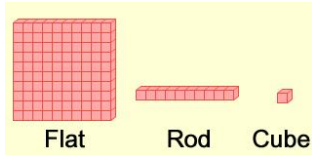# Vocabulary: Modeling Whole Numbers and Decimals

Vocabulary

- Base-10 blocks – a set of blocks that is used to represent the base-10 system.
  - Three types of blocks are shown in the *Modeling Decimals* Gizmo™:
    - A *cube* is a single block.
    - A *rod* is a row of 10 cubes.
    - A *flat* is a square array of 100 cubes. (A flat is also a stack of 10 rods.)

Flat   Rod   Cube

- Base-10 system – a system of numbers based on powers of 10.
  - The base-10 system uses 10 digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.
  - The position of a digit determines its value. For example, the number 647 means 6 hundreds, 4 tens, and 7 ones.
  - The base-10 system can also represent numbers smaller than 1. For example, 0.27 means 2 tenths and 7 hundredths.
  - The base-10 system is also called the decimal system.

- Decimal – a number written in the base-10 system.
  - Usually "decimal" refers to a number that contains a *decimal point*.
  - The portion to the right of the decimal point is often referred to as the "decimal part" of the number.

- Decimal point – a point that separates the ones place from tenths, hundredths, etc.
  - For example, the decimal 7.4 is seven and four tenths. The decimal 7.41 is seven and forty-one hundredths.

- Whole number – a positive number or zero that represents a whole quantity (no decimal part).
  - Examples: The numbers 437, 2, 50, 9941 and 6,489,274 are all whole numbers.
  - Example: In the number 89.71, the 89 is often referred to as the "whole number" or the "whole number part."
  - There is an unlimited (infinite) number of whole numbers.