TRAINING INSTRUCTOR 1C

Approved and Adopted by the Office of State Fire Marshal

Recommended for adoption by the Statewide Training and Education Advisory Committee and the State Board of Fire Services

INSTRUCTOR GUIDE

January 2010
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## LESSON PLANS

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Mission Statement
The mission of State Fire Training is to enable the California fire service to safely protect life and property through education, training, and certification.

California Fire Service Training and Education System
The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal's Office with oversight provided by the State Board of Fire Services.

The role of CFSTES is one of facilitating, coordinating, and assisting in the development and implementation of standards and certification for the California fire service. CFSTES manages the California Fire Academy System by providing standardized curriculum and tests; accredited courses leading to certification; approved standardized training programs for local and regional delivery; administering the certification system; and publishing Certification Training Standards, Instructors Guides, Student Manuals, Student Supplements, and other related support materials.

This system is as successful and effective as the people involved in it are. It is a fire service system developed by the fire service, for the fire service... and we believe it is the best one in the country.

Acknowledgments
State Fire Training coordinated the development of the material contained in this guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this guide for adoption by the State Fire Marshal (SFM). This guide is appropriate for fire service personnel and for personnel in related occupations that are pursuing State Fire Training certification.
Special acknowledgement and thanks are extended to the following members of State Fire Training for their diligent efforts and contributions that made the final publication of this document possible.

Alicia Hamilton
Fire Service Training Specialist III

The material contained in this document was compiled and organized through the cooperative effort of numerous professionals within, and associated with, the California fire service. We gratefully acknowledge these individuals who served as principal developers for this document.

| Richard Beckman                     | Ron Martin, Team Leader              |
| San Gabriel Fire Department         | Contra Costa County FPD              |
| Jim Brown                           | Gaudenz Panholzer                    |
| Monterey Fire Department            | San Jose Fire Department             |
| Bob Buell                           | Matt O’Donnell                       |
| Alameda Fire Department             | Ebbetts Pass Fire Department         |
| Mike Cahill                         | Lee Parker                           |
| Woodland Fire Department (Retired)  | Modesto Fire Department              |
| Jim Eastman                         | Bill Vandevort                       |
| Sacramento Metro FPD                | Monterey Fire Department (Retired)   |
| Mary Jennings                       | CFFJAC (Retired)                     |

"We gratefully acknowledge the hard work and accomplishments of those before us who built the solid foundation on which this program continues to grow."
**Student Profile**

**Target Group**
Personnel preparing to become a SFT Registered Instructor or a certified Training Instructor.

**Prerequisites**
Training Instructor 1A and Training Instructor 1B.

**Desired Attendance Time Frame**
None.
Class Requirements and Space

The characteristics of the classroom and support facilities have a great impact on the learning environment and the instructor's success or failure. For this course, it is advisable for the instructor to adhere as closely as possible to the following guidelines.

Classroom Equipment

- Writing board with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

Materials

Unit 1: Introduction
- Course outline
- Progress chart

Unit 2: Methodology
- Individual Activity 2-3-1: Levels Of Instruction
- Individual Activity 2-5-1: Special Needs And Limited English Proficiency

Unit 3: Instructional Preparation and Delivery
- Group Activity 3-3-1: Developing Behavioral Objectives
- Individual Activity 3-4-1: Cognitive Lesson Plan Development
- Individual Activity 3-4-2: Cognitive Teaching Demonstration
- Individual Activity 3-5-1: Psychomotor Lesson Plan Development
- Individual Activity 3-5-2: Psychomotor Teaching Demonstration
- Individual Activity 3-6-1: Developing Ancillary Components
- Individual Activity 3-10-1: Developing Audiovisual Training Aids
- Individual Activity 3-11-1: Evaluating A Student Instructor's Cognitive Teaching Demonstration As The Primary Evaluator
- Individual Activity 3-11-2: Evaluating A Student Instructor's Cognitive Teaching Demonstration As The Secondary Evaluator
- Individual Activity 3-11-3: Evaluating A Student Instructor's Psychomotor Teaching Demonstration As The Primary Evaluator

Unit 4: Testing
- Group Activity 4-2-1: Creating An Oral Test
- Individual Activity 4-2-2: Creating A Multiple-choice Written Test
- Individual Activity 4-2-3: Creating A True-False Written Test
- Group Activity 4-3-1: Test Administration
Introduction to the Instructor Guide

This publication is intended to serve as an instructor guide. For each topic identified in the course outline, a lesson plan has been developed that contains: a time frame, level of instruction, authority, behavioral objective, materials needed, method of instruction, references, preparation statement, lesson content, and end page. Suggested application methods have been identified throughout the lessons for you to use during your presentation.

- **Time Frame**: The estimated duration required for in-class presentation.
- **Level of Instruction**: Identifies the instructional level that the material was designed to fulfill. You have the latitude to increase the level based on available time, local conditions, and the students' apperceptive base.
- **Authority**: Keyed, when applicable, to the appropriate Certification Training Standard task.
- **Behavioral Objective**: The behavioral objective is a statement of the student's performance desired at the end of instruction. You must ensure that enough information is given in the presentation and/or activities to enable the student to perform according to the goal.
- **Materials Needed**: This should be a complete list of everything you will need to present the lesson, including visual aids, tests, etc.
- **References**: These are the specific references the curriculum development team used when developing the lesson plan. In addition, references may be listed as additional study aids for instructors to enhance the lesson -- books, manuals, bulletins, scripts, visual aid utilization plans and the like.
- **Preparation**: The motivational statement connects the student with the lesson plan topic through examples or illustrations relating to their occupation, injury, and even mortality. You will need to develop this statement to fit your target audience.
- **Lesson Content**: Includes information used in the four-step method of instruction.

### Cognitive Lesson Plans

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everything you say or display Content Instructor notes</td>
<td>Student Participation • Questions • Activities • Audiovisual Cues</td>
</tr>
</tbody>
</table>

### Psychomotor Lesson Plans

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific actions to be performed by the students</td>
<td>The who, what, when, where, why, and how (the “tricks of the trade”)</td>
</tr>
</tbody>
</table>
Begin with a verb, followed by a noun |

Safety practices

**Appendix A – Answer Keys**

- Formative tests with the answer key; instructor use only.

**Appendix B – Formative Tests**

- Formative test masters that must be copied for each student. Keep these in good condition to use for future classes.
Course Outline

Course Objectives: To provide the student with...
  a) A variety of methods and techniques for developing lesson plans and tests in accordance
     with the latest concepts in career education.
  b) Information to develop cognitive and psychomotor lesson plans and related supplemental
     materials.
  c) Various testing instruments to evaluate teaching and learning efficiency.
  d) An opportunity to develop, receive feedback, and finalize instructional materials to deliver
     a teaching demonstration.

Course Content: ............................................................................................................. 40:00

Unit 1: Introduction
1-1 Orientation And Administration ....................................................................................... 1:00

Unit 2: Methodology
2-1 Reasons For Lesson Plan Development ........................................................................ 0:30
2-2 Sources Of References And Materials ......................................................................... 0:30
2-3 Determining Levels Of Instruction ............................................................................. 0:30
2-4 Employing The Four-step Method Of Instruction ....................................................... 0:30
2-5 Teaching English Learners And Students With Special Needs ...................................... 0:30

Unit 3: Instructional Preparation And Delivery
3-1 Elements Of A Course Outline ...................................................................................... 0:30
3-2 Components Of Cognitive And Psychomotor Lesson Plans ........................................ 1:00
3-3 Developing Student Behavioral Objectives ................................................................. 1:00
3-4 Developing A Cognitive Lesson Plan (SFT Format) ................................................... 2:00
3-5 Developing A Psychomotor Lesson Plan (SFT Format) .............................................. 1:30
3-6 Developing And Employing Ancillary Components .................................................... 1:00
3-7 Selecting And Employing Audiovisual Training Aids ................................................. 1:30
3-8 Transition Techniques Within And Between Audiovisual Training Aid Devices ......... 1:00
3-9 Cleaning And Field Level Maintenance For Audiovisual Training Aid Devices .......... 0:30
3-10 Developing Audiovisual Training Aids ..................................................................... 1:30
3-11 Procedures For Evaluating Student Instructor Teaching Demonstrations ............... 0:30

Unit 4: Testing
4-1 Purpose, Selection Criteria, And Elements Of Test Instruments .................................. 1:00
4-2 Creating Oral, Written, And Performance Tests ......................................................... 2:00
4-3 Methods Of Administering And Grading Test Instruments (Oral and Written) .......... 1:00
Student Instructor Teaching Demonstrations .............................................................. 17:30
Formative Tests ................................................................................................................ 2:00
Summative Test ................................................................................................................ 1:00

Texts and References
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition
- Effective Supervisory Practices, ICMA, Fourth Edition
- Developing Attitude Toward Learning, Robert F. Mager, 1968 Edition
- Overcoming Test Anxiety, Dennis H. Congos, University of Central Florida
- Telling Ain’t Training, Harold D. Stolovitch and Erica J. Keeps, 2002 Edition
- The Instructor, Charles R. Allen
- The Rights of Firefighters, Will Aitchison, Third Edition

Calendar of Events
See Lesson Plan 1-1: Orientation and Administration
### TRAINING INSTRUCTOR 1C PROGRESS CHART

<table>
<thead>
<tr>
<th>STUDENT IDENTIFICATION</th>
<th>BEGINNING DATE:</th>
<th>ENDING DATE:</th>
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<tbody>
<tr>
<td></td>
<td>Activity 2-3-1</td>
<td>Activity 3-3-1</td>
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<tr>
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<td>Activity 2-5-1</td>
<td>Activity 3-4-1</td>
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<td>Activity 3-3-1</td>
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<td>Activity 3-5-1</td>
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<td>Activity 3-5-1</td>
<td>Activity 3-6-1</td>
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<td>Activity 3-10-1</td>
<td>Activity 3-11-1</td>
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<td>Activity 3-11-1</td>
<td>Primary Eval #1</td>
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<td>Activity 3-11-2</td>
<td>Primary Eval #2</td>
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<td>Activity 3-11-2</td>
<td>Secondary Eval #1</td>
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<td>Activity 3-11-3</td>
<td>Secondary Eval #2</td>
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<td>Activity 3-11-3</td>
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<td>Activity 3-11-3</td>
<td>Primary Eval #2</td>
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**CLASS SIZE:** Maximum 25 Students

16 Students = 1 Master Instructor

17-25 Students = 2 Master Instructors or 1 Master Instructor/Qualified Skills Evaluator

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## TRAINING INSTRUCTOR 1C PROGRESS CHART

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<th>CLASS SIZE: Maximum 25 Students</th>
<th>BEGINNING DATE:</th>
<th>ENDING DATE:</th>
<th>ATTENDANCE</th>
<th>SUMMATIVE TEST</th>
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<td>16 Students = 1 Master Instructor</td>
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<td>17-25 Students = 2 Master Instructors or 1 Master Instructor/Qualified Skills Evaluator</td>
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<td>STUDENT IDENTIFICATION</td>
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16 Students = 1 Master Instructor

17-25 Students = 2 Master Instructors or 1 Master Instructor/Qualified Skills Evaluator

Activity 4-2-1, Activity 4-2-2, Activity 4-2-3, Activity 4-3-1, Formative Test #1, Formative Test #2

Minimum 80% Required to Pass

PASS/FAIL

STUDENT IDENTIFICATION:

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**Topic:** 1-1: Orientation And Administration

**Time Frame:** 1:00

**Level of Instruction:** Level I

**Authority:** None

**Behavioral Objective:**
- **Condition:** Given an oral evaluation
- **Behavior:** The student will define the course requirements
- **Standard:** To the instructor's satisfaction according to the information contained in *Training Instructor 1C Student Supplement, SFT, 2010 Edition*, Pages 2-5

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

**References:**
- Calendar of Events

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)**
- **Curiosity (arouse)**
- **Interest (create)**
- **Desire (stimulate)**
- **Begin**
- **Association**
- **Students**
- **Experience**

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
I. INTRODUCTIONS

A. Introduce self and other staff
B. Cite background
   1. Fire department experience
   2. Education and training
   3. Teaching history
   4. Contact information where instructor can be reached
      a) Phone number(s)
      b) Email
      c) Other
C. Facilities orientation
   1. Classroom location(s)
   2. Restrooms
   3. Food locations
   4. Smoking locations
   5. Break locations
   6. Telephones
      a) Cell phone use
   7. Parking
   8. Emergency procedures

D. Student introductions

NOTE: Slide will remind each student what information to include in self introduction.

CLASS ACTIVITY
Students are to introduce themselves.
1. Name
2. Department
3. Rank
4. Years of experience
5. Current assignment
6. Reason(s) for taking Fire Instructor 1C

Why do we have you introduce yourselves at the beginning of a class in this manner?

E. Reasons for student introductions
   1. Introduce self to class
   2. Become accustomed to speaking in front of a group
   3. Get more at ease and relaxed with new and unfamiliar atmosphere
   4. Networking purposes

II. COURSE DESCRIPTION
   A. Class hours
      1. 19.5 hours for lecture
      2. 17.5 hours teaching demonstrations
         a) Based on 16 students
      3. 3 hours for formative and summative tests
   B. Considerable work
      1. Numerous activities
      2. Substantial homework load
         a) May equal or exceed classroom hours
         b) All homework must be successfully completed to pass
   C. Lunch and break times
III. CALENDAR OF EVENTS

NOTE: Refer students to the Calendar of Events in their student supplement.

A. Relates to the development and application of cognitive and psychomotor teaching materials
B. Time frames
C. There will be group discussions and activities throughout the class
D. Each student is required to complete two teaching presentations
   1. One 30-minute cognitive presentation
   2. One 15-minute psychomotor presentation
   3. Each based on a lesson plan developed during a homework assignment
E. Each student is required to evaluate three student instructor teaching demonstrations
   1. Primary Evaluators for cognitive presentations will lead a group critique
   2. Secondary Evaluators complete an evaluation independently

NOTE: Review topics to be covered in each session.

IV. COURSE REQUIREMENTS

A. Attendance
   1. Must attend the entire course
   2. Excused absences may be considered for emergencies
B. Classroom and group participation are required
### C. Required text

1. *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition
   - a) Ancillary material not in the required IFSTA text
   - b) All individual and group activities

### V. STUDENT EVALUATION

**A. Two formative tests**
- 1. Must complete both tests
- 2. Tests are not graded
   - a) Each test will be reviewed and discussed as a group
- 3. Students can keep their tests

**B. Activities**
- 1. Students must successfully participate in all activities

**C. Lesson plan development**
- 1. Topic must be emergency service related
- 2. Original lesson plan cannot be handwritten
- 3. Evaluated for
   - a) Content
   - b) Spelling
   - c) Grammar
   - d) Punctuation
   - e) Format

**D. Lesson plan rewrites**
- 1. Students failing the lesson plan development assignment may submit a rewrite
2. A single rewrite opportunity is allowed
3. Rewrites must be accompanied by the original paperwork
4. The rewrite will be evaluated by the Primary Instructor for meeting the passing standard

E. Teaching demonstrations
1. Each student must deliver one cognitive and one psychomotor teaching demonstration
2. The Primary Instructor must approve each topic selected by students for their teaching demonstrations
   a) Emergency service related
   b) No duplications
   c) Selected teaching demonstrations will be posted on a master list
3. Students must furnish all materials required for their teaching demonstration
4. Cognitive teaching demonstration
   a) Each student must pass the individual cognitive teaching demonstration
   b) The Primary Instructor, a second Master Instructor, or a qualified skills evaluator must observe all students’ cognitive teaching demonstrations in their entirety
5. Psychomotor teach demonstration
   a) Will be completed as a small group activity and evaluated by other students
   b) The Primary Instructor monitor all groups

F. Summative test
1. Minimum 50-item test
2. Format will be either completion, short-answer, and/or multiple choice
3. Minimum 80% passing score in order to pass the class
a) If a student fails the summative test, he or she fails the class and does not meet the prerequisite to attend the next Training Instructor class.

4. Retaking a summative test
   a) The Primary Instructor may elect to administer a retake exam
   b) Must be administered prior to returning the class materials to SFT
      1) Within 15 days of the class ending date

**NOTE:** Refer students to the Student Tracking Sheet in their student supplement.

G. Progress chart
   1. Uses student identification numbers instead of names
   2. Federal law prohibits publication of identifiable student grades
      a) Family Educational Rights and Privacy Act of 1974
Summary:
If these course requirements seem challenging and the course material that has to be covered appears like a lot in a short period, you are right. Careful diligence is necessary for success. In addition, you should participate in the classroom exercises and group activities to the fullest extent so you will obtain a greater understanding of the underlying principles being taught, and to be better prepared for the assignments you will be developing at home.

Should you have problems at any time, contact me at a break period or after class. Because of the amount of work and the pace of this course, you cannot afford to fall behind in the lectures, class participation and activities, or homework assignments.

Evaluation:
The student will complete the oral evaluation at a time determined by the instructor.

Assignment:
## Calendar of Events

<table>
<thead>
<tr>
<th>DAY</th>
<th>TOPIC</th>
<th>TITLE</th>
<th>TIME</th>
<th>ACTIVITY</th>
<th>EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-1</td>
<td>Orientation and Administration</td>
<td>1:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-1</td>
<td>Reasons For Lesson Plan Development</td>
<td>0:30</td>
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</tr>
<tr>
<td></td>
<td>2-2</td>
<td>Sources Of References And Materials</td>
<td>0:30</td>
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<tr>
<td></td>
<td>2-3</td>
<td>Determining Levels Of Instruction</td>
<td>0:30</td>
<td>2-3-1</td>
<td></td>
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<td>2-4</td>
<td>Employing The Four-step Method Of Instruction</td>
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<tr>
<td></td>
<td>2-5</td>
<td>Teaching English Learners And Students With Special Needs</td>
<td>0:30</td>
<td>2-5-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-1</td>
<td>Elements Of A Course Outline</td>
<td>0:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-2</td>
<td>Components Of Cognitive And Psychomotor Lesson Plans</td>
<td>1:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-3</td>
<td>Developing Student Behavioral Objectives</td>
<td>1:00</td>
<td>3-3-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-4</td>
<td>Developing A Cognitive Lesson Plan</td>
<td>2:00</td>
<td>3-4-1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Day 1 Total</strong></td>
<td>8:00</td>
<td></td>
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<tr>
<td></td>
<td>3-5</td>
<td>Developing A Psychomotor Lesson Plan</td>
<td>1:30</td>
<td>3-5-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-6</td>
<td>Developing And Employing Ancillary Components</td>
<td>1:00</td>
<td>3-6-1</td>
<td></td>
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<tr>
<td></td>
<td>3-7</td>
<td>Selecting And Employing Audiovisual Training Aids</td>
<td>1:30</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>3-8</td>
<td>Transition Techniques Within And Between Training Aid Devices</td>
<td>1:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-9</td>
<td>Cleaning And Field Level Maintenance For Audiovisual Training Aid Devices</td>
<td>0:30</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>3-10</td>
<td>Developing Audiovisual Training Aids</td>
<td>1:30</td>
<td>3-10-1</td>
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<td><strong>Day 2 Total</strong></td>
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<tr>
<td></td>
<td>3-11</td>
<td>Procedures Used For Evaluating Student Instructor Teaching Demonstrations</td>
<td>0:30</td>
<td>3-11-1</td>
<td>3-11-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student Instructor Small Group Psychomotor Teaching Demonstrations</td>
<td>2:00</td>
<td>3-5-2</td>
<td>3-11-3</td>
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<tr>
<td></td>
<td></td>
<td><strong>Day 3 Total</strong></td>
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<tr>
<td>DAY</td>
<td>TOPIC</td>
<td>TITLE</td>
<td>TIME</td>
<td>ACTIVITY</td>
<td>EVALUATION</td>
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</tr>
<tr>
<td>4-1</td>
<td>Purpose, Selection Criteria, And Elements Of Test Instruments</td>
<td>1:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-2</td>
<td>Creating Oral, Written, And Performance Tests</td>
<td>2:00</td>
<td>4-2-1, 4-2-2, 4-2-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Instructor Cognitive Teaching Demonstrations</td>
<td>2:30</td>
<td>3-4-2, 3-11-1, 3-11-2</td>
<td></td>
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<td></td>
<td><strong>Day 3 Total</strong></td>
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<tr>
<td>Day 4</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1:00</td>
<td>Formative Test 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Instructor Cognitive Teaching Demonstrations</td>
<td>7:00</td>
<td>3-4-2, 3-11-1, 3-11-2</td>
<td></td>
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<td></td>
<td><strong>Day 4 Total</strong></td>
<td><strong>8:00</strong></td>
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<tr>
<td>Day 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Instructor Cognitive Teaching Demonstrations</td>
<td>6:00</td>
<td>3-4-2, 3-11-1, 3-11-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-3</td>
<td>Methods Of Administering And Grading Test Instruments</td>
<td>1:00</td>
<td>4-3-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1:00</td>
<td>Summative Test</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td><strong>Day 5 Total</strong></td>
<td><strong>8:00</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Course Total</strong></td>
<td><strong>40:00</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Topic: 2-1: Reasons For Lesson Plan Development

Time Frame: 0:30

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials

Behavioral Objective:

| Condition: | Given a course final exam/summative test |
| Behavior: | The student will describe the purposes and benefits of lesson plans and identify reasons for developing lesson plans |
| Standard: | With a minimum 80% accuracy on the course final exam/summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 322-323 |

Materials Needed:
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

References:
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 322-323

Preparation:
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract)
- Curiosity (arouse)
- Interest (create)
- Desire (stimulate)
- Begin
- Association
- Students
- Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
VI. DEFINITION OF A LESSON PLAN

A. Instructional document that outlines the information and skills to be taught
   1. States what instructors and students will accomplish during a given lesson
   2. Provides step-by-step guide for presentations
   3. Lists support materials needed and indicates when they will be used

VII. PURPOSES AND BENEFITS OF LESSON PLANS

A. Provide uniformity
   1. Standardize instruction
   2. Same information taught each time lesson is delivered
   3. Helps provide consistent job performance of trained personnel

B. Give a clear path
   1. Both instructors and students
   2. Maintains sequential, orderly instruction
   3. Route to achieving learning objectives
      a) Improves student success

C. Ensure continuity
   1. Multiple instructors teaching from lesson plans
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Provide documentation</td>
<td>What does a lesson plan document?</td>
</tr>
<tr>
<td>1. Indicate teaching/learning information</td>
<td></td>
</tr>
<tr>
<td>2. Amount and type of materials, equipment, and other resources needed to teach the lesson</td>
<td></td>
</tr>
<tr>
<td>E. Provide document for developing test and evaluation requirements</td>
<td>What are some reasons for using prepared lesson plans?</td>
</tr>
<tr>
<td>1. Show material taught</td>
<td>SLIDE: #.#-13</td>
</tr>
<tr>
<td>2. Verify information presented is appropriate for testing</td>
<td></td>
</tr>
<tr>
<td>3. Establish testing criteria</td>
<td></td>
</tr>
<tr>
<td>VIII. REASONS FOR USING PREPARED LESSON PLANS</td>
<td></td>
</tr>
<tr>
<td>A. Less development time and cost</td>
<td></td>
</tr>
<tr>
<td>1. Numerous texts have prepared lesson plans available</td>
<td></td>
</tr>
<tr>
<td>B. Consistency with other agencies and organizations</td>
<td></td>
</tr>
<tr>
<td>1. Easier to exchange with other agencies</td>
<td></td>
</tr>
<tr>
<td>2. Ensures adherence to State and Federal standards (e.g., Fire Fighter I)</td>
<td></td>
</tr>
<tr>
<td>C. Usually adequate for general information</td>
<td></td>
</tr>
<tr>
<td>IX. REASONS FOR DEVELOPING LESSON PLANS</td>
<td></td>
</tr>
<tr>
<td>A. Prepared lesson plans may not be available</td>
<td></td>
</tr>
<tr>
<td>1. New equipment or techniques</td>
<td></td>
</tr>
</tbody>
</table>
## TRAINING INSTRUCTOR 1C
### Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Adaption of prepared lesson plans may be more difficult</td>
<td></td>
</tr>
<tr>
<td>1. Agency-specific needs may be significantly different than generic version</td>
<td></td>
</tr>
<tr>
<td>2. Agency needs greater depth in subject area than what is provided</td>
<td></td>
</tr>
<tr>
<td>C. Allows instruction to better meet the needs of the students</td>
<td></td>
</tr>
<tr>
<td>1. Lesson plans can be developed for a specific target audience</td>
<td></td>
</tr>
<tr>
<td>D. Ensures lesson plan consistency</td>
<td></td>
</tr>
<tr>
<td>1. Agency-specific format</td>
<td></td>
</tr>
<tr>
<td>2. Lesson plans from several courses can be merged to create new courses</td>
<td></td>
</tr>
<tr>
<td>3. Cataloging and filing of lesson plans is simpler</td>
<td></td>
</tr>
<tr>
<td>E. Enables agency to have lesson plans accurately reflect local needs</td>
<td></td>
</tr>
<tr>
<td>1. Policies</td>
<td></td>
</tr>
<tr>
<td>2. Procedures</td>
<td></td>
</tr>
<tr>
<td>3. Equipment</td>
<td></td>
</tr>
<tr>
<td>F. Career development of instructors</td>
<td></td>
</tr>
</tbody>
</table>

1. Lesson plan development enhances knowledge of instructional process

G. Improved documentation

1. In-house developed lesson plans provide more accurate documentation of the material taught

How might developing lesson plans help develop instructors?
Summary:
Lesson plans serve as an important tool in delivering consistent instruction. Many topics are adequately covered by prepared lesson plans that can be modified to meet specific agency needs. When no such prepared lesson plans are available, or when an agency has a need that can't be met by a prepared lesson plan, it may be appropriate to develop a lesson plan.

