Mini-Map for M.EE.4.MD.2.b

Subject: Mathematics
Measurement and Data (MD)
Grade: 4

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.4.MD.2.b Measure mass or volume using standard tools.	**M.4.MD.2.b** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Recognize "same" as the object that shares all of the same attributes as other objects in a group. Recognize "different" as the object that shares some or none of the attributes as other objects in a group.	Compare the mass of two different objects without using a measuring tool and communicate whether the mass of one object is heavier than, lighter than, or equal to the other object. Compare the volume of two different objects without using a measuring tool, and communicate whether one container would	Measure the mass of an object using informal units such as counters or pennies (e.g., placing counters on one side of a balance, opposite an object, until the balance is even and communicating the mass of the object by counting the total number of counters). Measure the volume of a container using informal units such as beans or buttons (e.g.,	Use a scale or pan balance to measure the mass of an object in ounces and in pounds. Use appropriate measuring cups to measure the volume of a liquid in cups.	Estimate the mass of an object in ounces and in pounds. Estimate the volume of an object by visually guessing how many cups of water would be required to fill a container.

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
	hold more or less fluid than the other.	completely filling a container with beans or buttons and communicating the volume by counting the total number of units used to fill the container).		

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to build toward measuring mass and volume, students will engage in activities that compare at least two items. Educators will call attention to both how they are the same and how they are different. This type of instruction should include but may not be limited to how light or heavy objects are across the school day, so students have many opportunities to experience same and different.

How is the Distal Precursor related to the Target?

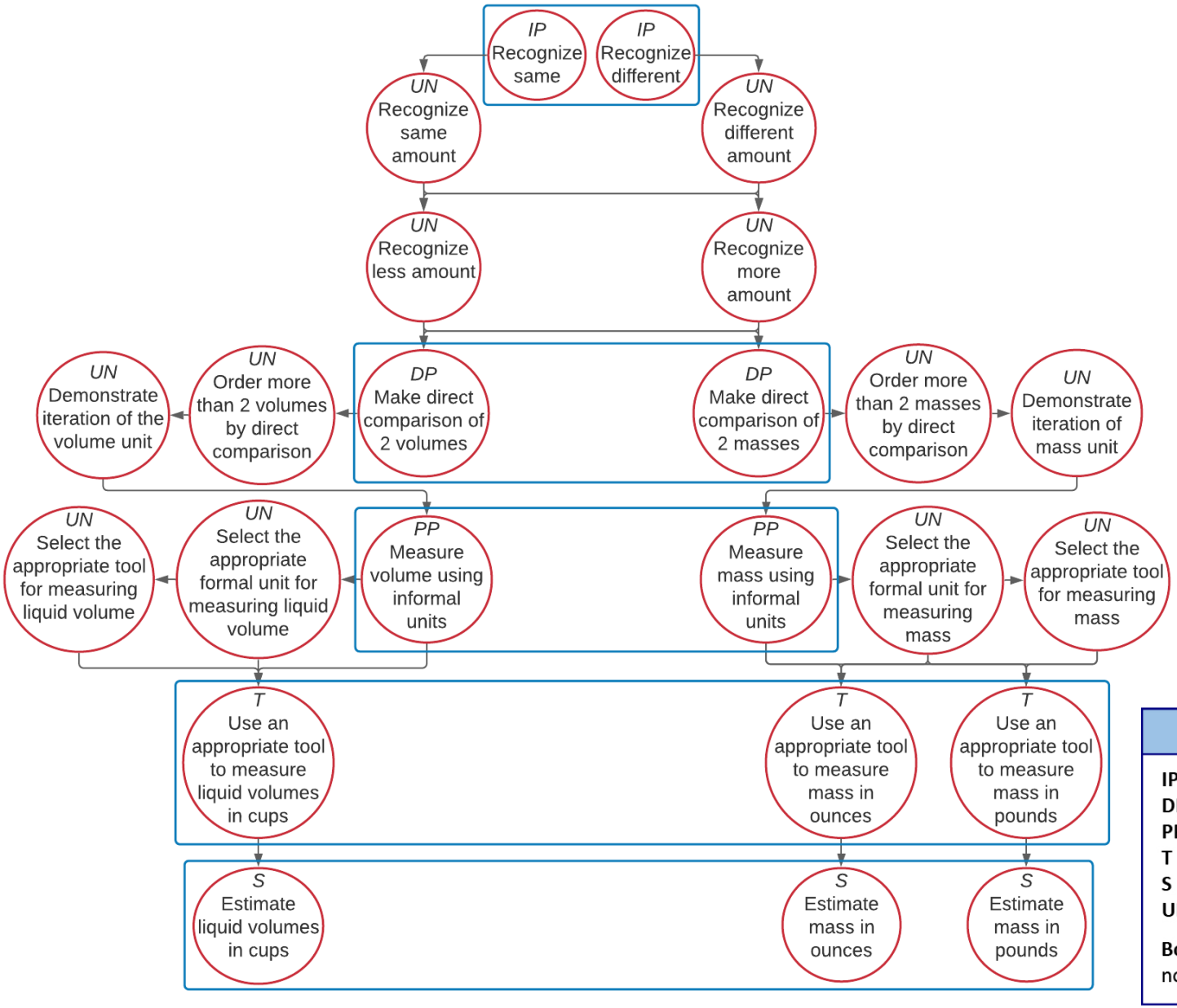
As students are learning to make comparisons, educators can utilize direct comparisons of familiar items based on mass (heaviness) or volume (how much something holds). For example, provide students with two items of similar size but with different masses (feeling of heaviness). Have them compare which feels heavier and which feels lighter. Students will need to be introduced to the language that describes mass and volume (e.g., heavy/light, more/less, same/different, how much it will hold).

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.MD.2.b Measure mass or volume using standard tools.



Map Key

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

Boxes indicate tested nodes