

# Home Connections

## Math Activities

**Grade 6**

**Measurement**

Exploring Volume and Surface Area

Measurement in Sports

# Exploring Volume and Surface Area

1. Have your child show how to calculate the volume and surface area of a rectangular package in your home. Work with your child to list the different dimensions possible for a package of this volume.
2. Using the list of possible dimensions, help your child investigate other packages in your home.

For example:



$$\begin{aligned}\text{Volume} &= (\text{area of rectangular base}) \times \text{height} \\ &= (20 \times 25) \times 19 \\ &= 9500\text{cm}^3\end{aligned}$$

$$\begin{aligned}\text{Surface Area} &= \text{Area1} + \text{Area2} + \text{Area3} + \\ &\text{Area4} + \text{Area5} + \text{Area6} \\ &= 20 \times 25 + \dots \\ &= 2(20 \times 25) + 2(\dots) + 2(\dots) \\ &= \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{cm}^2\end{aligned}$$

Volume is the amount of space occupied by an object. Surface Area is the sum of the areas of the sides.

## Let's Talk About It

- What type of package would have the greatest volume and the least surface area? Why?

# Measurement In Sports

Help your child find sports statistics with length or time, using a newspaper, sports magazine, or other resource. Ask your child to discuss the degree of precision used in these measurements.



Sporting events provide one context for examining the need for precision.

## Let's Talk About It

- What could happen if one number was wrong?
- Why is it important to measure time and length correctly?
- What does precision mean to you?
- How are statistics used to measure sports?