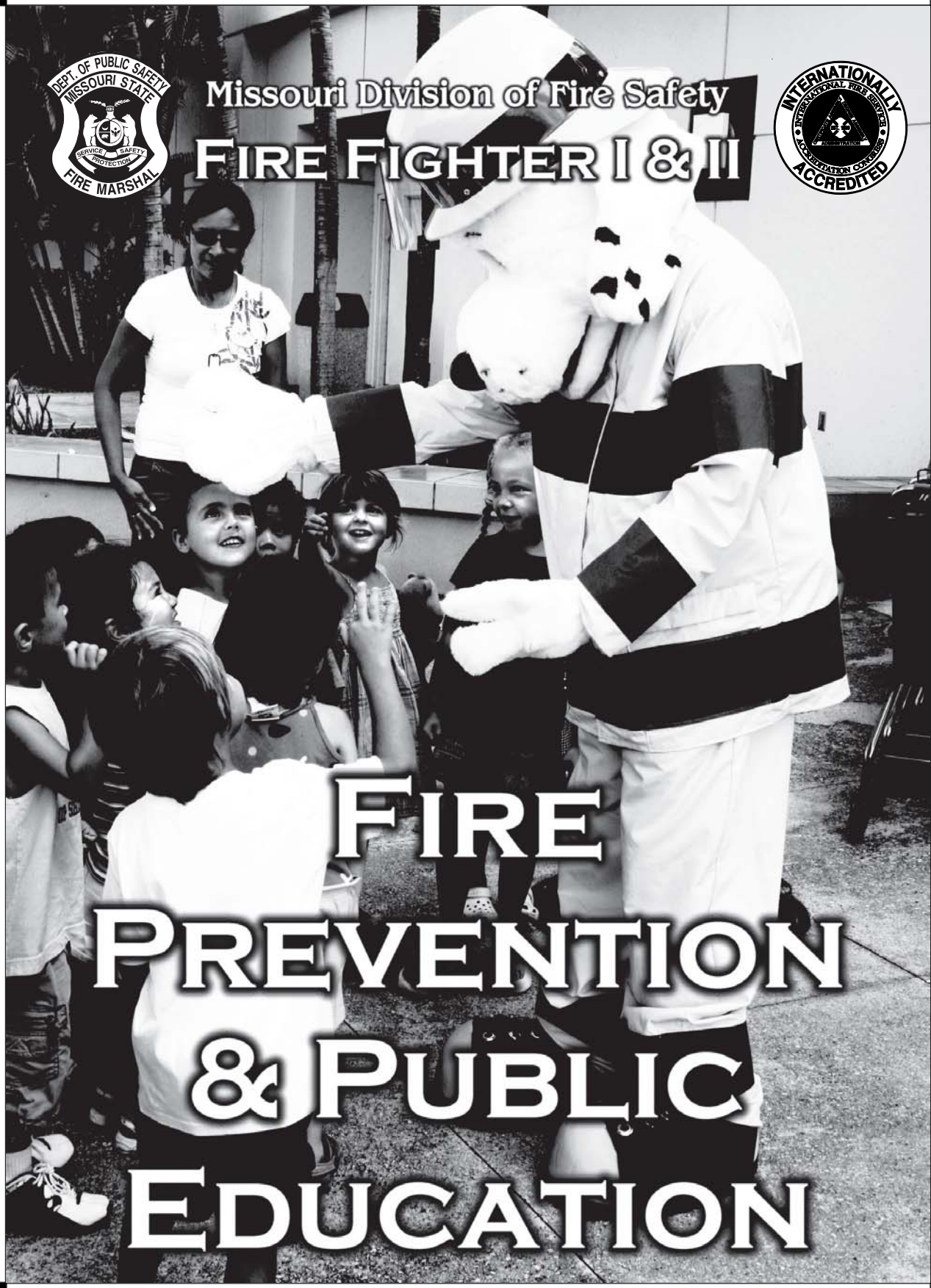




Missouri Division of Fire Safety
FIRE FIGHTER I & II



**FIRE
PREVENTION
& PUBLIC
EDUCATION**



UNIT OBJECTIVES

Upon completion of this unit of study, the student should be able to:

