

OJT Training Module Cover Sheet

Title: 1110 How the novice can use the *Illustrated Guide to Soil Taxonomy* to classify soils

Type: Skill Knowledge

Performance Objective: Trainees will be able to...

- Understand the general steps to follow when classifying a soil using the *Illustrated Guide to Soil Taxonomy* (IGST).
- Understand the sequential use of keys to classify soils, beginning with orders, then suborders, and finally great groups.
- Identify the major soil moisture and temperature regimes in their area.
- Use IGST to identify the major soil epipedons in their area from data and field observations.
- Use IGST to identify the major soil orders, suborders, and great groups in their area from data and field observations.

Target Proficiency:

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

Trainer Preparation:

- Be familiar with the assigned reading and review material in the lesson plan that follows.
- Note that this module does not target classifying soils as a goal but is intended to train someone how to use IGST to begin classifying soils.
- You must take IGST to the field with you.
- Adjust target proficiency as necessary to meet the trainee's needs. For example, is your trainee a student intern interested in learning how to classify soils or a soil conservationist who only wants to understand soil classification?
- If possible, select a number of sites representative of the soils in the trainee's area, preferably sites with existing descriptions and data that could be related to profiles observed. Otherwise, select sites common to the area. Consider asking the trainee for areas of interest.
- Since IGST classifies only to the great group level, do not examine data beyond what is needed for IGST classification. For example, base saturation data may be all that is needed to distinguish an Alfisol from an Ultisol.

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:

None

Notes:

- IGST was not designed for soil scientists. Soil scientists should use *Soil Taxonomy* and the *Keys to Taxonomy*.
- Consider dividing training into more than 1 day so that the trainee is not overwhelmed.
- Address the major areas of the trainee's area and avoid those parts of taxonomy that address soils not found locally.
- You can use existing soil monoliths to begin training but should consider field exercises for hands-on training.

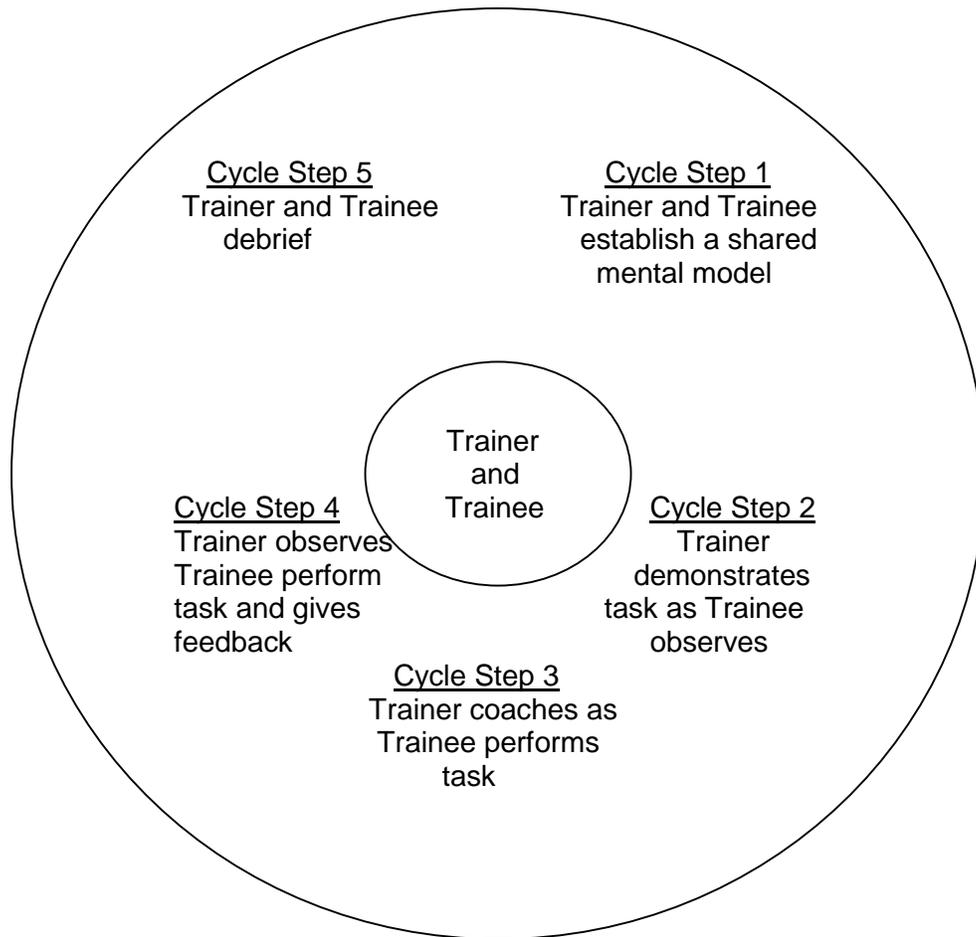
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The Five-Step OJT Cycle for Procedural Training (Skill)



