

Building Trades III Residential Construction
Sheldon High School
Instructor: Jeff Merker

Automotive Safety Inspection Check

Subject Area: Industrial Technology
Date Fall of 2013

Grade Levels: 9-12

Lesson Overview

Materials Included in this Lesson

- Worksheets
- Slide show of SMUD job
- Jack stands
- 4 x 4 blocks
- rags
- buckets
- distilled water
- rubber gloves
- safety glasses
- engine oil
- power steering fluid

Other Materials for this Lesson

- brake fluid
- brake thickness gages
- tire wear gage
- radiator coolant
- glass cleaner
- distilled water
- Grease for battery terminals
- vacuum cleaner
- Air compressor/air chuck
- Cardboard for lying on.

Skills the Student will Learn

1. Students will be exposed to the fundamental facets of inspecting key components on a vehicle to determine if it road worthy and safe.

Student Deliverables

Students will top off fluids, make safety repair or performance repair recommendations. More importantly, students will be able to inspect their personal vehicles or employer's vehicles for pre-trip safety.

Length of Unit Plan: 2-4 Days

Activity Day One

Students will watch slide show of SMUD internship job. Paired up, students will list the

repairs and checks they think are important before using a vehicle for an extended period of time. In addition they will give two to four reasons why it is important for a vehicle whether is personal or commercial to run at peak performance. Answers may include:

1. No loss of productivity due to down time.
2. Better fuel mileage
3. Safety for occupants

Activity Day Two

Students will be handed out a safety inspection report and we will go over by having a vehicle in back compound and do those inspections.

Activity Day Three

Students will go over the rest of the handout/safety checklist.

Activity Day Four

With the assistance of Scott Tavares, SMUD Fleet Supervisor. Students will be paired with another pair in front of 6 vehicles (pre-set up by instructor in morning.) Scott will oversee three vehicles and I will oversee three vehicles. Students will go through checklist and complete the inspection.

Activity Day Five

Make-up day is announced (after school). Others will take short test and survey of lesson plan. Extra credit may be obtained by using the checklist on a family vehicle and having parents sign off.

Enrichment Suggestions

Oil changes on small engines of shop equipment.

Student Resources

Write any additional student resources here such as online resources and worksheets.

Common Core Standards

6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

A1.0, A2.
A4.0, A5

CTE Pathway Standards

Include a bulleted list of CTE Pathway Standards by number with an abbreviated description of

the standard: (<http://www.cde.ca.gov/be/st/ss/>)

Transportation Pathway

C3.7 Perform necessary procedures to maintain, diagnose, service, and repair vehicle systems and malfunctions.

Lesson Plan Relevance To Externship

Due to declining learning opportunities for auto repairs most high school students have not performed inspections or repairs on a vehicle. SMUD pays their mechanics a high prevailing wage and other career opportunities are available in the auto and heavy machinery repair industry. By exposing students in the Advanced Construction Course to basic auto inspection skill sets may result in a connection to these career possibilities. In addition, students will develop a greater awareness to the many components that keep a vehicle running safely.

Rubric for the (type in the title) Project

Student Deliverables	1 Exceeds Expectations	2 Meets Expectations	3 Approaches Expectations	4 Fails to meet Expectations