2017.18, Second Grade, Mathematics, Quarter 3

**Effective Teaching Practices**
1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Use and connect mathematical representations.
4. Facilitate meaningful mathematical discourse.
5. Pose purposeful questions.
6. Build procedural fluency from conceptual understanding.
7. Support productive struggle in learning mathematics.
8. Elicit and use evidence of student thinking.  

-NCTM Mathematical Practices posted

**Ongoing fluency expectations:**
2.OA.B.2 Fluently add and subtract within 30 using mental strategies. (By the end of 2nd grade, know from memory all sums of two one-digit numbers and related subtraction facts.)
2.NBT.B.5 Fluently add and subtract within 100 using strategies.

**Literacy Skills for Mathematical Proficiency:**
1. Use multiple reading strategies.
2. Understand and use correct mathematical vocabulary.
3. Discuss and articulate mathematical ideas.
4. Write mathematical arguments.

<table>
<thead>
<tr>
<th>Domain → Cluster → TN Standard</th>
<th>Student Friendly “I Can” Statements</th>
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</table>
| *2.OA.B.2 Fluently add and subtract within 30 using mental strategies. By the end of 2nd grade, know from memory all sums of two one-digit numbers and related subtraction facts.* (Q1 - 4) | I can recall from memory all the sums of two one-digit numbers. ex: 4+9, 9+8, 5+7, etc. (Q1)  
I can recall from memory all of the differences within 20. (Q2)  
I can use mental math strategies (e.g., count on, make a ten, decompose numbers into smaller parts) to add or subtract numbers within 20 with ease. |
<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
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<tbody>
<tr>
<td>2.MD.C.8</td>
<td>Solve contextual problems involving dollar bills, quarters, dimes, nickels, and pennies using ¢ and $ symbols appropriately.</td>
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<tr>
<td>2.MD.C.7</td>
<td>Tell and write time in quarter hours and to the nearest five minutes (in a.m. and p.m.) using analog and digital clocks.</td>
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<tr>
<td>2.MD.A.1</td>
<td>Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</td>
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<tr>
<td>2.MD.A.2</td>
<td>Measure the length of an object using two different units of measure and describe how the two measurements relate to the size of the unit chosen.</td>
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**I can** statements:

- I can add within 30 using mental strategies. (Q3)
- I can subtract within 30 using mental strategies. (Q4)
- I can identify the name and value of dollar bills, quarters, dimes, nickels and pennies.
- I can identify the dollar ($), cent (¢), and (.) symbol and place them appropriately.
- I can compare which money amounts.
- I can count combinations of dollars and coins; for example: Example: If you have 2 dimes and 3 pennies, how many cents do you have?
- I can solve conceptual problems involving dollar bills, quarters, dimes, nickels, and pennies.
- I can explain that a decimal point is used to separate dollars from cents and is read as the word ‘and’.

- I can tell time to the 5 minute interval using analog and digital clocks.
- I can write time to the nearest 5 minutes by reading analog and digital clocks.
- I can tell and write time to the quarter hour using analog and digital clocks.
- I can use a.m. and p.m. correctly.

- I can select and use the appropriate tool needed to measure the length of an object (ruler, yardstick, meter stick, and measuring tape).
- I can determine the appropriate unit of length to use for measuring different objects (centimeters, inches, feet, yards, and meters).
- I can recognize which units of measurement are comparable in size, (e.g. inch/cm, yard/m).
<table>
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<tr>
<th>Standard</th>
<th>I can explain how the size of the unit length affects the measurement. For example, an object measured in both inches and feet could be 12 inches, or 1 foot; therefore, having more inches than feet because inches are smaller units.</th>
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<tr>
<td>2.MD.A.3 Estimate lengths using units of inches, feet, yards, centimeters, and meters.</td>
<td>I can describe strategies for estimating length (e.g. a meter is about the length from floor to above a door knob). I can discriminate between the size of centimeters, inches, feet, yards, and meters. Ex: A ladybug is about a centimeter in length, whereas a book might be a foot in length. I can estimate lengths in units of centimeters, inches, feet, yards, and meters. I can determine if my estimate is reasonable.</td>
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<td>2.MD.B.5 Add and subtract within 100 to solve contextual problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown to represent the problem.</td>
<td>I can add and subtract lengths within 100, ex: 45 cm – 24 cm = 21 cm on a bar model, open number line, or other pictorial representation. I can solve addition and subtraction contextual problems involving lengths of the same unit within 100 using drawings and equations with a symbol for the unknown number.</td>
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<td>2.MD.B.6 Represent whole numbers as lengths from 0 on a number line and know that the points corresponding to the numbers on the number line are equally spaced. Use a number line to represent whole number sums and differences of lengths within 100.</td>
<td>I can create a number line with whole number intervals within 100. (Attempt equal spacing.) I can identify each point within 100 on a number line. I can compute sums and differences within 100 using both an open number line and a labeled number line.</td>
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<td>2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</td>
<td>I can measure lengths of several objects to the nearest whole unit. I can measure lengths of objects by making repeated measurements of the same objects. I can represent measurement data using a line plot.</td>
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<td>2.MD.A.4 Measure to determine how much longer one object is than another and express the difference in terms of a standard unit of length.</td>
<td>I can measure to determine how much longer one object is than another and determine the difference using the same unit of measurement.</td>
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<td>Science Integration: GLE 0207.9.2  Temperature changes affect the state of matter.  Q3</td>
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<td>2.MD.D.10 Draw a pictograph and a bar graph (with intervals of one) to represent a data set with up to four categories. Solve addition and subtraction problems related to the data in a graph.</td>
<td>I can draw a pictograph and a bar graph (with intervals of one) to represent a data set with up to four categories. I can use a tally chart to create and complete a pictograph. I can solve addition and subtraction problems using data from a pictograph or bar graph (within a single-unit scale or intervals of one). I can compare data on a bar graph in terms of “how many more”, “how many fewer/less”, “how many in all”.</td>
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