

**LESSON 3 WORKSHEET  
SURVIVAL SCIENCE**

**NAME:** \_\_\_\_\_  
**INITIALS:** \_\_\_\_\_

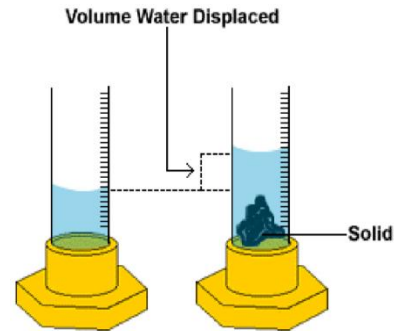
**CALCULATING DENSITY**

1. Find **Mass (weight)** of the following objects:

- 100 PENNIES \_\_\_\_\_ grams (to nearest 50 g)
- 25 PENNIES \_\_\_\_\_ grams (divide above by 4)

2. Measure the **volume** of the following objects:

- SPORT BALL \_\_\_\_\_ cc's or mL (weight = 10 g)
- 25 PENNIES \_\_\_\_\_ cc's or mL



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3. Calculate the Density:

**Density(p) = Mass(m)/Volume(v)    p = m/v**

**SPORT BALL** \_\_\_\_\_ / \_\_\_\_\_ mL = \_\_\_\_\_ g/mL

**PENNIES** \_\_\_\_\_ / \_\_\_\_\_ mL = \_\_\_\_\_ g/mL

4. Feel **Density** differences (using a perfect cube measuring 1 cm per side)

**WEIGHT IN GRAMS      ROUND (cm<sup>3</sup>)    COMPARED TO WATER    DENSITY RANKING (1-4)**

Cu _____ g/1 mL = _____ g/cm <sup>3</sup>	_____	_____
Fe _____ g/1 mL = _____ g/cm <sup>3</sup>	_____	_____
Al _____ g/1 mL = _____ g/cm <sup>3</sup>	_____	_____
Pb _____ g/1 mL = _____ g/cm <sup>3</sup>	_____	_____

**Which ELEMENT is most dense based on your density rank above:** \_\_\_\_\_

**METALLURGY (less than 2000 degrees F or ~1100 degrees C temp or )**

Tin = Sn    Iron = Fe    Copper = Cu    Antimony = Sb    Lead = Pb    Al = Aluminum    Zn = Zinc  
Ag = Silver    Au = Gold

**BRONZE:** \_\_\_\_\_ + \_\_\_\_\_

**PEWTER:** \_\_\_\_\_ + \_\_\_\_\_ or \_\_\_\_\_

**AMMO:** \_\_\_\_\_ or \_\_\_\_\_ or **BRASS = Cu + Zn**