Unit 2 Tools

Content Area: **Applied Technology**
Course(s):
Time Period: **Marking Period 1**
Length: **2 weeks**
Status: **Published**

Summary

This unit is an overview of the basic hand tools of an automotive shop. Students will learn the names, use, and care of basic automotive hand tools. Students will know the function and use of the Six Simple Machines and how they are used in tool design and creation. Emphasis will be on safety, knowledge, and the correct use of tools.

The goal of this unit is to teach the basic tools that are essential for performing basic automotive repairs. Students will be taught the six basic machines and how they are used and combined to create all complex tools. By making students aware of the dangers and accidents that can occur, students will be better equipped to avoid and foresee possible accidents. Students will be made aware of the dangers while working in the shop and how to recognize and avoid mishaps. The possible dangers are fires, physical injuries, chemical burns, electrocution, etc..

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Essential Questions/ Enduring Understandings

Essential Questions:

Why is it important to know how to choose and use the proper tool for any given job?

How do you determine the tool to use and what are the precautions to take while using them?

What are the basic hand tools used in the automotive shop and what are they used for?

How are each of these tools used and for what type of fasteners?

Enduring Understandings

Understanding the function and limitations of a tool is essential for both efficiency and safety in any task. □□

The safe and effective use of tools requires a deliberate process of selection based on the job's demands and an awareness of the inherent risks. □□

A foundational knowledge of basic hand tools and their specific applications is a prerequisite for diagnosing, maintaining, and repairing vehicles. □

The successful completion of a task, especially involving fasteners, depends on a technician's ability to select

and use the correct tool for the job.

Objectives

Students will know…..

the proper use of tools will make job repair easier.

knowledge of tools is essential in selecting the right tool for the job to be performed.

misuse of tools can be hazardous to themselves and others.

safety protocols must be observed in order to prevent injury to themselves and others

Students will be skilled at….

using properly the different types of tools used in an automotive shop.

the ability to select the proper tool for each particular job.

caring for tools and using them correctly to avoid injury.

Learning Plan

Preview the essential questions and connect to learning throughout the unit.

Visual demonstration of different automotive hand tools

Use of Modern Automotive Technology text and workbook chapter 3.

Teacher led discussions

Hands on test of basic hand tool knowledge

Closing discussion and anticipatory set.

Assessment

Formative Assessment:

answer essential questions

participate in class discussions

exit tickets

job sheets

Summative Assessment:

Quizzes and unit test on tool use and identification-

Alternative Assessment:

Tool identification practicum

Benchmark:

Final Exam

Materials

Text: Modern Automotive Technology Ch3

Internet Research and Video Clips

Visual materials used to demonstrate proper use of specific tools

Standards

L	Language
9.2.12.CAP.2	Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.
9.2.12.CAP.4	Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.
1.1.5	Determine goals for life-long learning and leisure opportunities for all family members.
9.2.12.CAP.5	Assess and modify a personal plan to support current interests and post-secondary plans.
8.1.12.CS.4	Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors.

1.2.6	Demonstrate leadership skills and abilities in school, workplace and community settings.
R	Reading
2.1.1	Apply time management, organizational, and process skills to prioritize tasks and achieve goals.
W	Writing
2.2.3	Demonstrate behaviors that conserve, reuse, and recycle resources to maintain the environment.
8.1.12.AP.5	Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.
8.2.12.ITH.1	Analyze a product to determine the impact that economic, political, social, and/or cultural factors have had on its design, including its design constraints.

Modifications

https://docs.google.com/spreadsheets/d/1AckQSTlNShzlM-rDV5YKYUFm2WMCxJQiS10rEZ4jCC8/edit?usp=sharing