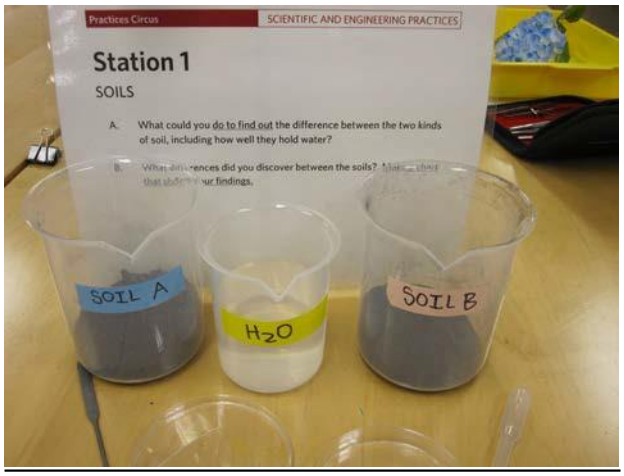
Practices Rotation Stations SCIENTIFIC AND ENGINEERING PRACTICES

Identify the main scientific practice needed to do the underlined directions.

Station 1, A & B: SOILS



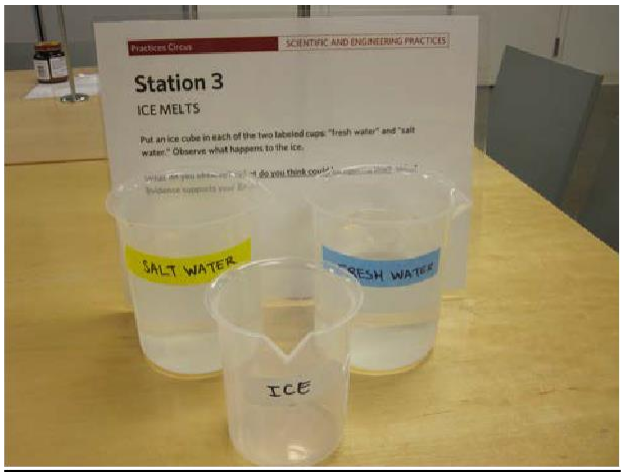
A. What could you do to find out the differences among the two kinds of soil, including how well they hold water?

B. What differences did you discover among the three soils? Make a chart that shows your findings.

Station 2: FLOWER

Take a flower apart and describe what you find. Draw a series of pictures with labels.

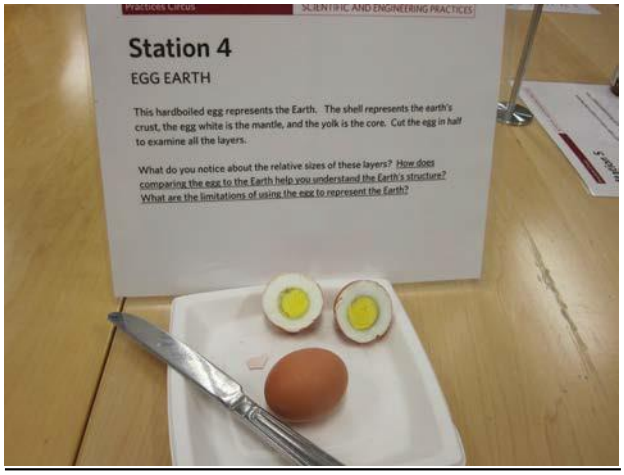
Station 3: ICE MELTS



Put an ice cube in each of the two labeled cups: “fresh water” and “salt water”. Observe what happens to the ice.

What do you observe? What do you think could be causing this? What evidence supports your idea?

