

PHCC Educational Foundation



Do-It-Yourself Plumbing Apprentices Contest

Basic Guidelines for Planning an Apprentice Contest

1. Find volunteers! Members, teachers, technicians and inspectors all make good volunteers.
2. Designate a chairman or coordinator to run the contest. The role of chairman or coordinator can be done by anyone who is willing to volunteer and dedicate the time it takes to plan and administer the contest. He or she should have some plumbing background as well as the ability to answer technical questions about the contest.

The chairman/coordinator is responsible for delegating all necessary job tasks. His/her decisions are final.

Normally, the chairman/coordinator is the state or local apprenticeship committee chairman or an instructor at an apprentice school.

3. Set up a timeline or schedule of events.
4. Design the test and/or contest you will use. A sample contest has been provided at the end of this book.
5. Make a list of contest rules for the apprentices to follow. Provide this information with the registration form.
6. Make an agenda for the apprentices to follow. Include registration deadlines, time to arrive at the contest site and time of the awards presentation.
7. Find students to compete. Ideally, they should be PHCC apprentices and/or SkillsUSA students. You can have as few as three and as many as you feel you can handle.
8. Find a location for the contest. Some suggestions include outside under a tent, inside an exhibition hall, in a member's shop or at the apprentice school. If you use an exhibition hall, please note that you may have to obtain a permit from the local fire marshal.
9. Build your modules or work stations. The modules/work stations should be built to match the contest you use.
10. Talk with local suppliers and representatives about donating materials and prizes (tools, money, trophies, plaques, etc.) for your contest. Ask for everything from the materials take off list and seek sponsors to help fund the event.
11. Find at least three judges to help score the contest. Choose inspectors or industry experts who have no affiliation with the apprentices.
12. Make arrangements for apprentices to stay on site if they are coming from out of town. Make arrangements for volunteers who are not from your area.

13. Promote the contest! Have signs made recognizing your sponsors. Have people come to watch. Send out a press release announcing the contest ahead of time.
14. Arrange for a dumpster for trash once the contest is over.
15. Run the contest. This is the fun part!
16. Break down the contest once the apprentices are finished and judging is complete. Remove all materials, load the modules/work stations for storage, and clean the area.
17. Find a storage location for the modules/work stations so they can be reused in future years.
18. At the awards presentation, be sure to recognize all volunteers and sponsors. Recognize all of the contestants and then present the winners – 1st, 2nd and 3rd place.

Apprentice Contest FAQs

Q: How long does it take to plan a contest?

A: Normally, it takes four to six months to plan a contest. However, it can be done in four weeks if you have dedicated help!

Q: How much does it cost? How much should we budget to have a contest?

A: The cost depends on the number of apprentices competing and the site you select for the contest. The two biggest expenses are the materials to build the modules/work stations and the space (tent or hall) you need for the contest.

Q: Do the students have to pay to compete?

A: That is up to you. If your budget needs help, you should charge to offset the cost. Generally, employers and contest sponsors cover most of the expense.

Q: Where is the best place to hold the contest?

A: It is a matter of preference. One option is to hold your contest in conjunction with your state convention. Another is to hold your contest in conjunction with the SkillsUSA state competition for your state. A good rule-of-thumb is to put the contest in a place where it is easily accessible for the largest audience possible.

Q: Can anyone watch the apprentices compete?

A: YES! Promote this as much as possible. Have friends, family, wives and other employees come to watch. This is a big event that can help your local apprentice program. It gives the apprentices an incentive to do quality work and to be competitive! See if you can get trade press or local press coverage.

Recommended Contest Policies

Purpose of the Plumbing Apprentice Contest: The purpose of the contest is to generate excitement about the plumbing trade and to provide outstanding students with an opportunity to demonstrate their skills before an international audience.

Overview:

The Plumbing Apprentice Contest offers plumbing apprentices a unique opportunity to demonstrate their knowledge and skills in a practical, hands-on event that is fun and exciting for everyone involved. The Plumbing Apprentice Contest is held in conjunction with the {your event}.

Contestants have the opportunity to take in the full convention experience by attending the {state or local's} largest event of the year, complete with peer-to-peer networking and exposure to the latest technologies and products available to the industry.

