SINGLE REPLACEMENT REACTIONS WORKSHEET

1. Using the activity series table answer the following questions:
   (a) list two metals that will react with Fe^{2+} ions _____ _____
   (b) list two metals that will lose electrons to Pb^{2+} _____ _____
   (c) list two ions that will take electrons from Zn _____ _____
   (d) list two metals that will react with HCl _____ _____
   (e) identify the best oxidizing agent (i.e. electron grabber)

2. Using the activity series, how do you decide if a reaction will or will not take place between two species?

3. Describe what you would see when a piece of Mg metal is placed in an aqueous solution of copper(II) sulfate. Write the net ionic equation for the reaction that takes placed.

4. What would happen to a silver dollar when placed in a 3 M HCl solution? Justify your answer.

5. Given an ionic equation, how can you identify the spectator ions of a reaction?

6. Do aluminum pop cans make a suitable containers for hydrochloric acid solutions? Write an equation that supports your answer.

7. Rank order the following species in order of their ***increasing*** ability to capture electrons: Pb^{2+}, I_2, Al^{3+}, Ba^{2+}, O_2

   _____ _____ _____ _____ _____

8. Rank order the following species in order of their ***increasing*** ability to lose electrons: Ni , Cu^{+}, Cl^{-}, K, Mg

   _____ _____ _____ _____ _____

9. What happens when a piece of calcium metal is placed in water? Write the molecular equation that supports your prediction.