**Density Continued**

*Ways to Change Density:*

1. Change\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ AND Keep \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increase the mass 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ density

Decrease the mass 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in density

Which container has more density? A or B

b) Change\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ AND Keep \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increase the \_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 decrease \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the volume 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ density

Which container has more density? A or B

What 2 ways will INCREASE the density?

a) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Liquid Layers:*

* If you pour together liquids that \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ and have different densities, they will form liquid layers.
  + The liquid with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ density will be on the bottom.
  + The liquid with the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ density will be on the top.
* Objects or substances with \_\_\_\_\_\_\_\_\_\_\_\_ density will sink below objects or substances with\_\_\_\_\_\_\_\_\_\_\_\_\_\_ density
  + Which do you think is MORE dense, Water or Oil???

Water, Oil and a Superball:

The oil is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dense than the water, so it’s on top. The superball is less dense than \_\_\_\_\_\_\_\_\_\_\_\_\_\_, but more dense than \_\_\_\_\_\_\_\_\_\_\_, so it sinks to the bottom of the oil layer, yet floats on the top of the water layer.

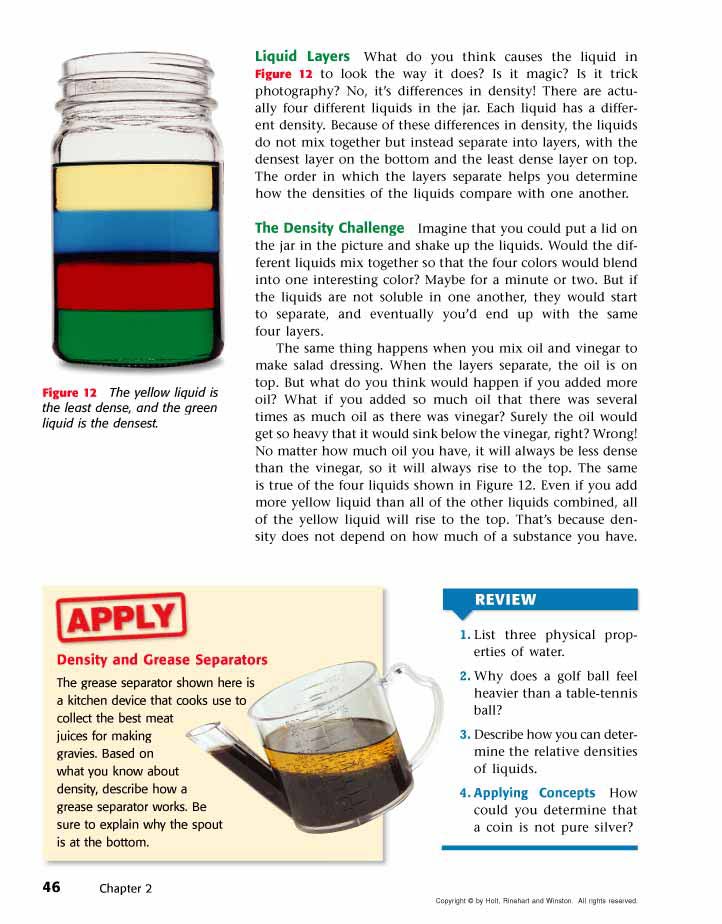
If you have 2 or more substances, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dense substance will be on bottom The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dense substance will be on top

*Practice*:

1. The density of five liquids are measured as follows:
   * Liquid 1: 1.0 g/mL
   * Liquid 2: 1.38 g/mL
   * Liquid 3: 0.77 g/mL
   * Liquid 4: 2.95 g/mL
   * Liquid 5: 0.056 g/mL

Draw a picture of all 5 liquids in a test tube how they would layer according to density.

2) Check out this picture.

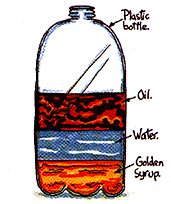
a) Which layer has the highest density?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Which layer has the lowest density?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

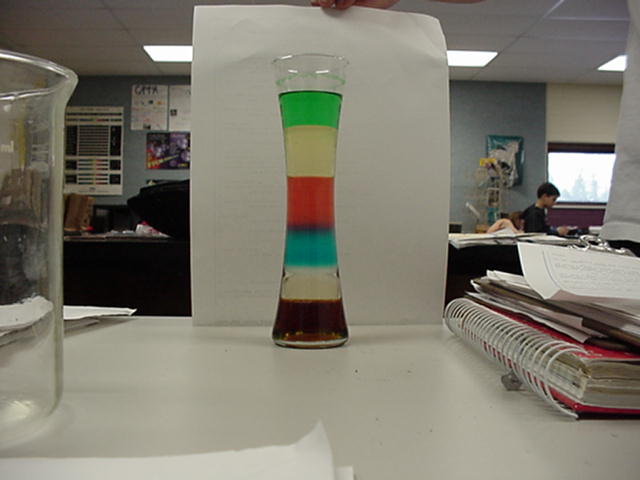
c) Imagine that the liquids have the following densities:

* + 10g/cm3. 3g/cm3.
  + 6g/cm3. 5g/cm3.

Which density would go with which layer?

3) Liquid Layers:

* Which liquid has the highest density?
* Which liquid has the lowest density?
* Which liquid has the middle density?

4) Imagine that the liquids on the right have the following densities:

* + 15g/cm3 10g/cm3
  + 3g/cm3 9g/cm3
  + 7g/cm3 12g/cm3

Match the colors to the correct densities.