**SkillsUSA State HVAC/R Contest 2023**

**Competencies and Supplies List**

The following is information for your student-contestants in the SkillsUSA NC State HVAC/R contest:

**HVAC/R Contest Competencies**

* How to properly wear safety gear (safety glasses, gloves, goggles)
* Know how to calculate airflow through an Electric Furnace using the Sensible Heat Formula
* Know how to describe the refrigerant recovery process
* Know how to braze copper
* Know how to read electrical schematics and troubleshoot electrical problems using the schematic
* Know how to use troubleshooting codes on gas furnaces
* Know how to use Electrical meters (VOM, Amp meter, capacitor tester)
* Know how to read pressures on a A/C or Heat Pump using refrigerant manifold gauges
* Know how to use a P/T chart
* Know how to use Temperature meter/probes
* Know how to calculate superheat and sub-cool

**Items Contestants Need to Supply/Bring:**

* Safety glasses
* Safety goggles
* Gloves (solid leather or gloves with a neoprene coating)
* Handheld calculator (cell phone calculator are not permitted)
* One-page Resume to be given to the Contest Chair prior to beginning the written exam, which is the first contest station for everyone. Failure to submit the Resume will result in a 10-point penalty on the Overall Score for the HVACR contest.

The contest coordinators will provide the tools necessary to work on each piece of equipment.