Living Lab – Virtual Mini-Lesson
Super Soils Extension 2:2 - Soil Chemistry Experiment Instructions - Upper grades

Supplies: 2 oz. distilled water, ½ cup white vinegar, ¼ cup baking soda, containers

Instructions:
1. Collect 1 cup of soil. Divide it into two ½ cup samples in two separate containers. We will call them sample #1 and sample #2. (Talk to your family about where to get a soil sample and container. Cleaned plastic recycling containers work well).

2. Add ½ cup white vinegar to soil sample #1. Observe with ears and eyes. If it fizzes/bubbles, the soil is alkaline, with a pH between 7 and 8.

3. If you do not observe a reaction, try a second test.

4. Add a small amount of distilled water, enough to make the soil muddy, ~2 tbsp.

5. Sprinkle on a ¼ cup baking soda and watch for reaction. If you see or hear bubbling/fizzing, the soil sample is acidic, with a pH of 5-6.

6. If no reaction is observed, you may wish to repeat the tests, but it is likely the soil sample is neutral, with a pH of 6-7. If a reaction is observed in both samples, make sure you are using distilled water and a clean container.