**Quick Review from 6/9/14 KEY**

1. Identify each of the following activities in the scientific method as an observation (O), a hypothesis (H), an experiment (E), or a theory (T)
   1. Explains why nature behaves the way it does. \_\_T\_\_
   2. Collect data. \_\_O\_\_
2. Solve the following problems, stating answers to the proper number of significant figures
   1. 12.62 + 1.5 + 0.25 = 14.37 =14.4
   2. 10.4 + 3.75(1.5 x 104) = 10.4 + 5.6250 x 104 = 5.6 x 104
3. Write the name or symbol for the following elements
   1. Chromium Cr
   2. B boron
4. (4 points) Write the following measurements in scientific notation with 4 significant figures.
   1. 581962846 g 5.820 x 108 g
   2. 0.0000352329 mL 3.523 x 10-5 mL
5. What is the log of 6.49 x 105 (with proper number of sig figs) 5.812
6. Round the following numbers to 3 significant figures and write them in scientific notation.
   1. 3758298950 km

3.76 x 109 km

* 1. 0.000320241713 sec

3.20 x 10-4 sec

1. Classify each of the following as a homogenous mixture, heterogeneous mixture, element or compound
   1. Copper metal, Cu \_\_\_\_\_\_\_\_\_element\_\_\_\_\_\_\_\_\_
   2. Soft Drink \_\_\_\_homogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Sugar, C12H22O11 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
   4. Ham Sandwich \_\_\_\_\_\_\_heterogeneous mixture\_\_\_\_\_\_\_\_\_\_\_
   5. Baking Soda, NaHCO3 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
2. Identify each of the following as properties of a solid, liquid or gas
   1. This substance has a definite volume and \_\_\_\_\_\_solid\_\_\_\_\_\_

shape.

* 1. The particles in the substance have negligible attractive forces. \_\_\_\_gas\_\_\_\_\_\_\_\_

1. Write the name for each of the following ions (include the Roman numeral when necessary) (5 points):
   1. Zn2+ zinc
   2. N3- nitride
   3. Na+ sodium
   4. Cl- chloride
   5. Cu2+ copper(II) or cupric
2. Identify each of the following transformations as a chemical or physical change (5 points).
3. Silver tarnishing \_\_\_\_\_\_\_\_\_chemical\_\_\_\_\_\_\_
4. Cutting the grass \_\_\_\_\_\_\_\_\_physical\_\_\_\_\_\_\_
5. A nail rusting \_\_\_\_\_\_\_\_\_chemical\_\_\_\_\_\_\_
6. Water boiling \_\_\_\_\_\_\_\_\_physical\_\_\_\_\_\_\_\_
7. A button falling off a shirt \_\_\_\_\_\_\_\_\_physical\_\_\_\_\_\_\_\_