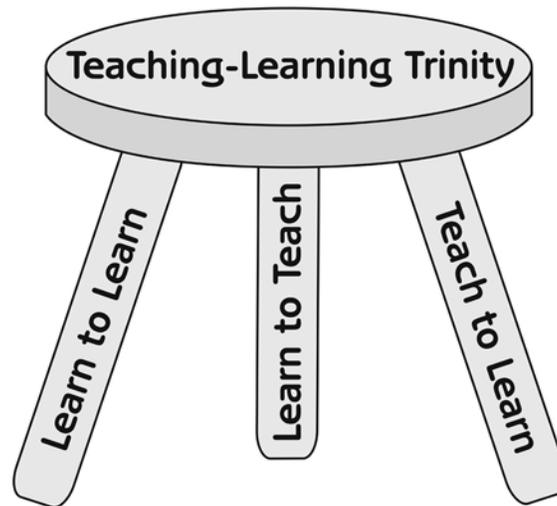


## ***“Learn to Teach & Teach to Learn”***

### **Soil Survey Division Training Instructor Guide**



The process of teaching and learning is a three-legged approach, according to Steve J. Thien, Department of Agronomy, Kansas State University. We as instructors must learn how to teach then teach to learn. The student must learn how to learn. The following is a grab bag of ideas and guides, from NEDC, Dr. Ed Jones of Management Training Consultants, Inc., Robert W. Pike and associates of the Bob Pike Group, and the U.S. Navy, to help you in your process of learning to teach and teaching to learn.

“Learning is what they remember  
after they have forgotten all that you said”

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## Applying Adult Learning Theory

1. Adults have a need to know why they should learn something.

*Training should be based on valid needs of the intended audience. All information provided should include reasons for learning. The benefits of learning should be clearly shown. Activities should be based on real work experiences.*

2. Adults have a greater volume and different quality of experience than youth.

*Design training activities that reflect the actual work the learners will perform. Provide activities that permit learners to compare the theoretical aspects of the training with their experiences.*

3. Adults enter into a learning experience with a task-centered (or problem-centered or life-centered) orientation to learning.

*Design training so that learners are solving problems or performing tasks as close to those encountered back on the job as possible. If large amounts of information support the problem-solving activities, present this information as reference material. Teach learners how to use the information to successfully complete the problem-solving activities. Do not do an information dump. Focus activities on “doing” something with information rather than simply “knowing” the information.*

More on the application of adult learning theory can be found at:

[ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/adult\\_learning\\_theory.pdf](ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/adult_learning_theory.pdf)

### **Motivation**

You cannot motivate your students. They must motivate themselves.

#### **What you can do:**

- Your students may ask, “What’s in it for me?” Show them the value or use of your material.
- Use praise liberally. Call it positive reinforcement.
- Make course objectives clear when setting expectations, then challenge students to achieve them. For some, having a goal to attain *is* motivation to attain it.
- Be available, before, after, and during your presentation, during breaks, etc.
- Be excited about your topic.

### **What you want to avoid doing. De-motivators are:**

- No energy, no eye contact, speaking in a monotone, no personal contact
- “I did, I am, etc.” Too much personal experience
- Poor preparation
- Singling out individual learners
- Reading directly from manuals, slides, etc.
- Lack of time for topic and for questions and answers
- In the same gear all day (no, I don’t mean clothing.)
- Having no credibility
- Being quick to criticize
- Talking down to learners, making them feel stupid
- Not covering/sticking to objectives
- Too many “war stories”
- Disinterest in the subject and/or the learners

### **Learning is stimulated through the five senses.**

There are few stimuli that will activate all five senses at once. Some are more vital than others. A breakdown of how we learn today:

75% through the sense of sight  
13% through the sense of hearing  
6% through the sense of touch  
3% through the sense of smell  
3% through the sense of taste

To stimulate learning through the senses:

- Use visual stimuli whenever possible. Learners remember more about what they see.
- Appeal to several senses together for the most efficient learning.
- Use strong stimuli, such as vivid pictures, loud noises, and bright colors, for a better response. (Do not go overboard.)
- Vary the stimuli; repetition of even a strong stimulus becomes monotonous and weakens the desired response.

In 451 B.C., Confucius said, “What I hear, I forget; what I see, I remember; but what I do, I understand.”

A stimulating presentation requires more preparation, but if a subject is worth remembering, it is worth the effort that it takes to make it memorable.

## ***Logic***

All information entering the mind is screened by an analytical process that rejects, or at least questions, ideas that do not make sense. Use the following principles to prepare lessons logically.

1. Each point must make sense by itself.
  - The “why” behind your point; learners want to know the reason behind your point.
  - State your point then ask the learners to apply it to specific instances.
  
