**Mass, Volume and Density Notes**

*Coke Can Experiment:*

In your own words, explain what happened when you watched the Diet Coke and regular Coke being placed in a container of water. Explain WHY!

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*Mass:*

* Measurement of the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(or stuff) in an object
  + Measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (g)

*Volume:*

* Measurement of the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an object takes up
  + Measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(ml) or \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm3

1Kg of Feathers or 1Kg of Rocks: Which do you think would have the greater volume? The greater mass? Why?

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*Density:*

* Density is defined as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* It is a measure of how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and how heavy the molecules are in an object.
* Density is the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_within a certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

*Practice:*

1. Which is more dense? Box A or Box B

Why?

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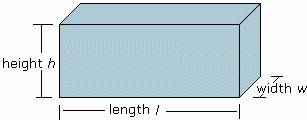
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1. Which is more dense? Box A or Box B

Why?

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*Finding Density:*

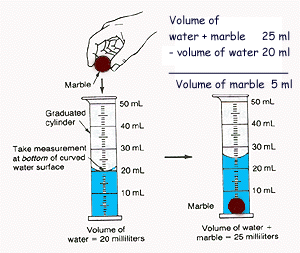
1) Find the mass of the object

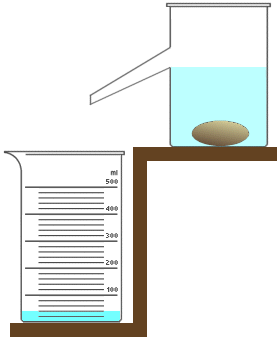
2) Find the volume of the object

3) Divide

Density = Mass g

Volume cm³

*Displacement Method:*



* Awkward Sized item with a difficult volume to solve for?
* Any object displaces a volume of water equal to it’s own volume when placed in water.

*Density Practice Questions:*

To find density:

1. Find the mass of the object
2. Find the volume of the object
3. Divide : Density = Mass ÷ Volume

Example:

If the mass of an object is 35 grams and it takes up 7 cm3 of space, calculate the density.

**Set up your density problems like this:**

Given: Mass = 35 grams Volume = 7 cm3 Unknown: Density (g/ cm3)

Formula: D = M / V

Solution: **D = 35g/7 cm3**

**D = 5 g/cm3**

1 Frank has a paper clip. It has a mass of 9g and a volume of 3cm3. What is its density?

2. Frank also has an eraser. It has a mass of 3g, and a volume of 1cm3. What is its density?

3. Jack has a rock. The rock has a mass of 6g and a volume of 3cm3. What is the density of the rock?

4. Jill has a gel pen. The gel pen has a mass of 8g and a volume of 2cm3. What is the density of the rock?