

Course Title – Car Care

Implement start year – 2017-2018

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Unit #4 - Common Problems and Maintenance

Transfer Goal –

Students will be able to independently integrate and apply essential technical and critical thinking skills when diagnosing common problems and maintaining a vehicle.

Stage 1 – Desired Results

Established Goals

2009 NJCCC Standard(s), Strand(s)/CPI #
(<http://www.nj.gov/education/cccs/2009/final.htm>)

Common Core Curriculum Standards for Math and English
(<http://www.corestandards.org/>)

21st Century Themes

(www.21stcenturyskills.org)

- Global Awareness
- Financial, Economic, Business and
- Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

8.2 Technology Education, Engineering, and Design

All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

G. The Designed World: The designed world is the product of a design process that provides the means to convert resources into products and systems.

- 8.2.12.G.1 Analyze the interactions among various technologies and collaborate to create a product or system demonstrating their interactivity.

CCSS.ELA-LITERACY.RST.9-10.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

CCSS.ELA-LITERACY.WHST.9-10.2.F Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

9.1 21st-Century Life & Career Skills All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

9.1.12.A.1

Apply critical thinking and problem-solving strategies during structured learning experiences.

21st Century Skills

Learning and Innovation Skills:

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Information, Media and Technology Skills:

- Information Literacy
- Media Literacy
- ICT (Information, Communications and Technology) Literacy

Life and Career Skills:

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

Enduring Understandings:

Students will understand that . . .

EU 1

maintaining a clean vehicle is important for increased longevity.

EU 2

regular car maintenance and driver preparation can help solve or prevent roadside emergencies or common vehicle problems in an efficient and safe manner.

Essential Questions:

EU 1

- Why wouldn't you purchase a vehicle covered in mud or salt?
- Why wouldn't you purchase a vehicle without seeing it in person even after seeing a picture?

EU 2

- What should you do during a roadside emergency?
- What are some ways you can anticipate a problem with your vehicle before it leaves you stranded?
- Why should you check the contents of your emergency roadside kit every summer and winter?
- When is a tow necessary?

Knowledge:

Students will know . . .

EU 1

- different automotive finishes.
- the importance of washing, drying, and waxing a vehicle.
- the importance of cleaning the inside of a vehicle.

EU 2

- common vehicle problems.
- common dashboard indicators and what they represent.
- where to find roadside assistance.
- when it is safe to drive a vehicle and when the vehicle should be towed.

Skills:

Students will be able to . . .

EU 1

- correctly clean a vehicle inside and out.
- correctly apply surface protection to a vehicle.
- safely clean the engine compartment.

EU 2

- analyze basic automotive problems and make a decision about a solution.
- replace lights and indicator bulbs.
- prepare for roadside emergencies.

Stage 2 – Assessment Evidence

Other Recommended Evidence:

- Quiz/Test
- Discussions
- Worksheets
- Workbook

Stage 3 – Learning Plan

Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: *Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer.*

- Teacher led discussions on vehicle finishes. (A)
- Teacher led discussion on the importance of maintaining the inside and outside of a vehicle. (A)
- Teacher led discussion on common vehicle problems. (A)
- Teacher led discussion on steps to take during a roadside emergency. (A)
- Teacher/ Student demonstration on cleaning and waxing a vehicle. (A,M,T)
- Teacher/ Student demonstration on removing stains from a variety of materials. (A,M,T)
- Teacher/ Student demonstration on applying surface protectants. (A,M,T)
- Teacher/ Student demonstration on cleaning an engine compartment. (A,M,T)
- Teacher/ Student demonstration on replacing lights and indicators (A,M,T)
- Workbook on vehicle systems unit such as chapters 7 and 20 in Auto Upkeep Basic car Care, Maintenance, and Repair book. (A)
- Videos on tires, paints, and jumpstarting vehicles which can be found on youtube.com. (M)