2. The points must come in a logical sequence. These can be:
  - Whole to part; big picture first, then specific parts (NSSL data sheet first, then the tiers, then the columns, for example)
  - Importance
  - Time
  - Geographic
  - Magnitude
  - Difficulty
  - Order of performance

### ***Immediate Application and Participation***

This principle directs you to try out the skills or verbalize the facts required. In essence, have your learners do it now, there in the classroom.

A good rule to follow is the more participation there is-the more learning has occurred. ***“People learn more effectively when they are actively involved in the learning process, not passively observing it.”***

However, participation for the sake participation sake can be a waste of time. Make sure there is a planned purpose for the activity.

Many trainers believe that, in groups of 20 or more, participation is not practical. But limited participation is possible and beneficial. Limit it to small groups within the class. Then a spokesperson for the group presents their ideas. Thus, each learner is involved in the learning – testing understanding, getting feedback, and making adjustments – just as though he/she interacted directly with the presenter. In most cases, our SSD training courses will be conducted utilizing small groups. Some tips for small group instruction are listed later in the section ***“Practical Tips.”***

### **Active participation includes:**

1. Oral
  - Questions asked of the whole class
  - Assignments to groups of students to explain subpoints, etc.
2. Written
  - Working on group exercises
  - Individual tasks
  - “Pop” quizzes
  - Flip chart summaries
3. Group work
  - Group discussions
  - Small team exercises
  - Projects for later presentation
4. Physical
  - A. Assembly of apparatus
  - B. Hands-on use of assembled apparatus
  - C. Performing an activity

### ***Repetition***

Studies show that as much as 65-75% of the material learned will be “forgotten” within a week. This is the reason that the world of advertising presents us with a steady barrage of commercials over and over again. There are two ways that repetition can be used effectively without being boring.

1. Repetition with a difference: Give the same information but vary your approach. An example would be using a film followed by a case study.
2. Refresher training: Cover the same material, but in less time and with less intensity. Each time, the learner will forget less and retain more and get closer to your desired learning level. This method has some application during the week of training but may be best applied over the following several weeks.
3. Interval training: Learners will retain only about 10% of what they learned after 30 days. However, if you provide the material at six intervals and increase the amount of time from each interval to the next one, they will retain 90% after 30 days.
  - 1<sup>st</sup> time
  - 2<sup>nd</sup>, an hour later
  - 3<sup>rd</sup>, next day
  - 4<sup>th</sup>, 1 week later
  - 5<sup>th</sup>, 2 weeks later
  - 6<sup>th</sup>, 30 days later

## ***The Four-Step Process of Instruction***

### **Step 1 – Prepare**

- A. Prepare yourself for helping them learn.
  - Have thorough familiarity with the subject.
  - Break down the components of the subject.
  - Design a training plan that:
    - Explains how, what, where, and why
    - Is clear as to what you expect of the students
    - Is clear as to how you are measuring the effectiveness of the training.
- B. Prepare the employees for learning.
  - Put them at ease.
  - Give them the big picture.
  - Let them know what's in it for them.
  - Gauge their reactions and respond accordingly.

### **Step 2 – Present**

- A. Tell them about the subject.
- B. Show them the task.
  - Go through it several times and allow time for questions and discussion.
  - Avoid too many details.
  - Demonstrate how to perform the task.
  - Explain why it is done this way.

### **Step 3 – Let them try**

- A. Have them tell you.
  - Describe the job and the steps involved.
  - Don't move on until they have it down.
- B. Have them "show themselves."
  - You follow the instructions as they give them to you.
- C. Have them explain.
- D. Let them try.
- E. Correct their mistakes.
  - Take one thing at a time.
  - Set a pattern for correction.
    - Establish what is wrong (try to get them to identify the problem).
    - Present right way again.
    - Let them try it again.
    - Fix the correction in their mind before moving on.
- F. Help them develop skill.
  - Observe and continue feedback.

#### **Step 4 – Follow up**

- A. Put them on their own.
- B. Encourage them to ask questions when they have them.

#### ***Some Hints to Stimulate Participation***

Check out what follows. More on this subject of participation within the classroom structure can be found at:

[ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/getting\\_sts\\_involved.pdf](ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/getting_sts_involved.pdf)

Quoting from sources as examples:

- “She says, ‘Yes. Say more about that,’ and nods her head and says, ‘Right, right, and how do you feel about that?’ I guess she just invites us to talk and then keeps us talking. More important, she listens to what we say and shows respect for our ideas as well as our feelings.”
- “His sessions sound like a cross between an interview and a counseling session with a ‘shrink’ He doesn’t offer a single fact or opinion of his own. Instead, he gets us to talk about the subject by offering provocative comments, stories and questions. Finally, he summarizes what we’ve said.”
- “She walks over to you and watches you intently while you are talking, at close range, as though just the two of you were having a conversation. She leans toward you while she nods and says ‘yes’ or ‘right.’“
- “He reaches toward us with his hand open and palm up. Sometimes he beckons with it as though asking us to keep talking. He signals to the one who’s talking and keeps the others from butting in.”

