Prelab Assignment: Single and Double Displacement Reactions

1. In this lab you will perform a variety of single and double displacement reactions. What are three observable signs that a chemical reaction has occurred?

2. What is the general equation of a single displacement reaction?

3. For each of the following sets of reactants, write the balanced equation for the single displacement reaction that occurs. If you determine that a reaction will not occur, write “NR”, and provide a brief explanation.
   a. Aluminum metal + aqueous nickel(II) nitrate
   b. Gold metal + hydrobromic acid

4. What is the general equation of a double displacement reaction?

5. For each of the following sets of reactants, write the balanced equation for the double displacement reaction that occurs. If you determine that a reaction will not occur, write “NR”, and provide a brief explanation.
   a. Aqueous zinc chloride + aqueous sodium chromate
   b. Aqueous lithium hydroxide + phosphoric acid

6. The equipment required for this lab is fairly simple - just 8 small test tubes and 6 large test tubes.
   a. Using the small test tubes you will mix two aqueous solutions together and observe whether or not a reaction occurs. What quantity of each solution will you use? How will you estimate this quantity?
   b. What do the reactions studied in the large test tubes all have in common?
   c. In the reactions involving both a solid and a solution as reactants, which do you place in the test tube first?