

## Unit Plan by Prioritized Standards

<b>Content Area</b>	Math
<b>Grade/Course</b>	5th grade
<b>Unit of Study</b>	Module 5
<b>Duration of Unit</b>	20 days

Insert priority standards below (include code). **CIRCLE or Highlight** the **SKILLS** that students need to be able to do and **UNDERLINE** the **CONCEPTS** that students need to know. (address “supporting” standards in daily lesson plans)

**MGSE5.MD.5** **Relate volume** to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

- a. **Find the volume of a right rectangular prism with whole- number side lengths** by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
- b. **Apply the formulas  $V = l \times w \times h$  and  $V = b \times h$  for rectangular prisms to find volumes** of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
- c. **Recognize volume as additive.** Find volumes of solid figures composed of two nonoverlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

**MGSE5.NF.6** **Solve real world problems** involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Skills (what must be able to do)	Concepts (what students need to know)	DOK Level / Bloom's
<ul style="list-style-type: none"> <li>● Relate volume to the operations of multiplication and addition</li> <li>● Apply the formula for volume</li> </ul>	<ul style="list-style-type: none"> <li>● Find volume of right rectangular prisms w/whole number and fractional side lengths</li> <li>● Recognize volume as additive</li> </ul>	2/3
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<p><b>Step 5: Determine BIG Ideas</b> (enduring understandings students will remember long after the unit of study)</p>	<p><b>Step 6: Write Essential Questions</b> (these guide instruction and assessment for all tasks. The big ideas are answers to the essential questions)</p>
<ul style="list-style-type: none"> <li>• <b>Recognize volume as an attribute of three-dimensional space.</b></li> <li>• <b>Understand that volume can be measured by finding the total number of same size units of volume required to fill the space without gaps or overlaps.</b></li> <li>• <b>Understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume.</b></li> <li>• <b>Three-dimensional (3-D) figures are described by their faces (surfaces), edges, and vertices (singular is “vertex”).</b></li> <li>• <b>Volume can be expressed in both customary and metric units.</b></li> <li>• <b>Volume is represented in cubic units – cubic inches, cubic centimeters, cubic feet, etc.</b></li> <li>• <b>Volume refers to the space taken up by an object itself.</b></li> <li>• <b>Multiplication of fractions will appear in many different settings</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>How do we measure volume?</b></li> <li>• <b>How are area and volume alike and different?</b></li> <li>• <b>How can you find the volume of cubes and rectangular prisms?</b></li> <li>• <b>What is the relationship between the volumes of geometric solids?</b></li> <li>• <b>Why are some tools better to use than others when measuring volume?</b></li> <li>• <b>Why is volume represented with cubic units and area represented with square units?</b></li> <li>• <b>Why is multiplication used when finding volume?</b></li> </ul>
<p><b>Essential Unit Vocabulary</b></p>	
<p>• metric and customary systems • metric and customary units of measure • liquid volume • volume • solid figure • right rectangular prism • cubic units (cubic cm, cubic in, cubic ft, nonstandard cubic units) • edge lengths • height • area of base</p>	
<p><b>Next step, create assessments and engaging learning experiences</b></p>	