

OJT Training Module Cover Sheet

TITLE: 1001 Understand the basics of soil interpretation ratings.

Type: Skill Knowledge

Performance Objective: Trainee will be able to:

- Understand the basic concept of fuzzy logic (numerical ratings) as it relates to soil properties.
- Understand the basic reasoning for providing numerical rating values.
- Define and list the typical limitation rating class names.
- Define and list the typical suitability rating class names.

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.
- Pull together examples of reports from the Soil Data Mart (SDM) to illustrate various soil interpretation ratings.

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

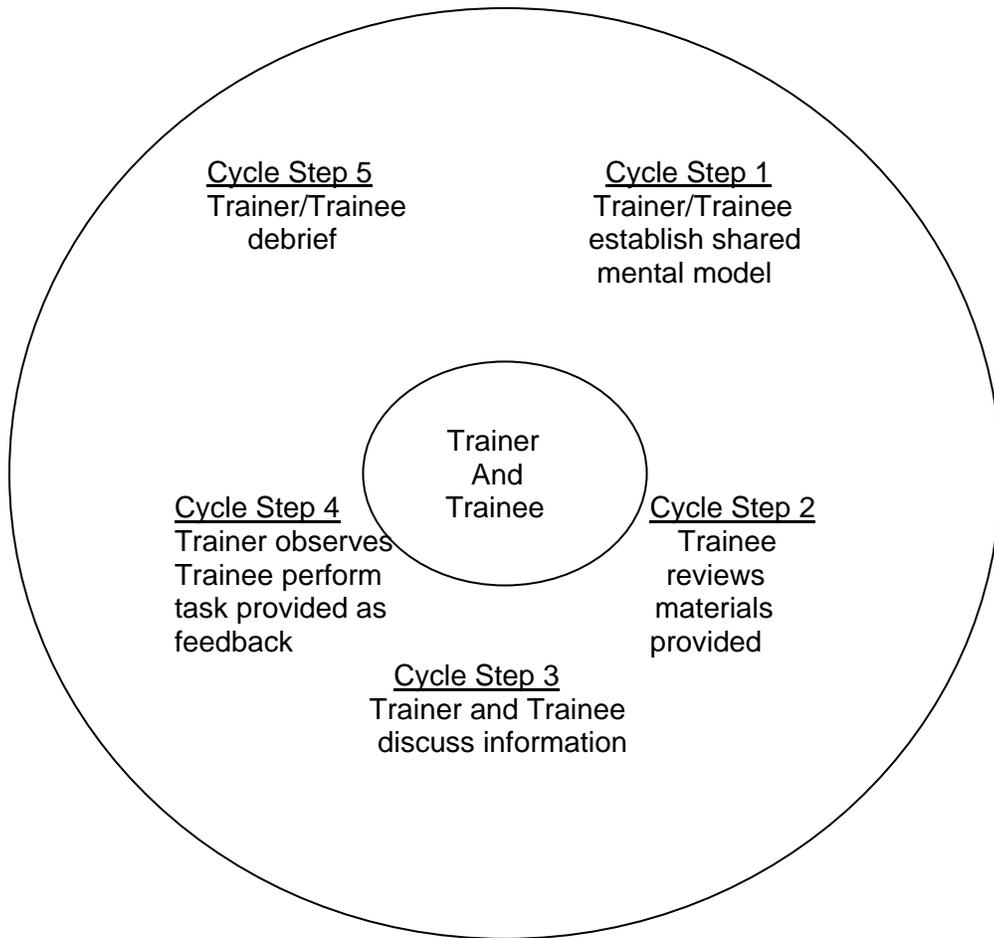
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The Five Step OJT Cycle for Declarative Training (Knowledge)



OJT Module Lesson

Title: 1001 Understand the basics of soil interpretation ratings.	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Cycle step 1	Trainer and trainee review module objectives and procedures
Cycle step 2	Trainer and trainee access via the internet and read/review: <ul style="list-style-type: none"> • Soil Survey Manual Chapter 6: <ul style="list-style-type: none"> ○ Interpretive Systematics • Attached Understanding Fuzzy Logic Soil Interpretations.pdf.
Cycle step 3	Trainer reviews the following with trainee:
1. Fuzzy logic (numerical ratings)	<p>Trainer should utilize a standard x/y axis graph to illustrate relationship of a soil property to the numerical ratings.</p> <ul style="list-style-type: none"> • Indicates relative severity or suitability of individual limiting factors. • Ranges from 0.00 to 1.00. • Used in conjunction with limitation and suitability ratings. <p>Trainee should include a discussion regarding assignment of rating values.</p>
2. Limitation ratings	<ul style="list-style-type: none"> • Usually based on hazards, risks, or obstructions presented by properties or characteristics of undisturbed soil. • Identifies the degree of limitation that restricts the use of a site for a specific purpose. • Indicates gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00). • Divided into three classes: <ul style="list-style-type: none"> ○ Not limited – indicates that the soil has features that are very favorable for the specified use; good performance and very low maintenance can be expected. ○ Somewhat limited – indicates that the soil has features that are moderately favorable for the specified use; limitations can be overcome or minimized by special planning, design, or installation; fair performance and moderated

	<p>maintenance can be expected.</p> <ul style="list-style-type: none"> ○ Very limited – indicates that the soil has one or more features that are unfavorable for the specified use; limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures; poor performance and high maintenance can be expected.
<p>3. Suitability ratings</p>	<ul style="list-style-type: none"> ● Based on the characteristics of the soils that influence the ease of using or adapting a soil for a specific use. ● Indicates gradations between the point at which a soil feature is suitable for the use (1.00) and the point at which the soil feature is not suitable (0.00). ● Divided into three classes: <ul style="list-style-type: none"> ○ Good – includes soils that have properties favorable for the specified use; satisfactory performance and low maintenance cost can be expected. ○ Fair – includes soils that have one or more properties that make the soil less suitable than those rated good. ○ Poor – includes soils that have one or more properties that are unfavorable for the specified use; overcoming the unfavorable properties requires special design, extra maintenance or cost, or field alteration. ○ A fourth class, <i>unsuited</i>, is sometimes used for soils that are unacceptable for the specified use unless extreme measures are taken to alter the soil characteristics.
<p>Cycle step 4</p>	<ul style="list-style-type: none"> ● Trainer should generate several reports in Web Soil Survey to illustrate various soil interpretation ratings ● Take the measurement of learning quiz.
<p>Cycle step 5</p>	<p>Debrief; trainer addresses any questions and/or concerns</p>

OJT Module Lesson Measurement of Learning

Title: 1001 Understand the basics of soil interpretation ratings.	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Quiz	Trainee completes the quiz attached below.

SF-182

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

Quiz

1. The numerical (fuzzy) ratings range from 0.00 to 10.00?

True

False

2. A numerical (fuzzy) rating of 0.00 is the point at which the soil feature is not a limitation in a limitation style interpretation?

True

False

3. The limitation ratings are based on the characteristics of the soils that influence the ease of using or adapting a soil for a specific use?

True

False

4. Which limitation rating is most favorable?

Not limited

Somewhat limited

Very limited

5. The suitability ratings are divided into four classes?

True

False