

**Field Operations Section
Drill of the Month Style Guide
1998**

(Adopted from portions of the MFRI "Curriculum Development Style Guide, 1998")

**Maryland Fire and Rescue Institute
University of Maryland**

Drill of the Month Style Guide

Purpose: To provide guidelines for those who develop MFRI Company Drill Instructor Guides.

Contents

I.	Drill Components	2
II.	Format	5
III.	Sample Instructor Guide	18
	Samples:	
	A. Cover Sheet	6
	B. Instructor Teaching Outline	7
	B-1. Lesson Plan	10
	C. Instructional Support Material	14
	1. General Guidelines for Preparing Transparencies	14
	2. General Guidelines for Preparing Storyboards	16
	D. Skills Card	17
IV.	Appendix:	27
	Bibliography	29

I. DRILL COMPONENTS

Drill of the Month authors may format their lessons in the current MFRI lesson guide format. Following is a list of standard components suggested to be included in each drill.

DRILL FORMAT AND INSTRUCTIONAL MATERIAL SAMPLES

Cover material

1. Cover sheet (Sample A).

Instructional and student materials

2. Instructor Teaching Outline (Sample B).
3. Instructional Support Materials (Sample C)
 - Transparencies and Slides
 - Storyboard format

TERMINOLOGY

Session: The designated two- to three-hour teaching block of time (typically sessions are 50-minute teaching blocks with 10-minute breaks).

Lesson: Each teaching segment within a Session that addresses a new topic. A lesson may be a half hour, an hour, an hour and a half, two hours, or three hours.

Examples:

Rescue Technician Session 1: (There are two lessons of different length in this 3-hour session)

- RT 1-1 designates session 1, lesson 1 of the Rescue Technician course. Lesson 1 is one hour long and provides the cognitive/knowledge information for the session.
- RT 1-2 designates session 1, lesson 2 of the Rescue Technician course. Lesson 2 is two hours long and provides psychomotor/skills practice opportunity for the session.

Objectives: Sometimes refer in a general way to any learning goal or desired outcome of education; sometimes refer to more narrowly or explicitly-worded statements specifying the *behavior* that learners should be able to exhibit in some measurable form (Rowntree).

Hierarchy of objectives: (Refer to Sample B and the attachment on Levels of Learning in the Appendix.)

- Student Performance Objectives (SPO): Describe a **specific task** or job to be performed **given** certain items listed and completed to a **stated standard or a requirement**, such as a test score, and direct the student toward meeting course goals or learning outcomes. The SPO will be either a cognitive objective that requires knowledge, or a psychomotor objective that requires a skill.

Cognitive Objective Example: **Given** information on medications, the student will be able to **list** the medications used by EMTs for assisting a patient in a medical emergency according to **local protocols and DOT standards**.

Psychomotor Objective Example: **Given** a manikin, the student will be able to

demonstrate the steps opening the airway with the jaw-thrust maneuver in an unconscious trauma patient according to the **American Heart Association standards**.

- Enabling Objectives (EO): List **key points** and/or operations to be learned or mastered and “enable” the student to meet the performance objective.

Example: **EO 1-1-1.** List the 4 medications that can be carried on a Basic Life Support ambulance.

Examples: **EO 2-1-1.** Demonstrate the method of assessing breathing before moving the patient.

EO 2-1-2. Show how to position yourself to prepare for opening the airway with the jaw thrust maneuver.

EO 2-1-3. Open the airway using the jaw thrust maneuver.

Page Numbering: Published page numbering to be completed by MFRI.

Instructional Support Materials (Visual Aids and Handouts): Each audio-visual item and handout will carry a four-part identification number to identify its particular program, type of support material, related session, and sequence in the lesson.

1. Type of support material letter designation
 - T = Transparency
 - H = Handout
2. Program abbreviation: CD
3. First number = session
4. Second number = lesson segment within session
5. Third number = sequence of support material

NOTE: Authors should identify support materials in simple numbers corresponding to the appropriate location in the outline. Final numbering/identification will be completed by MFRI.