OJT Module Lesson

Title: 1110 How the novice can classify soils using the <i>Illustrated Guide to Soil Taxonomy</i>	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Cycle Step 1	<p>You and trainee review the objectives of the module.</p> <p>Review the IGST Foreword and discuss the potential uses and limitations of the guide. Review Part 1—How to Use This Version of the Keys.</p> <p>Consider using the <i>Guide to Pronouncing Taxonomic Terms</i>, located online, during training.</p>
Cycle Step 2	Use IGST for determination of the following for each pedon. Trainee observes.
1. Where are you in the environment?	<ul style="list-style-type: none"> • Where are you in the United States according to the maps provided in the guide? • What is the landscape you are observing and how does it influence soil formation? • What is the landform you are observing and how does it influence soil formation? • What is the surface morphology and how does it affect soil formation? • What is the temperature regime for the area and how does it affect soil formation and classification?
2. Describe the soil profile.	<ul style="list-style-type: none"> • Use standard horizon nomenclature. • Discuss how horizon nomenclature is significant when classifying the soil using IGST.
3. Determine which diagnostic horizons and characteristics are present.	<ul style="list-style-type: none"> • Determine which epipedon is observed. • Determine what other diagnostic subsurface horizons and characteristics are present.
4. What is the moisture regime?	<ul style="list-style-type: none"> • During your initial observation of the whole pedon, determine the moisture regime and how it affects soil formation and classification.
5. Determine the classification.	<p>Use the IGST Key to Soil Orders to determine the order for the pedon observed.</p> <ul style="list-style-type: none"> • Use existing data if available. • Review the general characteristics of the order. • Review the environment and processes related to the order.

	<ul style="list-style-type: none"> • Where does the order generally occur in the world and the United States, according to the guide?
	<p>Use the IGST Key to Suborders for the order selected to determine the suborder.</p> <ul style="list-style-type: none"> • What observed characteristics influenced your decision during the keying process? • How does the guide describe this suborder?
	<p>Use the IGST Key to Great Groups for the suborder selected to determine the great group.</p> <ul style="list-style-type: none"> • What observed characteristics influenced your decision during the keying process? • How does the guide describe the great group?
6. Soil profiles	Does the soil pedon observed in the field relate to any soil profile images of the order, suborder, or great group in the guide?
7. Land management	Describe, based on what you now know, how this soil could influence future land management decisions.
Cycle Step 3	Have trainee complete all procedures demonstrated. Coach trainee on one or more pedons. Provide coaching according to the needs of the trainee, such as after each demonstration, one step at a time, etc.
Cycle Step 4	If possible, have trainee complete all procedures without coaching.
Cycle Step 5	Answer any questions or concerns. Provide feedback as needed.

OJT Module Lesson Measurement of Learning

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WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Classify a soil during field observation.	Select a soil common to the area and have the trainee use IGST to: <ul style="list-style-type: none">• Describe the environment at regional and local levels.• Describe the soil to the best of their ability.• Classify the soil to the great group level to the best of their ability.

SF-182

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