

LESSON ONE

FIREFIGHTER I

Emergency Medical Care

DOMAIN: PSYCHOMOTOR

LEVEL OF LEARNING: COMPREHENSION /
APPLICATION

MATERIALS

IFSTA Essentials 5th edition or Jones and Bartlett Fundamentals of Fire Fighter Skills 2nd Edition or Delmar Firefighter's Handbook 3rd Edition; Adult and Infant CPR mannequins; disinfectant solution; gauze pads; spare lungs; recording paper; overhead projector or laptop computer and multimedia projector; VCR/DVD and screen; AHA Basic Emergency Care for the Health Care Provider Student Manual; blankets, sheets or floor pads, bag valve resuscitators oxygen set-up (tank, regulator wrench, and oxygen tubing), and a pocket-mask resuscitator.

NFPA 1001 JPR, 2008 edition

4.3 Minimum emergency medical care performance capabilities for entry-level personnel

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter I candidate shall correctly demonstrate the procedures for performing cardiopulmonary resuscitation; dislodging a foreign object from an adult, child and infant; and demonstrate using a bag mask resuscitator while performing single and two rescuer CPR on a simulated cardiac arrest victim.

ENABLING OBJECTIVES

1. The Firefighter I candidate shall correctly demonstrate the procedures for single-rescuer CPR on an adult mannequin.
2. The Firefighter I candidate shall correctly demonstrate the procedures for single-rescuer CPR on a child using a mannequin.
3. The Firefighter I candidate shall correctly demonstrate the procedures for single-rescuer CPR on an infant mannequin.
4. The Firefighter I candidate shall correctly demonstrate the procedures for two-rescuer CPR on an adult mannequin.
5. The Firefighter I candidate shall correctly demonstrate the procedures for managing the obstructed airway of a conscious and unconscious adult, using a student or mannequin.
6. The Firefighter I candidate shall correctly demonstrate the procedures for dislodging a foreign object from a conscious and unconscious child, using a student or mannequin.
7. The Firefighter I candidate shall correctly demonstrate the procedures for dislodging a foreign object from a conscious and unconscious infant, using an infant mannequin.

8. The Firefighter I candidate shall correctly demonstrate the use of a bag mask resuscitator and a pocket mask using a resuscitation mannequin.

LESSON ONE

FIREFIGHTER I

Emergency Medical Care

MOTIVATION

In the past several years, emergency medical response has become a more integral part of the fire service role. As with fire fighting skills and technology, emergency medical skills and technology continue to improve each year. In order to provide optimum pre-hospital care, the firefighter must be trained and updated to provide current, state-of-the-art basic medical care. The focus of this unit is to provide the firefighter with basic skills in the areas of CPR, airway management, patient assessment, traumatic injuries, treatment for burns, poisoning, and infectious diseases. Standard operating guidelines are discussed regarding firefighter safety when treating patients with a suspected infectious disease.

NOTE: Currently North Carolina Office of Emergency Medical Services (OEMS) requires that all certified EMT Instructors be certified by the American Heart Association or American Red Cross as CPR Instructors. The North Carolina Office of State Fire Marshal (OSFM) recommends that certified CPR Instructors should teach this lesson plan to insure compliance with the National CPR Standards.

NOTE: Training material and practical testing procedures provided by the American Red Cross, American Heart Association, or the N.C. Office of Emergency Medical Services EMT training program may be used in conjunction with all units covered under the emergency medical care objectives. However, written and practical evaluation exams will be based on material found in the International Fire Service Training Association's manual, Fire Service First Responder.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter I candidate shall correctly demonstrate the procedures for single-rescuer CPR on an adult mannequin.

1. Briefly describe the function of the cardiovascular system and the respiratory system as they relate to maintaining brain function.
2. List and discuss the six causes of cardiac arrest.
3. Review the general and legal considerations that may be involved with initiating CPR.
4. Demonstrate the techniques for assessing a patient's airway, breathing and circulation (ABCs).
5. Review and demonstrate the techniques for rescue breathing.
6. Review and demonstrate the techniques for single-rescuer CPR.
7. Point out that the American Heart Association (AHA) defines an adult as anyone over the age of 8 years old.

