

Soil Temperature and Core Lab

The temperature of the soil is important for growing crops. It is also important that farmers and builders know the depths of the horizons located in their area. You are going to be determining the temperature of several soil samples and you will also be taking a core sample.

Materials:

soil thermometer
soil core sampler
meter stick
soil color chart



Procedures:

1. Find a shaded area under a tree or bush. Take the temperature of the soil. Leave the thermometer in the soil for two minutes before reading the temperature. Record the temperature in the data table below.
2. Find a sunny area that is receiving direct sunlight. Take the temperature of the soil. Record the temperature in the data table below.

Temperature	Record temperature in °C
Shaded Sample	
Sunny Sample	

3. Take a soil core sample in the location of your choice.

Location of core _____

4. Diagram the horizons of the core sample you took. Label the horizons.

5. Measure the depths of each horizon you sampled. Record the depths in the data table below.

6. Compare the soil colors in each horizon with the soil color chart. Determine the type of soil found in each horizon and record your results in the data table.

Horizon	Depth in cm	Soil Type (According to Color Chart)

Analysis and Conclusion:

1. What was the difference in temperature between the shaded and sunny locations?

2. Using the crop chart, determine the best types of crops to grow in the sunny location based on the temperature that you recorded.

3. Did you see each of the horizons (O, A, B, C, and R) in your soil core sample? Why or why not?

4. According to the results you got using the color chart, would the topsoil (horizon A) be good for growing crops? If so, what crops would you suggest?