AFNR Natural Resources

# Soil Texture by Feel and Volume

**Materials:**

Differently textured soils
Soil texture by feel flow chart
Dry soil samples
Soil sifters with four levels (gravel, sand, silt, clay)
Graduated cylinders or gram scale
Soil Triangle
Bucket of water/cups

**Procedure:**

1. Begin with one soil sample
2. Follow the steps on the flow chart diagram.
3. Refer to teacher demonstration to determine if your soil makes a ribbon.
4. Record your findings in the data table on the following page.
5. Sift the dry sample through the soil sifter. Remove the top layer. Measure the volume of sand, then silt, then clay in your sample. Total the amounts then determine the percentage of each.
6. Record in the data table.
7. Use the soil texture triangle to determine the texture of the sample. Did it match your texture by feel determination?
8. Rotate around the room to different samples. Rinse hands in between. Write down your guesses on the soil texture for each sample
9. Share results

- Why does this matter?
- How would this affect natural resources matters?
- How can this information be used in the real world? Urban? Rural?

Data Table

| Soil | Texture by feel | Sand | Silt | Clay | Texture on triangle |
|---|---|---|---|---|---|
| Sample A | | g % | g % | g % | |
| Sample B | | g % | g % | g % | |
| Sample C | | g % | g % | g % | |
| Sample D | | g % | g % | g % | |

*Extensions*

Conduct simple experiments to determine which samples hold the most water, drain the best, etc.

Instead of providing soil samples, take the class on a field trip to gather soil samples and introduce them to the method of conducting a soil sample test in the field then bring back to the lab.