**Along similar lines:**

<b>Leader Statement</b>	<b>Leader Attitude</b>	<b>Leader “message” to group</b>
“I see.” “Yes, yes”	Neither agree or disagree; noncommittal but positive	“I’m interested in what you are saying.”
“In other words, you think...” “If I understand you correctly, your decision would be...”	Be sure you understand what he/she means.	“I’ve listened; I understand; I have the facts.”
“You feel that...” You are upset about...”	Be sure you understand how she/he feels.	“I’ve listened; I understand how you feel; your feelings are important.”
“The group seems to feel that...” “The key ideas that you have expressed seem to be...”	Summarize group contributions.	“This is what you have expressed, and it is important.”

**The wallflower and the motor mouth**

The **wallflower** is a learner who resists participating. Whether this person is trained to be quiet or simply is a shy, introverted person, he/she is more likely to speak up when there is no threat of embarrassment. You as a presenter can reduce this threat in several ways:

- Before asking a question, watch the learner’s face to see if it registers a clear understanding of what is going on.
- Always ask questions with no “wrong” answers; after another learner has said something concise and accurate, ask the wallflower if she/he agrees.
- Always express approval of inputs, especially those of wallflowers.
- Utilize small group activities.
- Generate questions within small groups. Wallflowers may be more comfortable in a small group than in the larger group.
- Provide incentives for contributing to learning, especially within the small groups; make it possible for the peers in the group to reward the wallflower.

The **motor mouth** is a learner who over-participates, from simple aggressiveness and/or excessive enthusiasm. There is a risk of developing an adversarial relationship between the motor mouth and the presenter. Avoid ridicule as a presenter. Even though the other learners usually lose patience with the motor mouth before the presenter does, they will resent berating of any of their colleagues. You may try the following:

- Use body language, moving about the room so that you do not directly face him/her.

- At the same time, use some of the techniques intended to draw other learners out.
- If that does not work, try holding out your palm at him/her in the classic policeman's "stop" signal when he/she tries to interrupt.
- Use incentives that may involve others and thus make it difficult for one person to dominate.
- Build a praise bridge to another participant: Offer praise by saying, "We appreciate your responses." Then add, "Now, let's hear from someone else."

## Developing Effective Instructional Materials

An operational definition of a presentation is: ***The systematic discussion, explanation, or demonstration of skills, knowledge, or attitudes.*** To make an effective presentation, we should follow guidelines developed by the experts.

In conjunction with the 10-step plan itemized below, there is the consideration of developing lesson plans. If we are to ever provide college-level credits for our courses, which has been discussed, we will be required to prepare a lesson plan for each course. Lesson plans provide aids and guides to help somebody else step in and present your material if you are not available. They are also meant to help keep you focused on your own objectives, teaching aids, personal hints, etc. More on lesson plans can be found at:

<http://www.nedc.nrcs.usda.gov/isd/isd9.html>

and

<http://www.ntsc.navy.mil/Resources/Library/Acqguide/traingde.htm>

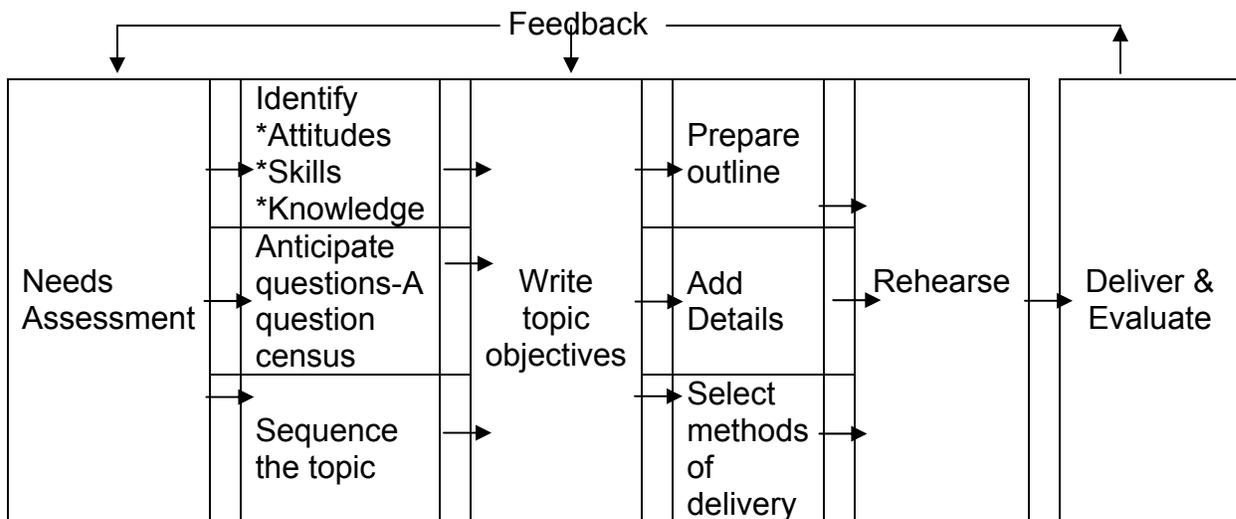
### ***10-Step Plan***

#### **The Planning Process:**

1. Identify audience needs.
2. Identify the topic and the questions that will be asked.
3. Determine the level of knowledge needed and the sequence of your subtopics.
4. Write your objectives.
5. Prepare an outline to structure your content.
6. Add the details.
7. Choose the presentation method.
8. Rehearse.

