

OJT Training Module Cover Sheet

Title: How to... Determine Soil Texture in the USDA Soil Classification System

Type: Skill Knowledge

Performance Objective: Trainee will be able to...

- Be aware of the textural class definitions
- Estimate the soil texture class of the most common soils in the area by using a field method.

Target Proficiency:

- Awareness Understanding Perform w/ Supervision
 Apply Independently Proficiency, can teach others

Trainer Preparation:

Secure soil samples of known textures if possible. Dry, crushed samples are preferred. Have the textural triangle available. Provide a water bottle, hand towels, & a broad, dull knife or other tool for mixing the soil with water. Trainer must be proficient in estimating soil textures. Review the *Soil Survey Manual*, the *Field Book for Describing and Sampling Soils*, or other reference material. Obtain samples of sand, silt, and clay. A "Texture by Feel" flow chart is a beneficial guide for the trainee.

Special Requirements:

None

Prerequisite Modules:

None

Notes:

This activity may cause spills of soil or water. Dust is likely. Hands and fingers will become dirty and may also become rough and chapped.

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OJT Module Lesson

Title: How to Determine Soil Texture in the USDA Soil Classification System	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
1. Trainer and trainee should review the objectives and field procedure for determining soil texture.	Soil Survey Manual , chapter 3, pages 136-140 Field Book for Describing and Sampling Soils , pages 2-29 and 2-30
2. Discuss the physical characteristics of sand, silt, & clay.	Use a diagram of the relative size of the soil particles
3. Discuss the 12 particle size classes.	Soil Survey Manual , chapter 3, pages 137-140 Open the attachment: Textural Triangle.pdf. Review the Textural Triangle and the textural class definitions in the SSM.
4. Discuss the field method for determining soil texture.	Open the attachment: Texture by Feel.pdf.
Prepare samples for texturing.	Trainer shows trainee how to place 1-2 tablespoons of the soil sample in the palm of the hand, moisten & mix the sample to a putty-like consistency
Estimate the texture.	Trainer shows trainee how to use the "Texture by Feel" flowchart to estimate the soil texture class. <ul style="list-style-type: none"> • Attempt to form a ribbon. • Wetting a sample further, feel for grittiness.
Evaluate the results.	Compare the sample to known data (if available) or to trainer decision upon texturing to determine if the trainee has an understanding.
5. Select another sample and repeat the process.	Have trainee repeat with another sample as trainer observes. <ul style="list-style-type: none"> • Trainee should be able to correctly select the texture, or • Place the texture in an adjacent textural class horizontally or vertically within the "Texture by Feel" flowchart.

OJT Measurement of Learning

Provide two or more samples, either with data or known based on trainer experience.	Trainee provides texture for each sample without guidance from trainer. Permit use of the "Texture by Feel" flowchart.
Repetition	Repeat until satisfied that trainee knows what he or she is doing.
Repetition	If desired by trainee, attempt texturing samples without the flowchart.

Performance Report Form

Open attachment: Trainee Performance Report Form template.pdf.