**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3406: HAND AND POWER TOOLS**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students demonstrate maintenance and use of hand tools and power tools to safely complete various plumbing jobs.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

|  |  |
| --- | --- |
| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3406: HAND AND POWER TOOLS**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. use hand tools common to the pipe trades** |  |  |  |
| **2. use power tools common to the pipe trades** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3406: HAND AND POWER TOOLS**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. use hand tools common to the pipe trades** | | | | | | |
| 1.1 identify hand tools used in the pipe trades | I can consistently identify hand tools used in the pipe trades. | I can usually identify hand tools used in the pipe trades. | | I sometimes need assistance to identify hand tools used in the pipe trades. | I often need assistance to identify hand tools used in the pipe trades. | I have not yet provided evidence of this performance task. |
| 1.2 describe the use of hand tools | I can consistently describe the use of hand tools. | I can usually describe the use of hand tools. | | I sometimes need assistance to describe the use of hand tools. | I often need assistance to describe the use of hand tools. | I have not yet provided evidence of this performance task. |
| 1.3 describe the maintenance of hand tools | I can consistently describe the maintenance of hand tools. | I can usually describe the maintenance of hand tools. | | I sometimes need assistance to describe the maintenance of hand tools. | I often need assistance to describe the maintenance of hand tools. | I have not yet provided evidence of this performance task. |

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| --- | --- | --- | --- | --- | --- |
| **2. use power tools common to the pipe trades** | | | | | |
| 2.1 identify power tools used in the pipe trades | I can consistently identify power tools used in the pipe trades. | I can usually identify power tools used in the pipe trades. | I sometimes need assistance to identify power tools used in the pipe trades. | I often need assistance to identify power tools used in the pipe trades. | I have not yet provided evidence of this performance task. |
| 2.2 describe the use of power tools | I can consistently describe the use of power tools. | I can usually describe the use of power tools. | I sometimes need assistance to describe the use of power tools. | I often need assistance to describe the use of power tools. | I have not yet provided evidence of this performance task. |
| 2.3 describe the maintenance of power tools | I can consistently describe the maintenance of power tools. | I can usually describe the maintenance of power tools. | I sometimes need assistance to describe the maintenance of power tools. | I often need assistance to describe the maintenance of power tools. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3411: WELDED PIPE AND FITTINGS**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students identify and describe welded pipe and fittings.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3411: WELDED PIPE AND FITTINGS**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. construct welded and flanged piping system components** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3411: WELDED PIPE AND FITTINGS**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. construct welded and flanged piping system components** | | | | | | |
| 1.1 identify types, markings, designations, and pressure ratings for welded pipe and fittings | I can consistently identify types, markings, designations, and pressure ratings for welded pipe and fittings. | I can usually identify types, markings, designations, and pressure ratings for welded pipe and fittings. | | I sometimes need assistance to identify types, markings, designations, and pressure ratings for welded pipe and fittings. | I often need assistance to identify types, markings, designations, and pressure ratings for welded pipe and fittings. | I have not yet provided evidence of this performance task. |
| 1.2 identify stud tensioning systems | I can consistently identify stud tensioning systems. | I can usually identify stud tensioning systems. | | I sometimes need assistance to identify stud tensioning systems. | I often need assistance to identify stud tensioning systems. | I have not yet provided evidence of this performance task. |
| 1.3 state factors, methods, and torque measurements for bolt ups | I can consistently state factors, methods, and torque measurements for bolt ups. | I can usually state factors, methods, and torque measurements for bolt ups. | | I sometimes need assistance to state factors, methods, and torque measurements for bolt ups. | I often need assistance to state factors, methods, and torque measurements for bolt ups. | I have not yet provided evidence of this performance task. |

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| 1.4 identify types, markings, designations, temperature, and pressure ratings of flanged fittings and gaskets | I can consistently identify types, markings, designations, temperature, and pressure ratings of flanged fittings and gaskets. | I can usually identify types, markings, designations, temperature, and pressure ratings of flanged fittings and gaskets. | I sometimes need assistance to identify types, markings, designations, temperature, and pressure ratings of flanged fittings and gaskets. | I often need assistance to identify types, markings, designations, temperature, and pressure ratings of flanged fittings and gaskets. | I have not yet provided evidence of this performance task. |
| 1.5 describe the fabrication process for welded pipe and fittings to the tack-up stage | I can consistently describe the fabrication process for welded pipe and fittings to the tack-up stage. | I can usually describe the fabrication process for welded pipe and fittings to the  tack-up stage. | I sometimes need assistance to describe the fabrication process for welded pipe and fittings to the tack-up stage. | I often need assistance to describe the fabrication process for welded pipe and fittings to the tack-up stage. | I have not yet provided evidence of this performance task. |
| 1.6 describe flange preparation and joining techniques for flanged joints | I can consistently describe flange preparation and joining techniques for flanged joints. | I can usually describe flange preparation and joining techniques for flanged joints. | I sometimes need assistance to describe flange preparation and joining techniques for flanged joints. | I often need assistance to describe flange preparation and joining techniques for flanged joints. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3416: PLASTIC PIPE AND TUBES**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students identify, describe, and demonstrate the construction of plastic pipe and tubes.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3416: PLASTIC PIPE AND TUBES**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. construct plastic piping and tubing systems** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3416: PLASTIC PIPE AND TUBES**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. construct plastic piping and tubing systems** | | | | | | |
| 1.1 identify types, applications, and designations of plastic pipe, tubing, and fittings | I can consistently identify types, applications, and designations of plastic pipe, tubing, and fittings. | I can usually identify types, applications, and designations of plastic pipe, tubing, and fittings. | | I sometimes need assistance to identify types, applications, and designations of plastic pipe, tubing, and fittings. | I often need assistance to identify types, applications, and designations of plastic pipe, tubing, and fittings. | I have not yet provided evidence of this performance task. |
| 1.2 describe fabrication processes for solvent welding plastic pipe | I can consistently describe fabrication processes for solvent welding plastic pipe. | I can usually describe fabrication processes for solvent welding plastic pipe. | | I sometimes need assistance to describe fabrication processes for solvent welding plastic pipe. | I often need assistance to describe fabrication processes for solvent welding plastic pipe. | I have not yet provided evidence of this performance task. |
| 1.3 describe fabrication processes for plastic pipe and tubing using alternative joining methods | I can consistently describe fabrication processes for plastic pipe and tubing using alternative joining methods. | I can usually describe fabrication processes for plastic pipe and tubing using alternative joining methods. | | I sometimes need assistance to describe fabrication processes for plastic pipe and tubing using alternative joining methods. | I often need assistance to describe fabrication processes for plastic pipe and tubing using alternative joining methods. | I have not yet provided evidence of this performance task. |