Evaluation:
The student will complete the course final exam or summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 322-323 in order to prepare yourself for the upcoming test. Study for our next session.
**Topic:** 2-2: Sources Of References And Materials

**Time Frame:** 0:30

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructor Materials

**Behavioral Objective:**

- **Condition:** Given a course final exam or summative test
- **Behavior:** The student will describe common sources of instructional references and considerations for determining the validity, accuracy and credibility of the information
- **Standard:** With a minimum 80% accuracy on the course final exam or summative test according to the information contained in *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 433-439

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

**References:**

**Preparation:** Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

```
Attention (attract)       Begin
Curiosity (arouse)       Association
Interest (create)        Students
Desire (stimulate)       Experience
```

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLIDE: #1</td>
<td>SLIDE: #2</td>
</tr>
</tbody>
</table>

**X. RESEARCH**

A. Need factual support for training content

B. Data collection
   1. Sources depend on specific uses of the data
   2. Amount and detail of research and data collection depends on
      a) Time available
      b) Complexity of the subject
      c) Importance of the subject

What are some common sources of information for fire service instructors?

**XI. COMMON INFORMATION SOURCES FOR FIRE SERVICE INSTRUCTION**

A. Government agencies

B. Libraries

C. Educational institutions

D. Nonprofit organizations

E. Professional organizations

F. Testing and standards organizations

G. Vendors/manufacturers

H. Internet

**XII. RELIABILITY AND CREDIBILITY OF SOURCES**

A. Terms used to describe types of research material
   1. Primary literature
      a) Written by someone with direct knowledge of event or topic
      b) Often considered most credible
### B. Secondary literature
1. Based on primary literature
2. Written or compiled by someone not present at event or directly knowledgeable of the subject
3. Acceptable if primary source(s) is accurate and evaluated
4. Many texts are in this category

### C. Tertiary literature
1. Twice removed from original source
2. May contain errors of translation, interpretation or context

#### XIII. INFORMATION SOURCE CONSIDERATIONS

##### A. Internet
1. Amount of information available is immense
   a) Search engines can help organize and prioritize information sources
   b) Much of the information available in print is now also available on the web

2. Verify authority
   a) Not all information on internet is accurate, valid, or current
   b) Determine who produced or sponsored information
   c) Watch for misleading Uniform Resource Locators (URLs)
      1) Document by listing the complete URL and the date obtained

---

What are some considerations for determining the reliability of an internet source?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>d) Domains that tend to be more reliable</td>
<td></td>
</tr>
<tr>
<td>1) .edu</td>
<td></td>
</tr>
<tr>
<td>2) .org</td>
<td></td>
</tr>
<tr>
<td>3) .gov</td>
<td></td>
</tr>
<tr>
<td>4) .mil</td>
<td></td>
</tr>
<tr>
<td>e) Be skeptical of &quot; .com &quot; domains</td>
<td></td>
</tr>
<tr>
<td>f) Read &quot;about&quot; sections</td>
<td></td>
</tr>
<tr>
<td>g) Check dates</td>
<td></td>
</tr>
<tr>
<td>h) Look for reasons the author/sponsor is authoritative/credible</td>
<td></td>
</tr>
</tbody>
</table>

3. Determine scope and content
   a) Site/document purpose
   b) Intended audience
   c) Current content
   d) Fact/opinion
   e) Affiliations

B. Government agencies

1. Federal
   a) National Fire Incident Reporting System (NFIRS)
   b) National Institute of Occupational Safety and Health (NIOSH)
   c) Department of Homeland Security (DHS)
   d) Federal Emergency Management Agency (FEMA)
## PRESENTATION

e) United States Fire Administration (USFA)
f) Department of Transportation (DOT)
g) Centers for Disease Control (CDC)

**NOTE:** List additional agencies as noted by the students.

## APPLICATION

What State agencies produce material and information useful to the instructor?

2. State
   a) California State Fire Marshal (CSFM)
   b) Office of Emergency Services (OES)
      1) Also called the Governor's Office of Emergency Services
   c) Office of Homeland Security (OHS)
   d) Occupational Safety and Health Administration (Cal/OSHA)

**NOTE:** List additional agencies as noted by the students.

What agencies or departments in your local area would be good sources of information?

3. Local

**NOTE:** List additional agencies as noted by the students.

C. Libraries
D. Educational entities
   1. Community colleges
   2. California Fire Fighter Joint Apprenticeship Committee (CFFJAC)
   3. Regional Occupational Program (ROP)
   4. Career/Technical education
   5. State colleges and universities

**NOTE:** List additional agencies as noted by the students.
E. Professional organizations
   1. International Association of Fire Chiefs (IAFC)
   2. International Association of Fire Fighters (IAFF)
   3. California Professional Firefighters (CPF)
   4. Training Resource and Data Exchange (TRADE)
   5. California Fire Chiefs Association (CFCA)
   6. CFCA Training Officers

NOTE: List additional organizations as noted by the students.

F. Testing and standards organizations
   1. National Fire Protection Association (NFPA)
   2. Underwriters Laboratory (UL)
   3. Factory Mutual (FM)

NOTE: List additional agencies as noted by the students.

G. Vendors/manufacturers

H. Nonprofit organizations

XIV. VALIDITY AND REFERENCE CITATIONS

A. Instructors must determine the accuracy and validity of the information sources
   1. Credibility
   2. Accuracy
   3. Reasonableness
   4. Support

B. Use standard styles to cite references
   1. American Psychiatric Association (APA)
   2. Modern Language Association (MLA)
   3. Chicago Style Manual (CSM)
Summary:
There are many sources of information available for instructional development. The volume of information available and the ease of publishing information on the internet can lead to inaccurate, invalid, and out of date material. Instructors must determine and verify the validity and accuracy of reference materials.

Evaluation:
The student will complete the course final exam at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 433-439 in order to prepare yourself for the upcoming test. Study for our next session.
Topic: 2-3: Determining Levels Of Instruction

Time Frame: 0:30

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS # 2: Describe And Demonstrate The Development Of Instructional Materials

Behavioral Objective:
Condition: Given an activity and a summative test
Behavior: The student will determine the levels of instruction used in the fire service, recognize the instructor's role in each level of instruction, and identify the evaluation principles utilized in each level of instruction
Standard: With a minimum 80% accuracy on the summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 142 and 531, Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 9-14, and successfully completing Individual Activity 2-3-1

Materials Needed:
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Individual Activity 2-3-1: Levels of Learning

References:
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 142 and 531

Preparation: Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

Attention (attract)  Begin
Curiosity (arouse)  Association
Interest (create)  Students
Desire (stimulate)  Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
NOTE: Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 142 and 531 have limited coverage on the subject of levels of instruction. SFT has determined that Training Instructor 1C will address this subject more thoroughly in the student supplement.

XV. LEVELS OF INSTRUCTION

A. Also known as levels of learning

B. The depth of instruction for a specific skill and/or technical information that enables the student to meet the minimum requirements for the job

C. Three levels
   1. Level I - basic knowledge
   2. Level II - competent
   3. Level III - highly proficient

XVI. LEVEL I - BASIC KNOWLEDGE

A. Student acquires new information

B. Instructor is the primary information source
   1. Presentation emphasizing "what," "where," etc.
   2. Assignments
   3. Discussions
   4. Student feedback

C. Evaluations
   1. Objective tests
      a) Student recognizes or recalls information
## XVII. LEVEL II - COMPETENT

A. Student applies learned knowledge and skills

B. Instructor as information source
   1. Presentation emphasis is switched from "what" to "how" and "why"
   2. Students asked to explain concepts, relationships, and principles
   3. Students asked to apply knowledge and skills to day-to-day problems

C. Evaluations
   1. Tests may be objective or subjective
   2. Psychomotor tests focus on competence
   3. Student efficiently melds knowledge and skills to accomplish a task or solve similarly structured problems

## XVIII. LEVEL III - HIGHLY PROFICIENT

A. Student is able to apply knowledge and skills from earlier learning to new situations and problems

B. Instructor monitors and facilitates
   1. Instructor presents increasingly challenging and unique problems
   2. Students develop, implement, and evaluate solutions to the problems
      a) Student based knowledge and skill development

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<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLIDE: #--10</td>
<td>How does the information emphasis change between Level I and Level II?</td>
</tr>
<tr>
<td>SLIDE: #--11</td>
<td></td>
</tr>
<tr>
<td>SLIDE: #--12</td>
<td>What is the instructor's role in Level III instruction?</td>
</tr>
</tbody>
</table>
**PRESENTATION**

3. Students show mastery of psychomotor skills and can show others how to perform the task

**APPLICATION**

**SLIDE: #(#-13**

Should Level III testing be limited to objective written tests?

1. Tests may be both objective and subjective
   a) Written and performance based
   b) Simulated situations
   c) Exercises
   d) Day-to-day observation of performance

**NOTE:** Refer students to Individual Activity 2-3-1: Levels of Learning in their student supplement.

**CLASS ACTIVITY:** Complete Individual Activity 2-3-1.
Summary:
The levels of instruction are a critical concept for an instructor to understand. They shape the extent to which a given topic will be covered, and guide the student behavioral objectives tied to the lesson. Utilized appropriately, the levels of instruction guide an instructor to meet the needs of the students in an efficient and consistent manner.

Evaluation:
The student will complete the activity and summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 142 and 531 and Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 9-14 in order to prepare yourself for the upcoming test. Study for our next session.
INDIVIDUAL ACTIVITY 2-3-1 INSTRUCTOR ANSWER KEY

**Title:** Levels Of Instruction

**Time Frame:** 0:10

**Materials Needed:**
- Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 9-14
- Pen or pencil

**Introduction:** This activity provides the students the opportunity to match the appropriate levels of instruction with their corresponding verbs.

**Directions:**
1. Listed below are common lesson topics that are often included in training programs.
2. Place the appropriate level of instruction in the box next to the topic.
3. You have 5 minutes to complete this activity.
4. Be prepared to discuss your answers with the class.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the components of the fire tetrahedron</td>
<td>I</td>
</tr>
<tr>
<td>2. How to operate a circular saw</td>
<td>II</td>
</tr>
<tr>
<td>3. Evaluate training program effectiveness</td>
<td>III</td>
</tr>
<tr>
<td>4. How to conduct a pre-trip inspection</td>
<td>II</td>
</tr>
<tr>
<td>5. How to ventilate a pitched roof</td>
<td>II</td>
</tr>
<tr>
<td>6. Identify three types of fire extinguishers</td>
<td>I</td>
</tr>
<tr>
<td>7. Create a training program for a newly acquired apparatus</td>
<td>III</td>
</tr>
<tr>
<td>8. Locate a 10-foot attic ladder</td>
<td>I</td>
</tr>
<tr>
<td>9. How to calculate the friction loss on an attack line</td>
<td>II</td>
</tr>
<tr>
<td>10. Revise hybrid/electric vehicle extrication SOPs</td>
<td>III</td>
</tr>
<tr>
<td>11. Determine pump pressure</td>
<td>II</td>
</tr>
<tr>
<td>12. Memorize the department's mission statement</td>
<td>I</td>
</tr>
<tr>
<td>13. How to inventory the forcible entry compartment</td>
<td>II</td>
</tr>
<tr>
<td>14. Describe appropriate PPE for a vehicle fire</td>
<td>II</td>
</tr>
<tr>
<td>15. Determine the level of instruction</td>
<td>II</td>
</tr>
</tbody>
</table>
**Topic:** 2-4: Employing The Four-step Method Of Instruction  

**Time Frame:** 0:30  

**Level of Instruction:** Level II  

**Authority:** 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials  

**Behavioral Objective:**  
**Condition:** Given a summative test  
**Behavior:** The student will describe the purposes of and techniques used during each step of the four-step method of instruction  
**Standard:** With a minimum 80% accuracy on the summative test according to the information contained in *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 193-196  

**Materials Needed:**  
- Writing board/pad with markers/erasers  
- Appropriate audiovisual training aids and devices  

**References:**  
- *Fire and Emergency Services Company Officer*, IFSTA, Fourth Edition, Pages 265-266  
- *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 193-196  

**Preparation:** Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.  

- **Attention (attract)** Begin  
- **Curiosity (arouse)** Association  
- **Interest (create)** Students  
- **Desire (stimulate)** Experience  

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XIX. THE FOUR-STEP METHOD OF INSTRUCTION

A. A method of instruction consisting of four steps
   1. Preparation
   2. Presentation
   3. Application
   4. Evaluation

NOTE: Refer to Figure 9.2, Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 194.

XX. PREPARATION

A. Purpose
   1. To prepare the instructor to teach
   2. To prepare the students to learn
      a) Create motivation

B. Preparing the instructor

   1. Begin well in advance of the course
   2. Evaluate the audience
      a) What are the needs of the students?
   3. Research the skill or topic and gather references
   4. Review and modify or create the lesson plan
   5. Create a comfortable physical learning environment

What are some components of the physical learning environment?
TRAINING INSTRUCTOR 1C
Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Classroom arrangement and seating</td>
<td></td>
</tr>
<tr>
<td>b) Climate</td>
<td></td>
</tr>
<tr>
<td>c) Lighting</td>
<td></td>
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<tr>
<td>6. Gather necessary resources and teaching aids</td>
<td></td>
</tr>
</tbody>
</table>

C. Preparing the student

1. Motivation should pass the "ACID" test
   a) Attention – Attract
   b) Curiosity – Arouse
   c) Interest – Create
   d) Desire – Stimulate

2. Create a foundation for learning by establishing a "BASE"
   a) Begin
   b) Associating
   c) Students
   d) Experiences

3. How to accomplish

   a) Ask questions
   b) Cite examples
   c) Relate previous experiences
   d) Review previous lessons
   e) Conduct diagnostic quizzes
   f) Cite the benefits of learning the lesson

SLIDE: #--18

SLIDE: #--19

What are some methods for an instructor to motivate students?
## XXI. PRESENTATION

### A. Purpose

1. To communicate content developed to change the behavior of students
2. To present new information to the learner
   a) Skills
   b) Concepts
   c) Procedures
3. Instruct, motivate and educate students

### B. How to accomplish

1. Select the appropriate presentation style for the audience, subject, and desired outcome
2. Present lectures, demonstrations, and activities
3. Use audiovisual training aids
4. Use ancillary components
   a) Information sheets
   b) Skills sheets
   c) Worksheets/Activity sheets
5. Clarify procedures
6. Emphasize key points
7. Explain
   a) Concepts
   b) Philosophies
   c) Principles
   d) Implications
**TRAINING INSTRUCTOR 1C**  
**Instructional Development Techniques**

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
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</thead>
<tbody>
<tr>
<td>How should the presentation of information proceed?</td>
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</tbody>
</table>

8. Proceed from the known to the unknown and from simple to complex  
9. Use textbooks and other reference materials  
10. Apply active learning principles  
11. Summarize key points and concepts  
12. Encourage students to take notes

**XXII. APPLICATION**

A. Most important step  
B. Can be combined with the presentation step

C. Purpose  
1. To provide the opportunity for students to apply theory, critical thinking, critical decision-making, or psychomotor skills to practical situations  
2. Demonstrate skills-based knowledge through appropriate means  
3. Provide students the opportunity to perform under supervision  
4. Involve students actively in the learning process  
5. Provide the opportunity to practice and master critical skills  
   a) Controlled, nonemergency environment  
   b) Under supervision

Of the four steps in the four-step method, which is the most important?  
**SLIDE: #--23**

What is the purpose of the application step?  
**SLIDE: #--24**

**SLIDE: #--25**

**SLIDE: #--26**
D. How to accomplish
1. Have students perform the task under supervision
2. Observe performances closely
3. Check and correct errors
4. Instill correct habits in students
5. Check key points and safety points

6. Develop discussions based on theory, decision-making, or skills application
7. Conduct periodic skills tests
8. Assign projects and activities
9. Assign problem-centered scenarios

XXIII. EVALUATION

A. Purpose

1. To evaluate the learning process
2. Evaluate student understanding
3. Evaluate teaching effectiveness
   a) Instructor’s ability
   b) Quality of materials
   c) Behavior modification

B. How to accomplish

1. Have students perform tasks unassisted
2. Conduct performance tests
3. Ask prepared questions
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Have students demonstrate and explain tasks</td>
<td>SLIDE: #--30</td>
</tr>
<tr>
<td>5. Have students observe and critique other student performances</td>
<td></td>
</tr>
<tr>
<td>6. Conduct summative tests</td>
<td></td>
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<tr>
<td>7. Evaluate</td>
<td></td>
</tr>
<tr>
<td>a) Notebooks</td>
<td></td>
</tr>
<tr>
<td>b) Projects</td>
<td></td>
</tr>
<tr>
<td>c) Assignments</td>
<td></td>
</tr>
<tr>
<td>d) Activities</td>
<td></td>
</tr>
<tr>
<td>8. Have students complete course and instructor evaluation forms</td>
<td></td>
</tr>
<tr>
<td>9. Have instructors complete course evaluation forms</td>
<td></td>
</tr>
</tbody>
</table>
Summary:
The four-step method of instruction is a proven, effective method of delivering career-technical education. The four steps are: 1) Preparation, where the instructor and student are prepared for the learning process, 2) Presentation, where new information is imparted to the student, 3) Application, the most important step where the student becomes involved in the learning process, and 4) Evaluation, where the learning process is evaluated. By employing this method in instructional delivery, there is a greater success rate.

Evaluation:
The student will complete the summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 193-196 in order to prepare yourself for the upcoming test. Study for our next session.
Topic: 2-5: Teaching English Learners And Students With Special Needs

Time Frame: 1:00

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS #1: Describe Instructional Delivery Elements and Methods

Behavioral Objective:

Condition: Given an activity and a summative test

Behavior: The student will describe considerations for instructing English learners and students with special needs

Standard: With a minimum 80% accuracy on the summative test according to the information contained in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 18-26 and successfully completing Individual Activity 2-5-1

Materials Needed:

- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Individual Activity 2-5-1: Special Needs and Limited English Proficiency

References:

- 2008 Proposed Program Quality Standards for Career Technical Education (CTE) #13: Teaching English Learners
- 2008 Proposed Program Quality Standards for Career Technical Education (CTE) #14: Teaching Students with Special Needs
- Practical Guidelines for the Education of English Language Learners: Research-Based Recommendations for Instruction and Academic Interventions, University of Houston, Center on Instruction, 2006 Edition

Preparation: Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

  Attention (attract) Begin
  Curiosity (arouse) Association
  Interest (create) Students
Desire (stimulate) | Experience
---|---
Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XXIV. LIMITED ENGLISH PROFICIENT (LEP) STUDENTS

A. Many individuals preparing to enter workplace are LEP

B. According to the 1998 Perkins Vocational and Technical Education Act, an LEP individual
   1. Secondary school student, adult or out-of-school youth
   2. Limited ability to speak, read, write or understand English, and
      a) Whose native language is not English, or
      b) Who lives in a family or community environment where a language other than English is dominant

C. Literacy levels of LEP students
   1. Literacy in English
   2. Literacy in native language
   3. Oral proficiency in English confused with English- or native-language literacy
      a) May speak English proficiently
      b) Some unable to read or write English
      c) Inability to read or write native language
D. English as a Second Language (ESL)

1. English language development
2. Covers all aspects of English
   a) Grammar
   b) Vocabulary
   c) Pronunciation
3. Not specific to content/context of language

E. Specially Designed Academic Instruction in English (SDAIE)

1. Originally called "Sheltered English"
   a) Focuses on content comprehension
   b) Language acquired because of context
2. Four major components of SDAIE lesson design
   a) Hands-on activities
   b) Visual clues
   c) Cooperative learning
   d) Guarded vocabulary
3. Lesson design
   a) Hands-on activities

   1) Provides context for content language

What is the role of ESL education?

SLIDE: #--34

How is language acquired under SDAIE compared to ESL?

SLIDE: #--35

How can a hands-on activity help LEP students comprehend context?

SLIDE: #--37
## PRESENTATION

1) Reference point to build language

2) Understanding meaning of content vocabulary through real experiences

3) Looking up terms in a glossary alone takes language out of context

4) Why is the process of looking up the definition in a glossary sufficient for LEP individuals?

### SLIDE: #--38

**b) Visual clues**

1) Pictures, models, mock-ups

2) The real thing

3) Demonstrations

4) Make abstract concepts concrete

5) Associate the vocabulary with the image

### SLIDE: #--39

**c) Cooperative learning**

1) Using small teams for problem-solving
   - Students work together
   - Held individually accountable

2) Takes advantage of strengths to build on student weaknesses

3) Requires careful planning and team selection

4) Lowers student's "affective filter"
   - Reduces student’s stress level
### How does stress impact LEP students?

- Interference with language acquisition

5) Instructor must monitor process

### How is cooperative learning beneficial?

6) Benefit to LEP individuals

- Provides peer support
- Exposes students to other ways to solve complex problems
- Develops social skills
- Provides excellent vehicle to practice oral language skills

**SLIDE: #--40**

### d) Guarded vocabulary

1) Selection of language used
2) How introduced, practiced, and incorporated into lesson
3) Teacher monitors their own language
   - Rate of speech
   - Syntax
   - Language structure

**SLIDE: #--41**

4. SDAIE teaching strategies

   a) Plan activities requiring students to provide evidence of learning (observable actions)

**SLIDE: #--42**
### PRESENTATION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>b)</td>
<td>Speak clearly, not overly fast</td>
</tr>
<tr>
<td>c)</td>
<td>Avoid idiomatic expressions</td>
</tr>
<tr>
<td>d)</td>
<td>Use academic language consistently</td>
</tr>
<tr>
<td></td>
<td>1) Avoid multiple versions of same term</td>
</tr>
<tr>
<td></td>
<td>2) Use terms in correct context</td>
</tr>
<tr>
<td>e)</td>
<td>Reinforce lecture with written material, outline, etc.</td>
</tr>
<tr>
<td>f)</td>
<td>Incorporate group activities where students will use the academic language</td>
</tr>
<tr>
<td>g)</td>
<td>Ask questions appropriate for student knowledge level</td>
</tr>
<tr>
<td>h)</td>
<td>Use visual aids that include terminology with illustrations</td>
</tr>
<tr>
<td>i)</td>
<td>Clarify objectives of reading assignments</td>
</tr>
</tbody>
</table>

### XXV. STUDENTS WITH SPECIAL NEEDS

1. Disability
   a) Physical or mental impairment substantially limiting one or more major life activities
   b) Seeing, hearing, speaking, learning, working

2. Qualified individual with a disability
   a) Meets legitimate skill, experience, education or other requirements of an employment position
   b) Can perform essential functions of position with or without reasonable accommodation

---

According to the Americans with Disabilities Act (ADA), what are some likely disabilities requiring accommodation?

**SLIDE: #43**

Who is a "qualified individual with a disability?"
3. Reasonable accommodation
   a) Any modification or adjustment to a job or work environment
   b) Enables qualified applicant with a disability to participate in application process or perform essential job functions
   c) Includes adjustments to ensure equal rights in employment

d) Required to accommodate "known" disability
   1) Requested by individual with disability
   2) Appropriate accommodation suggested by
      • Individual with disability
      • Disabled Student Service Center
   3) Accommodations made on individual basis

4) Employer not obligated to provide accommodation, unless
   • Individual's known disability impairs ability to know, or communicate need for, accommodation obvious to employer
   • "Undue hardship" imposed on employer's business operations
What is meant by "undue hardship?"

**SLIDE: #--47**

e) Undue hardship
   1) Action requiring significant difficulty or expense
   2) Determined on case-by-case basis

Can employers be required to make accommodations in the way a test is given?

**SLIDE: #--48**

f) Accommodations for tests or examinations
   1) May be needed to measure actual ability of individual to perform job function
   2) Given in format that does not require use of impaired skill, unless it is job-related skill that test is designed to measure

Can employers maintain existing performance standards for employees with a disability?

**SLIDE: #--49**

4. Performance standards
   a) For essential functions, employer can hold individuals with disabilities to same standards
      1) As similarly situated employees without disabilities
      2) With or without reasonable accommodation
   b) For marginal functions
      1) Reasonable accommodations must be provided
      2) Job restructuring may be required
### B. Learning disability

1. Neurobiological disorder in which an individual's brain is structured differently
2. Affects an individual's ability to interpret what is seen and heard
3. May interfere with ability to see, hear, write, spell, recall, reason, organize information, and do math
4. Processing speed and memory also affected

### XXVI. ASSISTIVE TECHNOLOGY (AT)

#### A. Items, equipment, or systems that can assist, maintain, or improve functional capabilities of individuals with learning disabilities

1. Can be high-tech or low-tech tools
2. Helps individuals work around specific deficits to reach their full potential

#### B. Examples

1. Organizational skills, memory, time management
   a) Highlighters
   b) Index cards
   c) Personal data managers
2. Auditory/Listening
   a) Tape recorder
   b) Books on disc
   c) Pressure-sensitive paper

---

**SLIDE: ##-50**

What is meant by the term "learning disability?"

**SLIDE: ##-51**

What is the purpose of assistive technology?

