**Breaking Down Volume**

Now that you know how to find volume of a rectangular prism, let’s break down what we are really doing. This will help us with future prisms.

1. Begin by looking at the specific dimensions of this rectangular prism.



1. What are the dimensions of the base?

5 cm.

1. How many 1 cm. cubes would it take to cover the base?

2 cm.

1. How many layers of 1 cm. cubes would it take to fill the prism?

3 cm.

1. Using your answers from parts b and c, find the volume of the prism. In other words, how many 1 cm. cubes will it take to fill the rectangular prism?

2. Now consider this rectangular prism:

1. What are the dimensions of the base of this rectangular prism?

1. How many 1 cm. cubes would it take to cover the base?
2. How many layers of 1 cm. cubes would it take to fill the prism?
3. Using your answers from parts b and c, find the volume of the prism. In other words, how many 1 cm. cubes will it take to fill the rectangular prism?

3. So when we find volume of a rectangular prism, we multiply the length by the width and then by the height. Using what you found above, explain ***why*** it works.

4. Thinking back to the last unit on perimeter and area, when we multiply the length by the width of a rectangle, what does that find?