

# DENSITY

## Description:

This event is designed to examine the students' basic understanding of the nature of density using blocks of various materials that are square or rectangular.

**Number of Participants:** 2

**Approximate Time:** 30 minutes

## The Competition:

This activity will consist of several stations that will be used to determine the competitors understanding of density. Each station will test different aspects of the problem. Students may also be asked to find the mass of an object in grams (g) using an elementary or digital balance. They may also be asked to measure length, width and height in centimeters (cm) and calculate the area in cubic centimeters ( $\text{cm}^3$ ). Students may be asked to calculate density using a simple formula (e.g., if a 20-gram block is 10 cubic centimeters, the density is  $2\text{g}/\text{cm}^3$ ).

## Scoring:

Highest score wins. One point is given for measurements, two points for density questions. Tiebreakers will be previously determined questions.

## *Sample Stations/Questions:*

Station One: Given a set of 3-4 blocks, rank order them from most to least dense.

Station Two: Given two blocks, which would float in water?

Station Three: Given two objects with the same size, ask which is more dense.

Station Four: Given two objects with the same mass, ask which is more dense.

Note: If blocks are used they should be numbered for easier identification.

