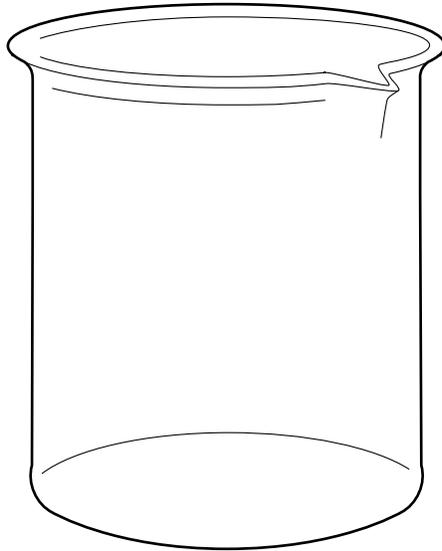


Use with textbook pages 260–265.

Dense, denser, densest

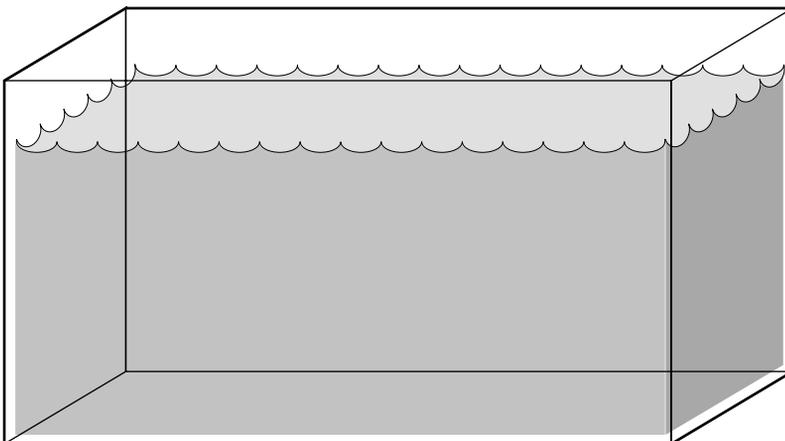
Complete and label the diagrams according to the instructions below.

1. The table below lists the densities of five different fluids. If the fluids were added to a beaker, how would they be layered? Draw and label the layers in the beaker below.



| Substance | Density (g/mL) |
|-----------------|----------------|
| gasoline | 0.69 |
| glycerol | 1.26 |
| corn syrup | 1.40 |
| vegetable oil | 0.92 |
| rubbing alcohol | 0.79 |

2. Water has a density of 1.00 g/mL. Draw and label each of the following objects in the tank of water. Show whether they will sink or float.



| Object | Density |
|---------------|-------------------------|
| cork | 0.24 g/cm ³ |
| ice | 0.92 g/cm ³ |
| gold ring | 19.32 g/cm ³ |
| block of wood | 0.66 g/cm ³ |
| marble | 2.5 g/cm ³ |

Name _____

Date _____

Use textbook pages 264–265.

Density detective

Use your detective skills to find the identity of the mystery objects. First calculate the density of the object. Then use the Table of Densities to decide what the object is made of.

Table of Densities

| Solids | Density (g/cm ³) | Solids | Density (g/cm ³) |
|---------|------------------------------|----------|------------------------------|
| marble | 2.56 | copper | 8.92 |
| quartz | 2.64 | gold | 19.32 |
| diamond | 3.52 | platinum | 21.4 |

1.



While digging in the backyard, you find an old coin. Its mass is 26.76 g and its volume is 3 cm³. What is the density of the coin?

Calculation: _____

What is the coin made of? _____

2.



You think you have found a diamond. Its mass is 5.28 g, and its volume is 2 cm³. What is the density of the object?

Calculation: _____

What did you find? _____

3.

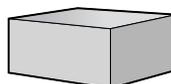


You find a ring with a mass of 107 g. You fill a graduated cylinder up with 10 mL of water and put the ring into the cylinder. The water rises up to the 15 mL mark. What is the density of the ring?

Calculation: _____

What is the ring made of? _____

4.



There is a block on your desk that acts as a paperweight. Its measurements are: 3 cm by 4 cm by 6 cm. The block has a mass of 184.32 g. What is the density of the block?

Calculation: _____

What is the block made of? _____