2023

School District of Horicon
Course Outline
Learning Targets

Home Maintenance
Chapter 1: The Home
• List the maintenance jobs needed most often. • Describe the benefits of home maintenance.
Chapter 2: Home Safety
• Describe a common myth about accidents. • State what work habits promote safety. • Explain the possible hazards of working with ladders and tools, electrical devices, and chemicals. • List some safety aids everyone should have in their home.
Chapter 3: First Aid
• Explain in detail the steps to be taken for home related accidents.
Chapter 4: Basic Hand Tools
• Recognize tools used for measuring, fastening, cutting, drilling, and other jobs. • Choose the proper tool for an application. • Decide on a program of tool storage, upkeep, and labeling.
Chapter 5: Power Tools
• List the main parts of each power tool. • Describe what materials can and cannot be worked by each tool • Choose a tool with the correct speed, size, and power for the job. • Adjust and position the tool for desired result. • Demonstrate safe work skills.
Chapter 6: Fasteners
• Name some common fasteners. • Choose proper hardware for a job. • Produce strong joints between materials. • Show knowledge of safe work methods.

Chapter 7: Lumber and Building Materials

- List the common softwood and hardwood species.
- Describe several ways boards are cut from a log.
- List the dressed sizes for the most common lumber used.
- Read and decode the grade marlins on lumber and plywood.
- Choose proper wood types and grades for interior and exterior use.
- Request woodwork items by name.
- Choose wood products by cost and quality.

Chapter 8: Structural Parts of the House

- Define terms used for the materials, masonry, units, and wood framing members found in each of the major house structures.
- Locate the studs and other frame components when you need to mount items or do remodeling.
- Recognize a job which is beyond your abilities.

UNIT: Home Maintenance Hands-on Labs

- Perform basic faucet and toilet repair.
- Identify household plumbing materials and describe their uses.
- Understand the components of basic electrical outlets and switches
- Perform basic extension cord repair.
- Perform basic light fixture installation.
- Describe steps for basic appliance maintenance.
- Measure with rulers, squares, and tape measures.
- Explain how to perform drywall installation and repair.
- Operate hand and power tools safely.

Basic Auto

Chapter 1: Introduction and How Cars Work

- Describe how cars work.
- Locate and identify the Vehicle Identification Number (VIN).
- Identify the engine size and configuration.
- Explain the difference between manufacturer, make, and model.
- Classify vehicle types.
- Distinguish differences between spark and compression ignition engines.
- Relate pollutants to gasoline and diesel engines.
- Propose and discuss possible future vehicle designs.
- Practice identifying automobiles by make, model, year, and type.
- Differentiate between force, work, power, and energy.
- Identify careers in the automotive industry.
- Navigate an online owner’s manual.

Chapter 2: Buying an Automobile

- Differentiate between transportation needs and wants.
- Develop a budget for purchasing and operating a vehicle.
- Identify the steps in purchasing an automobile.
- Compare and contrast different places to purchase an automobile.
- Calculate a reasonable offer for a vehicle.
- Advocate for safety features in an automobile.
- Carry out research on vehicles using available resources.
- Evaluate window stickers.
- Conduct a vehicle inspection.
- Propose the benefits of selling, trading in, or donating a used vehicle.

Chapter 3: Automotive Expenses

- Explain how car payments are calculated.
- Describe insurance coverage levels.
- Propose when it may be beneficial to have additional insurance.
- Calculate monthly expenses on a given vehicle.
- Explain depreciation.
- Differentiate between maintenance and repairs.

Chapter 4: Repair Facilities

- Describe how technicians can become certified.
- Communicate effectively with a technician or service writer.
- Interpret a repair invoice.
- Demonstrate use of the three C's (concern, cause, and correction).
- List and describe different types of facilities.
- Conduct research to locate a quality repair facility.
- Characterize business ethics.
- Summarize differences between warranty types.

Chapter 5: Safety around the Automobile

- Demonstrate safe work practices.
- Identify types of fires and explain what types of fire extinguishers to use.
- Explain the fire triangle.
- Evaluate when to wear specific personal protection equipment.
- Describe the purpose of OSHA and EPA.
- Use different types of automotive lifts to safely support a vehicle.
- Operate a jack and use jack stands to safely support a vehicle.

