

Name: _____

Date: _____



ACTIVITY 3. What is pH? And how do we measure it?

Objective

To explore acidity and pH.

1. What does pH measure?
2. How do we measure pH?
3. What substances have high and low pH?
4. What does it mean?

Materials

pH paper

Variety of liquids with different pH (e.g. tap water, seawater, milk, coke, soda water, lemon juice, vinegar, antacid tablet dissolved in water, coffee, baking soda)

Student Data Form

Pencils, pens

Methods

1. Describe what pH is in your own words to your neighbor, then record on data form (next page).
2. Describe something edible that tastes acidic. Give examples.
3. Describe something edible that tastes basic (alkaline). Give examples.
4. Taste a number of different liquids and place in order from the most acidic to least acidic (basic). Record these on the data form. For baking soda, taste only a tiny amount.
5. Measure the pH of these substances with pH paper. When using pH paper, leave it in each solution for 10 seconds. Then compare the colors on your paper to the color scale on the box to give a pH value.
7. Record your data in the student data form.

Discussion

1. Which liquids have the highest pH, which have the lowest?
2. Were your predictions accurate?
3. Why is measuring pH important?

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STUDENT DATA FORM

Describe what pH means:

If something edible is acidic, what do you think it tastes like? Give examples:

If something edible is basic (alkaline), what do you think it tastes like? Give examples:

In Column A, list the substances from low acidity to high acidity based on taste. The first row should be low acidity and the last row should be high acidity based on your taste. Use pH paper to measure the acidity, and write the pH value in Column B. In column C, write "high" if the pH is 0-6 and "low" if pH is 8-14. Write "neutral" if pH is 7.

A. Substances (listed from low acidity to high acidity based on taste)	B. pH (paper)	C. High or Low Acidity?