



pH LAB by Beth Mick

Name _____

Date _____

Introduction:

A liquid may be an acid, base, or neutral. The degree of how acidic or basic a material is can be measured by using the pH scale of pH 1-14. The scale is divided into three areas: Acid (readings below 7), neutral (reading of 7), and basic (readings above 7). Each division either increases or decreases the pH of a substance 10 times. The pH of 5 is ten times more acidic than a pH of 6. Water has a pH of 7 but when it mixes with air the suspended materials will either raise or lower its pH. Acid Rain is an example of this type of reaction.

Common household substances may be neutral, acidic or basic. You will be using pH paper that will turn color depending upon the pH of the substance.

Objective:

Think about each substance and decide what you think the substance is, neutral, acidic or basic. Use pH paper to determine the actual pH of the substance. Using the pH recordings label the substance as neutral, acidic or basic.

Materials:

- pH paper and Chart
- Lemon Juice
- Cola
- Ammonia
- Detergent
- Pond Water
- Distilled Water
- Salt Water
- Tap Water
- Baking Soda

Procedure:

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1. Look at your objective, what do you think you should do first before you start.
2. Record your predictions.
3. Use the pH paper and record the actual pH of each substance.
4. Record if the substance is neutral, acidic or basic.

Analysis Questions:

1. What types of ions cause a substance to be acidic or basic?
2. Look at the substances; if a something is called acidic will it burn your skin?
3. How much more acidic is a substance with a pH 2 than a pH of 3? How much more basic is a substance of a pH of 10 than a pH of 8?
4. Draw a pH scale that includes all of the substances you tested on it.

Teacher Notes:

1. Substitute any substance you may have with things that you do not have.
2. The 1st step in the procedure is to try and help them remember the importance of a data table.
3. Depending upon the level of students the question on ions could include both hydrogen or hydroxide – or the class may get into the pH scale being the negative log and that it is the concentration of hydrogen versus hydroxide.