Examples:

- T-CD-1-1-1 (Transparency, Company Drill, first session, first lesson, first transparency in sequence)
- H-FFI-6-2-2 (Handout, Firefighter I program, sixth session, second lesson, second transparency in sequence)

Place the identification number for transparencies and handouts in the bottom right-hand corner. Prepare transparencies in horizontal format.

To meet specific regional or jurisdictional needs, instructors may use local audiovisual resources in a program that illustrate special or local methods that are different from those described in the lesson. For example, there may be special hazardous materials storage facilities and specific local protocols for managing an incident that differ from what is described in the standard program.

Outlining: Use the standard outline system below, which uses the rule that if there is a roman numeral I, there must be a II; if there is an A, there must be a B; if there is a 1, there must be a 2; etc.

I. Overview Point (1-1-1)

A.

1.

2.

a.

b.

1)

2)

a)

b)

i.

ii.

i)

ii)

B.

1. Etc.

II. Overview Point (1-1-2) Etc.

Each roman numeral (main point) must match and discuss an enabling objective and its related overview point.

II. FORMAT

(The following pages include samples of documents or forms.)

SAMPLE A: COVER SHEET

(The following format is used for cover sheets)

Drill Title
by: Author's Name
Title
Department/Agency

(The space in middle is for graphic artwork. If you so choose, you may submit an appropriate graphic from any graphics program or submit suggestions or sample art work with your cover)

Maryland Fire and Rescue Institute
University of Maryland
College Park

SAMPLE B: INSTRUCTOR TEACHING OUTLINE

Company Level Drill Format

(The following components will guide developers, as well as instructors preparing to teach. See the attached lesson plan, Sample B-1, which is numbered to reflect the following parts.)

- Headers: Place the current development date of the program in the upper left hand corner of page 1 only of the outline.
- Page Numbers: Place page numbers at the bottom center of each page of the outline. (See Section VIII. Course Components, Page Numbering for Instructor Guides.)

Preparation components, Part 1 (prepare to teach):

1. Title of Company Level Drill
2. Session number. Sessions are two or three hours, which can be broken into shorter lessons.
3. Lesson number. Lessons can be in half hour, hour, two hour, or three hour increments but all increments will total a 2- or 3-hour session.
4. Title of topic.
5. Time increment for lesson in half-hour, hour, or hour and a half blocks up to 3 hours.
6. Teaching/Learning level (Appendix A).
7. Learning/Teaching Aids. List equipment or other teaching/learning materials.
8. Behaviors to foster. What students will do in the class and perform beyond the class.
9. Task. State the expected behavior, which will become a part of the Student Performance Objective (SPO). Example: "Describe the purpose of each instructional method."
10. Given. State the conditions under which the student will perform the behavior, which will become a part of the SPO. Example: "Given information on instructional methods."
11. Standard. List the NFPA or other standard used to develop the Student Performance Objective was developed. A reference to the standard stated here may be included in the Student Performance Objective. Example: "NFPA 1041 2-3.2"

The SPO will read: "Given information on instructional methods, students will be able to describe each method and how it enables the learning process. The student will perform to a final written test accuracy of 70% and to meet the NFPA standard."

12. Prerequisite Knowledge. List prerequisites required by the standard. Include these knowledge areas in the lesson unless they were included in previous lessons. Standards often repeat prerequisites in subsequent sections with similar categories.
13. Prerequisite Skills. List prerequisites required by the standard. Include these skills in the lesson. Standards often repeat prerequisites in subsequent sections with similar categories.
14. Resources/References: List supplemental readings or resources.

Preparation components, Part 2 (help students learn):

15. Attention - call to order, introduce self and topic to be discussed
16. Motivation - state a need to know: why is this lesson important, how will it be used, how it will be useful, and how it relates to job requirements and skills performance
17. Student Performance Objective (SPO) - describes what students will learn or perform. Include its three parts:
 - The **conditions** under which they will perform or learn - given what items, time, assistance, etc.
 - The **behavior** to be performed - the student will be able to (verb appropriate to teaching/learning based on Level of Learning list attached)
 - The **standard or degree** to which the student is expected to perform (such as an objective skills check list, NFPA, OSHA, Maryland Protocols, manufacturers recommendations, etc.). NEVER use “to the satisfaction of the instructor, which is a subjective phrase rather than an objectively based requirement.
18. Enabling Objectives (EO). Each enabling objective will match an overview point. List two to seven **main** activities (enablers), which will assist (enable) the student in reaching the performance objective in this lesson. Avoid a lengthy or complicated performance objective that requires numerous (more than seven) EOs to complete the objective. If the objective is that complicated and/or lengthy, break down the objective into several objectives and cover the information or skill in subsequent lessons.

Identify enabling objectives by number: **1-1-1** = Session 1, Lesson 1, Enabling Objective 1. Subsequent enabling objectives in Session 1, Lesson 1 are numbered 1-1-2, 1-1-3, 1-1-4, etc.

19. Overview/Main Points. Main points must match enabling objectives; for each enabling objective, there will be a main point. Pull key ideas or terms from the EOs that will briefly describe the topic point. These topic points become the key points (roman numerals) of the teaching outline.

Presentation and Application Components, Part 3 (actively engage students in learning):

20. List any initial instructions which will help or remind the instructor to prepare for teaching.
21. Develop the instructional outline based on the EO points. Use two columns: the left column contains the instructional outline or teaching points. It contains key ideas, not a detailed textbook. Give enough information so the instructor understands the points to be made. Consider that those who are teaching the program will have background knowledge and experience in the subject.

22. The right column contains notes, suggestions, or directions to the instructor and lists references to or suggestions for visuals to be shown, activities to do, and discussions to generate. Place specific instructional details in the NOTES (right) column or refer instructors to a specific resource (text, handout, video, etc.)
23. It is important to include “applications” in the outline. There are many instructional methods, the most effective of these involve students in questioning, thinking, participating in discussion, demonstrating skills, and participating in group activities so they see how to apply what they have learned, to think and draw conclusions, and to explore ideas through interaction with the instructor and other group members.

Evaluation components. Part 4 (check student learning):

24. Summary. Did the instructor teach all points; did the students listen and hear, participate and apply? How is level of learning determined? Review and summarize the lesson.
 - Restate the SPO and the main points. This gives the instructor a chance to assure that the instruction and application activities met the objective.
 - Restate the main points. This gives the instructor a chance to assure that all main points were covered.
25. Oral Review: List suggested activities for review such as questions that relate to key ideas in the lesson. Instructors can ask students to recall one to three important ideas from each main point (see overview points) in the lesson and ask the group to conclude how these points meet the SPO.
26. Other evaluation: Is there a quiz for this lesson? Is it an in-class quiz or a take-home assignment? Can the instructor make up a quiz or an assignment? State any such directions or tasks to be accomplished here.

SAMPLE B-1: INSTRUCTOR TEACHING OUTLINE

Header--current date of developed program

- (1) **Methods of Instruction - Instructor Training Program
Instructor Guide**
- (2) **Instructor II - Session ___ :**
- (3) **Lesson ___ :**
- (4) **Title of Topic:**
- (5) **Time: ___ hours**
- (6) **Teaching/Learning Level:** *(Cognitive or Psychomotor level; see Sample G, Section C)*
- (7) **Learning/Teaching Aids:** *Board/easel pads, chalk/markers (List other items with bullets, such as projectors, training equipment, etc.)*
- (8) **Behaviors to Foster:** *Active participation and discussion to: (In a brief statement, describe the activities that the instructor will use in providing opportunity for groups to apply knowledge and skills.)*
- (9) **Task:** *(Briefly state the behavior, such as “describe the steps of opening an airway.” This statement will also be the behavior component of your SPO, which is stated completely on the next page of the Instructor Guide.)*
- (10) **Given:** *(Briefly state the information given (if a cognitive lesson) or the items or demonstration necessary (if a psychomotor lesson). Example: “AHA information on airway management,” or “a demonstration on how to open an airway.”*
- (11) **Standard:** *(State the standard(s) or protocols to which the program or this particular lesson is written, such as NFPA, OSHA, DOT, Maryland BLS Protocols, ANSI Standards, etc.)*
- (12) **Prerequisite Knowledge:** *(Briefly list what the student needs to know either before entering this lesson, such as information and skills from a previous lesson, or what the student will have accomplished within this lesson.)*
- (13) **Prerequisite Skills:** *(Briefly list skills that will be accomplished in this lesson.)*
- (14) **Resources/References:** *(List with bullets any additional references or resources used in developing the program. It is not necessary to list the required or recommended course text(s) since they are listed above.)*

Page number

Lesson __ (*Restate lesson number [3] from first page*)

- (15) **Attention: (Call to Order)** (*A reminder to instructors; no information is needed on this line. Instructors should use appropriate and various ways to call class to attention.*)
- (16) **Motivation: (State Need to Know)** (*A reminder to instructors; no information is needed on this line. Developers may insert a motivational statement, although it is best if the instructor uses an example from a recent or current event that is pertinent to the lesson.*)
- (17) **Student Performance Objective (SPO):** (*State the complete performance objective including the student behavior, the “givens” or conditions under which the students will perform the behavior, and the degree or standard reference to which they will perform the behavior.*)
- (18) **Enabling Objectives (EO):** (*List three to seven enabling objectives which will “enable” the students to meet the behavior stated in the performance objective. More than seven enablers may be difficult to accomplish in a lesson only because too much information overwhelms the students and they do not learn too many skills or extensive knowledge well in one session. If necessary, separate multiple or difficult skills and information into several sessions.*)

EO 1-1-1.

EO 1-1-2.

EO 1-1-3.

EO 1-1-4.

- (19) **Overview/Main Points:** (*List key words from the enabling objectives and make them the main teaching points. List each point with a separate bullet.*)

Page number

(20) **Opener: Call to order; start with a motivator (need to know) related to objectives and the lesson; state objectives and main points.** *(This statement is a blanket reminder for instructors and is placed here because of the importance of the lesson opening to learning readiness.)*

(21) **Teaching Points**

(22) **Notes**

(23) *(Begin the lesson outline here. See Section VIII. Course Components, Outlining.)*

(List any instructional materials here such as AV, handouts, equipment needs for skills, and discussion or group activities).

(Each roman numeral lists a key point from the Overview and is matched with its Enabling Objective. The EO number will follow the key point in parenthesis. Example:

I. *Types of Rope in Rescue (3-1-1)*

A.

1.

2.

B.

II. *Types of Knots in Rescue (3-1-2)*
Continue the outline using as many pages as necessary.)

Page number

(24) **Summary:**

Instructor II - Session __: *(Repeat Session number here.)*

Lesson __: *(Repeat Lesson number and topic here.)*

Student Performance Objective (SPO):

(Repeat Student Performance Objective here.)

Review/Main Points:

(Repeat Overview points here.)

Evaluation: *(List review points here. An example is given below.)*

(25) **Oral Review:** Under each review point, recall and list three features from the discussion or list steps or safety features of each skill. Make a note of these points or highlight points in your notes so you may use them for exam review.

(26) **Other Evaluation:** *(If there are assigned quizzes for this lesson, state that fact here. List any options the instructor may use for evaluating the students, if any. An example is given below.)*

Instructors may use course quizzes, if any, or create and use lesson quizzes and other learning reinforcements. Quizzes are diagnostic and may be given as in-class group assignments to generate discussion or as home assignments and used as review prior to starting the next session.

Page number

SAMPLE C: INSTRUCTIONAL SUPPORT MATERIALS

1. General Guidelines for Preparing Transparencies

Title
(24 or 36 font, bold centered)

- **Key Point or Phrase**
- **Key Point or Phrase**
- **Key Point or Phrase**
(18 or 24 font, bold)

(T or S #)

- a. Develop transparencies so they project in the horizontal position.
- b. For titles/headings, use boldface and a font size of 24 or 36.
- c. For key points, use boldface and 18 or 24 font with respect to heading size. Example: heading 24; key points 18.
- d. Indent points and list them with bullets under heading.
- e. A heading with an illustration may be used. The graphics artist can insert headings and labels over photos and illustrations.

- f. Keep statements simple. Use no more than seven points, short phrases, or one illustration on each transparency or.
- g. Do not crowd the transparency. Leave “white space.”
- h. Do not use all caps. Use upper and lower case; capitalize the first letter of each word in titles/headings and first word in key points.
- i. Position numbers at bottom right.

Transparency example: T-RT-1-1-1

T-	RT-	1-	1-	1
Transparency	Program ID	Session #	Lesson #	Transparency#

(This sample can be used for a transparency or slide and is taken from the Level I Methods of Instruction Program and lists the Overview/Main Points for this lesson. Where possible, transparencies are the preferred medium since they can be used in an interactive discussion format and in a well-lit classroom. Use slides for showing unique photographs not illustrated in the text.)

Lesson 3-2: Cognitive and Psychomotor Methods

Overview/Main Points:

- Defining “Methods”
- Types of Instructional Methods
- Activity-based Methods
- Questioning Techniques
- Learning Resources

T-ITI-3-2-3

(This Transparency is for Instructor Training level; it is developed for Session 3, Lesson 2, and is the 3rd transparency. The first transparency/slide will show the SPO or at least its major components of behavior, conditions/givens, degree/standard; the second transparency will list the EOs, which will match the Overview Points. Subsequent transparencies/slides will list key points from the instructional outline, which will keep an interactive discussion on track.)

2. General Guidelines for Preparing Storyboards

- a. Create one draft illustration per frame.
- b. Write a description for each frame or indicate the heading, points, and/or labels required for the illustration.
- c. Number each frame.
- d. Use the type and placement format described in General Guidelines for Preparing Transparencies and Slides.

Picture - Visual



Frame _____

Title - Transcript - Audio



Frame _____



Frame _____

SAMPLE D: SKILLS CARD

(For each program, create a list of skills that will be taught as required by the standard. Number the skills consecutively beginning with number 1 through all skills in the program.. Instructors will mark a skill card [sample to follow] under the appropriate number as each student successfully practices or masters a skill. The following partial list of skills was taken from the Rescue Technician textbook.)

Rescue Technician Skills Proficiency Evaluation

Objective/Skill

Rescue Knots and Harnesses (Individual Skill Evaluation)

Correctly tie the following family of figure-8's:

1. Figure-8
2. Figure-8 reweave
3. Figure-8 bend
4. Figure-8 bight

Correctly tie the following clove hitch knots:

5. Clove hitch *around* an object
6. Clove hitch *over* an object
7. Split clove hitch
8. Correctly don and off harness specified by the evaluator
9. Using the donned harness correctly prepare for slope rappel.

Mechanical Advantage and Anchor Systems (Team Evaluation)

10. Correctly reeve a mechanical advantage block and tackle system.
11. Correctly reeve a "Z"-system.
12. Correctly reeve a piggyback system.
13. Correctly anchor the system using a natural anchor point.
14. Correctly anchor the system using an anchor point on vehicle.
15. Correctly anchor the system using a picket holdfast.

Patient Transfer Devices (Team Evaluation)

16. Correctly secure a patient in a Stokes basket.
17. Correctly secure a patient in a SKED stretcher.
18. Correctly prepare the transfer device for horizontal movement.

