

www.LearningResources.com

For a dealer near you, call:  
(847) 573-8400 (U.S. & Int'l)  
(800) 222-3909 (U.S. & Canada)  
+44 (0)1553 762276 (U.K. & Europe)



Students may give many different answers. Some may include: the cube masses are not exactly 1 gram and the volumes are not exactly 1 cm<sup>3</sup>, and so on.

Encourage students to find the mass, volume, and density for larger cubes. The density for a cube with a side length of two centimeters is also 1 g/cm<sup>3</sup>. Repeat the activity for cubes with side lengths of three, four, and five centimeters; students should see a pattern in their charts. (Note: each time the mass increases by 1 gram, the volume increases by 1 cubic centimeter.)

Challenge advanced students to explain why the *Gram Unit Cubes* do not hover in water. The density of water is equal to 1 g/cm<sup>3</sup> which is equal to the density of the cubes.



INTERLOCKING

# Gram Unit Cubes

Set of 1000 • 1 cm Cubes

© Learning Resources, Inc., Vernon Hills, IL (U.S.A.)  
Learning Resources Ltd., King's Lynn, Norfolk (U.K.)  
Please retain our address for future reference.  
Made in China. LRM0305-GUD



# GRAM UNIT CUBES

*Gram Unit Cubes* (LER 305) are perfect for teaching mathematical and scientific concepts. Use the cubes to teach counting, sorting, and classifying skills to younger students; fractions and the four operations to middle grade students; and concepts such as density and mass to older students.

## Counters

*Gram Unit Cubes* can be used to model all kinds of mathematical problems. Use red cubes to model the following problem: Michelle bought six apples and gave two of them to a friend. How many apples did Michelle have left for herself? Help students make the transition from concrete to abstract with the cube models before moving onto pencil and paper operations.

## Sorting

*Gram Unit Cubes* come in ten different colors. Ask children to sort them into piles by color. Encourage students to practice their writing and counting skills by labeling each pile with the color name and the number of cubes it holds.

## Fractions

Use the cubes to model fractions. Link together three blue and two red *Gram Unit Cubes*. Ask students to

describe the fraction that represents the number of blue cubes in the linked rod. Three out of five cubes are blue, thus the fraction is  $\frac{3}{5}$ . Find the fraction represented by the red cubes. It's  $\frac{2}{5}$ . All of the cubes have been described, so  $\frac{3}{5} + \frac{2}{5} = \frac{5}{5}$  or 1 linked bar. Continue using models to subtract, multiply, and divide fractions with the cubes.

## Mass

*Gram Unit Cubes* have a mass of one gram each. Encourage students to estimate mass by picking up objects in one hand and the cubes in the other until the masses feel equivalent. Ask students to predict masses, and then measure them with their hand balances. Use a pan balance to compare the estimated mass with the true mass. Encourage students to find their error percentages. Limit the mass of objects to fifty grams or less.

## Density

*Gram Unit Cubes* are perfect for students to practice calculating density. Begin with one cube. Initially, explain to students that the mass of each cube is one gram and the volume is  $1 \text{ cm}^3$ . Students should create a chart with columns for mass, volume, and density. Ask students to find the density of one *Gram Unit Cube*. Density equals mass divided by volume. So, the density of one