

Soils Lab: Soil Formation and Classification



Learning Objectives: Upon completion of this module, students should be able to

- understand how regional environmental conditions and geological processes govern soil formation;
- classify various types of soil (from New England) based on their texture and appearance;
- understand how soil texture and properties affect plant growth and health; and
- infer the importance of soil in food production and identify threats to soil health.

Descriptions: In this module, we will explore environmental and geological factors that contribute to soil formation. We will learn how the last ice age shaped much of the geological landscape in the North East United States. We will learn to identify soil horizons and learn their unique geological, biological, and chemical characteristics. This will allow us to examine how soil impacts our agricultural systems and therefore human society. Key threats to soil health will be discussed, such as pollution and erosion.

Lab Skills Earned:

- ✓ Soil texturing by hand
- ✓ Distinguishing soil horizons

Format: Mostly in-person, hands-on lab with a digital component
50% lecture 50% practical

Lab Instructions for Registered Students:

- (1) **PLEASE REFRAIN FROM WEARING EXPENSIVE JEWELRIES, WATCHES, OR RINGS AS YOUR HANDS WILL GET MUDDY.** (If you wouldn't build a sand castle with the jewelries/watches/rings you have on, you should not wear them to the lab – leave them at home or with your parents.)
- (2) **While there is no requirement on attire, you may not want to wear your favorite sweater, dress, dress shirt, etc. since there is a slight chance that you will get mud on them.**