

Comparison of the MLR and NECAP Expectations

Grade 2 Mathematics

Maine Learning Results	NECAP Grade Level Expectations	Differences/Comments
<b>A. Number</b>	<b>Number and Operations</b>	
1. Students <i>understand</i> and use number notation and place value to 1000 in numerals.	<p>M(N&amp;O)–2–1 Demonstrates conceptual understanding of rational numbers with respect to:                      whole numbers from 0 to 199 using place value, by applying the concepts of equivalency in composing or decomposing numbers (e.g., <math>34 = 17 + 17</math>; <math>34 = 29 + 5</math>); and in expanded notation (e.g., <math>141 = 1 \text{ hundred} + 4 \text{ tens} + 1 \text{ one}</math> or <math>141 = 100 + 40 + 1</math>) using models, explanations, or other representations.</p> <p>M(N&amp;O)–2–2 Demonstrates understanding of the relative magnitude of numbers from 0 to 199 by ordering whole numbers; by comparing whole numbers to each other or to benchmark whole numbers (10, 25, 50, 75, 100, 125, 150, or 175); by demonstrating an understanding of the relation of inequality when comparing whole numbers by using “1 more”, “1 less”, “10 more”, “10 less”, “100 more”, or “100 less”; or by connecting number words and numerals to the quantities they represent using models, number lines, or explanations.</p>	Some concepts in N&O-2-1 and N&O-2-2 relate to MLRs D1 and D2.
2. Students <i>understand</i> and use procedures to add and subtract whole numbers with one and two digits.	M(N&O)–2–3 <b>Demonstrates conceptual understanding of mathematical operations involving</b> addition and subtraction of whole numbers by solving problems involving joining actions, separating actions, part-part whole relationships, and comparison situations; and addition of multiple one-digit whole numbers. (See Appendix A.)	

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3. Students recognize unit fractions including $\frac{1}{2}$ , $\frac{1}{4}$ , and $\frac{1}{3}$ .	M(N&O)–2–1 Demonstrates conceptual understanding of rational numbers with respect to: whole numbers from 0 to 199 using place value, by applying the concepts of equivalency in composing or decomposing numbers (e.g., $34 = 17 + 17$ ; $34 = 29 + 5$ ); and in expanded notation (e.g., $141 = 1 \text{ hundred} + 4 \text{ tens} + 1 \text{ one}$ or $141 = 100 + 40 + 1$ ) using models, explanations, or other representations; and positive fractional numbers (benchmark fractions: $\frac{a}{2}$ , $\frac{a}{3}$ , or $\frac{a}{4}$ , where $a$ is a whole number greater than 0 and less than or equal to the denominator) as a part to whole relationship in area and set models where the denominator is equal to the number of parts in the whole using models, explanations, or other representations.	NECAP GLE N&O-2-1 includes numerators greater than 1, but less than the denominator (i.e., $\frac{2}{4}$ , $\frac{3}{4}$ , and $\frac{2}{3}$ ).
<b>B. Data</b>	<b>Data, Probability, and Statistics/Geometry &amp; Measurement</b>	
1. Students <i>understand</i> and use <i>units</i> of time, temperature, and money.	M(G&M)–2–7 Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands.  M(N&O)–2–5 Demonstrates understanding of monetary value by adding coins together to a value no greater than \$1.99 and representing the result in dollar notation; making change from \$1.00 or less, or recognizing equivalent coin representations of the same value (values up to \$1.99).	NECAP also include making change and the value of coins up to \$1.99 (\$1.00 in MLRs).  NECAP includes time to 15 minute intervals; MLR includes time to hour and half hour.  NECAP includes simple conversions.

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2. Students read, construct, and <i>interpret</i> picture graphs.	<p>M(DSP)–2–1 Interprets a given representation (pictographs with one-to-one correspondence, line plots, tally charts, or tables) to answer questions related to the data, or to analyze the data to formulate conclusions. (IMPORTANT: <i>Analyzes data consistent with concepts and skills in M(DSP)–2–2.</i>)</p> <p>M(DSP)–2–2 Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using more, less, or equal.</p>	NECAP also includes line plots, tally charts, and tables.
No corresponding MLR	M(DSP)–2–4 Uses counting techniques to solve problems involving combinations using a variety of strategies (e.g., student diagrams, organized lists, tables, tree diagrams, or others); (e.g., How many ways can you make 50 cents using nickels, dimes, and quarters?)	Combinations are not explicitly mentioned in the MLRs.
C. Geometry	Geometry and Measurement	
1. Students recognize, <i>classify</i> , and <i>create</i> geometric figures in two and three dimensions.	M(G&M)–2–1 Uses properties, attributes, composition, or decomposition to sort or classify polygons or objects by a combination of two or more non-measurable or measurable attributes.	
2. Students <i>understand</i> how to measure length and capacity and use appropriate <i>units</i> .	M(G&M)–2–7 Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands.	<p>Capacity is not included in NECAP until grade 3.</p> <p>NECAP includes conversions.</p>
3. <i>Create</i> shapes by using objects to combine and <i>decompose</i> other shapes.	M(G&M)–2–1 Uses properties, attributes, composition, or decomposition to sort or classify polygons or objects by a combination of two or more non-measurable or measurable attributes.	

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No corresponding MLR at this grade.	M(G&M)–2–6 Demonstrates conceptual understanding of perimeter and area by using models or manipulatives to surround and cover polygons.	This GLE corresponds to MLR C2 at grades 3 and 4.
<b>D. Algebra</b>	<b>Functions and Algebra</b>	
Students <i>understand</i> how to represent quantities as simple expressions using addition and subtraction.	M(N&O)–2–1 Demonstrates conceptual understanding of rational numbers with respect to: whole numbers from 0 to 199 using place value, by applying the concepts of equivalency in composing or decomposing numbers (e.g., $34 = 17 + 17$ ; $34 = 29 + 5$ ); and in expanded notation (e.g., $141 = 1 \text{ hundred} + 4 \text{ tens} + 1 \text{ one}$ or $141 = 100 + 40 + 1$ ) using models, explanations, or other representations; and positive fractional numbers (benchmark fractions: $\frac{a}{2}$ , $\frac{a}{3}$ , or $\frac{a}{4}$ , where $a$ is a whole number greater than 0 and less than or equal to the denominator) as a part to whole relationship in area and set models where the denominator is equal to the number of parts in the whole using models, explanations, or other representations.	Shaded portions of the GLE relate to this MLR.

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<p>Students <i>understand</i> that the equal sign means, "is the same as."</p>	<p>M(F&amp;A)–2–4 Demonstrates conceptual understanding of equality by finding the value that will make an open sentence true (e.g., _____). (limited to one operation and limited to use addition or subtraction)</p> <p>M(N&amp;O)–2–2 Demonstrates understanding of the relative magnitude of numbers from 0 to 199 by ordering whole numbers; by comparing whole numbers to each other or to benchmark whole numbers (10, 25, 50, 75, 100, 125, 150, or 175); by demonstrating an understanding of the relation of inequality when comparing whole numbers by using "1 more", "1 less", "10 more", "10 less", "100 more", or "100 less"; or by connecting number words and numerals to the quantities they represent using models, number lines, or explanations.</p>	<p>Shaded portions of the GLE relate to this MLR.</p>
<p>Students <i>understand</i> how to <i>create</i>, identify, describe, and extend patterns given a pattern or a rule.</p>	<p>M(F&amp;A)–2–1 Identifies and extends to specific cases a variety of patterns (linear and non-numeric) represented in models, tables, or sequences by extending the pattern to the next element, or finding a missing element (e.g., 2, 4, 6, _____, 10).</p>	