Mini-Map for M.EE.6.G.2

Subject: Mathematics
Geometry (G)
Grade: 6

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.6.G.2 Solve real-world and mathematical problems about volume using unit cubes.	**M.6.G.2** Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Communicate understanding of "separateness" by recognizing objects that are not joined together. Recognize enclosure as an enclosed space that lies within a boundary that distinguishes it from the space that lies outside the boundary.	Communicate understanding that volume is the space enclosed by a shape or an object, that a unit cube is a cube with edge lengths of one unit and a volume of one cubic unit, and that volume can be measured by counting the number of unit cubes needed to completely fill a container or space.	Calculate the volume of a solid figure by counting the total number of unit cubes in a solid figure. Calculate the volume of a rectangular prism by packing the box with unit cubes and counting them.	Solve word problems involving the volume of a rectangular prism by determining the volume of the prism. (The volume of a rectangular prism should be determined by packing the prism with unit cubes.)	Calculate volume of a rectangular prism using the volume formula (volume = height x length x width).

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Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to solve problems using unit cubes, students at this level start by exploring objects and experiencing putting various materials into various containers. Educators demonstrate the language of in/out, more/less, big/little, longer/shorter, taller/smaller, wider/thinner, etc.

How is the Distal Precursor related to the Target?

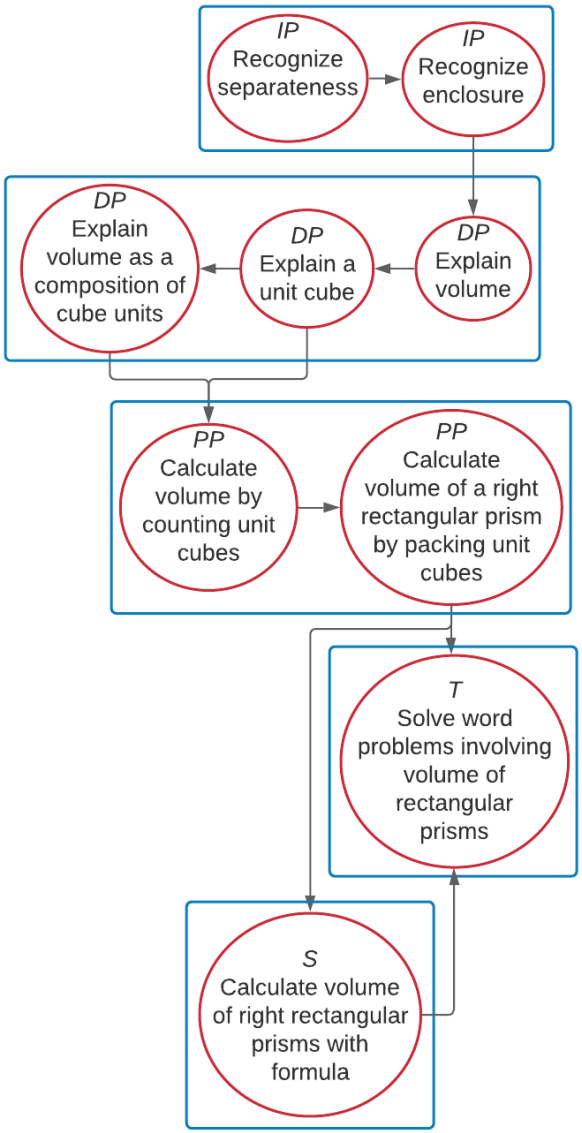
As students learn about how various materials do or do not fit in a given space, educators provide opportunities to compare and order by length, area, and capacity. Educators may use non-standard measurement tools such as hands or fingers to estimate length, blocks or squares for area, and sand or water for capacity.Educators should take care to use the word "volume" while defining and demonstrating its meaning as students are filling enclosed shapes or objects. While students do not need to say the word "volume", they do need to learn its meaning.

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.6.G.2 Solve real-world and mathematical problems about volume using unit cubes.



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

Boxes indicate tested nodes