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| 1.4 describe fabrication processes for bell-end joints | I can consistently describe fabrication processes for  bell-end joints. | I can usually describe fabrication processes for  bell-end joints. | I sometimes need assistance to describe fabrication processes for bell-end joints. | I often need assistance to describe fabrication processes for bell-end joints. | I have not yet provided evidence of this performance task. |
| 1.5 describe fabrication processes for plastic pipe using thermal fusion and electric resistance welding | I can consistently describe fabrication processes for plastic pipe using thermal fusion and electric resistance welding. | I can usually describe fabrication processes for plastic pipe using thermal fusion and electric resistance welding. | I sometimes need assistance to describe fabrication processes for plastic pipe using thermal fusion and electric resistance welding. | I often need assistance to describe fabrication processes for plastic pipe using thermal fusion and electric resistance welding. | I have not yet provided evidence of this performance task. |
| 1.6 fabricate and test a solvent weld spool to the manufacturer’s specifications | I can consistently fabricate and test a solvent weld spool to the manufacturer’s specifications. | I can usually fabricate and test a solvent weld spool to the manufacturer’s specifications. | I sometimes need fabricate and test a solvent weld spool to the manufacturer’s specifications. | I often need fabricate and test a solvent weld spool to the manufacturer’s specifications. | I have not yet provided evidence of this performance task. |
| 1.7 fabricate and test a fusion weld spool to the manufacturer’s specifications | I can consistently fabricate and test a fusion weld spool to the manufacturer’s specifications. | I can usually fabricate and test a fusion weld spool to the manufacturer’s specifications. | I sometimes need assistance to fabricate and test a fusion weld spool to the manufacturer’s specifications. | I often need assistance to fabricate and test a fusion weld spool to the manufacturer’s specifications. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3421: THREADED AND GROOVED PIPE**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students develop an understanding of threaded and grooved pipe.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3421: THREADED AND GROOVED PIPE**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. construct threaded and grooved piping system components** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3421: THREADED AND GROOVED PIPE**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. construct threaded and grooved piping system components** | | | | | | |
| 1.1 identify types, markings, designations, temperature, and pressure ratings of ferrous pipe and fittings | I can consistently identify types, markings, designations, temperature, and pressure ratings of ferrous pipe and fittings. | I can usually identify types, markings, designations, temperature, and pressure ratings of ferrous pipe and fittings. | | I sometimes need assistance to identify types, markings, designations, temperature, and pressure ratings of ferrous pipe and fittings. | I often need assistance to identify types, markings, designations, temperature, and pressure ratings of ferrous pipe and fittings. | I have not yet provided evidence of this performance task. |
| 1.2 identify applications of codes, regulations, and manufacturer's specifications | I can consistently identify applications of codes, regulations, and manufacturer's specifications. | I can usually identify applications of codes, regulations, and manufacturer's specifications. | | I sometimes need assistance to identify applications of codes, regulations, and manufacturer's specifications. | I often need assistance to identify applications of codes, regulations, and manufacturer's specifications. | I have not yet provided evidence of this performance task. |
| 1.3 describe the composition of ferrous, alloyed, and non-ferrous pipe | I can consistently describe the composition of ferrous, alloyed, and non-ferrous pipe. | I can usually describe the composition of ferrous, alloyed, and non-ferrous pipe. | | I sometimes need assistance to describe the composition of ferrous, alloyed, and non-ferrous pipe. | I often need assistance to describe the composition of ferrous, alloyed, and non-ferrous pipe. | I have not yet provided evidence of this performance task. |
| 1.4 calculate cut length for threaded and grooved pipe | I can consistently calculate cut length for threaded and grooved pipe. | I can usually calculate cut length for threaded and grooved pipe. | | I sometimes need assistance to calculate cut length for threaded and grooved pipe. | I often need assistance to calculate cut length for threaded and grooved pipe. | I have not yet provided evidence of this performance task. |
| 1.5 describe the fabrication steps for threading and grooving pipe | I can consistently describe the fabrication steps for threading and grooving pipe. | I can usually describe the fabrication steps for threading and grooving pipe. | | I sometimes need assistance to describe the fabrication steps for threading and grooving pipe. | I often need assistance to describe the fabrication steps for threading and grooving pipe. | I have not yet provided evidence of this performance task. |
| 1.6 demonstrate the use of hand tools to thread and groove pipe | I can consistently demonstrate the use of hand tools to thread and groove pipe. | I can usually demonstrate the use of hand tools to thread and groove pipe. | | I sometimes need assistance to demonstrate the use of hand tools to thread and groove pipe. | I often need assistance to demonstrate the use of hand tools to thread and groove pipe. | I have not yet provided evidence of this performance task. |
| 1.7 demonstrate the use of power tools to thread and groove pipe | I can consistently demonstrate the use of power tools to thread and groove pipe. | I can usually demonstrate the use of power tools to thread and groove pipe. | | I sometimes need assistance to demonstrate the use of power tools to thread and groove pipe. | I often need assistance to demonstrate the use of power tools to thread and groove pipe. | I have not yet provided evidence of this performance task. |
| 1.8 assemble and pressure test an assigned project | I can consistently assemble and pressure test an assigned project. | I can usually assemble and pressure test an assigned project. | | I sometimes need assistance to assemble and pressure test an assigned project. | I often need assistance to assemble and pressure test an assigned project. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3426: TUBES, TUBING, AND VALVES**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students develop an understanding of tubes, tubing systems, and valves.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3426: TUBES, TUBING, AND VALVES**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. construct tube and tubing system components** |  |  |  |
| **2. install valves in piping systems** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3426: TUBES, TUBING, AND VALVES**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. construct tube and tubing system components** | | | | | | |
| 1.1 identify types, designations, and pressure ratings | I can consistently identify types, designations, and pressure ratings. | I can usually identify types, designations, and pressure ratings. | | I sometimes need assistance to identify types, designations, and pressure ratings. | I often need assistance to identify types, designations, and pressure ratings. | I have not yet provided evidence of this performance task. |
| 1.2 identify fitting types and joining techniques | I can consistently identify fitting types and joining techniques. | I can usually identify fitting types and joining techniques. | | I sometimes need assistance to identify fitting types and joining techniques. | I often need assistance to identify fitting types and joining techniques. | I have not yet provided evidence of this performance task. |
| 1.3 identify applications and manufacturer’s specifications pertaining to joining methods | I can consistently identify applications and manufacturer’s specifications pertaining to joining methods. | I can usually identify applications and manufacturer’s specifications pertaining to joining methods. | | I sometimes need assistance to identify applications and manufacturer’s specifications pertaining to joining methods. | I often need assistance to identify applications and manufacturer’s specifications pertaining to joining methods. | I have not yet provided evidence of this performance task. |
| 1.4 identify application to health and safety issues pertaining to joining methods | I can consistently identify application to health and safety issues pertaining to joining methods. | I can usually identify application to health and safety issues pertaining to joining methods. | | I sometimes need assistance to identify application to health and safety issues pertaining to joining methods. | I often need assistance to identify application to health and safety issues pertaining to joining methods. | I have not yet provided evidence of this performance task. |
| 1.5 describe the process for bending tubing | I can consistently describe the process for bending tubing. | I can usually describe the process for bending tubing. | | I sometimes need assistance to describe the process for bending tubing. | I often need assistance to describe the process for bending tubing. | I have not yet provided evidence of this performance task. |
| 1.6 describe the fabrication process pertaining to joining methods | I can consistently describe the fabrication process pertaining to joining methods. | I can usually describe the fabrication process pertaining to joining methods. | | I sometimes need assistance to describe the fabrication process pertaining to joining methods. | I often need assistance to describe the fabrication process pertaining to joining methods. | I have not yet provided evidence of this performance task. |
| 1.7 assemble and pressure test an assigned project including flared, compression joints, and bending components | I can consistently assemble and pressure test an assigned project including flared, compression joints, and bending components. | I can usually assemble and pressure test an assigned project including flared, compression joints, and bending components. | | I sometimes need assistance to assemble and pressure test an assigned project including flared, compression joints, and bending components. | I often need assistance to assemble and pressure test an assigned project including flared, compression joints, and bending components. | I have not yet provided evidence of this performance task. |

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| **2. install valves in piping systems** | | | | | |
| 2.1 identify types of valves | I can consistently identify types of valves. | I can usually identify types of valves. | I sometimes need assistance to identify types of valves. | I often need assistance to identify types of valves. | I have not yet provided evidence of this performance task. |
| 2.2 describe major design variations of valves and their applications | I can consistently describe major design variations of valves and their applications. | I can usually describe major design variations of valves and their applications. | I sometimes need assistance to describe major design variations of valves and their applications. | I often need assistance to describe major design variations of valves and their applications. | I have not yet provided evidence of this performance task. |
| 2.3 describe service and maintenance procedures of valves | I can consistently describe service and maintenance procedures of valves. | I can usually describe service and maintenance procedures of valves. | I sometimes need assistance to describe service and maintenance procedures of valves. | I often need assistance to describe service and maintenance procedures of valves. | I have not yet provided evidence of this performance task. |
| 2.4 explain the purpose of manufacturer's instructions | I can consistently explain the purpose of manufacturer's instructions. | I can usually explain the purpose of manufacturer's instructions. | I sometimes need assistance to explain the purpose of manufacturer's instructions. | I often need assistance to explain the purpose of manufacturer's instructions. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3431: INSTALL AND TEST PIPING SYSTEMS**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students develop an understanding of pressure testing and pumps and install hangers, supports, and fasteners.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3431: INSTALL AND TEST PIPING SYSTEM**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| 1. **install hangers, supports, and fasteners for piping systems** |  |  |  |
| **2. pressure test a piping system** |  |  |  |
| 1. **describe pumps for piping systems** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3431: INSTALL AND TEST PIPING SYSTEM**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. install hangers, supports, and fasteners for piping systems** | | | | | | |
| 1.1 identify types of hangers, supports, and fasteners | I can consistently identify types of hangers, supports, and fasteners. | I can usually identify types of hangers, supports, and fasteners. | | I sometimes need assistance to identify types of hangers, supports, and fasteners. | I often need assistance to identify types of hangers, supports, and fasteners. | I have not yet provided evidence of this performance task. |
| 1.2 describe applications of hangers, supports, and fasteners | I can consistently describe applications of hangers, supports, and fasteners. | I can usually describe applications of hangers, supports, and fasteners. | | I sometimes need assistance to describe applications of hangers, supports, and fasteners. | I often need assistance to describe applications of hangers, supports, and fasteners. | I have not yet provided evidence of this performance task. |
| 1.3 describe installation techniques for hangers, supports, and fasteners | I can consistently describe installation techniques for hangers, supports, and fasteners. | I can usually describe installation techniques for hangers, supports, and fasteners. | | I sometimes need assistance to describe installation techniques for hangers, supports, and fasteners. | I often need assistance to describe installation techniques for hangers, supports, and fasteners. | I have not yet provided evidence of this performance task. |

