

Grade 5

Fill 'Em Up

Module 8- Geometry: Area, Perimeter, & Volume

Fifth grade students use the relationship between the length, width, and depth of an object to determine its volume. Use this activity to help your child make sense of this relationship by giving him/her many experiences in comparing volumes of containers.

Materials:

Pick 5 empty plastic rectangular containers of different sizes from the kitchen or elsewhere at home. Rectangular containers help your child look at length and width as well as height.

Directions:

1. Have your child arrange the 5 containers in what he/she believes is the correct order from least volume to greatest volume according to how much water he/she believes each container will hold.
2. Ask your child to explain how he/she decided that one container would hold less or more than another container. Encourage your child to use words such as "length," "width," and "depth" in his/her explanation.
3. To check whether the order is correct, have your child begin by filling the smallest container with water.
4. Carefully pour the water from the smallest container into the container he/she believes is next larger in volume. Talk about whether or not he/she was correct in his/her estimation. Then give him/her a chance to reorder the containers.
5. Continue having your child test his/her decisions about the order of the containers by adding water to the container being tested

then pouring that water into the next largest container until the containers are in order from least to greatest volume.

Questions to ask your child while playing:

Why do you think this container holds more/less water than that one?

Did any of the containers fool you about their volume? If so, what was it about the container that made you think it holds more or less water than it really does?