1. What is the difference between reactants and products? ________________________________

2. Name three properties that can be observed in a substance.
   a. __________________________
   b. __________________________
   c. __________________________.

3. What is the Law of Conservation of Matter, and how does it apply to chemical reactions?

   ________________________________________________________________________________

4. True or False: A physical change results in new substances being formed. __________________

5. If you have 12 atoms of hydrogen before a chemical reaction, how many atoms of hydrogen will be present after the chemical reaction? ________________________________

6. Why does the mass of a substance remain the same after a chemical reaction?

   ________________________________________________________________________________

7. How does a catalyst affect a chemical reaction? ________________________________

8. Give an example of a chemical reaction during which a single substance breaks down.

   ________________________________________________________________________________

9. How can scientists use their knowledge of chemical reactions?

   ________________________________________________________________________________

10. Write a chemical equation of Dr. Jeff’s demonstration using a battery to light steel wool on fire. The battery is used to allow a current to travel through the steel wool, thus heating it up. Steel wool is made from iron (Fe).

    ________________________________________________________________________________