#### **Delivery and Evaluation:**

9. Delivery of the presentation
10. Evaluation



1. Identification of audience needs
  - Can you find out what their expectations are?
  - What is their familiarity with the subject?
  - Cultural considerations; will humor work?
  - Are they forced to be there, or is their attendance voluntary?
2. Identification of topic and the questions that will be asked
  - Do a “question census” to anticipate what they would like answered.
  - Brainstorm yourself, with peers, or with an audience.
3. Determine the level of knowledge needed and the sequence of the subtopics.
  - How deep into the subject matter should you go with this audience?
  - What sequencing will work best?
    - Importance
    - Time
    - Geographic
    - Magnitude
    - Difficulty
    - Whole to part
    - Part to whole
    - Order of performance
  - More on sequencing can be found on the NEDC Web site at:
    - <http://www.nedc.nrcs.usda.gov/isd/isd7.html>

4. Write your objectives.
  - [See addendum for objective development.](#)
  - Be S.M.A.R.T.
    - Specific
    - Measurable
    - Attainable
    - Result-oriented
    - Time-bound
5. Prepare an outline to structure your content.
  - Start with the opening.
    - Avoid starting with a joke.
    - Personal story okay
    - Involve learners with a question.
    - Use a rhetorical question, anecdote, startling statistic, object.
    - State your objective(s).
  - Body
    - Your sequence of subtopics
  - Closing
    - Summarize.
    - Tie into opening.
    - Tell a related story.
    - Appeal to learners.
    - Conclude; make sure the learners know that you are done (thanks, goodbye).
6. Add the details.
  - Who, what, when, where, why, how
  - Present the most important details in the most interesting way.
7. Choose the presentation method.
  - *Dependent*; audience totally dependent on you
  - *Independent*; the learners do something, do not need you.
  - *Interdependent*; group activities
  - (See tips later on.)
8. Rehearse.
  - Important key; the learners really want you to do well and be successful.
  - We may be afraid for our own self-esteem as a result of:
    - Performing poorly
    - Audience reaction (questions we cannot answer, etc.)
    - Boring subject matter or poor preparation
  - Rehearsing. **Do it!**

9. Delivery of presentation
  - Capture it on video so that you can evaluate yourself.
  - Focus on:
    - Overall presentation
    - Nonverbal communication; hand gestures, eye contact, quirks, movement
    - Verbal communication; tone of voice, enunciation, pace, volume, emphasis, variation
    - Design of presentation; did you accomplish your objectives, did it all fit together, did you have too much or too little time?
10. Evaluation
  - Complete a self evaluation.
    - Things I did well
    - Things I need to improve
    - What did I learn?
  - More concerning the evaluation of materials can be found at:  
<http://www.nedc.nrcs.usda.gov/isd/isd10.html>

## ***Practical Tips***

### **Tips for small group instruction**

1. Give them a task.
2. The task should result in a product.
3. Give a time limit.
4. You set the groups, not them; can be done in a variety of ways.
5. Groups of four to six people
6. Clarify task for a floundering group.
7. Be sure someone has been designated as leader and someone else as recorder in each group. Rotate these tasks during the course.
8. Each leader presents product to the whole group.
9. Trainer adds knowledge to group reports.

### **Tips for effective lectures**

1. Start by stating objectives.
2. Use good posture.
3. Avoid excessive “quirks.”
4. Look at the audience; face them and not the screen.
5. Use different gestures, body movements.
6. Vary the pitch of your voice. (Do not talk in a monotone; we get comments about that.)
7. Do not read to the group; reading shows that you are not prepared or do not have a good grasp of the subject.
8. Use examples, hypothetical situations, questions.

9. Use visual aids.
10. Hold handouts until end if at all possible.

### **Tips for using a flip chart**

1. Prepare how you will use it in advance.
2. If you prepare it prior to class, cover it until it is ready for use.
3. Print in block letters 2 to 3 inches high.
4. Do not fill page from top to bottom.
5. Write memory aids in light pencil on page corners.
  - Remember key words, items, lists, etc.
  - To key what to do next (go to PowerPoint slide, etc.)
6. Use black or blue markers; highlight with other colors (avoid green).
7. Have masking tape strips or pins ready if you are posting pages on a wall.
8. Stand next to and not in front of the flip chart while you are writing.
9. Leave blank pages between prepared pages to capture audience responses.
10. When you are done with the chart, cover or remove the sheet to return focus to you. The students may remain focused on the flip chart when they should focus on you.

