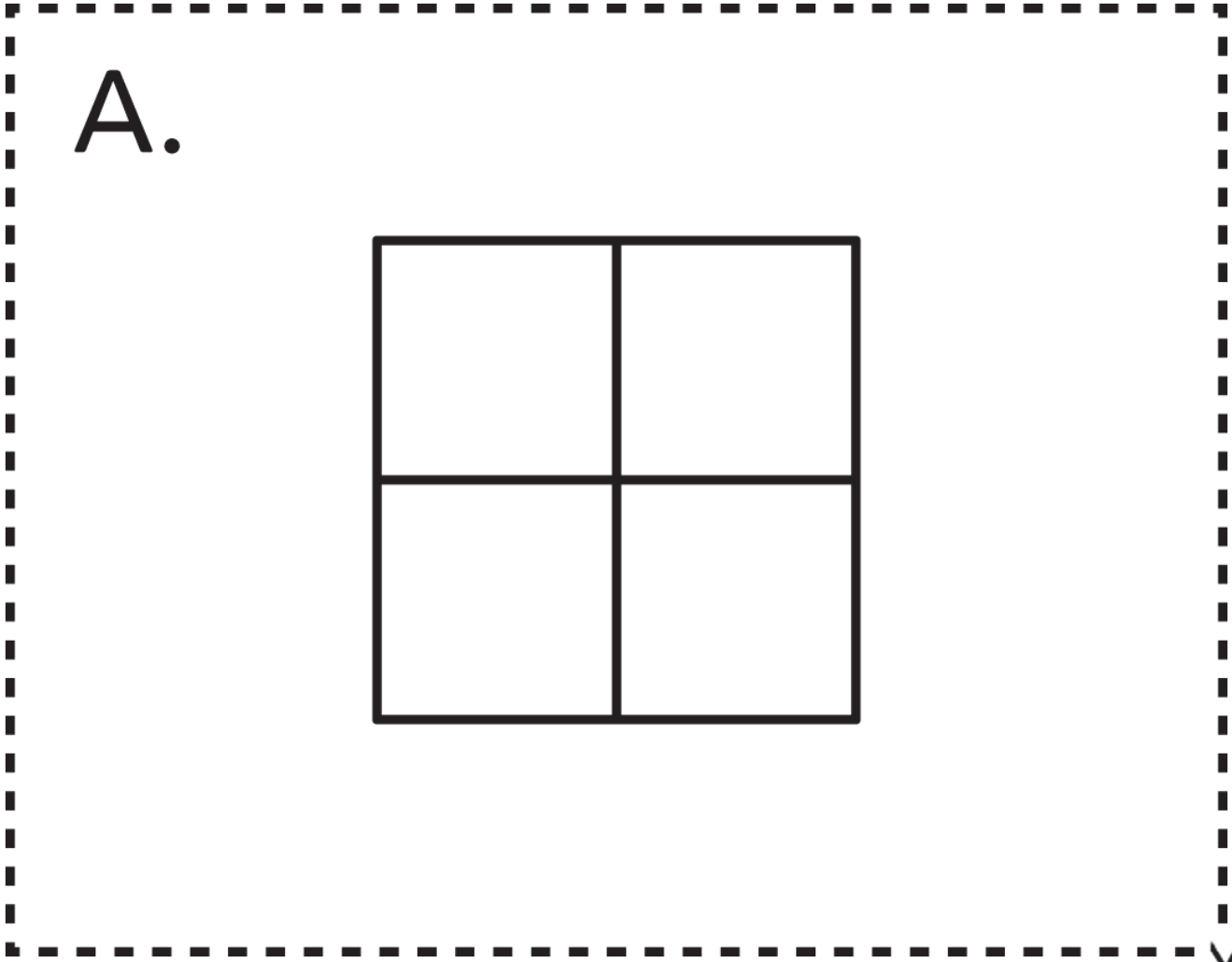




Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 16a

# Draw the Shape Cards

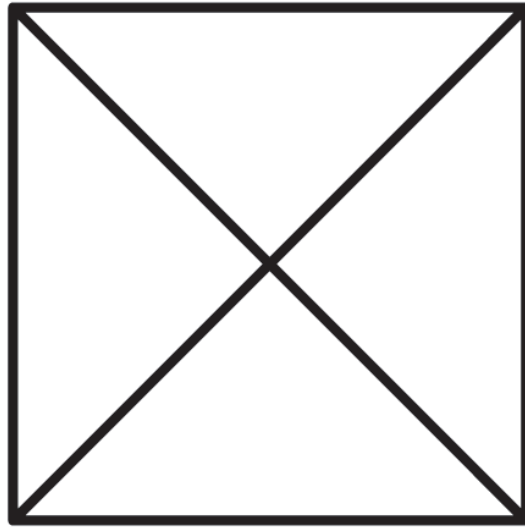


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 16b

## Draw the Shape Cards

B.



Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 16c

## Draw the Shape Cards

C.

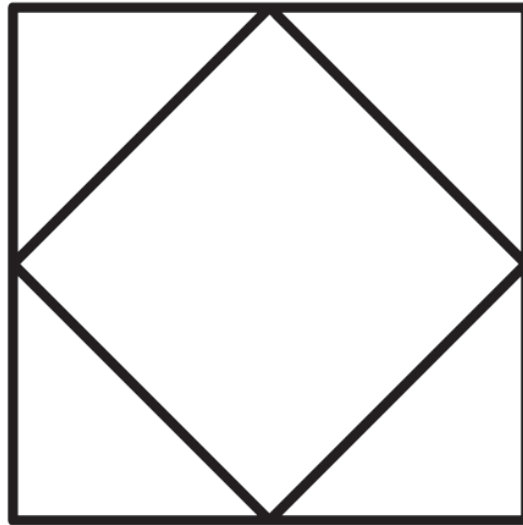


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 16d

## Draw the Shape Cards

D.

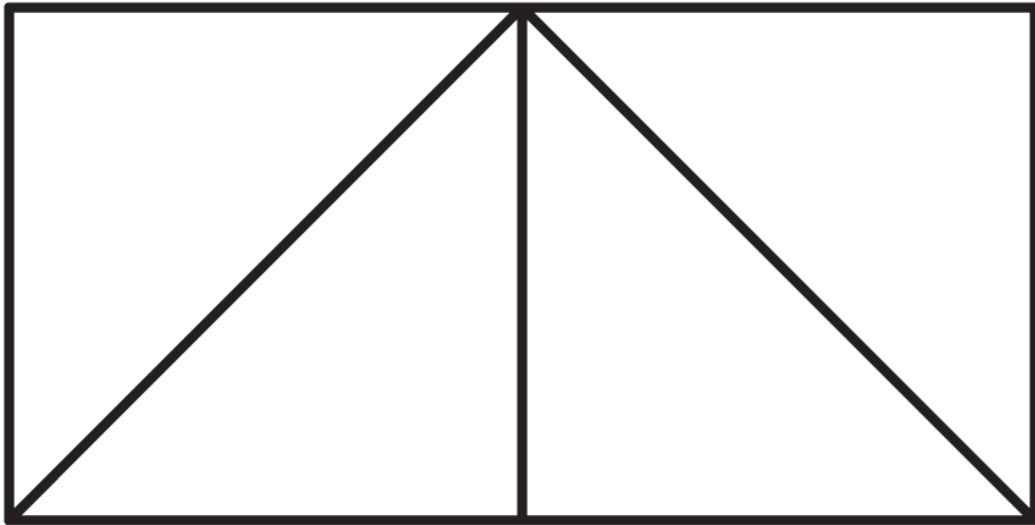


Name \_\_\_\_\_ Date \_\_\_\_\_

Math Every Day: Master 16e

## Draw the Shape Cards

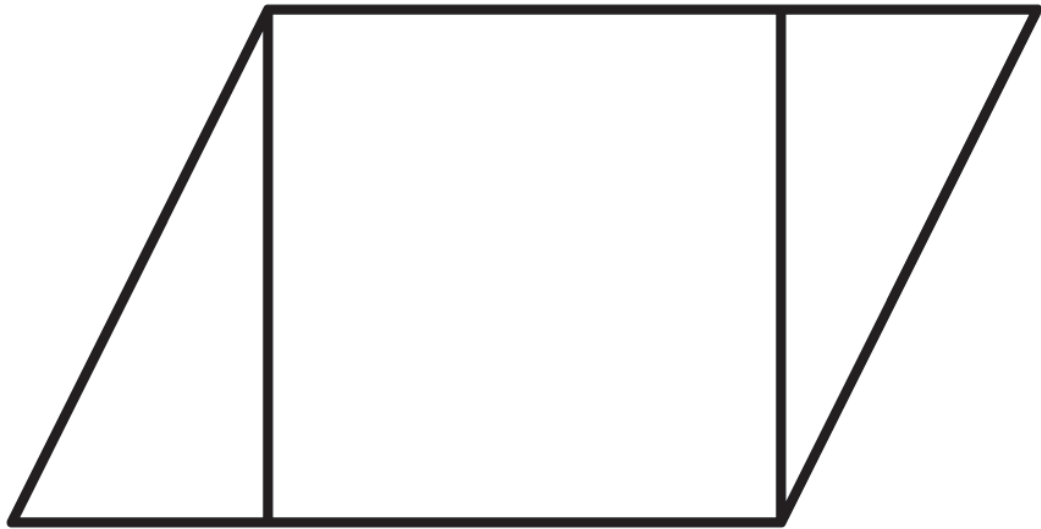
E.