1. Define the importance of inspection and public fire education programs to public relations and the community.
2. Define the types of fire hazards.
3. Describe the purposes and procedures for preincident surveys.
4. Conduct a building survey and prepare a written report.
5. Describe the purposes and procedures for home fire safety surveys.
6. Demonstrate inspection procedures for private dwellings.
7. Describe the methods for presenting a prepared fire education program.
8. Present a prepared fire education program to an identified audience, given a lesson plan, time allotment, and instructional materials.



NFPA STANDARDS

Successful completion of the information in this section is necessary to fulfill the requirements of the following sections of NFPA 1001-2008:

Fire Fighter II Standard

6.5.1 Perform a fire safety survey in a private dwelling, given survey forms and procedures, so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

(A) Requisite Knowledge. Organizational policy and procedures, common causes of fire and their prevention, the importance of a fire safety survey and public fire education programs to fire department public relations and the community, and referral procedures.

(B) Requisite Skills. The ability to complete forms, recognize hazards, match findings to preapproved recommendations, and effectively communicate findings to occupants or referrals.

6.5.2* Present fire safety information to station visitors or small groups, given prepared materials, so that all information is presented, the information is accurate, and questions are answered or referred.

(A) Requisite Knowledge. Parts of informational materials and how to use them, basic presentation skills, and departmental standard operating procedures for giving fire station tours.

(B) Requisite Skills. The ability to document presentations and to use prepared materials.

6.5.3* Prepare a preincident survey, given forms, necessary tools, and an assignment, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

(A) Requisite Knowledge. The sources of water supply for fire protection; the fundamentals of fire suppression and detection systems; common symbols used in diagramming construction features, utilities, hazards, and fire protection systems; departmental requirements for a preincident survey and form completion; and the importance of accurate diagrams.

(B) Requisite Skills. The ability to identify the components of fire suppression and detection systems; sketch the site, buildings, and special features; detect hazards and special considerations to include in the preincident sketch; and complete all related departmental forms.



NOTES	STUDENT GUIDE
	<p>I. Fire Prevention and Public Education</p> <p>A. A fire department's educational activities must be designed to increase public awareness of fire and life safety problems and to promote the removal of those problems and hazards</p> <p>B. These education efforts can include:</p> <ol style="list-style-type: none">1. Conducting public presentations2. Distributing safety information3. Providing public service announcements4. Posting informational displays5. Performing fire safety surveys6. Providing fire station tours <p>C. Fire fighters and fire inspectors contact property owners and occupants in non-emergencies when conducting surveys and inspections (<i>Essentials, p. 961</i>)</p> <ol style="list-style-type: none">1.<ol style="list-style-type: none">a. Also made for fire department familiarization purposes and fire hazard recognition<ol style="list-style-type: none">(1) Contents(2) Manufacturing processes(3) Building layouts(4) Occupant loads



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">(5) Fire protection systemsb. Fire fighters can identify construction techniques and important building features if surveys are conducted while buildings are under construction <p>2. Fire inspections involve the search for fire hazards and the necessary enforcement of fire and life safety regulations to remove these hazards</p> <ul style="list-style-type: none">a. Usually conducted by fire inspectors specially trained in inspection and code enforcement proceduresb. Fire company personnel usually enforce only common code requirements such as:<ul style="list-style-type: none">(1)(2) Fire extinguisher accessibility(3)(4) Egress obstructionsc. When company personnel find a more serious code violation, they should pass that information on to the fire prevention bureau <p>D. Code enforcement inspections are conducted in commercial, institutional, and industrial occupancies to help ensure public safety</p> <ul style="list-style-type: none">1. In many jurisdictions, these inspections are conducted by trained fire inspectors