Reference:

Delmar Handbook 3rd edition, pages 804-805, 796, 798

J&B Fundamentals 2nd edition, pages 681-704

IFSTA Essentials 5th edition, pages 1022-1023, 1030-1035

NOTE: Remember that training guidelines for patient assessment and medical treatment may vary from area to area. The instructor must be familiar with local medical protocol and follow it if it differs from the information presented in this unit.

APPLICATION

Have each student practice assessing the ABC's and the techniques for performing single rescuer CPR. Use a Recording Anne if available. Have students work in pairs. Have students assist each other and let them critique each other's performance.

PRESENTATION

ENABLING OBJECTIVE #2

The Firefighter I candidate shall correctly demonstrate the procedures for single-rescuer CPR on a child using a mannequin.

1. Discuss the six (6) causes of cardiac arrest in children.
2. Demonstrate the techniques for performing rescue breathing on a child.
3. Demonstrate the techniques for performing single-rescuer CPR on a child.
4. Point out that the American Heart Association (AHA) defines a child as anyone between the ages of 1-8 years old.

Reference:

J&B Fundamentals 2nd edition, pages 687, 695, 699
IFSTA Essentials 5th edition, page 1035

NOTE: There are many different types of training mannequins being used across the state. If a Recording Anne is not available for the application phase, then utilize the measuring device that comes with the training mannequin.

APPLICATION

Have each student practice assessing the ABCs and the techniques for performing single rescuer CPR on a child. Use a Recording Anne if available. Have students work in pairs. Have students assist each other and critique each other's performance.

PRESENTATION

ENABLING OBJECTIVE #3

The Firefighter I candidate shall correctly demonstrate procedures for single-rescuer CPR on an infant mannequin.

1. List procedures for assessing airway, breathing and circulation (ABC's) for an infant.
2. Discuss and demonstrate techniques for performing rescue breathing on an infant.
3. Discuss and demonstrate the techniques for performing single rescuer CPR on an infant.
4. Point out that the American Heart Association (AHA) defines an infant as anyone under the ages of 1-year-old.

Reference:

J&B Fundamentals 2nd edition, pages 687, 695, 699
IFSTA Essentials 5th edition, pages 1025-1027, 1035

APPLICATION

Have each student practice assessing the ABC's and the techniques for performing single rescuer CPR on an infant. Have students work in pairs. Have students assist each other and critique each other's performance.

PRESENTATION

ENABLING OBJECTIVE #4

The Firefighter I candidate shall correctly demonstrate the procedures for two-rescuer CPR on an adult mannequin.

1. Discuss procedures for initiating two-rescuer CPR.
2. Discuss and demonstrate procedures for the second rescuer to phase into assisting first rescuer with CPR.
3. Discuss and demonstrate procedures for allowing the two rescuers to switch positions and maintain effective CPR.

Reference:

J&B Fundamentals 2nd edition, pages 699-701
IFSTA Essentials 5th edition, pages 1032-1035

APPLICATION

Have each student practice the techniques for two-rescuer CPR. Have each student practice phasing in as the second rescuer. Have each student practice switching positions smoothly.

PRESENTATION

ENABLING OBJECTIVE #5

The Firefighter I candidate shall correctly demonstrate the procedures for managing the obstructed airway of a conscious and unconscious adult, using a student or mannequin.

1. Discuss the three most common causes of foreign body obstruction.
2. Discuss and demonstrate each step, in correct sequence, for dislodging a foreign obstruction on a conscious adult.
3. List the reasons for rescuers to use the chest thrusts rather than abdominal thrusts.
4. Discuss and demonstrate each step, in correct sequence, for dislodging a foreign obstruction on an unconscious adult.

Reference:

J&B Fundamentals 2nd edition, pages 689-690
IFSTA Essentials 5th edition, pages 1037-1040

APPLICATION

Have the students' team up in pairs and practice assessing a victim suspected of having an airway obstruction and practicing the steps and correct sequences for dislodging a foreign obstruction from a conscious and unconscious patient. Caution the students not to use full force on each other while practicing. HORSEPLAY can result in serious injury.

