



# PLUMBER/SPRINKLER FITTER FUNDAMENTALS

Youth Apprenticeship

## PLUMBER/SPRINKLER FITTER FUNDAMENTALS

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Plumber/Sprinkler Fitter youth apprentices gain skills related to the use of plumbing safety, drawings and blueprints, materials, tools, materials, and general worksite procedures. Apprentices must adhere to industry safety and security standards.

**Length of Apprenticeship:** One Year or two years

## COMPETENCIES

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**Year 1:** Plumber/Sprinkler Fitter youth apprentices must complete a **total of 15** competencies. **Fourteen** of the 15 Plumber/Sprinkler Fitter competencies listed below must be complete. Employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment. Year 1 competencies are completed with employer guidance.

**Youth Apprentices must also complete the following during Year 1:**

- First Aid Certification
- OSHA 10 or 30

**Year 2:** Plumber/Sprinkler Fitter youth apprentices must complete a **total of 15** competencies. **Fourteen** of the 15 Plumber/Sprinkler Fitter competencies listed below must be complete. Employers can substitute **1** competency with one other occupationally appropriate skill. That skill should be added to the competency list for assessment. Competencies are completed with minimal employer guidance. Substitution must be added to the competency list for assessment.

**Select construction type and circle the applicable year:**

- Residential completed during Year: One and/or Two
- Commercial completed during Year: One and/or Two

Note that where necessary, skills can be simulated.

Plumber/Sprinkler Fitter Competencies
<ol style="list-style-type: none"><li>1. Follow safety procedures</li><li>2. Read construction drawings and plans</li><li>3. Interpret symbols and procedures</li><li>4. Contribute to a job task plan</li><li>5. Work as a member of a construction team</li><li>6. Prepare work area for construction</li><li>7. Select construction materials</li></ol>

8. Use hand and light duty tools
9. Use power tools and equipment
10. Perform materials handling
11. Install materials per job specifications
12. Perform construction measurements
13. Maintain a clean and safe work area
14. Clean up job site
15. Practice quality craftsmanship

## **REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES**

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Some of the related instruction courses can bridge into the following registered apprenticeship:

- Plumber
- Sprinkler Fitter

## **POST-SECONDARY PATHWAY OPPORTUNITIES**

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There are several post-secondary pathway opportunities in this area. Following is partial list.



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Youth Apprenticeship  
ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

## YOUTH APPRENTICE INFORMATION

<b>Youth Apprentice Name</b>	
<b>YA Coordinator</b>	<b>YA Consortium</b>
<b>School District</b>	<b>High School Graduation Date</b>

## REQUIREMENTS

### One Year

Youth Apprentices completing a one-year apprenticeship must complete ALL the items listed below. Check completed areas.

- Competency checklist
- Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate
- Related instruction equal to 1 high school credit or at least 3 college credits
- Minimum of 450 work hours

### Two Year

Youth Apprentices completing a two-year apprenticeship must complete ALL the items listed below. Check completed areas.

- Competency checklist
- Employability Skills checklist (in this job book) or the DPI Employability Skills Certificate each year
- Related instruction equal to 2 high school credit or at least 6 college credits
- Minimum of 900 work hours

## HOURS

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Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

### Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays this behavior

### PLUMBER/SPRINKLER FITTER FUNDAMENTALS

Plumber/Sprinkler Fitter Fundamental Skills	Rating		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>1. Follows safety procedures</b> <ul style="list-style-type: none"> <li>select and use appropriate clothing and personal protective equipment (PPE)</li> <li>comply with job site safety and security rules and regulations</li> <li>maintain a clean and organized work environment</li> <li>identify and report unsafe job conditions</li> <li>report injuries and damage to property</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Reads construction drawings and plans</b> <ul style="list-style-type: none"> <li>relate drawing to job task</li> <li>interpret elements and symbols</li> <li>locate worksite features on a construction plan</li> <li>convert scales measurements to full measurements</li> <li>translate specifications to work requirements</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. Interprets symbols and procedures</b> <ul style="list-style-type: none"> <li>explain the role of drawings and specifications</li> <li>identify drawings and symbols used on a construction drawing</li> <li>apply information from drawings in construction activities</li> <li>interpret specifications appearing on construction drawings</li> <li>interpret and convert measurements in terms of actual dimensions</li> <li>explain specifications in terms of work requirements</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. Contributes to a job task plan</b> <ul style="list-style-type: none"> <li>setup and prepare tools and equipment for safe operation</li> <li>determine the scope of work</li> <li>respect contractual relationships</li> <li>apply scheduling practices</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Works as a member of a construction team</b> <ul style="list-style-type: none"> <li>offer and request assistance</li> <li>follow company policies and procedures</li> <li>learn from other team members</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>6. Prepares work area for construction</b> <ul style="list-style-type: none"> <li>remove debris</li> <li>clean up sites</li> <li>dispose of waste and hazardous materials</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7. Selects construction materials</b> <ul style="list-style-type: none"> <li>consider usefulness and portability</li> <li>consider minimizing cost</li> <li>consider performance goals</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. Uses hand and light duty tools</b> <ul style="list-style-type: none"> <li>wear appropriate personal protective equipment (PPE)</li> <li>select the correct tool for the job</li> <li>inspect tool</li> <li>operate the tool safely</li> <li>perform routine maintenance on hand tools</li> <li>store tool</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9. Uses power tools and equipment</b> <ul style="list-style-type: none"> <li>wear appropriate personal protective equipment (PPE)</li> <li>select the correct tool for the job</li> <li>inspect tool</li> <li>operate the tool safely</li> <li>perform routine maintenance on power tools</li> <li>store tool</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>10. Performs materials handling</b> <ul style="list-style-type: none"> <li>identify materials necessary to complete the task</li> <li>conserve resources and materials</li> <li>retrieve equipment and materials needed</li> <li>load and unload materials, tools, equipment, and supplies</li> <li>lift, position, and secure materials during installation</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11. Installs materials per job specifications</b> <ul style="list-style-type: none"> <li>retrieve equipment and materials needed</li> <li>unload materials, tools, equipment, and supplies</li> <li>lift, position, and secure materials during installation</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>12. Performs construction measurements</b> <ul style="list-style-type: none"> <li>select measuring tool</li> <li>read measurement accurately</li> <li>scale proportions</li> <li>convert units of measurement</li> <li>estimate resources, materials, and supplies needed for a project</li> <li>record measurements</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>13. Maintains a clean and safe work area</b> <ul style="list-style-type: none"> <li>• clean and maintain materials and tools</li> <li>• clean, organize, and put away items in the work area</li> <li>• store materials and tools <i>after use</i></li> <li>• follow facility procedures for clean-up and shut down</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>14. Cleans up job site</b> <ul style="list-style-type: none"> <li>• clean and maintain materials and tools</li> <li>• store materials and tools <i>after use</i></li> <li>• follow facility procedures for clean-up and shut down</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>15. Practices quality craftsmanship</b> <ul style="list-style-type: none"> <li>• inspect and test work to determine quality</li> <li>• monitor throughout for safety and quality</li> <li>• identify impact of building codes on quality of work</li> <li>• verify work meets job expectation</li> </ul>	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Competency Substitute</b> (if you replaced a competency above, note the competency and rating)	<b>Year 1 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Year 2 Rating</b>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>			

## RELATED INSTRUCTION

Indicate which related instruction courses the youth apprentice completed:

Course Title	Credits	Location