Wetland Soils in Living Color -

Soil Chart Directions

**MATERIALS**

Soil Data Chart, clip board, writing implement, spade or trowel(s), ruler, (5) collection cups, color chart, sheet of white paper, soil texture chart, mister bottle w/ distilled water, your science journal/notebook (optional)

**DESCRIPTION OF LOCATION:**

1. Choose a soil sample site representative of the area you are investigating or by using a random sampling technique.
2. Sketch a simple diagram showing where your sample site is located in relation to the larger study area.
3. Include brief description, measurements from fixed infrastructure and/or GPS coordinates that would allow someone else to find your sample site.

**DESCRIPTION OF PLANTS PRESENT:**

1. Describe the type of plants growing on your soil sample site – i.e., grass, bushes, trees, etc. – and include the names of any plants you know.

**POSSIBLE EVIDENCE OF ANIMAL ACTIVITY:**

1. Describe any evidence of burrows, insects, foot traffic or trails, or human artifacts you may observe in your soil sample site.

**POSSIBLE SOURCES OF WATER:**

1. Include natural and/or human developed sources of water (i.e., rain, snow, hose bibbs, irrigation systems, etc.) that you can directly observe from your soil sample site or have evidence of on the soil sample site (i.e., rain, snow, in an obvious stream channel, on shore of lake, etc.)

**INVESTIGATION PREPARATION:**

1. Measure 1 square foot (0.09 square meters) of ground, marking the corners with sticks, rocks, etc.
2. Within the plot, describe the leaf litter layer and measure its depth and add this to your description of the location.
3. Remover the soil litter layer within your plot with a spade or trowel and place on paper
4. Review all instructions for this investigation.
5. Decide which team members will do each component.

**DEPTH OF SOIL SAMPLE:**

1. Collect soil samples from the soil surface and depths of approximately 7.5 cm (3 inches), 15 cm (6 inches) and 1foot (30 cm) and keep each sample in a separate, labelled location.
2. Why might it be important to know the depth of a soil sample?

**- - - REST OF DIRECTIONS ON OTHER SIDE - - -**

**SOIL COLOR:**

1. Place a golf ball size sample of soil from each depth - in order from surface to 30 cm - on a sheet of white paper.
2. Use the color charts provided to describe the soil color at each depth and record on Soil Sample Data Chart.
3. What might the color tell us about a soil?

**DAMPNESS OF SOIL SAMPLE:**

1. Place a golf ball size sample of soil from the soil surface sample in the palm of your hand and squeeze tight – Record if water can be squeezed from the sample and/or it sticks together as a ball.
2. Repeat this for each soil sample depth and record on the Soil Sample Data Chart.
3. What might this tell us about the soil besides if it is currently wet or not? Could soil moisture affect other soil properties we are investigating?

**SOIL SAMPLE TEXTURE:**

1. Place a golf ball size sample of soil from the soil surface sample in the palm of your hand Take a small amount of soil (about the size of a golf ball).
2. Moisten the soil with a few drops of water and squeeze it between your thumb and next finger.
3. Use the chart below or a soil texture key to determine the texture of your soil sample.
4. Repeat this for each soil sample depth and record on the Soil Sample Data Chart.
5. Why is the texture of the soil important?



**OTHER SOIL DATA:**

1. What other soil data can be tested and measured? Why would anyone want to know the information from each of these tests?