OJT Training Module Cover Sheet

Title: 206 How to identify family classes

Type: X Skill □ Knowledge

Performance Objective: Trainee will be able to…

- Locate and recognize family differentiae in Soil Taxonomy for mineral soils.
- Locate and recognize family differentiae in Soil Taxonomy for organic soils (i.e., Histosols and Histels).

Target Proficiency:

□ Awareness □ Understanding □ Perform with supervision
X Apply independently □ Proficiency, can teach others

Trainer Preparation:

- Have available a hard copy and/or an ecopy of the current *Keys to Soil Taxonomy.*
- Access pedon descriptions and/or OSDs in sufficient numbers to provide a cross representation of the survey area and thus address the activities within Cycle Steps 2, 3, and 4. Include organic soils if they occur in your survey area.

Special Requirements:

Initiate an external learning request with a SF-182 in Aglearn for this activity. Instructions and a template are located on the training webpages for OJT modules.

Prerequisite Modules:

- 201 How to use *Soil Taxonomy* and the *Keys to Soil Taxonomy*
- 202 How to use *The Guy Smith Interviews: Rationale for Concepts in Soil Taxonomy*
- 203 How to identify diagnostic horizons and characteristics of the higher categories
- 204 How to identify soil orders
- 205 How to identify the control sections of soils in your survey area

Notes:

None

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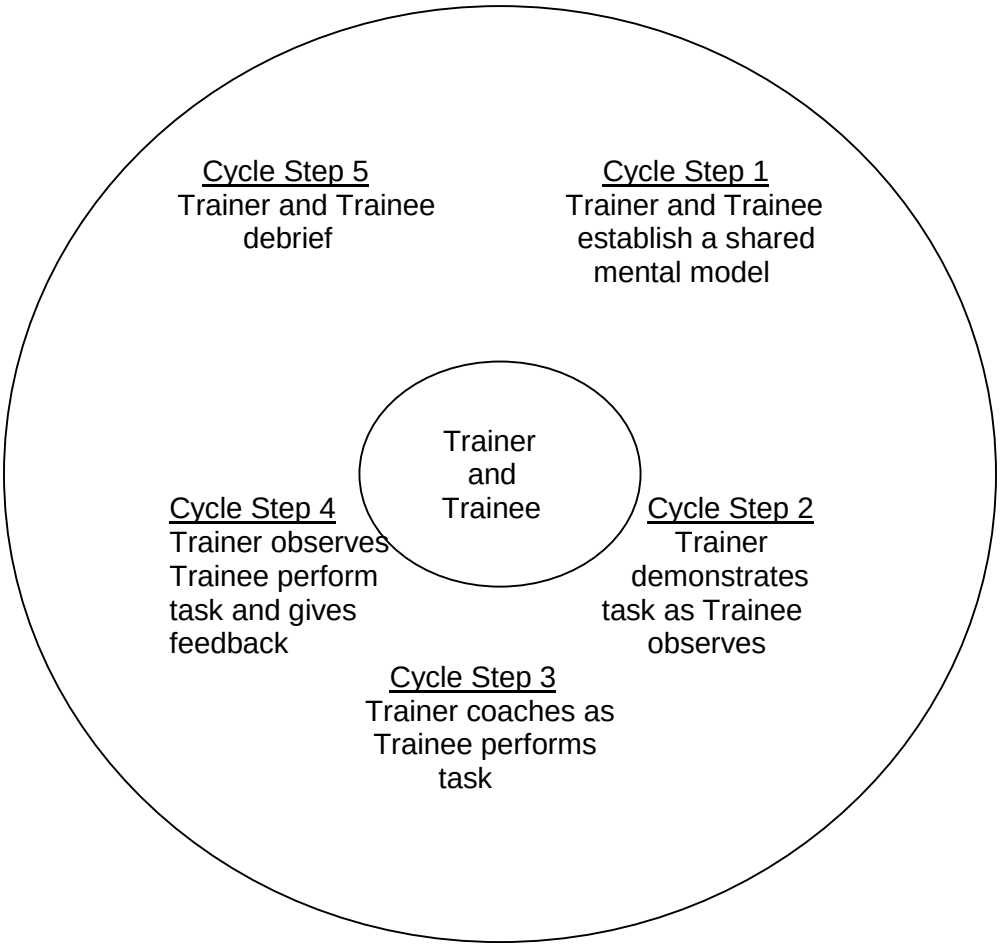
The Five-Step OJT Cycle for Procedural Training (Skill)