Vehicle on Its Side (Team Evaluation)

Correctly demonstrate the following:

19. Circle check.
20. Stabilization.
21. Gain access via removal of window glass using hand or power tools specified by the evaluator.
22. Gain access through a roof flap using hand or power tools.
(Continue listing skills until all are numbered.)

III. SAMPLE INSTRUCTOR GUIDE

DRILL TOPIC: FIREGROUND SUPPORT OPERATIONS

LEVEL OF INSTRUCTION:

TIME REQUIRED: TWO HOURS

MATERIALS:

- * DRILL TRANSPARENCIES
- * OVERHEAD PROJECTOR
- * SCREEN

REFERENCES: TRUCK COMPANY FIREGROUND OPERATIONS, SECOND EDITION, CHAPTERS 1 AND 2

=====

PREPARATION:

MOTIVATION:

OBJECTIVE (SPO): 1-1

T-1-1

The student will demonstrate a basic understanding of fire spread, and truck company operations.

OVERVIEW:

T-1-2

Fireground Support Operations

- * Introduction
- * Fire spread
- * Truck company operations

SESSION 1 FIREGROUND SUPPORT OPERATIONS

- SPO 1-1 The student will demonstrate a basic understanding of fire spread and truck company operations.
- 1-1 Describe the various means of fire spread and fire conditions which serve as a basis for performing certain fireground support duties.
- 1-2 Describe the basic duties normally performed by a truck company at the fire scene.

I. Introduction

A. Fire fighters performing truck work should have the training, equipment, and staffing to carry out five basic objectives: T-1-3

1. Rescue victims
2. Protect exposures
3. Confine the fire
4. Extinguish the fire
5. Overhaul the fireground

B. Other objective - salvage T-1-4

C. Activities in support of fire fighting

1. Raising ladders
2. Advancing hoselines
3. Ventilating

NOTE: Truck company duties may be performed by personnel responding on aerial apparatus, rescue squads, engines, or other fire apparatus. The personnel, tools, and equipment are more important in performing the duties than the apparatus being used. T-1-5

II. Fire Spread (1-1)

A. Convection T-1-6

1. Travel of heat through motion of heated matter
 - a. Smoke
 - b. Hot air
 - c. Heated gases
 - d. Flying embers
2. Rises toward top of building
3. As gases cool, matter drops down to be reheated - convection cycle

4. Fire resistant construction designed to confine convection cycle
5. When fire prevented from spreading upward, convection carries fire outward
6. As fire spreads outward, area is saturated with superheated gases. Result may be flashover

B. Radiation

T-1-7

1. Travel of heat through space with no material substance required
2. Unaffected by wind unless blocked and radiates evenly in all directions
3. Raises temperature of air and combustible materials
4. Flashover can occur before flames contact material
5. Ventilation little help against concentrations of radiant heat
6. Radiant heat can cause great physical distress to fire fighters

C. Conduction

T-1-8

1. Travel of heat through solid body
2. Can take heat through walls and floors by way of pipes, metal girders, and joists
3. Fire spread time depends on amount of heat and fire being applied to structural member or wall
4. When fire contacts such parts, thorough check must be performed to ensure that fire has not travel through to other areas
5. Can be conducted in any direction
6. Can result in wall and roof collapse
7. Fire fighters must be observant and check for fire spread by conduction

8. Hose streams stop conduction

D. Flashover

T-1-9

1. Ignition of combustibles in area heated by convection, radiation, or combination
2. Convection causes flashover at top of structure
3. Radiation contributes to flashover in areas that block heat
4. Flashover usually not caused by radiation alone but in combination with convection

E. Smoldering fire and backdraft

1. Products of fire can fill building until fire almost starved for oxygen, at which point it begins to smolder
2. More incomplete combustion produces more carbon monoxide
3. Carbon monoxide is explosive and flammable
4. If oxygen enters structure improperly, accumulated base will ignite into rapidly spreading fire or violent explosion-backdraft
5. Situation can be controlled effectively through proper ventilation and attack

