Unit 3d-Use Models and Strategies to Subtract Tens

Content Area: **Mathematics**
Course(s): **Math 1**
Time Period: **MP3-4**
Length: **MP3-4 Topic 11 11-1 to 11-7**
Status: **Published**

Essential Questions

- How can I use what I know about subtraction to subtract tens?

Big Ideas

- Number Uses, Classification, and Representation: Numbers can be used for different purposes, and numbers can be classified and represented in different ways.
- Numbers and the Number Line: The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
- The Base-Ten Numeration System: The base-ten numeration system is a scheme for recording numbers using digits 0–9, groups of ten, and place value.
- 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.
- Patterns, Relations, and Functions: Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. For some relationships, mathematical expressions and equations can be used to describe how members of one set are related to members of a second set.
- Practices, Processes, and Proficiencies:Mathematics content and processes can be applied to solve problems.

CSDT Technology Connection

8.1.2.AP.2 Model the way programs store and manipulate data by using numbers or other symbols to represent information

Enduring Understandings

Number Operations in Base Ten

1.NBT.C Use place value understanding and properties of operations to add and subtract. [M]

1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used [M]

1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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. [M]

1.NBT.B.2c 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).

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.