

Lesson Plans

Fire Service Instructor I

Knowledge Objectives

After studying this chapter, you will be able to:

- Identify and describe the components of learning objectives. (pp 127–129)
- Identify and describe the parts of a lesson plan. (NFPA 4.3.2, NFPA 4.4.3) (pp 129–132)
- Describe the four-step method of instruction. (pp 132, 134)
- Describe the instructional preparation process. (NFPA 4.2.2, NFPA 4.3.2, NFPA 4.3.3) (pp 134–136)
- Describe the lesson plan adaptation process for the Fire Service Instructor I. (NFPA 4.3, NFPA 4.3.1, NFPA 4.4.4) (pp 138–139)

Skills Objectives

After studying this chapter, you will be able to:

- Demonstrate the four-step method of instruction. (pp 132, 134)
- Review a lesson plan and identify the adaptations needed. (NFPA 4.3.3) (pp 138–139)
- Adapt a lesson plan so that it both meets the needs of the students and ensures that learning objectives are met. (NFPA 4.3.3) (pp 138–139)

Fire Service Instructor II

Knowledge Objectives

After studying this chapter, you will be able to:

- Describe how a Fire Service Instructor II creates a lesson plan. (NFPA 5.3, NFPA 5.3.1) (pp 140–149)
- Describe how a Fire Service Instructor II modifies a lesson plan. (NFPA 5.3.3) (p 149)

Skills Objectives

After studying this chapter, you will be able to:

- Create a lesson plan that includes learning objectives, a lesson outline, instructional materials, instructional aids, and an evaluation plan. (NFPA 5.3.2) (pp 140–149)
- Modify a lesson plan so that it both meets the needs of the students and ensures that all learning objectives are met. (NFPA 5.3.3) (p 149)

CHAPTER 6

Fire Service Instructor III

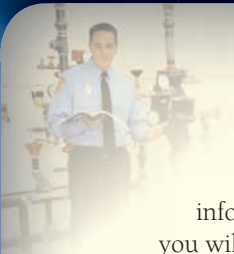
Knowledge Objectives

There are no knowledge objectives for Fire Service Instructor III students.

Skills Objectives

There are no skills objectives for Fire Service Instructor III students.

You Are the Fire Service Instructor



A recent seminar you attended has motivated you to present to your department some information you learned at the keynote presentation and workshops. You have a brief hand-out of key points and terms, a pad full of written notes that you scribbled down, and links to various Web sites that the instructors provided. As part of your research, you note that the instructor from one of the workshops has made his lesson plan available to class participants for use in passing along this information. You have only two days to gather this information and review the material from the Web site before you will conduct the training session.

1. What are the responsibilities of an Instructor I in adapting a lesson plan for an audience?
2. How will you determine the outcomes of the lesson plan provided by the instructor?
3. Which parts of the lesson plan provided will contain the content of the class material? How will you use each part of the lesson plan in your presentation?

Introduction

When most people think about the job of a fire service instructor, they picture the actual delivery of a presentation in front of the classroom. Although lectures are an important aspect of instruction, they are not the only part of the job. Most fire service instructors spend many hours planning and preparing for a class before students ever arrive in the classroom. There are many details to address when planning a class:

- What are the expected outcomes (objectives) of the training session?
- How much time will the class take?
- How many students will attend the class?
- Are there student prerequisites required to understand the objectives?
- Which training aids and equipment will be needed?
- In what order will the instructional material be presented?

- Will the delivery schedule be affected by availability of specific resources?

All of these questions and more are answered during the planning and preparation for the class. This information is compiled into a document called a lesson plan. A [lesson plan](#) is a detailed guide used by the fire service instructor for preparing and delivering instruction to students. A fire service instructor who uses a well-prepared and thorough lesson plan to organize and prepare for class greatly increases the odds of ensuring quality student learning. A Fire Service Instructor I uses a lesson plan that is already developed, usually by an instructor who is certified as an Instructor II or higher. The Instructor II has received training in how to develop his or her own lesson plan and may be responsible for developing all parts of the lesson plan, including objectives, lesson outline, suggested student activities, methods of evaluation, and many other components of a properly crafted class session.

Fire Service Instructor I

Why Use a Lesson Plan?

Many fire fighters who are assigned to instruct a class have a lot of emergency scene experience and may have even participated in group discussions on department operations, personnel evaluations, or the budget process. However, working from prepared lesson plan materials is a process with which many fire fighters have no experience, as they may have participated as students and not in delivering information to students.

Most people without experience in the field of education do not understand the importance of a lesson plan. Attempting to deliver instruction without a lesson plan is like driving in a foreign country without a map **FIGURE 6-1**. The goal in both situations is to reach your intended destination. In a lesson plan, the learning objectives are the intended destination. Without a map (the lesson plan), you most likely will not reach the destination. If an instructor attempts to shoot from the hip without a prepared lesson plan that details the expected outcomes, content may be skipped, safety points may be omitted,



FIGURE 6-1 Attempting to deliver instruction without a lesson plan is like driving in a foreign country without a map. Don't waste valuable class time searching for directions.

and inconsistency between deliveries will occur. Also, without a lesson plan that contains learning objectives, you may not even know what the destination for the class is. In other words, if you do not have clearly written learning objectives for your class and a plan for how to achieve them, there is a high probability that you will not be successful.

Teaching Tip

Occasionally, an instructor may use a lesson plan from an established or ongoing training program. Such lesson plans may have been adapted for previous deliveries based on a specific audience and factors related to that class. If an instructor becomes complacent and fails to check the existing lesson plans fully against his or her own class requirements, the result may be an inferior lesson delivery for the students.

Written lesson plans also ensure consistency of training throughout the various companies of a large fire department, or when a class is taught multiple times, especially by different fire service instructors. In such cases, a common lesson plan ensures that all students receive the same information. Lesson plans are also used to document what was taught in a class. When the class needs to be taught again in the future, the new fire service instructor will be able to refer to the existing lesson plans and achieve the same learning objectives.

Teaching Tip

At first, lesson plans may seem awkward and disorganized, but there is a logical thought process behind their design. You simply need to learn this methodology.

Teaching Tip

If you are using a common lesson plan, carefully review it, and write your comments and thoughts in the margins as you prepare for the class. It is particularly useful to note illustrative examples that you can use in class during the preparation stage so you do not have to think up examples under pressure. Good examples and local applications include your own firsthand experiences, and they make the material more relevant for your students.

Learning Objectives

All instructional planning begins by identifying the desired outcomes. What do you want the students to know or be able to do by the end of class? These desired outcomes are called objectives. A **learning objective** is defined as a goal that is achieved through the attainment of a skill, knowledge, or both, and that can be observed or measured. Sometimes these learning objectives are referred to as performance outcomes or behavioral outcomes, for a simple reason: If students are able to achieve the learning objectives of a lesson, they will achieve the desired outcome of the class. Effective instructors always start their presentations by discussing and reviewing the objectives of the presentation with the students.

A **terminal objective** is a broader outcome that requires the learner to have a specific set of skills or knowledge after a learning process. An **enabling objective** is an intermediate objective and is usually part of a series of objectives that direct instructors on what they need to instruct and what the learners will learn to accomplish the terminal objective. Consider the enabling objectives to be the steps that allow you to reach the top floor—that is, the terminal objective. An example of how terminal and enabling objectives are developed from JPRs is provided later in the chapter.

■ Understanding the Components of Learning Objectives

Many different methods may be used for writing learning objectives. One method commonly employed in the fire service is the **ABCD method**, where the acronym stands for **A**udience (Who?), **B**ehavior (What?), **C**ondition (How or using what?), and **D**egree (How well?). (Learning objectives do not always need to be written in that order, however.) The ABCD method was introduced in the book *Instructional Media and the New Technologies of Education* written by Robert Heinich, Michael Molenda, and James D. Russell (Macmillan, 1996).

Audience

The **audience** of the learning objective describes who the students are. Are your students experienced fire fighters or new recruits? Fire service learning objectives often use terms such as *fire fighter trainees*, *cadets*, *fire officers*, or *students* to describe the

audience. Some lesson plans will contain multiple objectives to meet the course goal. In this case, it is acceptable to reference the audience once at the beginning of the objective listing, as long as all of the objectives relate to the same audience members. If the objective is written correctly, the audience will be evident in the structure of the objective.

Behavior

Once the students have been identified, typically the **behavior** is listed next. The behavior must be an observable and measurable action. A common error in writing learning objectives is using words such as “know” or “understand” for the behavior. Is there really a method for determining whether someone understands something? It is preferable to use words such as “state,” “describe,” or “identify” as part of learning objectives—these are actions that you can see and measure. It is much easier to evaluate the ability of a student to identify the parts of a portable fire extinguisher than to evaluate how well the student understands the parts of a portable fire extinguisher. The importance of the behavior portion of the objective will be discussed later in the chapter.

The behavior may identify the type of presentation or class that will be conducted. Words such as *describe* or *state* in the objective imply that the student will know something, whereas words such as *demonstrate* or *perform* indicate that the student will be able to do something. This is where the terms *cognitive* or *psychomotor* objectives are applied in a properly formatted objective. Instructors should blend presentation styles to enhance the learning environment whenever possible. Appealing to multiple senses and allowing for many application opportunities enhances the learning.

Condition

The **condition** describes the situation in which the student will perform the behavior. Items that are often listed as conditions include specific equipment or resources given to the student, personal protective clothing or safety items that must be used when performing the behavior, and the physical location or circumstances for performing the behavior. For example, the following phrases in an objective specify the condition:

- “... in full protective equipment, including self-contained breathing apparatus.”
- “... using the water from a static source, such as a pond or pool.”

Degree

The **degree** is the last part of the learning objective; it indicates how well the student is expected to perform the behavior in the listed conditions. With what percentage of completion is the student expected to perform the behavior? Total mastery of a skill would require 100 percent completion—this means perfection, following every step on the skill sheet. For example, a student performing a ladder raise needs to complete all of the steps on the skill checklist to raise the ladder safely. Skipping any step (failing the skill) may result in a serious injury, damage to the ladder, or death. In contrast, many times knowledge-based learning objectives are expected to be learned to the degree stated in the passing rate for written

exams, such as 70 percent or 80 percent. Another degree that is frequently used is a time limit, which can be included in learning objectives dealing with both knowledge and skills.

Using the ABCD Method

Strictly speaking, well-written learning objectives should contain all four elements of the ABCD method. Nevertheless, learning objectives are often shortened because one or more of the elements are assumed to be known. If a lesson plan is identified as being used for teaching potential fire service instructors, for example, every single objective may not need to start with “the fire service instructor trainee.” The audience component of the ABCD method may be listed once, at the top of all the objectives, or not listed at all.

The same principle applies to the condition component. If it is understood that a class requires all skills to be performed in full personal protective gear, it may not be necessary to list this condition in each individual learning objective. It is also common to omit the degree component, as many learning objectives are written with the understanding that the degree will be determined by the testing method. If the required passing grade for class written exams is 80 percent, it is assumed that knowledge learning objectives will be performed to that degree. Similarly, if the skill learning objectives for a class are required to be performed perfectly, a 100 percent degree for those learning objectives can be assumed.

Learning objectives should be shortened in this way only when the assumptions for the missing components are clearly stated elsewhere in the lesson plan. Of course, a learning objective is unlikely to omit the behavior component, because it is the backbone of the learning objective. Some curricula do require the ABCD to be stated each time, in sequence, and in complete form. For enabling objectives, a shortened form may sometimes be permitted; otherwise, many of the components in the series of objectives would simply be restated over and over again, which may confuse or frustrate a learner trying to identify course expectations.

ABCD learning objectives do not need to contain all of the parts in the ABCD order. Consider the following example:

In full protective equipment including SCBA, two fire fighter trainees will carry a 24-foot extension ladder 100 feet and then perform a flat raise to a second-floor window in less than one minute and thirty seconds.

Here the audience is “the fire fighter trainees.” The behaviors are “carry a 24-foot extension ladder” and “perform a flat raise.” Both carrying and raising are observable and measurable actions. The conditions are “full protective equipment including SCBA,” “100 feet,” and “to a second-floor window;” they describe the circumstances for carrying and raising the ladder. The degree is “less than one minute and thirty seconds.” The fire fighter trainees must demonstrate the ability to perform these behaviors to the proper degree to meet this learning objective successfully.

The ABCD method is a clear and appropriate way to address objectives. Inclusion of all four of its elements is essential in the construction of the terminal objective, which is the main idea for the lesson. This objective should contain all the

components to inform the students what will be taught, the method of evaluation, and the resources consulted for the information presented. Subsequent (enabling) objectives may assume certain points previously stated in the main objective, such as audience, degree, and references, as long as these points are clarified in the main objective. Each enabling objective allows the student to meet the intent or goal of the terminal objective.

Parts of a Lesson Plan

Many different styles and formats for lesson plans exist. No matter which lesson plan format is used, however, certain components should always be included. Each of these components is necessary for you to understand and follow a lesson plan **FIGURE 6-2**.

Instructor Guide

Lesson Plan

Lesson Title: Use of Fire Extinguishers

← **Lesson Title**

Level of Instruction: Firefighter I

← **Level of Instruction**

Method of Instruction: Demonstration

Learning Objective: The student shall demonstrate the ability to extinguish a Class A fire with a stored-pressure water-type fire extinguisher. (NFPA 1001, 5.3.16)

← **Learning Objective**

References: Fundamentals of Firefighter Skills, 3rd Edition, Chapter 8

← **References**

Time: 50 Minutes

Materials Needed: Portable water extinguishers, Class A combustible burn materials, Skills checklist, suitable area for hands-on demonstration, assigned PPE for skill

← **Instructional Materials Needed**

Slides: 73–78*

Step #1 Lesson Preparation:

- Fire extinguishers are first line of defense on incipient fires
- Civilians use for containment until FD arrives
- Must match extinguisher class with fire class
- FD personnel can use in certain situations, may limit water damage
- Review of fire behavior and fuel classifications
- Discuss types of extinguishers on apparatus

Demonstrate methods for operation

Step #2 Presentation

- A. Fire extinguishers should be simple to operate.
 1. An individual with only basic training should be able to use most fire extinguishers safely and effectively.
 2. Every portable extinguisher should be labeled with printed operating instructions.
 3. There are six basic steps in extinguishing a fire with a portable fire extinguisher. They are:
 - a. Locate the fire extinguisher.
 - b. Select the proper classification of extinguisher.
 - c. Transport the extinguisher to the location of the fire.
 - d. Activate the extinguisher to release the extinguishing agent.
 - e. Apply the extinguishing agent to the fire for maximum effect.
 - f. Ensure your personal safety by having an exit route.
 4. Although these steps are not complicated, practice and training are essential for effective fire suppression.
 5. Tests have shown that the effective use of Class B portable fire extinguishers depends heavily on user training and expertise.
 - a. A trained expert can extinguish a fire up to twice as large as a non-expert can, using the same extinguisher.
 6. As a fire fighter, you should be able to operate any fire extinguisher that you might be required to use, whether it is carried on your fire apparatus, hanging on the wall of your fire-house, or placed in some other location.
- B. Knowing the exact locations of extinguishers can save valuable time in an emergency.
 1. Fire fighters should know what types of fire extinguishers are carried on department apparatus and where each type of extinguisher is located.
 2. You should also know where fire extinguishers are located in and around the fire station and other work places.
 3. You should have at least one fire extinguisher in your home and another in your personal vehicle and you should know exactly where they are located.
- C. It is important to be able to select the proper extinguisher.
 1. This requires an understanding of the classification and rating system for fire extinguishers.
 2. Knowing the different types of agents, how they work, the ratings of the fire extinguishers carried on your fire apparatus, and which extinguisher is appropriate for a particular fire situation is also important.

Step #3 Application

Slides 7–10

Ask students to locate closest extinguisher to training area

Review rating systems handout — Have students complete work book activity page #389

(Continues)

(Continued)

3. Fire fighters should be able to assess a fire quickly, determine if the fire can be controlled by an extinguisher, and identify the appropriate extinguisher.
 - a. Using an extinguisher with an insufficient rating may not completely extinguish the fire, which can place the operator in danger of being burned or otherwise injured.
 - b. If the fire is too large for the extinguisher, you will have to consider other options such as obtaining additional extinguishers or making sure that a charged hose line is ready to provide back-up.
4. Fire fighters should also be able to determine the most appropriate type of fire extinguisher to place in a given area, based on the types of fires that could occur and the hazards that are present.
 - a. In some cases, one type of extinguisher might be preferred over another.
- D. The best method of transporting a hand-held portable fire extinguisher depends on the size, weight, and design of the extinguisher.
 1. Hand-held portable fire extinguishers can weigh as little as 1 lb to as much as 50 lb.
 2. Extinguishers with a fixed nozzle should be carried in the favored or stronger hand.
 - a. This enables the operator to depress the trigger and direct the discharge easily.
 3. Extinguishers that have a hose between the trigger and the nozzle should be carried in the weaker or less-favored hand so that the favored hand can grip and aim the nozzle.
 4. Heavier extinguishers may have to be carried as close as possible to the fire and placed upright on the ground.
 - a. The operator can depress the trigger with one hand, while holding the nozzle and directing the stream with the other hand.
 5. Transporting a fire extinguisher will be practiced in Skill Drill 8-1.
- E. Activating a fire extinguisher to apply the extinguishing agent is a single operation in four steps.
 1. The P-A-S-S acronym is a helpful way to remember these steps:
 - a. Pull the safety pin.
 - b. Aim the nozzle at the base of the flames.
 - c. Squeeze the trigger to discharge the agent.
 - d. Sweep the nozzle across the base of the flames.
 2. Most fire extinguishers have very simple operation systems.
 3. Practice discharging different types of extinguishers in training situations to build confidence in your ability to use them properly and effectively.
 4. When using a fire extinguisher, always approach the fire with an exit behind you.
 - a. If the fire suddenly expands or the extinguisher fails to control it, you must have a planned escape route.
 - b. Never let the fire get between you and a safe exit. After suppressing a fire, do not turn your back on it.
 5. Always watch and be prepared for a rekindle until the fire has been fully overhauled.
 6. As a fire fighter, you should wear your personal protective clothing and use appropriate personal protective equipment (PPE).
 7. If you must enter an enclosed area where an extinguisher has been discharged, wear full PPE and use SCBA.
 - a. The atmosphere within the enclosed area will probably contain a mixture of combustion products and extinguishing agents.
- F. The oxygen content within the space may be dangerously depleted.

Step #4 Evaluation:

1. Each student will properly extinguish a Class A combustible fire using a stored-pressure type water extinguisher. (Skill Sheet x-1)
2. Each student will return extinguisher to service. (Skill Sheet x-2)

Lesson Summary:

- Classifications of fire extinguishers
- Ratings of fire extinguishers
- Types of extinguishers and agents
- Operation of each type of fire extinguishers
- Demonstration of Class A fire extinguishment using a stored pressure water extinguisher

Assignments:

1. Read Chapter 8 prior to next class.
2. Complete “You are the Firefighter” activity for Chapter 8 and be prepared to discuss your answers.

What happens if wrong type or size extinguisher is used?

Display available types of extinguishers

Have students demonstrate steps using empty extinguisher

Complete skills sheet #7–9 for each student

Review PPE required for extinguisher use

Discuss hazards of extinguishing agents

FIGURE 6-2 The components of a lesson plan.

■ Lesson Title or Topic

The lesson title or topic describes what the lesson plan is about. For example, a lesson title may be “Portable Fire Extinguishers” or “Fire Personnel Management.” Just by the lesson title, you should be able to determine whether a particular lesson

plan contains information about the topic you are planning to teach. A title page may be used to highlight or preview the content of the lesson plan package **FIGURE 6-3**. It may serve as a summary of all of the contents and help prepare the instructor for the class.



Des Plaines Fire Department Division of Training

Lesson Title

Training Date:

Location of Training:

FireHouse Code:

Safety Plan Required? Y ☐ N ☐

Topic:	Instructor(s):
Teaching Method(s):	Time allotted:
Handouts:	
AV needs:	Teaching resources:
Level of Instruction:	Evaluation Method:
NFPA JPR's:	Equipment needed:
LEARNING OBJECTIVES: <i>Upon completion of the class and study questions, each participant will independently do the following with a degree of accuracy that meets or exceeds the standards established for their scope of practice:</i>	
General class activities for student application	
Safety Briefing 1.	SAFETY RED FLAGS ALL STOPS:

FIGURE 6-3 Sample cover sheet for a lesson plan.

■ Level of Instruction

It is important for a lesson plan to identify the level of instruction, because your students must be able to understand the instructional material. Just as an elementary school teacher would not use a lesson plan developed for high school students,

so you as a fire service instructor must ensure that the lesson plan is written at an appropriate level for your students. Often the level of instruction in the fire service corresponds with National Fire Protection Association (NFPA) standards for professional qualifications. If you are teaching new recruits

or cadets, you would use lesson plans that are designated as having a Fire Fighter I or II level of instruction. If you are teaching fire service professional development classes, you may use lesson plans that are specified as having a Fire Officer I or II level of instruction. Another method of indicating the level of instruction is by labeling the lesson plan with terms such as “beginner,” “intermediate,” or “advanced.” No matter which method is used to indicate the level of instruction, you should ensure that the material contained in a lesson plan is at the appropriate level for your students.

Another component of the level of instruction is the identification of any prerequisites. A **prerequisite** is a condition that must be met before the student is permitted to receive further instruction. Often, a prerequisite is another class. For example, a Fire Service Administration class would be a prerequisite for taking an Advanced Fire Service Administration class. A certification or rank may also be a prerequisite. Before being allowed to receive training on driving an aerial apparatus, for example, the department may require a student to hold the rank of a Driver and possess Driver/Operator—Pumper certification.

Safety Tip

You should ensure that the proper prerequisites are met by each of your students. Failure to do so may mean that a student performs tasks that he or she is not qualified or prepared to perform.

Behavioral Objectives, Performance Objectives, and Learning Outcomes

As mentioned earlier in this chapter, learning objectives are essential to the lesson plan. All lesson plans must have learning objectives. Many methods for determining and listing learning objectives are available. The specific method used to write the learning objectives is not as important as ensuring that you understand the learning objectives for the lesson plan that you must present to your students. The Fire Service Instructor II will use JPRs to develop the learning objectives in the ABCD format, and the Instructor III will write course objectives.

Instructional Materials Needed

Most lesson plans require some type of instructional materials to be used in the delivery of the lesson plan. Instructional materials are tools designed to help you present the lesson plan to your students. For instance, audiovisual aids are the type of instructional material most frequently listed in a lesson plan—that is, a lesson plan may require the use of a video, DVD, or computer. Other commonly listed instructional materials include handouts, pictures, diagrams, and models. Also, instructional materials may be used to indicate whether additional supplies are necessary to deliver the lesson plan. For example, a preincident planning lesson plan may list paper, pencils, and rulers as the instructional materials needed. The actual equipment students will be using or operating could be

shown and passed through the classroom portion of the lesson (e.g., nozzles, hand tools, PPE).

Lesson Outline

The **lesson outline** is the main body of the lesson plan. This element is discussed in detail later in this chapter. The lesson outline comprises four main elements: preparation, presentation, application, and evaluation. Each area fulfills a specific purpose in the delivery of instruction. Instructors who engage their students effectively use each part to ensure that the objectives of the lesson plan are properly met to the level intended.

References/Resources

Lesson plans often simply contain an outline of the information that must be understood to deliver the learning objectives. Fire service instructors who are not experts in a subject may need to refer to additional references or resources to obtain further information on these topics. The references/resources section may contain names of books, Web sites, or even names of experts who may be contacted for further information. By citing references in the lesson plan, the validity of the lesson plan can also be verified.

Lesson Summary

The **lesson summary** simply summarizes the lesson plan. It reviews and reinforces the main points of the lesson plan. The lesson summary plays an important role in the overall lesson, allowing the instructor to enhance the application step by asking summary questions on key objective and lesson points. You may view this as the instructor asking the student, “What did I just teach you or show you?”

Assignment

Lesson plans often contain an **assignment**, such as a homework-type exercise that will allow the student to further explore or apply the material presented in the lesson plan. Be prepared to explain the assignment, its due date, the method for submitting the assignment, and the grading criteria to be used.

The Four-Step Method of Instruction

While reviewing and preparing for class with your lesson plan, the **four-step method of instruction** is the primary process used to relate the material contained in the lesson plan to the students **TABLE 6-1**. These four steps are found within the lesson plan. The four-step method of instruction is the method of instruction most commonly used in the fire service.

Step 1: Preparation

The **preparation step** is the first phase in the four-step method of instruction. The preparation step—also called the motivation step—prepares or motivates students to learn. When beginning instruction, you should provide information to students that explains why they will benefit from the class. Adult learners need to understand what they will get out of attending the class, because very few adults have time to waste in sitting through a presentation that will not directly benefit them.

JOB PERFORMANCE REQUIREMENTS (JPRS) *in action*

The lesson plan is the tool used by a fire service instructor to conduct a training session. It is as essential as personal protective equipment (PPE) is to a fire fighter. The lesson plan details the information necessary to present the training session, which includes everything from the title of the class to the assignment for the next training session. In between are the resources needed, the behavioral objectives, the content outline, and the various teaching

applications used to complete the training. As a fire service instructor, you must review and practice the delivery of the lesson plan, check the materials needed for the class, and be ready to present the materials. Using the lesson plan, you must present a structured training session by taking advantage of appropriate methods of instruction to engage the students and use a variety of communication skills to complete the learning objectives.

Instructor I

The Instructor I will teach from a prepared lesson plan using appropriate methods of delivery and communication skills to ensure that the learning process is effective. The instructor must understand each component of the lesson plan. It may be necessary to adapt the lesson plan to the needs and abilities of the audience and the teaching environment.

Instructor II

The Instructor II will prepare the lesson plan components and determine the expected outcomes of the training session. The four-step method of instruction should be defined within the lesson plan and all instructional requirements outlined for the presenter's use.

Instructor III

The Instructor III will conduct a training needs assessment and develop a curriculum to meet the training need, including course goals and evaluation strategies.

JPRS at Work

Present prepared lesson plans by using various methods of instruction that allow for achievement of the instructional objectives. Adapt the lesson plan based on student needs and specific conditions.

JPRS at Work

Create and modify existing lesson plans to satisfy the student needs, JPRS, and objectives developed for the training session.

JPRS at Work

There are no JPRS at this instructor level.

Bridging the Gap Among Instructor I, Instructor II, and Instructor III

A partnership must exist between the developer of the lesson plan and the instructors who will deliver that lesson plan. In many cases, these individuals may be the same person. In other cases, such as in large departments, you may never know who wrote the lesson plan. Your skill in developing a lesson plan that another instructor can use—perhaps long after it was developed—is therefore important. If another person must deliver your lesson plan, however, you must be sure that all components of the lesson plan are clear and concise and that the material and instructional methods match the needs of the students. Your communications skills and knowledge of the learning process will be used at both Instructor I and Instructor II levels in the development and delivery of this content. The Instructor III develops curricula based on a training needs assessment and provides direction to instructors at the other levels on the goal or outcome of the material they are developing or delivering.

Table 6-1 The Four-Step Method of Instruction

Step in the Instructional Process	Instructor Action
1. Preparation	The instructor prepares the students to learn by identifying the importance of the topic, stating the intended outcomes, and noting the relevance of the topic to the student. This should not be confused with the time used by the instructor to prepare course material and review lesson plan content.
2. Presentation	The presentation of content is usually organized in an outline form that supports an understanding of the learning objectives. Varied presentation techniques should be used to keep the students' interest and to maximize learning.
3. Application	The instructor applies the presentation material as it relates to students' understanding. Often the fire service instructor will ask questions of the students or ask students to practice the skill being taught. This step also allows the instructor to do a progress check on the students and to identify any learning issues before moving on to other class content.
4. Evaluation	The students' understanding is evaluated through written exams or in a practical skill session.

The benefit of a class can be explained in many ways:

- The class may count toward required hours of training.
- The class may provide a desired certification.
- The class may increase students' knowledge of a subject.

Whatever the benefit may be, you should explain it thoroughly during the preparation step. In a lesson plan, the preparation section usually consists of a paragraph or a bulleted list describing the rationale for the class. During the preparation step, the Fire Service Instructor I needs to grab students' attention and prepare them to learn when the instructor begins presenting the prepared lesson plan. Adult learners like to learn quickly how the class material will affect them: Will it make them safer or more knowledgeable about their job? Will it improve their efficiency on the fire ground or make the students better leaders? This step in the process is critical as a motivational tool to encourage the students to participate in the learning process, not just to sit in on the class as a way to pass the time. The Fire Service Instructor II, while developing the lesson plan, will include suggested preparation points, including safety- and survival-related information, local examples, and explanations of how the material will help improve students' ability to do their job.

■ Step 2: Presentation

The presentation step is the second step in the four-step method of instruction; it comprises the actual presentation of the lesson plan. During this step, you lecture, lead discussions, use audiovisual aids, answer student questions, and perform other techniques to present the lesson plan. (The *Methods of Instruction* chapter discusses the various methods of instruction used during this step.) In a lesson plan, the presentation section normally contains an outline of the information to be presented. It may also contain notes indicating when to use teaching aids, when to take breaks, or where to obtain more information.

■ Step 3: Application

The application step, which is the third step in the four-step method of instruction, is the most important step because it is during this phase that students apply the knowledge presented in class. The root word *apply* is very important to illustrate what the instructor needs to let the students do: apply what

they are learning to examples or actual hands-on practice. Normally, this is where learning occurs, as students practice skills, perhaps make mistakes, and retry skills as necessary. You should provide direction and support as each student performs this step. You must also ensure that all safety rules are followed as students engage in new behaviors.

In a lesson plan, the application section usually lists the activities or assignments that the student will perform. In the fire service, the application section of a psychomotor objective lesson often requires the use of skill sheets for evaluation purposes. The experienced fire service instructor uses the application step to make sure that each student is progressing along with the lesson plan. This step also allows students to participate actively and to remain engaged in the learning process.

■ Step 4: Evaluation

The evaluation step is the final step of the four-step method of instruction. It ensures that students have correctly acquired the knowledge and skills presented in the lesson plan. The evaluation may, for example, take the form of a written test or a skill performance test. No matter which method of evaluation is used, the student must demonstrate competency without assistance. In a lesson plan, the evaluation section indicates the type of evaluation method and the procedures for performing the evaluation.

Instructional Preparation

Once you have a lesson plan, the instructional preparation begins. Which materials are needed for the class? Which audiovisual equipment will be used? Where will the class be conducted? How much time will be needed? These and many other questions must be answered during instructional preparation. The information contained in the lesson plan should be used as a guide for instructional preparation.

■ Student Preparation

Students should prepare for instruction by coming to a class prepared and ready to learn. Certain classroom or drill-ground rules may exist that prohibit bringing cell phones, newspapers, or other reading materials into the learning

environment. The instructor should monitor the preparedness of the students as they come to the classroom or drill ground, and may enhance their readiness to learn by providing class information and objectives ahead of time. The expectations and outcomes may be better if the students take the time to prepare before the class. Bringing textbooks, notebooks, and writing supplies is another important part of the student's preparation.

Teaching Tip

Check all instructional materials prior to class and replace any missing or nonfunctional materials. This review includes ensuring that a video clip that plays on your home computer also plays on the computer that you will be using in the classroom.

■ Organizational Skills

Taking the information from a lesson plan and transforming it into a well-planned class takes good organizational skills. First, you should organize the class planning timeline **FIGURE 6-4**. Identify the time available for you to plan and prepare for the class. The time available for preparation is usually the amount of time from the point when the lesson plan is identified until the day when the class is scheduled to be taught. Identify the milestones that must be accomplished as part of this timeline. Depending on the lesson plan, milestones may include obtaining audiovisual equipment, purchasing materials, reserving a classroom, or previewing audiovisual aids.

■ Procuring Instructional Materials and Equipment

Most classes take advantage of instructional materials or equipment. The method of obtaining these instructional materials and equipment differs from fire department to fire department.

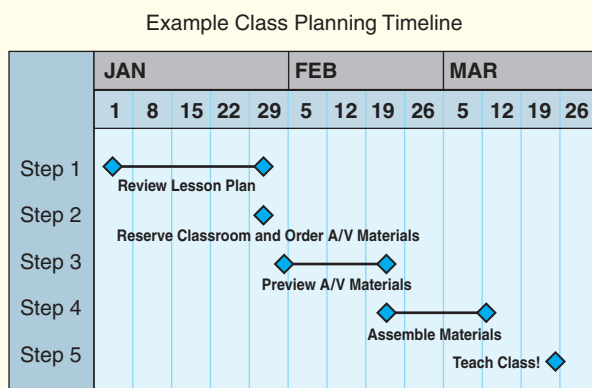


FIGURE 6-4 The well-organized fire service instructor always creates a class planning timeline.

A common method of procuring materials is for the fire service instructor to contact the person in the fire department who is responsible for purchasing training materials, such as a training officer or someone assigned to the training division. You may be required to provide a list of needed materials to the training officer. Often, this list of materials must be submitted well in advance of when the class is scheduled to begin, due to the purchasing requirements of your agency. The key is to know your agency's time frame and to work within it to allow you to follow policy. The training officer, in turn, compiles the materials either by purchasing new materials or by securing materials already available at the training division. The training officer contacts the fire service instructor when all class-related materials are available.

Another common method for procuring class equipment is the equipment checkout process, which is typically managed by the fire department's training division. For example, if you need a multimedia projector for a class, you would submit a request for the projector in which you indicate the date and time when the projector is needed. The training division would then reserve the projector for you. On the day of the class, the projector would be available for you. Depending on the organizational procedures, you might be required to pick up the projector and set it up, or the training division might set up the projector at the class location for you. Regardless of how you obtain your projector, you should make sure you understand how to use it and how to troubleshoot any problems before class begins.

■ Preparing to Instruct

The most important part of the instruction's preparation is preparing for actual delivery of the lesson plan in the classroom or on the drill ground. If you obtain the necessary materials, equipment, apparatus, drill tower, or classroom, but you do not prepare to deliver the lesson plan, the class will not be successful. You should be thoroughly familiar with the information contained in the lesson plan, which may require you to consult the references listed in the lesson plan and research the topic further. If the lesson plan includes a computer presentation, then practice using this technology to deliver the presentation.

No matter which method of instructional delivery is used, you should always rehearse your presentation before delivering it to a training session full of students. A class is destined for failure if you are seeing the presentation material for the first time in front of the class. Successful fire service instructors have a sound understanding of the information that they are delivering and can adapt to the particular needs of their class because they always know what is coming next.

■ Adapting Versus Modifying a Lesson Plan

One of the most important—yet confusing—distinctions between a Fire Service Instructor I and a Fire Service Instructor II is the Instructor II's ability to modify a lesson plan. A lesson plan is a guide or a roadmap for delivering instruction, but it is rarely implemented exactly as written. To understand what can and cannot be changed by each level of fire service

instructor, let us review what the JPRs for NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*, say about modifying and adapting a lesson plan.

Fire Service Instructor I

4.3.2 Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified.

4.3.3 Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved.

The Fire Service Instructor I should not alter the content or the lesson objectives. Prior to the beginning of the class, the Instructor I should be able to evaluate local conditions, assess facilities for appropriateness, meet local standard operating procedures (SOPs), and recognize students' limitations. He or she should be able to change the method of instruction and course materials to meet the needs of the students and accommodate their individual learning styles, including making adaptations as necessary due to the learning environment, audience, capability of facilities, and types of equipment available.

Fire Service Instructor II

5.3.3 Modify an existing lesson plan, given a topic, audience characteristics, and a lesson plan, so that the JPRs or learning objectives for the topic are addressed and the plan includes learning objectives, a lesson outline, course materials, instructional aids, and an evaluation plan.

To clearly understand the difference between adapting and modifying, you must understand the proper definitions of these terms:

- **Modify:** to make basic or fundamental changes
- **Adapt:** to make fit (as for a specific use or situation)

Put simply, a Fire Service Instructor II can make basic or fundamental changes to the lesson plan, whereas a Fire Service Instructor I can adapt only to local conditions without altering objectives. Fundamental changes include changing the performance outcomes, rewriting the learning objectives, modifying the content of the lesson, and so on.

What can a Fire Service Instructor I do? He or she can make the lesson plan fit the situation and conditions. These conditions include the facility, the local SOPs, the environment, limitations of the students, and other local factors.

NFPA 1041 specifically states that a Fire Service Instructor I may modify the method of instruction and course materials to meet the needs of the students and accommodate the individual fire service instructor's style. Here are a few real-life examples:

- A Fire Service Instructor I may change a lesson plan's method of instruction from lecture to discussion if he or she determines that the latter method would be a better presentation format because of the students' level of knowledge.
- A Fire Service Instructor I may adapt the classroom setting if the facility cannot meet the seating arrangement listed in the lesson plan.

- A Fire Service Instructor I may adapt the number of fire fighters performing an evolution in a lesson plan from three to four to meet local staffing SOP requirements.
- A Fire Service Instructor I *cannot* modify a lesson plan learning objective that states a fire fighter must raise a 24-foot extension ladder because he or she feels the task is too difficult for one fire fighter.
- A Fire Service Instructor I *cannot* change the JPR of developing a budget in a Fire Officer lesson plan because he or she does not feel comfortable teaching that subject.

As with all other positions within the fire service, it is important that fire service instructors perform only those actions within their level of training. As a Fire Service Instructor I, you must recognize what you can and cannot do. Acting

Teaching Tip

All instructors routinely adapt and modify courses. While a Fire Service Instructor I may believe that a curriculum needs to be modified, those changes should be made only by a Fire Service Instructor II. This process will ensure that development of the curriculum is done correctly and that coverage of the lesson objectives is not reduced.

Theory Into Practice

Lesson plans must remain dynamic in both the short term and the long term. In the short term, you should understand when it is appropriate to adjust a lesson plan during its delivery based on students' learning styles, changing conditions, timing considerations, and students' progress. In the long term, you should provide input to your supervisor regarding the success of the delivery. If problems occurred or improvements are needed, report this feedback as well.

One critical component of lesson plan adaptability is the break times. Break times are built into course schedules and may need to be adjusted to reflect the training environment or to accommodate other classes being conducted at the same time.

If you make adjustments to the delivery of a lesson plan, it is critical that you ensure that all learning objectives are still covered. For example, many times activities must be scheduled around the activities of other courses. Scheduling use of resources in the field with other instructors can help reduce conflicts. The program coordinator should be advised if an instructor intends to move portions of the program around so that the coordinator can ensure the change does not affect other programs and shared resources.

VOICES OF EXPERIENCE



As a 16-year-old junior fire fighter in my hometown, I was baffled by all of the possibilities that one could achieve in the fire service. All the thrills of going on calls and learning the ropes were at times quite overwhelming. I learned early on how to distinguish a good fire instructor from those who simply blew smoke. I did my time and soon became interested in the teaching aspect of the fire business. I had taken numerous classes on a variety of fire subjects, as well as English and writing classes at Penn State University. The time had come to go after state instructor certification in Pennsylvania.

The program to become state certified as a fire service instructor at the time consisted of attending a 40 Instructor Methodology class and passing a written test at the state fire academy. Upon successful completion of that week-long session and passing the written test, I was granted state certification as an Instructor I. I later took an Instructor II class and was certified to that level. After apprenticing in several classes, I learned different teaching styles from different instructors. Most instructors were using canned lesson plans, which were okay but left much to the imagination.

As time went on and I began to develop my own programs, I researched and selected a lesson plan format that suited me and met all the requirements of a professional plan. Like many instructors, occasionally I had to teach a class with no lesson plan, commonly known as “winging it.” These classes never went quite right. It was like driving somewhere new without a map or GPS. I also was more aware of how many instructors could not develop a quality lesson plan.

Being taught to write a lesson plan that anyone could pick up and teach a class has always stuck with me. That is the true test of a well-written plan. I have developed many, many lesson plans, but one in particular stands out. It was the one I had to write for a 15-minute presentation I had to do in front of a review board as part of the interview process for the ultimate position of my career. After writing many possible lesson plans, I finally was satisfied with my final product and went with it. I felt I had the road map that I needed to make my presentation successful. That one experience truly made me fully understand the importance of having a well-written lesson plan when instructing.

Outdated lesson plans have always been a thorn in my side. It is one thing to develop a good lesson plan, but it is another thing to keep the lesson plan current. As techniques, strategies, and technology change, so must the teaching outline for an affected subject. You won't appreciate having an updated lesson plan to teach a class until you actually need it.

In my opinion, the most important component of being a successful instructor is mastering the ability to develop and use quality lesson plans. Teaching is so much easier when you have a lesson plan to refer to when necessary. I can truly state that my success and longevity in the instructing field can be largely attributed to the ability to write and use good lesson plans. Couple the lesson plan with all the other necessary attributes of a good instructor, and you will be a success story of your own.

F. Tom Hand
Fire Training Coordinator (Retired)
Mesa Fire & Medical Department
Mesa, Arizona

“You won’t appreciate having an updated lesson plan to teach a class until you actually need it.”

outside your scope of training may lead to legal liability. If you are ever unsure whether you have sufficient knowledge or skills to teach a topic, you should discuss this issue with your superior.

Reviewing Instructional Materials for Adaptation

There are many ways for a Fire Service Instructor I to obtain a lesson plan: fire service Web sites, commercially published curriculum packages, the National Fire Academy, the instructor's fire department's training library, or other fire departments. No matter which method is used, the lesson plan must be reviewed and any areas that need adaptation must be identified. This is true even for lesson plans that were originally developed within your own fire department. Over time, standards and procedures change, so that a lesson plan that was completely correct for your department when it was created may be out-of-date in just a few months.

After obtaining a lesson plan, you must review the entire lesson plan and determine whether adaptations are needed to make it usable for your class. As part of the class planning and preparation process, lesson plan adaptations must be scheduled and completed before you deliver the presentation to the class. A lesson plan might need adaptations for many reasons, such as differences related to the learning environment, the audience, the capability of facilities, and the types of equipment available. Always be prepared to adapt the lesson plan to accommodate last-minute classroom or equipment changes. While these occurrences should be rare, they do happen.

Instructors may find they need to adapt a lesson plan in situations where all members of the audience do not come from one department, as in a regional or academy delivery. If you are teaching from a prepared lesson plan within your department only, the audience factors, prerequisite knowledge, and

abilities are likely already known, so you may have to adapt the lesson plan only if it is from an outside source, or to tailor it to the available delivery time.

Evaluating Local Conditions

The main focus when adapting a lesson plan is to make minor adjustments so it fits your local conditions and your students' needs. To accomplish this, you must first be familiar with your audience. The Fire Service Instructor I should contemplate the following questions when reviewing a lesson plan for any adaptations needed to accommodate the intended audience:

- Which organizational policies and procedures apply to the lesson plan?
- What is the current level of knowledge and ability of your students?
- Which types of tools and equipment will your students use in performing the skills within the lesson plan?

The second area pertaining to the local conditions that must be considered is you, the Fire Service Instructor I:

- What is your experience level and ability? Can you identify resources and materials to improve your knowledge and background? If not, be prepared to ask for assistance from another instructor.
- How familiar are you with the topic that will be taught? Teaching material you are not familiar with can pose severe safety and credibility hazards. If you are not familiar with the topic, do not attempt to fake it, as wrong or incomplete information could be dangerous.
- What is your teaching style?

The answers to these types of questions will allow you to adapt the lesson plan so that you deliver the lesson in the most effective way given your own abilities.

Evaluating Facilities for Appropriateness

You should also review and adapt the lesson plan based on the facilities that will be used when delivering the class. Several factors—for example, the equipment available, student seating, classroom size, lighting, and environmental noise—must be considered as part of this evaluation. For example, a lesson plan may call for students to sit at tables that have been moved into a U-shaped arrangement. However, if the local classroom has desks that are fixed to the floor, you will not be able to arrange the seating as indicated in the lesson plan. The lesson plan would then need to be adapted to meet the conditions of the facility and the seating arrangement changed accordingly. You should make this adaptation, keeping in mind the reason for the indicated seating arrangement.

Meeting Local SOPs

A lesson plan must be reviewed to ensure that it meets and follows local SOPs. This is one of the most important

Teaching Tip

The National Fire Academy maintains a Web site called TRADE's Virtual TRADEing Post, which enables fire service instructors to share non-copyrighted information, PowerPoint® presentations, lesson plans, and training programs or other downloadable materials. The training information is provided free of charge with the understanding that you must give credit to the department or agency that developed it.

This Web site is part of the Training Resources and Data Exchange (TRADE) program, which is a network designed to foster the exchange of fire-related training information and resources among federal, state, and local levels of government.

considerations when adapting a lesson plan. You should never teach information that contradicts a SOP. Not only would this lesson be confusing for the students, but it would also create a liability for you. If a student were to be injured or killed while performing a skill in violation of a SOP, you would be held responsible. At a minimum, you would be disciplined within the organization—but it is also possible that you might be held legally responsible in either criminal or civil court.

When reviewing a lesson plan, make note of the SOPs that may cover the topics in the lesson plan. After completely reviewing the lesson plan, research the SOPs and ensure that no conflicts exist. If your research turns up conflicting information, you should adapt the lesson plan to meet the local SOPs as long as it does not change the lesson objectives. If you are not familiar with your local SOPs, contact someone within the department who can assist you with ensuring that the lesson plan is consistent with local SOPs.

■ Evaluating Limitations of Students

The lesson plan should also be reviewed in light of student limitations and adapted to accommodate those limitations if possible. The lesson plan should be at the appropriate educational level for the students, and the prerequisite knowledge and skills should be verified. For example, if you were reviewing a lesson plan to teach an advanced hazardous materials monitoring class, students should have already undergone basic hazardous materials training. If you were training new fire fighters and reviewing this lesson plan, you may not be able to adapt it. Instead, you would most likely have to require students to undergo additional training before the lesson plan would be appropriate to present to them.

Safety Tip

When adapting a lesson plan, closely evaluate the revised plan's safety implications. It is all too easy to omit important safety information that was previously included in the lesson plan or to include information that may create a safety issue when combined with other material.

■ Adapting the Method of Instruction

The method of instruction is the one area that a Fire Service Instructor I may readily modify. Such a modification may be needed to allow you to deliver the lesson plan effectively, but it should not change the learning objectives. For example, you may not be comfortable using the discussion method to deliver a class on fire service sexual harassment as indicated

Ethics Tip

Fire service instructors regularly adapt material to meet their departmental needs and to improve the curriculum. Is it ethical to alter material to reflect your personal opinions when those opinions run counter to the traditional way of thinking? The solution to this dilemma is not as simple as it may seem. Imagine where the fire service would be today if only a few years ago bold fire service instructors did not step up to the plate and refuse to present material that was not based on safe practices. “Doing the right thing” is what ethical decisions are all about—but there is a fuzzy line between “the right thing” and “my way is the only right way.”

For example, changing a course by eliminating the use of fog nozzles because you believe that these nozzles lead to hand burns is as dangerous as another fire service instructor eliminating the use of smooth-bore nozzles from a lesson plan. The reality is that students must understand the appropriate use, benefits, and dangers of each type of nozzle. What might seem like a simple adaptation could have serious consequences for a student who is not trained thoroughly and properly to department standards.

by the lesson plan. Instead, you might modify the lesson plan and change the method of instruction to lecture. This would allow the same information to be taught, just in a different format, and the same learning objectives would still be achieved.

■ Accommodating Instructor Style

In addition to ensuring that the method of instruction best suits your abilities, lesson plans may be adapted to accommodate your personal style. A lesson plan often reflects the style of the fire service instructor who wrote it. When reviewing and adapting a lesson plan, consider whether the lesson plan—and especially the presentation section—fits your own style. For example, a lesson plan may call for a humorous activity designed to establish a relationship between the instructor and the students. If you are teaching a military-style academy class, this may not be the best style, so you may need to adapt the presentation accordingly.

■ Meeting the Needs of the Students

All adaptations should be done with one purpose in mind—namely, meeting the needs of the students. As with all lesson plans, the main goal is to provide instruction that allows students to obtain knowledge or skills. This goal should be verified after you review and adapt a lesson plan.

Fire Service Instructor II

Creating a Lesson Plan

The Fire Service Instructor II is responsible for creating lesson plans. Depending on the subject, this task can take anywhere from several hours to several weeks. Regardless of the size of the lesson plan, the ultimate goal is to create a document that any fire service instructor can use to teach the subject and ensure that students achieve the learning objectives.

Many fire departments have lesson plan templates for the Fire Service Instructor II to use as a starting point. Such a standard format makes it easier for all fire service instructors in the department to understand the lesson plan and ensures consistency in training. If readily accessible and available, it may be easy for the instructor to access one style of lesson plan provided by a publisher and use that as the template for the training program. Consistency may be achieved if a variety of instructors all use the same lesson plan format to write or teach from. The lesson plans made available with this textbook to the instructor as part of the instructor's toolkit would be an example of a prepared lesson plan template that is written in Microsoft Word and is easily reused as a standard format. The instructor's toolkit and online companion Web site offer a sample lesson plan template (intentionally left blank) for you to use in the future.

A simple way of approaching the development of an outline that will be the basis of your lesson plan is to use a basic *introduction*, *body*, and *conclusion* sequence to organize your thoughts.

Safety Tip

Once a lesson plan is modified, go back and confirm that all learning objectives are met.

■ Achieving Job Performance Requirements

The first step of lesson plan development is to determine the learning objectives. What are students expected to achieve as a result of taking the class? Many times this desired outcome is obvious, because you are teaching a class to prepare students to perform a certain job or skill. For example, if you were to

develop a lesson plan for a class to train fire fighters to drive a fire engine, you would start by listing the JPRs for a fire engine driver. On many other occasions, however, the learning objectives are not that clear.

It is very difficult to develop a lesson plan when the learning objectives are not clearly stated. Many fire service instructors have been in the unhappy position of being told to teach a certain class, such as one dealing with workplace diversity or safety, without clear direction on the intended learning objectives. Although the person requesting the class may have a general idea of what the class is intended to accomplish, he or she might not know the specific learning objectives that the Fire Service Instructor II needs to develop a lesson plan.

For example, the fire chief may want to improve fire fighter safety through training. Unless given specific learning objectives, the Fire Service Instructor II cannot develop a lesson plan to “improve fire fighter safety.” When placed in this position, the Fire Service Instructor II should attempt to clarify the fire chief's vision of improving fire fighter safety. Would he like all fire fighters to understand the chain of events that leads to an accident and to know how to break that chain so that an accident is avoided? A learning objective can be written to achieve that goal. Or does the fire chief expect all fire fighters to don their structural firefighting protective equipment properly within a time limit? A learning objective can be written to achieve that goal, too. Whenever you are asked to develop a lesson plan for a class, start by clarifying the intended outcome of the class with the person who requests the class.

■ Learning Objectives

Once the Fire Service Instructor II has a clear outcome for a class, he or she should work backward to develop the learning objectives for the class. As described earlier in this chapter, learning objectives can be written utilizing the ABCD method **TABLE 6-2**.

Audience

The audience should describe the students who will take the class. If the lesson plan is being developed specifically for a certain audience, the learning objectives should be written to indicate that fact. For example, if a Fire Service Instructor II is writing a lesson plan for a driver training class, the audience would be described as “the driver trainee” or “the driver candidate.” Both of these terms indicate that the audience consists

Table 6-2 Learning Objectives Using the ABCD Method

Method Step	Question	Example
Audience	Who	The fire fighter
Behavior	Will do or know what	Will perform a one-person ladder raise
Condition	Using which equipment or resources	Using a two-section, 24-foot ground ladder
Degree	How well or to which level	So that the proper climbing angle is set and all safety precautions are observed

of individuals who are learning to be drivers. If the audience is not specifically known or if it includes students from mixed backgrounds, the audience part of the learning objective could be written more generically, such as “the fire fighter” or even “the student.”

Behavior

As described earlier, the behavior part of the learning objective should be specified using a clearly measurable action word, which allows the evaluation of the student's achievement of the learning objective. Another important consideration is the level to which a student will achieve the learning objective. This level is most often determined using Bloom's Taxonomy (*Taxonomy of Educational Objectives*, 1956), a method to identify levels of learning within the cognitive domain (discussed further in the chapter *The Learning Process*) **TABLE 6-3**.

Cognitive Domain Objectives

For the fire service, the most commonly used levels when developing *cognitive* learning objectives are (in order from simplest to most difficult) knowledge, comprehension, and application:

- *Knowledge* is simply remembering facts, definitions, numbers, and other specific items.
- *Comprehension* is displayed when students clarify or summarize important points.
- *Application* is the ability to solve problems or apply the information learned to situations.

Higher levels of application and understanding occur when the learning objectives are written at these levels:

- *Analysis* is the ability to break down information into components and the ability to know which components affect understanding.

- *Synthesis* is the ability to reassemble information in a new manner using abstract thinking and creativity.
- *Evaluation* is the ability to make judgments, critiques, or appraisals of the information.

In 2001, Dr. David Karthwohl and several other educational theorists modified the original Bloom's Taxonomy of Educational Objectives to expand its scope **FIGURE 6-5**. Several levels were revised:

- Knowledge became Remembering
- Comprehension became Understanding
- Application became Applying
- Analysis became Analyzing
- Evaluation became a level 5 task
- Synthesis was moved to the highest level and became Creating

A Fire Service Instructor II must determine which level within the cognitive domain is the appropriate level for the student to achieve for the lesson plan. For example, if an Instructor II is developing objectives for a class on portable extinguishers, the following objectives could be written for each basic level:

- Knowledge: “The fire fighter trainee will identify the four steps of the PASS method of portable extinguisher application.” For this objective, the student simply needs to memorize and repeat back the four steps of pull, aim, squeeze, and sweep. Achievement of this very simple knowledge-based objective is easily evaluated with a multiple-choice or fill-in-the-blank question.
- Comprehension: “The fire fighter trainee will explain the advantages and disadvantages of using a dry-chemical extinguisher for a Class A fire.” This objective

Table 6-3 Bloom's Taxonomy of Educational Objectives

	Definition	Example	Sample Verbs
Knowledge	Ability to assemble terms or facts, memorize material, and recall information	Identify the wraparound short backboard device.	List Define Recall State Recite
Comprehension	Ability to use knowledge and interpret or translate the information (i.e., understand the meaning of information)	Recognize situations where the wraparound short backboard is indicated.	Explain Summarize Describe Restate Interpret
Application	Ability to use knowledge and comprehension to apply information to new situations	Illustrate situations of poor application of the wraparound short backboard.	Solve Illustrate Apply Put into practice
Analysis	Ability to break down information into components and determine how each component affects understanding (i.e., looking at elements and the relationships)	Analyze situations when a wraparound short backboard is or is not indicated.	Organize Analyze Compare Contrast
Synthesis	Ability to reassemble the information in a new manner using abstract thinking and creativity	Describe a scenario that illustrates other uses of the wraparound short backboard device.	Design Hypothesize Discuss Devise
Evaluation	Ability to make judgments, critiques, or appraisals of the information	Following the completion of the scenario, evaluate the use of the wraparound short backboard device on an entrapped vehicle crash victim.	Evaluate Judge Defend Justify

COGNITIVE DOMAIN	PSYCHOMOTOR DOMAIN	AFFECTIVE DOMAIN
KNOWLEDGE Recognition and recall of facts and specifics <u>EXAMPLES:</u> Define, Describe, List, State	IMITATION Observes skills and attempts to repeat them <u>EXAMPLES:</u> Assemble, build, connect, couple, repeat	RECEIVING Listening passively; attending to <u>EXAMPLES:</u> Ask, name
COMPREHENSION Interprets, translates, summarizes, or paraphrases given information <u>EXAMPLES:</u> Convert, infer, rewrite	MANIPULATION Performs skills by instruction rather than observation <u>EXAMPLES:</u> Transmit, arrange, recreate	RESPONDING Complies to given expectation; shows interest <u>EXAMPLES:</u> Answer, recite
APPLICATION Processes information in a situation different from original learning context <u>EXAMPLES:</u> Demonstrate, relate, produce	PRECISION Reproduces a skill with accuracy, proportion, and exactness; usually performed independently of original sources <u>EXAMPLES:</u> Modify, demonstrate	VALUE Displays behavior consistent with single belief or attitude; unforced compliance <u>EXAMPLES:</u> Complete, explain, justify
ANALYSIS Separates whole into parts; clarifies relationships among elements <u>EXAMPLES:</u> Diagram, outline, illustrate	ARTICULATION Combines more than one skill in sequence with harmony and consistency <u>EXAMPLES:</u> Combine, coordinate, develop, modify	ORGANIZING Committed to set of values as displayed by behavior <u>EXAMPLES:</u> Integrate, adhere
SYNTHESIS Combines elements to form new entity from original one <u>EXAMPLES:</u> Compile, compose, design	NATURALIZATION Completes one or more skills with with ease; requires limited physical or mental exertions <u>EXAMPLES:</u> Design, specify, manage	CHARACTERIZING Behavior consistent with values internalized <u>EXAMPLES:</u> Qualify, modify, perform
EVALUATION Makes decisions, judges, or selects based on criteria and rationale <u>EXAMPLES:</u> Compare, contrast, justify, summarize		

FIGURE 6-5 Revised matrix for the new taxonomy.

© Adapted from Miami-Dade Community College revision of Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Company. Dave, R. H. (1970). *Developing and Writing Behavioral Objectives*. Tucson, AZ: Educational Innovators Press; and Krathwohl, D. B. S. Bloom, and B. Masia. (1964). *Taxonomy of Educational Objectives, Handbook II: Affective Domain*. New York: David McKay Company.

requires the student first to identify the advantages and disadvantages of a dry-chemical extinguisher, and then to select and summarize those that apply to use of such an extinguisher on a Class A fire. This higher-level objective may be evaluated by a multiple-choice question but is better evaluated with a short answer-type question.

- Application: “The fire fighter trainee, given a portable fire extinguisher scenario, shall identify the correct type of extinguisher and demonstrate the method for using it to extinguish the fire.” This is the highest level of objective because it requires the student to recall several pieces of information and apply them correctly based on the situation. This type of objective

is often evaluated with scenario-based questions that may be answered with multiple-choice items or short answers.

Psychomotor Domain Objectives

For the fire service, the most commonly used levels when developing *psychomotor* learning objectives are (in order from simplest to most difficult) imitation, manipulation, precision, articulation, and naturalization:

- *Imitation* is when the student observes the skill and attempts to repeat it.
- *Manipulation* is performing a skill based on instruction rather than on observation.
- *Precision* is performing a single skill or task correctly.

- *Articulation* is when the student combines multiple skills.
- *Naturalization* is when the student performs multiple skills correctly all of the time.

Action verbs associated with the psychomotor domain include the following:

- Demonstrate
- Practice
- Apply
- Perform
- Display
- Show
- Assemble

Affective Domain Objectives

The *affective* domain deals with an individual's expressed interests, ambitions, and values. These kinds of emotional behaviors are essential to the overall learning experience but may not be readily visible during initial learning. The taxonomy of the affective domain identifies five levels of understanding:

- *Receiving* is paying attention and displaying a willingness to learn.
- *Responding* is displaying an acknowledged behavior within the learning experience and participating when given an opportunity.
- *Valuing* is showing active involvement, passion, or commitment toward a topic.
- *Organization* is accepting a new value as one's own and setting a specific goal.
- *Characterization* is comparing and contrasting one's own values to others and using the new value.

Action verbs associated with affective domain objectives include the following examples:

- Accept
- Participate
- Share
- Judge

- Attempt
- Challenge

Condition

The condition(s) should describe the situation in which the student will perform the behavior. Specific equipment or resources must be listed in the objective; these are the "givens" necessary to demonstrate the skill or knowledge. For example, the phrases "in full protective clothing, including SCBA" and "using water from a static source such as a pool or pond" would tell both the instructor and the student what needs to be present to complete the behavior. You might notice that many skill sheets have a specific area inside their template that lists the equipment needed for part of the skill sheet. Before teaching the lesson, the instructor must check whether all equipment or resources needed for the performance of the objective are in working order and whether the student can properly operate all equipment or resources.

Degree

The degree may also be known as the standard because it describes how well the behavior must be performed. Both the student and the evaluator need to know the criteria against which the student is being measured. Percentage scores, "without errors," and "within a designated time" are all examples of the degree of performance that objectives should contain. A reference to a skill sheet during manipulative performance will guide both the student and instructor in how to approach proper completion and evaluation of the skill.

There is no one correct format for determining which level or how many learning objectives should be written for a lesson plan **TABLE 6-4**. Typically, a lesson plan will contain knowledge-based (cognitive) learning objectives to ensure that students learn all of the facts and definitions within the class. Comprehension or cognitive objectives are then used to ensure that students can summarize or clarify the material. Psychomotor objectives are used to ensure that the student can actually perform a task identified in the objective and presented in the

Table 6-4 Examples of Formatted Objectives by Domains and Levels

Duty Area	Domain Level	Cognitive	Domain Level	Psychomotor	Domain Level	Affective
Fire fighter	Knowledge	A fire fighter trainee, given a written exam, will identify the tools needed to perform vertical ventilation on a peaked roof according to J&B Fundamentals of Fire Fighter Skills 3 rd edition.	Manipulation	The fire fighter, given a K-950 rotary saw and an assortment of blades, will follow manufacturer's directions to change the wood blade to a metal blade.	Receiving	Basic fire fighter academy students will name the safety precautions to be taken when using a ground ladder during vertical ventilation.
Officer	Synthesis	Company officers will be given video clips of five different fire scenes and will explain the type of ventilation required based on smoke conditions according to department SOPs.	Articulation	As the officer of a crew with three experienced fire fighters, and given PPE, ladders, and tools, conduct vertical ventilation on a pitched roof so that all barriers are removed and structural integrity is not compromised within four minutes.	Organizing	The officer of a crew assigned to ventilation at a structure fire will display adherence to all safety and risk management requirements for the entire crew, according to department policy.

lesson plan. Objectives pertaining to the third domain—that is, affective objectives—are often listed with the psychomotor objectives and identify “when” to perform the task. These learning domains are discussed in more detail in the chapter *The Learning Process*.

■ Converting Job Performance Requirements into Learning Objectives

Often, a Fire Service Instructor II needs to develop learning objectives to meet [job performance requirements \(JPRs\)](#) listed in a NFPA professional qualification standard. A JPR describes

a specific job task, lists the items necessary to complete that task, and defines measurable or observable outcomes and evaluation areas for the specific task. Matching of learning objectives to JPRs occurs when a lesson plan is being developed to meet the professional qualifications for a position such as Fire Officer, Fire Instructor, or Fire Fighter.

The JPRs listed in the NFPA standards of professional qualifications are not learning objectives per se, but learning objectives can be created based on the JPRs. Each NFPA professional qualification standard has an annex section that explains the process of converting a JPR into an instructional objective, including examples of how to do so **FIGURE 6-6**. By following this format,

Courtesy of NFPA

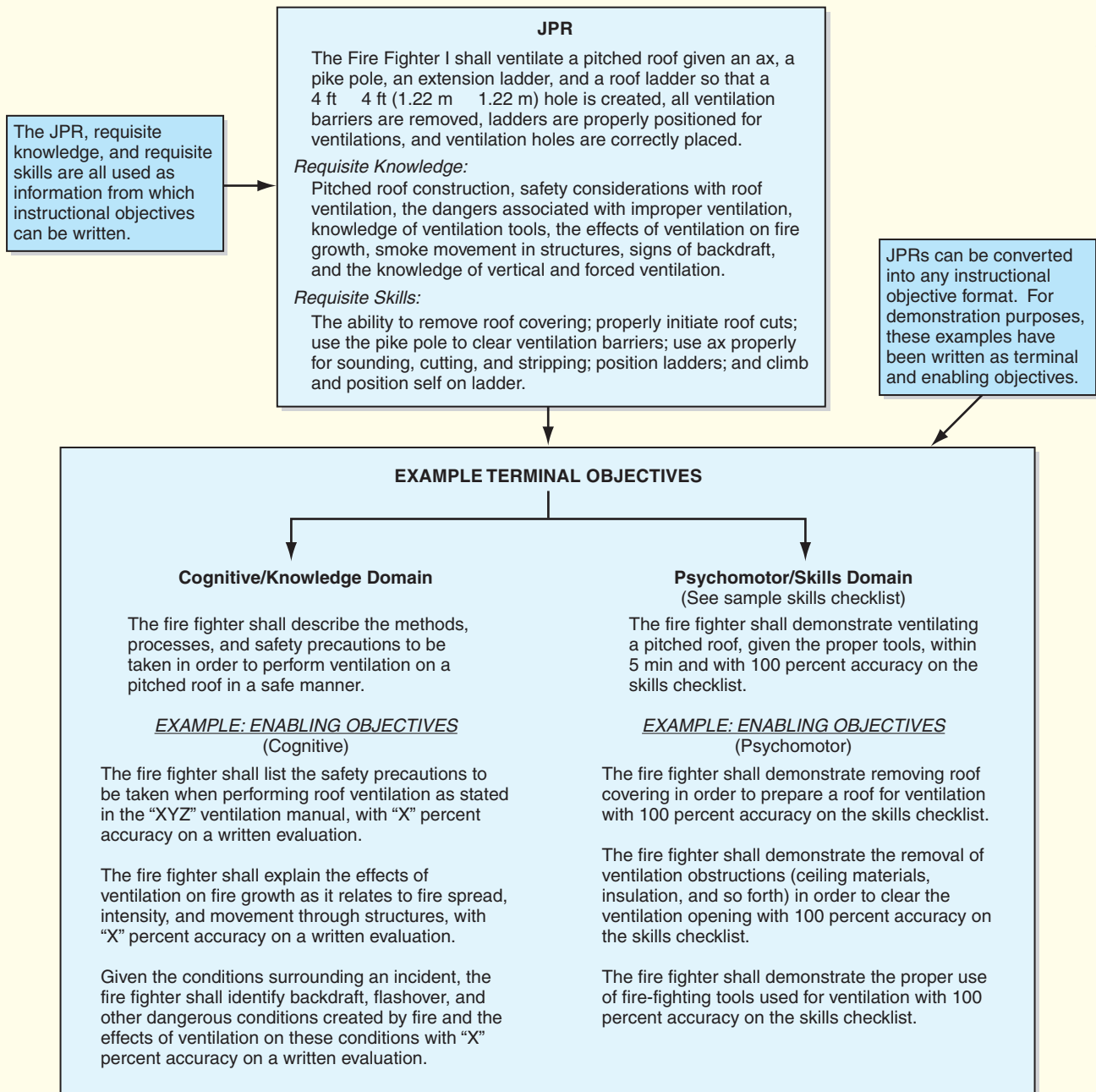


FIGURE 6-6 Converting job performance requirements into instructional objectives.

a Fire Service Instructor II is able to develop learning objectives for a lesson plan to meet the professional qualifications for NFPA standards. This process includes the breaking down of a JPR into a terminal objective and several enabling objectives, including cognitive and psychomotor objectives. Further into the development process, cognitive objectives are written into a lesson plan and include evaluation tools such as test questions, whereas psychomotor objectives are broken down into task steps and made into skill sheets. An Instructor III will use the JPRs to help write course objectives for larger curricula.

Safety Tip

When writing objectives in a psychomotor format, be sure to address any safety issues required to meet the objective.

■ Lesson Outline

After determining the performance outcomes and writing the learning objectives for the lesson plan, the next step for the Fire Service Instructor II is to develop the lesson outline **FIGURE 6-7**

. The lesson outline is the main body of the lesson plan and is the major component of the presentation step in the four-step method of instruction.

One method for creating a lesson outline involves brainstorming the topics to be covered and then arranging them in a logical order. Begin listing all of the information that needs to be taught to achieve the learning objectives. Which terms do students need to learn? Which concepts must be presented? Which skills need to be practiced? Which stories or real-life examples would demonstrate the need to learn this material?

Once you have listed all of the topics that should be covered in the lesson outline, organize them into presentation and application sections. Arrange the listed topics you will lecture on in a logical and orderly fashion in the presentation section. It may be practical to structure a lesson outline by progressing from the known and working toward the unknown. This is particularly useful in a large course where the instructor aims to ensure that the topics previously covered have been mastered by the students. This establishes a relationship among topics in the larger curriculum. For example, you will need to instruct students on building construction and ladders before you can focus on vertical ventilation. Topics should be presented in order starting from the basic and then moving on to

Pre-Lecture (Preparation Step)

I. You Are the Fire Fighter

Time: 5 Minutes

Small Group Activity/Discussion

Use this activity to motivate students to learn the knowledge and skills needed to understand the history of the fire service and how it functions today.

Purpose

To allow students an opportunity to explore the significance and concerns associated with the history and present operation of the fire service.

Instructor Directions

1. Direct students to read the “You Are the Fire Fighter” scenario found in the beginning of Chapter 1.
2. You may assign students to a partner or a group. Direct them to review the discussion questions at the end of the scenario and prepare a response to each question. Facilitate a class dialogue centered on the discussion questions.
3. You may also assign this as an individual activity and ask students to turn in their comments on a separate piece of paper.

Lecture (Presentation Step)

I. Introduction

Time: 5 Minutes

Slides: 1–6

Level: Fire Fighter I

Lecture/Discussion

- A. Training to become a fire fighter is not easy.
 1. The work is physically and mentally challenging.
 2. Firefighting is more complex than most people imagine.
- B. Fire fighter training will expand your understanding of fire suppression.
 1. The new fire fighter must understand the roots of the fire service, how it has developed, and the fire service “culture” in order to excel.
 2. This course equips fire fighters to continue a centuries-old tradition of preserving lives and property threatened by fire.

(Continues)

(Continued)

II. Fire Fighter Guidelines

Time: 5 Minutes

Slide: 7

Level: Fire Fighter I

Lecture/Discussion

- A. Be safe.
 - 1. Safety should always be uppermost in your mind.
- B. Follow orders.
 - 1. If you follow orders, you will become a dependable member of the department.
- C. Work as a team.
 - 1. Firefighting requires the coordinated efforts of each department member.
- D. Think!
 - 1. Lives will depend on the choices you make.
- E. Follow the golden rule.
 - 1. Treat each person, patient, or victim as an important person.

III. Fire Fighter Qualifications

Time: 30 Minutes

Slides: 8–10

Level: Fire Fighter I

Lecture/Discussion

- A. Age requirements
 - 1. Most career fire departments require that candidates be between the ages of 18 and 21.
- B. Education requirements
 - 1. Most career fire departments require a minimum of a high school diploma or equivalent.
- C. Medical requirements
 - 1. Medical evaluations are often required before training can begin.
 - 2. Medical requirements for fire fighters are specified in NFPA 1582, *Standard on Comprehensive Operational Medical Program for Fire Departments*.
- D. Physical fitness requirements
 - 1. Physical fitness requirements are established to ensure that fire fighters have the strength and stamina needed to perform the tasks associated with firefighting and emergency operations.
- E. Emergency medical requirements
 - 1. Many departments require fire fighters to become certified at the first responder, Emergency Medical Technician (EMT)–Basic, or higher levels.

IV. Roles and Responsibilities of the Fire Fighter I and Fire Fighter II

Time: 30 Minutes

Slides: 11–17

Level: Fire Fighter I and II

Lecture/Discussion

- A. The roles and responsibilities for Fire Fighter I include:
 - 1. Don and doff personal protective equipment properly.
 - 2. Hoist hand tools using appropriate ropes and knots.
 - 3. Understand and correctly apply appropriate communication protocols.
 - 4. Use self-contained breathing apparatus (SCBA).
 - 5. Respond on apparatus to an emergency scene.
 - 6. Force entry into a structure.
 - 7. Exit a hazardous area safely as a team.
 - 8. Set up ground ladders safely and correctly.
 - 9. Attack a passenger vehicle fire, an exterior Class A fire, and an interior structure fire.
 - 10. Conduct search and rescue in a structure.
 - 11. Perform ventilation of an involved structure.
 - 12. Overhaul a fire scene.
 - 13. Conserve property with salvage tools and equipment.
 - 14. Connect a fire department engine to a water supply.
 - 15. Extinguish incipient Class A, Class B, and Class C fires.
 - 16. Illuminate an emergency scene.
 - 17. Turn off utilities.

