Unit 7: Tune Up

Content Area: **Applied Technology**
Course(s):
Time Period: **Marking Period 2**
Length: **3 weeks**
Status: **Published**

Brief Summary of Unit

In this unit, students will learn basic procedures for automotive tune-ups. They will learn how to inspect, replace and maintain tune-up-related components

Revised July 2023

Essential Questions/Enduring Understandings

Essential Questions

- Why is it environmentally essential to maintain and inspect tune-up-related components?
- How will keeping the vehicle in a proper state of tune benefit the consumer financially?

Enduring Understandings

- service operations commonly performed will ensure a properly running engine
- a properly running engine will minimize exhaust emissions, maximize fuel consumption, and prolong engine life.

Objectives

Students Will Know

-
  - the difference between a major and a minor tune-up.
  - safety precautions that should be remembered during a tune up.
  - a properly running engine will save money in gas and repair bills.

Students Will Be Skilled At

- replacing minor tune-up components
- determining when service may be needed

Learning Plan

- Preview the essential questions and connect them to learning throughout the unit.
- Teacher presentation.
- Modern Automotive Technology workbook and textbook assignments.
- Hands-on job sheet on system components and their operation.
- Writing prompt.
- Written test.
- Closing discussion.
- Use of a cooperative learning technique to evaluate unit mastery.

Assessment

Formative

- Answer essential questions
- Participate in class discussions
- Demonstrate proper and safe work habits daily.

Summative

- Section Quizzes and Tests

Benchmark

- Hands on performance of Job Sheets
- Final Exam/Mid Term Exam

Alternative

- Verbal test
- Power points the student created that shows an understanding of unit.

Materials

- Textbook: Modern Automotive Technology
- Shop/Customer Vehicles
- Automotive Lifts and Equipment
- Recycled/New Automotive Components

- All Data (Online Automotive Diagnostic Tool)

Standards

LA.RI.11-12.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
LA.RST.11-12.2	Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
LA.RST.11-12.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
LA.RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.
TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.2.12	Technology Education, Engineering, Design, and Computational Thinking - Programming All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.12.A	The Nature of Technology: Creativity and Innovation: Technology systems impact every aspect of the world in which we live.
TECH.8.2.12.B	Technology and Society: Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society.

Suggested Strategies For Modification

https://docs.google.com/spreadsheets/d/1uiLPbTXK4FZS_Pj1-X11O_BGMLz19ri5fVsil6XbSy0/edit?usp=sharing