Topic C:

Volume of Right Rectangular Prisms

6.G.A.2

Focus Standard:	6.G.A.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 $V = l\,w\,h$ and $V = b\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
Instructional Days:	4	
Lesson 11:	Volume with Fractional Edge Lengths and Unit Cubes (P)[1]	
Lesson 12:	From Unit Cubes to the Formulas for Volume (P)	
Lesson 13:	The Formulas for Volume (P)	
Lesson 14:	Volume in the Real World (P)	

In Topic C, students extend their understanding of the volume of a right rectangular prism with integer side lengths to right rectangular prisms with fractional side lengths. They apply the known volume formula, $V = lwh$, to find the volume of these prisms and use correct volume units when writing the answer. In Lesson 11, students determine the volume of a rectangular prism with edges $\frac{1}{8}$, $\frac{3}{8}$, and $\frac{5}{8}$ by packing it with 15 cubes with edge length $\frac{1}{8}$; they then compare that volume to the volume computed by multiplying the side lengths. In Lesson 12, students extend the volume formula for a right rectangular prism to the formula $V = $ area of base $\cdot$ height. Students explore the bases of right rectangular prisms and understand that any face can be the base. They find the area of the base first and then multiply by the height. They determine that two formulas can be used to find the volume of a right rectangular prism. In Lesson 13, students apply both formulas from Lesson 12 to application problems dealing with volume formulas of right rectangular prisms and cubes with fractional edge lengths. The topic concludes with Lesson 14, in which students determine the volume of composite solid figures and apply volume formulas to find missing volumes and missing dimensions in real-world contexts.

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[1] Lesson Structure Key: **P**-Problem Set Lesson, **M**-Modeling Cycle Lesson, **E**-Exploration Lesson, **S**-Socratic Lesson