

## OJT Training Module Cover Sheet

**Title: 009 How to plan traversing in your soil survey area based on scale and order of soil survey.**

**Type:**      Skill      Knowledge

**Performance Objectives**                     : Trainee will be able to:

- Determine whether traversing is “primary” or “secondary” in their survey area, depending on order of soil survey.
- Plan traverses using photo interpretation and knowledge of local geology, geomorphology, plant communities, topography, soil catenas, and landscape models.
- Identify safety and access issues of concern in traversing the survey area.

**Target Proficiency:**

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

**Trainer Preparation:**

- Trainer should be familiar with the assigned reading/review material in the lesson plan that follows.
- Access to the survey's “Descriptive Legend” and aerial photos or images

**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:**

- 003 Understand the concepts of landscape models and soil catenas.
- 004 Understand soil variability within landscape continuum in your soil survey area.
- 005 How to differentiate between scale and orders of mapping in soil survey.
- 010 How to design a map unit.
- 011 How to recognize and use soil components.
- 012 How to recognize and distinguish map units.

**Notes:**

None

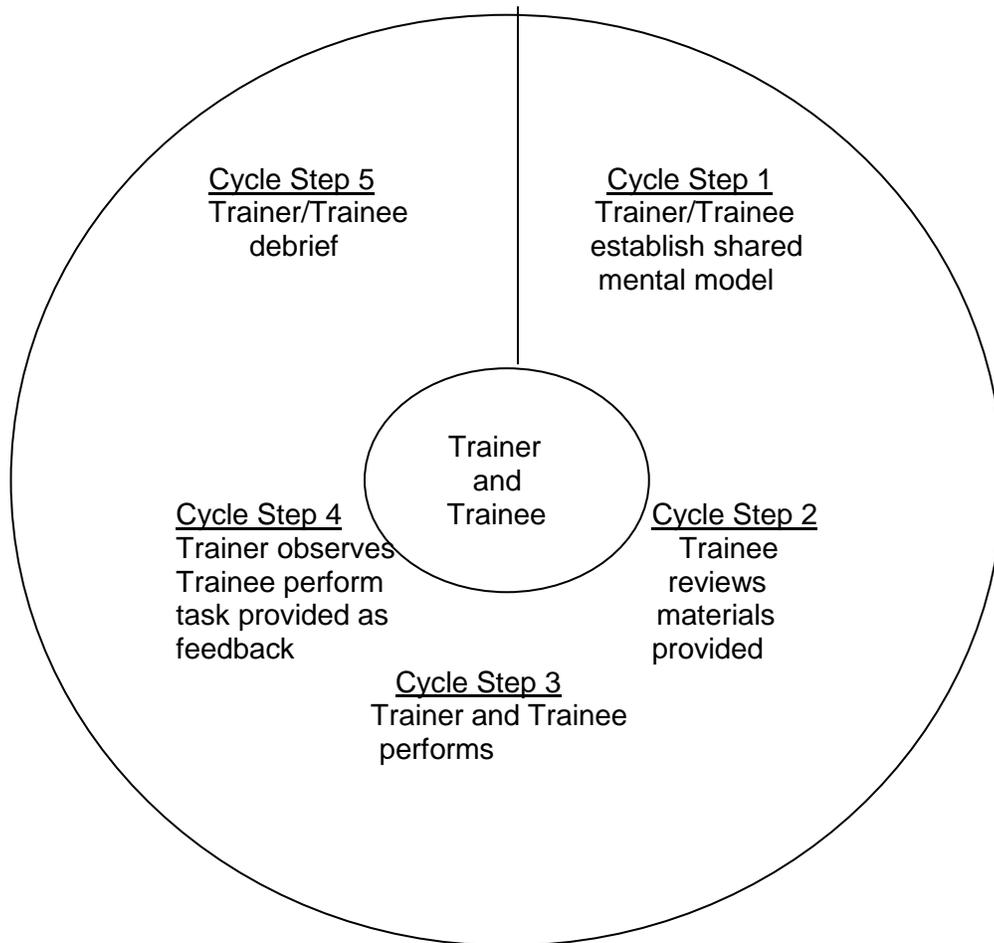
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# The Five-Step OJT Cycle for Declarative Training (Knowledge)



## OJT Module Lesson

Title: <b>009 How to plan traversing in your soil survey area based on scale and order of soil survey.</b>	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Cycle step 1	Trainer and trainee establish shared mental model for this module by:
1. Review objectives of the module.	Trainee reads through the objectives on the cover sheet. Trainee discusses objectives with the trainer to make sure that both are in agreement as to requirements and timeline.
2. Review prerequisites.	Trainee should review prerequisite modules. The information gained will define the terms used in this module, show how soils are related, and provide guidance on classification and documentation.
3. Complete reading assignment.	Trainee should access via the internet and read/review the following: <ul style="list-style-type: none"> <li>• <b>Soil Survey Manual</b>, Chapter 4, Field Operations</li> <li>• <b>NSSH 627</b>, Exhibit 627- 8</li> </ul>
Cycle step 2	
1. Study survey area's descriptive legend and soil key (Conceptual Array).	Trainee should review the descriptive legend to be able to discuss what kind of soils have been mapped and identified in the survey area and how they are related geologically and geomorphologically to each other.
2. Study available general soil, geologic, and topographic map information.	Review of this material will alert the trainee about what soils to expect and what unusual situations to be aware of (geology, aspect, hydrology, and vegetation) and will provide some guidance for laying out a traverse.
3. Study available cultural maps or other information about the area.	Information gathered here will alert the trainee to the presence of buried cables or pipelines, landfills, historic sites, cemeteries, mines, roads, trails, caves, past military activity areas, and areas of past fires.
4. Discuss affects of soil order and scale of map on planning traverses, and emphasize the scale and order in your survey area.	Via the internet, revisit Table 2-1, Chapter 2, Soil Survey Manual. <ul style="list-style-type: none"> <li>• How do these affect traverse spacing in your survey area?</li> <li>• How do these affect intensity of planned observations in your survey area?</li> </ul>

