

2006 California Envirothon
Learning Objectives: SOILS

Soils and soil management can both effect and be affected by climate.

Students should be able to

1. Know soil vocabulary and terminology including names of soil constituents: sand, silt, clay, organic matter, air and water.
2. Be able to describe topographic features including names of landforms.
3. Know what slope and slope aspect are and be able to measure them
4. Understand the origin of soil parent materials.
5. Be able to describe a soil profile including depth, horizons, color, texture and structure.
6. Understand the terms *carbon sink*, *carbon sequestration*, and *albedo*
7. Know how climate affects the formation of soil and how climate changes, especially global warming and changing precipitation, might affect soil properties.
8. Know which soil properties can affect the climate.
9. Be able to explain how soil management can slow or accelerate climate change, especially global warming.
10. Be able to explain ways in which climate change can affect soil management.
11. Know how to use a soil survey report including use of the map index, reading aerial photographs, finding soil boundaries and symbols on a detailed soil map, reading soil map unit descriptions, and reading tables.