Math Every Day: Master 16f

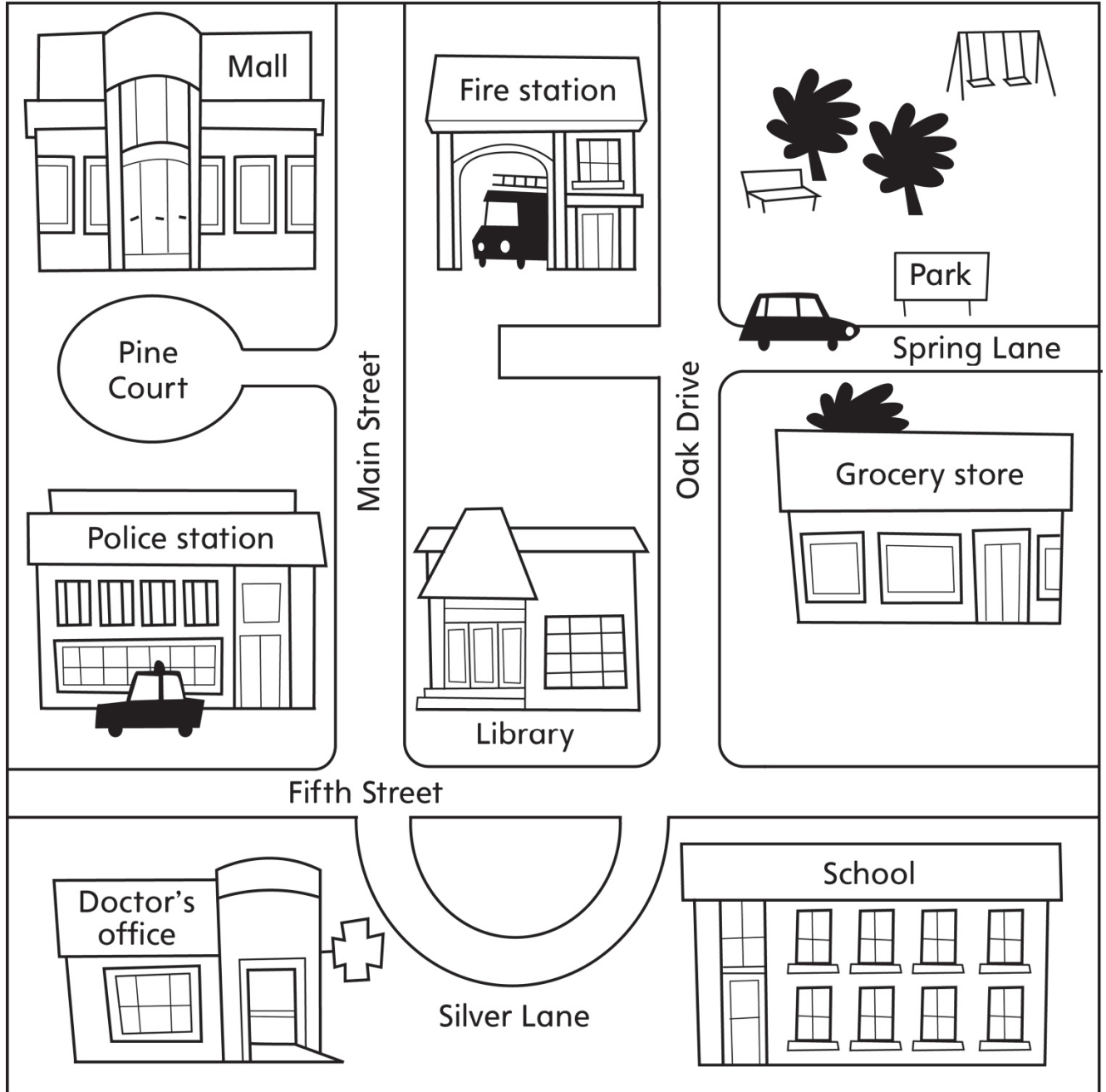
# Draw the Shape Cards

F.



