



## Electrical Construction Wiring

### ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with residential wiring or electrical trades as the occupational objective.

### CLOTHING REQUIREMENTS

Official SkillsUSA work shirt and work pants, or comparable uniform with no school logos, work shoes or boots and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

*Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.*

### EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. All wiring panels, electrical supplies and materials as required by the problem assigned

### EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

1. All students must have a one-page, typewritten résumé
2. Proof of Training signed
3. Safety Glasses
4. Hard Hat
5. Work Shoes
6. Cordless Drill with batteries and charger
7. Assorted Flat Blade and Phillips Tips for Cordless Drill
8. 5/8 inch or 3/4 inch Wood Drill Bits
9. Pump pliers
10. Assorted flat blade and Phillips screwdriver
11. Wire strippers
12. Diagonal pliers
13. Side cutting pliers/Lineman's pliers
14. Needle nose pliers
15. Torpedo level
16. Electrician's hammer
17. Electrician's knife/Utility knife
18. Hacksaw
19. 1/2" EMT Conduit bender and reamer
20. Measuring tape or folding ruler
21. Multi-meter (volt, ohm, amp) or equivalent voltage and continuity testers
22. Calculator (NO CELL PHONES)
23. Pencils
24. Magic Marker (Sharpie)
25. Current National Electrical Code Book



## Electrical Construction Wiring

### **SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)**

*(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels) The competition will evaluate each contestant's preparation for employment and recognize outstanding students for excellence and professionalism in the field of residential plumbing.*

The contest will assess the ability to perform jobs or skills selected from the following list of competencies.

### **KNOWLEDGE PERFORMANCE**

The contest will include a written knowledge exam assessing general knowledge of residential wiring. Written portions may also exist during the skills portion of the contest. Knowledge of terms and principles used in residential wiring will be required for the skill demonstration portion of the contest.

### **SKILL PERFORMANCE**

The skills portion of the contest will include a series of work stations that have information and instruction sheets for wiring a residence or completing a light commercial installation. All work shall conform to the specifications of the latest edition of the National Electrical Code.

### **Contest Competencies:**

Competitors will install a 100 amp panelboard, various conduit bends, and various commercial and residential circuits.

### **Standards and Competencies** – *(Summary of national technical standards list)*

1. Define and apply safety rules and practices in residential wiring according to NEC standards
2. Apply knowledge of basic wiring theory according to NEC standards
3. Install conduits to meet NEC standards
4. Use basic equipment and procedures defined by industry standards
5. Install switch boxes and outlet boxes to meet NEC standards
6. Rough in, connect, and install electrical devices to meet NEC standards



## Electrical Construction Wiring

### Electrical Construction Wiring Score Sheet

Items Evaluate	Possible Points	Contestant Score
Written Test	25	
Station one - Parts Identification	25	
Job: Smoke Detector, Lighting, Receptacle Circuit	100	
	SUBTOTAL = 150	
Clothing Penalty	Deduction    -5 points	
No resume	Deduction    -10 points	
Safety Penalty	Deduction    -10 points	
	TOTAL	

*Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.*

*Note: Scorecards should only be used as guidance. Changes may occur.*