

Earth Science Week 2022

Sustaining Living Soil with Composting Experiment

Summary and Worksheet

Students will use a soil thermometer to observe the temperatures of two compost bins, a control and one treated with a variation. The variable could be one of the following: aerated vs not aerated; moist vs. dry; with and without browns or greens. A higher temperature reading indicates increased microbial activity, and thus better decomposition. Students record the temperature daily over several weeks. After the study is over, students can plot the data and interpret the results. The following table can be adapted by the teacher as needed. Once the experiment is concluded, students plot and analyze their data to compare the behavior of the two piles.

Discussion Questions

- How and why does the speed of decomposition change?
- What are some factors that affect decomposition in a compost bin?
- Where have you observed decomposition in the environment?

Experiment Variable:

Temperature Measurements		
Week 1		
Date	Control Bin Temperature	Variable Bin Temperature
Week 2		
Date	Control Bin Temperature	Variable Bin Temperature
Week 3		
Date	Control Bin Temperature	Variable Bin Temperature
Week 4		
Date	Control Bin Temperature	Variable Bin Temperature