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| 1.4 explain specifications and manufacturer’s requirements for hangers, supports, and fasteners | I can consistently explain specifications and manufacturer’s requirements for hangers, supports, and fasteners. | I can usually explain specifications and manufacturer’s requirements for hangers, supports, and fasteners. | I sometimes need assistance to explain specifications and manufacturer’s requirements for hangers, supports, and fasteners. | I often need assistance to explain specifications and manufacturer’s requirements for hangers, supports, and fasteners. | I have not yet provided evidence of this performance task. |

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| --- | --- | --- | --- | --- | --- |
| **2. pressure test a piping system** | | | | | |
| 2.1 identify equipment used for pressure testing piping installations | I can consistently identify equipment used for pressure testing piping installations. | I can usually identify equipment used for pressure testing piping installations. | I sometimes need assistance to identify equipment used for pressure testing piping installations. | I often need assistance to identify equipment used for pressure testing piping installations. | I have not yet provided evidence of this performance task. |
| 2.2 describe procedures and requirements for pneumatic and hydrostatic testing | I can consistently describe procedures and requirements for pneumatic and hydrostatic testing. | I can usually describe procedures and requirements for pneumatic and hydrostatic testing. | I sometimes need assistance to describe procedures and requirements for pneumatic and hydrostatic testing. | I often need assistance to describe procedures and requirements for pneumatic and hydrostatic testing. | I have not yet provided evidence of this performance task. |
| 2.3 describe hazards specific to pressure testing | I can consistently describe hazards specific to pressure testing. | I can usually describe hazards specific to pressure testing. | I sometimes need assistance to describe hazards specific to pressure testing. | I often need assistance to describe hazards specific to pressure testing. | I have not yet provided evidence of this performance task. |

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| **3. describe pumps for piping systems** | | | | | |
| 3.1 identify types of pumps | I can consistently identify types of pumps. | I can usually identify types of pumps. | I sometimes need assistance to identify types of pumps. | I often need assistance to identify types of pumps. | I have not yet provided evidence of this performance task. |
| 3.2 describe differences in pumps | I can consistently describe differences in pumps. | I can usually describe differences in pumps. | I sometimes need assistance to describe differences in pumps. | I often need assistance to describe differences in pumps. | I have not yet provided evidence of this performance task. |
| 3.3 describe factors affecting the operation of a pump | I can consistently describe factors affecting the operation of a pump. | I can usually describe factors affecting the operation of a pump. | I sometimes need assistance to describe factors affecting the operation of a pump. | I often need assistance to describe factors affecting the operation of a pump. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3436: WELDING SAFETY AND FABRICATION**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students develop an understanding of welding equipment and the basics of welding.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