{Your organization}, through the generous support of the industry's leading manufacturers and suppliers, provides the basic materials required for the contest. Contestants, typically with sponsorship support from their associations and/or employers, are responsible for travel and lodging expenses. Contestants are also required to provide their own basic hand tools. Convention registration is provided to contestants at no charge.

Contest Scope:

Contestants demonstrate their ability to perform jobs or skills selected from the following list of competencies:

Tools and Equipment

- Measure lines to the nearest sixteenth of an inch with a ruler/tape measure
- Identify and use basic hand tools common to the plumbing trade
- Determine measurements from a manufacturer's specifications
- Determine rough-in locations
- Establish grade lines for installing plumbing

Systems Rough-in: Drainage Systems

- Identify fittings required on a drainage system
- Calculate the slope required for building sewer lines
- Install soil and waste back vents
- Install cleanouts on drains
- Rough-in waste lines and vents for built-in lavatories
- Measure, cut and join cast-iron pipe to a cast-iron fitting no-hub
- Rough-in waste lines and vents for bathtubs
- Secure horizontal and vertical lines of pipe to wood, metal and masonry surfaces
- Fabricate vinyl shower pan

Systems Rough-in: Water Systems

- Rough-in water supply lines for showers
- Rough-in water supply lines for water closets
- Conduct water pressure tests on a water supply system

Eligibility – Who May Compete:

1. Participants must be employed by an active PHCC member whose dues have been received at the {your state or local} office
2. All participants must be 3rd year apprentices or higher during 2014 and shall not have attained journeyman status. Exception: apprentices graduating in 2014 are eligible to compete. {You can tailor this to local needs.}
3. {Employers/schools} may enter multiple contestants, based on space availability.
4. Any exceptions to these eligibility requirements will be determined by the contest chairman.
5. Contestants are required to provide an interpreter if translation from English is necessary.

Contestant Registration:

Only properly registered participants may compete in the Plumbing Apprentice Contest. Proper registration requires:

1. Submitting an official registration form with payment by the due date listed on the form.
2. Provisions may be made for alternates to be officially registered in the contest. The entry of individuals who are officially registered as alternates will be considered as a change in a contestant's registration, and such alternates may compete in the Plumbing Apprentice Contest upon notification of the contest chairman at least 24 hours prior to the opening of the competition.

Observer Policies:

1. A roped or otherwise marked area will be designated for observers. No observers, including advisors, will enter the designated contest areas without approval from the contest chairman or his designee.
2. Observers are not permitted to talk with or gesture to contestants.
3. Judges and contest committee members have the authority to disqualify contestants who accept assistance from observers.
4. No observers will be permitted in the contest holding room or at the pre-contest orientation meeting unless specifically invited by the contest chairman or his designee.

Judging Policies:

1. Judges for the Plumbing Apprentice Contest will be selected by the contest committee. Included on the judging panel will be industry experts, contractors and other qualified individuals who are able to objectively evaluate the contestants' work.
2. Judges shall not have any previous contact or relationship with any of the contestants participating in the Plumbing Apprentice Contest. Any judge who has previous knowledge of a contestant will be excused from the contest.
3. All judges' decisions are final.

Contest Scoring:

1. Scoring for the Plumbing Apprentice Contest will be coordinated by the contest chairman.
2. A written tie-breaker test will be administered during the pre-contest orientation meeting. Scores from this test will only be used in the event of a tie for first, second or third place in the contest based on numerical score totals for the skills captions of the contest.
3. Speed in completing the project does not earn additional points toward the overall score. However, completion by the end of the contest time limit does have an effect on scoring.
4. Proper safety practices, including wearing of proper work attire and safety glasses, are required.
5. Numerical scoring and final contest ranking of contestants will not be released under any circumstances. The only ranking that will be released is the placement of the first, second and third place winners.
6. First, second and third place winners will be announced at {name the date, time and location}.

Tools Supplied by Each Contestant

Each contestant is required to provide the following tools for his/her use in the Plumbing Apprentice Contest. It is the responsibility of the contestant to coordinate the shipping and delivery of his tools to the contest site.

