Mini-Map for M.EE.5.NBT.5

Subject: Mathematics
Number and Operations in Base Ten (NBT)
Grade: 5

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.5.NBT.5 Multiply whole numbers up to 5 × 5.	**M.5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

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 set by recognizing a group of objects sharing an attribute. Communicate understanding of a subset by recognizing a subset as a set or group of objects within a larger set that share an attribute.	Communicate understanding that in repeated addition problems, a single numerical value is added repeatedly (e.g., 6 + 6 + 6) and that one way to add a number a given number of times is by using skip-counting as a strategy (e.g., 6 + 6 + 6 can be added as 6, 12, 18). Represent repeated addition 12, 18). Represent repeated addition problems using an equation showing the addition of the	Demonstrate multiplication by combining multiple sets containing the same number of objects. Communicate understanding that the number of sets times the number of objects in each set equals the total number of objects.	Multiply numbers up to 12 by factors 1 to 5, using manipulatives or repeated addition (e.g., multiply 3 x 5 by adding 5 + 5 + 5 = 15).	Communicate understanding of multiplication as the number of groups times the number of objects in each group (with the understanding that each group contains an equal number of objects) and that the total number of objects (i.e., the product) can then be divided by the number of groups to equal the number of objects in each group, and vice versa.

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
	same numeral the required number of times, and find the correct sum using an addition strategy (e.g., 5 + 5 + 5 = 15).			

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to understand multiplication, students must 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, 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 "concentration" where the cards highlight one characteristic in a group of similar cards [e.g., shape]; incorporating creating sets into everyday activities [e.g., during independent reading, the teacher gives a student a pile of books and asks them to create two sets, then helps the student determine the criteria they want to use to sort them, such as books I want to read/books I don't want to read; bugs/dogs; sports/gaming]).

How is the Distal Precursor related to the Target?

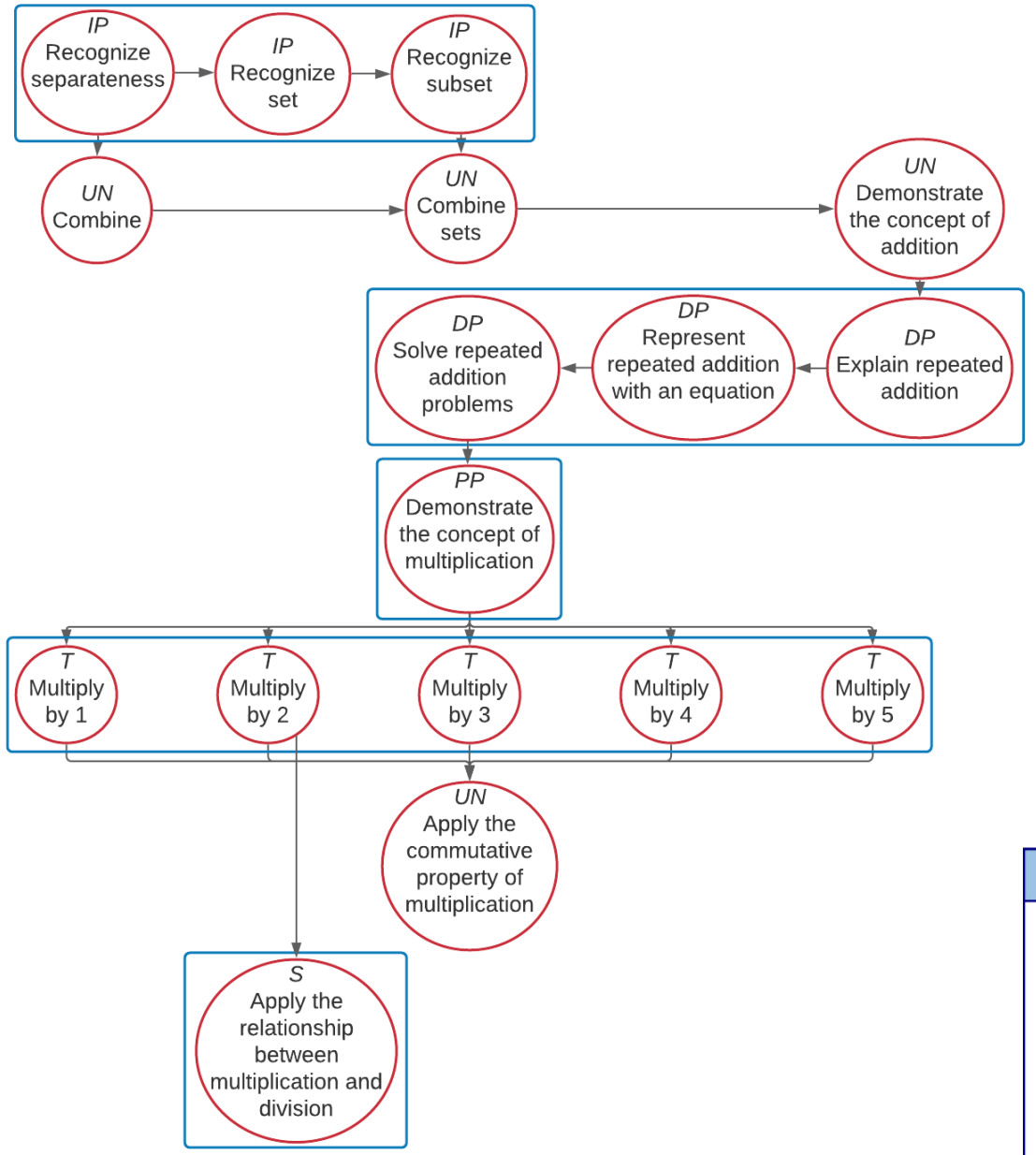
As students gain an understanding of how to group items into sets, educators will begin to help students connect their knowledge of sets with their knowledge of counting and addition. Educators will provide multiple experiences counting sets and combining sets using multiple models. As student understanding progresses, educators will provide experience with multiple (3-4) small sets, and students will use repeated addition to find the total. They can check their work by counting the individual items in each group. Educators should take care to use words like "some," "all," "put," and "add" while defining and demonstrating their meaning. While students do not need to say these words, they do need to learn the meanings.

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.5.NBT.5 Multiply whole numbers up to 5 × 5.



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

Boxes indicate tested nodes