NOTES	STUDENT GUIDE
	<p>2. In other jurisdictions, fire company personnel may be assigned to inspect ordinary mercantile and light industrial occupancies</p> <p>II. Fire Hazards (<i>Essentials, p. 962</i>)</p> <p>A. _____: a condition which will encourage a fire to start or will increase the extent or severity of a fire</p> <ol style="list-style-type: none">1. Fuel supply hazards can usually be managed by controlling the fuel's arrangement<ol style="list-style-type: none">a.b.c. Flammable and combustible gasesd. Chemicals, such as nitrates, oxides, and chloratese. Dusts, such as grain, wood, metal, or coalf. Combustible metals, such as magnesium, sodium, or potassiumg. Plastics and resins2. _____: the most manageable type of hazards<ol style="list-style-type: none">a. Chemical heat energy from improperly stored materials or chemical reactions when materials contact each otherb. Electrical heat energy from poorly maintained appliances, exposed wiring, and lighting

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NOTES	STUDENT GUIDE
	<ul style="list-style-type: none"><ul style="list-style-type: none">c. Mechanical heat energy from moving parts on machinery such as belts and bearings3. _____: difficult to control except in cases where oxygen exclusion can be implemented for certain materialsB.<ul style="list-style-type: none">1. Conditions which can occur in almost all occupancies and can encourage fires to start2. Poor housekeeping and improper storage of materials<ul style="list-style-type: none">a. Increases fire loadsb. Increases possibility of flammable or combustible materials contacting an ignition sourcec. Hides other fire hazards3. Defective or improper use of heating, lighting, or power equipment: provides ignition sources4. Improper use of flammable and combustible liquids5. Personal hazards<ul style="list-style-type: none">a.b. Probably the most serious of all occupancy hazards because it is difficult to defend againstc. Can be reduced by public awareness, fire and life safety education, and good safety practices



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">d. Smoking in bed is an example of a personal hazard <p>C. Special hazards</p> <ul style="list-style-type: none">1.<ul style="list-style-type: none">2. Commercial occupancies<ul style="list-style-type: none">a. Lack of fire protection systems or equipmentb.c. Mixed types of contentsd. Access problems to arease. Common attics, cocklofts, and other voidsf. Illegal building additionsg. Illegal storageh. Fire department connection obstructedi. Storage obstructing sprinklers3.<ul style="list-style-type: none">a.b. Flammable liquid storage, handling, and usec. High piled storage of combustibles

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NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">d. Large, open arease. Lack of fire protection systemsf. Large amounts of flammable and combustible gases in useg. Use of vehicles inside buildings <p>4.</p> <ul style="list-style-type: none">a. Lack of fire protection systemsb.c. Locked or blocked exitsd. Materials stored in paths of egresse. Combustible interior finishesf. Inadequate or inoperative fire extinguishersg. Inadequate or inoperative exit lighting <p>D. _____: a condition, facility, or process which could produce or stimulate a fire that would involve a possible large life or property loss</p> <ul style="list-style-type: none">1. Lumberyards2. Bulk oil storage facilities3. Shopping centers4. Hospitals5. Theaters



NOTES	STUDENT GUIDE
	<ol style="list-style-type: none">6. Nursing homes7. Schools8. Apartment complexes9. Large public assemblies <p>III. Fire Inspections (<i>Essentials, p. 966</i>)</p> <p>A. Fire fighters conducting code enforcement inspections must be:</p> <ol style="list-style-type: none">1. Able to clearly communicate with property owners and occupants2. Technically competent to convey accurate information during inspections3.4. Able to refer citizens to additional sources of information <p>B. Special equipment may be needed to conduct inspections in some occupancies</p> <ol style="list-style-type: none">1. Reference materials, such as code books and technical information about an occupancy2. Writing and drawing equipment for documentation3. Flashlight, measuring tape, camera <p>C. Many departments schedule fire inspections for specific days and times</p> <ol style="list-style-type: none">1.



