Unit 1b-Fluency Add and Subtract Within 10

Content Area: **Mathematics**
Course(s): **Math 1**
Time Period: **Marking Period 1**
Length: **MP1 Topic 2 2-1 to 2-9**
Status: **Published**

Essential Questions

- What strategies can you use while adding and subtracting?

Big Ideas

- Equivalence: Any number, measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- Operation Meanings and Relationships: There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.
- Properties: For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.
- Basic Facts and Algorithms: There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- Practices, Processes, and Proficiencies:Mathematics content and processes can be applied to solve problems.

Diversity Integration

Race and Ethnicity

Objective: Students will be able to solve addition and subtraction problems

Description of Activity: Students will use a stack of number cards to create addition and subtraction sentences. Each stack will have numbers 0-10 and the number word written in another language (example: 1 - uno).

CSDT Technology Connection

8.1.2.NI.4: Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.

Activity: Students will practice logging on to math apps using assigned usernames and passwords.

Enduring Understandings

Operations and Algebraic Thinking

1.OA.C Add and subtract within 20.

1.OA.A1 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., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.C5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA.C6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

1.OA.B3 Apply properties of operations as strategies to add and subtract. Examples: If is known, then is also known. (Commutative property of addition.) To add the second two numbers can be added to make a ten, so . (Associative property of addition.) (Clarification: Students need not use formal terms for these properties.)

1.OA.B4 Understand subtraction as an unknown-addend problem.

Mathematical Practices Focus

MP.1 Make sense of problems and persevere in solving them.

MP.2 Reason abstractly and quantitatively.

MP.3 Construct viable arguments and critique the reasoning of others.

MP.4 Model with mathematics.

MP.5 Use appropriate tools strategically.

MP.6 Attend to precision.

MP.7 Look for and make use of structure.

MP.8 Look for and express regularity in repeated reasoning.