INV. 1 ACTIVITY—PHYSICAL AND CHEMICAL WEATHERING

Focus Question: How are physical and chemical weathering similar? How are they different?

Use the online tutorial on FOSSweb to review the concept of weathering.

Instructions:

1. Go to the FOSS website (www.FOSSweb.com) and login with your student credentials. (If your school/district has its own unique web URL for accessing FOSSweb, please be sure to use that URL instead.)
2. Navigate to the **Soils, Rocks, and Landforms** resources by clicking on the image for the module.
3. Click the "Tutorial" drop-down menu under "Online Activities."
4. Click on the "Weathering" tutorial and interact with it.
5. As you watch the first part of the tutorial, create a T-Chart with the headers, "Physical Weathering" and "Chemical Weathering." Write down characteristics of each kind of weathering in the appropriate column of your T-chart.
6. Outdoor extension: Walk around your yard and your neighborhood.
   - Can you find evidence of physical and chemical weathering occurring?
   - Make a list of what you discover.

INV. 1 ACTIVITY—BACKYARD SOIL INVESTIGATION

Focus Question: What's in our backyard soil?

This is a home connection to the outdoor investigation we did in class with our schoolyard soil. If you do not have a backyard, you can go to a local park to collect soil samples. You'll need to collect samples from a variety of different locations in your yard or park such as under mulch, at the edge of a grass line, wooded areas, packed soil, loose soil (such as in garden beds), under decaying leaf litter, and near the edges of buildings.

Materials:

- Small jars or containers with lids, such as baby food jars or empty water bottles (1 per type of soil being collected)
- Small trowels or plastic spoons for digging
- Water
- Measuring cup
- Science notebook or paper for recording observations
- Masking tape
- Paper plates

Instructions:

1. Take your materials outdoors with you. Find different locations that will provide different soil types for you to observe.
2. Collect samples of the soil using your trowel or plastic spoons and put them on paper plates.
3. Observe the soil samples. Record your observations and descriptions of your soils in your notebook. Include the color, shape of particles, size, texture, smell, and moisture level of the soil. If you see anything growing (or living) in your soil, include that too.
4. Roll or fold your paper plate so you can funnel the soil into your container about halfway. Use the masking tape to label your container with where you found the soil.
5. Add water using the measuring cup so the water level is above the surface of the soil.
6. Cover and shake the container.
7. Allow the container to settle.
8. What do you observe? Record your observations in your notebook. Is the soil in your yard the same in all locations?