Name: _____ **Date:** _____

Acids & Bases

Compounds can be divided into two groups: **acids** and **bases.** There are many kinds of acids and bases in our home and school. Acids taste sour. Lemon juice is an example of an acid. Bases taste bitter. Baking soda is an example of a base. Chemicals can be acids and bases too. Sulfuric acid is used in car batteries. Bleach, a base, is used to whiten clothes. Some substances are neither acids nor bases. They are neutral. (Caution: Never taste an unknown substance.)

Litmus paper can be used to test a substance chemically to discover which compound it is. When placed in a sample substance chemicals in the litmus paper will react with the substance and change the paper's color. Comparing the changed litmus paper strip to a chart you can determine where a substance falls on the acid-base continuum. Strong acids match the color for 1, 7 is neutral, and 14 is a strong base. Test some common compounds in this activity.

You will need:

*** 6 litmus paper strips * a marker * dish soap * sugar water**
*** 6 small paper cups * carbonated drink * lemon juice * milk**

1. Label each cup with the name of the substance. Pour a small amount of each into its cup.
2. Dip a strip of litmus paper into the first substance. Did it change color? Compare the strip's color with the acid-base continuum chart and record your findings in the chart below.
3. Repeat the procedure for each of the 6 substances. Record the number for each substance and whether it is an acid, base, or neutral in the chart below, including the "Mystery Substance".
4. Write your opinion of what the "Mystery Substance" is in the space provided.

Testing Household Substances

Material	Number of Reaction to Litmus Paper	Acid, Base, or Neutral
Lemon Juice		
Milk		
Dish Soap		
Sugar Water		
Ginger Ale		
Mystery Substance		

In your opinion what is the mystery substance? _____

LIVEWORKSHEETS