Activity: pH and Lemonade

Materials for Team of 4:

- lemonade concentrate, thawed
- distilled water
- pH paper
- pH color chart
- graduated cylinder
- beaker or large jar
- baby food jars

Procedures:

1. Using distilled water, mix the lemonade as directed on the package.
2. Determine the pH of the lemonade. Record this value. Determine and record the pH of distilled water.
3. Measure 50 ml of the lemonade; add 50 ml of distilled water. Predict the pH of this solution. Test your prediction.
4. Measure 25 ml of the lemonade; add 75 ml of distilled water. Predict and test the pH of this solution.
5. Measure 10 ml of lemonade; add 90 ml of distilled water. Test and record the pH of this solution. Label this solution A.
6. Take 10 ml of solution A and a different amount of distilled water of your own choosing. Predict and test the pH of your solution. Make 3 more combinations of distilled water. Start each trial with 10 ml of solution A. Test and record the pH. Graph the results. Compare your results with at least 2 other teams.
7. After completing your testing, you may drink your lemonade solutions.

Interpretations:

A. How does adding water influence pH?

B. Predictions do not have to be exactly correct to be good. Did your predictions get better with practice? Why?

C. Why do you think some lemonade tastes better than others?

Enrichment:

Write a poem or advertisement about pH and lemonade.