(Continued)

18. Perform fire safety surveys.
 19. Clean and maintain equipment.
 20. Present fire safety information to station visitors, community groups, or schools.
- B. Additional roles and responsibilities for Fire Fighter II include:
1. Coordinate an interior attack line team.
 2. Extinguish an ignitable liquid fire.
 3. Control a flammable gas cylinder fire.
 4. Protect evidence of fire cause and origin.
 5. Assess and disentangle victims from motor vehicle accidents.
 6. Assist special rescue team operations.
 7. Perform annual service tests on fire hose.
 8. Test the operability of and flow from a fire hydrant.
 9. Fire fighters must also be prepared to assist visitors to the fire station and use the opportunity to discuss additional fire safety information.

V. Summary

Time: 5 Minutes

Slides: 51–53

Level: Fire Fighter I

Lecture/Discussion

- A. Remember the five guidelines: Be safe, follow orders, work as a team, think, and follow the golden rule.
- B. Fire fighter qualifications consider age, education, medical and physical fitness, and emergency medical certifications.
- C. The roles and responsibilities of Fire Fighter I and Fire Fighter II vary.

Post-Lecture

I. Wrap-Up Activities (Application Step)

Time: 40 Minutes

Small Group Activity/Individual Activity/Discussion

A. Fire Fighter in Action

This activity is designed to assist the student in gaining a further understanding of the roles and responsibilities of the Fire Fighter I and II. The activity incorporates both critical thinking and the application of fire fighter knowledge.

Purpose

This activity allows students an opportunity to analyze a firefighting scenario and develop responses to critical thinking questions.

Instructor Directions

1. Direct students to read the “Fire Fighter in Action” scenario located in the Wrap-Up section at the end of Chapter 1.
2. Direct students to read and individually answer the quiz questions at the end of the scenario. Allow approximately 10 minutes for this part of the activity. Facilitate a class review and dialogue of the answers, allowing students to correct responses as needed. Use the answers noted below to assist in building this review. Allow approximately 10 minutes for this part of the activity.
3. You may also assign these as individual activities and ask students to turn in their comments on a separate piece of paper.
4. Direct students to read the “Near Miss Report.” Conduct a discussion that allows for feedback on this report. Allow 10–15 minutes for this activity.

Answers to Multiple Choice Questions

1. A, D
2. B
3. B
4. D

B. Technology Resources

This activity requires students to have access to the Internet. This may be accomplished through personal access, employer access, or through a local educational institution. Some community colleges, universities, or adult education centers may have classrooms with Internet capability that will allow for this activity to be completed in class. Check out local access points and encourage students to complete this activity as part of their ongoing reinforcement of firefighting knowledge and skills.

Purpose

To provide students an opportunity to reinforce chapter material through use of online Internet activities.

Instructor Directions

1. Use the Internet and go to www.Fire.jbpub.com. Follow the directions on the Web site to access the exercises for Chapter 1.
2. Review the chapter activities and take note of desired or correct student responses.
3. As time allows, conduct an in-class review of the Internet activities and provide feedback to students as needed.
4. Be sure to check the Web site before assigning these activities, as specific chapter-related activities may change from time to time.

(Continues)

(Continued)

II. Lesson Review (Evaluation Step)**Time:** 15 Minutes

Discussion

Note: Facilitate the review of this lesson's major topics using the review questions as direct questions or overhead transparencies. Answers are found throughout this lesson plan.

- A. Name some of the physical fitness requirements established for firefighters.
- B. What requirements do the firefighter qualifications focus on?
- C. How do the roles and responsibilities of the Fire Fighter I and II differ?

III. Assignments**Time:** 5 Minutes

Lecture

- A. Advise students to review materials for a quiz (determine date/time).
- B. Direct students to read the next chapter in *Fundamentals of Fire Fighter Skills* as listed in your syllabus (or reading assignment sheet) to prepare for the next class session.

FIGURE 6-7 A sample lesson outline.

the more complex. Ensure that the topics flow together and that the presentation does not contain any gaps that might confuse a student. If you identify a gap, you may need to create a new topic to bridge it.

In the application section of the lesson, list the topics that require students to apply the information learned in the presentation section. Most often the topics in the application section will be activities or skills practice. If the lesson does not include actual hands-on activities, the application should at least consist of discussion points for you to talk about with the students to ensure the information in the lecture was learned and can be applied.

Many lesson outlines utilize a two-column format. The first column contains the actual outline of the material to be taught. If this lesson outline is to be used by experienced fire service instructors, a simple outline of the material may suffice. For less experienced fire service instructors (or to ensure consistency among multiple instructors), the outline may be more detailed. The second column of the lesson outline contains comments or suggestions intended to help a fire service instructor understand and present the lesson outline. It is also a good practice to indicate in the second column which learning objectives are being achieved during the presentation or application sections. This information is especially helpful when you are developing a lesson plan to teach an established curriculum that uses a numbering system to identify learning objectives.

Instructional Materials

Once the lesson outline is developed, all instructional materials needed to deliver instruction should be identified and listed in the lesson plan. This list should be specific so that the exact instructional aid can be identified. For example, if the lesson plan is a fire safety lesson for children that incorporates a DVD as an instructional aid, just listing "fire safety video" in the lesson plan does not provide enough information for the

fire service instructor. Instead, give the exact title of the video, such as "*Sparky Says: Join My Fire Safety Club*, by the NFPA." This information will allow any fire service instructor who uses the lesson plan to obtain the correct instructional aid. Instructional materials may range from handouts to projectors to the hoses used during a skills practice.

Often the inclusion of one instructional aid creates a need for more instructional materials. For example, if a lesson plan lists a DVD as an instructional aid, the instructional materials would need to be revised to include a DVD player and projector. Ask the following types of questions to determine precisely what you need:

- Are additional informational resources needed to present the learning objectives to students—for example, a handout describing your department's SOPs?
- Are supplies needed to make props or demonstrations?
- Is equipment needed for the activities or skills practice?
- Is equipment needed to ensure student safety?

Evaluation Plan

The evaluation plan is the final part of the lesson plan. Each part of the evaluation plan should be directly tied to one or more learning objectives. When writing this component of the lesson plan, simply describe the evaluation plan—do not provide the actual evaluation. In other words, the lesson plan could indicate that the evaluation plan is a 50-question multiple-choice test, but it should not list the actual test questions. The test questions should be a separate document that is securely kept and made available only as needed to fire service instructors. When the evaluation plan lists skills performance tests, these documents should be included with the instructional materials and distributed to students so they can prepare for skills testing. This step is covered in the chapter *Evaluating the Learning Process*.

Theory Into Practice

A set of clear learning objectives, a thorough lesson outline, and a method of ensuring that the learning objectives are met should form the backbone of every course taught in the fire service. Proper construction of learning objectives will ensure that the course meets the identified needs of the students. Conversely, when they are not supported with clear learning objectives, courses may stray from their intended purpose. To ensure development of clear learning objectives, use the ABCD method during the creation process.

The lesson outline is a necessity to ensure that you cover the material required to meet the learning objectives. This outline should flow logically to assist in student comprehension. Brainstorming will help guide your thought process in covering all relevant topics. Arranging topics in a logical sequence requires an understanding of the learning objectives. Once it is completed, run your lesson outline by a colleague to see if he or she can follow your logical sequence. If your colleague is confused, then your students are also likely to be confused.

The last step to ensure success is to create an evaluation process to confirm that the learning objectives have been met. Without an evaluation process, there is no way to measure the objectives or to guarantee that a student has met the goals of the class.

Teaching Tip

If you are creating a lesson plan, the evaluation should directly link back to the initial learning objectives outlined at the beginning of class.

Modifying a Lesson Plan

Unlike a Fire Service I, who can only *adapt* lesson plans (as discussed earlier in this chapter), a Fire Service Instructor II may *modify* lesson plans. Modifying a lesson plan occurs when the

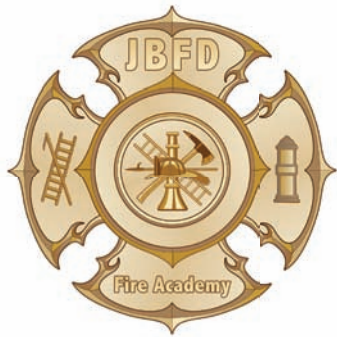
Instructor II makes fundamental changes, such as revising the learning objectives. When these kinds of substantial changes to a lesson plan are made, the lesson plan should be completely revised, following the step-by-step process used to develop the original lesson plan. To ensure that the lesson plan is written to meet a new learning objective, follow through each step of the lesson plan development process and make the necessary changes in all sections of the lesson plan.

When modifying a lesson plan, always obtain necessary approval from the authority having jurisdiction. Even though a Fire Service Instructor II has the training to modify learning objectives, the change typically must be approved by a curriculum committee, a training officer, or the fire chief. Similarly, any lesson plan modification must comply with all agency policies and procedures. If a reference used to develop the lesson plan is updated, such as a department SOP or an NFPA standard, make sure that the reference cited in the lesson plan is current.

After modifying a lesson plan, retain a copy of the original lesson plan. This original must be kept to document the classes that were taught from that lesson plan. It can also be referred to when making future lesson plan modifications.

The fire service instructor greatly improves his or her ability to deliver training information to students by using a standard lesson plan format that incorporates the four-step method of instruction. Consistency and accuracy of information must be relayed to varied audiences, and use of a lesson plan template can facilitate this process. Moreover, in the event of unexpected emergency runs or other breaks that may occur during instruction, having a well-organized lesson plan allows for you to pick up where you left off. Fellow instructors can use the same lesson plan and achieve similar outcomes. The lesson plan can be compared to an incident action plan, in that it identifies expected outcomes of a training session, clarifies resources available or needed, and provides a step-by-step measurable set of instruction material that brings a training session to a successful outcome. Existing or published lesson plans should be reviewed and modified to reflect your department procedures and practices. Utilization of fire service references and NFPA JPRs also provide content validity to the material being taught. Using a standard form for instruction ensures that the instructor covers many legal and ethical concerns relating to the delivery of training in the modern fire service.

Training BULLETIN



Jones & Bartlett Fire District

Training Division
5 Wall Street, Burlington, MA, 01803
Phone 978-443-5000 Fax 978-443-8000
www.jbfd.org

Instant Applications: Lesson Plans

Drill Assignment

Apply the chapter content to your department's operation, its training division, and your personal experiences to complete the following questions and activities.

Objective

Upon completion of the instant applications, fire service instructor students will exhibit decision making and application of job performance requirements of the fire service instructor using the text, class discussion, and their own personal experiences.

Suggested Drill Applications

1. Using a sample lesson plan included in supplemental course material, identify the components of the lesson plan.
2. Using the same sample lesson plan, adjust the lesson plan based on the needs of different audiences.
3. Analyze an existing lesson plan from your department. Are the components complete and accurate?
4. Review the Incident Report in this chapter and be prepared to discuss your analysis of the incident from a training perspective and as an instructor who wishes to use the report as a training tool.