PRESENTATION

ENABLING OBJECTIVE #6

The Firefighter I candidate shall correctly demonstrate the procedures for dislodging a foreign object from a conscious and unconscious child, using a student or mannequin.

1. The procedures for dislodging a foreign obstruction from a child are the same as used for an adult.
2. Point out the one exception when performing abdominal thrust on an unconscious child. Only one hand should be used on pre-adolescent children.

Reference:.

J&B Fundamentals 2nd edition, pages 690-692

IFSTA Essentials 5th edition, pages 1037-1041

PRESENTATION

ENABLING OBJECTIVE #7

The Firefighter I candidate shall correctly demonstrate the procedures for dislodging a foreign object from a conscious and unconscious infant, using an infant mannequin.

1. Discuss and demonstrate the correct sequence of steps for dislodging a foreign object from an infant.

Reference:

J&B Fundamentals 2nd edition, pages 692-693

IFSTA Essentials 5th edition, pages 1040-1041

APPLICATION

Divide students into groups of 2 - 4 (depending on size of class and availability of infant mannequins). Have each student practice the correct sequence of steps for dislodging a foreign object from a conscious and unconscious infant.

PRESENTATION

ENABLING OBJECTIVE #8

The Firefighter I candidate shall correctly demonstrate the use of a bag mask resuscitator and a pocket mask using a resuscitation mannequin.

1. Discuss the advantage of using the bag mask versus mouth-to-mouth and mouth-to-pocket mask.
2. Demonstrate assembling the components a bag-mask.
3. Demonstrate the four steps of effectively operating a bag-mask.
4. Discuss the needs and advantages of using oxygen with the bag-mask.
5. Demonstrate hooking up oxygen to the bag mask.
6. Demonstrate the procedures for using a pocket-mask on a patient in respiratory or cardiac arrest.

Reference:

J&B Fundamentals 2nd edition, pages 685-686

APPLICATION

Set up a station using a Rescue Anne or other suitable mannequin. Let students practice the procedures for ventilating a mannequin with a bag-mask and a pocket-mask. Have each student practice hooking up an oxygen supply to the bag-mask.

SUMMARY

In this unit a strong emphasis has been placed on the need for firefighters to rapidly assess and intervene in situations involving cardiac arrest and airway obstructions. These skills must be mastered if the firefighter is going to have a positive impact on the survival of patients who find themselves victims of these two major medical problems. Time is always against the firefighters. The quicker the firefighter can identify the problem, and provide precise intervention measures, the better the patient's chances are for survival.

LESSON TWO

FIREFIGHTER I

Emergency Medical Care

DOMAIN: COGNITIVE / PSYCHOMOTOR

LEVEL OF LEARNING: COMPREHENSION /
APPLICATION

MATERIALS

IFSTA Essentials 5th edition or Jones and Bartlett Fundamentals of Fire Fighter Skills 2nd Edition or Delmar Firefighter's Handbook 3rd Edition; Overhead projector or laptop computer and multimedia projector; VCR/DVD and screen; disposable gloves, mask, eye protection, gowns, samples of infectious control plans from local authority having jurisdiction; OSHA 1910 and 1030.

NFPA 1001 JPR, 2008 edition

4.3 Minimum emergency medical care performance capabilities for entry-level personnel

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter I candidate shall correctly define in writing the principles of infection control, and demonstrate the procedures for protecting the firefighter from being contaminated by blood borne pathogens and body fluids.

OBJECTIVE PAGE

ENABLING OBJECTIVES

1. The Firefighter I candidate shall correctly define in writing the term Universal Precautions, and describe under what circumstances this term would apply to firefighters.
2. The Firefighter I candidate shall correctly define in writing the term Exposure, and list the precautions needed to minimize this risk to firefighters.
3. The Firefighter I candidate shall correctly demonstrate procedures for using, for decontaminating and / or disposing of contaminated personal protective equipment, resuscitation equipment, needles and sharp instruments, and other potentially infected waste products, i.e. blood or other body fluids.
4. The Firefighter I candidate shall correctly demonstrate the procedures for washing and disinfecting hands.