### **Tips for handouts**

1. If at all possible, put handouts in the course binder prior to the course session.
2. If that is not possible, distribute at the end of the presentation so the students pay attention to you and not the handout (unless the handout is needed during the presentation).
3. Distribute handouts out during the presentation, at the time they are needed. Preferably, the handouts should be distributed by an assistant.
4. Spell check the handout!
5. Make more copies than you think you will need; do not come up short!

### **Tips for Microsoft PowerPoint presentations**

1. Be aware of the size of the file you may create, especially when using pictures and graphs from other programs. There are instructions for embedding versus copying and pasting and for sizing in general. Go to this Microsoft help site for these instructions. Then, you can open the "Picture" toolbar in PowerPoint and use the compress picture option.  
<http://office.microsoft.com/en-us/assistance/HA011168821033.aspx>
2. Use color backgrounds or slide design templates; avoid clear, colorless backgrounds (which are boring!). Note that some light colors will be "eaten up" by the projection equipment and will appear white.
3. However, do not use dark colors, dark blues in particular. They eat up the ink rapidly when you make copies for course binder materials.

4. Use animations and slide transitions appropriately. However, do not go overboard and thus distract from your material.
5. Make sure “text” colors contrast with background used.
6. Prepare a script/outline to help keep you from reading the slides (a lesson plan?).
7. PowerPoint has a way of adding a hyperlink to a slide that allows you to jump to another program, such as an Excel spreadsheet, that you want to refer to during your presentation. In PowerPoint, go to Help! and ask for “Create a hyperlink.”
8. Use the remote to allow you to move around the room.
9. Do move around, but do not stand and block anyone’s view of the screen for very long if at all.
10. Talk to the learners, not to the screen; have your shoulders square to the audience to help you do this.
  - You could have the laptop running your session open and within your view to help you face your audience and not the screen.

### **11. Practice, practice, practice!**

#### **Stress-release techniques**

1. Visualization the night before; visualize success.
2. Positive self-statement
3. Use meditation if it works for you.
4. Use relaxation exercises.
5. Stretch.
6. Rehearse.

#### **Tips for skill sessions**

1. Show the skill; perform without commentary.
2. Show and tell; perform with running commentary.
3. Practice; let the students perform on their own.
4. Provide feedback so that the students learn how well they have performed.

#### **Tips for opening sessions**

1. Open with energy, enthusiasm, and animation.
2. Do not apologize, even if you think you should; prepare thoroughly so that you do not need to apologize.
3. Make eye contact with several individuals around the room.
4. Give the audience an overview
5. Be aware of your appearance.
  - Clothing.—Dress professionally.
  - Gestures.—Use your hands appropriately.
  - Facial expressions.—Is your face animated, and does it communicate interest?
  - Posture.—Stand up straight.

6. Be aware of your voice.
  - Tone.—Promote enthusiasm and interest.
  - Enunciation.—Clearly pronounce each word.
  - Volume.—Speak up; ensure that your audience can hear you.
  - Pace, speed.—Do not speak too rapidly or too slowly, pause too long, or fill the pauses with um’s and ah’s.
7. Establish contact.—Move around the room; get close to the audience.

### **Tips for closing sessions**

1. Review.
  - Review without calling it a review.
  - Have the students keep track of actions and key points during the presentation; have them share these with a small group and then provide feedback to the entire audience. You fill in the blanks.
  - Have each small group develop two or three test questions and rotate these questions to another small group, which reviews the questions for completeness, clarity, and fairness; then have a third small group take the “test.”
2. Elicit new ideas.
  - What new applications do the learners see for the content?
  - What problem does the content solve?
  - Does anybody have another way of doing things?
3. Connect to the future.
  - What is the on-the-job application?
  - What are the possible barriers?
  - What strategies could be used to overcome the barriers?
  - How could learners support each other in application of new skills and knowledge?
4. Answer questions.
  - Ask for questions.
  - Better yet, do not ask, “Are there any questions?” Rather, ask, “What are your questions?”
  - Ask small groups to review content. Some questions may be answered within a small group. Ask two or three remaining questions of the larger group about content that the small group did not clarify.
5. Punctuate the finish in one or more of the following ways:
  - Summarize in a few well-chosen words.
  - Restate main points.
  - Present a call to action.
  - Use humor.
  - Use an appropriate quote.
  - Offer an appropriate anecdote.