Incident Report

Milford, Michigan—1987

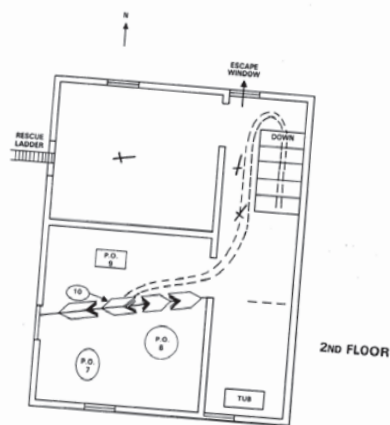
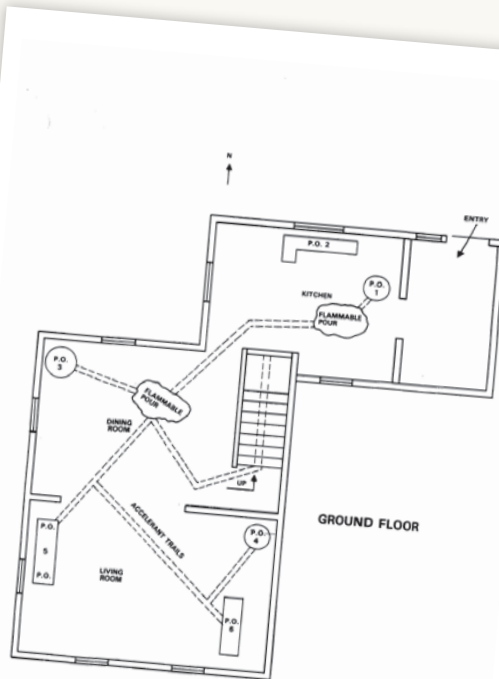


Figure 6A Floor plan of involved Milford structure.

Courtesy of the U.S. Fire Administration

Four days after the Hollandale, Michigan fire, a training session that was supposed to teach fire fighters to recognize physical evidence of arson fires trapped six fire fighters on the second floor of a 120-year-old house (**Figure 6A**). The wood-framed house had low-density ceiling tiles with lightweight wood paneling on the first floor. There were numerous holes in the walls and ceilings.

Various arson scenarios were set up in each of the rooms on both floors using furniture, clothing, and other items. Both flammable and combustible fluids were used.

Multiple hose lines were charged and ready on the outside of the structure. Portable water tanks were set up and filled with tenders, prepared for a water shuttle operation.

Fire fighters toured the building to see the scenarios before ignition. Initial ignition efforts failed, and several windows on the second floor were broken to improve ventilation. A fire set on a couch in the southwest corner of the living room using flammable or combustible liquids was openly burning and had breached the exterior wall and entered the attic space.

One fire fighter was already inside trying to ignite the fires on the second floor. Four fire fighters were directed to enter the house, along with the assistant chief. Without a hose line, these fire fighters passed multiple burning fire sets that were producing little heat or smoke. Most likely, they did not see the fire in the living room or realize it had spread to the attic. They met with the assistant chief and another fire fighter on the second floor to ignite a fire in one of the bedrooms. At this time, the other upstairs bedroom was already burning. The assistant chief directed them to exit the house as fire conditions rapidly intensified. The escape route down the stairs to the first floor was cut off and, under very adverse conditions, the fire

Continued...

Incident Report **Continued...**

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Milford, Michigan—1987

fighters were able to locate a window on the second floor for egress (**Figure 6B**). Three of them were able to exit through the window and onto the first floor roof below. Reportedly, the SCBA face piece was melting off the last fire fighter able to exit.

Outside, fire fighters observed the change in conditions and the rescue of the assistant chief and the two other fire fighters. They initiated suppression and rescue operations. Ladders were raised to the second-floor windows in the now almost fully involved house.

The first trapped fire fighter was located and removed in approximately 10 minutes. The others were all located on the second floor shortly thereafter. Per the NFPA report, “One of the fire fighters who was able to escape did not know that he would be part of an interior training until he was instructed to ‘suit up,’ and even then he was unsure of his specific assignment.” Three fire fighters died in the fire, which was the first multiple-death training incident in the United States since the release of NFPA 1403 in 1986.



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Figure 6B Stairs to the second floor of the Milford house show significant fire involvement that blocked escape from second floor.

Postincident Analysis

NFPA 1403 (2007 Edition) Noncompliant

Combustible wall paneling and ceiling tiles contributed to rapid fire spread (4.2.17) (4.2.10.5)

Flammable and combustible liquids used (4.3.6)

Multiple simultaneous fires on two floors (4.4.15)

No interior hose line (4.4.6)

Numerous holes in walls and ceilings allowed fire spread (4.2.10.4)

Interior stairs only exit other than windows (Note: a violation due to the limited normal means of egress, which may have precluded the use of the upper floor without additional provisions put in place) (4.2.12.1) (4.2.13)

Flashover and fire spread unexpected (4.3.9)

Fire chief claimed no knowledge of NFPA 1403 (4.5.4)

Wrap-Up

Chief Concepts

- A fire service instructor who uses a well-prepared and thorough lesson plan to organize and prepare for class greatly increases the odds of ensuring quality student learning.
- All instructional planning begins by identifying the desired outcomes, called objectives.
- In the ABCD method of writing learning objectives, ABCD stands for **A**udience (Who?), **B**ehavior (What?), **C**ondition (How or using what?), and **D**egree (How well?).
- A lesson plan includes the following parts:
 - Lesson title or topic
 - Level of instruction
 - Behavioral objectives, performance objectives, and learning outcomes
 - Instructional materials needed
 - Lesson outline
 - References/resources
 - Lesson summary
 - Assignment
- While reviewing and preparing for class with a lesson plan, the four-step method of instruction is the primary process used to relate the material contained in the lesson plan to the students:
 - Preparation
 - Presentation
 - Application
 - Evaluation
- Preparing for instruction is very important. You may need to spend several hours preparing to teach a class,

including reviewing the lesson plan, reserving classrooms and instructional aids, and purchasing materials.

- A Fire Service Instructor I can use a lesson plan to teach a class and may adapt the lesson plan to the local needs of the class.
- A Fire Service Instructor II can create a new lesson plan to teach a class and may modify an existing lesson plan.
- Over time, standards and procedures change, so that a lesson plan that was completely correct for your department when it was created may be out-of-date in just a few months.
- The main focus when adapting a lesson plan is to make minor adjustments so it fits your local conditions and your students' needs. To accomplish this goal, you must be familiar with your audience.
- You should review and adapt the lesson plan based on the facilities that will be used when delivering the class.
- A lesson plan must be reviewed to ensure that it meets and follows local SOPs. After completely reviewing the lesson plan, research the SOPs and ensure that no conflicts exist.
- The lesson plan should be reviewed based on student limitations and adapted to accommodate those limitations if possible.
- Reviewing and adapting a lesson plan should be a formal process. You should document in writing which adaptations have been made.
- The method of instruction is the one area that a Fire Service Instructor I may readily alter. Such a change may be needed to allow you to deliver the lesson plan effectively, but it should not change the learning objectives.
- When reviewing and adapting a lesson plan, consider whether the lesson plan—and especially the presentation section—fits your personal style.

Wrap-Up, continued

- All adaptations should be done with one purpose in mind—namely, meeting the needs of the students.
- When creating a lesson plan, a Fire Service Instructor II should ensure that the lesson plan is complete and clearly understandable so that any other fire service instructor can use it.
- Developing lesson plans includes the following steps:
 - Achievement of job performance requirements
 - Learning objectives
 - Conversion of job performance requirements into learning objectives
 - Lesson outline
 - Evaluation plan
- When modifying a lesson plan, always obtain necessary approval from the authority having jurisdiction. Even though a Fire Service Instructor II has the training to modify learning objectives, the change typically must be approved by a curriculum committee, a training officer, or the fire chief.

Hot Terms

ABCD method Process for writing lesson plan objectives that includes four components: audience, behavior, condition, and degree.

Adapt To make fit (as for a specific use or situation).

Application step The third step of the four-step method of instruction, in which the student applies the information learned during the presentation step.

Assignment The part of the lesson plan that provides the student with opportunities for additional application or exploration of the lesson topic, often in the form of homework that is completed outside of the classroom.

Audience Who the students are.

Behavior An observable and measurable action for the student to complete.

Condition The situation in which the student will perform the behavior.

Degree The last part of a learning objective, which indicates how well the student is expected to perform the behavior in the listed conditions.

Enabling objective An intermediate learning objective, usually part of a series that directs the instructor on what he or she needs to instruct and what the learner will learn to accomplish the terminal objective.

Evaluation step The fourth step of the four-step method of instruction, in which the student is evaluated by the instructor.

Four-step method of instruction The most commonly used method of instruction in the fire service. The four steps are preparation, presentation, application, and evaluation.

Job performance requirement (JPR) A statement that describes a specific job task, lists the items necessary to complete that task, and defines measurable or observable outcomes and evaluation areas for the specific task.

Learning objective A goal that is achieved through the attainment of a skill, knowledge, or both, and that can be measured or observed.

Lesson outline The main body of the lesson plan; a chronological listing of the information presented in the lesson plan.

Lesson plan A detailed guide used by an instructor for preparing and delivering instruction.

Lesson summary The part of the lesson plan that briefly reviews the information from the presentation and application sections.

Wrap-Up, continued

Lesson title or topic The part of the lesson plan that indicates the name or main subject of the lesson plan.

Level of instruction The part of the lesson plan that indicates the difficulty or appropriateness of the lesson for students.

Modify To make basic or fundamental changes.

Preparation step The first step of the four-step method of instruction, in which the instructor prepares to deliver the class and provides motivation for the students.

Prerequisite A condition that must be met before a student is allowed to receive the instruction contained within a lesson plan—often a certification, rank, or attendance of another class.

Presentation step The second step of the four-step method of instruction, in which the instructor delivers the class to the students.

Terminal objective A broader outcome that requires the learner to have a specific set of skills or knowledge after a learning process.

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FIRE SERVICE INSTRUCTOR *in action*

You are a Fire Service Instructor I who has been asked to teach an SCBA class to your department's new-recruit class. The captain in charge of the training academy provides you with the lesson plan that was used during the last class. He asks you to review the lesson plan and let him know if you need anything before you teach the class in two weeks.

1. Which statement best describes your next action?
 - A. Safely store the lesson plan away until the day of the class.
 - B. Begin creating your own lesson plan and compare it to the one you were given.
 - C. Review the lesson plan you were given and develop a timeline to prepare for the class.
 - D. Tell the captain that a Fire Service Instructor I cannot teach this class.
2. As you review the SCBA lesson plan, you notice that some of the learning objectives are no longer needed because of an equipment change. As a Fire Service Instructor I, what should you do?
 - A. Delete the unnecessary objectives from the lesson plan.
 - B. Notify the captain, so a Fire Service Instructor II can modify the lesson plan.
 - C. Teach the learning objectives anyway because they are in the lesson plan.
 - D. Rewrite the learning objectives so they apply to the new equipment.
3. The last class contained 20 recruits. The class you will teach will have 40 students. As a Fire Service Instructor I, you can adapt the lesson plan to accommodate the additional students.
 - A. True
 - B. False
4. Your department has a standard operating procedure for the use and maintenance of SCBA. Which of the following statements is true concerning the SOP and the lesson plan?
 - A. The lesson plan should never contradict the SOP.
 - B. The lesson plan may reference the SOP but you do not need to teach it.
 - C. The lesson plan should not include the SOP because students will learn it later.
 - D. The lesson plan should cover textbook material only, not SOPs.
5. As a Fire Service Instructor I preparing to teach this class, which of the following issues would you normally be responsible for?
 - A. Selecting the type of SCBA for your department
 - B. Establishing a budget for the class
 - C. Writing the exam questions
 - D. Reviewing and preparing audio/visual aids
6. Why would a less experienced fire service instructor have a more detailed lesson outline?
 - A. A less experienced fire service instructor should not have a more detailed lesson outline because it will be distracting.
 - B. A more detailed lesson plan will allow the fire service instructor to cover areas that are not part of the learning objectives.
 - C. The fire service instructor will have more basic knowledge about the topic, so less information is required in the lesson outline.
 - D. All lesson outlines should be the same regardless of the fire service instructor's experience.
7. When reviewing a lesson plan, should you consider your personal style of presentation and adapt the plan to meet your style?
 - A. This is acceptable because the original fire service instructor will have incorporated his or her own personal style when developing the lesson plan.
 - B. This is acceptable because the original fire service instructor will have ensured that no personal style is reflected in the lesson plan.
 - C. This is not acceptable because the material should be about the students and not the fire service instructor.
 - D. This is not acceptable because no adaptations should ever be made by a Fire Service Instructor I.