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">2. In some departments, the building owner or occupants are contacted in advance to schedule a time for an inspection<ul style="list-style-type: none">a. Helps to ensure that the owner or occupant will be present during the inspectionb. Allows for inspections to be conducted when least disruptive to business operations3. Other departments may conduct inspections in a systematic, block-by-block fashion<ul style="list-style-type: none">a. Works well with mercantile occupanciesb. Less effective with large complexesD. Department procedures should specify how inspections are to be conducted<ul style="list-style-type: none">1. All personnel must remember to give a good impression to help with a positive public image for the department2. After arrival at the occupancy, the company officer should contact the individual with whom the inspection was scheduled and explain the process3. The occupant or a representative should accompany the inspection team during the inspection<ul style="list-style-type: none">a.b. To answer any questionsc.

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NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">4. If an area is locked, the team should ask for it to be unlocked<ul style="list-style-type: none">a. The officer should explain why it is necessary to see these areasb. If access continues to be denied, the circumstances should be documented and referred to the department's fire prevention bureau5.<ul style="list-style-type: none">a. Any hazardsb. General housekeepingc.d. Location of fire department connectionse. Building name and addressf. Water supply/hydrant locations6. On the interior, the team should look for:<ul style="list-style-type: none">a. Cleanliness and maintenanceb. Portable extinguishersc.d. Exit signs and emergency lightinge.f. Proper control for ignition sources



NOTES	STUDENT GUIDE
	<p>7. Any hazards that are immediately dangerous to life safety, such as blocked exits, must be corrected immediately before the inspection team leaves the occupancy</p> <p>8. Following the inspection:</p> <ul style="list-style-type: none">a. Each violation should be explained to the person accompanying the inspection teamb. <p>IV. Fire Safety Surveys (<i>Essentials, p. 970</i>)</p> <p>A. Help fire fighters become familiar with the occupancies within a community and recognize safety hazards</p> <ul style="list-style-type: none">1. Preincident planning surveys in public occupancies to collect information2. Residential fire safety surveys to provide fire safety information and identify potential hazards to occupants <p>B. Preincident survey objectives:</p> <ul style="list-style-type: none">1.2. Familiarize fire fighters with the property3. Obtain proper life safety procedures4.5. Adequacy and maintenance of fire protection equipment



NOTES	STUDENT GUIDE
	<ol style="list-style-type: none">6. Help owner understand and improve conditions7. Assemble facts about the building, contents, and exposures <p>C. Personal requirements for fire fighters during preincident surveys</p> <ol style="list-style-type: none">1. During any fire prevention activity, fire fighters should be well-groomed with a neat appearance2. Uniforms should be clean and in good condition3. Fire fighters involved public fire prevention activities must be capable of clearly communicating while dealing with the public4. <p>D. Conducting the survey</p> <ol style="list-style-type: none">1. The same basic procedures as in a fire inspection are followed during a preincident survey2. The fire officer should introduce the crew making the survey and explain their purpose3. A representative of the occupant should always accompany fire personnel during the survey4. Personnel should check outside of building and note:<ol style="list-style-type: none">a. Visibility of address numbersb. Access to building for suppression forcesc. Exposures



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">d. Hydrants and water supplye. Terrain around buildingf. Sprinkler or standpipe connectionsg. Utility shutoff locations <p>5. Checking the interior</p> <ul style="list-style-type: none">a.<ul style="list-style-type: none">(1) Start at the roof and work downward(2) Start in the basement and work upwardb. Take notes and make sketchesc. Detailed notes, sketches and photographs provide dependable information for a complete preincident plan <p>6. If floor plan drawings are not available, fire fighters will have to create them</p> <ul style="list-style-type: none">a. Types of sketches<ul style="list-style-type: none">(1) Floor plan -(2) Plot plan -(3) Elevation sketch - shows cross section or cutaway view of buildingb. Large occupancies may already have prepared maps or floor plans



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">c. If one is unavailable, personnel should make a plot plan, showing:<ul style="list-style-type: none">(1) The property arrangement in relation to streets and access routes(2) Potential exposures(3) Exterior special hazards(4) Sprinkler or standpipe fire department connections(5) Hydrants or water supply locationsd. A floor plan sketch should be made showing:<ul style="list-style-type: none">(1) The general layout of each floor(2) The locations of special hazards(3) Utility control locations(4) Fire protection and control devices(5) Locations of stairways and elevators(6) Potential life hazard to occupants(7) Locations of hazardous materials(8) Location of fire doors, fire walls, and HVAC fire control systemse. The use of standard plan symbols can make the sketch more understandable to others



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">7. If the owner or occupant allows, photographs can be extremely helpful in developing preincident plansE. Residential fire safety surveys<ul style="list-style-type: none">1.<ul style="list-style-type: none">a. A mandatory fire inspection cannot be conducted in a private residence once it is occupiedb. Planning and publicity for a residential fire safety survey program is important to gain community acceptancec. Home surveys are conducted for fire prevention not code enforcementd. Surveys help to increase fire awareness and interest in public fire safety education programs2. Goals<ul style="list-style-type: none">a.b. To stop accidental fires from startingc.d. Prevent injuries and deaths3. Fire fighters' responsibilities in dwelling inspections:<ul style="list-style-type: none">a. Conduct surveys in teams of twob.



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">c. Always maintain a professional appearanced.e. Remember the primary interest is to prevent firesf. Compliment on favorable conditionsg. Make constructive comments to eliminate hazardous conditionsh.i. Thank owner or occupant for cooperation <p>4. Interior survey observations</p> <ul style="list-style-type: none">a.b. Proper operation and conditions of appliancesc. Check properly maintained electrical wiring and equipmentd.e. Note if solid-fuel burning equipment is correctly installed and clear of combustiblesf. General housekeeping practices<ul style="list-style-type: none">(1) Smoking materials(2) Candles in safe locations(3) Clean dryer vents

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NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">g.h. Note proper clearance to gas appliancesi. Check heating equipment for:<ul style="list-style-type: none">(1) Proper installation(2) Clearance to combustibles(3) Condition of vents and fluesj. Note areas of accumulated waste, such as stacks of paper, old rags, discarded furniturek. Recommend that flammable liquids:<ul style="list-style-type: none">(1) Be stored in safety-type containers(2) Never be brought into a dwelling(3) Never be used for cleaning purposes5. Exterior surveys<ul style="list-style-type: none">a. Check the condition of chimneys and spark arrestorsb. Discourage the use of outside trash burnersc.d. Check for adequate distance between a barbeque and combustible surfacese. Is fuel stored properly



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">f. Check for proper storage of dangerous chemicals, such as gasoline, swimming pool chlorine, pesticide, and propaneg. Look for dry combustibles, such as firewood, stored too close to a structure <p>6. Following the survey, fire fighters should provide fire and life safety information to the occupants and thank them for their cooperation</p> <p>V. Public Fire and Life Safety Education (<i>Essentials, p. 982</i>)</p> <p>A. Public fire and life safety education is key to reducing deaths and injuries</p> <ul style="list-style-type: none">1. Any fire fighter may be assigned or asked to give a fire safety presentation to a group2. By educating the public, they can apply the knowledge to save themselves and their families <p>B. Some general considerations apply to all public safety presentations and should be followed by all personnel</p> <ul style="list-style-type: none">1.<ul style="list-style-type: none">a. The results of delivering incorrect information can be deadlyb. Sources to help verify the accuracy of fire safety presentations<ul style="list-style-type: none">(1) U.S. Fire Administration, www.usfa.dhs.gov



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">(2) NIST, Building and Fire Research Laboratory, www.fire.nist.gov(3) Home Safety Council, www.homesafetycouncil.org(4) Safe Kids, www.usa.safekids.org(5) American Red Cross, www.redcross.org(6) U.S. Consumer Products Safety Commission, www.cpsc.gov(7) National Fire Protection Association, www.nfpa.org(8) Ready America, www.ready.gov <ol style="list-style-type: none">2. Positive information should be presented to be effective<ol style="list-style-type: none">a.b. In an emergency, people will remember correct behaviors that were taught clearlyc. Positive message: "crawl low under smoke"d. Negative message: "do not stand up in smoke"3. The safety message must be targeted to the audience and based on:<ol style="list-style-type: none">a. Their age and attention spanb. The time of the year and season



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">c. A recent incident in the community4. A single presentation will not work for all age or ethnic groupsC. Fire and life safety presentations for adults<ul style="list-style-type: none">1. Adults may be more receptive to making changes in their homes and behavior when:<ul style="list-style-type: none">a. Move into a new homeb. Have a new family memberc. A tragedy has struck close to home2. All presentations should follow the basic four-step method of instruction<ul style="list-style-type: none">a.<ul style="list-style-type: none">(1) Learning the message to be delivered(2) Practicing the presentation(3) Knowing the audience(4) Preparing the audience to learn or motivating them is the first step in making a presentation(5) Explaining why the information is important to them(6) Arousing the audience's curiosity, developing their interest and a sense of personal involvement



NOTES	STUDENT GUIDE
	<p data-bbox="711 411 740 443">b.</p> <ol data-bbox="761 562 1349 1245" style="list-style-type: none"><li data-bbox="761 562 1349 632">(1) Explain the necessary information to the audience<li data-bbox="761 674 1349 940">(2) Use visual aids<ol data-bbox="808 751 1219 940" style="list-style-type: none"><li data-bbox="808 751 1062 783">(a) Smoke detector<li data-bbox="808 825 1219 856">(b) Telephone for dialing 9-1-1<li data-bbox="808 898 1154 930">(c) Fire alarm pull station<li data-bbox="761 982 1349 1245">(3) Use demonstration techniques<ol data-bbox="808 1060 1276 1245" style="list-style-type: none"><li data-bbox="808 1060 1117 1092">(a) Stop, drop, and roll<li data-bbox="808 1134 1166 1165">(b) Crawling low in smoke<li data-bbox="808 1207 1276 1239">(c) Alerting others to an emergency <p data-bbox="711 1293 740 1325">c.</p> <ol data-bbox="761 1482 1369 1776" style="list-style-type: none"><li data-bbox="761 1482 1227 1514">(1) Can be the most important step<li data-bbox="761 1556 1325 1625">(2) Participants might demonstrate how to report a fire or test a smoke detector<li data-bbox="761 1667 1369 1776">(3) By practicing what they have been taught, people are more likely to retain the information



NOTES	STUDENT GUIDE
	<p>d.</p> <p>(1) Evaluation can measure educational gain - what did the students learn</p> <p>(2) Fire fighters are part of the team which collects and reports this information but are usually responsible for designing the evaluation step</p> <p>D. Fire and life safety presentations for young children</p> <p>1. Young children are at more risk for fire deaths and burn injuries than other age groups</p> <p>2. When addressing young children, fire fighters should remember:</p> <p>a.</p> <p>b. Sarcasm and teasing are not appropriate</p> <p>c.</p> <p>d. Children may lose attention or bring up other topics, so a presenter should be flexible</p> <p>e. If doing a classroom presentation, the teacher should be consulted on how to handle questions</p> <p>f.</p> <p>g. A misbehaving child should be asked for help for redirection</p>



