Ag-Bites
Bite-sized activities for bringing agriculture into your classroom.

LearnAboutAg.org

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Strawberry pHun!

Using strawberries to learn about the pH scale.

Grades 6-8

The Facts

From the baking soda we add to cookie dough to the slightly acidic soil we grow strawberries in, pH is all around us. The pH scale is how we quantify how acidic or basic something is. Today we will determine where strawberries fall on the pH scale.

Activity

1. Place the strawberries in a large bowl and mash.

2. Label three cups: puree, puree with lemon, and puree with baking soda. Equally divide the puree into the three cups.

3. Add nothing to the cup labeled puree. Stir one tablespoon of lemon juice into the cup labeled puree with lemon. Stir ¼ teaspoon of baking soda into the cup labeled puree with baking soda.

4. Dip one pH test strip halfway into each cup. Immediately remove the strips and place them onto a piece of copy paper. After a few seconds, record the pH level. Use the pH scale in the sidebar to compare the three strawberry solutions.

5. Taste the strawberry solutions and share observations. Invite students to use the claim, evidence, reasoning (CER) model to analyze each mixture.

6. To learn more about strawberry production, growing challenges, and nutritional benefits, download Ag in the Classroom's Strawberry Fact Sheet from *learnaboutag.org/resources/fact*.

Classroom Activities

Nutrition

- Use food labels to compare the nutritional value between frozen, fresh, or dried strawberries. Is there a difference?

Math

- Research the price of strawberries at different times of year. Create a graph to show the price differences and construct a CER argument as to why the price fluctuates throughout the year.

Science

- Identify ways that agriculturists can change the pH of the soil to maximize plant health.
- Research the parts of a strawberry plant. Dissect the fruit and label the different parts using online resources as a guide.
- Prepare and test the pH value of other fruits and vegetables by first creating a puree and then measuring the pH. Illustrate your results with a color-coded spectrum similar to the one in the sidebar.

California Standards

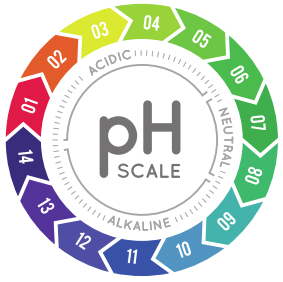
Grade 6-8

NGSS: MS-PS1-2
ELA CC: RST.6-8.1

Materials

- 1 (16 oz) carton of fresh strawberries or (thawed) frozen strawberries
- 1 tablespoon lemon juice
- ¼ teaspoon baking soda
- pH test strips
- Blender or large fork to mash
- Three 8-ounce cups
- Spoons
- Large bowl
- Stir sticks or spoons
- Copy paper

Tip



Examples:

Stomach Acid (1)
Lemons or Limes (2)
Strawberries (3)
Tomatoes (4)
Artichokes (5)
Milk (6)
Distilled Water (7)
Sea Water (8)
Baking Soda (9)
Milk of Magnesia (10)
Ammonia (11)
Hand soap (12)
Household Bleach (13)
Drain Cleaner (14)

This is one in a series of Ag-Bites developed by CFAITC. Ag-Bites meet the standards of the California Department of Education.
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