

# BUILDING RECTANGULAR PRISMS

## A hands-on lesson about volume

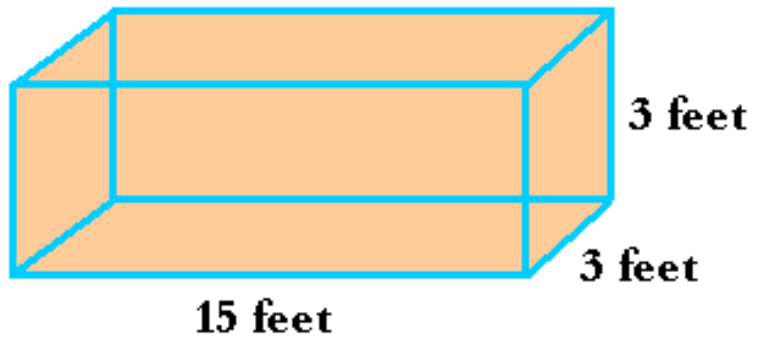
This lesson is to show how volume can be thought of as:

Area of the base x height

Example:

(15 feet x 3 feet) x 3 feet

45 feet x 3 feet = 135 cubic feet



Materials needed:

Connecting cubes (either cm or 1 inch size) and the attached set of task cards.

Directions:

1. Supply each pair of students with connecting cubes.
2. Build the base first (the amount in parentheses). The length is the longest side. The width is the shortest side.
3. Calculate the area of the base. Write it in the space provided.
4. Build the other layers according to the third number (height). This is how tall the prism will be.
5. Multiply the area of the base x the height to find the total volume.
6. Alternate: Add the area of the base repeatedly (according to the height) so students will realize that each layer / stack is the same area as the base.

Options:

- Compare volumes from one prism to the next.
- Predict the volume if 1 or more layers were added or removed.
- Did any prisms have the same volume, but different dimensions?

$$(3 \times 2) \times 2$$

Volume is:

$$(4 \times 2) \times 3$$

Volume is:

$$(2 \times 3) \times 5$$

Volume is:

$$(2 \times 2) \times 6$$

Volume is:

$$(4 \times 5) \times 2$$

Volume is:

$$(6 \times 2) \times 3$$

Volume is: