Name: _____ **Date:** _____

Determining the pH of Common Household Items

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 pH paper. This paper has been treated with chemical indicators whose color varies according to pH.

When writing lab report copy and complete the items below!
The data chart from this lab can be taped/stapled into Lab Notebook.

Prelab: Understanding the pH scale

1. Examine the pH scale given to you. This allows you to measure the pH of solutions.
2. Note that the various colors (ranging from red to blue) and numbers on the scale corresponds to certain pH values.
3. Answer the following questions **before** going to the procedure.

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)?

j. Define neutral solution:

k. Define pH scale:

Post-Lab: Analysis & Conclusions

Of the solutions you tested, name the:

a. strongest acid: _____
b. weakest acid: _____
c. neutral solution: _____
d. strongest base: _____
e. weakest base: _____

Conclusion:

1. which solutions were not what you expected?
2. What were some things that may have gone wrong in the experiment?
3. How could you improve the experiment to make it better?
4. Explain a situation where someone could use pH test strips in your neighborhood.

Procedure

You MUST wear goggles at all times!!! *Take your time on this lab… you have all class period!*

1. Have one group member write down each of the samples in the below data table. Make group predictions of whether each sample will be acidic, basic, or neutral. Record these predictions in the data table.
2. Get a well plate and have one person from your group 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 pHydrion paper (12 small strips). DO NOT touch with your fingers.
4. Using tweezers, dip one of the small strips of pH paper into the first well. Pull the strip out **immediately**.
5. Count to 5 and then compare the color of the paper to the color chart.
6. Record your data in the data table below.
7. Repeat for the rest of the solutions.

Liquid	1	2	3	4	5	6	7	8	9	10	11	12
pH												

Solution Name	Prediction (Acid/Base/Neutral)	pH based on paper reading (1-14)	Was your prediction correct?
HCl			
Vinegar			
Laundry Soap			
H2O			
Hot Sauce			
Bleach			
Lemon Juice			
Windex			
G.F. Juice			
Dish Soap			
Apple Juice			
Ammonia			

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, tweezers, and color charts to the front of the room.