III. Truck Company Operations (1-2)

A. Truck companies

1. Referred to as ladder companies, hook-and-ladder companies, aerial companies, and snorkel companies
2. Label describes apparatus but not planning, personnel, equipment, and training
3. Basic duties
 - a. Rescue
 - b. Ventilation
 - c. Laddering

T-1-10

- d. Forcible entry
 - e. Checking fire extension
 - f. Salvage
 - g. Ladder pipe operations
 - h. Utility control
 - i. Overhaul
4. Discuss the various duties associated with a truck company using text and supplemental material
- B. Truck company may perform some or all of duties
- C. Fireground efficiency depends on
- 1. Knowledge of company territory
 - a. Ventilation and laddering problems
 - b. Life hazards
 - c. Exposure hazards
 - d. Locations especially dangerous to fire fighters
 - e. Other special conditions
 - 2. Building inspections
 - 3. Pre-fire planning

REVIEW:

T-1-11

Fireground Support Operations and Initial Assignments

- * Introduction
- * Fire spread
- * Truck company operations
- * Tools and personnel
- * Coverage
- * Apparatus positioning

REMOTIVATION:

ASSIGNMENT:

=====

EVALUATION:

VISUAL AIDS FOR SESSION 1

T-1-1 The student will demonstrate a basic understanding of fire spread, truck company operations, initial tool and personnel assignments, scene coverage by apparatus, and apparatus positioning.

T-1-2 OVERVIEW:

- * Introduction
- * Fire spread
- * Truck company operations
- * Tools and personnel
- * Coverage
- * Apparatus positioning

T-1-3 Five basic objectives:

1. Rescue victims
2. Protect exposures
3. Confine the fire
4. Extinguish the fire
5. Overhaul the fireground

T-1-4 Other objective - salvage

Activities in support of fire fighting

1. Raising ladders
2. Advancing hoselines
3. Ventilating

T-1-5 Truck company duties may be performed by personnel responding on aerial apparatus, rescue squads, engines, or other fire apparatus. The personnel, tools, and equipment are more important in performing the duties than the apparatus being used.

T-1-6 Illustration similar to figure 1.1 in Richman text

T-1-7 Illustration similar to figure 1.2 in Richman text

T-1-8 Illustration similar to figure 1.3 in Richman text

T-1-9 Illustration similar to figure 1.4 in Richman text

T-1-10 Basic duties

1. Rescue
2. Ventilation
3. Laddering
4. Forcible entry
5. Checking fire extension
6. Salvage
7. Ladder pipe operations
8. Utility control
9. Overhaul

T-1-11 Fireground Support Operations and Initial Assignments

- * Introduction
- * Fire spread
- * Truck company operations

IV APPENDIX

LEVEL OF INSTRUCTION

Adapted from Norman E. Gronlund's
Stating Objectives for Classroom Instruction

Select the Level of Instruction based on the domain to be used in the lesson: cognitive, affective, or psychomotor. Lessons are usually taught in the cognitive or psychomotor domains. Initial lessons may begin with lower levels of instruction (below), and students advance through levels in successive lessons. Advanced programs may begin at higher levels or work consistently at the upper learning levels. Some lessons progress through several learning levels in one session. (Example: describe techniques--level 1, discuss and demonstrate--level 2, practice--level 3 in one session.) Choose the instruction level based on the highest level that will be met in that lesson.

