

Whiteboard: Profiles and Horizons**Soil 1**

This soil profile from Arizona shows very little horizon development. It is essentially a thick C horizon overlain by a thinner A horizon. The dry arid climate of Arizona means that this soil has little vegetation so there is no O horizon, and the A horizon is not very distinguishable from the C horizon. It is a good example of how dry climates limit soil development. Though the soil is deep, it has no distinguishable major horizons.

Soil 2

This picture shows you a soil profile from North Carolina. It shows only the top four feet of the profile. You can clearly see a brown A horizon overlying a reddish B horizon. Because North Carolina has a temperate climate and adequate rainfall and vegetation, a distinct A horizon has developed, which is brown because of all the organic matter in it. The underlying B horizon is red because of the iron and clay that rainfall has moved downward from the A horizon. Beneath this deep B horizon is a C horizon, not shown in this picture.

Soil 3

This soil is from Kansas. It is under a prairie and shows a thick dark A horizon, which has developed from the accumulation of grassland organic matter. Under the A horizon is a light brown B horizon made of accumulated clay.

Soil 4

If you look closely you can see four distinct horizons in this soil profile. In the very top is a thin, dark black O horizon. Just below it is a medium-brown A horizon. Just below that is a light brown horizon, which is probably a second A horizon. It is not uncommon for very old well-developed soils to have more than one A horizon. Below the second A horizon is a red B horizon, which is colored this way because of accumulations of iron and clay from above. This soil is from Alabama. It is a mature soil and is well-developed.