**SLIDE: ##-52**

What are some examples of assistive technologies?
### PRESENTATION

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>d) Laptop computer</td>
<td></td>
</tr>
<tr>
<td>e) Video tapes with closed captions/subtitles</td>
<td></td>
</tr>
</tbody>
</table>

### Application

3. Visual processing
   a) Tape recorders
   b) Software programs
   c) Large print media & transparencies

4. Math
   a) Color-coding columns
   b) Hand-held calculators
   c) On screen computer calculator programs

5. Reading
   a) Voice output/Text-to-speech systems
   b) Speech synthesis/screen review system
   c) Tape recorders
   d) Books on disc

6. Written language
   a) Spell checker
   b) Grammar check
   c) Software writing programs

### C. Academic accommodations for classroom and fieldwork

What are some academic accommodations the instructor should consider?

**SLIDE: #53**

1. Classroom
   a) Offer opportunity to discuss academic needs in a statement on syllabus
   b) Recommend students visit Disabled Student Services for assessment and recommendation for accommodations
c) Face class when speaking
d) Repeat discussion questions
e) Verbally describe visual aids
f) Never use less than a 24-point font size on computer-generated presentations
g) Printed material should be at least a 12 point font size without serifs
h) Provide electronic format of written materials
i) Show videos and DVDs with closed captions

What accommodations would be appropriate for fieldwork?

D. Fieldwork
1. Discuss safety concerns with student and Disabled Student Services
2. Assign group projects/skills to allow all students to contribute according to ability
3. Have students verbalize operations and key points while performing manipulative-performance skills
4. Teach complex skills in smaller segments
   a) Individual elements of evolution taught first (e.g., ladder lift, carry, raise taught separately, then assembled as single ladder evolution)

What accommodations would be appropriate for conducting examinations?

E. Examinations
1. Measure knowledge and comprehension rather than physical performance unless necessary
2. Allow extra time to complete exams
### XXVII. TEACHING LEP AND SPECIAL NEEDS STUDENTS

#### A. Audience
1. Instruct using language appropriate to your audience
   - a) Fire fighters
   - b) Pre-employment students
   - c) General public
2. Careful consideration of word choice and terminology for pre-employment students
   - a) Instructor's fire agency terms versus IFSTA
   - b) Use of initials versus spelled-out terms
3. Include all students
   - a) Avoid actions that single out students
   - b) LEP and special needs students may suffer stress in learning material if "singled-out"

#### B. Course syllabus
1. Offer opportunity for students to discuss need for reasonable accommodation
2. Discuss syllabus, course policies, and expectations at beginning of class

---

How should an instructor design a class that all students, including LEP and special needs students, have the best opportunity for success?

SLIDE: #--57

What can an instructor do to include all students in the classroom?

SLIDE: #--58
### 3. Discuss text/student manual, layout, study questions, how assignments are completed

**C. Hands-on activities**

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are some considerations for in-class activities to increase LEP/special needs students’ chances for success?</td>
<td></td>
</tr>
</tbody>
</table>

| SLIDE: #--59 |

1. **In-class**
   - a) Design activities that apply to lesson
   - b) Group activities allow students to discuss, using terminology appropriate to lesson
   - c) Assign responsibility to each student in group so that all participate (small teams)
   - d) Balance small teams with strong and weak students

| SLIDE: #--60 |

2. **Field**
   - a) Have students verbally identify parts and functions of equipment
   - b) Saying while doing psychomotor performance
   - c) Require all safety commands while performing evolutions
   - d) Have students repeat skills instruction

| SLIDE: #--61 |

D. **Audiovisual**

1. Label diagrams, models, charts, illustrations
2. Use large fonts without serifs in computer-generated presentations (e.g., PowerPoint®)
3. Attach the label to the illustration
4. Use closed captioned or subtitled video

### E. Printed materials
1. Ensure student materials reinforce lessons
2. Discuss how to use student materials to complete assignments and meet objectives

### F. Presentation
1. Speak clearly, not too fast
2. Face students while speaking
3. Ask questions appropriate to student knowledge level
4. Provide opportunity for all students to apply what is taught

### G. Assignments
1. Recommend use of AT for all students
2. Provide examples of appropriate use of AT
   a) Index cards for study questions
   b) Highlighters to identify discussion points

### H. Examinations
1. Provide sufficient time for exams
   a) Allow enough time for all students to complete exams
2. Be sure questions are clear and appropriate to the level of learning

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
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<tbody>
<tr>
<td>b) Offer opportunity for students with special needs to take exams through Disabled Student Services</td>
<td>What can an instructor do to help pre-employment students determine if they are sufficiently academically prepared?</td>
</tr>
</tbody>
</table>

I. General assessment

1. Recommend English/math placement test for pre-employment students in college courses
   a) Determine if student has basic English/math skills to be successful in fire technology course
   b) Recommend remedial community college education to improve success potential

2. Learning disability
   a) Discuss with student concerns regarding academic performance
   b) Recommend student to Disabled Student Services Program for testing
   c) Program can determine appropriate accommodation based on test results

If the instructor suspects a student has a learning disability, but the student has not requested accommodation, what should the instructor do?
Summary:
Whether instructing limited English proficiency students or students with special needs, the preparation and delivery of instruction can make a significant difference in the potential success of the student meeting the behavioral objectives. Adapting lesson plans, instructional delivery, activities and assignments to accommodate students with these learning challenges will benefit all students in the learning process.

Evaluation:
The student will complete the activity and summative test at a time determined by the instructor.

Assignment:
Review your notes and read Training Instructor 1C Student Supplement, SFT, 2010 Edition Pages 18-26 in order to prepare yourself for the upcoming test. Study for our next session.
INDIVIDUAL ACTIVITY 2-5-1: INSTRUCTOR ANSWER KEY

Title: Special Needs and Limited English Proficiency

Time Frame: Homework

Materials Needed:
- Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 18-26
- Pen or pencil

Introduction: As an instructor, you have an obligation to provide the very best learning opportunity for all your students. Oftentimes this will mean taking extra time to develop specific teaching strategies to accommodate varied levels of learning disabilities. The following exercise will reinforce what we discussed in this lesson and give you the opportunity to choose different assistive methods.

Directions:
1. Review your notes for this lesson.
3. Write your responses to the four items below in the space provided.
4. Be prepared to discuss your responses with the class.
1. What accommodations are instructors required to make for a disabled person when performing an essential job function?

None; an instructor can hold individuals with disabilities to same standards as similarly situated students without disabilities, with or without reasonable accommodation

Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 21-22

2. What are three assistive technologies (AT) for organizational skills, memory, and time management?

1) Highlighters
2) Index cards
3) Personal data managers

Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 22

3. List three potential benefits to the student when you employ cooperative learning strategies.

1) Lowering students "affective filter" (reducing stress level)
2) Providing peer support
3) Exposing students to other ways to solve complex problem
4) Developing social skills
5) Providing an excellent vehicle to practice oral language skills

Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 20

4. What are the four main components of SDAIE lessons?

1) Hands-on activities
2) Visual clues
3) Cooperative learning
4) Guarded vocabulary

Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 19
5. List five areas an instructor should consider to design and deliver an effective course that meets the needs of all students. **During the review, ask the students to identify one recommendation for an area they chose.**

1) **Audience**

2) **Course syllabus**

3) **Hands-on activities**

4) **Audiovisual**

5) **Printed materials**

6) **Presentation**

7) **Assignments**

8) **Examinations**

9) **General assessment**

Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 24-26
**Topic:**
3-1: Elements Of A Course Outline

**Time Frame:**
0:30

**Level of Instruction:**
Level II

**Authority:**
2008 Training Instructor CTS #7: Describe The Elements Of A Course Outline

**Behavioral Objective:**

**Condition:**
Given a summative test

**Behavior:**
The student will describe the elements of a course outline

**Standard:**
With a minimum 80% accuracy on the summative test according to the information contained in *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 528-538 and *Training Instructor 1C Student Supplement*, SFT, 2010 Edition, Pages 30-32

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

**References:**
- *Course Information and Required Materials Manual*, SFT
- *Curriculum Development Guidelines*, SFT
- *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 528-538

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)**
- **Begin**
- **Curiosity (arouse)**
- **Association**
- **Interest (create)**
- **Students**
- **Desire (stimulate)**
- **Experience**

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XXVIII. DEFINITION OF A COURSE OUTLINE

A. Tentative course content

B. Developed by reviewing the course objectives and determining the topic titles for possible cognitive and/or psychomotor lesson plans
   1. Topic titles are placed in order so that the most basic knowledge is taught first
   2. Subsequent lessons build on the basic knowledge until the student is able to meet the course objectives

C. Identifies the relationship of a particular topic to other topics in the course

XXIX. PARTS OF A COURSE OUTLINE

A. Course title
   1. Should reflect the content of the course
   2. Allows the instructor to focus on specific areas
      a) Pump operations
      b) Ground ladders
      c) Hose evolutions

B. Course objectives
   1. Also referred to as
      a) Terminal objectives
      b) Course outcomes
   2. Should have the following characteristics

What should the title reflect?

What are some important characteristics of course objectives?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Understandable by instructors, students, members of the organization, and accrediting agencies</td>
<td></td>
</tr>
<tr>
<td>b) Appropriate to the topic area and certification standard</td>
<td></td>
</tr>
<tr>
<td>c) Identifies the knowledge and skills expected of students at the end of the course</td>
<td></td>
</tr>
<tr>
<td>d) Supportive of the use of a range of teaching and learning styles, evaluation instruments, and training resources</td>
<td></td>
</tr>
<tr>
<td>e) Supports learning achievements measured by individual lesson objectives</td>
<td></td>
</tr>
<tr>
<td>f) Written for the instructor</td>
<td></td>
</tr>
<tr>
<td>1) Guides the instructor</td>
<td></td>
</tr>
<tr>
<td>g) Describes the learning outcomes</td>
<td></td>
</tr>
</tbody>
</table>

C. Course content

1. List of lessons that need to be taught to meet the desired course objectives

   a) Organized in teaching sequence

      1) Most basic knowledge is taught first
      2) Subsequent lessons build on the basic knowledge
      3) Students should not advance to higher levels until current level has been mastered

   2. Can include cognitive, psychomotor, or both

   3. Include items for in class work, periodic tests, reviews, and summative tests/certification exams

D. Teaching times

1. Teaching time for each individual lesson

2. Total teaching time available for the course

How should lessons be organized in the course outline?
### PRESENTATION

3. Course objectives  
4. Instructional materials needed  

E. Texts and references

1. Books and materials that the course is based on  
2. Provides instructor with sources to review prior to delivering course  
3. Provides student with extra reading/reference sources

### APPLICATION

What is the purpose of items listed in the "Texts and Reference" section?
Summary:
Course objectives are listed on the course outline. The course outline also includes a list of all of the lessons that must be taught in order to achieve these objectives. When preparing to teach a course, an instructor should review the course outline to ensure that s/he understands the course objectives and can develop and deliver the lessons to meet course objectives.

Even with all this careful planning, the instructor must remain flexible and make needed adjustments. What looked good on paper may not work out during the actual delivery. Also, what worked on one occasion may not do the same in another situation.

Evaluation:
The student will complete the summative test at a time determined by the instructor.

Assignment:
Topic: 3-2: Cognitive And Psychomotor Lesson Plans Components And Their Function

Time Frame: 1:00

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials

Behavioral Objective:

Condition: Given a summative test

Behavior: The student will define, describe, and differentiate the components of cognitive and psychomotor lesson plans

Standard: With a minimum 80% accuracy on the summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 321-354

Materials Needed:
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

References:
- Curriculum Development Guidelines, SFT
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 321-354

Preparation: Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

Attention (attract)  Begin
Curiosity (arouse)  Association
Interest (create)  Students
Desire (stimulate)  Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XXX. BASIC LESSON PLAN FORMAT
A. Lesson plans consist of three parts that correspond to the four-step method of instruction

B. Preparation information
   1. Addresses the 10 elements

C. Lesson outline
   1. Addresses the four-step method of instruction

D. Evaluation
   1. Addresses the type of performance evaluation to be used by the instructor

XXXI. PREPARATION INFORMATION
A. Job or topic
   1. Short descriptive title

   2. Title should give indication of lesson content

   3. Topic titles are taken directly from the course outline

   4. Don't be so brief with the title that it does not describe the lesson content

   5. Code words are used to identify the type of lesson plan
      a) "How to . . . " for psychomotor domain lesson plans
      b) "Concepts of" or "Reasons for" for cognitive domain lesson plans
### B. Time frame

1. Estimated time for delivery of the lesson plan

2. Time estimates need to take into consideration the behavioral objective, class size, and class experience

3. Include the time that is needed to complete the application step in a psychomotor domain lesson plan

4. Time frames can be dictated by outside influences such as Chief’s directives, predetermined time frames, or mandates

### C. Level of instruction

1. Desired learning level that the students will reach by the end of the instructional period

2. May be based on the National Fire Protection Association (NFPA) job performance requirements (JPRs)

3. Levels of learning based on the taxonomy appropriate for the domains

   - a) Level I – Basic knowledge
   - b) Level II – Competent
   - c) Level III – Highly proficient
D. Authority

1. Document or source that dictates why this particular knowledge or skill set is necessary
2. Tied to the student behavioral objective
3. Examples
   a) National Fire Protection Association (NFPA) standard
   b) California Certification Training Standards (CTS)
   c) Occupational Safety and Health Administration (OSHA) requirement
   d) Local policy or standard operating guidelines (SOG)

E. Learning objective

1. Description of the minimum acceptable behavior that the student will display by the end of the instructional period
2. The behavioral objective specifically identifies what will occur
3. Must be consistent with level of instruction
4. California State Fire Training format uses the Condition, Behavior, Standard (CBS) model
   a) "Condition" describes how the behavior will be evaluated
   b) "Behavior" describes what the student will know or be able to do
   c) "Standard" describes how well the behavior is to be accomplished
F. Materials needed

1. List all items needed to teach the number of students in the course
   a) Consider the quantity of students that will be in the learning environment
2. Consider activities that need instructional materials, handouts, or tools and equipment

G. Prerequisites

1. This element is not a component with California's State Fire Training format, but may exist in lesson plans from agencies in other states
2. List of information, skills, or previous requirements that students must have prior to entering the course or starting the lesson
3. Consider the requirements for either cognitive or psychomotor lesson plans

H. References

1. List specific documents or resources used to develop the lesson plan
2. List reference materials that would be good for an instructor to pursue to prepare for an upcoming class
   a) Identify page numbers so the instructor can develop depth in the subject matter
3. Also beneficial as a source for additional information for inquisitive students
I. Lesson summary

1. Sometimes referred as the "conclusion"
2. Restatement or emphasis of the key points
3. Clarify uncertainties, clear up misconceptions
4. Increase learning and improve retention
5. Some instructors simply go back to the beginning of the presentation step and re-emphasize key points in the lesson material

J. Assignments

1. Reinforcement and emphasis on key components of the lesson
2. Reading, practice, research, or other outside class requirements for students
3. Utilize an activity as a tool for the students to complete the additional reinforcement

K. Comments (optional)

1. Some lesson plan formats may incorporate this item
2. Again, this is not included in California format

XXXII. LESSON OUTLINE

A. This is the actual information or skills to be taught using the four-step method
1. Preparation step
   a) Instructor stimulates motivation within the student
2. Presentation step
   a) Where the instructor imparts information to the students

3. Application step
   a) Most important step

   b) Provides an opportunity for the students to practice a skill or reinforce information

4. Evaluation step
   a) To confirm that learning has occurred

B. This will include each step or the activities to be performed by the instructor

C. This will include everything that a student would do to reinforce learning

XXXIII. EVALUATION

A. Types of performance evaluation that the instructor uses to determine if the students have met the objectives of the lesson

B. Cognitive lesson plans are evaluated with written or oral test items
   1. Role-play
   2. Discussion
   3. Research project
   4. Assignments

C. Psychomotor lesson plans are evaluated with performance skill evaluation techniques

What is the purpose of the application step?

How can instructors evaluate psychomotor domain lesson plans?
### TRAINING INSTRUCTOR 1C
Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
</table>
| 1. Confirms the ability of the student to perform the identified objective | **What two basic functions are confirmed with the evaluation step?**  
**SLIDE: #)#-85** |
| 2. Level of performance or success is predetermined by the student behavioral objective | |

D. Two basic functions are confirmed with the evaluation step

1. Confirms that learning has occurred with the students
2. Confirms that instruction has occurred as performed by the instructor

E. Must be consistent with level of instruction and student behavioral objective
Summary:
In this lesson, we have reviewed and clarified the components of cognitive and psychomotor lesson plans. We discussed how each component supports the four-step method of instruction and how the level of instruction and evaluation must be consistent with the condition, behavior, and standard. Each element of the course outline has an important relationship with each lesson plan.

Evaluation:
The student will complete the summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 321-354 in order to prepare yourself for the upcoming test. Study for our next session.
**Topic:** 3-3: Developing Student Behavioral Objectives

**Time Frame:** 1:00

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS # 2: Describe and Demonstrate the Development of Instructional Materials

**Behavioral Objective:**

**Condition:** Given an activity and a summative test

**Behavior:** The student will describe the components and purposes of student behavioral objectives (SBOs), develop a student behavioral objective for a cognitive lesson plan, and develop a student behavioral objective for a psychomotor lesson plan using the State Fire Training format

**Standard:** With a minimum 80% accuracy on the summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 329-332 and successfully completing Group Activity 3-3-1

**Materials Needed:**

- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Group Activity 3-3-1: Developing Behavioral Objectives

**References:**

- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 329-332
- Measuring Instructional Results, Robert F. Meager, 1997

**Preparation:**

Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

  - Attention (attract) Begin
  - Curiosity (arouse) Association
  - Interest (create) Students
  - Desire (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
### XXXIV. STUDENT BEHAVIORAL OBJECTIVE (SBO)

**A.** A statement of minimum acceptable student performance for an instructional period

**B.** Purposes of the behavioral objective

1. Motivate and inform the students by providing
   a) Conditions for evaluation
   b) Performance expectations
   c) Specifics on how well they must perform
2. Compare students to standards
   a) Performance based criterion or criterion-referenced performance
3. **Do not** compare students to students
   a) Norm-referenced

### XXXV. CONSTRUCTING BEHAVIORAL OBJECTIVES

**A.** California State Fire Training format for a SBO has three elements

1. Condition
2. Behavior
3. Standard

**B.** Condition criteria

1. Describes the situation, tools, and materials that will be used during the evaluation
2. Lists only the items the students will use during the evaluation

3. Cognitive condition describes the testing mechanism the students will use
   a) Examples
      1) Given a written exam
      2) Given an oral exam
      3) Given an activity
      4) Given a course summative test

4. Psychomotor condition lists the tools and/or equipment the students will use
   a) Examples
      1) Given a CPR mannequin and facemask
      2) Given a 24-foot ladder

What does the "behavior" portion of the SBO describe?

SLIDE: #90

C. Behavior criteria
   1. Describes the required student performance at the end of instruction
   2. Starts with key words, "The student will . . ."

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 332, Table 14.1.

3. Communicates intent
   a) Uses action verbs that can be measured
   b) Exclude confusion and vague meaning
      1) Vague behavioral objectives are words with many interpretations

What are some examples of words that have multiple interpretations?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know</td>
<td></td>
</tr>
<tr>
<td>Understand</td>
<td></td>
</tr>
<tr>
<td>Appreciate</td>
<td></td>
</tr>
<tr>
<td>Realize</td>
<td></td>
</tr>
<tr>
<td>Really appreciate</td>
<td></td>
</tr>
<tr>
<td>Believe</td>
<td></td>
</tr>
<tr>
<td>Fully benefit</td>
<td></td>
</tr>
<tr>
<td>Grasp the significance</td>
<td></td>
</tr>
</tbody>
</table>

2) Measurable behavioral objectives are words with few interpretations

- Write
- Recite
- Identify
- Differentiate
- Solve
- Discuss
- Construct
- Compare
- List
- Contrast
- Assemble
- Inspect
- Draw
- Describe
- Operate
D. Standard criteria
   1. Delineates
      a) Minimum accuracy expressed as
         1) Percentage
         2) Time limits
         3) Step completion
      b) Safety criteria
      c) Reference
   2. Time standard
      a) Should be used in psychomotor SBOs most of the time
   3. "According to" reference
      a) Where did the information originate?
         1) Including text title and page numbers
         2) Department rules/guidelines
            • SOG #2.06

XXXVI. BEHAVIORAL OBJECTIVE PITFALLS

A. Condition
   1. Do not list items that will be used during the instructional process such as "Skills Sheet"
   2. Do not list items designed to be used by the instructor rather than the students, such as a stopwatch

B. Behavior
   1. Do not use words with many interpretations
   2. Avoid mixing Level I words with words that show Level II performance by the students

SLIDE: ##-##
### PRESENTATION

**NOTE:** Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 332, Table 14.1.

3. Do not write wordy or flowery statements

C. Standard

1. Avoid conflicting standards of performance

   a) "Completing all operations" is different from "with a minimum of 80% accuracy"

   b) "Completing all operations" is the preferred way to say "with a minimum of 100% accuracy"

### APPLICATION

What is an example of a conflicting statement?

**NOTE:** Refer the students to Group Activity 3-3-1: Developing Behavioral Objectives in their student supplements.

Divide the class into small groups for this activity. You will be approving the lesson plan topics in Step 3 of the activity.

**CLASS ACTIVITY:**
Complete Group Activity 3-3-1.
Summary:
Learning does not necessarily depend on instruction. However, instruction does depend on learning! Behavioral objectives are statements that lend direction to instruction and are a necessary part of this process, as they influence student learning in many ways. Understanding what behavioral objectives are and how to construct them is a critical step in lesson plan development. When constructed properly and adhered to, behavioral objectives increase the instructor’s accountability while reducing potential liability.

Evaluation:
The student will complete the activity and summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 329-332 in order to prepare yourself for the upcoming test. Study for our next session.
GROUP ACTIVITY 3-3-1: DEVELOPING BEHAVIORAL OBJECTIVES

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>0:45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Needed:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 329-332</td>
</tr>
<tr>
<td></td>
<td>• Writing board/pad with markers/erasers</td>
</tr>
<tr>
<td>Introduction:</td>
<td>This activity provides students the opportunity to practice developing student behavioral objectives.</td>
</tr>
<tr>
<td>Directions:</td>
<td>1. Individually, decide on one cognitive lesson plan topic for your 30-minute teaching demonstration.</td>
</tr>
<tr>
<td></td>
<td>2. Individually, decide on one psychomotor lesson plan topic for your 15-minute teaching demonstration.</td>
</tr>
<tr>
<td></td>
<td>3. The Primary Instructor will ask for each student's two topic titles and approve them prior to continuing this activity.</td>
</tr>
<tr>
<td></td>
<td>4. In your group, share your two topic titles and record them on the writing board or conference pad.</td>
</tr>
<tr>
<td></td>
<td>5. As a group, develop a student behavioral objective for each topic title in your group.</td>
</tr>
<tr>
<td></td>
<td>6. Each group has 20 minutes to complete the activity.</td>
</tr>
<tr>
<td></td>
<td>7. Each group will discuss their student behavioral objectives with the class and stress the importance of clear objectives.</td>
</tr>
</tbody>
</table>
Topic: 3-4: Developing A Cognitive Lesson Plan (SFT Format)

Time Frame: 2:00

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials
2008 Training Instructor CTS #3: Describe And Demonstrate The Presentation Of Psychomotor And Cognitive Lesson Plans

Behavioral Objective:

Condition: Given an activity and a summative test

Behavior: The student will describe and demonstrate the development of an illustrated lecture cognitive lesson plan and determining its effectiveness

Standard: With a minimum 80% accuracy on the summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 236-237, 321-339, 352-353 and successfully completing Individual Activities 3-4-1 and 3-4-2

Materials Needed:
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Individual Activity 3-4-1: Cognitive Lesson Plan Development
- Individual Activity 3-4-2: Cognitive Teaching Demonstration

References:
- Curriculum Development Guidelines, SFT

Preparation: Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

Attention (attract) Begin
Curiosity (arouse) Association
Interest (create) Students
Desire (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XXXVII. LESSON PLAN FORMATS

A. Not all lesson plans are alike

B. Some components may not be included on lesson plans that you receive from other sources
   1. This is especially true when networking with fire agencies outside of California

C. The goal is to develop lesson plans that include all of the components as identified in State Fire Training’s Curriculum Development Guidelines (CDG)
   1. Utilizing the CDG format would benefit fire agencies to develop a standard

XXXVIII. LESSON PLAN CREATION

A. The student text outlines steps that should be followed when instructors prepare lesson plans

B. Instructors will develop their own style for developing lesson plans

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 338-339.

Does an instructor have to follow the steps in order of the sequence?

1. Instructors may develop portions of the lesson plan out of sequence

2. Most of the steps will be performed for a complete cognitive lesson plan considering the CDG format

NOTE: This lesson focuses on developing a lesson plan consistent with SFT’s Curriculum Development Guidelines. A cognitive lesson plan format and sample are in the Training Instructor 1C Student Supplement, SFT, 2010 Edition.

SLIDE: #--96
XXXIX. LESSON PLAN CREATION STEPS

A. Topic title
   1. A lesson plan topic needs to be identified
   2. Should be a short, descriptive title of information for the following lesson plan material to support
   3. Title can be taken from the course outline

B. Time frame
   1. Determine the appropriate time it will take to teach the lesson
   2. May be influenced by outside factors
      a) Direction from authorities
      b) Federal, State, or local regulations
      c) Available time

C. Level of instruction
   1. Based on job performance requirements
   2. Determines the depth of learning and the depth of teaching

D. Authority
   1. Identify the document that dictates that this particular knowledge set is necessary

E. Learning (behavioral) objective
   1. Describe the expected outcome at the end of instruction
   2. SFT format uses Conditions-Behavior-Standard as the method (CBS method) to identify the behavioral objective

F. Materials needed

What is the purpose of having a topic for a lesson plan?

SLIDE: #-#-97

What format does SFT use to write objectives?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compile a list of materials that will be needed to teach the lesson plan</td>
</tr>
<tr>
<td>2. The list should include everything an instructor would need for successful delivery</td>
</tr>
<tr>
<td>a) Audiovisual equipment and materials</td>
</tr>
<tr>
<td>b) Nonprojected media items and props</td>
</tr>
<tr>
<td>c) Activity and information sheets</td>
</tr>
<tr>
<td>d) Learning environment dimensions and requirements</td>
</tr>
<tr>
<td>e) Special equipment needs</td>
</tr>
<tr>
<td>3. Ensure that materials used will not cause an instructor to violate copyright law</td>
</tr>
<tr>
<td>4. This list may change after the development of the lesson plan outline</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPLICATION</th>
</tr>
</thead>
</table>

G. References  
1. List specific references used when developing the lesson plan

2. List additional study aids for instructors to gain additional knowledge of the topic and enhance the lesson
   a) Books
   b) Manuals
   c) Bulletins
   d) Scripts

3. Ensure the documents are the most current available and properly cited

H. Preparation  
1. Develop the preparation component
2. The instructor helps to motivate the student to WANT to learn the topic

I. Presentation

1. Determine the order for instructing the material
   a) Establish the order in which the knowledge and skills will be taught
   b) Should be done in a logical sequence
      1) Methods of sequencing
         • Known to unknown
         • Simple to complex
         • Whole to part
         • Part to whole
         • Step-by-step
         • Chronological
   c) May also include a quick review of prerequisite and corequisite knowledge and skills

2. Write the outline
   a) Major points
   b) Subpoints
   c) Supporting detail

J. Application

1. Write questions to ask the students
2. List audiovisual cues
### K. Lesson summary
1. Emphasize important, critical, or key information that was covered throughout the lesson
2. Bring the lesson to a close
3. Do not include new information

### L. Evaluation
1. Identify how and when the students will be evaluated on the information presented in the lesson

### M. Assignment
1. Reinforces the information presented in the lesson
2. Additional reading or activity
3. Not meant to merely keep the students busy
   a) Confirms and emphasizes the information

### XL. DETERMINING EFFECTIVENESS OF COGNITIVE LESSON PLANS

#### A. Review student testing results
1. If a majority of students passed the test, lesson plan may not need revision
2. If a significant number of students did not pass the test, determine the cause
   a) Review instructor and course evaluations
   b) Review student training records
   c) Interview students who failed the test

#### B. Review instructor and course evaluations
1. Look for comments consistent about presentation style
2. Facility factors
3. External factors

C. Review the lesson plan

1. Clear learning objectives
2. Appropriate audiovisual equipment and materials
3. Appropriate facility
4. Appropriate testing criteria
5. Conditions and expectations clearly explained
6. Other factors

D. If problems with the lesson plan are found
   1. Make necessary revisions to the lesson plan
   2. Ensure that revisions are cost and time effective

NOTE: Review Individual Activity 3-4-1: Cognitive Lesson Plan Development with the students. Be sure you have approved all the topics selected by the students before they begin lesson plan development.

NOTE: Review Individual Activity 3-4-2: Cognitive Teaching Demonstration with the students. Provide each student with the date and approximate time they will complete their cognitive teaching demonstration, then post the schedule. Allow 1 hour for set-up, presentation, and evaluation for each student.

CLASS ACTIVITY: Complete Individual Activity 3-4-1. Start in class and finish as homework.

CLASS ACTIVITY: Prepare for Individual Activity 3-4-2.
Summary:
A cognitive lesson plan is the instructional tool that is utilized by instructors to ensure a standard delivery of information to develop skills, knowledge, and abilities of students. We recognize that there are three formats for lesson plans as identified in the text. However, we only concentrated on the SFT's Curriculum Development Guidelines format for constructing cognitive lesson plans. The cognitive lesson plan will be just one tool that provides the instructor a conduit to allow for the student's success. The cognitive lesson plan will help instructors manage their instructional time as well as maintain instructional standards.

Evaluation:
The student will complete the activity and summative test at a time determined by the instructor.

Assignment:
## INDIVIDUAL ACTIVITY 3-4-1: COGNITIVE LESSON PLAN DEVELOPMENT

<table>
<thead>
<tr>
<th><strong>Time Frame:</strong></th>
<th>1:00 in-class; completed as homework</th>
</tr>
</thead>
</table>
| **Materials Needed:** | - Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 321-354  
- Cognitive lesson plan format and sample  
- Previously prepared course outline  
- Pen or pencil, paper |
| **Introduction:** | This activity provides the students the opportunity to develop their personal skills by developing a lesson plan. The lesson plan is a guide for the instructor. The lesson plan will list, in an organized sequence, those things that instructors must say and do to help their students learn. This will assist instructors to effectively manage the learning time while preventing over teaching or under teaching of the particular topic for the teaching session. |
| **Directions:** | 1. Review a previously prepared course outline and develop a cognitive lesson plan.  
2. Due: ____________________________ |

Error! No text of specified style in document.
INDIVIDUAL ACTIVITY 3-4-2: COGNITIVE TEACHING DEMONSTRATION

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Needed:</td>
<td>• Self-prepared lesson plan</td>
</tr>
<tr>
<td></td>
<td>• Appropriate audiovisual training aids</td>
</tr>
<tr>
<td></td>
<td>• Sample Passing and Sample Failing Student Instructor Cognitive Teaching Demonstration Evaluations</td>
</tr>
</tbody>
</table>

**Introduction:**
This activity provides the student with the opportunity to deliver a cognitive lesson from a self-prepared lesson plan. Instructor led presentations require an awareness of the students' knowledge base and several factors regarding the learning environment. Such things as seating arrangement, lighting, comfort, instructor demeanor, voice volume, eye contact, and distracting teaching methods are all important considerations.

**Directions:**
1. Your teaching demonstration is scheduled for:
   __________________________________________________________________________
   (Enter Day, Date, and Approximate Time)
2. Review the Sample Passing Student Instructor Cognitive Teaching Demonstration Evaluation form.
4. Prepare to teach a 30-minute presentation from your self-prepared cognitive lesson plan following the four-step method of instruction.
   • Include a clearly stated student behavioral objective.
   • Use presentation methods and teaching strategies that create interest and involve the students.
   • Follow your lesson plan.
   • Use a minimum of two forms of an audiovisual training aid to enhance and reinforce teaching points.
     • Video use limited to a maximum of two minutes.
   • Conclude the presentation with a summary and assignment, if appropriate.
5. Your presentation time must be at least 25 minutes and no longer than 35 minutes.
6. You will be evaluated by both student evaluators and the Primary Instructor for the class or a qualified Skills Evaluator.
**Topic:**

3-5: Developing A Psychomotor Lesson Plan (SFT Format)

**Time Frame:**

1:30

**Level of Instruction:**

Level II

**Authority:**

2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials

**Behavioral Objective:**

**Condition:**

Given an activity and a summative test

**Behavior:**

The student will describe and demonstrate the development of a psychomotor lesson plan and determine its effectiveness

**Standard:**

With a minimum 80% accuracy on the summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 127, 321-339 and successfully completing Individual Activities 3-5-1 and 3-5-2

**Materials Needed:**

- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Individual Activity 3-5-1: Psychomotor Lesson Plan Development
- Individual Activity 3-5-2: Psychomotor Teaching Demonstration

**References:**

- Curriculum Development Guidelines, State Fire Training

**Preparation:**

Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)** Begin
- **Curiosity (arouse)** Association
- **Interest (create)** Students
- **Desire (stimulate)** Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
XLI. LESSON PLAN FORMATS
   A. All lesson plans are not alike
   B. Some components may not be included in lesson plans that you receive from other sources
   C. Any format that includes all of the important elements will work
   D. In this course, lesson plans will be developed using the format outlined in the Curriculum Development Guidelines from California State Fire Training

NOTE: This lesson focuses on developing a lesson plan consistent with California State Fire Training Curriculum Development Guidelines. A psychomotor lesson plan format and sample are in the Training Instructor 1C Student Supplement, SFT, 2010 Edition.

XLII. PSYCHOMOTOR LESSON PLAN CREATION STEPS

   A. Topic title
      1. For psychomotor lesson plans, the title will start with "How To"
      2. Title can be taken from the course outline
   B. Time frame
      1. Determine the appropriate time it will take to present the skill
         a) All time for the instructor to demonstrate the skill and full speed, then again at a slow speed
         b) Include enough time for one student to perform the skill

   SLIDE: #--106

   How does the topic title identify whether or not it is a psychomotor lesson?

   SLIDE: #--105

   What is considered when determining the time frame?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
</table>
| **2. May be influenced by outside factors**  
   a) Direction from authorities  
   b) Federal, State, or local regulations  
   c) Available time | **SLIDE: ###-107**  
   At what level of instruction are psychomotor lesson plans taught? |
| **C. Level of instruction**  
   1. Psychomotor skills are typically taught to Level II | |
| **D. Authority**  
   1. Identify the document that dictates that this particular skill set is necessary | **SLIDE: ###-108**  
   What format does SFT use to write objectives? |
| **E. Learning (behavioral) objective**  
   1. Describe the expected outcome at the end of instruction | |
| **F. Materials needed**  
   1. Compile a list of materials that will be needed to demonstrate the skill | |
### PRESENTATION

2. The list should include everything an instructor would need for successful delivery
   a) Skills sheets
   b) Audiovisual training aids and devices
   c) Equipment
   d) Items required for skills testing

3. This list may change after the development of the outline of the lesson plan

### G. References

1. List specific references used when developing the lesson plan
2. List additional study aids for instructors to gain additional knowledge of the topic and enhance the lesson
   a) Books
   b) Manuals
   c) Bulletins
   d) Scripts

3. Ensure the documents are the most current available and properly cited

### H. Preparation

1. Develop the preparation component

2. The instructor helps to motivate the student to WANT to learn the topic

### I. Presentation

1. In psychomotor lesson plans, presentation consists of a skills sheet
   a) Two column format
      1) Lists Operations and Key Points
## Presentation

<table>
<thead>
<tr>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) A step or the smallest aspect in performing a task</td>
</tr>
<tr>
<td>b) Doing or performance units</td>
</tr>
<tr>
<td>c) Listed in the order in which they are done</td>
</tr>
<tr>
<td>1) On left side (column) of page</td>
</tr>
</tbody>
</table>

### Key Points

<table>
<thead>
<tr>
<th>KEY POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Information that aids in knowing or understanding operations that enable the student to perform the task correctly</td>
</tr>
<tr>
<td>b) Knowledge units</td>
</tr>
<tr>
<td>c) Developed by asking</td>
</tr>
<tr>
<td>1) Which?</td>
</tr>
<tr>
<td>2) Where?</td>
</tr>
<tr>
<td>3) Why?</td>
</tr>
<tr>
<td>4) How?</td>
</tr>
<tr>
<td>d) Safety factors</td>
</tr>
<tr>
<td>e) Listed with the corresponding Operations</td>
</tr>
<tr>
<td>1) On right side (column) of page</td>
</tr>
</tbody>
</table>

## Application

The instructor must present the skill in the same way the student will be evaluated.

**SLIDE: #112**

### Application

1. For psychomotor lesson plans, application typically directs students to practice the skill under supervision.

**SLIDE: #112**

What constitutes the application step of psychomotor instruction?
## K. Evaluation

1. Identify how and when the students will be evaluated on the skill
2. Students must perform the skill without guidance to a standard that includes either time or quality or both
3. The standard used must be the same as the standard in the behavioral objective

### XLIII. DETERMINING EFFECTIVENESS OF PSYCHOMOTOR LESSON PLANS

#### A. Review student testing results

1. If a majority of students passed the performance test, lesson plan may not need revision
2. If a significant number of students did not pass the test, determine the cause
   a) Review instructor and course evaluations
   b) Review student training records
   c) Interview students who failed the test

#### B. Review instructor and course evaluations

1. Comment consistency about presentation style
2. Facility factors
3. External factors

#### C. Review the lesson plan

1. Clear learning objectives
2. Appropriate equipment and facility
3. Appropriate testing criteria
4. Conditions and expectations clearly explained
5. Other factors

D. If problems with the lesson plan are found
   1. Make necessary revisions to the lesson plan
   2. Ensure that revisions are cost and time effective

**NOTE:** Review Individual Activity 3-5-1: Psychomotor Lesson Plan Development with the students. The students must choose a topic for a piece of equipment that they have access to and can bring to class for their teaching demonstration. Approve the topics selected by the students before they begin lesson plan development.

**CLASS ACTIVITY:**
Complete Individual Activity 3-5-1. Start in the class and finish as homework.

**NOTE:** Review Individual Activity 3-5-2: Psychomotor Teaching Demonstration with the students. Divide the class into groups (maximum size is four students per group). Tell the groups when and where the activity will be completed. Advise the groups to allow 30 minutes for set-up, presentation, and evaluation for each demonstration.

**CLASS ACTIVITY:**
Prepare for Individual Activity 3-5-2.
**Summary:**

When a psychomotor skill for which no lesson plan is available needs to be taught, the instructor will have to develop a new psychomotor lesson plan. A properly developed and formatted lesson plan will ensure consistent instruction of the skill.

A lesson plan is the instructional tool that is utilized by instructors to ensure the standard delivery of information and skills to be taught to students by utilizing educational resources, the learning environment, and appropriate support materials. The lesson plan provides the instructor the teaching purpose for the subject delivery, which provides for the student’s success. The lesson plan will help instructors manage their instructional.

**Evaluation:**

The student will complete the activity and summative test at a time determined by the instructor.

**Assignment:**

Review your notes and read *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 127, 321-339 in order to prepare yourself for the upcoming test. Study for our next session.
INDIVIDUAL ACTIVITY 3-5-1: PSYCHOMOTOR LESSON PLAN DEVELOPMENT

**Time Frame:**
1:00 in-class; completed as homework

**Materials Needed:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 321-354
- Psychomotor lesson plan format and sample
- Pen or pencil, paper

**Introduction:**
This activity provides the students the opportunity to develop their personal skills by developing a lesson plan. The lesson plan is a guide for the instructor. The lesson plan will list, in an organized sequence, those things that instructors must say and do to help their students learn. This will assist instructors to effectively manage the learning time while preventing over teaching or under teaching of the particular topic for the teaching session.

**Directions:**
2. Develop a psychomotor lesson plan based on your selected topic.
3. Bring your original documents and a second complete package for your instructor.
4. Due: ____________________________________________
5. If you do not meet the passing criteria, you will have one opportunity to submit a rewrite of your adapted lesson plan.
6. You will use these adapted materials for your upcoming teaching demonstration.
INDIVIDUAL ACTIVITY 3-5-2: PSYCHOMOTOR TEACHING DEMONSTRATION

**Time Frame:** Homework

**Materials Needed:**
- Self-prepared lesson plan
- Appropriate audiovisual training aids
- Sample Passing Student Instructor Psychomotor Teaching Demonstration Evaluation
- Sample Failing Student Instructor Psychomotor Teaching Demonstration Evaluation

**Introduction:**
This activity provides the student with the opportunity to deliver a psychomotor lesson from a self-prepared lesson plan. Instructor led presentations require an awareness of the students' knowledge base and several factors regarding the learning environment. Such things as lighting, comfort, instructor demeanor, voice volume, maintaining eye contact, and avoiding distracting teaching methods are all important considerations.

**Directions:**
1. Your teaching demonstration is scheduled for:
   
   (Enter Day, Date, and Approximate Time)

2. Review the Sample Passing Student Instructor Psychomotor Teaching Demonstration Evaluation form.

3. Review the Sample Failing Student Instructor Psychomotor Teaching Demonstration Evaluation form.

4. Prepare to teach a 15-minute presentation from your self-prepared psychomotor lesson plan following the four-step method of instruction.
   - Include a clearly stated student behavioral objective.
   - Follow your lesson plan.
   - Use appropriate personal protective equipment.
   - Reinforce teaching points.
   - Allow time for student application while you supervise and provide feedback.
   - Allow time for student evaluation.
   - Conclude the presentation with an assignment, if appropriate.

5. Your presentation time must be at least 12 minutes and no longer than 17 minutes.

6. You will be evaluated by a student evaluator.
**Topic:** 3-6: Developing And Employing Ancillary Components

**Time Frame:** 1:00

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #2: Describe And Demonstrate The Development Of Instructional Materials

**Behavioral Objective:**

**Condition:** Given an activity and a summative test

**Behavior:** The student will describe ancillary components included with a lesson plan and develop an information sheet and activity

**Standard:** With a minimum 80% accuracy on the summative test according to the information contained in *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 339-349 and successfully completing Individual Activity 3-6-1

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Individual Activity 3-6-1: Developing Ancillary Components

**References:**
- *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Pages 339-349

**Preparation:** Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract) Begin
- Curiosity (arouse) Association
- Interest (create) Students
- Desire (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
### XLIV. ANCILLARY COMPONENTS

#### A. Purpose
1. Provide students with background or resource information that is
   a) Not available in the textbook
   b) Not easily copied from other sources
      1) Copyrighted standards
      2) Lengthy protocols
2. May list performance steps that students can follow while practicing skills or evolutions
3. Enable students to apply, study, and practice the lesson content

#### B. Types of ancillary components
1. Assignment sheet
2. Information sheet
3. Skills sheet
4. Study sheet
5. Worksheet or activity sheet

### XLV. INFORMATION SHEET

**NOTE:** Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 340, Figure 14.6.

A. A type of handout or fact sheet that provides additional background information on a topic supplemental to the information provided in the text or other course resources
## B. Reasons for information sheets
1. Information unavailable to some students
2. Students would have to consult numerous sources to get information
3. Information is not available in any texts

## C. Developing information sheets
1. Create a title that indicates the subject
2. Introduce the information with a brief description that explains its importance
   a) Relate the information to the primary text or part of the lesson
3. Present the information
   a) Detailed text or outline format
      1) Easy to read and follow
   b) Include charts, tables, or illustrations
4. Develop test questions based on the information sheet
   a) So students can assess whether they have achieved the lesson objectives

### XLVI. SKILLS SHEET
A. Divides a task into parts by listing the operational steps and their key points or steps for completing each operation

B. Used in psychomotor lesson plans

**NOTE:** Skills sheets are discussed in detail in Training Instructor 1C, Lesson 3-5
### XLVII. WORKSHEET OR ACTIVITY SHEET

**NOTE:** Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 345, Figure 14.9.

| **A.** | Provide the students with opportunities to apply rules, analyze and evaluate objects and situations, or use multiple skills while completing activities |
| **B.** | May be used to generate discussions on a topic |
| **C.** | May not require scoring or grading by the instructor |

**D.** Developing activity sheets

1. Create a title that reflects the subject
2. List all the materials and resources that students need in order to complete the activity
3. Introduce the activity with a brief introduction that motivates students to complete the activity
   a) Relate the information to the lesson objectives
4. Provide clear directions that explain how to complete the worksheet
5. Provide answers or solutions on a separate page
   a) May be given either with the worksheet or after the worksheet is completed

### XLVIII. STUDY SHEET

**NOTE:** Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 347, Figure 14.10.

| **A.** | An instructional document designed to arouse student interest in a topic and explain to students the specific areas to study |

**What is the purpose of an activity sheet?**

**SLIDE: #--122**

**SLIDE: #--123**

**What is a study sheet?**

**SLIDE: #--124**
When might students use a study sheet?

B. May be distributed to students to use during instruction or for them to use as self-study aides

C. Including a study sheet test enables the students and instructor to measure how well students understood the material

D. Developing study sheets
   1. Create a title that reflects the subject
   2. List all the materials and resources that students need in order to complete the study sheet
   3. Introduce the activity with a brief introduction that motivates students to complete the study sheet
   4. Design the study sheet to present the study information
   5. Design study questions to make students think and assess understanding of all aspects of the topic
   6. Include a study sheet test (optional) on a separate sheet of paper

XLIX. ASSIGNMENT SHEET

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 348, Figure 14.11.

What information does an assignment sheet contain?

A. Contains information about a specific activity or project that the student is expected to perform without supervision

B. Activity may be done in class or outside of class

C. Should contain the three components of the Mager Model
   1. Performance
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Conditions</td>
<td></td>
</tr>
<tr>
<td>3. Criteria</td>
<td></td>
</tr>
</tbody>
</table>

How does an assignment sheet differ from a worksheet?

**NOTE:** SFT uses activity sheets for required/graded activities. Refer to *Fire and Emergency Services Instructor*, IFSTA, Seventh Edition, Page 346, for justification.

E. Developing assignment sheets
   1. Create a title that reflects the subject
   2. List all the materials and resources that students need in order to complete the assignment
   3. Introduce the activity with a brief introduction that motivates students to complete the activity
   4. Design the assignment sheet to present the information
   5. Include the scoring and grading criteria for the assignment
   6. Describe the form and format that the final product must be in along with the due date
      a) Essay, table, graphic, etc.
      b) Handwritten, typed, model, etc.

L. CONSIDERATIONS FOR USING ANCILLARY COMPONENTS

A. Information sheets
   1. Distributed at end of the lesson to minimize distraction
      a) If distributed during the lesson, pause the class until all copies have been distributed
### PRESENTATION

2. Introduce the information sheet  
   a) Discuss  
3. Bring closure prior to returning to your lesson

### APPLICATION

#### SLIDE: #-#-129

How are skills sheets used?

#### SLIDE: #-#-130

When should these sheets be distributed?

### B. Skills sheets

1. Instructor demonstration is the presentation step of the four-step method of instruction  
   a) The instructor should demonstrate  
      1) Full speed  
      2) Slow speed, step-by-step while verbalizing  
      3) Full speed again  
2. The student practicing a skill using a skills sheet is the application step  
   a) The student should practice  
      1) While reciting operations and key points  
      2) As though they are being tested, according to the skills sheet, prior to the actual test

### C. Worksheets/activity sheets/study sheets/assignment sheets

1. Distributed at the end of the lesson or as indicated by the lesson plan  
   a) If distributed during the lesson, pause the class until all copies have been distributed  
2. Introduce and discuss the material  
3. Be familiar with the exercise to explain it to the students  
4. Due dates and times need to be communicated during the introduction
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTE: Refer students to Individual Activity 3-6-1: Developing Ancillary Components in their student supplement.</td>
<td>CLASS ACTIVITY: Complete Individual Activity 3-6-1. Start in the class and finish as homework if necessary.</td>
</tr>
</tbody>
</table>
Summary:
During training, students are expected to retain a large amount of information. While much of this information is available in texts or other sources that the student has ready access to, sometimes information covered in a lesson plan is not otherwise available to the students. Instructors can develop and use a variety of ancillary components to assist students with retaining information that has been presented.

Instructors can develop a variety of ancillary components for their lesson plans to assist students with the retention of material. These ancillary components should be created when information is not otherwise readily available to students, when students need to be given further direction on studying, or when activities are assigned to students. Ancillary components may include Information Sheets, Skills Sheets, Worksheets, Study Sheets, and Assignment Sheets.

Evaluation:
The student will complete the activity and a summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 339-349 in order to prepare yourself for the upcoming test. Complete Individual Activity 3-6-1. Study for our next session.
INDIVIDUAL ACTIVITY 3-6-1: DEVELOPING ANCILLARY COMPONENTS

**Time Frame:**
0:30 (in-class) and homework

**Materials Needed:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 339-349
- Computer with word processing software and printer
- Lesson plan developed in Individual Activity 3-4-2

**Introduction:**
This activity provides the students the opportunity to develop a variety of ancillary components for a lesson plan.

**Directions:**
1. Review Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 339-349
2. Following the guidelines in the text, develop the following three ancillary components for your cognitive lesson plan:
   - Information sheet
   - Study sheet
   - Worksheet or activity sheet
3. Assignments must be computer printed.
4. Assignments will be graded on completeness, accuracy, content, format, and presentation.
5. The assignment is due on _____________________________.

Topic: 3-7: Selecting And Employing Audiovisual Training Aids

Time Frame: 1:30

Level of Instruction: Level II

Authority: 2008 Training Instructor CTS #9: Describe And Demonstrate The Use Of Audiovisual Equipment And Materials

Behavioral Objective:

<table>
<thead>
<tr>
<th>Condition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given a course final exam summative test</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behavior:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student will describe the selection and use of audiovisual training aids used in instruction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard:</th>
</tr>
</thead>
<tbody>
<tr>
<td>With a minimum 80% accuracy on the course final exam summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 249-272</td>
</tr>
</tbody>
</table>

Materials Needed:

- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

References:

- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 249-272

Preparation:

Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract) Begin
- Curiosity (arouse) Association
- Interest (create) Students
- Desire (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
### LI. AUDIOVISUAL TRAINING AIDS

A. Purpose is to enhance the learning process

B. Presents information to different senses
   1. Sight
   2. Sound
   3. Touch

### LII. BENEFITS TO AUDIOVISUAL TRAINING AIDS

A. Enhance student understanding
   1. Address many learning styles

B. Increase student acceptance
   1. Design messages through the three senses

C. Add interest to a lecture

D. Clarify, prove, or emphasize a key point

E. Enhance memory

F. Help students organize ideas
   1. ICS charts

G. Gain and maintain student attention

H. Illustrate a sequence of events or steps in a process

I. Save lecture time
   1. A picture is worth a thousand words
LIII. SELECTING AUDIOVISUAL TRAINING AIDS

A. Learning objectives and lesson content
B. Required student performance
   1. Meets student’s needs
C. Class size and interaction

1. Large enough for all students to see
   a) Easel chart versus projector and screen
2. Allows for all students to participate
   a) CPR mannequins

D. Pace of learning
E. Practice factors
F. Evaluative factors
G. Budget limitations
   1. Cost effective
      a) Initial purchase
      b) Maintenance costs

LIV. NONPROJECTED TRAINING AIDS

A. Types
   1. Marker boards
   2. Easel pads
   3. Illustration or diagram displays
   4. Duplicated materials
   5. Models
   6. Audio recordings
### What are the benefits of nonprojected training aids over high-tech projected training aids?

#### B. Advantages
1. Easy to use
2. Lower chance of malfunction
3. Relatively inexpensive

#### C. Disadvantages
1. Can slow class pace
2. Can disengage younger audiences

#### D. Considerations for use
1. Training aids support instruction
   a) They do not replace
2. Talk to the students
   a) Not the training aid
3. Ensure adequate size or quantity for class size
4. Use multiple colors

#### E. Marker boards
1. Types
   a) Chalk board
   b) Dry erase marker board
   c) Electronic or interactive boards
2. Advantages
   a) Relatively low cost
   b) Low maintenance
   c) Low potential for equipment failure
   d) Versatility

3. Disadvantages
   a) Penmanship issues

   1) Spelling
   2) Legibility

   b) Inability to save presentations
   c) Can be ineffective with large audiences

4. Considerations for use
   a) Write only what is necessary
   b) Write large and legibly
   c) Draw complex diagrams prior to class

   1) Keep pictures covered until needed
   2) Completely erase after use

F. Easel pads
   1. Advantages
      a) Still considered a very versatile tool for indoor and outdoor learning environments
## TRAINING INSTRUCTOR 1C
### Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Provides a permanent record of classroom discussions</td>
<td></td>
</tr>
<tr>
<td>c) Can look very professional if reproduced from printed 8½&quot; x 11&quot; documents prior to presentation</td>
<td></td>
</tr>
</tbody>
</table>

### Disadvantages

1. **Penmanship issues**
2. Can be ineffective with large audiences

### Considerations for use

- Prepare before classroom presentation

### What are some techniques for making easel charts more "instructor friendly?"

- Include alternating pages to prevent bleed through
- Tabs for navigating multiple pages
- Folding corners to turn to correct pages
- Preprinted hairline pencil marks visible in the instructor's zone
- Pretorn tape can be used to display multiple pages in the classroom

### Illustration or diagram displays

#### Examples

- ICS charts
- Anatomy charts
- Maps

#### Advantages

- Low cost

### SLIDE: #--142

What are some types of illustrations and diagrams commonly used in the fire service?
### H. Duplicated materials

1. **Examples**
   - a) Student handouts
   - b) Worksheets
   - c) Information Sheets
   - d) Activity Sheets

2. **Advantages**
   - a) Reinforces presentation
   - b) Students can keep for reference

3. **Disadvantages**
   - a) Can be a distraction

4. **Considerations for use**
   - a) Ensure legibility

---

What should an instructor do with an illustration or diagram once it is no longer in use?

**SLIDE: #--143**

What are some examples of duplicated materials?
b) Comply with copyright laws

c) Staple multiple pages
d) Three-hole punch handouts
e) Information to include
   1) Course name/topic
   2) Date
   3) Instructor name
f) Provide sufficient copies
g) Provide space for notes

I. Models
   1. Examples
      a) Miniatures
      b) Cutaways
      c) Anatomical models
      d) Actual tools and equipment
   2. Advantages
      a) Illustrates

      1) Mechanics
         • Fire pumps
         • Braking systems
      2) Spatial relationships
         • Organs of the abdomen
   b) Saves lecture time

What simple things can an instructor do to make handouts easier for the students to use?

SLIDE: ##-144

What types of information are models particularly effective at presenting?
3. Disadvantages
   a) Can be large/expensive
   b) Can distract student if in view and unused during instruction

4. Considerations for use
   a) Introduce when presenting that piece of equipment
   b) Follow appropriate safety procedures

J. Audio recordings
   1. Advantages
      a) Appeals to sense of hearing
      b) Presents sounds that cannot be described with words alone

      1) Lung sounds
      2) Pump cavitation

   2. Disadvantages
      a) Possibility of malfunction
      b) Hearing impaired students
      c) No volume control

   3. Considerations for use
      a) Ensure equipment functions
      b) Ensure appropriate volume
         1) Loud enough
         2) Not too loud
      c) Play multiple times if needed
LV. PROJECTED TRAINING AIDS

A. Types
   1. Projectors and screens
   2. Visual presentations and displays
   3. Television and video
   4. Slide projectors
   5. Overhead projectors and transparencies

B. Advantages
   1. Vivid images
   2. Visible to large audience
   3. Stimulate multiple senses
   4. Can add previously prepared overhead transparencies by writing on them

C. Disadvantages
   1. Large investment in equipment
   2. Projection equipment can block some students’ view
   3. Can become abused
      a) Becomes presentation instead of supporting presentation
   4. Requires electricity and screens
      a) Potential for equipment and power failure

D. Considerations for use
   1. Ensure all equipment connects and communicates
### 2. Eliminate keystoning

**NOTE:** Demonstrate keystoning.
- a) Adjust screen
- b) Adjust projector

### 3. Set image size and focus

### 4. Present instruction to the students
- a) Not the screen

### 5. Ensure all students can see the screen

### 6. Ensure safety

- a) Electrical
- b) Fire
- c) Trip hazards
  - 1) Power cords

### 7. Have spare projector bulbs

### 8. Prepare nonprojector-based presentation in case of power failure or equipment malfunction

---

#### E. Video and multimedia projectors/large screen images

1. Examples
   - a) Video projectors
   - b) Multimedia projectors

2. Advantages
   - a) Large, high quality display
   - b) Can often be used in lighted room
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) Wide variety of images projected</td>
<td>What can be projected onto a screen?</td>
</tr>
<tr>
<td></td>
<td>1) Computer screens</td>
</tr>
<tr>
<td></td>
<td>2) Video</td>
</tr>
<tr>
<td></td>
<td>3) Photos</td>
</tr>
<tr>
<td>3. Disadvantages</td>
<td></td>
</tr>
<tr>
<td>a) High initial cost</td>
<td></td>
</tr>
<tr>
<td>b) High cost of replacement bulbs</td>
<td></td>
</tr>
<tr>
<td>c) External speakers may be needed</td>
<td></td>
</tr>
<tr>
<td>4. Considerations for use</td>
<td></td>
</tr>
<tr>
<td>a) Larger classroom</td>
<td></td>
</tr>
<tr>
<td>b) Seating arrangement for all students to see</td>
<td></td>
</tr>
<tr>
<td>c) Power cords</td>
<td></td>
</tr>
<tr>
<td>1) Safety</td>
<td></td>
</tr>
<tr>
<td>2) Tripping hazards</td>
<td></td>
</tr>
</tbody>
</table>

F. Visual presenters/display

1. Combines functions of overhead projector with a multimedia projector

2. Advantages
   a) Can display a small object to a large audience

3. Disadvantages
   a) High initial cost
   b) External speakers may be needed

G. Television and video presentations

1. Advantages
   a) Suited to distance learning
   b) Widely available
   c) Can be produced in-house
### 2. Disadvantages

- a) Not easily adapted
- b) Not interactive

### 3. Considerations for use

- a) Preview video prior to use
- b) Emphasize key points prior to use and review following
- c) Cue to desired point
- d) Stop video for discussion
- e) Do not leave room during video

---

**H. Slide projectors/slides**

**1. Advantages**

- a) High resolution
- b) Can be archived

**2. Disadvantages**

- a) Rarely used
- b) Difficult to find supplies/support
- c) PowerPoint® presentations are easier to develop

**3. Considerations for use**

- a) Preview slides prior to use
- b) Number slides in case of a tray spill
- c) Black out screen or use blank slide to return focus to the instructor during discussions
## I. Overhead projectors/transparencies

1. **Advantages**
   - a) Low cost
   - b) Easy to control flow of information

2. **Disadvantages**
   - a) Low resolution
   - b) Instructor geographically tied to projector

3. **Considerations for use**
   - a) Utilize reveal technique
   - b) Use pointer on stage for emphasis

### LVI. SIMULATORS

#### A. Types

1. **Electronic**
   - a) Simulate situations or environments
     - 1) Theatrical smoke machines
     - 2) Alarm/detection systems

2. **Display boards**
   - a) Parts or systems mounted on a board for ease of viewing
     - 1) Vehicle air braking system

3. **Smoke simulators**
   - a) Models or software that simulates smoke movement in building such as high rises or shopping malls
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Computer simulators</td>
<td>What types of incidents can be simulated with computers?</td>
</tr>
<tr>
<td>a) Simulated scenarios</td>
<td></td>
</tr>
<tr>
<td>1) Structure/wildland fires</td>
<td></td>
</tr>
<tr>
<td>2) Hazardous materials</td>
<td></td>
</tr>
<tr>
<td>b) Static or dynamic</td>
<td></td>
</tr>
<tr>
<td>5. Virtual reality</td>
<td></td>
</tr>
<tr>
<td>a) Immerses student in simulated environment</td>
<td></td>
</tr>
<tr>
<td>b) Reinforces procedure or protocol based skills</td>
<td></td>
</tr>
<tr>
<td>1) ICS</td>
<td></td>
</tr>
<tr>
<td>2) EMS skills</td>
<td></td>
</tr>
<tr>
<td>6. Anatomical/physiological mannequins</td>
<td></td>
</tr>
</tbody>
</table>

**B. Advantages**

1. Allow training that is otherwise impractical

**C. Disadvantages**

1. High cost

2. Suited for training individuals or small groups

**D. Considerations for use**

1. Reinforces simulated skills while using real time confirmed by agency standards
2. Try to add skill sets of less experienced command officers

---

**LVII. ANCILLARY EQUIPMENT**

**SLIDE: ##-157**

<table>
<thead>
<tr>
<th><strong>SLIDE: ##-158</strong></th>
</tr>
</thead>
</table>

A. Television monitors/projection screens
1. Preferred display set-up
   a) Front corner of classroom
   b) 45° angle

2. Size guideline

   a) 2 x 6 rule
      1) Front row
         • Minimum distance from the screen is twice width of the projected image
         • Maximum width of a row is twice the width of the projected image
      2) Back row
         • Maximum distance from screen is six times the width of the projected image
         • Maximum width of a row is six times the width of the projected image

NOTE: Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 272 incorrectly refers to the width of the screen rather than the projected image. IFSTA's monitor guideline of "1 inch per student" on this same page is not a reasonable guideline.

B. Presentation software/hardware

1. Types of software
   a) PowerPoint® (Microsoft)
   b) Key Note (Apple/Macintosh)
   c) Open Office
   d) Harvard
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Standard hardware components</td>
<td>SLIDE: #--160</td>
</tr>
<tr>
<td>a) Computer</td>
<td>What are the standard hardware components needed to deliver a presentation?</td>
</tr>
<tr>
<td>1) Central processing unit (CPU)</td>
<td></td>
</tr>
<tr>
<td>• The brain</td>
<td></td>
</tr>
<tr>
<td>b) Projector</td>
<td>What types of projectors can be selected for presentations?</td>
</tr>
<tr>
<td>1) Types of projectors</td>
<td></td>
</tr>
<tr>
<td>• Liquid crystal display (LCD)</td>
<td></td>
</tr>
<tr>
<td>• Digital light projection (DLP)</td>
<td></td>
</tr>
<tr>
<td>• Fiber optics future generation presentation displays</td>
<td></td>
</tr>
<tr>
<td>c) Remote</td>
<td></td>
</tr>
<tr>
<td>1) Tools to assist with the presentation</td>
<td></td>
</tr>
<tr>
<td>2) Many have different features</td>
<td></td>
</tr>
<tr>
<td>3) There can be conflicts with instructors in neighboring classrooms</td>
<td></td>
</tr>
<tr>
<td>4) Some remotes have options of changing frequencies</td>
<td></td>
</tr>
<tr>
<td>5) Instructors need to be familiar with their tools</td>
<td></td>
</tr>
<tr>
<td>d) Sound system</td>
<td></td>
</tr>
<tr>
<td>1) Do not rely on sound systems built into projection equipment</td>
<td></td>
</tr>
<tr>
<td>2) Need to consider external speakers if presentation includes audio</td>
<td></td>
</tr>
</tbody>
</table>
3) Consider classroom size and number of students to ensure all can hear clearly

C. Preparing to use ancillary equipment

1. Check to make sure it works
2. Become familiar with operation
3. Bring needed supplies
   a) Power cords/outlet strips
   b) Other cords and connectors
   c) Spare bulbs
   d) Spare equipment
4. Check room for compatibility with equipment
   a) Adequate power sources
   b) Screen availability
   c) Ability to darken room
5. Set up equipment prior to class
   a) Ensure compatibility of equipment
   b) Last minute adjustments
   c) Tape down cords in traffic areas
6. Classrooms with preinstalled ancillary equipment
   a) Will need to adjust your own personal delivery style

SLIDE: #-#-161

What can be achieved by checking the equipment before use?

SLIDE: #-#-162

What are some things that an instructor needs to check in the classroom relative to the use of audiovisual media?
7. Troubleshooting
   a) Make sure all power supplies/switches are on
   b) Make sure all connections are correct and secure
   c) If computer image is not projecting
      1) Toggle display using "function key with appropriate combination key" on computer
         • As specified in the computer user's guide
      2) Toggle image source on projector
         • As specified in the projector user's guide
      3) Video RAM (memory) in computer may be insufficient to display on computer screen and projection device simultaneously
         • Generally not an issue on newer computers

What are some simple troubleshooting steps to get ancillary equipment working?

SLIDE: #*-163
Summary:
As the saying goes, a picture is worth a thousand words. Proper selection of audiovisual media equipment can make or break a presentation. Used effectively, training aids can add interest and reinforce learning objectives. A quality instructor will use these tools to support the presentation, and give the student the best chance to comprehend and retain the lesson information.

Evaluation:
The student will complete the course-final exam summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 249-272 in order to prepare yourself for the upcoming test. Study for our next session.
**Topic:** 3-8: Transition Techniques Within And Between Audiovisual Training Aid Devices

**Time Frame:** 1:00

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #9: Describe And Demonstrate The Use Of Audiovisual Equipment And Materials

**Behavioral Objective:**

- **Condition:** Given a course-final-exam summative test
- **Behavior:** The student will describe the purpose and methods of employing transition techniques within and between training aid devices
- **Standard:** With a minimum 80% accuracy on the course-final-exam summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 255-258

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

**References:**
- Curriculum Development Guidelines, SFT
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 255-258

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)**
- **Curiosity (arouse)**
- **Interest (create)**
- **Desire (stimulate)**
- **Begin**
- **Association**
- **Students**
- **Experience**

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LVIII. TRANSITIONS IN PRESENTATIONS

A. Importance of transitions
   1. Move students from one portion of a lesson to next
   2. Connects lesson without losing students' attention

B. Purpose of transitions
   1. Maintain interest in lesson
   2. Maintain continuity of information flow
   3. Maintain consistency between seemingly unrelated topics
      a) Transitions between lessons within a course
   4. Establish relationships
      a) Tie parts of topic together to illustrate relationship
      b) Relate upcoming concept or skill to previous one
   5. Provide previews of what to expect in the next portion of the material
   6. Provide summary to end the previous idea or topic

C. Transitions identified in the lesson plan
   1. Lesson plan should contain location of necessary transitions

SLIDE: #-#-164

Why is it important to use transitions?

SLIDE: #-#-165

How do transitions support the presentation?

SLIDE: #-#-166

In the cognitive lesson plan, where should audiovisual transitions be noted?
## Audiovisual Transitions

2. Audiovisual transitions are noted on the "Application" side of the cognitive lesson plan
   a) Slide or transparency number
      1) May include a description

## Timing Transitions

D. Timing transitions
   1. When to use transitions is a question of timing
   2. Transitions used when needed in following ways
      a) End one topic and begin another
      b) End a complete lesson within a series or a course
      c) Start a new lesson within a series or course
      d) Move from one teaching method into another
      e) Provide rest breaks for students and instructors

### During the Presentation

During the presentation, when does an instructor need to employ transitions?

**SLIDE: #--168**

### How Long Should Transition Time Take to Employ?

How long should transition time take to employ?

**SLIDE: #--169**

### Should Transition Time Be Calculated Into the Overall Lesson Plan Time?

Should transition time be calculated into the overall lesson plan time?
Once the instructor has determined when to use transitions, what is the next issue?
4. Determine the types of transitions needed and how to create them

   a) Two types of transitions for oral communications
      1) Verbal
      2) Nonverbal
   b) Creation of transitions in computer-generated media presentations

LIX. VERBAL TRANSITIONS
A. Must be as smooth as possible to avoid distraction
B. Transition words or phrases

1. Recommended phrases
   a) "In addition to"
   b) "In other words"
   c) "As well"
   d) "Therefore"
   e) "In summary"
   f) "Not only"

2. Phrases to avoid
   a) "Finally"
   b) "In conclusion"
   c) Above phrases give students permission to stop listening
### Methods of verbal transitions

1. Summary statement and preview
2. Review of lesson or course agenda
3. Change of media
4. Repeat keywords or synonyms or pronouns in place of keywords
5. Enumerate parts to ensure continuity
6. Include questions
   - Rhetorical questions
     1) Help establish a relationship between information provided and information to follow
   - Overhead, direct, and relay questions
     1) Provide an opportunity to ask questions
     2) May lead to a planned or unplanned discussion period, depending on topic and level of student participation

### Nonverbal transitions

A. Used when instructors want to emphasize a point within a topic

B. May consist of
   1. Change of facial expression
   2. A pause
   3. Change of vocal pitch or rate of speech
   4. A gesture
5. Physically moving from one point to another within a space

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
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<tbody>
<tr>
<td>C. Must be smooth and <strong>not</strong> distracting</td>
<td></td>
</tr>
<tr>
<td>D. May be used to move from one teaching method into another</td>
<td></td>
</tr>
<tr>
<td>1. Involves obvious change</td>
<td></td>
</tr>
<tr>
<td>2. Transitions may disturb student concentration</td>
<td></td>
</tr>
<tr>
<td>a) Altering light</td>
<td></td>
</tr>
<tr>
<td>b) Turning on audiovisual equipment</td>
<td></td>
</tr>
<tr>
<td>c) Assembling a model</td>
<td></td>
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</tbody>
</table>

How can an instructor effectively transition the presentation when equipment assembly is necessary?

<table>
<thead>
<tr>
<th>SLIDE: #--175</th>
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</thead>
<tbody>
<tr>
<td>E. Methods when equipment assembly is needed</td>
</tr>
<tr>
<td>1. Another instructor or aide does assembly</td>
</tr>
<tr>
<td>2. Assembly time used for rest break</td>
</tr>
<tr>
<td>a) Break time and transition must coincide</td>
</tr>
</tbody>
</table>

When an instructor uses computer-generated media, what types of transitions are often employed?

<table>
<thead>
<tr>
<th>SLIDE: #--176</th>
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</thead>
<tbody>
<tr>
<td>LXI. MEDIA TRANSITIONS AND ANIMATIONS</td>
</tr>
<tr>
<td>A. Computer-generated presentations</td>
</tr>
<tr>
<td>1. Transitions between slides</td>
</tr>
</tbody>
</table>
2. Animation effects within slides
   a) Animations may become overused/abused
   b) Some effects are not appropriate for training

<table>
<thead>
<tr>
<th>PRESENTATION</th>
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</thead>
<tbody>
<tr>
<td>2. Animation effects within slides</td>
</tr>
<tr>
<td>a) Animations may become overused/abused</td>
</tr>
<tr>
<td>b) Some effects are not appropriate for training</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the main issue with animation effects?</td>
</tr>
<tr>
<td>What are some general guidelines that an instructor should follow when selecting the type of media transitions and/or animations for a computer-generated presentation?</td>
</tr>
</tbody>
</table>

**SLIDE: ###-177**

### B. Guidelines for media transitions and animations

1. Create one heading for each slide or image
   a) Expand with subheadings
   b) Add illustrations (graphs, charts, photos)

2. Keep backgrounds simple
   a) Should not conflict with text or graphics

3. Use transitions and animations sparingly

4. Use variety in composition of slide elements
   a) Intersperse graphs, charts, photos, clipart

5. Vary transition style
   a) One style for major topics
   b) Different style for subtopics

6. Use blackout screens in the presentations to bring the focus back to the instructor

<table>
<thead>
<tr>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are some of the pitfalls to avoid when selecting media transitions and/or animations?</td>
</tr>
</tbody>
</table>

January 2010 (V1)
### C. Media transition pitfalls

1. Fancy, involved, visually stimulating transitions and animations
   - a) Will be distracting
   - b) Keep focus on information, *not* animation
2. Transitions with too much motion
3. Sound effects included with software
   - a) Not generally appropriate for training sessions
   - b) Avoid, unless necessary to convey message
Summary:
For consistency and continuity of presentation, the well-prepared instructor should use verbal, nonverbal and media transitions where they will be most effective to move students from one portion of a lesson to the next with minimal distraction. By following the general guidelines for creating transitions applicable to the lesson and method of delivery, the instructor will be well on the way toward delivery of a quality presentation.

Evaluation:
The student will complete the course-final-exam summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 255-258 in order to prepare yourself for the upcoming test. Study for our next session.
**Topic:** 3-9: Cleaning And Field Level Maintenance For Audiovisual Training Aid Devices

**Time Frame:** 0:30

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #9: Describe And Demonstrate The Use Of Audiovisual Equipment And Materials

**Behavioral Objective:**

- **Condition:** Given a course-final-exam
- **Behavior:** The student will describe cleaning and field level maintenance of audiovisual training aid devices
- **Standard:** With a minimum 80% accuracy on the course-final exam according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 272-274

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices

**References:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 272-274

**Preparation:** Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract)
- Curiosity (arouse)
- Interest (create)
- Desire (stimulate)
- Begin
- Association
- Students
- Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LXII. INSPECTION

A. Instructors should regularly inspect all training aids and equipment
   1. At least before each use

B. Some equipment allows you to identify the lifetime remaining on a projector bulb
   1. Confirm before beginning a class
   2. Have a replacement bulb available

LXIII. CLEANING

A. Periodic cleaning provides opportunity for inspection of equipment

B. Follow manufacturer’s instructions for cleaning, care, and maintenance

C. General cleaning suggestions
   1. Use manufacturer-recommended cleaning agents and procedures
   2. Do not use abrasive cleaners on glass surfaces
   3. Use a soft cloth to remove dust and fingerprints
   4. Use a soft bristled brush to dust hard-to-reach areas inside equipment
   5. Do not use solvents for cleaning

Where can information be found on how to clean and maintain audiovisual equipment?

How should dust and fingerprints be cleaned off equipment?
6. Clean chalk and whiteboards completely when finished using them
7. Clean filters as necessary
8. Clean audio and video heads according to manufacturer recommended methods and intervals

LXIV. CARE

A. Proper care will prevent damage and extend the life of audiovisual materials and equipment

B. General care guidelines
   1. Do not leave electronic equipment or media in vehicles during extreme temperatures or in direct sunlight
   2. Storage
      a) Media (slides, transparencies, memory sticks)
         1) In appropriate storage containers
         2) Temperature-controlled areas
         3) Out of direct sunlight
      b) Mannequins
         1) In carrying cases or closed cabinets
      c) Projectors
         1) According to manufacturer’s guidelines
      d) Power cords
         1) Wrap securely
   3. Use dust covers on equipment that is not being used
   4. Use lens caps on all optical lenses
   5. Wear cotton gloves when
      a) Handling transparencies and slides
**PRESENTATION**

<table>
<thead>
<tr>
<th>b) Touching lenses or changing light bulbs in projectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Allow projectors sufficient cool-down time when powering down</td>
</tr>
</tbody>
</table>

| a) Extends the life of the bulb |

**APPLICATION**

Why is it important to allow bulbs to cool down?

**SLIDE: #--186**

**LXV. MAINTENANCE**

**A. Only qualified personnel should perform specialized maintenance of audiovisual equipment**

**B. When performing basic maintenance**

1. Follow manufacturers’ guidelines
2. Unplug electrical power cords and remove batteries
   a) To prevent shock

**C. Instructors should be able to perform some basic maintenance**

1. Replace projector bulbs
   a) Always wear cotton gloves to prevent skin oil contamination of the bulb
2. Lubricate gears and moving parts
   a) Follow manufacturer's recommendations
3. Tighten loose screws and connections
   a) Do not over-tighten
4. Periodically clean air filters in multimedia projectors
   a) Clogged filters cause cooling fans to work harder and decreases the life of the unit

**SLIDE: #--187**

What are some basic maintenance tasks that instructors should be able to perform?
Summary:
Instructors can improve the dependability and service life of audiovisual equipment by performing regular inspections, caring for, and cleaning the equipment. In the event that equipment should fail, the ability to perform basic maintenance tasks may help the instructional delivery to continue as planned.