1. 8' steel tape measure
2. Copper tubing cutter with reamer
3. Arc joint pliers (channel lock type)
4. 8" or 10" adjustable wrench
5. Set of assorted slotted and Phillips screwdrivers
6. Torpedo Level
7. 14-16 oz. Claw hammer
8. Plastic (PVC) pipe reamer or suitable knife
9. Suitable saw to cut PVC pipe\
10. Hacksaw
11. Copper cleaning tool (inside and outside)
12. Roll of plumber's emery cloth
13. 12" architect's scale
14. 2H pencil and eraser
15. 12" straightedge or drafting triangle
16. Torque wrench for no-hub clamps
17. Straight tin snips
18. 5/16" nut driver
19. Battery-operated 3/8" drill
20. Allen Wrench
21. Clear Safety Glasses

Interpretation of Contest Policies and Rules:

Interpretations of the contest policies and rules, if necessary, will be made by the contest chairman. All decisions of the chairman are final.

How to Register for the Contest

Complete registration materials will be available on the {your association} web site {URL address} beginning on {date materials will be available}. Included in the registration materials will be the contest policies, a draft schedule of the contest and related events, and a contestant application form. Contestant application forms must be completed and submitted with payment to the address listed on the form by {your application deadline}.

Based on the eligibility requirements listed above, the contest chairman will determine whether a candidate is eligible to participate in the contest. Candidates will be notified of the status of their application by {date apprentices will receive confirmation of their participation}.

Recommended Prize List

Following is a list of recommended prizes to seek for your contestants. Ideally, the same prize package should be offered for first, second and third place in the contest. Cash prizes should vary based on placement. It is not necessary to obtain all items on the list. A good prize package would include one power tool, a tool box and lots of small tools to go in the tool box, along with cash prizes.

- Sawzall w/ case
- Right angle drill w/ case
- 3/8" heavy duty variable speed drill w/ case
- 14" pipe wrench
- 18" pipe wrench
- 6" adjustable wrench
- 12" adjustable wrench
- 10"-17" basin wrench
- No hub torque wrench
- PVC saw w/ blades
- 1/8"-1" tubing cutter
- Midget cutter
- 16 oz. claw hammer
- Tool box
- Channel Lock pliers
- Utility knife
- Torpedo level
- Torch kit
- Drill bit kit
- Internal pipe wrench
- Allen wrench set
- Flaring tool
- Vise grip set
- Cash prizes

Sample Contest Itinerary

{Night Before the Contest}

6:00pm Contestant Orientation Meeting (Mandatory)
{Location}

{Contest Day}

6:45am Contestant Arrival at Contest Site
{Location}

7:00am Approximate Contest Start Time

12:00 – 12:30pm Lunch Break

4:30pm Scheduled Contest End (subject to change by contest chairman)

5:30pm Judging Complete; Apprentices Return to Area for Contest Teardown

8:00pm {Event where awards are presented}
(Awards will be presented to contest winners at this event)

Important Note: Contestants are required to participate in the contest teardown which occurs once the judges have completed their review. We need your help in cleaning up after the contest. This can be done in an hour or less with good participation. Also, participation by all contestants is required at the {awards event}, where the contest winners will be recognized.

Contestants who do not participate in the entire contest event – contestant orientation meeting, contest, teardown and {awards event} - will not finish among the top three and will be ineligible for the prize packages.

Sample Registration Form

Plumbing Apprentice Contest
Sponsored by **{Your Organization}**
{Date and Time}
{Location}

Contestant Application Form

Instructions: Please send the completed Contestant Application Form by **{application deadline}**, along with the \$**{amount}** registration fee, to **{Contest Name}**, **{Address}**, **{City, State, Zip}** or fax to **{fax number}**.

Contestant Name: _____ Year of Apprenticeship: _____

Address: _____ Shirt/Jacket Size: _____

City/State/Zip: _____

Phone: _____ Fax: _____ E-mail: _____

Name of Apprenticeship Training Program: _____

Employer Company: _____

Address: _____

City/State/Zip: _____

Phone: _____ Fax: _____ E-mail: _____

Employer Contact Person: _____ Title: _____

PHCC Member Sponsor's Name: _____

Name and Phone Number of Local News Media: _____

Questions? Please contact **{name and contact info}**.

