

**Subject Area:**

Home Maintenance and Improvement AGSC 222

**Title:**

Servicing and Maintaining Home HVAC Systems

**Teacher:****School:****Lesson Objective(s) & Career Cluster:**

Agriculture/Architecture and Construction

The students will gain the skills and knowledge enabling them to perform routine service and preventive maintenance on residential HVAC units. They will be able to service filters and capacitors, examine drain pans and lines, test thermostat operations, and inspect fan motor and compressor motor amps, along with being able to identify parts of the home ventilation systems.

**Activity:**

After discussing the important maintenance requirements for HVAC units as defined in IMS materials 8620-A, students will be divided into equal groups, each group will be assigned to a different HVAC unit around our Chapel Hill campus to service. Students will be given a HVAC service report. These students will inspect the various conditions of their assigned HVAC unit and will record their information on their form. Once the service reports are completed the groups will exchange reports and compile a list of materials needed to service each HVAC unit. Materials will be provided and students will properly service each unit.

**Evaluation:**

After all services have been completed the original group will evaluate the completed tasks and workmanship of the other group and report on the quality of services completed.

**Extension/Modification and/or Instructional Methodology:**

Students can inspect and service their personal home HVAC units and compile a service report, including duties performed. This paper can be handed in for extra credit and listed in their journal pages as outside hours.

**SCAN Skills:**

Organize information/Problem Solving/Written Communication/Participate as a team member/Decision making and Visualization/Trouble shooting situations.

**Cooperative Learning Ideas, TAAS, TEKS Competencies:**

This lesson is aligned with TEKS C(6) A, C(6) C. Prior to this lesson the students will contact a local air conditioning businesses to determine duties performed during and the cost of service reports.

**Team Project, Guest Speaker, or Field Trip:**

After each team performs their service and preventative tasks on the Chapel Hill units, I will schedule a field trip to Wood Air Conditioning (a local air conditioning company) to facilitate a tour and speak with students about the opportunities and requirements for a career in the HVAC industry.

**Resources:**

Paper/ Sample service evaluation for HVAC units/ preventative maintenance materials and supplies/ multimeter/ various hand tools.