Mini-Map for M.EE.4.NF.1-2

Subject: Mathematics
Number and Operations—Fractions (NF)
Grade: 4

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.4.NF.1-2 Identify models of one half (1/2) and one fourth (1/4).	**M.4.NF.1** Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **M.4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Communicate understanding of "separateness" by recognizing objects that are not joined together. Communicate understanding of "wholeness" by recognizing an object that has all the parts joined together.	Divide familiar shapes, such as circles, triangles, squares, and/or rectangles, into two or more distinct parts. These parts may or may not be equal.	Divide familiar shapes, such as circles, squares, and/or rectangles, into two or more equal parts.	Identify the model that represents one half or one fourth of a familiar shape or object.	Identify the area model that is divided into halves or fourths.

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

When working toward an understanding of fractions, students need exposure to a wide variety of items that can be taken apart and put back together (e.g., linking cubes, magnetic tiles, puzzles, cake, clay, apple). Encourage students to interact with the objects. Educators should take care to use the words "whole" and "part" to describe them. While students do not need to say these words, they do need to learn the meanings.

How is the Distal Precursor related to the Target?

As students begin to understand whole and part, educators will introduce partitioning shapes (which do not need to be equal parts). Educators will introduce the idea that shapes can be cut into parts, and when they are put back together, they form the whole shape. As students gain experience with cutting shapes into parts, the educator will introduce the concept of equal parts. In all partitioning activities, the student will work on counting the parts.

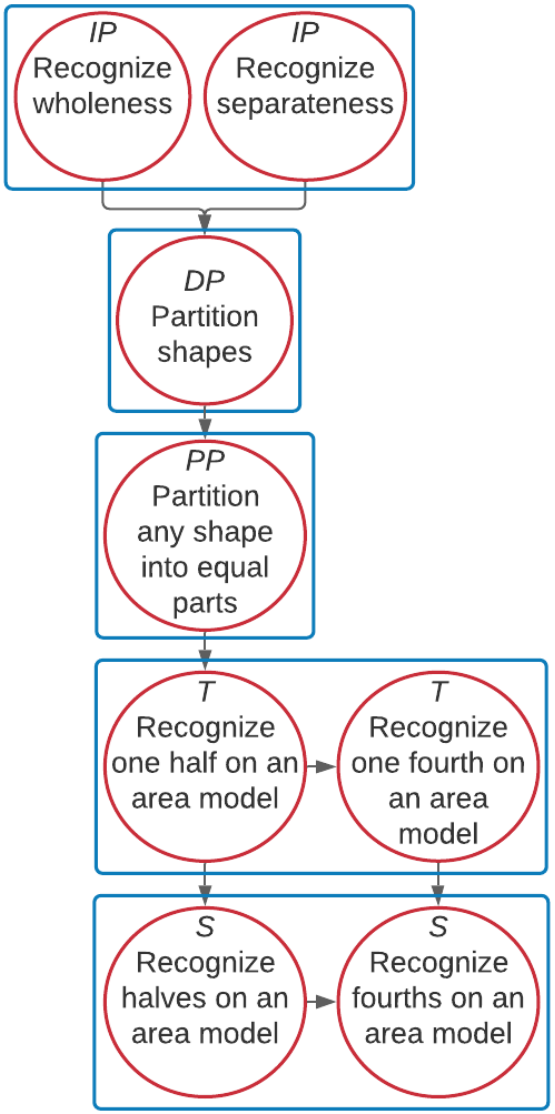
NOTE: Students do not need to physically cut the shape to work on this concept. Cutting can be accomplished via computer technology, assistive technology, directing another where to cut, etc.

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.

Link to Text-Only Map

M.EE.4.NF.1-2 Identify models of one half (1/2) and one fourth (1/4).



Map Key	
IP	Initial Precursor
DP	Distal Precursor
PP	Proximal Precursor
T	Target
S	Successor
UN	Untested

Boxes indicate tested nodes