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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Law, Public Safety, Corrections, & Security |
| **Course Name** | Firefighter I |
| **Lesson/Unit Title** | Emergency Scene Safety |
| **TEKS Student Expectations** | **130.334. (c) Knowledge and skills**(19) The student identifies safety procedures for ensuring a safe environment. The student is expected to:(C) Identify structure fire and roadway emergency scene potential hazards(D) Describe solutions to mitigate potential hazards(E) Describe procedures for safe operation at emergency scenes |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | The student will be able to:* Identify structure fire and roadway emergency scene potential hazards
* Describe solutions to mitigate potential hazards
* Describe procedures for safe operations at emergency scenes
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| **Rationale** | While understanding that firefighting is inherently dangerous, it is important to recognize the hazards present at all emergency scenes. Emergency scene and operational environment safety can be made by possible by understanding and following departmental Standard Operating Procedures (SOPs), knowing your equipment, and utilizing personnel correctly. Being prepared for the worst while not taking anything for granted is wise for firefighters. |
| **Duration of Lesson** | 5 hours. |
| **Word Wall/Key Vocabulary***(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* |  |
| **Materials/Specialized Equipment Needed** | * Status board
* Personnel Accountability Tags
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | Read an article (newspaper, magazine, or internet) to the class about an emergency response resulting in fire service personnel injury or death (For an example article do an Internet search for: three firefighters injured in residential collapse. As a group discuss how the system failed these personnel and what could or should have been done to make a difference in the outcomes of those emergency response calls. Use the Discussion Rubric for assessment. |
| **Direct Instruction \*** | I. Safety TriadA. Procedures1. Formal and informal processes that are in place as department management tools2. Designed to foster safety, they create structure for all activities that occur on the fireground and at emergency scenes3. Formal processesa. Standard Operating Procedure (SOP)b. Standard Operating Guideline (SOG)c. Training manuals4. Informal processes or procedures area. Departmental routines that are not writteni. One example is placing boots next to the bed during sleep hours, or putting them next to the rig during daylight hoursB. Equipment1. Equipment is designed for safetya. NFPA Standards are for design and safe usei. Must be inspected and maintained2. Because equipment is used by different firefighters, documentation of repairs and maintenance is critical for personnel safety3. Equipment usea. Using the right tool for the right job is essential for emergency scene safetyb. For safety reasons, all equipment should be used in accordance with manufacturer’s specifications and directionsC. Personnel1. Human factors can contribute to scene safetya. Training needs to be regular and consistentb. Perhaps the single most important element of scene safety is training. It leads to good decisions and effective critical thinking skills2. Firefighter fitness and healtha. Enable firefighters to deal with the inherent stresses of firefightingi. Participate in annual health screeningsii. Work hardening to perform physical tasks (work hardening helps prevent firefighter injuries from typical firefighting tasks)b. Work hardening and mandatory fitness training and testingc. Nutrition education for fire service personnel relates directly to incident readiness and scene safetyd. Critical Incident Stress Management (CISM)i. A system used for firefighters and others who work with fire victims to help them to cope with or resolve the stress of working with gruesome injuries and/or horrific scenesii. Prebriefing (knowing what to expect) can ease the stress of entering a sceneiii. Defusing (minor debriefing after an event) can ease stress for firefighters who must enter a scene more than onceiv. Qualified stress managers should be available when neededv. Personnel should utilize Member Assistance Programs (MAP)vi. Deals with issues that could affect job performance and firefighter safetyvii. Offers professional, mental health services and other health services to fire service employeesII. Assigned Responsibility for Scene SafetyA. Department (effective leadership)1. Enforce departmental rules, policies, and procedures in accordance with NFPA 1500 (Standard on Fire Department Occupational Safety and Health Program) and OSHA regulations (which are part of the Code of Federal Regulations)2. Create a health and safety committee3. Develop SOPs relative to safety4. Implement a risk management plan5. Purchase appropriately safe and effective apparatus and equipment6. All training should occur with an emphasis on safetyB. Firefighter (operational readiness)1. Prepared mentally2. Prepared physically3. Understand operational proceduresa. Recognizes and follows the Chain of Command.b. Performance is consistent with training expectationsIII. Hazard Recognition for Fire and Roadway EmergenciesA. Highway (roadway) emergencies1. Follow Department of Transportation (DOT) guidelinesa. Position apparatus to block oncoming traffici. Block at least one traffic lane next to the incident (more if necessary)ii. Be extremely careful when dismounting the apparatusb. Turn the front wheels in the direction away from the emergencyc. Use traffic cones effectively to detour traffic away from the scened. Turn off the lights facing oncoming traffic to avoid distracting or blinding driverse. Do not walk with your back to trafficf. Wear reflective vests if not using Personal Protective Equipment (PPE)B. Fire and other emergencies1. Crowd controla. To maintain a scene safetyb. To prevent interference with firefighters and other emergency personnel operating at emergency incidentsc. To prevent injuries to spectators and emergency response teamsd. Relatives and friends of victims in an incident should be restrained from coming too close to emergency operations (do not leave them unattended; have someone attend to them until the victims are removed from the scene)2. Scene control zonesa. Can be used to establish scene securityi. Many departments establish three zones: Hot, Warm, Cold3. Personnel accountabilitya. Used to identify and track personnel at emergency incidentsi. Passport systems (tag systems) account for personnel within the hazard zoneii. Passports are collected by an accountability officer and attached to a control board or an ID chart. They are returned as personnel leave the hazard zone4. Self-Contained Breathing Apparatus (SCBA) Tag System a. More accountability than a passport systemi. In addition to passport collection, time of entry is noted along with lowest SCBA pressure among team membersii. PPE is checked prior to entry5. Interior operationsa. Follow the department’s SOPsb. Size up before making interior entry (look for windows or doors that could be used as emergency exits)c. Wear full PPE (including SCBA) alwaysd. Have tools with you as necessarye. Stay in contact with your team through physical, voice, or visual contactf. Maintain radio contact with the Incident Commander (IC)g. Take some sort of tag line, lifeline, or hose with you into the hazard zoneh. Be aware of your surroundings by maintaining situational awarenessi. Know when and how to call for help (use “Mayday,” the international distress signal)6. Emergency escapea. Be prepared to save yourselfb. Understand how to activate your Personal Alert Safety System (PASS) device7. Rapid Intervention Teams/Crews (RIT/RIC)a. Part of the 2-in/2-out criteria mandated by NFPA 1500 and OSHA anytime firefighters are going to be in an atmosphere that is Immediately Dangerous to Life or Health (IDLH)b. The primary assignment is to rescue emergency personnel who have become lost, disorientated, injured, or trapped |
| **Guided Practice \*** | None |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | * Have students identify and list potential roadway and emergency scene hazards. Then have them describe procedures and solutions to mitigate those hazards for fire service safe operations at emergencies. Use the Writing Rubric for assessment.
* Have students write a scenario about a structure fire incident and then have them trade scenarios (alternative: The instructor may want to create a scenario instead). Each student will have five minutes to explain and demonstrate the elements of a Personnel Accountability System used by the local jurisdiction. Use the Recognizing the Elements of a SCBA Tag System Checklist for assessment.
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| **Lesson Closure** | None |
| **Summative/End of Lesson Assessment \***  | * Emergency Scene Safety Quiz and Key
* Recognizing the Elements of a SCBA Tag System Checklist
* Discussion Rubric
* Writing Rubric

**Accommodations for Learning Differences:** For reinforcement, students will participate in peer teaching (mentoring) and team learning; participate in guided research and note-taking (web based); and keep journals with key words and definitions. |
| **References/Resources/****Teacher Preparation** | * ISBN: 0135151112, *Essentials of Firefighting* (5th Edition), International Fire Service Training Association (IFSTA)
* ISBN: 9781428339828, *Firefighter's Handbook: Firefighter I and Firefighter II* (3rd Edition), Delmar Cengage Learning
* Do an Internet search for: three firefighters injured in residential collapse
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| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** |  |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** |  |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) | Students will participate in situational awareness exercises and classroom discussion and training exercises. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSA |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)