LESSON TWO

FIREFIGHTER I

Emergency Medical Care

MOTIVATION

In 1985, the Center for Disease Control (CDC) in Atlanta, Ga. developed a strategy for minimizing risks to health care workers who had the potential for coming in contact with communicable diseases, blood borne pathogens and body fluids. On March 6, 1992, OSHA put into effect the standard 1910.1030 which requires all employers of health care professionals to develop, implement and monitor an infection control program that would educate the employee about infectious disease control measures. The objective of the standard is to reduce the contamination risk to health care workers who are exposed to infectious diseases, blood borne pathogens and / or body fluids.

This lesson plan presents the firefighter with the information and skills necessary to safeguard against accidental contamination whenever they are faced with exposure to contagious diseases, blood borne pathogens and body fluids.

NOTE: OSHA 1910.1030 and the established local infection control plan from the local jurisdiction should be previewed and used in conjunction with material presented in this unit.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter I candidate shall correctly define in writing the term Universal Precautions, and describe under what circumstances this term would apply to firefighters.

1. Define Universal Precautions.

2. Point out the circumstances that require the firefighter to follow Universal Precautions.
 - a) Exposure to blood and all body fluids (amniotic, pericardial, peritoneal, pleural, synovial, cerebrospinal fluids, semen and vaginal secretions.)
 - b) Point out exceptions such as with HIV and HBV transmission.
3. List the common types of communicable diseases.
4. List and discuss the four ways communicable diseases may spread and discuss each one.

Reference:

Delmar Handbook 3rd edition, pages 792-796

J&B Fundamentals 2nd edition, pages 678-679

IFSTA Essentials 5th edition, pages 1004-1005, 1007-1009

APPLICATION

At random, verbally quiz the class as to the definition of Universal Precaution. Have the class identify the body fluids that would require them to follow Universal Precautions.

PRESENTATION

ENABLING OBJECTIVE #2

The Firefighter I candidate shall correctly define in writing the term Exposure, and list the precautions needed to minimize this risk to firefighters.

1. List and discuss the actions an employer can take to minimize or eliminate the risk of exposure to the employee.
 - a) Infection control plan.
 - b) Medical documentation.
2. Discuss the components of proper medical management.
 - a) Collect pertinent medical and occupational history
 - b) Provide treatment and counseling.
 - c) Decontaminate and disinfect work environment, equipment and clothing.
 - d) Proper disposal of contaminated waste.

Reference: OSHA 1910.1030.

Reference:

IFSTA Essentials 5th edition, pages 1009-1013

APPLICATION

Have a student from each represented department in the class bring a copy of their infection control plan, and have the class evaluate them in comparison to the OSHA recommendations.

PRESENTATION

ENABLING OBJECTIVE #3

The Firefighter I candidate shall correctly demonstrate procedures for using, for decontaminating and / or disposing of contaminated personal protective equipment, resuscitation equipment, needles and sharp instruments, and other potentially infected waste products, i.e. blood or other body fluids.

1. Discuss and demonstrate procedures for using, decontaminating, disinfecting and or disposal of personal protective clothing and equipment.

Reference: OSHA 1910.1030.

IFSTA Essentials 5th edition, pages 1005-1007

ENABLING OBJECTIVE #4

The Firefighter I candidate shall correctly demonstrate the procedures for washing and disinfecting hands.

1. Demonstrate the techniques for washing and disinfecting the hands after possible exposure has occurred.

Reference:

Delmar Handbook 3rd edition, pages 793-794

IFSTA Essentials 5th edition, pages 1005-1006

APPLICATION

Divide the class into small equal groups. Have them practice hand washing, disposal of needles and other sharp

instruments, proper use of gloves, mask and eye protection, disposal of blood spills and infective waste, decontaminating and laundering protective clothing. Monitor each group's techniques to insure correct compliance with the local infection control program.

SUMMARY

Review the sections of OSHA 1910.1030 that are addressed in this lesson plan.

Compare the Infection Control Plan used by the authority having jurisdiction to OSHA 1910.1030 to insure compliance.

Review and discuss the definition of Universal Precautions.

