

Metal/Metal Ions Activity Laboratory Simulation

Comments

12/10/01

The goal of the Metal/Metal Ions Activity Laboratory Simulation was to explore a particular type of chemical reaction called a single replacement reaction. Single replacement reactions are a class of reactions that fall under the broad category of oxidation-reduction reactions. Oxidation-reduction reactions are a major class of reactions that involve the transfer of electrons. Neutralization reactions are another major class of reactions we have studied this semester. Neutralization reactions do not involve the transfer of electrons.

In your study of single replacement reactions you developed a series of relative reactivity of metals and metal ions. This series is called an activity series and rank orders metals and their ions in order of reactivity. Having developed an activity series you then learned how to apply the series to predict other reactions that you had not tested experimentally. Had we had additional time this semester we would have explored the activity series and expand it greatly.

After doing the Metal/Metal Ions Activity Simulation I expect you to be able to predict the products of a single replacement reaction and write their ionic and net ionic equations.

Sample problems covering the Activities of Metal Web Experiment.

Write the chemical formula(s) of the product(s) and balance the following reactions. Identify all products phases as either (g)as, (l)iquid, (s)olid or (aq)ueous. Soluble ionic compounds should be written in the form of their component ions. If no reaction occurs, write NR. (Note: You should use the Activity Series from the draft Useful Information pages that are available on our Web page.)