Evaluation:
The student will complete the course final exam summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 272-274 in order to prepare yourself for the upcoming test. Study for our next session.
**Topic:** 3-10: Developing Audiovisual Training Aids

**Time Frame** 1:30

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #9: Describe And Demonstrate The Use Of Audiovisual Equipment And Materials

**Behavioral Objective:**

<table>
<thead>
<tr>
<th>Condition:</th>
<th>Given an activity and a course final exam summative test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior:</td>
<td>The student will describe and demonstrate the development of audiovisual training aids to be used during the delivery of a cognitive lesson plan</td>
</tr>
<tr>
<td>Standard:</td>
<td>With a minimum 80% accuracy on the course final exam summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 73-75, 149-152, 248-274, 349-352, Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 69, and successfully completing Individual Activity 3-10-1</td>
</tr>
</tbody>
</table>

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials
- Individual Activity 3-10-1: Developing Audiovisual Media

**References:**
- Curriculum Development Guidelines, SFT
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 73-75, 149-152, 248-274, and 349-352
- www.copyright.gov

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)** Begin
- **Curiosity (arouse)** Association
- **Interest (create)** Students
- **Desire (stimulate)** Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LXVI. CONSIDERATIONS WHEN DEVELOPING AUDIOVISUAL MATERIALS

A. Ensure audiovisual materials support the behavioral objective/learning outcomes
   1. Domains of learning
      a) Cognitive
      b) Psychomotor
      c) Affective
   2. Styles and methods of learning
      a) Audio
      b) Visual
      c) Kinesthetic
   3. Laws of learning
      a) Readiness
      b) Exercise
      c) Effect
      d) Disuse
      e) Association
      f) Recency
      g) Primary
      h) Intensity
   4. Theories of learning and remembering
      a) Sensory stimulation theory
         1) For people to change, they must invest their senses in the process

What domains of learning do they support?

What are some of the laws of learning?
2) During a learning session, instructors stimulate what students
   - See
   - Hear
   - Touch
   - Smell
   - Taste

b) Cone of learning
   1) Used in the fire service for many years
   2) Illustrates that students retain the following amounts of information
      - 10% of what they read
      - 20% of what they hear
      - 30% of what they see
      - 50% of what they see and hear
      - 70% of what they say or repeat

      - 90% of what they say while doing what they are talking about

How do students achieve the greatest amount of retention?

5. Instructor needs to perform an assessment
   a) Consider what is the best way for your audience

6. This is why we use an illustrated lecture

What are the major elements of copyright?

B. Copyright
   1. Fixation
      a) Putting an original creation into a tangible form which allows people to perceive it
2. Originality
   a) Requires work to be a product of the author's own mind
   b) Cannot copyright facts or theories

3. Expression: the work must be an "expression" and not an "idea." Ideas cannot be copyrighted, although one's expression of that theory could be.

C. Fair use
   1. Under the Fair Use Doctrine rule of copyright law, an author may make limited use of another author's work without asking permission
   2. The fair use privilege is perhaps the most significant limitation on a copyright owner's exclusive rights
   3. If you write or publish, you need a basic understanding of what is and is not fair use

D. Plagiarism
   1. Presenting someone else's work as your own
   2. If you use it – give credit where credit is warranted

E. Obtain permission for use

NOTE: Allow discussion of students' personal experiences.

LXVII. DEVELOPMENT GUIDELINES

A. Typefaces
   1. Serif fonts
      a) Have curly ends on the beginning or ending of the font
      b) Sometimes referred to as tails or feet
      c) Hard to see by a good portion of your audience
   2. Sans-serif fonts
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Do not have &quot;tails or feet&quot; at the beginning or end</td>
<td>What does the 6x6 rule signify?</td>
</tr>
<tr>
<td>3. Minimum 24-point font is recommended</td>
<td></td>
</tr>
</tbody>
</table>

B. 6x6 rule  
1. Six words and six lines  
2. Some references do identify 7x7 as guidelines

C. Phrases  
1. Truncated statements to build bullet points  
2. Statements or quotes are acceptable  
3. Avoid paragraphs or long sentences  
4. Do not need to be complete statements  
5. Key words to grasp concepts

D. One heading for each slide  
1. Headliner for the slide

E. Backgrounds  
1. Keep the backgrounds simple  
2. Backgrounds should not conflict with text or graphics  
3. Use contrasting colors between backgrounds and text  
4. Keep the background color compatible with the text and graphics  
5. Do not select colors that clash or distract  

6. Utilizing dark font color on light color backgrounds is better suited in a bright learning environment

F. Use effects (transitions and animations) sparingly

Is there an advantage of using bright color text over dark color text?
## Presentation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Excessive use of effects actually can become a distraction rather than a delivery of the message</td>
</tr>
<tr>
<td>2.</td>
<td>Generally, professional presenters use no more than two or three effects</td>
</tr>
<tr>
<td>G.</td>
<td>Builds</td>
</tr>
<tr>
<td>1.</td>
<td>Another type of effect for each single slide</td>
</tr>
<tr>
<td>2.</td>
<td>This is how text can be presented to the students in the audience</td>
</tr>
<tr>
<td>3.</td>
<td>Incorporate the effect of &quot;revelation,&quot; which was taken from another media format – the overhead projector</td>
</tr>
<tr>
<td>a)</td>
<td>Revealing information at the time needed on to advance the discussion at hand</td>
</tr>
<tr>
<td>b)</td>
<td>As an example: revealing bullet point by bullet point</td>
</tr>
<tr>
<td>c)</td>
<td>This is very effective by maintaining students' focus on the current discussion point</td>
</tr>
<tr>
<td>4.</td>
<td>Use variety in the composition of the various elements on the slides by interspersing</td>
</tr>
<tr>
<td>a)</td>
<td>Graphs</td>
</tr>
<tr>
<td>b)</td>
<td>Charts</td>
</tr>
<tr>
<td>c)</td>
<td>Photographs</td>
</tr>
<tr>
<td>d)</td>
<td>Clipart</td>
</tr>
<tr>
<td>e)</td>
<td>Avoid over use which again can create a distraction</td>
</tr>
</tbody>
</table>

## Application

- Are there any considerations to be noted with using transitions?
- What is revelation when considering presenting information?
- What are some additional elements to add impact for presentations?
5. Guideline: use parallel structure on each slide
   a) Start phrases with nouns
   b) Start bullets with verbs

LXVIII. INSTRUCTOR COMPETENCY

A. Remember, audiovisual aids are not a crutch
B. Audiovisual software does not replace the instructor
C. Instructors must practice using audiovisual aids in order to reinforce the behavioral objectives
   1. Be prepared to use audiovisual material that has been developed for the instruction
D. Practice and become comfortable with the strategic placement of the computer and projected image
E. Avoid reading off the screen

F. A well prepared instructor has a "Plan B" as an alternative if the technology fails or other issues arise with audiovisual materials

NOTE: Refer students to Individual Activity 3-10-1: Developing Audiovisual Training Aids in their student supplements.

SLIDE: ###-191

What do instructors do when the audiovisual materials fails?

CLASS ACTIVITY:
Complete Individual Activity 3-10-1. Start in the class and finish as homework if necessary.
Summary:
Audiovisual media is an important tool for enhancing the learning process. While developing the media, you must remember the most important consideration – the media must support the behavioral objective. Keeping in line with the principles of learning and audiovisual development guidelines will ensure that your product is effective.

Evaluation:
The student will complete the course final exam summative test at a time determined by the instructor.

Assignment:
INDIVIDUAL ACTIVITY 3-10-1: DEVELOPING AUDIOVISUAL TRAINING AIDS

**Time Frame:**
0:30 in-class; completed as homework

**Materials Needed:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 73-75, 149-152, 248-274, and 349-352
- Audiovisual Checklist

**Introduction:**
As an instructor, you have an obligation to develop audiovisual materials to support your lessons. This activity provides the students the opportunity to develop audiovisual materials to use during the cognitive lesson plan teaching demonstration. The instructor will be available for assistance during the classroom portion.

**Directions:**
1. Review your notes for this lesson.
3. Prepare a minimum of two (2) types of audiovisual aids to be presented with the delivery of your cognitive lesson plan.
   - One must be projected and one nonprojected
4. Use the information in your student supplement as a guide to make sure your audiovisual materials support your lesson.
**Topic:** 3-11: Procedures For Evaluating Student Instructor Teaching Demonstrations

**Time Frame:** 0:30

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS # 12: Describe And Demonstrate The Methods Of Student Instructor Evaluation

**Behavioral Objective:**

**Condition:** Given activities and a course final exam summative test

**Behavior:** The student will describe and demonstrate procedures for evaluating student instructor psychomotor and cognitive teaching demonstrations, including providing feedback, making constructive suggestions for improvement, and completing evaluation forms

**Standard:** With a minimum 80% accuracy on the course final exam summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 359-362 and successfully completing Individual Activities 3-11-1, 3-11-2, and 3-11-3

**Materials Needed:**
- Writing board pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Blank Student Instructor Cognitive Teaching Demonstration Evaluation Form
- Blank Student Instructor Psychomotor Teaching Demonstration Evaluation Form
- Individual Activity 3-11-1: Evaluating A Student Instructor's Cognitive Teaching Demonstration As The Primary Evaluator
- Individual Activity 3-11-2: Evaluating A Student Instructor's Cognitive Teaching Demonstration As The Secondary Evaluator
- Individual Activity 3-11-3: Evaluating A Student Instructor's Psychomotor Teaching Demonstration As The Primary Evaluator

**References:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 359-362
Preparation: Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention** (attract) Begin
- **Curiosity** (arouse) Association
- **Interest** (create) Students
- **Desire** (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LXIX. INSTRUCTOR EVALUATIONS

A. The purpose is to assess the effectiveness of a presentation and to provide constructive criticism for improvement

1. Focused on objective criteria

   a) Easily defined or observable
      1) What you saw
      2) What you heard

   3) Examples
      - She spoke with good clarity and volume
      - He made eye contact with students in the front row but did not look at the rest of the class

2. Avoid subjective criteria

   a) Not easily defined or observable
      1) What you felt
      2) Examples
         - He spoke well
         - Her eye contact was O.K.

LXX. PROCEDURES FOR EVALUATION

A. Before the evaluation
   1. Review the evaluation materials
      a) Evaluation form
      2. Become familiar with evaluation criteria
LXXI. USING EVALUATION FORMS

Why do we use evaluation forms?

SLIDE: #-#-195

A. Reasons
   1. Reduce subjectivity
   2. Help to ensure consistency

B. Should include objective evaluation of
   1. Classroom management
      a) Seating arrangement
      b) Lighting
      c) Minimizing distractions
   2. Proper instructional method for topic
   3. Clear communication of learning objectives
      a) What type of evaluation will be used
      b) What information the students will need to learn
      c) How well they will need to learn it
   4. Effective preparation
      a) Draws students in
      b) Prepares them to learn
         1) ACID BASE
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Presentation techniques</td>
<td></td>
</tr>
<tr>
<td>a) Verbal communication</td>
<td></td>
</tr>
<tr>
<td>1) Volume</td>
<td></td>
</tr>
<tr>
<td>2) Clarity</td>
<td></td>
</tr>
<tr>
<td>3) Lack of interferences</td>
<td></td>
</tr>
<tr>
<td>b) Nonverbal communication</td>
<td></td>
</tr>
<tr>
<td>1) Eye contact</td>
<td></td>
</tr>
<tr>
<td>2) Gestures</td>
<td></td>
</tr>
<tr>
<td>3) Lack of distracting mannerisms</td>
<td></td>
</tr>
<tr>
<td>c) Audiovisual training aids</td>
<td></td>
</tr>
</tbody>
</table>

5. Presentation techniques

a) Verbal communication
   1) Volume
   2) Clarity
   3) Lack of interferences
b) Nonverbal communication
   1) Eye contact
   2) Gestures
   3) Lack of distracting mannerisms
c) Audiovisual training aids

What criteria will we be using to evaluate the instructor's use of training aids?

1) Easily seen
2) Support presentation
3) Used effectively
d) Active learning environment
   1) Frequent use of questioning techniques
   2) Active student/instructor interaction
   3) Active student/student interaction

6. Appropriate time management

SLIDE: #-#-196

LXXII. AFTER THE EVALUATION

A. Complete evaluation form
B. Provide objective feedback to student instructor

1. Note strengths

What aspects of the presentation will the evaluation give the student instructor feedback on?
2. Mention areas of possible improvement
   a) Provide constructive suggestions

NOTE: Refer students to Individual Activity 3-11-1: Evaluating A Student Instructor’s Cognitive Teaching Demonstration As The Primary Evaluator, Individual Activity 3-11-2: Evaluating A Student Instructor’s Cognitive Teaching Demonstration As The Secondary Evaluator, and Individual Activity 3-11-3: Evaluating A Student Instructor's Psychomotor Teaching Demonstration As The Primary Evaluator in their student supplements.

CLASS ACTIVITY:
Complete Individual Activities 3-11-1, 3-11-2, and 3-11-3 during the remainder of the class.
Summary:
The teaching evaluations you will receive and deliver in this class will be an invaluable tool to assist you on your way to becoming an effective instructor. Participating in this process will allow you to begin to see what works, and what does not when you are developing and presenting instruction. These evaluations will help you refine your techniques and become the most effective instructor possible.

Evaluation:
The student will complete activities and course final exam summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 359-362 for the upcoming test. Study for our next session.
Individual Activity 3-11-1: Evaluating a Student Instructor's Cognitive Teaching Demonstration as the Primary Evaluator

**Time Frame:** 0:45

**Materials Needed:**
- Blank Cognitive Teaching Demonstration Evaluation Form
- Sample Passing Student Instructor Cognitive Teaching Demonstration Evaluation
- Sample Failing Student Instructor Cognitive Teaching Demonstration Evaluation
- Pen or pencil

**Introduction:**
This activity provides the student the opportunity to observe student instructor teaching demonstrations and provide feedback in the form of a written evaluation. Student evaluators will be able to help student instructors by focusing on all aspects of the Training Instructor 1C course and give constructive, positive feedback to their fellow students.

**Directions:**
1. Review the blank Cognitive Teaching Demonstration Evaluation form.
2. Review the Sample Passing Student Instructor Cognitive Teaching Demonstration Evaluation form. Pay special attention to the details of the remarks in each category.
3. Review the Sample Failing Student Instructor Cognitive Teaching Demonstration Evaluation form. Pay special attention to the problem areas identified and how they were expressed.
4. As the **Primary Evaluator**, you will present your findings (using your completed evaluation form) and then lead a class discussion on the student instructor's performance.
5. Be prepared to discuss your overall experience with the class.
6. Submit your completed evaluation to your Primary Instructor when requested.
Individual Activity 3-11-2: Evaluating a Student Instructor’s Cognitive Teaching Demonstration as the Secondary Evaluator

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>0:45</th>
</tr>
</thead>
</table>
| Materials Needed: | • Blank Cognitive Teaching Demonstration Evaluation Form  
• Sample Passing Student Instructor Cognitive Teaching Demonstration Evaluation  
• Sample Failing Student Instructor Cognitive Teaching Demonstration Evaluation  
• Pen or pencil |
| Introduction: | This activity provides the student the opportunity to observe student instructor teaching demonstrations and provide feedback in the form of a written evaluation. Student evaluators will be able to help student instructors by focusing on all aspects of the Training Instructor 1C course and give constructive, positive feedback to their fellow students. |
| Directions: | 1. Review the blank Cognitive Teaching Demonstration Evaluation form.  
2. Review the Sample Passing Student Instructor Cognitive Teaching Demonstration Evaluation form. Pay special attention to the details of the remarks in each category.  
3. Review the Sample Failing Student Instructor Cognitive Teaching Demonstration Evaluation form. Pay special attention to the problem areas identified and how they were expressed.  
4. As the Secondary Evaluator, you will present your findings as requested by the Primary Evaluator.  
5. Be prepared to discuss your overall experience with the class.  
6. Submit your completed evaluation to your Primary Instructor when requested. |
Individual Activity 3-11-3: Evaluating a Student Instructor’s Psychomotor Teaching Demonstration as the Primary Evaluator

**Time Frame:** 0:30

**Materials Needed:**
- Blank Psychomotor Teaching Demonstration Evaluation Form
- Sample Passing Student Instructor Psychomotor Teaching Demonstration Evaluation
- Sample Failing Student Instructor Psychomotor Teaching Demonstration Evaluation
- Pen or pencil

**Introduction:**
This activity provides the student the opportunity to observe student instructor teaching demonstrations and provide feedback in the form of a written evaluation. Student evaluators will be able to help student instructors by focusing on all aspects of the Training Instructor 1C course and give constructive, positive feedback to their fellow students.

**Directions:**
1. Review the blank Psychomotor Student Teaching Demonstration Evaluation Form.
2. Review the Sample Passing Student Instructor Psychomotor Teaching Demonstration Evaluation form. Pay special attention to the details of the remarks in each category.
3. Review the Sample Failing Student Instructor Psychomotor Teaching Demonstration Evaluation form. Pay special attention to the problem areas identified and how they were expressed.
4. As the **Primary Evaluator**, you will present your findings (using your completed evaluation form) and then lead a class discussion on the student instructor's performance.
5. Be prepared to discuss your overall experience with the class.
6. Submit your completed evaluation to your Primary Instructor when requested.
# Student Instructor Cognitive Teaching Demonstration Evaluation Form

<table>
<thead>
<tr>
<th>EVALUATED COMPONENTS</th>
<th>CONSIDER</th>
<th>YES</th>
<th>NO</th>
<th>Pass or Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CLASSROOM MANAGEMENT</td>
<td>Seating arrangement, lighting, distractions</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. LEARNING OBJECTIVE</td>
<td>Must include Condition, Behavior, Standard</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. PREPARATION</td>
<td>ACID BASE, Effective</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. PRESENTATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a. Content</td>
<td>Appropriate lesson flow, known to unknown</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b. Verbal Communication</td>
<td>Volume, clarity, interferences</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4c. Nonverbal Communication</td>
<td>Eye contact, gestures, distracting mannerisms</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. APPLICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5a. Audiovisual Training Aids</td>
<td>Easily seen, support lecture, used effectively</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVALUATED COMPONENTS</td>
<td>CONSIDER</td>
<td>YES</td>
<td>NO</td>
<td>Pass or Fail</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------</td>
<td>-----</td>
<td>----</td>
<td>--------------</td>
</tr>
<tr>
<td>5b. <strong>Active Learning Environment</strong></td>
<td>Questioning techniques, interaction, feedback</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

| 6. SUMMARY                                    |                                         |     |    |              |

Comments:

| 7. EVALUATION                                 |                                         |     |    |              |

| 8. ASSIGNMENT                                 |                                         |     |    |              |

*Critical Component: Failure on this component results in failure of the teaching demonstration*

Primary Evaluator: ________ Actual Teaching Time

Grade: Pass [ ] Fail [ ]

Comments:

Secondary Evaluator: ________ Actual Teaching Time

Grade: Pass [ ] Fail [ ]

Comments:

Master Instructor
or Skills Evaluator: ________ Actual Teaching Time

Grade: Pass [ ] Fail [ ]

Comments:
## Student Instructor Psychomotor Teaching Demonstration Evaluation Form

<table>
<thead>
<tr>
<th>EVALUATED COMPONENTS</th>
<th>CONSIDER</th>
<th>YES</th>
<th>NO</th>
<th>Pass or Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MANAGED TRAINING ENVIRONMENT</td>
<td>Disruptions, distractions</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. LEARNING OBJECTIVE</td>
<td>Must include Condition, Behavior, Standard</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. PREPARATION</td>
<td>Effective, ACID BASE</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
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<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b. Training Aids and Props</td>
<td>Same as what the students will use, easily seen, used effectively and safely</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4c. Performed Skill At Full-speed Using Skill Sheet</td>
<td>Using skill sheet, promoting safety</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4d. Performed Again Slowly, Verbalizing Operations And Key Points</td>
<td>Appropriate speed, verbalizing operations and key points, emphasizing safety</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4e. Verbal Communication</td>
<td>Volume, clarity, interferences</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### EVALUATED COMPONENTS

<table>
<thead>
<tr>
<th></th>
<th>CONSIDER</th>
<th>YES</th>
<th>NO</th>
<th>Pass or Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>4f</td>
<td>Nonverbal Communication  Eye contact, gestures, distracting mannerisms</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
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<td></td>
<td>Comments:</td>
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<tr>
<td>5</td>
<td>APPLICATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5a</td>
<td>Student Skill Performance  Completes all operations, checking key points,</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td></td>
<td>emphasizing safety, correcting errors</td>
<td></td>
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<tr>
<td></td>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b</td>
<td>Active Learning Environment  Questioning techniques, interaction, feedback</td>
<td></td>
<td></td>
<td>P or F</td>
</tr>
<tr>
<td></td>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>EVALUATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>ASSIGNMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical Component: Failure on this component results in failure of the teaching demonstration

---

Student Instructor: ____________________________  Demo #: [  ] 1\textsuperscript{st}  [  ] 2\textsuperscript{nd}

Primary Evaluator: ________ Actual Teaching Time  Secondary Evaluator: ________ Actual Teaching Time

Grade: Pass [ ] Fail [ ]  Grade: Pass [ ] Fail [ ]

Comments:

Master Instructor or Skills Evaluator: ________ Actual Teaching Time

Grade: Pass [ ] Fail [ ]

Comments:
**Topic:**
4-1: Purpose, Selection Criteria, And Elements Of Test Instruments

**Time Frame:**
1:00

**Level of Instruction:**
Level II

**Authority:**
2008 Training Instructor CTS #10: Describe And Demonstrate The Testing Process

**Behavioral Objective:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Given a course-final-exam summative test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>The student will describe the purpose, criteria for selection, and elements of test instruments</td>
</tr>
<tr>
<td>Standard</td>
<td>With a minimum 80% accuracy on the course-final-exam summative test according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 303-318, 375-405, 410 and Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 80-82</td>
</tr>
</tbody>
</table>

**Materials Needed:**
• Writing board/pad with markers/erasers
• Appropriate audiovisual training aids and devices

**References:**
• Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 303-318, 375-405, and 410

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- **Attention (attract)**
- **Begin**
- **Curiosity (arouse)**
- **Association**
- **Interest (create)**
- **Students**
- **Desire (stimulate)**
- **Experience**

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LXXIII. PURPOSES OF TEST INSTRUMENTS

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 303-318.

A. Serves as the final step of the four-step method of instruction to
   1. Evaluate the student understanding
   2. Evaluate teaching effectiveness

B. Evaluate student understanding - provide feedback to students on
   1. What has been learned
   2. What should have been learned
   3. What still needs to be learned

C. Evaluate teaching effectiveness - allows instructors to evaluate
   1. Progress that students make during a course
   2. Effectiveness of instructional materials and techniques

D. Test process terms
   1. Evaluation
      a) Process used to assess
         1) A student's achievements
         2) The effectiveness of learning experiences
      b) Made against a defined criteria or standard

How can a test instrument evaluate teaching effectiveness?
2. Testing  
   a) Process of evaluation that implies standardization  
   b) Student is compared against a defined criteria or standard  

3. Validity  
   a) Extent to which a test measures what it was designed to measure  
      1) Did students learn the desired outcome or did they guess the right answer?  
      2) Did students learn the objectives, but due to poor test design, they were unable to identify the correct answers?  

Relative to evaluation and testing, what is validity?

4. Reliability  
   a) Condition that ensures that the test is dependable  
      1) Assures it yields the same results each time it is given  
   b) A reliable test is free from  
      1) Ambiguous items or directions  
      2) Vague scoring criteria  
      3) Environmental distractions  
      4) Opportunities for cheating or guessing  

Relative to evaluation and testing, what is reliability?

LXXIV. TEST CLASSIFICATIONS  
A. Interpretation classification (two types)  
   1. This test classification is based on interpreting test results in one of two ways
### PRESENTATION

#### a) Criterion-referenced tests

1. Compare performance against appropriate minimum standards
2. Majority of fire and emergency service tests are criterion-referenced
3. Criteria established through
   - NFPA professional qualifications standards
   - Federal, state, or local requirements
   - Other professionally accepted requirements

#### b) Norm-referenced tests

1. Rate student performance compared to other students based on broad sampling
2. Grading "on a curve"
3. Should not be used as end-of-course or certification test
4. May be used for promotional examinations

### APPLICATION

SLIDE: #--201

To what do criterion-referenced tests compare student performance?

SLIDE: #--202

How do norm-referenced tests rate student performance?

