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12/9/11

The Case of the Sinking Film Can:

Analysis and Conclusion

1. Calculate the density of the film can:

Density = -----

D = _____ g/ _____ mL

D = _____ g/mL

Density of water: _____ g/mL

Why doesn't the film can float?

3. DENSITY OF OBJECTS AND LIQUIDS EXPLANATION

The film can doesn't float because.....

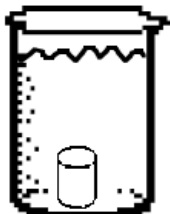
Include:

Drawing of film can (NO VECTORS)

Measurements of mass and volume with UNITS

Calculation of density

Comparison of density of film can and liquid



DENSITY COMPARISON

4. THE BUOYANT FORCE EXPLANATION

The film can doesn't float because.....

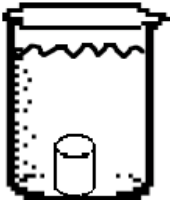
Include:

Drawing of film can with vectors labeled with measurements from lab (1, 2, 3)

Buoyant force definition and measurements with UNITS

Weight definition and measurement.

How does Archimede's principle apply to the film can?



VECTOR DIAGRAM

The Case of the Sinking Film Can: 12/8/11

Archimedes Principle

PREDICT:

Will an object that sinks weight the same, less, or more than its weight in air?

EXPLAIN?:

1. Weight of the film can (in grams) from spring scale ____
2. Weight of the film can (in grams) under water (not touching bottom) ____

3. How much less does the film can weigh under water?

This is the buoyant force = _____

GRAMS

Show subtraction: _____ - _____ = _____

4. Volume of film can: (use the displacement can)

Repeat the measurement until you get answers that are very close:

_____ mL _____ mL _____ mL

5. Weight of the water displaced: _____

6. Write out Archimedes Principle (Pg 83): _____

7. Use Archimedes Principle to explain why the answer to #3 and #5 should be about the same