(Bloom's Taxonomy)

Cognitive

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

(Krathwohl)

Affective

1. Receiving
2. Responding
3. Valuing
4. Organization
5. Characterization

(Simpson)

Psychomotor

1. Perception
2. Set
3. Guided Response
4. Mechanism
5. Complex Overt Response
6. Adaptation
7. Origination

DESCRIPTIONS:

Cognitive:

1. Knowledge: remembers, recalls; the lowest learning level. Defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states.
2. Comprehension: grasps meaning, interprets material, estimates future trends; the lowest level of understanding. Converts, defends, gives examples, distinguishes, estimates, explains, extends, generalizes, infers, paraphrases, predicts, rewrites, summarizes.
3. Application: uses material in new and concrete situations, applies rules, methods, concepts, principles, laws, theories; requires higher understanding level. Changes, computes, demonstrates, solves, discovers, manipulates, modifies, operates, predicts, prepares, uses, produces, relates.
4. Analysis: breaks material into components to understand structural organizational; higher intellectual level than comprehension and application requiring understanding of both structure and content. Breaks down, diagrams, differentiates, infers, discriminates, relates, distinguishes, identifies, illustrates, outlines, points out, selects, separates, subdivides.
5. Synthesis: able to put parts together to form a new whole, stresses creative behaviors, emphasizes forming new patterns or structures. Categorizes, combines, complies, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, relates, revises, reconstructs, reorganizes, writes/rewrites, summarizes, tells.
6. Evaluation: able to judge value of material for a given purpose based on definite criteria. Highest in cognitive hierarchy as this contains elements of all other categories plus conscious value judgements based on clearly defined criteria. Appraises, compares, concludes, relates,

contrasts, criticizes, describes, discriminates, explains, justifies, interprets, summarizes, supports.

Affective:

1. Receiving: willing to attend to particular stimuli; lowest level of learning outcomes in affective domain. Asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits erect, replies, uses.
2. Responding: participates, reacts to stimuli. Answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.
3. Valuing: worth or value attached to an object, phenomenon, behavior from simple acceptance to commitment; internalizes a set of specified values with clues expressed by overt behavior. Completes, describes, differentiates, explains, follows, forms, initiates, joins, invites, justifies, proposes, reads, reports, selects, shares, studies, works.
4. Organization: brings together different values, resolves conflicts, and begins building of internally consistent value system. Adheres, alters, arranges, combines, compares, completes, defends, explains, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.
5. Characterization: develops a value system with controlled behavior and a characteristic lifestyle; behavior is pervasive, consistent, and predictable. Acts, discriminates, solves, displays, influences, proposes, qualifies, questions, revises, serves, uses, verifies.

Psychomotor:

1. Perception: uses organs or sense to obtain cues to guide motor activity. Chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects, separates.
2. Set: readiness to take a particular type of action; includes mental, physical or emotional set. Begins, displays, explains, moves, shows, proceeds, reacts, responds, starts, volunteers.
3. Guided Response: early stages in learning a complex skill; includes imitation, trial and error. Assembles, builds, calibrates, displays, constructs, dismantles, dissects, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches, works.
4. Mechanism: performs acts where learned responses have become habitual and moves with confidence and proficiency; same as guided response.
5. Complex Overt Response: skillful motor performance of complex movement. Performs proficiently, quickly, smoothly, accurately with minimum energy, without hesitation. Same as guided response.
6. Adaptation: skills are so well developed that movement patterns can be modified to fit special requirements or meet problem situations. Adapts, alters, changes, rearranges, reorganizes, revises, varies.
7. Origination: creates new movement patterns to fit a unique situation or problem. Emphasizes creativity based on highly developed skills. Arranges, combines, composes, constructs, designs, originates.

Bibliography

(The references are listed in the order that they appear in this document.)

Rowntree, Derek. (1981). A Dictionary of Education. Totowa, New Jersey: Barnes and Noble Books.

Wiles, Jon and Bondi, Joseph. (1991). Supervision: A Guide to Practice (3rd ed.). New York: Macmillan Publishing Company.

Nilson, Carolyn. (1989). Training Program Workbook & Kit. Englewood Cliffs, New Jersey: Prentice Hall.

Gronlund, Norman E. (1985). Stating Objectives for Classroom Instruction. New York: Macmillan Publishing Company.

Department of the Air Force. (1979). AF Manual 50-2. Washington, D. C.: Headquarters US Air Force.

Good, T. W. (1983). Training for Everyone. Training. November, 1983.