Sample Confirmation Letter for Competing Apprentices

{Date}

{Contestant Name}

{Address}

{City, State, Zip}

Dear {Contestant Name}:

Please accept this letter as your confirmation for the Plumbing Apprentice Contest sponsored by {your organization}. Also, please take a moment to review the Contest Itinerary (enclosed) to help plan your time at the event. We appreciate your participation and look forward to a great contest!

Contestant Orientation Meeting

We have scheduled a mandatory meeting for all contestants on {date} in {exact location}. This meeting will start at {time}, offering contestants an opportunity to ask questions and make final preparations for the contest.

Contest Date/Time

The contest will be held on {date} at {exact location}. You will receive instructions and a set of specifications when you arrive at the contest site.

Please bring your tools to the contest area by {time}. The contest will begin promptly at {time}. The contest will end at {time}; however, please note that the contest chairman may, at his sole discretion, allow additional time for the contest.

All contestants are required to report back to the contest area at the time designated by the contest chairman for teardown.

Awards

Awards for the Plumbing Apprentice Contest will be presented at {event} which starts on {date and time}. All contestants must attend this event!

Housing & Travel

Sponsoring PHCC chapters and/or employers are responsible for making contestants' accommodations, so please be sure to verify your hotel reservation in advance. Please confirm with your sponsor to ensure that your room reservation has been made. {Tailor this to meet your local needs.}

Sincerely,

{Contest Chairman}

cc: {Apprentice's Employer/Sponsor}

Sample Contest Rules

1. Contestants must report to the mandatory pre-contest orientation prior to the contest, as scheduled in the program, for instructions from the contest chairman.
2. Participants must meet clothing requirements for the contest.
 - A. The penalty for contestants who do not satisfy the dress requirements will be a maximum of 5 percent of the total possible contest points.
 - B. Contestants must wear leather work boots or safety shoes and work clothing or company uniform during the competition or be subject to a maximum penalty of 5 percent of total points. Hat or cap is optional.
 - C. No canvas, vinyl, plastic or leather athletic-type of shoes can be worn. Sandals or open-toed shoes are not permitted. Contestants may be disqualified where improper footwear constitutes a health and/or safety hazard.
 - D. Safety glasses are specified to be worn at all times during the contest. Glasses must have side shields or goggles must be worn. Prescription safety glasses must also have side shields or must be covered with goggles.
 - E. Contestants with long hair that poses a possible safety or sanitary hazard must wear hair containment devices or hairnets.
3. During the contest, participants must work independently without assistance from judges, teachers, fellow students, or observers. Contestants may be disqualified on the spot for receiving such assistance.
4. Participants who do not bring required tools, as specified in the contest regulations, will be assessed penalty points by the judges. The contest chairman may, at his discretion, furnish the required item(s) but must assess a 2-point penalty per item.
5. All guidelines in the contest booklet provided must be followed.

Sample Observer Rules

To ensure a fair contest, the following rules regarding observer behavior will be in effect for the duration of the event. Failure to comply with these rules may result in the disqualification of the contestant.

1. A roped or otherwise marked area will be designated for observers.
2. No observers, including advisors/instructors, will enter the designated contest areas without the approval of the Contest Chairman.
3. No observers will talk or gesture to contestants.
4. Judges will disqualify contestants who accept assistance from observers.

NOTE: It is highly recommended that you post the observer rules in prominent locations around the contest site perimeter.

Judging Criteria DWV Piping

- 1. Piping installed according to plan and isometric provided** – 10 points maximum
 - a. 10 points if piping is installed according to plan and isometric provided.
 - b. 5 points if piping is installed partially according to plan and isometric provided.
 - c. 0 points if piping is not installed according to plan and isometric provided.

- 2. Water closet floor flange securely fastened to floor** – 10 points maximum
 - a. 10 points if securely fastened to floor.
 - b. 5 points if fastened, but not securely.
 - c. 0 points if floor flange is not fastened to the floor.

- 3. Extra fittings requested or used** – 10 points maximum
 - a. 10 points if contestant did NOT request or use extra fittings.
 - b. 5 points if contestant requested or used 1 extra fitting.
 - c. 0 points if contestant requested or used 2 or more extra fittings.