## Tips for using and answering questions

1. Asking them:
  - Plan them; know what you are going to ask and when in your presentation you are going to do so.
  - Know the purpose of each question. Are you eliciting information or an opinion?
  - Go from general questions to more specific ones.
  - Confine the questions to one topic area at a time.
  - Ask short, clear questions that are easy to understand.
  - Ask the group first, individuals second.
  - Do not interrupt a person who is responding to a question.
2. Answering them:
  - Listen for both intent (what is meant) and content (what is being asked).
  - Acknowledge each question; repeat or paraphrase each to show that you understand or get clarification.
  - Try to answer completely and accurately. Address answer to the whole audience; do not focus on only on the questioner, but verify the questioner's satisfaction.
  - Avoid these behaviors when answering questions:
    - a. Being unresponsive; do not ignore anybody.
    - b. Showing that you think the question is inappropriate or stupid.
    - c. Diverting the question. If at all possible, answer the questions as they come up.
    - d. Going off on a tangent. Do not say, "This reminds of a time..." and tell a 10-minute war story. By the time you finish, nobody will remember the question.
    - e. Treating two questions as one. Even if two people ask similar questions, answer each separately.

## Tips for writing test questions

A great deal of information can be found at the following NEDC URL:

<http://www.nedc.nrcs.usda.gov/isd/isd6.html>

Review the material on the Web site and then use the following checklist (which is also found there):

1. Does the item deal with one or more aspects of the subject?
2. Does the item call for information that the student should know or be able to deduce without consulting a reference source?
3. Is the item appropriate for the level of knowledge expected of the student? Items that are too difficult or too easy cannot make effective discriminations among the students.

4. Is the central problem stated clearly and accurately? Wording that is ambiguous or fuzzy may mislead the student and destroy the validity of an item.
5. Have irrelevant clues to the correct response been avoided?
6. Is the item written with as few words as possible to make it clear and complete? Unnecessary words increase reading time. The test is intended to evaluate knowledge, not reading speed.
7. Is the item type the best one for the particular point or problem?
8. Is the item written in conformity with the format?

### **Practical tips—highlights**

1. Do not open with a joke, but realize that humor is a tool. Humor need not be a joke, and it works best if it relates to the topic at hand. Not easy for some of us.
2. Know your subject matter.
3. Never read your talk.
4. Try to be natural.
5. Use keys or prompters; keep notes to a minimum.
6. Establish your purpose at the beginning. Give the audience your objectives.
7. Do not rush at the end; a good finish is important to drive home the points you made. Hence, make sure you have enough agenda time or make sure you fit your presentation to the agenda time available.
8. Do not talk in a monotone.
9. Take everything out of your front pockets (the jingling coins “quirk”).
10. Watch your audience’s reaction.
11. Be aware of:
  - What your purpose is (your point)
  - What is in it for the audience
12. Get the audience involved.
13. Keep visual aids and PowerPoints clear and concise.
14. Do not talk too much.
15. Get feedback on complex questions from the group to make sure that the students are not confused.
16. Practice stress-release techniques.

## ***Learning Pyramid***

Choosing instructional strategies that work will increase retention and make our training courses worth the time, effort, and expense of attending.

<b>Instructional Strategy</b>	<b>Average Retention Rate</b>
Lecture	5%
Reading	10%
Audio-Visual	20%
Demonstration	30%
Discussion Group	50%
Practice by Doing	75%
Immediate Use of Learning	90%

More on this subject can be found at:

[ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/methods\\_media.pdf](ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/methods_media.pdf)

## Developing Your Lesson Plan

[ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/lesson\\_plan\\_format.pdf](ftp://ftp-fc.sc.egov.usda.gov/NEDC/isd/lesson_plan_format.pdf)

Recognizing that we can put only a limited amount of information on a presentation slide, your lesson plan will accomplish several things. It will help you to capture and organize the thoughts that go along with each slide. It will be of great benefit to somebody who has to replace you at the last minute. We can distribute your notes to hearing-impaired learners. The learners get CDs of our course presentations and will have your notes to go along with the slides. The notes may function as your handout if they are prepared for a field or lab instructional session. If we decide to place your presentation within the Aglearn learning environment, we can capture your narration in written form for hearing-impaired learners.

We will do the following:

1. Follow the first page instructions found at the NEDC link above using Microsoft Word. This page will go to the training coordinator with your instructional materials.
2. Follow the NEDC instructions while writing the body of your lesson plan in narrative format.
  - a. If the lesson is for a field or lab procedure that the students will perform, prepare it in Microsoft Word and in the NEDC format. You may forget the segues.
  - b. If preparing a Microsoft PowerPoint presentation, have slides that reflect the following parts of the NEDC outline: Introduction, Motivator, Objectives, and Summary. Use the PowerPoint **Notes Page** view to organize your thoughts and capture your narration for each slide as appropriate. If you plan to ask questions, put the questions in your Note Page. Narration can be in bullet format, so long as you or somebody else can understand what it is you want to elaborate for that slide.