|  |  |
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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3436: WELDING SAFETY AND FABRICATION**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. apply safe work practices according to *Occupational Health and Safety Act* (OHS) legislation** |  |  |  |
| **2. use oxyfuel and arc welding equipment** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3436: WELDING SAFETY AND FABRICATION**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. apply safe work practices according to *Occupational Health and Safety Act* (OHS) legislation** | | | | | | |
| 1.1 identify hazards for welding and cutting operations | I can consistently identify hazards for welding and cutting operations. | I can usually identify hazards for welding and cutting operations. | | I sometimes need assistance to identify hazards for welding and cutting operations. | I often need assistance to identify hazards for welding and cutting operations. | I have not yet provided evidence of this performance task. |
| 1.2 identify personal protective equipment (PPE) for welding and cutting operations | I can consistently identify PPE for welding and cutting operations. | I can usually identify PPE for welding and cutting operations. | | I sometimes need assistance to identify PPE for welding and cutting operations. | I often need assistance to identify PPE for welding and cutting operations. | I have not yet provided evidence of this performance task. |
| 1.3 explain hazards involved with welding fumes and gases | I can consistently explain hazards involved with welding fumes and gases. | I can usually explain hazards involved with welding fumes and gases. | | I sometimes need assistance to explain hazards involved with welding fumes and gases. | I often need assistance to explain hazards involved with welding fumes and gases. | I have not yet provided evidence of this performance task. |
| 1.4 identify welding fume ventilation methods | I can consistently identify welding fume ventilation methods. | I can usually identify welding fume ventilation methods. | | I sometimes need assistance to identify welding fume ventilation methods. | I often need assistance to identify welding fume ventilation methods. | I have not yet provided evidence of this performance task. |

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| 1.5 explain effects of electricity and describe precautions used to prevent injury | I can consistently explain effects of electricity and describe precautions used to prevent injury. | I can usually explain effects of electricity and describe precautions used to prevent injury. | I sometimes need assistance to explain effects of electricity and describe precautions used to prevent injury. | I often need assistance to explain effects of electricity and describe precautions used to prevent injury. | I have not yet provided evidence of this performance task. |
| 1.6 describe procedures for welding or cutting in confined spaces | I can consistently describe procedures for welding or cutting in confined spaces. | I can usually describe procedures for welding or cutting in confined spaces. | I sometimes need assistance to describe procedures for welding or cutting in confined spaces. | I often need assistance to describe procedures for welding or cutting in confined spaces. | I have not yet provided evidence of this performance task. |
| 1.7 interpret general safety regulations in the *Occupational Health and Safety Act* | I can consistently interpret general safety regulations in the *Occupational Health and Safety Act*. | I can usually interpret general safety regulations in the *Occupational Health and Safety Act*. | I sometimes need assistance to interpret general safety regulations in the *Occupational Health and Safety Act*. | I often need assistance to interpret general safety regulations in the *Occupational Health and Safety Act*. | I have not yet provided evidence of this performance task. |

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| **2. use oxyfuel and arc welding equipment** | | | | | |
| 2.1 identify five basic joint types | I can consistently identify five basic joint types. | I can usually identify five basic joint types. | I sometimes need assistance to identify five basic joint types. | I often need assistance to identify five basic joint types. | I have not yet provided evidence of this performance task. |
| 2.2 describe types of welds and their required dimensions | I can consistently describe types of welds and their required dimensions. | I can usually describe types of welds and their required dimensions. | I sometimes need assistance to describe types of welds and their required dimensions. | I often need assistance to describe types of welds and their required dimensions. | I have not yet provided evidence of this performance task. |

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| --- | --- | --- | --- | --- | --- |
| 2.3 identify types of metals using practical tests | I can consistently identify types of metals using practical tests. | I can usually identify types of metals using practical tests. | I sometimes need assistance to identify types of metals using practical tests. | I often need assistance to identify types of metals using practical tests. | I have not yet provided evidence of this performance task. |
| 2.4 identify and use oxyfuel cutting equipment | I can consistently identify and use oxyfuel cutting equipment. | I can usually identify and use oxyfuel cutting equipment. | I sometimes need assistance to identify and use oxyfuel cutting equipment. | I often need assistance to identify and use oxyfuel cutting equipment. | I have not yet provided evidence of this performance task. |
| 2.5 identify and use arc welding equipment | I can consistently identify and use arc welding equipment. | I can usually identify and use arc welding equipment. | I sometimes need assistance to identify and use arc welding equipment. | I often need assistance to identify and use arc welding equipment. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3441: BRACKET AND SPOOL FABRICATION**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3436: Welding Safety and Fabrication

**Description:** Students fabricate a bracket project and a spool project to demonstrate an understanding of how to weld.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3441: BRACKET AND SPOOL FABRICATION**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. use oxyfuel and arc welding equipment** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3441: BRACKET AND SPOOL FABRICATION**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. use oxyfuel and arc welding equipment** | | | | | | |
| 1.1 build a bracket project | I can consistently build a bracket project. | I can usually build a bracket project. | | I sometimes need assistance to build a bracket project. | I often need assistance to build a bracket project. | I have not yet provided evidence of this performance task. |
| 1.2 build a spool project | I can consistently build a spool project. | I can usually build a spool project. | | I sometimes need assistance to build a spool project. | I often need assistance to build a spool project. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3446: BRAZING AND SOLDERING**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3436: Welding Safety and Fabrication