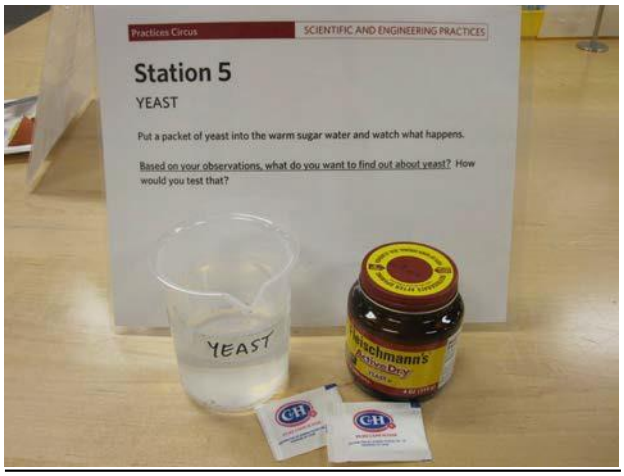
Station 4: EGG EARTH



This hardboiled egg represents the Earth. The shell represents the earth's crust, the egg white is the mantle, and the yolk is the core. Cut the egg in half to examine all the layers.

What do you notice about the relative sizes of these layers? <u>How does comparing the egg to the Earth help you understand the Earth's structure? What are the limitations of using the egg to represent the Earth?</u>

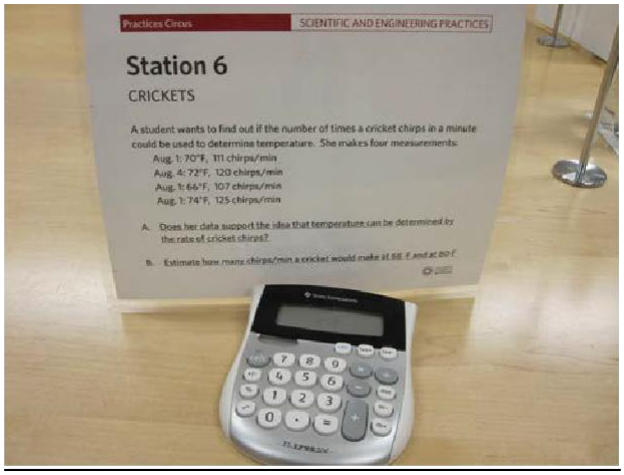
Station 5: YEAST



Put a packet of yeast into the warm sugar water and watch what happens.

<u>Based on your observations, what do you want to find out about yeast?</u> How would you test that?

Station 6, A & B: CRICKETS



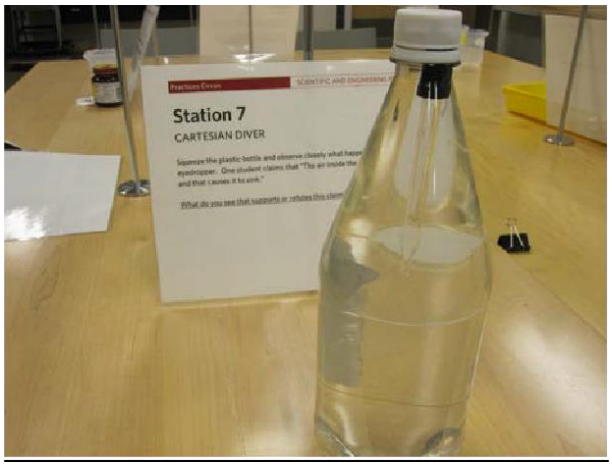
A student wants to find out if the number of times a cricket chirps in a minute could be used to determine temperature. She makes four measurements:

Aug. 1: 70°F, 111 chirps/min
Aug. 4: 72°F, 120 chirps/min
Aug. 1: 66°F, 107 chirps/min
Aug. 1: 74°F, 125 chirps/min

A. <u>Does her data support the idea that temperature can be determined by the rate of cricket chirps?</u>

B. <u>Estimate how many chirps/min a cricket would make at 68 °F and at 80°F</u>

Station 7: CARTESIAN DIVER



Squeeze the plastic bottle and observe closely what happens to the eyedropper. One student claims that “The air inside the diver gets denser and that causes it to sink.”

<u>What do you see that supports or refutes this claim?</u>