2nd Grade

Student Growth Goal Proficiency Rubric

Critical Area:

(2) Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

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| Novice | Apprentice | **Proficient** | Distinguished |
| ***Understand and apply properties of operations and the relationship between addition and subtraction.***  **1.OA.3** Apply properties of operations as strategies to add and subtract.2 Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)  ***Understand place value.***  **1. NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones.  Understand the following as special cases:  a. 10 can be thought of as a bundle of ten ones — called a “ten.”  b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six,  seven, eight, or nine ones.  c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six,  seven, eight, or nine tens (and 0 ones). | ***Represent and solve problems involving addition and subtraction.***  **1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to,taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., byusing objects, drawings, and equations with a symbol for the unknown number to represent the problem.  **1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or  equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.**2.OA.2** Add within 20. Fluently add and subtract within 20 using mental strategies.  ***Use place value understanding and properties of operations to add and subtract.***  **1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. | ***Represent and solve problems involving addition and subtraction.***  **2.OA.1** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1  **2. OA.2** Add and subtract within 20.  Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.    ***Use place value understanding and properties of operations to add and subtract.***  **2. NBT.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.  **2.NBT.6** Add up to four two-digit numbers using strategies based on place value and properties of operations. | ***Solve problems involving the four operations, and identify and explain patterns in arithmetic.***  **3.OA.9** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and  explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.  ***Use place value understanding and properties of operations to add and subtract.***  **2.NBT.9** Explain why addition and subtraction strategies work, using place value and the properties of  operations.  ***Use place value understanding and properties of operations to perform multi-digit arithmetic.***  **3. NBT.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. |

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| **Level** | **Cluster Title** | **Standards Referenced** | **Baseline** | **End-of-Year** |
| Level 4 Distinguished | ***Solve problems involving the four operations, and identify and explain patterns in arithmetic.***  ***Use place value understanding and properties of operations to add and subtract.***  ***Use place value understanding and properties of operations to perform multi-digit arithmetic.*** | **3.OA.9**  **2.NBT.9**  **3. NBT.2** |  |  |
| Level 3 Proficient | ***Represent and solve problems involving addition and subtraction.***  ***Use place value understanding and properties of operations to add and subtract.*** | **2.OA.1**  **2. NBT.5**  **2.NBT.6** |  |  |
| Level 2 Apprentice | ***Represent and solve problems involving addition and subtraction.***  ***Use place value understanding and properties of operations to add and subtract.*** | **1.OA.1**  **1.OA.2**  **2.OA.2**  **1.NBT.4** |  |  |
| Level 1 Novice | ***Understand and apply properties of operations and the relationship between addition and subtraction.***  ***Understand place value.*** | **1.OA.3**  **1. NBT.2** |  |  |