



# Air Conditioning & Refrigeration

## Model CES 7056D

Students test and service an air conditioning unit, perform electrical, mechanical, and maintenance tasks. They also learn about the installation, maintenance, and operation of residential air conditioning and refrigeration systems. Principles of air conditioning and refrigeration are explained, including gas expansion and compression, heat transfer, evaporation, condensation, thermostatic control, motors and electrical circuitry. Students calculate cooling requirements and perform hands-on electrical, mechanical, and maintenance tasks in a realistic job simulation.

### TOOL CABINET

Safety glasses, multi meter, manifold gauge, fin comb, parts pan, #2 Phillips screwdriver, tape measure.

### MATERIALS INCLUDE:

Mounted 5000 BTU window air conditioner, panel mounted amp meter, mounted test ports, pierce valves, and aprons. Includes desk with no legs.

### HANDS ON ACTIVITIES

- Test electrical systems
- Disassemble and assemble parts of an air conditioning unit
- Test system pressures and temperature
- Fill out work order
- Calculate the cooling load for a given space.

### CURRICULUM

Curriculum manual is provided in a three-ring binder, with pages contained in page protectors. Easy to follow step by step activities are highlighted using full color photographs. Once introduced to career related information (job description, education and training requirements, job prospects, and income ranges) the student begins a "hands on" work experience, using professional tools of the trade to complete projects or tasks. An audio tape follows the manual word for word. Pre-and post tests, worksheets, answer sheets, and instructors guide.



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