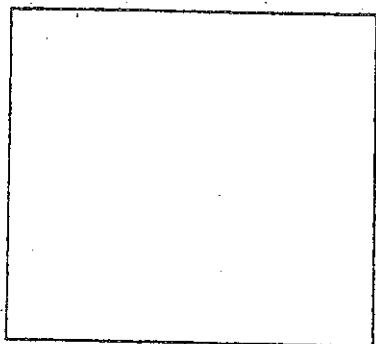


Density Lab

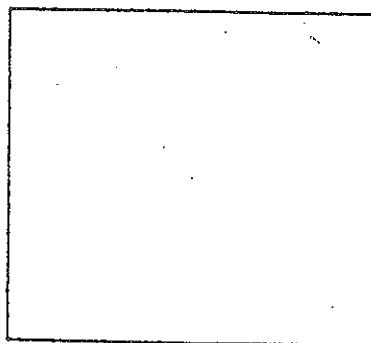
A Physical Property of Matter

What is Density?

There are bottles of Mercury and Water on the teacher desk. There is an equal volume of each in the bottles. Lift the bottles (be sure to keep the mercury bottle in the plastic bag). What's the difference? How can you explain this difference? Draw what you think the molecules of water and the atoms of mercury look like in the squares below:



Water



Mercury

Lab Procedure:

1. You will be provided with a set of 12 unknown solids and liquids. In the table, write a description of each substance.
2. Record a mass and volume for each of the substances. Be sure to use enough of the unknown to get at least two significant digits in your measurements.
3. Show your density calculation in the table. Do this as accurately as possible.
4. Use a density table to help you to identify the unknowns. Record the actual densities.

Challenge:

You will be provided with material to build a boat. Your job is to construct a boat that will float and hold more mass than any other in the class. This will be tested under the supervision of the teacher! Do you have what it takes to win? Question: If iron and its alloys are more dense than water, how are huge ocean liners and naval vessels able to float?

Sample	Description	Mass	Volume	Density Calculation	Identity	Actual Density
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						