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| **TEXAS CTE LESSON PLAN**  [www.txcte.org](http://www.txcte.org) | |
| **Lesson Identification and TEKS Addressed** | |
| **Career Cluster** | Transportation, Distribution & Logistics |
| **Course Name** | Management of Transportation Systems |
| **Lesson/Unit Title** | Safe Fork Lift Operation |
| **TEKS Student Expectations** | **130.461. (c) Knowledge and Skills**  (5) The student demonstrates an understanding of forklift knowledge and skills. The student is expected to:  (A) explain Occupational Safety and Health Administration  forklift safety standards, including equipment operation,  battery maintenance, liquid propane tank maintenance, lift  truck stability, load weight limits, seat belt requirements,  overhead guards, tip over prevention, and ride-out procedures  (B) perform visual inspection of forklifts and their operating  Environment  (C) discuss proper start-up, shut-down, and traveling  Procedures  (D) perform maintenance inspections and documentation  Procedures  (E) discuss forklift attachments  (F) evaluate proper lifting, carrying, load stability, and stacking  procedures for loading trailers, boxcars, and containers |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | **Students will…**   * Identify OSHA safety standards for forklifts. * Identify engine safety components of forklifts * Identify safety and operational checks for forklifts * Understand start up and shut down procedures * Understand safe operation of fork lift attachments * Identify safe operational practices of forklifts * Identify common hazards of forklift operation (struck by, caught in between, falls) |
| **Rationale** | In this lesson, students will learn safe fork lift operation, including how to identify engine safety components, safe operation of fork lift attachments, and common hazards. |
| **Duration of Lesson** | 3 – 4 45-minute lessons |
| **Word Wall/Key Vocabulary**  *(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | * OSHA * Internal Combustion Engine * Forks * Top clip retaining pin and heel * Hydraulic * Fuel sedimentor * Nameplate * Accelerator or direction control pedal * Hoist * Ammeter * Hour meter * Logistics |
| **Materials/Specialized Equipment Needed** | * Personal Protective Equipment * Access to forklift (check with ISD) * Internet access * Clip boards |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | * Ever wonder how Walmart loads and unloads their trucks? * How are trucks loaded and unloaded?   Show this or another video featuring safe fork lift operation: <https://youtu.be/KS1kd2ZboqE> |
| **Direct Instruction \*** | **Lecture/Discussion**   * Logistics can be defined as the concept where the right things must be delivered to the right place at the right time and in the right condition. * How do large businesses organize, restock and receive large items and small items in bulk? * Discuss relevant OSHA Safety Regulations, forklift safety components, operational procedures, and common hazards. * Review/explain how to understand and complete powered industrial trucks check lists. |
| **Guided Practice \*** | **Students will…**   * Work together as a class or in teams to identify forklift safety components and attachments. * Work together as a class or in teams to identify common hazards of forklift operation as well as relevant OSHA safety regulations. * Work together as a class or in teams to review, understand and complete powered industrial trucks check lists. |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | **Students will…**   * Identify OSHA safety standards for forklifts. * Identify engine safety components of forklifts. * Identify safety and operational checks for forklifts. * Understand start up and shut down procedures. * Understand safe operation of fork lift attachments. * Identify safe operational practices of forklifts. * Identify common hazards of forklift operation (struck by, caught in between, falls). |
| **Lesson Closure** | **Students will…**   * Participate in a class discussion/review of safe fork lift operations and OSHA safety standards. |
| **Summative/End of Lesson Assessment \*** | **Students will…**   * Complete a daily check list on a powered industrial truck or other equipment as identified/assigned by the teacher. |
| **References/Resources/**  **Teacher Preparation** | Additional resource materials, including daily operations checklists, can be found at this OSHA web site: <http://www.osha.gov/SLTC/poweredindustrialtrucks/index.html> |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** | Science Standards I.C.3 |
| **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) |  |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | DECA, SkillsUSATexas |
| **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)