OJT Training Module Cover Sheet

Title: 811 How to create and display EMI data in ArcGIS.

Type: **X** Skill □ Knowledge

Performance Objective: Trainee will be able to:

- Outline the steps needed to create and display EMI survey data in ArcGIS.
- Describe the function of ArcGIS tools used to develop an interpretive EMI map.
- Create an interpretive map within ArcGIS from imported EMI data.

Target Proficiency:

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

Trainer Preparation:

- Trainer should be familiar with the assigned reading/review material in the lesson plan that follows.
- Must be proficient with ArcGIS and EMI.

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:
None

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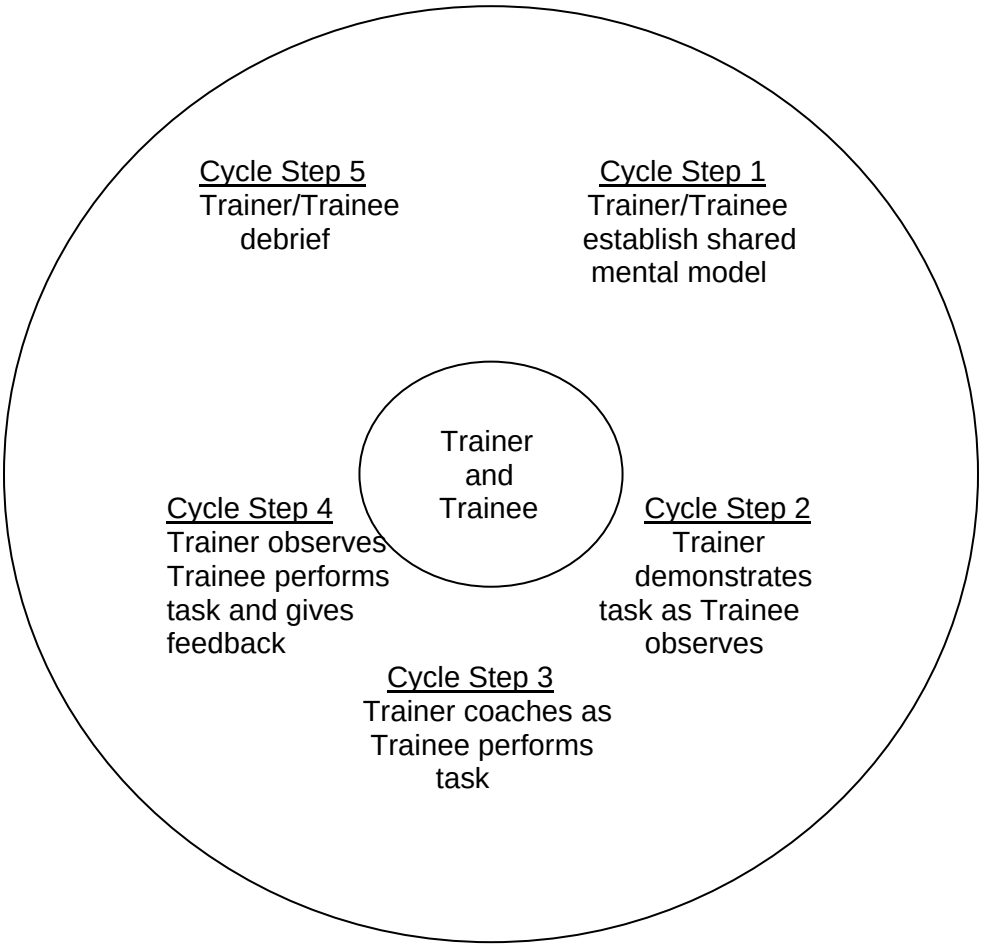
The Five-Step OJT Cycle for Procedural Training (Skill)



OJT Module Lesson

Title: **811 How to create and display EMI data in ArcGIS.**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Cycle step 1	Trainer and trainee review objectives of module. Trainer and trainee access via the internet [Soils Home/Soil Education/NCSS Members/Job Aids/Investigations] and read/review: • EM38 Meter Cookbook.pdf o **Example Procedure for Creating and Displaying EMI Survey Data in ArcGIS** Trainer leads discussion as follows: • Discuss basic import of data and conversion to a shapefile. • File formats that can be imported into ArcGIS. • The geodatabase that is created to work with EMI survey data. • Discuss interpretive techniques. • Interpretive tools that are used in ArcGIS to fill in the gaps. • Some of the differences in how these tools handle the data. • Information based on vector, not raster data. • Common “classes” to apply to EMI survey data for your survey work area.
Cycle step 2	Trainer demonstrates importing an EMI survey into ArcGIS and creating an interpretive map.
Cycle step 3	Have the trainee import an EMI survey into ArcGIS and create an interpretive map. Trainer provides coaching as appropriate.
Cycle step 4	Have the trainee import an EMI survey into ArcGIS and create an interpretive map without coaching. Trainer provides feedback as appropriate.
Cycle step 5	Trainer can debrief trainee and address any concerns.

OJT Module Lesson Measurement of Learning

Title: **811 How to create and display EMI data in ArcGIS.**	
WHAT	**WHY, WHEN, WHERE, HOW, SAFETY, QUALITY**
Trainee's learning is measured.	Have the trainee complete the attached quiz to reinforce the concepts in this module.
Apply knowledge gained to work.	The trainee can import EMI data into ArcGIS and display the data in an interpretive way commonly used in the work area.

SF-182

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

Quiz

1. Which 3 file types are desired for import into ArcGIS from an EMI survey?

   A) Excel file (*.xlsx).
   B) Comma delimited text file (*.csv).
   C) Map Document file (*.mxd).
   D) Tab delimited text file (*.txt).

2. True or False? Both Kriging and Inverse Distance Weighting (IDW) are commonly used interpolation methods for GIS.

3. True or False? Interpolated data can exceed the boundaries of the sample range.

4. What command/technique could be used to avoid extrapolation of data beyond the actual EMI survey area?

   A) Extract by Mask.
   B) Effects.
   C) Select.
   D) Sketch.

5. What feature type or geometry is specified when importing the EMI coordinate data into ArcGIS?

   A) File Geodatabase.
   B) Points.
   C) Tracks.