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none"><li data-bbox="711 411 737 443">h.<ul style="list-style-type: none"><li data-bbox="761 485 1248 516">(1) Frightened children cannot learn<li data-bbox="761 562 1373 632">(2) Stories about home fires and burn injuries should not be used<li data-bbox="711 678 1349 747">i. Children can be frightened by fire fighters in protective clothing and breathing apparatus<ul style="list-style-type: none"><li data-bbox="761 793 1373 825">(1) It helps if children watch as gear is put on<li data-bbox="761 871 1398 940">(2) Only clean gear must be used so not to expose children to contamination from fires<li data-bbox="711 987 1336 1089">j. Children learn better by doing, rather than listening - have them demonstrate what they have learned<li data-bbox="711 1136 737 1167">k.<ul style="list-style-type: none"><li data-bbox="761 1251 1378 1320">(1) Telling children what to do is less confusing than what not to do<li data-bbox="761 1367 1403 1509">(2) Complex message: "If there is smoke, crawl low under the smoke. If the exit blocked, use your second exit. Do not ever go back in."<li data-bbox="761 1556 1328 1587">(3) Basic message: "Get out and stay out." <p data-bbox="618 1633 1065 1665">E. Fire safety presentation topics</p> <ul style="list-style-type: none"><li data-bbox="667 1711 693 1743">1.<ul style="list-style-type: none"><li data-bbox="711 1789 1378 1858">a. Demonstrate what should be done if someone's clothes catch fire



NOTES	STUDENT GUIDE
	<ul style="list-style-type: none">(1) Immediately stop moving(2) Drop to the ground and cover the face with the hands(3) Roll over and over until the flames are smotheredb. Explain that someone else may need to assist a person in dropping to the ground and smothering the flames <p>2</p> <ul style="list-style-type: none">a.b. Fire safety procedures for the home<ul style="list-style-type: none">(1) Keep bedroom doors closed during sleeping hours(2) Have two or more escape exits from every room(3) Make sure windows can be easily opened for secondary escape routes(4) Train children if they are expected to use fire escape ladders(5) Have a method of alerting others to an emergency(6) Teach individuals to roll out of bed onto the floor in smoke(7) Crawl low in smoke



NOTES	STUDENT GUIDE
	<p>(8) Feel a door before opening it and if warm don't open it</p> <p>(9) Establish a meeting place outside to account for all family members</p> <p>(10) Call the fire department from outside the home</p> <p>3.</p> <ul style="list-style-type: none">a.b. Always use a candle holderc. Keep candles away from curtains or other fabricsd. Keep candles away from children and petse. Separate candles by at least 4 inchesf. Do not move lighted candlesg.h. Use flashlight instead of candles during a power outage <p>4. Residential smoke detectors</p> <ul style="list-style-type: none">a. Smoke detectors provide the key to survival for residents during a fireb. Smoke detector placement <p>(1)</p>



NOTES	STUDENT GUIDE
	<p>(2) At a minimum, a smoke detector should be in a hall outside each sleeping area and between the sleeping area and other rooms in the house</p> <p>(3)</p> <p>(4) If not on the ceiling, detectors should be on walls at least four-inches from the ceiling</p> <p>c. Smoke detectors should be maintained and tested in accordance with manufacturer's instructions</p> <p>d. Smoke detector batteries must be changed annually</p> <p>F. Fire station tours</p> <ol style="list-style-type: none">1. Fire fighters frequently take part in giving fire station tours to the public2.3. Fire fighters should dress appropriately and act professionally whenever civilians are in the station4. When visitors arrive, they should be given safety instructions and what to do if an alarm sounds5. All questions must be answered courteously6.7. Personnel must consider the safety of visitors if they are allowed to climb on apparatus or don equipment



NOTES	STUDENT GUIDE
	<p>8. If equipment is demonstrated, fire fighters must be certain that all visitors are not in dangerous locations</p> <p>9. Visitors should never be taken on elevating platforms or aerial ladders</p> <p>10.</p> <p>11. Citizens will remember for a long time what they have witnessed at the station</p> <p>VI. Fire Prevention and Public Education Summary</p> <p>A. Fire fighters may become involved in fire safety inspections and must be prepared to deal with the public during these inspections</p> <p>B. Inspections and preincident surveys are conducted for:</p> <ol style="list-style-type: none">1. Compliance with fire codes and regulations2. To gain familiarization with occupancies where fires may occur <p>C. Public fire and life safety education is vital to reducing injuries and deaths in a community</p> <p>D. Many times, the public's impression of the entire fire department will be based on the impression that an individual fire fighter gives during a fire safety presentation or station tour</p>