OJT Training Module Cover Sheet

Title: 021 How to complete premapping in your soil survey area using digital data resources.

Type: **X** Skill □ Knowledge

Performance Objective: Trainee will be able to…

- Complete a premap for use in mapping using available digital resources

Target Proficiency:

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

Trainer Preparation:

- Pull together the following kinds of material available in your survey area:
  - Imagery
  - CIR
  - DRGs and/or DEMs
  - Climatic data
  - Vegetative data
  - Geology
  - Other
- Refresh knowledge of how to interpret climatic, vegetative, geology, and other resources

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.
- Knowledge of ArcGIS basics

Prerequisite Modules:

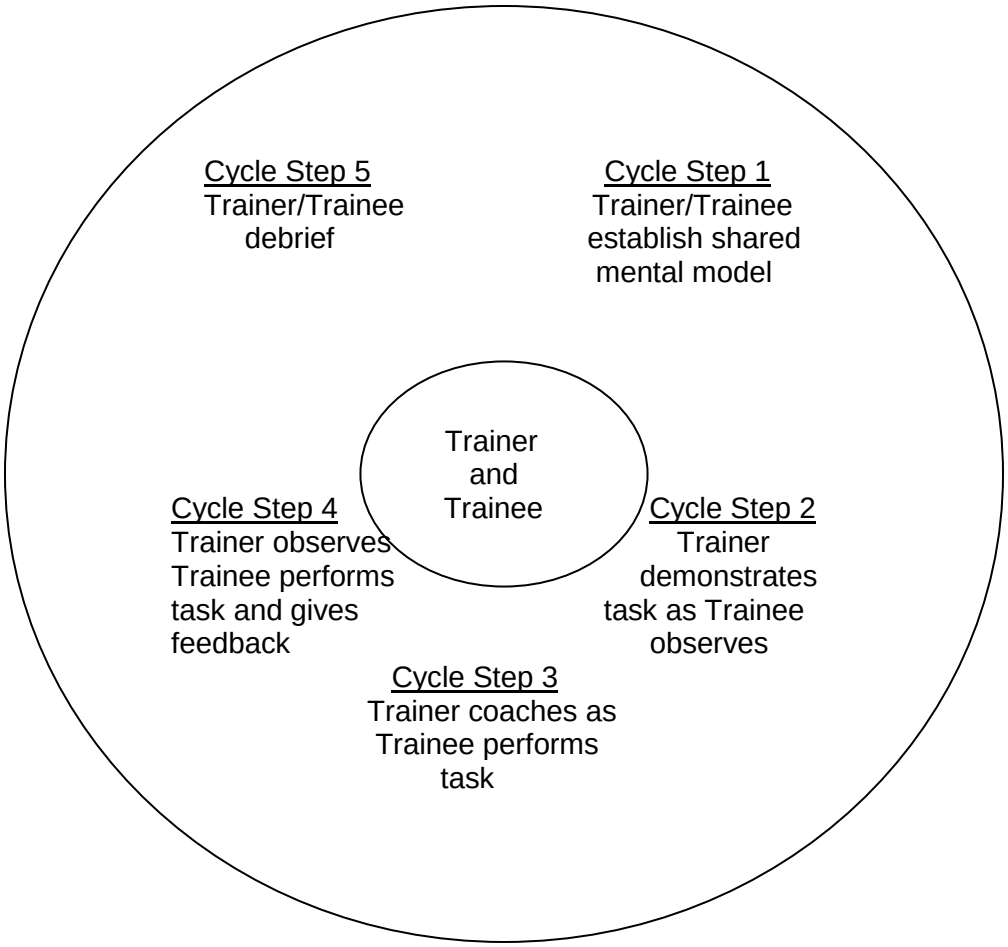
- 018 How to use a topographic map in your soil survey area.
- 019 How to interpret photo images in your soil survey area.
- 020 How to complete premapping in your soil survey area using hardcopy resources, with or without a stereoscope.

Notes:
None

Authors:
Marc Crouch

Approved by:
Shawn McVey

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



OJT Module Lesson

Title: **021 How to complete pre-mapping in your soil survey area using digital data resources.**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Cycle step 1	Trainer and trainee review objectives of module.
Cycle step 2	Trainer shows trainee the following:
1. Identify the base imagery, scale of map, and order of survey to be used for the exercise.	Trainer shows the base imagery. Discuss how scale of map and order of survey and designated smallest delineation will affect the premap process in your survey area.
2. Identify the digital resources available in your survey area.	Resources will vary from MLRA to MLRA and even within an MLRA. Trainer shows what is available in the survey area for this exercise.
3. Decide which resource should be utilized first in the survey area.	The trainer should decide on the basis of personal preference or resources available. The decision may be based on whether the resource has a large or small influence on mapping. For example, climatic data or vegetative data indicating climatic changes (mesic to frigid, for example) may have no affect or only provide one line through the survey area. CIR and topography may provide data for mapping down to the minimum size delineation. The trainer should discuss how each resource is to be used in the survey area. o CIR o DRGs o DEMs o Climatic data o Vegetative data o Geology o Other **Trainer can then adjust the following sub steps to the preferred sequence to be followed in the survey area.**
4. Recognize parent material changes using available geology maps and geomorphic information.	Trainer shows how this information can be transferred from the geology layer. Take this opportunity to discuss how soil map unit components represent geological units and/or combinations of units in the survey area. Use geomorphic information to recognize landscapes and landforms appropriately.

5. Recognize relief using DRGs and/or DEMs.	If DEMs are available, show the options for developing relief maps (contours, slope shape, slope aspect, percent slope, etc.) whether they work in your survey area or not. Discuss the pros and cons of each in the survey area. If DEMs are not available, show how DRG data can be used. Trainer should make the trainee aware of the contour interval of the elevation data used and how the interval may affect use in premapping. The trainer should use the data to refine or substantiate geologic features and the landscapes and landforms associated with them if done initially.
6. Recognize parent material changes using available geology maps.	Trainer shows how this information can be transferred from the geology layer. Take this opportunity to discuss how soil map unit components represent geological units and/or combinations of units in the survey area.
7. Utilize other resources to show where changes will occur.	Using other resources available in the survey area, trainer shows how to add or adjust previous lines as appropriate.
8. Add map unit symbols as appropriate.	Trainer shows how, with experience, map units can be assigned to polygons of the premap. The trainer should note that there are cases where it may not be possible to assign a mp unit to a polygon and that these areas would be targets for ground truthing, whereas areas with predicted map units will be traversed to verify predictions. **If a soils key is available for the MLRA, it could be used during this step.**
Cycle step 3	Trainer assigns an appropriately sized area and observes the trainee completing a premap at the scale and order of mapping in the survey area. Repeat by providing another area if the trainee needs repetition. If the trainee has grasped the process, move on to Cycle Step 4.
Cycle step 4	Trainer should select two or more areas of an appropriate size that provide an opportunity to use different sets of the available resources in the survey area. Have the trainee complete this step without observation by the trainer.

	Assess progress. Repeat Cycle Step 3 if necessary.
Cycle step 5	Trainer can debrief trainee and address any concerns.

OJT Module Lesson Measurement of Learning

Title: **021 How to complete pre-mapping in your soil survey area using digital data resources.**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Complete premaps using this digital method.	Complete premaps for several 500+-acre areas assigned to the trainee for mapping utilizing digital resources. See training plan for new employees.

SF-182

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