

LETTER HOME

Addition Properties Using Volume

Dear Family Member:

This unit will help your child develop spatial visualization skills while exploring the concept of volume. Volume is the amount of space that an object occupies. It is usually measured in cubic units. In these lessons, students find volume by finding the number of cubes that make up an object, either by counting or addition. They see that different shapes can have the same volume.

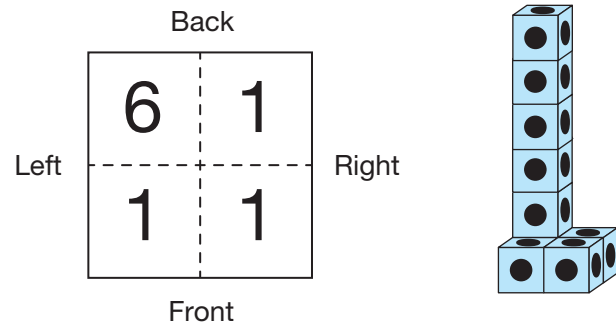
Students construct buildings and draw building plans to tell others how to construct the same structure. They create strategies for finding the volume of their structures.

The building plan on the right shows students how to construct a building. The picture is a building that matches the building plan. Notice that one of the towers is six units high, while the other three are one unit high.

The volume of this building is 9 cubic units. A possible number sentence for finding the volume of this building is $6 + 1 + 1 + 1 = 9$ where the 6 represents the number of cubes in the tallest tower, and the 1s represent the rest of the first layer of the building.

These volume experiences motivate students to explore the properties of addition. For example, does $6 + 1 + 1 + 1 = 7 + 2$?

Students then apply these addition properties to solve problems involving the volume of the buildings and the shapes of the buildings. For example, if the volume of the building is 12 cubic units, how tall is the tallest tower if I know the rest the building has a volume of 3 units?



$$6 + 1 + 1 + 1 = 7 + 2$$

Building plan used to construct a building

Math Facts and Mental Math

Students' fluency with the subtraction facts related to the addition facts in Group B will be assessed in this unit.

Group B: $3 - 0, 4 - 0, 5 - 1, 5 - 4, 6 - 1, 6 - 5, 7 - 1, 7 - 2, 7 - 5, 7 - 6, 8 - 1, 8 - 2, 8 - 3, 8 - 5, 8 - 6, 8 - 7, 9 - 1, 9 - 8$

You can help your child review these facts using the flash cards the teacher sent home or by making a set of flash cards from index cards or scrap paper. Study the facts in small groups each night. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use strategies to solve problems like these using mental math: $80 - 20$ (practices $8 - 2$), $900 - 800$ (practices $9 - 8$).

Thank you.