Topic C

Strategies for Addition and Subtraction Within 100

**2.OA.1**, **2.NBT.5**, 2.OA.2, 1.NBT.4, 1.NBT.5, 1.NBT.6

|  |  |  |
| --- | --- | --- |
| Focus Standard: | 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. |
| 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. |
| Instructional Days: | 3 |  |
| Coherence -Links from: | G1–M2 | Introduction to Place Value Through Addition and Subtraction Within 20  |
|  -Links to: | G2–M2 | Addition and Subtraction Within of Length Units |
| G2–M4 | Addition and Subtraction Within 200 with Word Problems to 100 |

In Topic C, students revisit their addition and subtraction skills, practicing with larger numbers up to 100. Throughout this topic, students use ten-frames and number bonds to add and subtract using the structure of ten. In Lesson 6, students only add or subtract a number less than 10 without crossing the multiple
(e.g., 63 + 2, 65 – 2). Students use their knowledge of basic facts and place value to solve problems with larger numbers. For example, knowing that 5 – 2 = 3 enables students to easily subtract 65 – 2. At times, students respond using Say Ten form (e.g., 26 is 2 tens 6) to see that in a sequence (e.g., 6 – 4, 16 – 4 , 26 – 4, 36 – 4, etc.) the number of tens changes but the basic fact remains the same.

Lesson 7 builds upon students’ knowledge of basic facts within the teens (e.g., 7 + 8 = 15) to add 2-digit and 1-digit numbers (e.g., 77 + 8 = 85). Hence, the new complexity is to cross a multiple of 10. Students apply 7 + 5 = 10 + 2 to easily solve 87 + 5 = 90 + 2 (shown right). Again, students make use of the ten structure and place value to separate a two-digit number into tens and ones, and bond smaller numbers to make a ten.

Lesson 8 mirrors the work of Lesson 7 in that students subtract single-digit numbers from multiples of 10. Students use 10 – 3 to solve 90 – 3 (shown right), and they use this strategy to solve a variety of one-step word problem types. Also, since students know partners of ten with automaticity, adding some ones after taking from the ten should not be too challenging (e.g., 91 – 3 = 88). Topic C culminates with students learning that it is possible to “get out the ten” in problems such as 23 – 9 and add back the remaining part, such that 13 + (10 – 9) = 14. This decomposing to make or take from a ten prepares students for adding and subtracting three-digit numbers in Module 4.

|  |
| --- |
| A Teaching Sequence Towards Mastery of Strategies for Addition and Subtraction Within 100 |
| Objective 1: Add and subtract within multiples of ten based on understanding place value and basic facts.(Lesson 6) |
| Objective 2: Add within 100 using properties of addition to make a ten.(Lesson 7) |
| Objective 3: Decompose to subtract from a ten when subtracting within 100 and apply to one-step word problems.(Lesson 8) |