- 4. Correct installation of NHCI fittings** – 15 points maximum
 - a. 15 points if contestant correctly installed all NHCI fittings.
 - b. 10 points if contestant incorrectly installed 1 NHCI fitting.
 - c. 5 points if contestant incorrectly installed 2 NHCI fittings.
 - d. 0 points if contestant incorrectly installed 3 or more NHCI fittings.

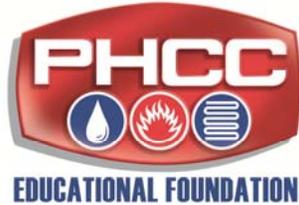
- 5. Correct use of primer on joints** – 10 points maximum
 - a. 10 points if no excess primer is evident on joints.
 - b. 5 points if excess primer is evident on 1-2 joints.
 - c. 0 points if excess primer is evident on 3 or more joints.

- 6. Proper pitch of piping** – 10 points maximum
 - a. 10 points if piping is properly pitched according to instructions (1/8" to 1/4" per foot fall).
 - b. 5 points if piping pitch is between 0" and 1/8" per foot fall or 1/4" and 3/8" per foot fall.
 - c. 0 points if piping pitch is less than 0" per foot fall or greater than 3/8" per foot fall.

- 7. Proper support of piping** – 10 points maximum
 - a. 10 points if cast iron piping is supported with both clevis hangers and riser clamps as instructed.
 - b. 0 points if piping is not supported as instructed.

- 8. Proper torque of NHCI couplings** – 10 points maximum
- 10 points if all NHCI couplings are properly torqued.
 - 5 points if 1-3 NHCI couplings are not properly torqued.
 - 0 points if more than 3 NHCI couplings are not properly torqued.
- 9. Proper drainage fittings used on NHCI installation** – 5 points maximum
- 5 points if contestant used proper drainage fittings on NHCI installation.
 - 0 points if contestant did not use proper drainage fittings on NHCI installation.
- 10. Completion** – 10 points maximum
- 10 points if contestant completed all required joints.
 - 7 points if contestant did not complete 1-2 joints.
 - 4 points if contestant did not completed 3-4 joints.
 - 0 points if contestant did not complete 5 or more joints.
- 11. Leak-free joints** – 20 points maximum
- 20 points if all joints are leak-free.
 - 10 points if 1 joint leaks.
 - 0 points if 2 or more joints leak.

MAXIMUM SCORE: 130 POINTS.



2014 Plumbing Apprentice Contest Contestant Score Sheet DWV Piping

Contestant # _____

Judge's Initials: _____

Criteria	Scoring Range	Points Awarded
Piping installed according to plan and isometric provided	0 to 10	
Water closet floor flange securely fastened to floor	0 to 10	
Extra fittings requested or used	0 to 10	
Correct installation of NHCI fittings	0 to 15	
Correct use of primer on joints	0 to 10	
Proper pitch of piping	0 to 10	
Proper support of piping	0 to 10	
Proper torque of NHCI couplings	0 to 10	
Proper drainage fittings used on NHCI installation	0 to 5	
Completion	0 to 10	
Leak-free joints	0 to 20	
TOTAL	0 to 130	

NOTE: Maximum score is 130. No fractional points to be given.

Judging Criteria Fixtures & Dimensions

- 1. Vent stack termination – 10 points maximum**
 - a. 10 points vent stack termination is according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 5 points if vent stack measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 0 points if vent stack measurement is off by more than $\frac{1}{2}$ ".

- 2. Vent lines installed plumb – 10 points maximum**
 - a. 10 points if vent lines are installed plumb and according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 5 points if vent lines measurements are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 0 points if vent line measurements are off by more than $\frac{1}{2}$ ".

- 3. Shower valve installed according to plan – 10 points maximum**
 - a. 10 points if shower valve is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 7 points if shower valve or riser dimension is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 4 points if both dimensions are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - d. 0 points if both dimensions are off by more than $\frac{1}{2}$ ".

- 4. Lavatory piping installation – 10 points maximum**
 - a. 10 points if lavatory piping is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 7 points if either water centerline or center-to-center measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 4 points if both measurements are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - d. 0 points if both measurements are off by more than $\frac{1}{2}$ ".

- 5. Lavatory fixture installation – 10 points maximum**
 - a. 10 points if lavatory is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 7 points if either rim height or centerline measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 4 points if both rim height or centerline measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - d. 0 points if both measurements are off by more than $\frac{1}{2}$ ".

