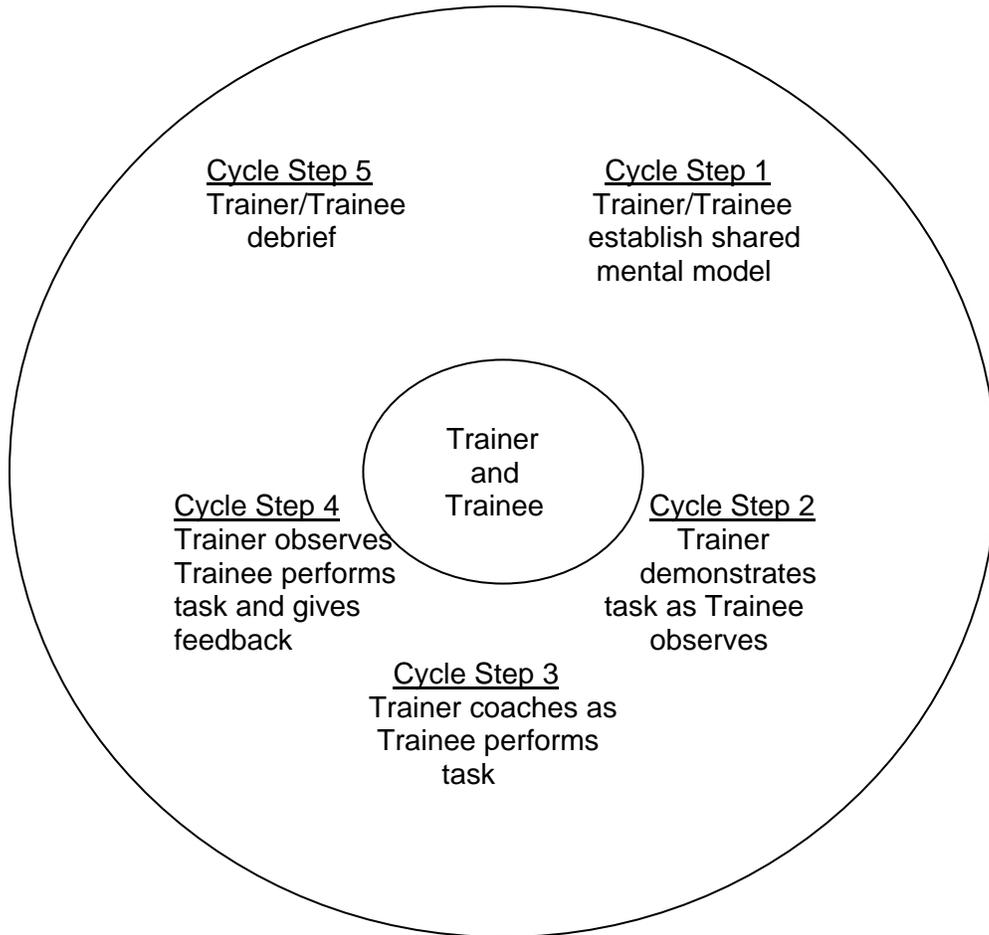


## OJT Training Module Cover Sheet

<b>Title:</b> 303 Transect - How to plan for transect data.
<b>Type:</b> <input checked="" type="checkbox"/> Skill <input checked="" type="checkbox"/> Knowledge
<b>Performance Objective:</b> Trainee will be able to ... <ul style="list-style-type: none"><li>• Understand the process of planning transects based on National Cooperative Soil Survey guidelines.</li><li>• Select map unit polygons appropriately to meet National Cooperative Soil Survey guidelines for science based documentation.</li></ul>
<b>Target Proficiency:</b> <input type="checkbox"/> Awareness <input type="checkbox"/> Understanding <input type="checkbox"/> Perform w/ Supervision <input checked="" type="checkbox"/> Apply Independently <input type="checkbox"/> Proficiency, can teach others
<b>Trainer Preparation:</b> Trainer should be familiar with the assigned reading/review material in the lesson plan that follows.
<b>Special Requirements:</b> 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.
<b>Prerequisite Modules:</b> Should be done in conjunction with the module <i>304 Transect - How to collect transect data</i>
<b>Notes:</b> Such items as selecting points, point intervals, and transect orientation will be covered in the module <i>304 Transects - How to collect transect data</i> .
<b>Authors:</b> Christopher C. Cochran Marc Crouch
<b>Approved by:</b> Shawn McVey