SLIDE: #--203

B. Purpose classification (three types)

1. Prescriptive tests (pretest)
   a) Given before the instruction
   b) Measures a student’s current level of knowledge to measure two following elements
1) Readiness
   - Determines if the student has the necessary knowledge and skills to perform in the course
   - Identifies the need for remedial training

2) Placement
   - Determines if the student has already achieved the behavioral objectives
   - Identifies students that can move on to the next course

2. Formative tests
   a) Evaluates progress
   b) Given during the course
   c) Measure improvement
   d) Give the instructor and student feedback on learning progress

3. Summative tests
   a) Comprehensive tests
   b) Evaluates success of teaching and learning
   c) Typically given at the middle and/or end of instruction

C. Administration classification (three types)
   1. Determining which type to use is based on the type of learning that is being evaluated
## 2. Oral – verbal answers to spoken questions

a) Questions may be either

1) **Closed**
   - Requiring only a single brief answer
   - Used when the purpose of the test is to determine knowledge

2) **Open**
   - Permit longer answers that may lead to further questions
   - Used when the purpose of the test is to determine how a student responds under pressure

b) **Advantages**

1) Only valid way to measure student's ability to verbally communicate ideas, concepts, or processes
2) Allows instructors to observe student's skills in
   - Judgment
   - Thought
   - Approach to problems
   - Ability to communicate under pressure

SLIDE: ###-208

c) **Disadvantages**

1) Scores may be unreliable because of evaluator subjectivity
2) Time consuming to administer
## Written

- **3) Difficult to ensure consistency between individual test takers**

3. Written - evaluates the student’s cognitive and affective learning objectives

   a) Multiple-choice
      1) Single question followed by multiple answers
   b) True-False
      1) Statement that requires student to determine whether it is true or false
   c) Matching
      1) Series of items needing matching to related information in another column
   d) Completion
      1) A question or statement missing a word
   e) Short Answer
      1) Question that requires a brief answer
   f) Essay
      1) Question that requires a lengthy answer or response

## Performance

4. Performance

   a) Students are required to perform a skill, task, or evolution rather than talk or write about it
   b) Must be based on standard criteria and performance objectives

**NOTE:** Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 376.
LXXV. TEST PLANNING

A. The key to designing effective tests is careful planning

B. Four steps

1. Step 1
   a) Determine test purpose and type

2. Step 2
   a) Identify and define learning objectives or learning outcomes

3. Step 3
   a) Prepare test specifications

4. Step 4
   a) Construct appropriate test items

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 385.

LXXVI. TEST USABILITY

A. Easy to administer
B. Easy to take
C. Sufficient time for administration
D. Cost effective
E. Available comparable forms
F. Easy to score

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 390.

LXXVII. WRITTEN TEST TYPES

A. Useful for measuring retention and understanding of technical information
B. Used to evaluate cognitive and affective learning
C. Objective tests
   1. Usually require student to respond with a specific answer
   2. Scoring is not influenced by outside factors
   3. Two major categories
      a) Recognition tests
         1) Answer is provided to the student; student must recognize the answer
         2) True-false, multiple choice, or matching
      b) Recall test
         1) The student must provide the answer through recall (memory)
         2) Short answer or completion

D. Subjective tests
   1. Usually require the student to write out long answers on the subject
   2. Easy to construct
   3. Difficult to score

E. Types of written tests
   1. Multiple-choice
      a) Single question or incomplete statement (stem)
         1) One correct answer
         2) Multiple additional incorrect choices (distracters)
      3) Advantages
         • Ability to measure complex learning objectives and various types of knowledge

What are some examples of types of written tests?
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4) Disadvantages</td>
<td>What are some disadvantages of multiple-choice tests?</td>
</tr>
<tr>
<td>• Can be difficult to construct tests that include different difficulty-level items</td>
<td></td>
</tr>
<tr>
<td>• Can be difficult to create enough plausible distracters for each stem</td>
<td></td>
</tr>
<tr>
<td>• 25% guessing factor</td>
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<tr>
<td>b) True-False</td>
<td></td>
</tr>
<tr>
<td>1) Statement that requires students to determine whether it is true or false</td>
<td>What are some advantages of true-false tests?</td>
</tr>
<tr>
<td>2) Advantages</td>
<td></td>
</tr>
<tr>
<td>• Adaptable to a wide range of subject matter</td>
<td></td>
</tr>
<tr>
<td>• Easy to score</td>
<td></td>
</tr>
<tr>
<td>• Can promote student interest and motivation and introduce points for discussion</td>
<td></td>
</tr>
<tr>
<td>3) Disadvantages</td>
<td></td>
</tr>
<tr>
<td>• Difficult to create test items that are completely true or completely false</td>
<td></td>
</tr>
<tr>
<td>• 50% guessing factor</td>
<td></td>
</tr>
<tr>
<td>• Do not give students the opportunity to demonstrate what they really know</td>
<td></td>
</tr>
<tr>
<td>c) Matching</td>
<td></td>
</tr>
<tr>
<td>1) Series of words, dates, events, or items listed in one column</td>
<td></td>
</tr>
<tr>
<td>2) Definition or related information in second column</td>
<td></td>
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<tr>
<td>3) Students must select choice in column 2 that matches the item in column 1</td>
<td></td>
</tr>
</tbody>
</table>
### PRESENTATION

#### 4) Advantages

- Minimizes guessing factor
- Relatively easy to construct
- Can cover a large amount of material in a small space

#### 5) Disadvantages

- Measurement of knowledge is limited because problem statements are short
- Inferior to multiple-choice tests in measuring high levels of instruction

### APPLICATION

What are some advantages of true-false tests?

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</table>

### d) Short answer/completion

1) **Fill in the blank/completion**

- Item is a statement that is missing a word or phrase
- Students must add the missing word(s)

2) **Short-answer**

- Items require a brief answer to a specific question

### How are items constructed on a completion test?

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</table>

3) **Advantages**

- Flexible
- Useful for measuring a student's ability to solve mathematical and similar problems
- Minimal opportunity for guessing

4) **Disadvantages**

- Difficult to score due to varied answers and misspelled words
### LXXVIII. INTERPRETIVE EXERCISES

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
</table>
| - Limited in measuring complex achievement  
- Difficult to design items so that only one answer is correct |  |
| **e) Essay** | What are some disadvantages of essay tests? |
| 1) Question that requires a lengthy, sometimes subjective, response | |
| 2) Advantages |  |
| - Eliminates guessing  
- Items are easy to create  
- Test skills in the higher learning levels |  |
| 3) Disadvantages |  |
| - Difficult to score because they are very subjective and answers may be difficult to read  
- Time consuming both to complete and to score  
- Writing ability and penmanship can be a barrier  
- Students with writing difficulties may be at a disadvantage |  |

A. Students are provided with information in the form of a paragraph, chart, diagram, etc.  
B. Items are answered based on interpretation of information

SLIDE: #216
C. Advantages
   1. Material may be tested at great depth
   2. Complex levels of learning may be tested
   3. Knowledge is tested in realistic methods
   4. Testing process is interesting for students

D. Disadvantages
   1. Complex and difficult to construct
   2. Require a high level of student reading ability
   3. Take a long time to administer

LXXIX. ORAL TESTS

A. Require students to verbally respond to spoken questions

B. Usually given one-on-one between instructor and student

C. Not commonly used in the fire and emergency services

D. Used in the following situations
   1. When the student cannot read at the level to which a test is written
   2. When a student must demonstrate the ability to respond under pressure
   3. To supplement performance tests to determine if a student knows the reasoning behind the tasks
   4. At the beginning of the class to
      a) Determine if assigned reading has been accomplished
      b) Provide a pretest and introduction to the topic

In what situations would oral tests be used?

SLIDE: #--218

SLIDE: #--219
5. As a component of a comprehensive exam
   a) Frequently for promotional processes

E. When determining student understanding at the end of a lesson

**LXXX. PERFORMANCE TESTS**

A. Students are required to perform a skill, task, or evolution

1. Must be used when testing psychomotor learning
2. Must be based on standard criteria and performance objectives

B. Discriminating

1. Test must separate the good students from the poor students

C. Tests will be valid and reliable

D. Advantages

1. Only way to measure student achievement in manipulative skills
2. Gives students who may struggle with oral or written tests an opportunity to succeed
3. Excellent means of motivating students
4. Provides students with a sense of accomplishment
5. Job-related
E. Disadvantages

1. Scores may be unreliable because of evaluator subjectivity
2. Tests are both resource and time consuming
3. Difficult to score individuals in team evolutions

NOTE: Refer to Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 410.
Summary:
Evaluating student performance is the important fourth step of the four-step method of instruction. There are a variety of types of test instruments that can be used to achieve this including oral, written, and performance tests. The instructor must make sure that the test is based on the identified learning objectives and that it is valid and reliable.

Evaluation:
The student will complete the course final exam/summative test at a time determined by the instructor.

Assignment:
**Topic:** 4-2: Creating Oral, Written, And Performance Tests

**Time Frame:** 2:00

**Level of Instruction:** Level II

**Authority:** 2008 Training Instructor CTS #10: Describe And Demonstrate The Testing Process

**Behavioral Objective:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>The student will describe and demonstrate the process of creating oral, written, and performance tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior</td>
<td>The student will describe and demonstrate the process of creating oral, written, and performance tests</td>
</tr>
</tbody>
</table>

**Standard:** With a minimum 80% accuracy on the course final exam, students must perform according to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 306-307 and 387-405, and successfully completing Group Activity 4-2-1 and Individual Activities 4-2-2 and 4-2-3

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Group Activity 4-2-1: Creating An Oral Test
- Individual Activity 4-2-2: Creating A Multiple-choice Written Test
- Individual Activity 4-2-3: Creating A True-False Written Test

**References:**

**Preparation:**

Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract)
- Curiosity (arouse)
- Interest (create)
- Desire (stimulate)
- Begin
- Association
- Students
- Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is...
to stimulate student motivation.
### LXXXI. TEST TYPES

**A. Written tests**
1. Test cognitive ability
2. Useful for measuring retention and comprehension of technical information

**B. Oral tests**
1. Test cognitive and communication abilities
2. Not commonly used in the fire and emergency services

**C. Performance tests**
1. Test psychomotor skill ability as it would be performed on the job
2. Test on present abilities, not potential

### LXXXII. COMMON CONSIDERATIONS FOR ALL TESTS

**A. General**
1. All test items must be referenced to a learning objective
2. Learning objectives, in turn, must be based on information from credible sources

**B. Format**
1. Spaces for date and student name on the test sheet
   a) Unless separate answer sheets are provided

When using performance tests, are you testing present or potential abilities of the student?
TRAINING INSTRUCTOR 1C
Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Test title or label</td>
<td>Where should instructions be included?</td>
</tr>
<tr>
<td>3. Numbered tests of different versions</td>
<td></td>
</tr>
<tr>
<td>a) Aids in reporting scores</td>
<td></td>
</tr>
<tr>
<td>b) Test security</td>
<td></td>
</tr>
<tr>
<td>4. Clear, easy-to-follow instructions</td>
<td></td>
</tr>
</tbody>
</table>

a) At the beginning of the test
b) At the start of each section that has a different format (multiple-choice, matching, true-false, etc.)

5. Sample test item and answer demonstrating how the test is to be completed

6. Consecutive numbering of test items

7. Single spacing within test items

8. Double spacing between test items

9. Point value of each test item

10. Use of commonly understood terms
    a) Do not use abbreviations or acronyms unless placed in parentheses following the common term

C. Test item arrangement

1. Group items
    a) Learning domain outcome
    b) Test item type
        1) Multiple-choice
        2) Matching
        3) Short answer

What are some considerations for arranging test items on the test instrument?
**TRAINING INSTRUCTOR 1C**  
*Instructional Development Techniques*

### PRESENTATION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 2. | Should be placed in sequence of increasing difficulty  
|   | a) Simple to complex  
|   | b) Allows students to gain confidence at beginning of test  
| 3. | Be careful that an item does not reveal the answer to subsequent items  

### APPLICATION

- D. Test item difficulty  
  1. Based on level of instruction as identified in the lesson plan  

- E. Instructions  
  1. Instruction on how to complete the test should be included  
  2. Instructions should explain  
    a) Purpose of test  
    b) Method and means for recording answers  
      1) On test document or separate answer sheet  
    c) Suggestion on whether to guess when undecided  
      1) Some tests penalize wrong answers more than not answering an item  
    d) Amount of time available to complete the test  
    e) When a test has multiple parts consisting of different types of items, specific instructions at the beginning of each section should be included  

### LXXXIII. WRITTEN TESTS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A. | Multiple-choice tests  
| 1. | Elements of multiple-choice test item  

What should the instructions explain?  
What are the elements of multiple-choice test item?
TRAINING INSTRUCTOR 1C
Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Stem</td>
<td></td>
</tr>
<tr>
<td>1) Question or incomplete statement</td>
<td></td>
</tr>
<tr>
<td>b) Choices or alternatives</td>
<td></td>
</tr>
<tr>
<td>1) Best answer</td>
<td></td>
</tr>
<tr>
<td>2) Distracters</td>
<td></td>
</tr>
</tbody>
</table>

2. Stem
a) Write the stem in the form of a direct question or incomplete statement that measures only one learning outcome
b) Clear, brief stem that contains most of the wording
   1) Do not place repeated words in the choices
c) Write positive statements

   1) If negative statements are used, "emphasize" the negative word
   - Underline
   - Bold
   - Italicize
d) Avoid grammatical clues to the correct answer

3. Choices
a) List four choices
   1) Best answer
      - One that is clearly the most correct
   2) Three plausible distracters
      - Do not include choices that are obviously wrong or humorous

SLIDE: #=#-228

If negative statements are used, what should the author do?

How many choices should be included?

SLIDE: #=#-229
### PRESENTATION

b) Create choices that are grammatically consistent with the stem  
c) Avoid grammatical clues to the correct answer  
d) Make all choices close to the same length  
   1) Correct response should not be longer or shorter than the distracters  

e) Avoid using the following phrases  
   1) All of the above  
   2) None of the above  
f) Place correct answer in varied positions among the A, B, C, and D choices  
g) Place each choice  
   1) On a separate, indented line  
   2) In a single column  
h) Begin responses with upper-case letters when the stem is a complete question  
i) Begin the responses with lower-case letters when the stem is an incomplete sentence  

What are some phrases that should be avoided?  

<table>
<thead>
<tr>
<th>SLIDE: #--230</th>
</tr>
</thead>
</table>

4. Specific formatting details may be determined by  
   a) Local policy or preference  
   b) Computer-generated test creation software  

5. Other guidelines for multiple-choice tests  
   a) Do not test trivial ideas or information  
   b) Use correct grammar and punctuation  

What factors may influence formatting? 

| SLIDE: #--231 |
### PRESENTATION

**B. True-False tests**

1. Difficulty in constructing is creating a statement that is either
   a) Completely true
   b) Completely false
2. True statements should be based on facts
3. False statements should be based on common misconceptions of the facts
4. What to include in true-false tests
   a) Write words "True" and "False" at the left margin when answers will be marked on the test paper
   b) Write instructions that direct students to draw a circle around the answer they select
      1) Do not have students write
         - "T" or "F"
         - "+" or "−"
         - "yes" or "no"
   c) Create a sufficient number of test items to provide reliable results
      1) More items are needed than for multiple-choice tests
      2) Large number of items minimizes the possibility of guessing the correct answer
   d) Distribute an equal number of true and false test items randomly throughout the test

### APPLICATION

On what should false statements be based?

**SLIDE: #232**

What should be the balance between true test items and false test items?
e) Write items that require a student to think about what they have learned, rather than merely remember it
f) Create brief and simply stated items that deal with a single concept

5. What to avoid when creating true-false tests
   a) Specific determiners
      1) Words that provide a clue to the answer
      2) Lead to true statements
         • "Sometimes," "generally," "usually," "often"
      3) Lead to false statements
         • "Always," "never," "all," "none"
   b) Trick or misleading items
   c) Double-negative items
      1) Are very confusing
   d) Personal pronouns such as "you"
   e) Command statements
   f) Items that test trivia or obscure facts
   g) Unusually long or short items
   h) Quoting verbatim from the book
      1) Most common mistake when writing true-false tests

C. Matching tests

1. Create two parallel columns of words, phrases, images, or a combination of these
<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) For every item in the problem column there should be one matching response in the other column</td>
<td></td>
</tr>
<tr>
<td>2. Instructions should indicate whether a response may be used more than once</td>
<td></td>
</tr>
<tr>
<td>3. Guidelines for creating matching tests</td>
<td></td>
</tr>
<tr>
<td>a) Avoid placing each group of problems and responses on more than one page</td>
<td></td>
</tr>
<tr>
<td>b) Prepare at least five but not more than seven problem statements</td>
<td></td>
</tr>
<tr>
<td>1) Limiting to five allows use of a mechanically/electronically scored answer sheet</td>
<td></td>
</tr>
<tr>
<td>c) Prepare more responses than problem statements</td>
<td></td>
</tr>
<tr>
<td>1) Reduces selection by elimination</td>
<td></td>
</tr>
<tr>
<td>d) Place appropriate titles at the head of each column</td>
<td></td>
</tr>
<tr>
<td>1) Number the problem statements</td>
<td></td>
</tr>
<tr>
<td>2) Place a blank line in front of each problem statement unless a separate answer sheet will be used</td>
<td></td>
</tr>
<tr>
<td>3) Use letters for each response</td>
<td></td>
</tr>
<tr>
<td>e) Arrange problems in systematic manner</td>
<td></td>
</tr>
<tr>
<td>1) Alphabetically</td>
<td></td>
</tr>
<tr>
<td>2) Chronologically</td>
<td></td>
</tr>
<tr>
<td>3) Numerically</td>
<td></td>
</tr>
</tbody>
</table>
### D. Short-answer/completion tests

1. Short-answer test  
   a) Question that requires an answer  

2. Completion test  
   a) Incomplete statement with key word(s) eliminated  
   b) Missing word represented with a blank line

3. Guidelines for creating short-answer/completion tests  
   a) Create short, concise, and direct statements so that only one answer is possible  
   b) Avoid long, involved statements with a string of blanks to fill  
     1) Tend to be confusing  
   c) Start with a direct question and change it to an incomplete statement  
   d) Ensure the answer is a key point in a lesson  
   e) Arrange the statement in order to place the blank at or near the end of the sentence  
   f) If a list of choices is provided, indicate when answers can be used more than once  
   g) Avoid statements that call for answers with more than one word, phrase, or number  
   h) Eliminate clues in the statement
**TRAINING INSTRUCTOR 1C**  
Instructional Development Techniques

<table>
<thead>
<tr>
<th>PRESENTATION</th>
<th>APPLICATION</th>
</tr>
</thead>
</table>
| 1) Variation of length of blank  
2) Use of words such as "a" or "an" preceding the blank | What may serve as a clue? |

**E. Essay tests**

1. Guidelines for creating essay tests
   a) Create and follow a plan for selecting test topics

   b) Write an outline of the acceptable responses
      1) Use as guide for scoring

   c) Clearly define the task to be completed when responding to each question

   d) Give thorough and specific directions that designate the
      1) Time to spent on each question
      2) Length of each response

   e) Provide enough time for students to respond to all questions

**F. Interpretive exercises**

1. Effective method for testing outcomes that involve comprehension, application, analysis, synthesis, and evaluation

2. Create introductory material
   a) Paragraph describing a situation or scenario
b) Numerical data  
c) Illustration, graph, table, chart, diagram, or map  
d) Ensure introductory material is  
   1) Relevant to learning objectives being measured  
   2) Brief and concise as possible  
   3) Should be unfamiliar to students  
      • Requires them to apply learned responses from a similar situation  

3. Create test items based on the introductory material  

   a) May be any type of written test item type  
   b) Apply rules for effective test item construction for each type of test item  
   c) Answers should not be contained in introductory material  
   d) Cannot be answered without the introductory material  
   e) Sufficient variety and quantity to provide a good sample of student's ability to interpret introductory material  

LXXXIV. ORAL TESTS  

A. Require students to verbally respond to spoken questions  
B. Usually given one-on-one between instructor and student  
C. Often used in conjunction with psychomotor performance tests  

For an interpretive exercise, in what format should the test items be?  

SLIDE: #241  

How do students take oral tests?
### D. Questions may be either

1. Closed
   a) Requiring only a single brief answer
2. Open
   a) Permitting longer answers that may lead to further questions and/or discussion

### E. Development

1. Base oral questions on standard criteria and performance objectives
2. Ensure that questions clearly state what students are to describe

### F. Validation

1. Ask questions of other faculty, experts, and students before using in actual testing conditions
2. Revise and update as necessary

**NOTE:** Refer students to Group Activity 4-2-1: Creating an Oral Test. Divide the class into small groups.

### LXXXV. PERFORMANCE (SKILLS) TESTS

A. Must be used when confirming psychomotor skills learning
B. Should be administered under controlled conditions
C. Specify performance objectives to be measured

1. Use student behavioral objectives from psychomotor lesson plan

**CLASS ACTIVITY:**
Complete Group Activity 4-2-1.

**SLIDE: #2-242**

When must performance tests be used?

Where are the performance objectives to measure identified?
### PRESENTATION

2. Consider combining several basic skills  
   a) Reduces time required for administration

### APPLICATION

How should student performance be rated?

D. Select rating factors on which a test will be judged

1. Rate students against a standard, not against the performance of other students
2. Design a rating form including  
   a) Student's approach to a standard job or procedure  
   b) Care shown in handling tools, equipment, and materials  
   c) Demonstration of accuracy  
   d) Time required to complete a job or procedure safely

E. Prepare directions that clearly explain the test situation to the students  
1. Written set of instructions for students to read  
2. Oral explanation for the instructor to provide  
3. Ensure that students have an opportunity to ask questions

F. Try a new performance test on other instructors before using it on students  
1. Measures validity  
2. Uncover problems that can be corrected

**NOTE:** Refer students to Individual Activity 4-2-2: Creating A Multiple-choice Written Test and Individual Activity 4-2-3: Creating A True-False Written Test in their student supplements. Students submit their tests for your review on Day 4 and be prepared to deliver on Day 5.

**HOMEWORK:**  
Complete Individual Activities 4-2-2 and 4-2-3 as homework.
Summary:
When was the last time you took a written examination? Did the questions test your knowledge level? Were the questions written in such a way to be easily understood? Were any of them confusing? Ambiguous? Redundant? Were there some questions that were totally written out of context?

If tests and questions are properly planned, prepared, and written, they will accomplish the intent of the test. They will measure what needs to be measured and they will do it accurately.

Tests used in the fire service are either oral, written, or performance tests. In creating these tests there are some general items that need to be considered in order for the tests to be valid and reliable; the most important being that the items must be based on the identified learning objective. For the individual types of tests there are more specific considerations that the instructor must keep in mind in order for the test instrument to achieve the desired goal.

Evaluation:
The student will complete the activities and course final exam/summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 306-307 and 387-405 and complete Individual Activities 4-2-2 and 4-2-3 as homework in order to prepare yourself for the upcoming test. Study for our next session.
GROUP ACTIVITY 4-2-1: CREATING AN ORAL TEST

**Time Frame:** 0:30

**Materials Needed:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 306-307 and 401-402
- Paper
- Pen or pencil

**Introduction:** This activity provides the students the opportunity to apply their knowledge of creating and administering oral tests.

**Directions:**
1. Review class notes from the lecture.
2. Read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 306-307 and 401-402
3. As a group, select one member’s self-prepared cognitive lesson plan.
4. Prepare a 5-item oral test that covers the subject matter from that cognitive lesson plan.
5. Be prepared to discuss your oral test questions in class.
INDIVIDUAL ACTIVITY 4-2-2: CREATING A MULTIPLE-CHOICE WRITTEN TEST

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>Homework</th>
</tr>
</thead>
</table>
| Materials Needed:    | • Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 387-393  
                       • Computer or typewriter  
                       • Printer and/or paper |
| Introduction:        | This activity provides the students the opportunity to apply their knowledge of creating and administering multiple-choice tests. |
| Directions:          | 1. Review class notes from the lecture.  
                       3. Prepare a 5-item multiple-choice test that covers the subject matter from your cognitive lesson plan.  
                       **Multiple-choice test must be typed or computer generated.**  
                       4. Submit one (1) copy to the instructor on _________________________.  
                       5. Make four (4) copies and be prepared to administer your completed test on __________________________________________. |
INDIVIDUAL ACTIVITY 4-2-3: CREATING A TRUE-FALSE WRITTEN TEST

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Computer or typewriter</td>
</tr>
<tr>
<td></td>
<td>Printer and/or paper</td>
</tr>
<tr>
<td>Introduction:</td>
<td>This activity provides the students the opportunity to apply their knowledge of creating and administering true-false written tests.</td>
</tr>
<tr>
<td>Directions:</td>
<td>1. Review class notes from the lecture.</td>
</tr>
<tr>
<td></td>
<td>2. Read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 387-396</td>
</tr>
<tr>
<td></td>
<td>3. Prepare a 5-item true-false test that covers the subject matter from your cognitive lesson plan.</td>
</tr>
<tr>
<td></td>
<td><strong>True-False test must be typed or computer generated.</strong></td>
</tr>
<tr>
<td></td>
<td>4. Submit one (1) copy to the instructor on _________________________.</td>
</tr>
<tr>
<td></td>
<td>5. Make four (4) copies and be prepared to administer your completed test on _________________________.</td>
</tr>
</tbody>
</table>
**Topic:**
4-3: Methods Of Administering And Grading Test Instruments

**Time Frame:**
1:00

**Level of Instruction:**
Level II

**Authority:**
2008 Training Instructor CTS #10: Describe And Demonstrate The Testing Process

**Behavioral Objective:**

<table>
<thead>
<tr>
<th><strong>Condition:</strong></th>
<th>Given an activity and a course final exam</th>
<th>summative test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavior:</strong></td>
<td>The student will describe and demonstrate the methods of administering and grading oral and written test instruments</td>
<td></td>
</tr>
<tr>
<td><strong>Standard:</strong></td>
<td>With a minimum 80% accuracy on the course final exam</td>
<td>summative test</td>
</tr>
</tbody>
</table>

According to the information contained in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 308-315, 402-405, and successfully completing Group Activity 4-3-1

**Materials Needed:**
- Writing board/pad with markers/erasers
- Appropriate audiovisual training aids and devices
- Group Activity 4-3-1: Test Administration

**References:**
- Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 308-315 and 402-405
- Overcoming Test Anxiety, Dennis H. Congos, University of Central Florida

**Preparation:**
Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

- Attention (attract) Begin
- Curiosity (arouse) Association
- Interest (create) Students
- Desire (stimulate) Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section “from the heart.” Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.
LXXXVI. TEST ADMINISTRATION

A. Begins before the test is given

B. Prior to the test

1. Inform students prior to test date
   a) Test type
   b) Test content
   c) Materials needed

2. Dates and times of tests should be included in the course syllabus

3. Determine if there are any specific instructions or protocols for administering the test

4. Help students overcome test anxiety
   a) Based on students’ fear of losing control
   b) Is reduced with increased preparation
   c) Provide students with guidelines
      1) How to prepare for the test
      2) Stress management techniques
      3) Outside resources

C. On the day of test

1. Report to assigned location early

2. Eliminate adverse conditions

   a) Room temperature

Prior to the test, what should you tell the students?