Review the components of an effective Infection Control Plan.

Review decontamination procedures for personnel and equipment.

LESSON THREE

FIREFIGHTER I

Emergency Medical Care

DOMAIN: PSYCHOMOTOR

LEVEL OF LEARNING: APPLICATION

MATERIALS

IFSTA Essentials 5th edition or Jones and Bartlett Fundamentals of Fire Fighter Skills 2nd Edition or Delmar Firefighter's Handbook 3rd Edition; Trauma dressings (4x4s, 8x10s); bandaging material, tape, and scissors; screen, overhead projector or laptop computer and multimedia projector; TV, VCR/DVD; oxygen set-up.

NFPA 1001 JPR, 2008 edition

4.3 Minimum emergency medical care performance capabilities for entry-level personnel

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter I candidate shall demonstrate the correct procedures for conducting a primary survey, identify the characteristics of three types of external bleeding, correctly demonstrate three procedures for controlling external bleeding, identify general signs and symptoms of shock and demonstrate the correct treatment for shock.

OBJECTIVE PAGE

ENABLING OBJECTIVES

1. The Firefighter I candidate shall correctly demonstrate the steps, in sequence for conducting a primary survey and secondary survey.
2. The Firefighter I candidate shall identify, in writing, the three types of external bleeding and the characteristics of each type.
3. The Firefighter I candidate shall correctly demonstrate three procedures for controlling external bleeding.
4. The Fire fighter I candidate shall correctly identify in writing the general signs and symptoms of shock as they relate to a patient who has sustained injuries resulting from trauma.
5. The Firefighter I candidate when given a trauma scenario shall correctly demonstrate the procedures for treating a patient with suspected shock, including using the appropriate oxygen therapy.

LESSON THREE

FIREFIGHTER I

Emergency Medical Care

MOTIVATION

In order for a firefighter to provide optimum medical care to fellow firefighters or the general public, the firefighter must be well versed in assessing and recognizing potential life threatening problems. By following the simple guidelines presented in this unit, the firefighter will be better prepared to make a rapid and thorough assessment of potentially life threatening problems and quickly begin stabilizing the patient until advanced medical assistance arrives.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter I candidate shall correctly demonstrate the steps, in sequence for conducting a primary survey and secondary survey.

1. List the procedures for documenting a patient's medical history.
2. List and describe the eight general points for assessing children.
3. Discuss the importance of quickly evaluating the three components of a primary survey.
 - a) Airway.
 - b) Breathing.
 - c) Circulation.
4. Discuss the importance of using the senses, sight, sound, smell, and touch, when evaluating a patient.

5. Demonstrate the basic steps for conducting a primary survey.
6. List and discuss the four pieces of information that make up a medical history.
7. List the procedures for obtaining a complete medical history.

Reference:

Delmar Handbook 3rd edition, pages 796-803

IFSTA Essentials 5th edition, pages 1025-1027

APPLICATION

Select two students from the group. Have one student be the patient, and have the other conduct a primary survey. Have class critique the exercise.

Divide the class into groups of four. Give each group two cards with mock problems, one medical and one trauma. Have each group list what type of medical history they would obtain that would be relative to the patient's injury or illness. Have each group leader present the information to the class.

PRESENTATION

ENABLING OBJECTIVE #2

The Firefighter I candidate shall correctly identify in writing three types of external bleeding and the characteristics of each type.

1. Provide a brief overview of the skin and its function.
2. Discuss the complications of blood loss in adults and children.
3. Identify and discuss the three types of bleeding and the characteristics of each type.
4. Identify the three major types of blood vessels and describe the characteristics of each.

Reference:

Delmar Handbook 3rd edition, pages 805-809

J&B Fundamentals 2nd edition, pages 693 & 708
IFSTA Essentials 5th edition, pages 1041-1050

PRESENTATION

ENABLING OBJECTIVE #3

The Firefighter I candidate shall correctly demonstrate three procedures for controlling external bleeding.

