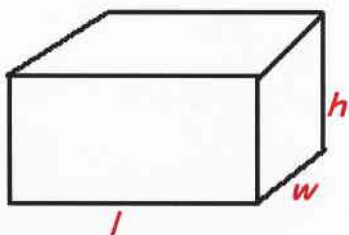


Surface Area and Volume with Cubes

This geometry activity will get you acquainted with the essential concepts of volume and surface area, and how to find their measure. Surface area is the total of the area of all of the faces of the object, and is measured in square units, which can be referred to as u^2 . The surface area of a rectangular prism can be found by using this formula: $TSA = 2(wl) + 2(wh) + 2(lh)$. A cube's width, length, and height are all the same, so the formula can be simplified to $TSA = 6(s^2)$. Volume is the amount of space that an object takes up, and is measured in cubic units, which can be referred to as u^3 . The volume of a rectangular prism can be found by multiplying its width, length, and height together ($V = lwh$). A cube's width, length, and height are all the same, so the formula can be simplified to $V = s^3$.



With the included CD, you can see this happen in action. After putting the disc in the computer, open the disc's contents and click on the shortcut inside. This should bring up a white window with a cube in the center. Talk in the microphone attached to the computer, and watch the sound of your voice react with the cube. What is actually happening is the amplitude of your voice is then used as a variable to extend the sides of the cube. You can see the side length and the calculated volume in the upper left hand corner of the window. Record the cube's side length while talking into the microphone, what would the surface area of the cube be when you recorded its side length?

Works Cited

"Volume Formulas." Math.Com. 15 May 2007
<<http://www.math.com/tables/geometry/volumes.htm>>.

Russell, Deb. "Area and Surface Formulas." About.Com. 15 May 2007
<<http://math.about.com/library/blmeasurement.htm>>.