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



## OJT Module Lesson

Title: 303 Transects - How to plan for transect data.	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Cycle step 1	<p>Trainee should access via the internet and read <a href="#">NSSH 627.08 Documentation</a> and <a href="#">Exhibit 627-8</a></p> <p>Trainee should access via the internet and review <a href="#">SSM Chapter 2, Orders of Soil Survey and Table 2-1</a>.</p> <p>Optional: Trainee is ArcGIS savvy.</p> <p>Unless otherwise stated, this module will assume activities are built around updating of map unit information. Indicate that in most cases transects will be done within polygons of the project map unit. Point out that in some cases transects may be used for other purposes, such as quantifying a single soil property or quality (for example, epipedon thickness) across a landscape or landform accounting for multiple map units.</p>
Cycle step 2 – Order 2	<p>If the trainee will be working in an Order 2 soil survey, use this option. Select a map unit in your survey area that does not have all the documentation needed and do the following:</p>
<p>1. Review what amount of transect data is needed and how many polygons will be needed to accomplish the goal.</p>	<p>Review with the trainee what, if any, transect data are already available from the original survey activities for this map unit. Discuss how you decide how many more transects to complete and what influences your decisions, such as:</p> <ul style="list-style-type: none"> <li>• Typical land use of the map unit (and how important it is).</li> <li>• Complexity of the map unit.</li> <li>• Is it a mystery or pretty straight forward?</li> <li>• Access issues.</li> <li>• Other influences you may have.</li> </ul> <p>Also discuss the number of transects versus the number of points. Review the documentation standards for verifying map units, noting that the number of number of points is crucial. Discuss how you decide if 10-point transects or 5-point transects are preferable based on the need for adequate spatial coverage. Discuss what may influence your decision:</p> <ul style="list-style-type: none"> <li>• Map unit extends or does not extend across multiple previous survey areas mapped during different times in history.</li> </ul>

	<ul style="list-style-type: none"> <li>• Mapped by a single individual or multiple individuals.</li> <li>• Complex or simple landscape/landform.</li> <li>• Other influences you may have.</li> </ul>
<p>2. Demonstrate how to select polygons for transecting.</p>	<p>This module assumes use of ArcGIS to locate all polygons of the selected map unit. Demonstrate this to the trainee.</p> <p>This module assumes a random but stratified method of selecting the number of polygons designated in order to:</p> <ul style="list-style-type: none"> <li>• Acknowledge that every polygon is a member of that map unit (family).</li> <li>• Cover any anticipated variability (based on era, number of previous mappers, landform, etc). Show the trainee how this is done in your survey area.</li> <li>• Satisfy the need for science-based data through appropriate use of statistics to analyze our data, which requires as little bias in selection as possible.</li> </ul> <p>Discuss selecting extra polygons in case access permission is an issue with the polygons selected. Discuss how this selection is done in your survey area. For addressing access to the land issues, see module 016-<i>How to present soil survey program benefits to landowners to gain access permission in your soil survey area.</i></p>
<p>3. Review alternatives to transects to verify map unit data.</p>	<p>Two methods are promoted here:</p> <ol style="list-style-type: none"> <li>1. Random stratified</li> <li>2. Grid</li> </ol> <p>Point out that both of these have pros and cons, the major being:</p> <ul style="list-style-type: none"> <li>• Pro—both will capture variability better for some map units.</li> <li>• Con—both are more time consuming.</li> </ul> <p>Review a couple of map unit projects in your survey area that would benefit from one or the other of these methods if time permitted.</p>
<p>Cycle step 2 – Order 3</p>	<p>If the trainee will be working in an Order 3 soil survey, use this option. Do the following:</p>
<p>1. Review amount of data needed.</p>	<p>Point out that the level of data needed for Order 3 is extensive, not intensive (as in Order 2). Show how you determine the amount of transect data you</p>

	typically gather in Order 3 surveys and what influences your decision.
2. Demonstrate selection of polygon and the area within the polygon for transecting.	Show trainee how you do this in your survey area during the premapping process. Discuss how you try to select areas that will be representative of the map unit. Discuss influences that make this different than in an Order 2 survey area, such as: <ul style="list-style-type: none"> <li>You will not have time to return to area.</li> <li>Access is an issue in the area.</li> <li>Other issues may be reasons for selecting areas for transecting.</li> </ul>
Cycle step 3	Select another map unit in need of documentation in your survey area. Coaching the trainee, have the trainee plan for the gathering of transect data.
Cycle step 4	Repeat cycle step 3 without coaching.  During project activities, assign the trainee the task of planning for the gathering of transect data.
Cycle step 5	Answer any questions. Repeat any steps as necessary.

## OJT Module Lesson Measurement of Learning

Title: **303 Transects - How to plan for transect data.**

WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Plan for the gathering of transect data routinely during project activities.	During project activities, assign this task to the trainee. Sign off on performance when target proficiency is achieved.

### SF-182

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