# SSD Requirements and Guidance for Instruction Preparation

## *Required*

1. **All** presentation materials will be electronic or have an *ecopy*. This form of presentation will facilitate:
  - Preparation of course hard-copy bound materials
  - Posting **all** materials on a Web site for *ecopy*
  - Placement of **all** materials on a CD for each student
  - Easy maintenance
2. Turn in all materials to the training coordinator, unless otherwise instructed, by the date requested to facilitate preparation of course bound materials.
3. Follow guidance for background color (**no dark colors**) and contrasting text color on PowerPoint slides.
4. Use the four-step process from [page 7](#); prepare, then tell them and show them, let them try, and follow-up as needed.
5. We will prepare a **lesson plan** for each topic.
6. We use pictures, but they make files huge. You can mitigate this problem—saving room on your hard disk and reducing download time—by using Compress Pictures, a feature on the Picture toolbar. This feature gives you options for reducing image resolution, applying compression with no loss of quality, and discarding unwanted information, such as the cropped parts of an image.
  - However, **do not** copy and paste or drag images into your presentation. If you do a copy and paste, PowerPoint treats the image as an object, which it cannot optimize. Use the **Insert** menu and **Picture** command.

## *Optional*

7. You should **rehearse** the timing of your presentation.
  - The Office Assistant (Microsoft) will help you with this in PowerPoint, or
  - You could go to AgLearn (<http://www.aglearn.usda.gov/>) and find instructive materials that apply.
    - AgLearn – Catalog – Desktop Computer
    - Find the module titled “Customizing, Running, and Broadcasting PowerPoint Presentations.”

- Go to the lesson titled “Multimedia and navigation tools...”
8. You could **rehearse** your presentation with recorded narration (if you have a microphone along with your speakers). This form of rehearsal will give you feedback on your speech pattern as well as the content of your presentation.
- The Office Assistant (Microsoft) will help you with this, or
  - You could go to AgLearn (<http://www.aglearn.usda.gov/>) and find instructive materials that apply.
    - AgLearn – Catalog – Desktop Computer
    - Find the module titled “Customizing, Running, and Broadcasting PowerPoint Presentations.”
    - Go to the lesson titled “Broadcasting presentations online...”
9. Send your presentation to other cadre members for peer review.
- The Office Assistant (Microsoft) will help you with this for Word or PowerPoint files.
    - File – Send to – Mail recipient (for review)
      - Automatically opens the reviewer’s editing toolbar if it is not already open
      - Helps you keep track of each sender’s comments/edits received
      - Helps you merge comments into your original document
  - You could go to AgLearn (<http://www.aglearn.usda.gov/>) and find instructive materials that apply.
    - AgLearn – Catalog – Desktop Computer
    - Find the module titled “Customizing, Running, and Broadcasting PowerPoint Presentations.”
    - Go to the lesson titled “Sending and reviewing presentations...”
10. You can get assistance by accessing Microsoft Office Online, where there is a module for recording and rehearsing your presentations (<http://office.microsoft.com/en-us/FX010857971033.aspx>).
11. If unsure about how to organize a PowerPoint presentation, you can go into PowerPoint and find templates with text to guide you. Look for the following:
- New presentations – New from templates – General templates – Presentations – select the “Training” or “Generic” presentation to get you started. Adapt to the text guidance as appropriate.
    - You can still redo the background or design to your liking.

# Addendum Material

## *Writing Objectives*

On the Instructional Systems Design (ISD) portion of their Web site, NEDC has some information regarding writing performance objectives. You may want to review this information.

<http://www.nedc.nrcs.usda.gov/isd/isd5.html>

The analysis phase should have answered these questions:

- Is there a problem worth solving?
- Is instruction a relevant part of the solution?
- If so, what should the instruction accomplish?

Only after the analysis phase is complete or near completion are objectives drafted.

A course ***description*** tells us something about the content and procedure of the course. An ***objective*** is a description of a performance you want learners to be able to exhibit before you consider them competent. An objective describes an intended ***result*** of instruction, rather than the ***process*** of instruction itself. At a minimum, the statement will include the performance result. In addition, in order to clarify the result if needed, we may add conditions and/or criteria to the objective.

There are three main reasons for explicit objectives.

1. When clearly defined objectives are developed, there is a sound basis for the selection or designing of instructional materials, contents, or methods.
2. We will be able to measure whether the objective has, in fact, been accomplished.
3. Students will have a means of organizing their own efforts toward accomplishment of the objectives.

In short, if we know where we are going, we have a better chance of getting there.

Again, the characteristics of a useful objective are:

1. Performance (what the learner is to be able to do)
2. Conditions (important conditions under which the performance is expected to occur)
3. Criteria (the quality or level of performance that will be considered acceptable)

Performance is described by a **doing** word. Examples of these are found on the NEDC ISD Web site for writing performance objectives.