- 6. Lavatory alignment – 10 points maximum**
 - a. 10 points if lavatory is installed level and plumb.
 - b. 5 points if lavatory is installed level, but not plumb (or vice versa).
 - c. 0 points if lavatory is neither level nor plumb.

- 7. Water closet piping installation** – 10 points maximum
- 10 points if water closet piping is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - 7 points if either measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 4 points if both measurements are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 0 points if both measurements are off by more than $\frac{1}{2}$ ".
- 8. Water closet fixture installation** – 10 points maximum
- 10 points if water closet is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - 7 points if either measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 4 points if both measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 0 points if both measurements are off by more than $\frac{1}{2}$ ".
- 9. Water closet alignment** – 10 points maximum
- 10 points if water closet is installed level and plumb.
 - 5 points if water closet is installed level, but not plumb (or vice versa).
 - 0 points if water closet is neither level nor plumb.
- 10. Floor drain dimensions** – 10 points maximum
- 10 points if floor drain is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - 5 points if floor drain measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 0 points if floor drain measurement if off by more than $\frac{1}{2}$ ".
- 11. Shower valve dimensions** – 10 points maximum
- 10 points if shower valve is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - 7 points if either measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 4 points if both measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 0 points if both measurements are off by more than $\frac{1}{2}$ ".
- 12. Shower arm dimensions** – 10 points maximum
- 10 points if shower arm is installed according to plan and drawings (must be within $\frac{1}{4}$ ").
 - 7 points if either measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 4 points if both measurement is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - 0 points if both measurements are off by more than $\frac{1}{2}$ ".

MAXIMUM SCORE: 120 POINTS.



2014 Plumbing Apprentice Contest Contestant Score Sheet Fixtures & Dimensions

Contestant # _____

Judge's Initials: _____

Criteria	Scoring Range	Points Awarded
Vent stack termination	0 to 10	
Vent lines installed plumb	0 to 10	
Shower valve installed according to plan	0 to 10	
Lavatory piping installation	0 to 10	
Lavatory fixture installation	0 to 10	
Lavatory alignment	0 to 10	
Water closet piping installation	0 to 10	
Water closet fixture installation	0 to 10	
Water closet alignment	0 to 10	
Floor drain dimensions	0 to 10	
Shower valve dimensions	0 to 10	
Shower arm dimensions	0 to 10	
TOTAL	0 to 120	

NOTE: Maximum score is 120. No fractional points to be given.

Judging Criteria Water Supply

- 1. Hot and cold water mains in correct location – 10 points maximum**
 - a. 10 points if hot and cold mains are in correct location according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 7 points if one dimension is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 4 points if two dimensions are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - d. 0 points if measurements are off by more than $\frac{1}{2}$ ".

- 2. Lavatory supplies in correct location – 10 points maximum**
 - a. 10 points if lavatory supplies are in correct location according to plan and drawings (must be within $\frac{1}{4}$ ").
 - b. 7 points if one dimension is off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - c. 4 points if two dimensions are off by $\frac{1}{4}$ " to $\frac{1}{2}$ ".
 - d. 0 points if measurements are off by more than $\frac{1}{2}$ ".

- 3. Water closet connected to cold water line – 5 points maximum**
 - a. 5 points if water closet is connected to cold water line.
 - b. 0 points if water closet is connected to hot water line or is not connected.

- 4. Fitting use matches plan – 5 points maximum**
 - a. 5 points if all fittings necessary to match isometric were used.
 - b. 2 points if contestant missed one fitting.
 - c. 0 points if contestant missed more than one fitting.

- 5. Extra fittings requested or used – 10 points maximum**
 - a. 10 points if contestant did NOT request of use extra fittings.
 - b. 5 points if contestant requested or used 1 extra fitting.
 - c. 0 points if contestant requested or used 2 or more extra fittings.

- 6. Correct use of solder on joints – 10 points maximum**
 - a. 10 points if no excess solder is evident on joints.
 - b. 5 points if excess solder is evident on 1-2 joints.
 - c. 0 points if excess solder is evident on 3 or more joints.

- 7. Correct use of flux on joints – 10 points maximum**
 - a. 10 points if no excess or burnt flux is evident on joints.
 - b. 5 points if excess or burnt flux is evident on 1-2 joints.
 - c. 0 points if excess or burnt flux is evident on 3 or more joints.

- 8. Tubing prepared properly** – 10 points maximum
- 10 points if contestant reams tube ends prior to soldering or press-connecting.
 - 0 points if contestant does not ream tube ends prior to soldering or press-connecting.
- 9. Correct preparation of press-connect joints** – 10 points maximum
- 10 points if contestant chamfers all joints prior to press-connecting.
 - 5 points if contestant fails to chamfer 1-2 press-connect joints.
 - 0 points if contestant fails to chamfer 3 or more press-connect joints.
- 10. Correct connection of press-connect joints** – 10 points maximum
- 10 points if contestant properly crimps all joints.
 - 5 points if contestant improperly crimps or fails to crimp 1-2 joints.
 - 0 points if contestant improperly crimps or fails to crimp 3 or more joints.
- 12. Completion** – 10 points maximum
- 10 points if contestant completed all required joints.
 - 7 points if contestant did not complete 1-2 joints.
 - 4 points if contestant did not complete 3-4 joints.
 - 0 points if contestant did not complete 5 or more joints.
- 13. Leak-free joints** – 20 points maximum
- 20 points if all joints are leak-free.
 - 10 points if 1 joint leaks.
 - 0 points if 2 or more joints leak.

MAXIMUM SCORE: 120 POINTS.



2014 Plumbing Apprentice Contest Contestant Score Sheet Water Supply

Contestant # _____

Judge's Initials: _____

Criteria	Scoring Range	Points Awarded
Hot and cold water mains in correct location	0 to 10	
Lavatory supplies in correct location	0 to 10	
Water closet connected to cold water line	0 to 5	
Fitting use matches plan	0 to 5	
Extra fittings requested or used	0 to 10	
Correct use of solder on joints	0 to 10	
Correct use of flux on joints	0 to 10	
Tubing prepared properly	0 to 10	
Correct preparation of press-connect joints	0 to 10	
Correct connection of press-connect joints	0 to 10	
Completion	0 to 10	
Leak-free joints	0 to 20	
TOTAL	0 to 120	

NOTE: Maximum score is 120. No fractional points to be given.

Judging Criteria Safety & Toolbox

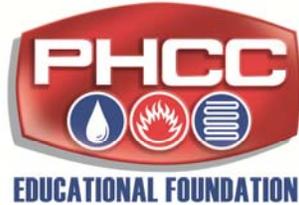
- 1. Wear safety glasses – 10 points maximum**
 - a. 10 points if glasses continually worn.
 - b. 5 points if contestant needs to be reminded once.
 - c. 0 points if contestant needs to be reminded more than once or glasses not worn.

- 2. Wear proper contest attire – 10 points maximum**
 - a. 10 points if contestant is wearing all proper contest attire including sponsor shirt and safety shoes and hair is tied back properly if applicable.
 - b. 0 points if contestant fails to meet attire requirements for contest.

- 3. Maintaining a safe work area – 10 points maximum**
 - a. 10 points if contestant keeps work area neat and safe throughout contest.
 - b. 5 points if contestant must be reminded about safe work area practices one time.
 - b. 0 points if contestant does not follow proper safety protocol or must be reminded more than once about safe practices.

- 4. Toolbox preparation – 30 points maximum**
 - a. 30 points if contestant has provided all tools on the required tool list.
 - b. 20 points if contestant is missing 1 tool from the required tool list.
 - c. 10 points if contestant is missing 2 tools from the required tool list.
 - d. 0 points if contestant is missing 3 or more tools from the required tool list.

MAXIMUM SCORE: 60 POINTS.



2014 Plumbing Apprentice Contest Contestant Score Sheet Safety & Toolbox

Contestant # _____

Judge's Initials: _____

Criteria	Scoring Range	Points Awarded
Wear safety glasses	0 to 10	
Wear proper contest attire	0 to 10	
Maintaining a safe work area	0 to 10	
Toolbox preparation	0 to 30	
TOTAL	0 to 60	

NOTE: Maximum score is 60. No fractional points to be given.