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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 1 |
| **Lesson/Unit Title** | NFPA 1500 and Firefighter Responsibility |
| **TEKS Student Expectations** | **130.334. (c) Knowledge and Skills**  (5) The student applies laws, ordinances, regulations, and rules as defined by the Texas Commission on Fire Protection Certification Curriculum Manual to perform duties within a set of rules or protocols.  (E) The student is expected to describe responsibilities of a firefighter as required by the National Fire Protection Association 1500 Standard on Fire Department Occupational Safety and Health Program |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | The students will be able to:   1. Describe responsibilities of a firefighter as required by the NFPA 1500: Standard on Fire Department Occupational Safety and Health Program 2. Demonstrate a general understanding of NFPA 1500 and its components |
| **Rationale** | National Fire Protection Association (NFPA) 1500: Standard on Fire Department Occupational Safety and Health Program specifies the minimum safety requirements for the fire departments that provide rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services. Although firefighting is inherently dangerous, following NFPA 1500 can improve firefighter health and reduce injuries and fatalities. It is important that members of the fire service understand these standards so that they can hold their employers accountable and stay safe on the job. |
| **Duration of Lesson** |  |
| **Word Wall/Key Vocabulary**  *(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* |  |
| **Materials/Specialized Equipment Needed** | * NFPA Standards Research Handout * NFPA 1500 and Firefighter Responsibility Quiz and Key * NFPA 1500 and Firefighter Responsibility Open-Note Quiz and Key * Group Evaluation Rubric * Peer Evaluation Rubric * Discussion Rubric * Individual Work Rubric * Presentation Rubric * Computer/projector |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | Use the following questions for a class discussion:   * What precautions are taken by fire service personnel and why are they taken? * What is NFPA and why does it exist? * What other standards have they already learned? * What do they think of when they hear “standards of firefighter responsibilities”? * What components do they think/feel may be contained within NFPA 1500?   Explain the basis for this standard, which is the need for accountability in the fire service. Use the Discussion Rubric for assessment. |
| **Direct Instruction \*** | 1. General Overview of NFPA 1500    1. NFPA 1500 contains the minimum requirements for safety and health programs       1. Life-safety factor – stems from natural desire to prevent needless suffering from          1. Physical pain          2. Emotional stress       2. Economic factor – includes legal expenses and expenses caused by loss of manpower, apparatus, equipment, tools, property, or systems.       3. Key concept – to apply the same degree of safety throughout the fire service          1. Fire departments may also set safety standards unique to their stations    2. Employee interest       1. The success of a safety program begins at the top of the fire department administrative chain and trickles down       2. The administration's attitude about safety is reflected in the attitudes of the supervising officers       3. The main goals are to          1. Prevent             1. Human suffering             2. Deaths             3. Injuries             4. Illnesses             5. Exposures to hazardous atmospheres and contagious diseases          2. Prevent damage/loss of equipment          3. Reduce the number and severity of incidents, accidents, and hazardous exposures    3. Firefighter Health Considerations       1. Firefighters must be in good physical condition to handle the physical demands of the profession       2. To stay healthy firefighters must          1. Stay informed about job-related health issues          2. Follow recommendations for vaccination against hepatitis B          3. Use precautions to avoid exposure to human immunodeficiency virus (HIV)          4. Learn proper lifting techniques to avoid muscle strains and other related injuries          5. Use tools designed to assist with lifting heavy objects          6. Properly clean and store tools and equipment used in patient care          7. Maintain a regular exercise program to sustain physical fitness          8. Maintain a diet that reduces cholesterol, fat, and sodium intake          9. Be aware of cardiovascular and cancer risks, such as             1. Smoking             2. High blood pressure             3. High cholesterol levels   j) Have regular physicals and medical checkups  II. Specific requirements outlined in NFPA 1500   * 1. Equivalency      1. Levels of qualifications are established (e.g. basic, intermediate, master, etc.)   2. Training, education, competency, and safety standards are set so that all fire personnel are held to the same standard   3. Training, education, competency, and safety standards are set so that all fire personnel are held to the same standard  1. Organization    1. All departments must have the following in place:       1. Written statement of policy       2. Operational response criteria (Standard Operating Procedures (SOPs))       3. Written risk management plan (coverage and components)       4. Written fire department occupational safety and health policy       5. Compliance with local laws and guidelines for all activities       6. Accident investigation procedures       7. An occupational safety and health committee       8. Recordkeeping for accidents, exposures, training, and deaths       9. An appointed health and safety officer (to perform the functions of NFPA 1521) 2. Training, Education, and Professional Development    1. Establish and maintain safety and health training    2. Training and education programs are in place for new members    3. Restrict the duties of the new members until they have proven their knowledge of the procedures    4. Training for all members on       1. Risk management plan       2. Department’s written procedures       3. Emergency medical services       4. Personal protective equipment (PPE)       5. Safe exiting and accountability 3. Member Qualifications    1. All structural firefighters must meet the following qualifications before being allowed to work in the field       1. Firefighters must meet NFPA 1001       2. Drivers/operators must meet NFPA 1002       3. Aircraft Rescue and Fire Fighting (ARFF) firefighters must meet NFPA 1003       4. Fire officers must meet NFPA 1021       5. Wildland firefighters must meet NFPA 1051       6. Hazardous Materials (HAZMAT) firefighters must meet NFPA 472 