	<ul style="list-style-type: none"> <li>• Will you visit all, most or none of the delineations in your survey area based on your order of survey?</li> </ul>
<p>5. Safety and access considerations:</p> <p>Traversing soil on public and private lands can present situations which can cause potential embarrassment, liability, or injury and can even be life threatening.</p> <p>Consider meeting with Range Safety Officer, Fire Safety Officer, State Police, or State Historic Preservation Officer if necessary.</p>	<ul style="list-style-type: none"> <li>• Obtain permission from landowner (private land) before conducting traverse.</li> <li>• If unable to reach landowner directly, use advance mailings, door hangers, or other means used in your survey area.</li> <li>• Become aware of poisonous plants, insects, reptiles, and dangerous animals or conditions that may exist in the area of the traverse. See OJT module specific to this.</li> <li>• Traversing on military land for the purpose of soil survey may require that the trainee have UXO (unexploded ordinance) training.</li> <li>• Traversing National Park land or other areas known to contain historic artifacts may require Cultural Resources training.</li> <li>• Traversing forested land or grasslands that may be subject to wildfire may require training in recognizing dangerous conditions, planning escape routes, and basic survival.</li> <li>• Traversing desert areas requires training in desert survival skills.</li> <li>• Another hazard that has recently become almost epidemic is meth labs, which are springing up in once tranquil rural areas. State Police offer training in recognizing meth lab paraphernalia and identifying meth users by their paranoid behaviors.</li> <li>• Last but not least, use an In-Out whiteboard or other means to let others know where you are going and when you'll be back. Do not rely solely on cell phones. See OJT module specific to this.</li> </ul>
<p>Cycle step 3</p>	
<p>1. Trainer and trainee work together in planning one or two traverses.</p>	<p>An experienced trainer can impart immeasurable bits of information on how to successfully plan and conduct a traverse in the survey area. By having to think and explain all of the necessary steps taken in the planning process, the trainer learns or re-learns as well.</p> <p>They should use changes in photographic tone, hydrological features, changes in slope (identified using a stereoscope, topo map or other tool), and changes in remotely sensed imagery to make an</p>

	<p>initial determination of what needs to be examined or observed. Once those points are identified, the trainee should plot a course to ensure that those sites are visited.</p> <p>Areas with relief will often be crossed perpendicular to the pattern with the shortest path possible. Areas without relief usually focus only on the shortest path only.</p> <p>The trainee needs to keep in mind that they should be looking primarily at the “plain and ordinary” but that the “out-of-the-ordinary” is to be examined as well.</p> <p>Note to the trainee that the actual traverse is often updated when in progress, depending upon what is being observed in the field.</p>
<p>2. Trainer and trainee should discuss what size area could be included in daily traverses for the order of survey in your area. Size is usually dependant on the order of soil survey, the complexity of the landscape, and the ability of the trainee.</p>	<p>The purpose is to give the trainee an idea of how much ground he or she could cover. If a person is working alone, a traverse should have the same beginning and ending points so as to maximize observations to distance walked. See <a href="#">attachment 1</a> below for example of traverse pattern. Realize that patterns will change daily, so there is no set pattern. It’s all about efficiency.</p>
<p>Cycle step 4</p>	<p>Trainee uses what has been learned to plot one or more traverses.</p>
<p>Cycle step 5</p>	<p>Trainer provides feedback to trainee upon completion of the Step 4 assignment. Trainer debriefs trainee on the subject matter—what has been learned and how it will be used.</p>

## OJT Module Lesson Measurement of Learning

Title: **009 How to plan traversing in your soil survey area based on scale and order of soil survey.**

WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Over the next week, have trainee plan several traverses for planned activities.	Upon completion of the activity, question the trainee to determine if the traverse was used as planned and how much on-the-go modification was done. Determine if all necessary data for the traversed area were gathered or if there is need for more. <ul style="list-style-type: none"><li>• Got all you need without much modification = success.</li><li>• Needed to modify traverse extensively or need to return to area = look at planning process again to minimize the need for modification.</li></ul>

### **SF-182**

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

## Attachment #1

Basic traverse varies in size and shape, depending on complexity and skill.  
Order 2: ~ 40 acres with many observations in each case for a trainee. As experienced is gained, there are fewer observations and more widely spaced traverses.