What are some adverse testing conditions that you may need to control?
<table>
<thead>
<tr>
<th><strong>PRESENTATION</strong></th>
<th><strong>APPLICATION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Lighting</td>
<td>What is the purpose for numbering tests?</td>
</tr>
<tr>
<td>c) Distractions</td>
<td></td>
</tr>
<tr>
<td>d) Noise inside or outside room</td>
<td></td>
</tr>
<tr>
<td>3. Maintain test security</td>
<td></td>
</tr>
<tr>
<td>a) Number tests/pages</td>
<td></td>
</tr>
<tr>
<td>1) Enables accounting for all materials after the test</td>
<td></td>
</tr>
<tr>
<td>b) Arrange seating</td>
<td></td>
</tr>
<tr>
<td>1) Eliminate the opportunity to cheat</td>
<td></td>
</tr>
<tr>
<td>4. Ensure that all cellular phones, pagers, personal digital assistants, etc. are turned off and put away</td>
<td></td>
</tr>
<tr>
<td>a) Can be a distraction or security concern</td>
<td></td>
</tr>
<tr>
<td>5. Ensure that no unauthorized notes or materials are available to students</td>
<td></td>
</tr>
<tr>
<td>6. Read test instructions to students</td>
<td></td>
</tr>
<tr>
<td>a) Procedures for marking answers</td>
<td></td>
</tr>
<tr>
<td>b) Allotted time</td>
<td></td>
</tr>
<tr>
<td>7. Ask if there are any questions</td>
<td></td>
</tr>
<tr>
<td>D. During the test</td>
<td></td>
</tr>
<tr>
<td>1. Maintain a quiet and safe environment</td>
<td></td>
</tr>
<tr>
<td>2. Walk around the room</td>
<td></td>
</tr>
<tr>
<td>a) Ensure no cheating is taking place</td>
<td></td>
</tr>
<tr>
<td>1) Copying</td>
<td></td>
</tr>
<tr>
<td>2) Electronic or other information storage</td>
<td></td>
</tr>
</tbody>
</table>
### PRESENTATION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3) Ensure that students leaving the room do not take testing materials with them</td>
<td></td>
</tr>
<tr>
<td>3. Control the conditions for performance tests to ensure they are valid and reliable</td>
<td></td>
</tr>
<tr>
<td>4. Provide for safety during all portions of a performance test</td>
<td></td>
</tr>
</tbody>
</table>

### APPLICATION

**SLIDE: #--248**

**E. Following the test**

1. Collect tests, answer sheets, and skill sheets
   a) Ensure that they have been completed correctly
   b) Maintain security
2. Review the test with students
   a) When appropriate
   b) To clarify objectives they may not have understood
3. Return test materials to the proper authority

**SLIDE: #--249**

### LXXXVII. TEST SCORING

**A. Oral tests**

1. Closed questions
   a) Student's answer must match required answer
   b) When more than one answer is possible all possible answers must be considered correct and given equal value
2. Open questions
   a) More subjective to score

**Why would an instructor review tests with students?**

**Are open questions more subjective or objective to score?**
b) Depend on
   1) Content accuracy
   2) How student answered the question
   c) Instructor should develop a scoring guideline

B. Written tests
   1. Score answer sheets
      a) Electronically
      b) Manually

C. Performance tests
   1. Measure individual performance

2. May include
   a) Time standard
   b) Quality standard
   c) Both types of standards

3. Use more than one test evaluator
4. Follow established procedures during administration
5. Ensure the evaluators are trained on how to use the skills checklist

LXXXVIII. REPORTING GRADES
A. Once tests have been scored, the scores must be recorded and reported

   1. As soon as possible
   2. Record in individual student records
   3. Use as feedback for students
<table>
<thead>
<tr>
<th>PRESENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Ensure accuracy when recording scores</td>
</tr>
<tr>
<td>B. Add individual scores for student</td>
</tr>
<tr>
<td>1. To determine final grade</td>
</tr>
<tr>
<td>2. To determine whether or not a student achieved the minimum required grade</td>
</tr>
<tr>
<td>a) Do not certify as having completed training any student that does not achieve the minimum required grade</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can an instructor post a sheet listing the students' names and grades in public?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Due to confidentiality concerns, report only to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student</td>
</tr>
<tr>
<td>2. Instructor</td>
</tr>
<tr>
<td>D. Family Education and Privacy Act (1974)</td>
</tr>
<tr>
<td>1. Legal restrictions apply to the dissemination of a student's grade/score information</td>
</tr>
<tr>
<td>2. Training Division/educational establishment</td>
</tr>
<tr>
<td>a) Certification purposes</td>
</tr>
<tr>
<td>b) Course effectiveness assessment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LXXXIX. TEST SECURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Security of tests is essential to an effective training program</td>
</tr>
<tr>
<td>1. To prevent cheating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Test security guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Regularly revise test questions and answer sheets</td>
</tr>
<tr>
<td>2. Destroy old or outdated test materials</td>
</tr>
<tr>
<td>3. Use multiple versions of the same test</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SLIDE: #251</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is a major reason for maintaining test security?</td>
</tr>
<tr>
<td>PRESENTATION</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>4. Take care in writing, duplicating, and storing test materials</td>
</tr>
<tr>
<td>5. Number and inventory test sheets, booklets, and answer sheets</td>
</tr>
<tr>
<td>6. Use secure data storage for electronic copies of testing instruments</td>
</tr>
<tr>
<td>7. Control presence of portable electronic devices in classrooms during tests</td>
</tr>
<tr>
<td>a) Can be used to</td>
</tr>
<tr>
<td>1) Access information about tests</td>
</tr>
<tr>
<td>2) Record test contents</td>
</tr>
<tr>
<td>3) Communicate to others outside of the testing room about test contents</td>
</tr>
<tr>
<td>8. Be aware of suspicious student activities</td>
</tr>
<tr>
<td>a) Students looking around the room</td>
</tr>
<tr>
<td>b) Answers written on skin, clothing, or papers laying on floor</td>
</tr>
<tr>
<td>c) Students talking to each other</td>
</tr>
<tr>
<td>d) Students leaving the room</td>
</tr>
<tr>
<td>e) Identical incorrect answers or sequences of answers on multiple choice tests</td>
</tr>
<tr>
<td>9. Remain in the room during test administration</td>
</tr>
</tbody>
</table>
### How can multiple versions of tests be created?

a) Different sequence of answers  
b) Different sequence of questions  
c) Different wording of questions  

10. Use essay, short answer, or completion tests that are more difficult to cheat on  
11. Use passwords to protect security of on-line testing instruments  

### C. Review organization's code of ethics with students at the beginning of the course clearly stating the

1. Ground rules  
2. Student's personal responsibility  
3. Consequences of cheating  

### D. Students are less inclined to cheat if

1. Course material is useful and desirable  
2. Course work is relevant to students' needs  
3. Students receive positive feedback and assistance  
4. Gaining knowledge is more important than getting a good grade  

**NOTE:** Refer the students to Group Activity 4-3-1: Test Administration in their student supplements. Divide the class into small groups for this activity.
Summary:
The administration of testing instruments involves careful planning and preparation by the instructor. Once tests have been administered, they must be scored and the scores must be recorded and reported. Instructors should be careful to follow proper procedures and comply with the law in reporting scores. Opportunities for student cheating can be minimized if an instructor follows proper procedures in maintaining test security.

Evaluation:
The student will complete the activity and course final exam summative test at a time determined by the instructor.

Assignment:
Review your notes and read Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Pages 308-315 and 402-405 in order to prepare yourself for the upcoming test. Study for our next session.
GROUP ACTIVITY 4-3-1: TEST ADMINISTRATION

<table>
<thead>
<tr>
<th>Time Frame:</th>
<th>0:30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Needed:</td>
<td></td>
</tr>
<tr>
<td>• Tests prepared in Activities 4-2-2 or 4-2-3</td>
<td></td>
</tr>
<tr>
<td>• Appropriate answer sheet for students to take the test</td>
<td></td>
</tr>
<tr>
<td>• Answer key(s) and/or other scoring materials for the test</td>
<td></td>
</tr>
<tr>
<td>• Pen or pencil</td>
<td></td>
</tr>
<tr>
<td>Introduction:</td>
<td></td>
</tr>
<tr>
<td>This activity provides the students the opportunity to apply their knowledge of the test administration process by administering tests that they have developed.</td>
<td></td>
</tr>
<tr>
<td>Directions:</td>
<td></td>
</tr>
<tr>
<td>1. Review class notes from the lecture.</td>
<td></td>
</tr>
<tr>
<td>3. When directed to do so by the instructor, administer the following test to your group:</td>
<td></td>
</tr>
<tr>
<td>▪ Multiple-choice test (Individual Activity 4-2-2)</td>
<td></td>
</tr>
<tr>
<td>▪ True-false test (Individual Activity 4-2-3)</td>
<td></td>
</tr>
<tr>
<td>4. Grade the test using the answer key.</td>
<td></td>
</tr>
<tr>
<td>5. Discuss any difficulties or confusion your group may have had with the test.</td>
<td></td>
</tr>
<tr>
<td>6. Repeat Steps 3-5 until all group members have administered, graded, and discussed their test.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Formative Test #1 Answer Key

INSTRUCTIONS: This is a 25-item multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer. You have 30 minutes to complete the test.

EXAMPLE: The Incident Command System was developed by the
   a. school system
   b. fire service
   c. state legislature
   d. NRA

1. Which of the following is a benefit of a lesson plan?
   a. Guarantees all students will learn the same materials
   b. Enables a poor instructor to teach the lesson
   c. Gives a clear path for both instructors and students to follow
   d. Explains how to teach a lesson to the instructor
   
   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 322

2. A lesson plan is best defined as
   a. an outline of the information and skills to be taught
   b. a document for the student to identify required learning
   c. a list of jobs to be taught
   d. a document that contains information about a specific activity or project that the student is expected to perform
   
   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 321

3. When looking for information sources, "primary literature" is
   a. material that has been translated one time
   b. likely to contain errors of translation
   c. written or compiled by someone who has direct knowledge of the topic or event
   d. intended to be used only once
   
   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 434
4. Which of the following is true regarding using the internet as a source of information?
   a. The internet has the disadvantage of being unavailable to most people
   b. Information posted on the internet can be trusted to be the most current information available on a given topic
   c. Information obtained from the internet is not copyright protected and can be used freely
   d. Domains such as .edu, .org, .gov, and .mil are generally more reliable than .com domains

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 435

5. The three levels of learning used in fire service instruction are
   a. basic knowledge, competent, and highly proficient
   b. knowledge, application, and synthesis
   c. perception, manipulation, and performance
   d. receiving, responding, and organizing

   Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 10

6. In the fire service, Level I learning
   a. usually is for psychomotor skills only
   b. involves students applying what they have learned to new situations
   c. is relatively easy to evaluate student progress
   d. requires students to do complex problem solving

   Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Page 10

7. Terms such as analyze, apply, differentiate, and relate are
   a. indicative of Level I student behavior
   b. indicative of Level II student behavior
   c. indicative of Level III student behavior
   d. not relevant with respect to levels of learning

   Answer found in Training Instructor 1C Student Supplement, SFT, 2010 Edition, Pages 12-13

8. Which of the following is Step 1 of the four-step method of instruction?
   a. Explanation
   b. Preparation
   c. Evaluation
   d. Application
9. Which of the following is not true about the application step?
   a. New information is presented
   b. Students apply the presented information.
   c. May be combined with the presentation step.
   d. Students perform the skill under supervision

10. Which of the following is something the instructor should do in the evaluation step?
    a. Have students perform the task under supervision
    b. Have students perform the task unassisted
    c. Demonstrate the task
    d. Describe how a task applies to the job

11. Which of the following is not one of the four major components of Specially Designed Academic Instruction in English (SDAIE)?
    a. Extra reading assignments
    b. Visual clues
    c. Cooperative learning
    d. Lowering student’s "affective filter"

12. Limited English Proficient (LEP) students
    a. are students with an identified learning disability
    b. are only those in K-12 educational institutions
    c. may be students whose native language is not English
    d. are protected by the Americans with Disabilities Act

13. Which of the following is a definition of a course outline?
    a. A list of the operations and key points required to complete a task
    b. A document that contains information about a specific activity or project that the student is expected to perform
    c. A fact sheet that provides additional background information
    d. A list of cognitive and psychomotor lessons to meet predetermined teaching objectives
14. In a course outline, course content must be listed
   a. so that the most basic knowledge is taught first
   b. from complex to simple
   c. based on teaching priority sequence
   d. according to student-determined order

15. Which of the following components of a lesson plan is a restatement of the key points of the lesson?
   a. References
   b. Assignments
   c. Lesson summary
   d. Lesson outline

16. Which component of the lesson plan relates to Step 2 of the four-step method?
   a. References
   b. Assignments
   c. Lesson summary
   d. Lesson outline

17. Which of the following is a list of information, skills, or previous requirements that students must have completed or mastered before entering a course or starting a lesson?
   a. Assignments
   b. References
   c. Prerequisites
   d. Level of instruction
18. Which component of a learning objective explains the situation, tools, or materials required for a student to perform a single specific action or behavior?

   a. Standards criteria
   - b. Conditions description
   c. Performance statement
   d. Resources statement

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 330

19. Which of the following terms is a description of the minimum acceptable behavior that a student must display by the end of an instructional period?

   a. Prerequisites
   b. Learning goal
   - c. Learning objective
   d. Level of instruction

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 323

20. Where does the instructor find the "statement of minimum acceptable student performance for an instructional period?"

   a. Learning desires
   - b. Behavioral objectives
   c. Preparation statement
   d. Course outline

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 329

21. Fire and Emergency Services Instructor identifies 13 steps to develop a lesson plan. Which statement best describes the lesson plan development process?

   a. The 13 steps performed in order will ensure a complete lesson plan
   - b. The learning objectives will develop into the lesson plan
   c. The instructor should determine the evaluation method prior to writing a lesson plan
d. Lesson plans developed using the 13 steps are comprehensive

*Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 338*

22. The Materials Needed section of the lesson plan identifies

- a. the items the instructor needs to teach the lesson
- b. the items the student will use during the lesson
- c. the same items as listed in the condition of the behavioral objectives
- d. additional items the instructor will need for the evaluation

*Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 323*

23. Which of the following is a characteristic of course objectives?

- a. Narrow and measurable
- b. Focused on individual learning styles
- c. Knowledge and skills expected at the end of the course
- d. Support behavioral objectives

*Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 528*

24. “Provides uniformity, gives a clear path, ensures continuity, provides documentation” best describes

- a. a course outline
- b. a lesson plan
- c. levels of instruction
- d. the four-step method of instruction

*Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 322*

25. Most learning takes place in the _____ step, making it critically important.

- a. preparation
- b. presentation
- c. application
- d. evaluation

*Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 195*
Appendix A: Formative Test #2 Answer Key

INSTRUCTIONS: This is a 26-item multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer. You have 30 minutes to complete the test.

EXAMPLE: The Incident Command System was developed by the
   a. school system
   b. fire service
   c. state legislature
   d. NRA

1. During which instructional step are skills sheets used by the instructor?
   a. Preparation
   ▶ b. Presentation
   c. Application
   d. Evaluation

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 220

2. What part of the psychomotor lesson plan is the foundation for the evaluation criteria?
   a. Presentation
   b. Application
   ▶ c. Skills sheet
   d. Materials needed

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 127

3. Information sheets, skills sheets, activity sheets, and study sheets are examples of
   ▶ a. ancillary components
   b. lesson plan appendices
   c. components of psychomotor lesson plans
   d. instructional aids

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 339
4. Which ancillary component divides a task into parts by listing the operational steps and their key points or steps for completing each operation?

   a. Study sheet
   ► b. Skills sheet
   c. Activity sheet
   d. Assignment sheet

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 341

5. Which ancillary component contains information about a specific activity or project that the student is expected to perform without supervision?

   a. Study sheet
   b. Skills sheet
   c. Information sheet
   ► d. Assignment sheet

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 346

6. Which of the following is not true about information sheets?

   a. Provides additional information on a topic
   b. Designed to encourage a student to learn
   c. Includes information that may not be readily available
   ► d. Requires the student to do homework

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 339

7. Which is an example of a nonprojected training aid?

   a. Video
   ► b. Marker board
   c. Overhead transparency
   d. Electronic presentation software (e.g., PowerPoint®)

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 258

8. Which is not a benefit of using audiovisual aids?

   ► a. Increases lecture time
   b. Adds interest to a lecture
   c. Helps students organize ideas
   d. Enhances student understanding

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 250
9. Which piece of nonprojection-type audiovisual equipment is the easiest, most versatile, and most frequently used?
   
   a. Models  
   b. Audiotapes  
   ▶ c. Marker board illustrations  
   d. Casualty simulation training aids

   *Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 258*

10. Which is an appropriate guideline for using audiovisual training aids?
   
   a. Use as many training aids as possible  
   b. Use visual aids that are complex and present multiple ideas  
   ▶ c. Rehearse with the training aids before giving a lecture  
   d. Do not spend a lot of preparation time on visual aids

   *Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 254*

11. Which strategy can be used to avoid distractions when using audiovisual training aids?
   
   a. Avoid eye contact with students when using a visual aid  
   b. Use multiple training aids simultaneously whenever possible  
   ▶ c. Introduce audiovisual training aids at the time they are to be viewed  
   d. Display projected visual training aids below the eyelevel of seated students

   *Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 254*

12. Summary slides, preview slides, and slides that provide for continuity within a presentation are examples of
   
   a. overheads  
   b. interactives  
   c. relationships  
   ▶ d. transitions

   *Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 255*

13. Which of the following statements is **most** correct regarding media transitions?
   
   a. Sounds should be incorporated with major text  
   b. Major headings should be grouped with graphics  
   ▶ c. Animations should be used sparingly  
   d. Fancy and involved motion will help maintain interest

   *Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 258*
14. All instructors are responsible for the condition of training aids. Which statement best describes how an instructor should maintain training aids?

   a. Clean, care for, and maintain your training aids
   ▶ b. Follow the manufacturer's recommendations
   c. Only designated personnel should be responsible
   d. Gloves should be worn during maintenance

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 273

15. Educational theories of learning and remembering indicate that students

   ▶ a. remember best when multiple senses are stimulated
   b. learn best when they read information
   c. are more apt to remember what they hear
   d. learn best with stimulation singularly focused

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 151

16. Presenting someone else’s work as your own best describes

   a. Fair use
   b. Copyright
   ▶ c. Plagiarism
   d. Originality

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 315

17. Which statement best describes the fair use doctrine of the copyright law as related to audiovisual media development?

   a. It protects an individual’s rights to original creation put into tangible form
   b. It protects ideas which have been expressed
   ▶ c. It allows limited use of protected works
   d. It supersedes plagiarism rules for educational purposes

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 273

18. "Versatile for indoor and outdoor, provides a permanent record, can be prepared before class" best describes

   a. overheads
   b. visual presenters
   c. computer projectors
   ▶ d. easel charts

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 260
19. Why are sans-serif fonts preferred for ancillary materials?
   ► a. Sans-serif fonts do not have tails, which make them easier to read
   b. Serif fonts are more difficult to read from the back of the classroom
   c. Serif fonts have curly ends
   d. Serif is less important than type size

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 349

20. The terms "6 x 6 rule," "phrases," and "simple backgrounds" apply to
   a. information sheets
   b. handouts
   c. easels
   ► d. projected aids

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 349

21. Which term means that a test measures what it is designed to measure?
   ► a. Validity
   b. Reliability
   c. Discrimination
   d. Comprehensiveness

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 386

22. Which term means that a test performs consistently?
   a. Validity
   ► b. Reliability
   c. Discrimination
   d. Comprehensiveness

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 386

23. Which term means that a test separates good students from poor students?
   a. Validity
   b. Reliability
   ► c. Discrimination
   d. Comprehensiveness

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 410
24. What is the key to ensuring a test is valid and comprehensive?
   a. Item analysis
   ▶ b. Test planning
   c. Easy to give and easy to take
   d. Including different types of items

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 376

25. Which test rates student performance compared to other students based on a broad sampling?
   a. All test types
   b. Formative tests
   ▶ c. Norm-referenced tests
   d. Criterion-referenced tests

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 377

26. Which of the following is an end-of-the-course appraisal that commonly measures learning by some form of objective or subjective evaluation instrument?
   a. Formative evaluation
   ▶ b. Summative evaluation
   c. Process evaluation
   d. Product evaluation

   Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 364
Appendix B: Formative Test #1

INSTRUCTIONS: This is a 25-item multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer. You have 30 minutes to complete the test.

EXAMPLE: The Incident Command System was developed by the
a. school system
b. fire service
c. state legislature
d. NRA

1. Which of the following is a benefit of a lesson plan?
   a. Guarantees all students will learn the same materials
   b. Enables a poor instructor to teach the lesson
   c. Gives a clear path for both instructors and students to follow
   d. Explains how to teach a lesson to the instructor

2. A lesson plan is **best** defined as
   a. an outline of the information and skills to be taught
   b. a document for the student to identify required learning
   c. a list of jobs to be taught
   d. a document that contains information about a specific activity or project that the student is expected to perform

3. When looking for information sources, "primary literature" is
   a. material that has been translated one time
   b. likely to contain errors of translation
   c. written or compiled by someone who has direct knowledge of the topic or event
   d. intended to be used only once
4. Which of the following is true regarding using the internet as a source of information?
   a. The internet has the disadvantage of being unavailable to most people
   b. Information posted on the internet can be trusted to be the most current information available on a given topic
   c. Information obtained from the internet is not copyright protected and can be used freely
   d. Domains such as .edu, .org, .gov, and .mil are generally more reliable than .com domains

5. The three levels of learning used in fire service instruction are
   a. basic knowledge, competent, and highly proficient
   b. knowledge, application, and synthesis
   c. perception, manipulation, and performance
   d. receiving, responding, and organizing

6. In the fire service, Level I learning
   a. usually is for psychomotor skills only
   b. involves students applying what they have learned to new situations
   c. is relatively easy to evaluate student progress
   d. requires students to do complex problem solving

7. Terms such as analyze, apply, differentiate, and relate are
   a. indicative of Level I student behavior
   b. indicative of Level II student behavior
   c. indicative of Level III student behavior
   d. not relevant with respect to levels of learning

8. Which of the following is Step 1 of the four-step method of instruction?
   a. Explanation
   b. Preparation
   c. Evaluation
   d. Application
9. Which of the following is not true about the application step?
   a. New information is presented
   b. Students apply the presented information.
   c. May be combined with the presentation step.
   d. Students perform the skill under supervision

10. Which of the following is something the instructor should do in the evaluation step?
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11. Which of the following is not one of the four major components of Specially Designed Academic Instruction in English (SDAIE)?
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   c. Lesson summary
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16. Which component of the lesson plan relates to Step 2 of the four-step method?
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   c. Lesson summary
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17. Which of the following is a list of information, skills, or previous requirements that students must have completed or mastered before entering a course or starting a lesson?
   a. Assignments
   b. References
   c. Prerequisites
   d. Level of instruction

Answer found in Fire and Emergency Services Instructor, IFSTA, Seventh Edition, Page 328
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25. Most learning takes place in the ______ step, making it critically important.
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   b. presentation
   c. application
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Appendix B: Formative Test #2

INSTRUCTIONS: This is a 26-item multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer. You have 30 minutes to complete the test.

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3. Information sheets, skills sheets, activity sheets, and study sheets are examples of
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   a. remember best when multiple senses are stimulated
   b. learn best when they read information
   c. are more apt to remember what they hear
   d. learn best with stimulation singularly focused

16. Presenting someone else's work as your own best describes
   a. Fair use
   b. Copyright
   c. Plagiarism
   d. Originality

17. Which statement best describes the fair use doctrine of the copyright law as related to audiovisual media development?
   a. It protects an individual's rights to original creation put into tangible form
   b. It protects ideas which have been expressed
   c. It allows limited use of protected works
   d. It supersedes plagiarism rules for educational purposes

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   a. Item analysis
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   c. Easy to give and easy to take
   d. Including different types of items

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   a. All test types
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   a. Formative evaluation
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   c. Process evaluation
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