Name: _____ Date: _____ Period: _____

Lab: Determining the pH of Common Household Items

Background: *The pH of a solution is a measurement of how acidic or basic a solution is. An easy way to measure the pH of a solution is to use litmus paper. This paper has been treated with chemical indicators whose color varies according to pH. Blue litmus paper turns red in the presence of an acid. Red litmus paper turns blue in the presence of a base.*

Understanding the pH scale:

Use your notes from yesterday to answer the following questions.

a. Which numbers indicate an **acid**?

b. Which numbers indicate a **base**?

c. Which number indicates a **neutral solution**?

d. Which number indicates the **strongest acid**?

e. Which number indicates the **strongest base**?

f. Which number indicates the **weakest acid**?

g. Which number indicates the **weakest base**?

h. What type of ions do acids release (word and abbreviation)?

i. What type of ions do bases release (word and abbreviation)?

Procedure:

You MUST wear goggles at all times!!!

1. Make predictions of whether each sample will be acidic, basic, or neutral. Record these predictions in the data table.
2. Get a well plate and collect 2-3 drops of each sample solution. Be sure to put each numbered sample into the spot with the same number as the sample. Only place ONE sample in each spot. NEVER MIX THE CHEMICALS!
3. Receive your red litmus paper (tests for bases) and your blue litmus paper (tests for acids) Only touch one end with your fingers
4. Dip a red and a blue strip of pH paper into the first well. Pull the strip out **immediately**.

5. Count to 5 and then fill out your data table.
6. Record your data in the data table below.

Solution	Prediction (Acid / Base / Neutral)	Red Litmus Paper Change to Blue / No change	Blue Litmus Paper Change to Red / No change	Acid or Base?	Was your prediction correct?
1 Coffee					
2 409					
3 Water					
4 Milk					
5 Soap					
6 Lemon Juice					
7 Soda					
Mystery Substance					

* Get the Hydrion Paper from teacher to confirm pH of substances.

8. Rinse out your well plate with **plenty** of water and dispose of all paper fragments in a trash can… NOT down the sink!!!!! Return wells and goggles to their appropriate homes.

Analysis & Conclusions: Answer in complete sentences.

1) What happens when acids and bases are mixed?

2) List two methods of testing that would have been more accurate than litmus paper:
   a.

   b.

3) What were some things that may have gone wrong in the experiment?

4) Explain a situation where someone could use pH test kits in your neighborhood.