# Mini-Map for M.EE.7.NS.2.c-d 

learning maps
Subject: Mathematics
The Number System (NS)
Grade: 7

## Learning Outcome

| DLM Essential Element | Grade-Level Standard |
| :--- | :--- |
| M.EE.7.NS.2.c-d Express a fraction with a denominator of 10 as | M.7.NS.2.c Apply properties of operations as strategies to <br> a decimal. |
|  | multiply and divide rational numbers. <br> M.7.NS.2.d Convert a rational number to a decimal using long <br> division; know that the decimal form of a rational number |
|  | terminates in Os or eventually repeats. |

## Linkage Level Descriptions

| Initial Precursor | Distal Precursor | Proximal Precursor | Target | Successor |
| :--- | :--- | :--- | :--- | :--- |
| Communicate <br> understanding of <br> "separateness" by <br> recognizing objects that <br> are not joined together. <br> Communicate <br> understanding of a set <br> by recognizing a group <br> of objects sharing an <br> attribute. |  | Recognize a set model <br> that represents a <br> whole. | Recognize one-tenth in <br> a set model. Recognize <br> multiple tenths, such as <br> two-tenths, five-tenths, <br> or eight-tenths in a set <br> model. | Communicate <br> understanding that a <br> decimal point is a dot <br> that separates the <br> whole number from the <br> fractional part of a <br> number. Represent a <br> fraction with a <br> denominator of 10 as a <br> value of the digit in the <br> tenths place is worth <br> that many tenths. <br> Compare two decimals <br> to the tenths place <br> using symbols (i.e., $=,<$, <br> $>)$ to show that one is <br> greater than, less than, <br> or equal to the other. |

## Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?
Expressing a fraction as a decimal requires a student to be able to recognize that two or more sets or groups of items exist. Work on this skill using a variety of sets. Help students recognize when items are grouped together into a set or separated out. As educators present a set, they label it (e.g., two balls, one marker, three CDs), count the items, label it again, and encourage students to use numerals to label and count the separate sets. Use tools like the ten-frame to point out whole and parts (e.g., a set of 9 is part of 10).

## Instructional Resources

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

## How is the Distal Precursor related to the Target?

As students work toward a greater understanding of sets, educators will provide students with many set models (see below) of fractions using the same unit fraction, either halves, thirds, fourths, or tenths. Students will work on identifying the whole.


## Link to Text-Only Map

M.EE.7.NS.2.c-d Express a fraction with a denominator of 10 as a decimal.


| Map Key |  |
| :--- | :--- |
| IP | Initial Precursor |
| DP | Distal Precursor |
| PP | Proximal Precursor |
| T | Target |
| S | Successor |
| UN | Untested |
| Boxes indicate tested |  |
| nodes |  |