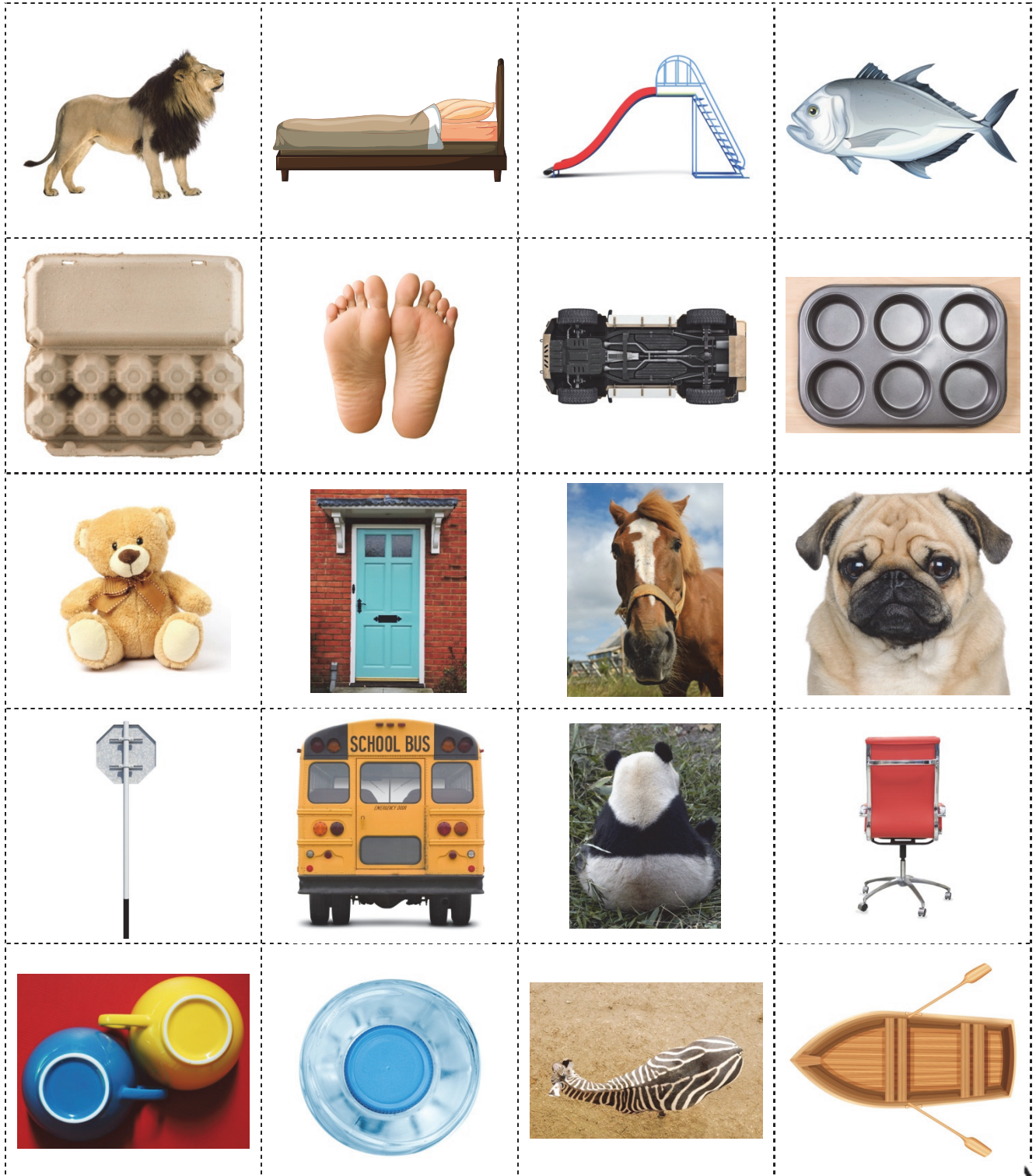
Math Every Day: Master 17

# Map of Neighbourhood



Math Every Day: Master 18

# Perspective Picture Cards





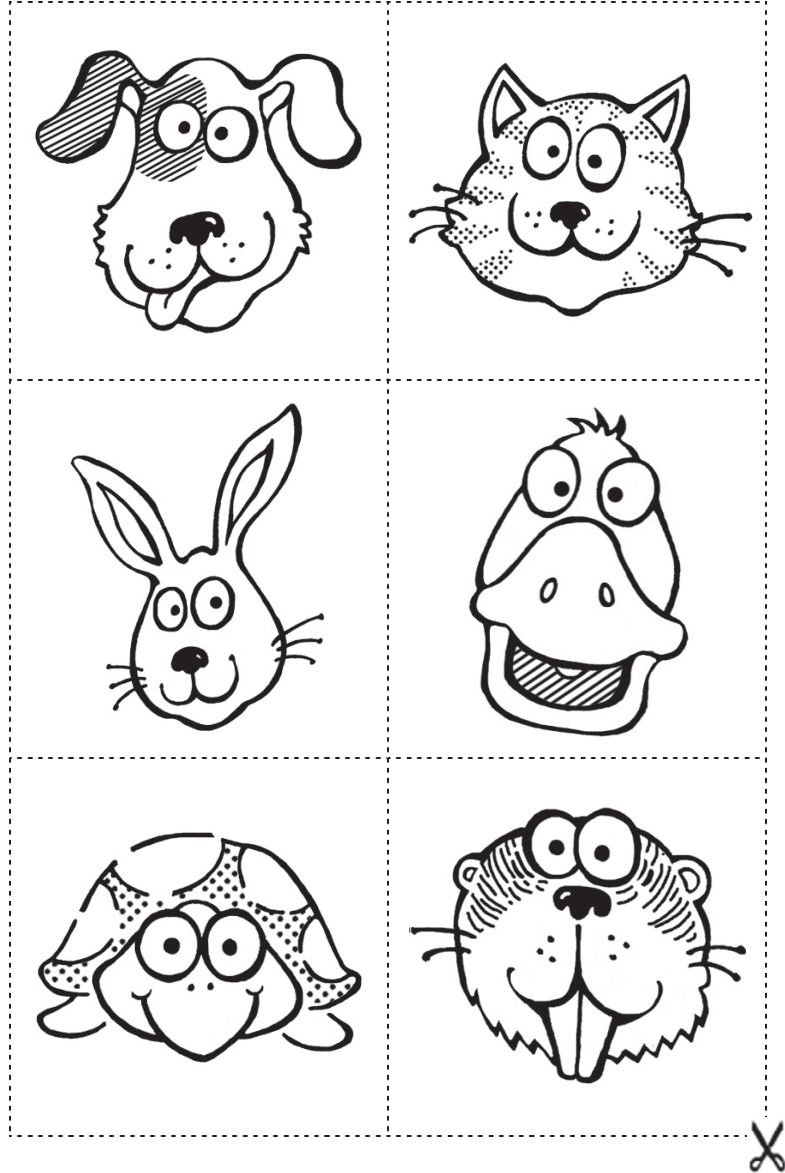
# View Cards

<b>Side view</b>	<b>Side view</b>	<b>Side view</b>	<b>Side view</b>
<b>Bottom view</b>	<b>Bottom view</b>	<b>Bottom view</b>	<b>Bottom view</b>
<b>Front view</b>	<b>Front view</b>	<b>Front view</b>	<b>Front view</b>
<b>Back view</b>	<b>Back view</b>	<b>Back view</b>	<b>Back view</b>
<b>Top view</b>	<b>Top view</b>	<b>Top view</b>	<b>Top view</b>


















