

OJT Training Module Cover Sheet

Title: 1011 Understand human alteration of soil quality and soil health in your area—overview.

Type: Skill Knowledge

Performance Objective: Trainee will be able to...

- Understand the effect of human use and management on soil quality and soil health.

Target Proficiency:

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

Trainer Preparation:

- Determine the major causes of soil alteration in your area.
- Determine the processes involved.
- Determine the extent and rate of alteration.
- Determine the effects on soil quality and health.
- If feasible, Contact a local agency (planning commission for example) that monitors and or handles permits for soil alteration for purpose of asking them about local activities that could be added to discussion

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.
- Trainer must be aware of the extent of urbanization, mineral mining, borrow pits, and other kinds of soil alteration occurring in his or her area.

Prerequisite Modules:

None

Notes:

None

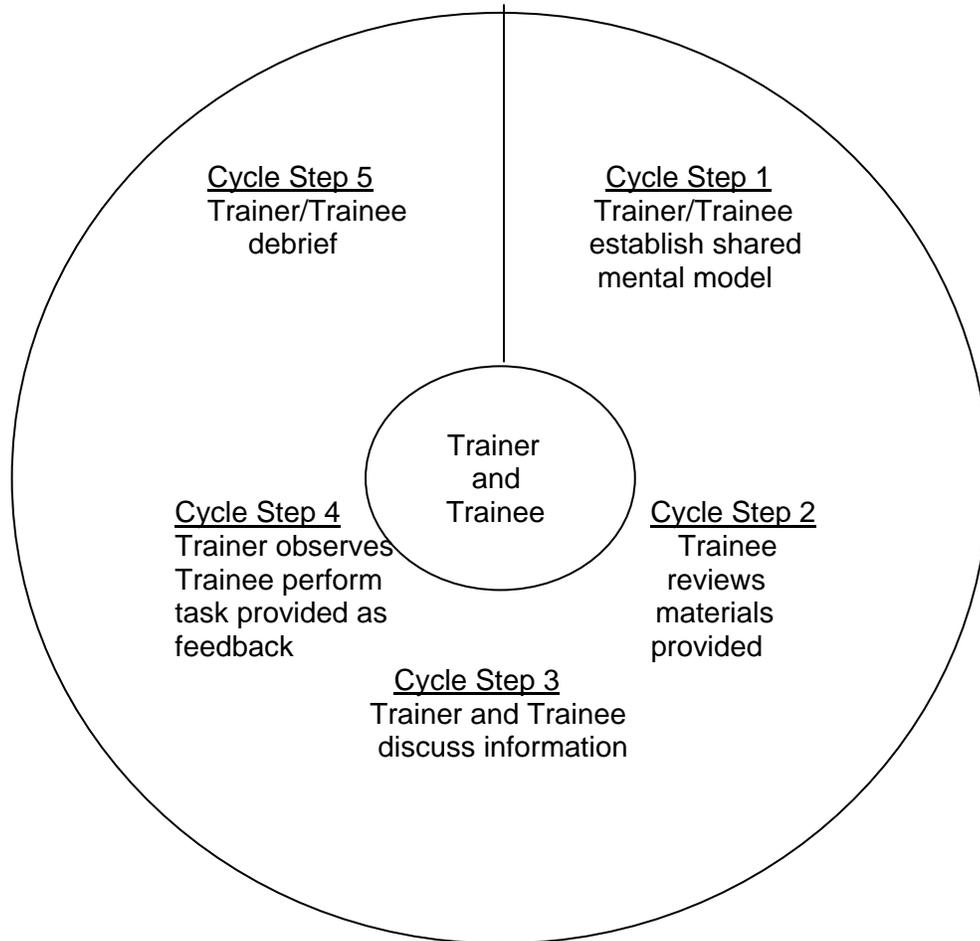
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The Five-Step OJT Cycle for Declarative Training (Knowledge)



OJT Module Lesson

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| WHAT | WHY, WHEN, WHERE, HOW, SAFETY, QUALITY |
|--|---|
| Cycle step 1 | <p>Trainer and trainee review objectives of module.</p> <p>Trainer points out who or what causes major soil alterations in the work area and the effects of these on soil quality and health.</p> |
| Cycle step 2 | <p>Trainer and trainee access via the internet and read/review information sheets on soil quality and health, paying particular attention to:</p> <ul style="list-style-type: none"> • Note 8: Soil Quality Information Sheets: <ul style="list-style-type: none"> • Soil Quality Introduction <ul style="list-style-type: none"> ○ Resource Concerns: <ul style="list-style-type: none"> ▪ Compaction ▪ Erosion ▪ Sediment deposition on cropland ▪ Pesticides ▪ Salinization |
| Cycle step 3 | Trainer asks trainee to: |
| <p>1. Identify activities that cause major soil alterations.</p> | <p>Discuss some dominant alteration activities common to the work area that are known to impact soil quality.</p> <p>Be sure to include more than one land use in the discussion (cropland, rangeland, urban development, etc.).</p> |
| <p>2. Identify the effects on soil quality and health.</p> | <p>Discuss the soil properties that are degraded by these activities.</p> |
| <p>3. Presentation summary.</p> | <p>Trainer and trainee review the ideas, concepts, and applicable technical notes and discuss the best way to organize and present this information to others.</p> |
| Cycle step 4 | <p>Trainer has trainee describe alteration activities and soil quality and health issues previously discussed in Step 3 to ensure understanding.</p> |
| Cycle step 5 | <p>Trainer can debrief trainee and address any concerns.</p> |

OJT Module Lesson Measurement of Learning

| Title: 1011 Understand human alteration of soil quality and soil health in your area—overview . | |
|--|---|
| WHAT | WHY, WHEN, WHERE, HOW, SAFETY, QUALITY |
| Trainee's learning is measured. | Have the trainee complete the attached quiz below to reinforce the concepts in this module. |
| Apply knowledge gained to field work. | The trainee can name use and management activities that impact soil quality and describe the associated positive and negative effects on soil quality and health. |

SF-182

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

Quiz

1. True or False? Soil quality is the capacity of a soil to function.
2. True or False? Soil compaction in agricultural areas is caused by tilling, harvesting, or grazing when the soils are dry.
3. True or False? Addition of compost, woodchips, or municipal sludge can improve soil structure, helping to control compaction.
4. True or False? The capacity of the soil to filter, buffer, degrade, immobilize, and detoxify pesticides is an aspect of soil quality.
5. True or False? Although erosion on construction sites often affects only a relatively small acreage of land in a watershed, it is a major source of sediment because the potential for erosion is commonly 100 times greater on highly disturbed land than on agricultural land.
6. Deposition of soil at field boundaries is a visual indication of soil erosion. Which of the following describe how soil quality is affected?
 - A) Coarse-grained soil particles deposited on silt loams improve soil quality.
 - B) Fine-grained soil particles deposited on sandy soils improve soil quality.
 - C) Through incremental deposition over many years, eroded material becomes incorporated into the surface layer and improves soil quality with the accumulation of organic matter.
 - D) All of the above.
 - E) B and C above.