MINI CUBE SET

It is a set of 5 cubes, consisting of Aluminum (Al), Brass (Bu), Copper (Cu), Mild Steel (MS) and Zinc (Zn). Each cube has following dimension:


Length: 1cm per cube

Width: 1cm per cube

Height: 1cm per cube

Students identify metal cubes by determining their density. Easy and accurate to measure 10mm cubes of 5 different metals. Each set includes one cube each: Aluminum, Brass, Copper, Mild Steel and Zinc. Plus, students can use the density of the samples to calculate the purity. Mild Steel is also known as plain carbon steel.

EXPERIMENT:

To determine the density of a metal using a set of different cubes

- You have to determine both the mass and volume of a single assigned sample.
- Record their data point on a Mass Vs Volume Graph.
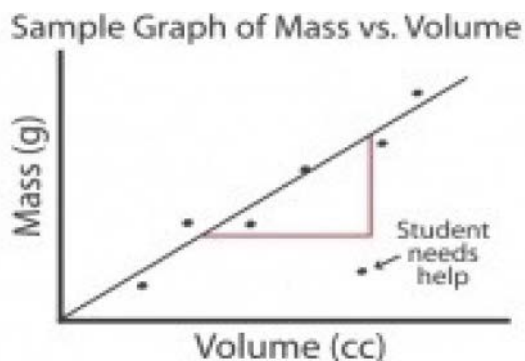
- Participated in a class discussion on: determining volume by different methods; drawing a straight line through the data points (including the origin); and calculating the slope of the line (rise over run). You will get a plot as given ABOVE. Slope of the "best" straight line usually gives a more accurate density value.

Advantages of using our Mini Density Cubes:

- It can be discovered that the density depends upon the ratio of mass to volume and not upon size of the sample.
- Students observe that some methods for determining volume are more accurate than others.
- Students discover that the slope of the "best" straight line usually gives a more accurate density value than calculating from a single piece of data.
- The teacher can immediately tell from the data points if a student needs help in measuring.
- Student can observe that Density=M/V, whereas M is mass of cube whereas V volume of cube.

Average values for Density

Block	Average mass	Volume (cubic centimeters)	Density (g/cubic cm)
Ms	7.625	1.0	7.6
Zn	6.975	1.0	7.0
Bu	8.525	1.0	8.5
Al	2.675	1.0	2.7
Cu	8.975	1.0	9.0