or higher       7. Members must practice their assigned skill sets on a regular basis (annually at a minimum) 4. Fire Apparatus and Equipment    1. New fire apparatus meets NFPA 1901    2. New wildland apparatus meets NFPA 1906    3. New marine firefighter vessels meet NFPA 1925    4. Tools, equipment, and Self-Contained Breathing Apparatus (SCBA) are properly secured within all apparatuses    5. Restraints and harnesses are in place and used (e.g. seatbelts)    6. All drivers undergo an approved training course    7. All traffic laws are followed including possession of a valid driver’s license with an appropriate rating (Class B in the state of Texas)    8. Apparatus comes to a complete stop at red lights, stop signs, and railroad crossings, even when responding priority one to an incident    9. Riding on the outside of an apparatus is prohibited    10. All apparatuses are tested per NFPA 1911        1. Ground ladders tested per NFPA 1932        2. Hoses inspected per NFPA 1962        3. Fire Extinguishers inspected per NFPA 10    11. Apparatus and equipment are disinfected per NFPA 1581    12. Hearing protection is provided when operating tools and riding in apparatus    13. Powered rescue tools meet NFPA 1936 5. Protective clothing and equipment    1. Fire departments provide PPE for all staff    2. All protective equipment meets NFPA 1971    3. PPE is cleaned every six months per NFPA 1851    4. Laundry service is available for contaminated clothing    5. Damaged or unsafe clothing is taken out of service    6. Gloves have proper interface (no skin shows)    7. Minimum two-inch overlap of all protective clothing layers    8. Programs in place for selection, care, maintenance, and use of protective clothing    9. SCBA is provided and protected    10. Members are provided emergency medical gloves and body and face protection    11. Infection control programs meet NFPA 1581    12. When involved in HAZMAT ops, members are supplied vapor protective garments that meet NFPA 1991 and are given a safe method of disposal for used garments    13. Special ops safety equipment provided for:        1. Wildland firefighting        2. Technical rescue operations (Urban Search and Rescue (US&R))        3. Surface water operations (boats) 6. Personal Alert Safety System (PASS) Devices    1. Members are provided with a PASS device    2. PASS devices are tested at least once a week 7. Life Safety Ropes    1. Are only used appropriately    2. Are taken out of service if ever damaged or below standards    3. Have documentation throughout the duration of their use    4. Are tested/checked and approved only by qualified people 8. Hearing Protection    1. Is provided when noise decibels exceed 90 dB in apparatus and/or when using tools 9. Communications    1. An incident clock is used to mark key time landmarks (e.g. call arrives, units dispatch, unit arrive)    2. Dispatch and responding companies use clear communication    3. Procedures are in place for emergency traffic (e.g. mayday, code red) 10. Emergency Operations     1. Use emergency risk management, accountability, and rapid intervention teams (RIT) for the rescue of members and rehabilitation for personnel     2. Have a plan in place to handle civil unrest or terrorism     3. Have a post-incident review process to ensure that lessons learned are shared to diminish future accidents and injuries 11. SCBA     1. Breathing air meets NFPA 1989     2. Quantitative fit test annually        1. Nothing passes through the seal        2. No beard or facial hair is in the area of the seal        3. Helmet does not interfere with the seal        4. Facepiece can be worn under protective hood        5. Cylinders are hydrostatically tested        6. In-service air cylinders are stored while charged        7. Personnel are protected during SCBA air cylinder filling 12. Wellness     1. Member Assistance Program (MAP) or Employee Assistance Program (EAP) is provided to assist members and their families with substance abuse, stress, and family or personal problems that may affect a member's work performance     2. Wellness program is provided to address physical fitness levels (aerobic conditioning, strength, and flexibility), along with smoking cessation, nutrition, and how to cope with stress     3. Guidance for the management of problems resulting from critical incident stress is also provided   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * NONE |
| **Guided Practice \*** | NFPA 1500 Training Video – Divide the class into small groups. Have the students act as if they are instructors that must produce a training video about NFPA 1500 for their cadets. The video should provide an overview and introduce the basic concepts of NFPA 1500. Encourage the students to be creative and to use techniques that their cadets would find interesting. The videos should be 15 to 20 minutes in duration and played for the class. (*Note:* If video equipment is unavailable, have the students perform the video live for the class.) Use the Presentation Rubric, the Group Evaluation Rubric, and the Peer Evaluation Rubric for assessment.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*  NONE |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*  NONE |
| **Lesson Closure** |  |
| **Summative/End of Lesson Assessment \*** | * NFPA 1500 and Firefighter Responsibility Quiz and Key * NFPA 1500 and Firefighter Responsibility Open-Note Quiz and Key * Group Evaluation Rubric * Peer Evaluation Rubric * Discussion Rubric * Individual Work Rubric * Presentation Rubric   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*  NONE |
| **References/Resources/**  **Teacher Preparation** | * 0135151112, *Essentials of Firefighting* (5th Edition), International Fire Service Training Association (IFSTA) * NFPA 1500 Guidelines version 2013 http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=1500 * Texas Commission on Fire Protection (TCFP) http://www.tcfp.texas.gov/ |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** | Social Studies Standards  V. Effective Communication  A. Clear and coherent oral and written communication  1. Use appropriate oral communication techniques depending on the context or nature of the interaction.  2. Use conventions of standard written English |
| **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) | * For enrichment, the students will research and summarize the NFPA Standards referenced in NFPA 1500. Use the NFPA Standards Research Handout for the activity. Use the Individual Work Rubric for assessment. (Note: This may be adapted into a group research project with presentations.) * For reinforcement, students will complete the NFPA 1500 Open-Note Quiz. Use the NFPA 1500 Open-Note Quiz Key for assessment. |
| **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)