1. Discuss and demonstrate the three most common ways to control external bleeding.
2. List and describe the nine pressure points.
3. Display and discuss the warning disclaimers regarding the use of a tourniquet.
4. Discuss the dangers of using a tourniquet.
5. Demonstrate the proper techniques for dressing and bandaging a head wound, forearm wound, hand wound and an impaled object.
6. Stress the importance of maintaining a clean non-contaminated area around the wound.
7. Remind students to follow local protocol for preventing rescuers from being contaminated by blood and body fluids.

Reference:

Delmar Handbook 3rd edition, pages 808-809
J&B Fundamentals 2nd edition, pages 708-710
IFSTA Essentials 5th edition, pages 1043-1046

APPLICATION

Set up several workstations allowing the students to practice dressing and bandaging different types of wounds located at various points on the body.

PRESENTATION

ENABLING OBJECTIVE #4

The Firefighter I candidate shall correctly identify in writing the general signs and symptoms of shock as they relate to a patient suffering from trauma injuries.

1. Define Shock.
2. List the most common signs and symptoms of shock.
3. List the different types of shocks, and discuss the signs, symptoms and treatment of each.

Reference:

Delmar Handbook 3rd edition, pages 810-811

J&B Fundamentals 2nd edition, pages 705-708

IFSTA Essentials 5th edition, pages 1050 – 1053

APPLICATION

Divide the class into small equal groups. Give each group two scenarios describing signs and symptoms of various types of shock. Have each group identify what type of shock the scenario cards represent.

PRESENTATION

ENABLING OBJECTIVE #5

The Firefighter I candidate when given a trauma scenario shall correctly demonstrate the procedures for treating a patient with suspected shock, including using the appropriate oxygen therapy.

1. Discuss the procedures for treating shock.
2. Point out the reasons for using oxygen therapy.
3. Demonstrate the use of an oxygen cylinder and regulator.
 - a) Crack open tank valve with tank wrench.
 - b) Attaching the regulator to the oxygen cylinder.
 - c) Open the tank gauge.
 - d) Check the PSI reading on the regulator.
 - e) Attaching the oxygen tubing to the regulator.
 - f) Smell oxygen before applying to patient.

Reference:

Delmar Handbook 3rd edition, pages 810-811

J&B Fundamentals 2nd edition, pages 706-708
IFSTA Essentials 5th edition, pages 1052-1053

APPLICATION

Set up several oxygen therapy stations and give each firefighter a scenario that requires the use of oxygen. Have each firefighter assemble the oxygen cylinder and select the appropriate mask and liter flow appropriate for the assigned scenario.

SUMMARY

This Lesson Plan stresses the importance of quickly identifying different types of bleeding, and the procedures for controlling and bandaging various wounds. The principles of oxygen therapy, as they relate to trauma, have also been covered.

Review the steps of conducting a primary survey and reinforce the importance of performing the steps in the correct sequence.

Review and discuss the general procedures for assessing children.

Review the importance of obtaining an accurate medical history of the patient and review the information needed for a thorough medical history.

Review the procedures for controlling external bleeding.

Review the dangers of using a tourniquet and the criteria for applying one to a patient.

Review the definition and treatment of shock.

Review the steps for safely administering oxygen to a patient.

LESSON FOUR

FIREFIGHTER I

Emergency Medical Care

DOMAIN: COGNITIVE

LEVEL OF LEARNING: COMPREHENSION

MATERIALS

IFSTA Essentials 5th edition or Jones and Bartlett Fundamentals of Fire Fighter Skills 2nd Edition or Delmar Firefighter's Handbook 3rd Edition; overhead projector or laptop computer and multimedia projector; projection screen; eye flushing kit or access to water faucet; 4x4 gauze pads;; VCR/DVD and TV; copy of current edition of NC Fire and Rescue Commission's Annual Fire Incident Report.

NFPA 1001 JPR, 2008 edition

4.3 Minimum emergency medical care performance capabilities for entry-level personnel

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter I candidate shall correctly identify the characteristics and appropriate medical care for injuries resulting from thermal and chemical burns.

ENABLING OBJECTIVES

1. The Firefighter I candidate shall correctly identify in writing the four types of thermal burns, the systems of classifying the severity of the burn, and shall correctly explain the treatment associated with each type.
2. The Firefighter I candidate shall correctly identify in writing the treatment for injuries resulting from chemical burns, including involvement of the eye.