OJT Module Lesson

Title: **206 How to identify family classes**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Cycle Step 1	You and trainee review the objective and agree on the purpose of this module. Decide whether to use a hard copy and/or ecopy of the *Keys to Soil Taxonomy* (*Keys*)**.** Emphasize that the current *Keys to Soil Taxonomy* will be used since it amends and updates *Soil Taxonomy***.** Have the trainee review Chapter 17 ("Family and Series Differentiae and Names") in the *Keys*. Have the trainee focus on both: • Family Differentiae for Mineral Soils and Mineral Layers of Some Organic Soils • Family Differentiae for Histosols and Histels Explain that these family components are arranged in the sequence in which the components appear in the family names. Also locate on the internet the *Guide to Pronouncing Taxonomic Terms.* You and trainee should use this guide as needed during training related to Soil Taxonomy.
Cycle Step 2	Select a pedon for a <u>mineral soil</u> or use an official soil series description (OSD) for this step. Identify the epipedon, any diagnostic subsurface horizons, and any diagnostic characteristics for the trainee. Identify the family components of this soil for the trainee. Use the *Keys* to review the criteria or required characteristics of each family component with the trainee. Explain how you decided upon the classes for each family component. If there are <u>organic soils</u> in your survey area, select one, identify the kinds of materials, their thicknesses, and the tiers present. Then, using the

	Keys, review the family components and classes in the same manner as above with the trainee. Emphasize that the thicknesses of organic soil materials (control section of Histosols and Histels) are defined in Chapter 3 ("Horizons and Characteristics Diagnostic for the Higher Categories") in the *Keys*.
Cycle Step 3	Assign the trainee one or more pedons and/or OSDs. Have the trainee determine the appropriate family components and classes for each soil. Have the trainee look these up in the *Keys* and review the criteria with you. The trainee performs this step with supervision.
Cycle Step 4	Assign the trainee one or more pedons and/or OSDs. Have the trainee determine the appropriate family components and classes for each soil. Then have the trainee look in the *Keys* and review the criteria with you. The trainee performs this step without supervision.
Cycle Step 5	Debrief trainee and address any concerns.

OJT Module Lesson Measurement of Learning

Title: **206 How to identify family classes**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Identify family classes.	During the course of work on project activities, have the trainee determine family classes. Repeat until the trainee is proficient.
Quiz	Complete the quiz below.

SF-182

Trainee and/or supervisor access Aglearn to verify completion of the module via its SF-182.

Quiz

1. Particle size is the first component used in the family name of soils, including mineral soils and organic soils (Histosols and Histels) that classify in Terric subgroups.
    a. True
    b. False

2. Fine earth refers to particles _____ .
    a. < 2.0 mm in diameter
    b. ≤ 2.0 mm in diameter

3. Pararock fragments are generally included with the fine earth in particle-size classes.
    a. True
    b. False

4. A mineralogy class is assigned to all mineral soils.
    a. True
    b. False

5. Cation-exchange activity classes are components in the family name of all soils.
    a. True
    b. False

6. The terms “allic,” “calcareous,” “acid,” and “nonacid” are classes of the calcareous and reaction component of mineral soils, and only one is ever used in the same taxon.
    a. True
    b. False

7. The reaction classes “euic” and “dysic” are used with all families of Histosols.
    a. True
    b. False

8. Soil temperature classes are used in the family name of all soils.
    a. True
    b. False