

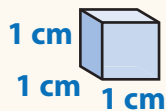
Find Volume Using Unit Cubes



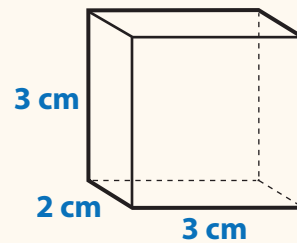
Dear Family,

This week your child is learning to find volume using unit cubes.

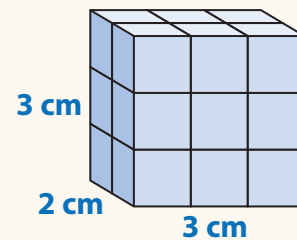
Suppose you want to find the volume of the rectangular prism shown at the right. One way to find the volume is to fill it with unit cubes that each have a volume of 1 cubic centimeter.



1 cubic centimeter



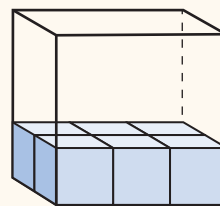
You can count all the cubes to find the volume. The prism has a volume of 18 cubic centimeters.



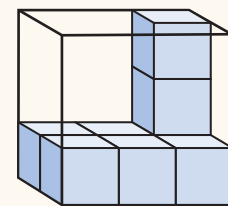
Another way to find the volume is to count the cubes in each layer and then add.

There are 6 cubes in each layer and 3 layers in all.

$$6 + 6 + 6 = 18 \text{ cubes}$$



One layer



3 total layers

The volume of the rectangular prism is 18 cubic centimeters. Using either method, the volume is the same.

Your child is also learning that unit cubes can be different sizes. So, it is important to know the size of the cube you are using when you find the volume of a figure.

- A unit cube with side lengths of 1 centimeter has a volume of 1 cubic centimeter.
- A unit cube with side lengths of 1 inch has a volume of 1 cubic inch.
- A unit cube with side lengths of 1 foot has a volume of 1 cubic foot.

Invite your child to share what he or she knows about different ways to find volume by doing the following activity together.

ACTIVITY FIND VOLUME USING UNIT CUBES

Do this activity with your child to find volume with unit cubes.

Materials scissors, tape, household containers shaped like rectangular prisms, such as cereal boxes and tissue boxes

- Cut out the cube pattern below on the solid lines. Fold on the dotted lines and tape into a cube. This cube represents 1 cubic unit of volume.
- Have your child use the unit cube to estimate the volume of one household container (the number of cubes that fit in the container). Because your child is finding an approximate volume, discuss that the cubes do not need to fill the length, width, and height of the container completely (with no gaps).
- Ask your child the questions below:
How many cubes would fit in the bottom of the box?
How many layers of cubes would fit in the box?
What is the approximate volume of the box?
- Repeat for another container.