<http://www.nedc.nrcs.usda.gov/isd/isd5.html>

An example of an objective statement with performance only:

***At the end of this training, the learner will be able to construct a digital map.***

Is that clear to you? Would everyone seeing that objective reach the same conclusion? Sometimes, as you can see, stating a performance only may not be enough. That is when we want to add conditions and/or criteria. Let's add a condition.

***At the end of this training, given the editing tools in ArcGIS 9.0, the learner will be able to construct a digital map.***

This is somewhat clearer, and maybe it is enough. At least, we now know that the learner should be able to complete a map with the condition that ArcGIS 9.0 editing tools will be used. We could, however, go a step further and add criteria. An example:

***At the end of this training, given the editing tools in ArcGIS 9.0, the learner will be able to construct a digital map of an approximately 5,000-acre designated project area. Work will meet NRCS standards and pass a quality-control review by a GIS specialist.***

Now, we have criteria applied as well as the condition. The objective now states that there is a project area of a designated size and that the work must meet standards and pass review.

Just a little food for thought as we prepare to do this task. Writing and editing learning objectives will be a task for all instructors. The following NEDC **Performance Objective Worksheet** will to assist you.

## **Performance Objectives Worksheet**

*Beginning with an appropriate verb, describe what a learner will be able to do after training using the components described here.*

<b>Performance Objectives</b>			
At the end of this training, learners will be able to ...			
<b>Task/Topic</b>	<b>Performance</b>	<b>Criterion</b>	<b>Condition</b>
<i>Begin with a verb.</i>	<i>Answer this: What will the learner know or do?</i>	<i>Describe how well the learner should know or be able to do the performance.</i>	<i>Begin with "given" or "when" and describe the condition that must exist for the learner to perform.</i>

## ***The Seven Laws of Learning*** (Robert W. Pike)

1. *The Law of the Teacher*: “Do you, as the instructor, have personal experience in applying what you are about to teach?”
2. *The Law of the Learner*: “Throughout your presentation, do you constantly emphasize for the participants the answer to ‘What’s in it for me?’”
3. *The Law of the Language*: “Do you always speak so that the participants can understand?”
4. *The Law of the Lesson*: “Are you willing to go from the known to the unknown? Do you start from where they are; establish a base line that they can build from?”
5. *The Law of the Teaching Process*: “Do you get people involved?”
6. *The Law of the Learning Process*: “Learning does not take place until behavior is changed. It is not simply a matter of showing that you can do it but of demonstrating to them that they can do it.”
7. *The Law of Review and Application*: “Do you show people how to apply it in real life?”

## ***The 22 Deadly Sins (Robert W. Pike)***

1. *Appearing Unprepared*: This does not mean that you are actually unprepared, which you must be, but it does mean appearing that you *seem* to be unprepared. Not knowing what comes next is an example.
2. *Starting Late*: Always start on time. Reward those who are on time and penalize those who are late.
3. *Handling Questions Improperly*: Putting them off (I'll answer that later); giving them impression that it is a dumb question, etc.
4. *Apologizing for Yourself or the Organization*: In all likelihood, most of your participants won't notice the problem. Don't apologize, just keep moving on.
5. *Being Unfamiliar with Knowable Information*: Know the obvious such as agency names, key people in attendance, etc.
6. *Using Audio Visuals Unprofessionally*: Not knowing how to operate the projection system is an example. Become familiar with it before your presentation, not during it.
7. *Seeming to be Off Schedule*: In order to not appear off schedule, tell participants where you're going and how long it's going to take to get there.
8. *Not Involving the Participants*: Enough said.
9. *Not Establishing Personal Rapport*: Make eye contact; be available at breaks, etc.
10. *Ending Late*: This is worse than starting late. They will not be pleased if you run over your scheduled time.
11. *Appearing Disorganized*: Cover objectives, have an introduction, summarize.
12. *Not Quickly Establishing a Positive Image*: Quickly take command, let them know that you know who you are, where you are, and where you are going with your presentation. Appearance is important.
13. *Not Covering the Objectives Promised*: "Promise much, deliver more." Make sure you deliver what you promised.
14. *Not Scheduling Enough Breaks*: 10 minutes for every 60-90 minutes in the classroom.
15. *Practicing Bad Habits*: Get rid of distracting habits and mannerisms such as jingling change in your pockets, using "um" or other non-words during pauses.
16. *Not Checking the Environment*: Responsibility of your coordinator.
17. *Not Updating Material*: Be current.
18. *Not Admitting Mistakes*: Admit it when you don't know an answer or make a mistake.
19. *Using Inappropriate Language*: Tasteless words or phrases can taint a presentation. Don't offend even one participant.
20. *Using Inappropriate Humor*: Best to avoid humor that relates to origin, sex, politics, or religion.
21. *Coming on as an Expert, a Know-It-All*: We can demonstrate our expertise with being superior.
22. *Using Poor Grammar, Pronunciation, and Enunciation*: Work on your delivery skills.