

Mini-Map for M.EE.4.NBT.4

Subject: Mathematics Numbers and Operations in Base Ten (NBT) Grade: 4

Learning Outcome

| DLM Essential Element | Grade-Level Standard |
|--|---|
| M.EE.4.NBT.4 Add and subtract two-digit whole numbers. | M.4.NBT.4 Fluently add and subtract multi-digit whole numbers |
| | using the standard algorithm. |

Linkage Level Descriptions

| Initial Precursor | Distal Precursor | Proximal Precursor | Target | Successor |
|--------------------------|---------------------------|--------------------------|-------------------------|---------------------------|
| Communicate | Combine two or more | Add two numbers with | Demonstrate addition | Use addition and |
| understanding of | sets of objects to create | a sum within 20 using | by adding two numbers | subtraction within 100 |
| "separateness" by | a new set. Divide a set | objects, drawings, | up to 100. Demonstrate | to solve word problems, |
| recognizing objects that | of 10 or fewer objects | counters, or a | subtraction by | including join, separate, |
| are not joined together. | into two or more | mathematical equation, | subtracting numbers up | part-part-whole, and |
| Communicate | distinct subsets. Count | and communicate the | to 100. Use place-value | compare problems. |
| understanding of set by | all objects in a set to | sum by combining both | reasoning including | |
| recognizing a group of | communicate the total | the numbers. Subtract a | multiples of 10 and 100 | |
| objects sharing an | number of objects in a | smaller number from a | to add or subtract | |
| attribute. Communicate | set. | larger number (no | numbers. | |
| understanding of a | | larger than 20) by | | |
| subset by recognizing a | | taking counters/objects | | |
| subset as a set or group | | away from the larger | | |
| of objects within a | | set or using drawings or | | |
| larger set that share an | | a mathematical | | |
| attribute. | | equation, and | | |
| | | communicate the left- | | |
| | | over number as the | | |
| | | difference. | | |

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target? In order to add and subtract two-digit whole numbers, students must first learn to organize items into groups/sets based on a common characteristic such as size, color, shape, texture, or flavor. Students learn how to sort items by separating a group of items into two groups (e.g., vehicles and animals). As students gain comfort sorting items into sets, they are encouraged to use their language to convey their thought process by identifying and naming the characteristic that determines the set (e.g., wheels and legs). Activities that require students to engage actively with the items will foster the students' understanding of set, subsets, and separateness (e.g., the game "one of these things is not like the other"; highlighting one characteristics in a group of similar items [e.g., color] by which the items will be grouped; incorporating creating sets into everyday activities [e.g., during cleanup time, students place items into one of two bins based on a designated characteristic]).

How is the Distal Precursor related to the Target? As students gain an understanding of how to group items into sets, educators will begin to help students connect their knowledge of sets with their knowledge of counting. Educators will provide multiple experiences counting sets and combining sets using multiple models. The following are examples of models.



Instructional Resources

| Released Testlets | | |
|---|--|--|
| See the Guide to Practice Activities and Released Testlets. | | |
| Using Untested (UN) Nodes | | |
| See the document <u>Using Mini-Maps to Plan Instruction</u> . | | |

Link to Text-Only Map

M.EE.4.NBT.4 Add and subtract two-digit whole numbers.

