LESSON
69
LAB

Making Predictions
Observing Change

Name _____

Date _____ Period _____

Purpose

To practice interpreting chemical equations and making predictions based on chemical equations.

Part 1: Predictions

Examine each chemical equation in the table. Predict what you think you will observe when the procedure is carried out. Enter your predictions in the second column of the data table.

Part 2: Complete the Procedures

When you have finished making your predictions, visit each station with your group. Complete the three procedures posted at each station, and record your observations.

Chemical equations	Predictions	Observations
Station 1: Dry ice		
1. $CO_2(s) \longrightarrow CO_2(g)$		
2. a. $CO_2(s) \longrightarrow CO_2(g)$ b. $CO_2(s) + H_2O(l) \longrightarrow H_2CO_3(aq)$		
3. $Ca(OH)_2(aq) + CO_2(s) \longrightarrow CaCO_3(s) + H_2O(l)$		
Station 2: Calcium chloride		
4. $CaCl_2(s) \longrightarrow CaCl_2(aq)$		
5. $CaCl_2(aq) + 2NaOH(aq) \longrightarrow Ca(OH)_2(s) + 2NaCl(aq)$		
6. $CaCl_2(s) + CuSO_4(s) \longrightarrow CaCl_2(s) + CuSO_4(s)$		

Chemical equations	Predictions	Observations
Station 3: Copper sulfate		
7. $CuSO_4(s) \longrightarrow$ $CuSO_4(aq)$		
8. $CuSO_4(s) +$ $4NH_4OH(aq) \longrightarrow$ $Cu(NH_3)_4SO_4(aq) +$ $4H_2O(l)$		
9. $CuSO_4(aq) +$ $Zn(s) \longrightarrow$ $Cu(s) + ZnSO_4(aq)$		

Questions

1. What clues did you look for to help you make your predictions?

2. Why was one of the procedures represented by more than one chemical equation?

3. What information is *not* indicated in a chemical equation (it must be observed)?

4. What information cannot always be determined from observation alone?

5. Making Sense Make a list of all the observations you made today that are associated with changes in matter.