**Math Every Day: Master 20**

# Animal Faces



# Sample Graphs

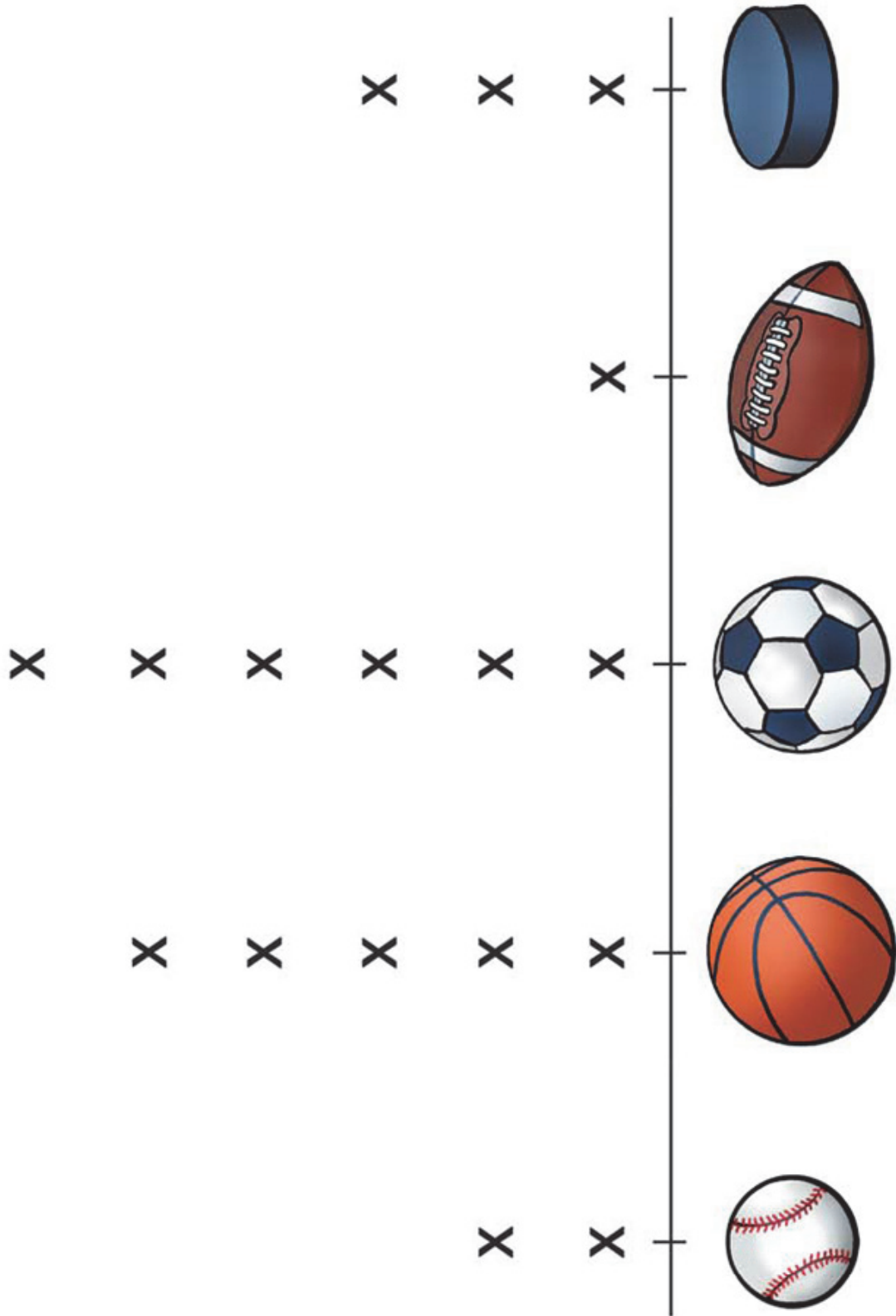
Our Favourite Fruit

						Grapes
						Orange
						Banana
						Apple

Math Every Day: Master 21b

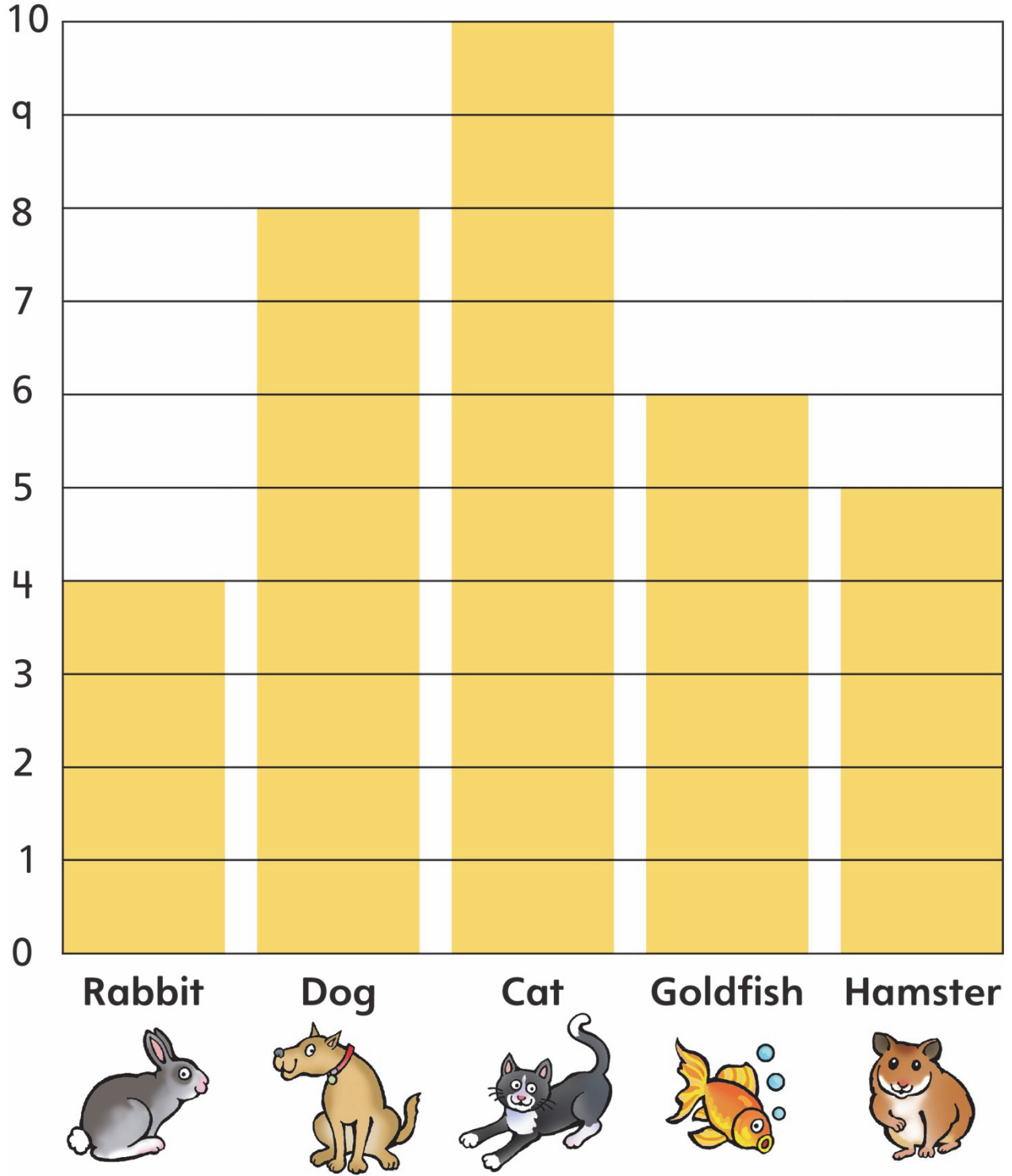
Sample Graphs

Our Favourite Sport



# Sample Graphs

## Pets We Have at Home



Name \_\_\_\_\_ Date \_\_\_\_\_

Multi-Use  
Master 1