LESSON FOUR

FIREFIGHTER I

Emergency Medical Care

MOTIVATION

This unit deals with a common hazard that every firefighter faces when responding to structural fires, chemical fires and spills. Burn related injuries could have disastrous physical and psychological effects. The firefighter must be well versed in treating all types of burns in order to prevent further damage to the patient.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter I candidate shall correctly identify in writing the four types of thermal burns, the systems of classifying the severity of the burn, and shall correctly explain the treatment associated with each type.

1. Begin class by sharing statistical information regarding thermal and chemical injuries that have occurred in N.C., as recorded in the N.C. Fire / Rescue Commission's annual Fire Incident Report.
2. List the four types of thermal burns.
3. Examine the causes of thermal and chemical burns.
4. Discuss the three classifications of thermal burns and point out the characteristics of each.
5. Discuss with class how the severity of thermal burns is gauged.
6. Explain the Rule of Nines chart. Demonstrate, using the chart, how percentages of burns are calculated.

7. Discuss the primary objectives for treating thermal burns.
8. Discuss the principles of history taking for burn patients.
9. Point out the complications of thermal burns with regards to inhalation.
10. Review procedures and precautions for assessing and treating all types of electrical burns.
11. Discuss the effects that fire gases have on firefighters and patients.
 - a) Carbon monoxide.
 - b) Carbon dioxide.
 - c) Hydrogen chloride.
 - d) Hydrogen cyanide.
 - e) Formaldehyde / acetaldehyde.
 - f) Acrolein.
12. Discuss treatment protocols for specific classifications of burns.
 - a) 1st degree.
 - b) 2nd. degree.
 - c) 3rd. degree.

Reference:

Delmar Handbook 3rd edition, pages 813-814

J&B Fundamentals 2nd edition, pages 7, 14, 47-48, 716

IFSTA Essentials 5th edition, pages 182-187

NOTE: If local treatment protocol is different or more detailed than what is outlined in this unit, then follow local protocol for treating thermal and chemical burns.

PRESENTATION

ENABLING OBJECTIVE #2

The Firefighter I candidate shall correctly identify in writing the treatment for injuries resulting from chemical burns, including involvement of the eyes.

1. Discuss the general treatment procedures for chemical burns.
2. Advise students to take appropriate precautions so as not to expose themselves to the chemical.
3. Discuss treatment procedures for chemicals that are not water-soluble.
 - a) Dry lime.
 - b) Phenol.
 - c) Sodium metals / sulfuric acid.
4. Demonstrate procedures for flushing eyes that have been exposed to chemicals.

Reference:

Delmar Handbook 3rd edition, pages 814

APPLICATION

Divide the class into three or four groups. Give each group an eye flush kit and have them practice flushing simulated chemicals from the eyes

SUMMARY

This Lesson Plan deals with a common hazard that every firefighter faces when responding to structural fires, chemical fires, and spills. Burn related injuries can have disastrous physical and psychological effects.

Review the four types of thermal burns.

Review the chart displaying the "Rule of Nines".

Review the treatment protocol for the three classifications of burns.

Review the effects of fire gases on exposed humans.

Review the treatment protocols for victims who have come in contact with water-soluble and non-water soluble chemicals.

LESSON FIVE

FIREFIGHTER I

Emergency Medical Care

DOMAIN: COGNITIVE

LEVEL OF LEARNING: COMPREHENSION

MATERIALS

IFSTA Essentials 5th edition or Jones and Bartlett Fundamentals of Fire Fighter Skills 2nd Edition or Delmar Firefighter's Handbook 3rd Edition; Overhead projector or laptop computer and multimedia projector; projection screen; VCR/DVD, TV; drug abuse handouts and activated charcoal.

NFPA 1001 JPR, 2008 edition

4.3 Minimum emergency medical care performance capabilities for entry-level personnel

Junior Member Statement:

Junior Member training activities should be supervised by qualified instructors to assure that the cognitive and psychomotor skills are completed in a safe and non-evasive manner. While it is critical that instructors be constantly aware of the capabilities of all students both mentally and physically to complete certain tasks safely and successfully, the instructor should take every opportunity to discuss with departmental leaders and students the maturity and job awareness each participant has for the hazards associated with fire and rescue training.

