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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 |
| **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 |
| **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 Triad  A. Procedures  1. Formal and informal processes that are in place as department management tools  2. Designed to foster safety, they create structure for all activities that occur on the fireground and at emergency scenes  3. Formal processes  a. Standard Operating Procedure (SOP)  b. Standard Operating Guideline (SOG)  c. Training manuals  4. Informal processes or procedures are  a. Departmental routines that are not written  i. One example is placing boots next to the bed during sleep hours, or putting them next to the rig during daylight hours  B. Equipment  1. Equipment is designed for safety  a. NFPA Standards are for design and safe use  i. Must be inspected and maintained  2. Because equipment is used by different firefighters, documentation of repairs and maintenance is critical for personnel safety  3. Equipment use  a. Using the right tool for the right job is essential for emergency scene safety  b. For safety reasons, all equipment should be used in accordance with manufacturer’s specifications and directions  C. Personnel  1. Human factors can contribute to scene safety  a. Training needs to be regular and consistent  b. Perhaps the single most important element of scene safety is training. It leads to good decisions and effective critical thinking skills  2. Firefighter fitness and health  a. Enable firefighters to deal with the inherent stresses of firefighting  i. Participate in annual health screenings  ii. Work hardening to perform physical tasks (work hardening helps prevent firefighter injuries from typical firefighting tasks)  b. Work hardening and mandatory fitness training and testing  c. Nutrition education for fire service personnel relates directly to incident readiness and scene safety  d. 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 scenes  ii. Prebriefing (knowing what to expect) can ease the stress of entering a scene  iii. Defusing (minor debriefing after an event) can ease stress for firefighters who must enter a scene more than once  iv. Qualified stress managers should be available when needed  v. Personnel should utilize Member Assistance Programs (MAP)  vi. Deals with issues that could affect job performance and firefighter safety  vii. Offers professional, mental health services and other health services to fire service employees  II. Assigned Responsibility for Scene Safety  A. 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 committee  3. Develop SOPs relative to safety  4. Implement a risk management plan  5. Purchase appropriately safe and effective apparatus and equipment  6. All training should occur with an emphasis on safety  B. Firefighter (operational readiness)  1. Prepared mentally  2. Prepared physically  3. Understand operational procedures  a. Recognizes and follows the Chain of Command.  b. Performance is consistent with training expectations  III. Hazard Recognition for Fire and Roadway Emergencies  A. Highway (roadway) emergencies  1. Follow Department of Transportation (DOT) guidelines  a. Position apparatus to block oncoming traffic  i. Block at least one traffic lane next to the incident (more if necessary)  ii. Be extremely careful when dismounting the apparatus  b. Turn the front wheels in the direction away from the emergency  c. Use traffic cones effectively to detour traffic away from the scene  d. Turn off the lights facing oncoming traffic to avoid distracting or blinding drivers  e. Do not walk with your back to traffic  f. Wear reflective vests if not using Personal Protective Equipment (PPE)  B. Fire and other emergencies  1. Crowd control  a. To maintain a scene safety  b. To prevent interference with firefighters and other emergency personnel operating at emergency incidents  c. To prevent injuries to spectators and emergency response teams  d. 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 zones  a. Can be used to establish scene security  i. Many departments establish three zones: Hot, Warm, Cold  3. Personnel accountability  a. Used to identify and track personnel at emergency incidents  i. Passport systems (tag systems) account for personnel within the hazard zone  ii. 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 zone  4. Self-Contained Breathing Apparatus (SCBA) Tag System  a. More accountability than a passport system  i. In addition to passport collection, time of entry is noted along with lowest SCBA pressure among team members  ii. PPE is checked prior to entry  5. Interior operations  a. Follow the department’s SOPs  b. Size up before making interior entry (look for windows or doors that could be used as emergency exits)  c. Wear full PPE (including SCBA) always  d. Have tools with you as necessary  e. Stay in contact with your team through physical, voice, or visual contact  f. Maintain radio contact with the Incident Commander (IC)  g. Take some sort of tag line, lifeline, or hose with you into the hazard zone  h. Be aware of your surroundings by maintaining situational awareness  i. Know when and how to call for help (use “Mayday,” the international distress signal)  6. Emergency escape  a. Be prepared to save yourself  b. Understand how to activate your Personal Alert Safety System (PASS) device  7. 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. |
| **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 |
| **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)