

Activity: What's my pH?

Materials: pH paper  
pH color chart  
baby food jars  
tweezers

common household solutions such as orange juice, apple juice,  
5 mg baking soda in 100 ml water, vinegar, distilled water,  
tap water, bleach, liquid detergent, ammonia, lemon juice,  
cranberry juice, milk of magnesia and soft drink  
river water and acid rain/snow

Procedures:

1. A common measure of acidity is the pH scale. This scale ranges from 0 to 14. Pure water is neutral at pH 7. Solutions with lower values are acids; those with values higher than pH 7 are bases.
2. Using tweezers, dip a small piece of pH paper into the sample. Remove it.
3. Immediately compare the color of the pH paper with the color chart.
4. Record the pH value for the solution.
5. Using a fresh piece of pH paper each time, repeat the test for each sample.
6. Wash all baby food jars and rinse with distilled water before using again.
7. Make a chart with the solutions arranged from the lowest pH to the highest pH.
8. Test and record the pH of the acid rain/snow and river water.

Interpretations:

- A. How do your team's pH values compare with those of at least two other teams?
- B. Which of the household solutions was closest to the pH of the acid rain/snow?
- C. For which solution was there the greatest variation in pH? What do you think is a cause for this variation?

Enrichment:

- A. Compare the pH of rain water collected early in a storm or shower with that of a sample collected at the end of the storm.
- B. Compare the pH measurements of stormwater from various areas of your community.
- C. Using the newspaper's weather section, compare the acid rain values throughout the state.