# SCOOP ON SOILS

## AFTER 1: Data Analysis for Porosity Experiment

Background: Each student group collected data during their porosity experiment. Students can apply the data cycle as they make conclusions about the experiment, discuss experimental design and flaws in their investigation process. What does the data tell us?

**Standards Addressed**: Math (2023): 3.PS.1, 3.NS.3

**Instructional Strategy**:

1. Recap and review the soil porosity experiment conducted at Blandy.
2. **Ask:** What can we do with our data from our experiment at Blandy? Solicit responses to move students to begin discussing analysis of their data. Ask students to generate ideas on HOW to analyze the data. They can write ideas on post-its, consider each idea, tally up the most frequent responses, and decide on the best way to analyze the data.
3. In the Virginia math SOL, students study bar graphs so this may be the path they choose to display their data. If so, you can find the mean (average) of the time in seconds for the water moving through the soil AND for the amount of water left in the soil.
4. Students can create graphs on large paper or create the graphs using an appropriate math digital platform.
5. Alternative: Groups input their respective data into this Google Sheets class example datasheet to visualize results.
    a. https://docs.google.com/spreadsheets/d/1t_-ssSsLBMi71mWTTD05jf7Y8lp1qHEgpx2WS0Ac-S8/copy
    b. It will ask you to make a copy to open the file, do so. Each student or group will have their own copy.
    c. Each group will enter their data into light green boxes.
    d. Datasheet automatically calculates the averages at the bottom.
    e. Graphs should automatically update with new data inputs.