



Pennsylvania. - District 2  
*Education... with a competitive side*

# PLUMBING



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## 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 Skills USA attire will be required at the state and national level.*

Must have safety glasses, leather work shoes or boots, workpants and work shirt with nothing descriptive of the school you are representing.

## Eligibility

Open to active SkillsUSA members enrolled in programs with residential plumbing as the occupational objective.

## Equipment and Materials Supplied by host school:

1. All necessary supplies, Copper cleaning tools, Flux/Paste/95/5 solder, 2-work rags, Teflon tape, primer, cement, fittings and piping required for the projects
2. Acetylene Tank and tips will be provided
3. No threading of pipe needed, Pipe will be pre- threaded to required lengths
4. Please do not bring torches

## Equipment and Materials Supplied by Contestant:

1. All students must have a one-page, typewritten resume
2. Copper tubing cutter with reamer
3. Tape measure
4. #2 Pencil, pen, sharpie marker
5. Channel locks
6. 2 - Pipe wrenches (12", 14", are suitable)
7. 3/4 " PVC pipe cutter needed
8. Safety glasses and gloves

## Scope of Contest - (*Defined by the National Competition Guidelines*)

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 level. The competition will evaluate each contestant's preparation for employment and recognize outstanding students for excellence and professionalism in the field of residential plumbing.

### Knowledge Performance

The contest will include a written knowledge exam assessing knowledge of the industry standards.

### Skill Performance

The contest includes three stations designed to test the ability to perform jobs or skills selected from the following list of competencies.

### Contest Guidelines

1. **Copper piping** - This project will test the quality of the solder joints and also the accuracy of the contestant's measurements. The joints will be tested under water pressure for leaks.
2. **Assemble black iron piping** – This project will test the contestant's knowledge of fitting allowances and their ability to read the fitting charts. Joining of black iron piping by hand will be a major part of this competition. The joints will be tested under water pressure for leaks.
3. **PVC Piping** - This project will test the contestant's ability to join PVC piping and calculate off set and fitting allowances, and the ability to use primer and cement neatly.
4. **Theory test** -This will be a 20 question multiple choice test. The test includes basic plumbing knowledge and the ability to read rough-in sheets and charts.
5. **Time** to complete all tasks will be factored into the score.
6. **Total amount of time** expected for the competition is approximately 2.5 hrs.

### **Plumbing Competition Rating Sheet**

<b>Items evaluated</b>	<b>Possible Points</b>	<b>Contestant Score</b>
Written Test - 15 minutes	20	
Black Iron Piping - 60 minutes	100	
Copper Piping - 45 minutes	100	
PVC Piping - 30 minutes	100	
Resume Penalty	-10	
Safety Penalty	-10	
Clothing Penalty	-5	
<b>Total Points</b>	<b>320</b>	

*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.*