TERMINAL OBJECTIVE

The Firefighter I candidate shall correctly identify the signs and symptoms of ingested poisons and drug abuse; the procedure for contacting the local poison control center; and

correctly demonstrate the treatment procedures for poisoning and drug overdose.

ENABLING OBJECTIVES

1. The Firefighter I candidate shall correctly identify in writing the signs and symptoms of ingesting poison and drug overdoses; and correctly demonstrate procedures for contacting the local Poison Control Center.
2. Given a simulated ingested poisoning scenario, the Firefighter I candidate shall correctly demonstrate the procedures for providing emergency medical care using a student or mannequin.

LESSON FIVE

FIREFIGHTER I

Emergency Medical Care

MOTIVATION

Substance abuse, intentional or accidental, is common in today's society. Intentional poisoning most commonly affects the adolescent and adult population. Accidental poisoning affects, the pre-adolescent and pre-school population. Poisoning can often lead to tragic results. The firefighter should have a good working knowledge of this type of emergency in order to rapidly and properly intervene.

PRESENTATION

ENABLING OBJECTIVE #1

The Firefighter I candidate shall correctly identify in writing the signs and symptoms of ingesting poison and drug overdoses; and correctly demonstrate procedures for contacting the local Poison Control Center.

1. Discuss the complications of drug overdoses.
 - a) Combination drug ingestion (mixed bag.)
 - b) Inability to identify substance.
2. Discuss procedures for gathering information.
 - a) What?
 - b) When?
 - c) How much?
 - d) Single or combination drugs.
3. Discuss the various drugs listed in the IFSTA First Responder manual.

4. Discuss the possible symptoms of ingested poisoning.
5. List the steps to be taken when assessing someone who is suspected of ingesting a poison.
 - a) Locate and transport container(s) with the patient.
 - b) Attempt to find out what, when and how much has been ingested.
 - c) If patient has vomited, take a sample of digested materials to the hospital.

Reference:

Delmar Handbook 3rd edition, pages 814-815

PRESENTATION

ENABLING OBJECTIVE # 2

Given a simulated ingested poisoning scenario, the Firefighter I candidate shall correctly demonstrate the procedures for providing emergency medical care using a student or mannequin.

1. Discuss the emergency treatments for poison ingestion.
 - a) Treatment procedures requiring inducement of vomiting.
 - b) Procedures for using syrup of Ipecac.
 - c) Procedures for neutralizing an ingested poison
 - d) Make contact with the Poison Control Center

NOTE: Since the publishing of the IFSTA First Responder manual, newer manuals such as the Emergency Medical Care for First Responders published by Brady Publishers, do not list Syrup of Ipecac as a treatment for ingested poisoning. The use of activated charcoal has become the #1 treatment of choice. Please follow your medical control SOG regarding this issue.

2. Discuss the warning disclaimer regarding giving a patient fluids or medications by mouth.
3. Discuss when not to induce vomiting.
4. Discuss the causes of food poisoning.

5. List of the most common foods susceptible to contamination.
6. Discuss the signs, symptoms and basic emergency care for food poisoning.
7. Point out the purpose of contacting a Poison Control Center.
8. Go over the protocols established for contacting the Poison Control Center in your region.

Reference:

Delmar Handbook 3rd edition, pages 814-815

NOTE: North Carolina Poison Control Center, Duke University Hospital, Durham, N.C., 1-800-672 1697 can be an excellent resource to a local hospital or emergency responders regarding identification treatment of all types of poisons.

APPLICATION

Set up a field trip to the local Poison Control Center, or assign each student one of the drugs listed on the handout and have them prepare a detailed report on the drug. Have them include physical and psychological effects, withdrawal symptoms and emergency treatment procedures.

SUMMARY

This unit has concentrated on training the Firefighter I candidate to recognize and treat various types of poisonings and drug overdoses. Stress the need for contacting the appropriate agency when confronted with complicated drug and poison problems.