

# “Unwrapping” the Standards

1. Choose a course priority standard for the “unwrapping process”.
2. Skills: Circle the verbs – what *students* need to do.
3. Concepts: Underline nouns and noun phrases that represent *teachable concepts*.
4. Compose Big Idea statements

**Content Area: Math**

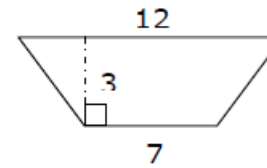
**Grade Level: 7<sup>th</sup>**

**Standard: 7.G.6**

<p><b>Domain:</b> Geometry (G)</p> <p><b>Cluster:</b> Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p> <p><b>Standard: 7.G.6</b> - Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. <b>(DOK 1,2)</b></p>		
1. Skills (verbs)	2. Key Concepts (nouns)	3. Additional Clarifications / Examples
Students need to be able to do.....	Students need to know.....	
Solve	Real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	<p>Students will not work with cylinders as circles are not polygons.</p> <p>“Know the formula” does not mean memorization of the formula. To “know” means to have an understanding of why the formula works and how the formula relates to the measure.</p> <ul style="list-style-type: none"> <li>• Students do not need to memorize formulas, but understand surface area as finding the area of each face in a three-dimensional figure and adding the areas to find the surface area.</li> <li>• Students understanding of volume can be supported by focusing on the area of the base time the height to calculate volume.</li> </ul> <p><u>Example:</u> A cereal box in the shape of a rectangular prism measures 2 inches deep, 8 inches wide, and 12 inches tall. What is the volume of the cereal box? What is the surface area of the cereal box? (Hint: Create a net of the cereal box and use the net to calculate the surface area.) Make a poster to share your work with the class.</p>

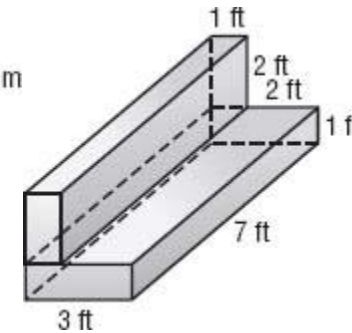
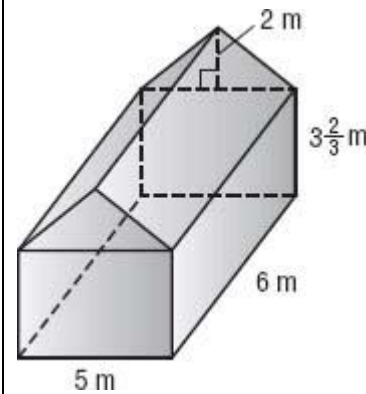
Example:

Find the area of the trapezoid shown below using the formula for rectangles and triangles.



Example:

Find the volume.



**4. Big Idea(s) in student language:** Students will calculate area, surface area, and volume of two- and three-dimensional shapes and objects composed of polygons and prisms.