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.

Domain → Cluster → TN Standard | Student Friendly “I Can” Statements
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*2.NBT.B.5* Fluently add and subtract within 100 using properties of operations, strategies based on place value, and/or the relationship between addition and subtraction. | I can add and subtract within 100 using strategies based on place value. I can add and subtract within 100 using properties of operations.
- Commutative property: The order of the addends does not affect the sum, ex: 41 + 50 = 50 + 41.
- Associative property: It does not matter which addends you combine first, the sum will still be the same, ex: 18 + 31 + 12 is the same as (18 + 12) + 31.
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<th>Standard</th>
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<tr>
<td><strong>2.NBT.B.9</strong></td>
<td>Explain why addition and subtraction strategies work using properties of operations and place value. (Explanations may include words, drawing, or objects.)</td>
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<tr>
<td><strong>I can</strong></td>
<td>I can explain the relationship between addition and subtraction, ex: If I know that 20 - 12 = 8, then I also know that 8 + 12 = 20.</td>
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<td><strong>2.NCE.M.3</strong></td>
<td>Solve addition and subtraction problems in context using various tools and strategies.</td>
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| **I can** | I can explain addition and subtraction strategies in relation to properties of operations.  
- Identity property: you can add zero to any number, and the number will stay the same, ex: 6+0=6.  
- Commutative property: The order of the addends does not affect the sum, ex: 6+5 = 5+6.  
- Associative property: It does not matter which addends you add together first, the sum will still be the same, ex: (8+2) + 4 = 8 + (2+4). |
| **Science Integration: GLE 0207.6.2** | Observe changes in moon’s appearance over time. Q2 |
| **I can** | I can fluently solve addition and subtraction problems within 100, using various tools (Ex. 100’s chart, number lines, open number lines, place value blocks, etc.) and strategies (counting on, counting back, place value, compensation, compatible numbers, etc.).  
I can use writing, drawings, and models to show how to add and subtract within 100 using multiple tools (100’s chart, number lines, open number lines, place value blocks, etc.).  
I can use writing, drawings, and models to show how to add and subtract within 100 using multiple strategies (counting on, counting back, place value, compensation, compatible numbers, decomposing into tens, commutative and associative properties, and mental strategies). |
### 2.OA.A.1 Add and subtract within 100 to solve one- and two-step contextual problems, with unknowns in all positions, involving situations of add to, take from, put together/take apart, and compare. Use objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Q1, Q2)

I can determine whether a word problem requires addition and/or subtraction to solve.
I can represent addition and subtraction word problems using objects, drawings, and equations with unknowns in all positions.
I can solve addition and subtraction word problems that involve two steps (doing one computation, and using that answer to perform a second computation that leads to the solution of the problem.)
I can write equations to represent a word problem using unknown numbers in different positions, ex: 5 + __ = 13, __ + 8 = 13, 5 + 8 = __.

### 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.
I can add within 30 using mental strategies. (Q3)
I can subtract within 30 using mental strategies. (Q4)

### 2.WCE.M.4 Interpret products of whole numbers when one factor is a 0, 1, 2, 5, or 10.

I can find the product of a single digit number multiplied by 0, 1, 2, 5, or 10.

### 2.NBT.B.6 Add up to four two-digit numbers using properties of operations and strategies based on place value.

I can add up to four two-digit numbers by applying strategies (e.g. decomposing numbers, rearranging the order of the numbers, making tens or multiples of tens) and properties (commutative, associative, and identity) based on place value.

### 2.NBT.B.7 Add and subtract within 1000 using concrete models, drawings, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction to explain the reasoning used.

I can use concrete models such as an open number line and other drawings to demonstrate how to add or subtract within 1,000 using strategies based on place value.
I can choose an appropriate strategy (written method) for solving an addition and subtraction problem within 1,000 and explain my reasoning.