# Ten-Frames



Name \_\_\_\_\_ Date \_\_\_\_\_

**Multi-Use  
Master 2**

# Place-Value Mat

Tens	Ones

**My Number**

Name \_\_\_\_\_ Date \_\_\_\_\_

Multi-Use  
Master 3

# Five-Frames

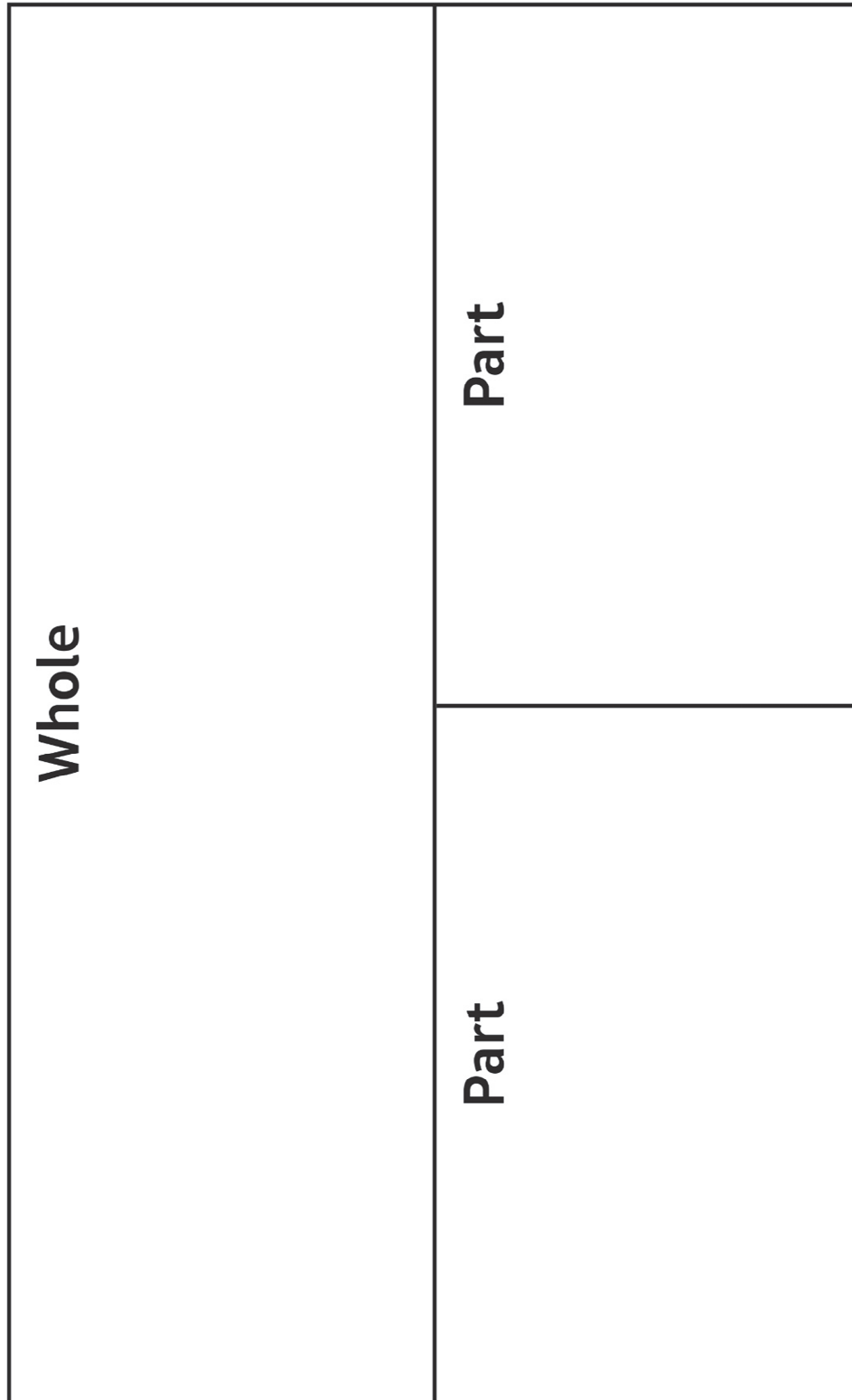
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Multi-Use  
Master 4

# Part-Part-Whole-Mat



Name \_\_\_\_\_ Date \_\_\_\_\_

Multi-Use  
Master 5

# Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name \_\_\_\_\_ Date \_\_\_\_\_

**Multi-Use  
Master 6**

# Sorting Mat

Yes	No

Name \_\_\_\_\_ Date \_\_\_\_\_

Multi-Use  
Master 7

# Graphing Mat

Title \_\_\_\_\_


Multi-Use  
Master 8

# Number Lines



Name \_\_\_\_\_ Date \_\_\_\_\_

**Multi-Use  
Master 9**

# Open Number Line



Name \_\_\_\_\_ Date \_\_\_\_\_

**Multi-Use  
Master 10**

# Thermometer