- Judge when it is safe to work on a vehicle with airbag systems.
- Explain right-to-know laws.
- Interpret safety data sheets.
- Practice safe lifting and carrying techniques.
- Identify factors that affect noise-induced hearing loss.
- Insert foam earplugs properly.

Chapter 6: Tools and Equipment

- Recognize basic hand tools.
- Select the correct tool for the job.
- Use tools properly.
- Utilize print and online service manuals.
- Classify socket types.
- Identify different types of wrenches.
- Identify different types of pliers.
- List the different types of screwdriver tips.
- Decide when it is justified to invest in a specialty tool.
- Categorize units into the metric or English system.
- Differentiate between electric-, air-, and battery-powered tools.
- Demonstrate the proper use of fender covers.

Chapter 7: Auto Care and Cleaning

- Identify different automotive finishes.
- Explain the importance of interior and exterior cleaning.
- Clean a vehicle inside and out.
- Wax a vehicle.
- Differentiate between polishing and waxing.
- Describe how to clean an engine compartment.
- Locate and lubricate hinges, latches, and locks.
- Repair a chip or scratch.
- Explain how paintless dent repair works.

Chapter 8: Fluid Level Check

- Identify vehicle information for the correct fluid type.
- Identify different types of fluids used in the automobile.
- Describe differences between coolant types.
- Follow safety warnings listed on chemical containers.
- Analyze fluid conditions.
- Perform basic fluid level checks.
- Add fluids when required.

- Justify using more environmentally friendly coolants.
- Summarize why it is important to add the correct types of fluids.
- Store and dispose of chemicals properly.

Chapter 9: Electrical System

- Define electricity in terms of voltage, current, and resistance.
- Interpret a wiring diagram.
- Explain different types of electrical circuits.
- Analyze different types of circuit problems.
- Use a digital multimeter to test for voltage, resistance, and current.
- Use Ohm's law to calculate voltage, resistance, or current.
- Identify and locate starting system components.
- Identify and locate charging system components.
- Test an alternator.
- Test a starter.
- Clean and test a battery.
- Explain battery performance ratings.
- Inspect belt conditions.
- Locate fuse junction blocks.
- Describe different fuse types.
- Remove, inspect, and replace a blade style fuse.
- Differentiate between bulb types.

Chapter 10: Lubrication System

- Define the purpose of engine oil.
- List and describe engine oil additives.
- Explain oil service and viscosity ratings.
- Differentiate between conventional, synthetic, and semi-synthetic oils.
- Discuss the importance of oil filters.
- Change the oil and filter on a vehicle.
- Advocate for the importance of oil recycling.

Chapter 14: Suspension, Steering, and Tires

- Define the purpose of the suspension system.
- Define the purpose of the steering system.
- Identify components in the suspension system.
- Identify components in the steering system.
- Inspect suspension and steering components.
- Describe different tread designs.
- Identify repairable and non-repairable areas on a tire.

- Inspect and rotate tires.
- Measure tire tread depth.
- Locate the tire placard on a vehicle.
- List causes of excessive tire wear.
- Propose reasons for snow tire use vs. all season tires.
- Explain when run flat technology may be beneficial.

Chapter 15: Braking System

- Define the purpose and principles of the braking system.
- Explain how regenerative braking works.
- Identify components in the brake system.
- Identify brake fluid properties.
- Discuss the advantage of anti lock brakes.
- Explain how the parking brake works.
- Perform brake inspections and measure brake pad thickness.
- Categorize different types of control and safety systems.

Chapter 20: Common Problems and Roadside Emergencies

- Identify common automotive problems.
- Analyze basic automotive problems and formulate a solution.
- Remove and replace a headlight.
- Explain the different causes of black, blue, and white smoke.
- Identify unusual sounds and associate a possible problem to that sound.
- Identify unusual smells and associate a possible problem to that smell.
- Explain what might cause a “no-start” situation.
- Clean a battery.
- Inspect, remove, and replace wiper blades.
- Locate a leak on a tire.
- List items that should be in an emergency roadside and a winter safety kit.
- Perform a jump-start safely.
- Inspect, remove, and replace a drive belt.
- Remove and replace a flat tire with a spare tire.

Students will be able to meet the learning targets above as evidenced by formative and summative classroom assessments.