**Description:** Students develop and demonstrate an understanding of brazing and soldering metal alloys.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3446: BRAZING AND SOLDERING**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. braze and solder metal alloys** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3446: BRAZING AND SOLDERING**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. braze and solder metal alloys** | | | | | | |
| 1.1 identify applications of brazed and soldered joints | I can consistently identify applications of brazed and soldered joints. | I can usually identify applications of brazed and soldered joints. | | I sometimes need assistance to identify applications of brazed and soldered joints. | I often need assistance to identify applications of brazed and soldered joints. | I have not yet provided evidence of this performance task. |
| 1.2 identify equipment and materials required to braze and solder | I can consistently identify equipment and materials required to braze and solder. | I can usually identify equipment and materials required to braze and solder. | | I sometimes need assistance to identify equipment and materials required to braze and solder. | I often need assistance to identify equipment and materials required to braze and solder. | I have not yet provided evidence of this performance task. |
| 1.3 describe brazing and soldering procedures | I can consistently describe brazing and soldering procedures. | I can usually describe brazing and soldering procedures. | | I sometimes need assistance to describe brazing and soldering procedures. | I often need assistance to describe brazing and soldering procedures. | I have not yet provided evidence of this performance task. |
| 1.4 assemble and test an assigned project | I can consistently assemble and test an assigned project. | I can usually assemble and test an assigned project. | | I sometimes need assistance to assemble and test an assigned project. | I often need assistance to assemble and test an assigned project. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3451: SKETCHING AND DRAWING**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students develop an understanding of drafting and the use of single-line drawings. Students demonstrate orthographic drawing and isometric single-line drawing.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3451: SKETCHING AND DRAWING**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. apply sketching and drawing concepts** |  |  |  |
| **2. develop single-line pipe drawings** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3451: SKETCHING AND DRAWING**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. apply sketching and drawing concepts** | | | | | | |
| 1.1 identify the types of drafting equipment | I can consistently identify the types of drafting equipment. | I can usually identify the types of drafting equipment. | | I sometimes need assistance to identify the types of drafting equipment. | I often need assistance to identify the types of drafting equipment. | I have not yet provided evidence of this performance task. |
| 1.2 explain the use of drafting equipment | I can consistently explain the use of drafting equipment. | I can usually explain the use of drafting equipment. | | I sometimes need assistance to explain the use of drafting equipment. | I often need assistance to explain the use of drafting equipment. | I have not yet provided evidence of this performance task. |
| 1.3 identify the types of drafting lines found on a drawing | I can consistently identify the types of drafting lines found on a drawing. | I can usually identify the types of drafting lines found on a drawing. | | I sometimes need assistance to identify the types of drafting lines found on a drawing. | I often need assistance to identify the types of drafting lines found on a drawing. | I have not yet provided evidence of this performance task. |
| 1.4 identify the three views of an orthographic projection | I can consistently identify the three views of an orthographic projection. | I can usually identify the three views of an orthographic projection. | | I sometimes need assistance to identify the three views of an orthographic projection. | I often need assistance to identify the three views of an orthographic projection. | I have not yet provided evidence of this performance task. |

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| 1.5 draw and label the three views of an orthographic drawing | I can consistently draw and label the three views of an orthographic drawing. | I can usually draw and label the three views of an orthographic drawing. | I sometimes need assistance to draw and label the three views of an orthographic drawing. | I often need assistance to draw and label the three views of an orthographic drawing. | I have not yet provided evidence of this performance task. |

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| --- | --- | --- | --- | --- | --- |
| **2. develop single-line pipe drawings** | | | | | |
| 2.1 identify piping symbols | I can consistently identify piping symbols. | I can usually identify piping symbols. | I sometimes need assistance to identify piping symbols. | I often need assistance to identify piping symbols. | I have not yet provided evidence of this performance task. |
| 2.2 draw and label orthographic single-line drawings | I can consistently draw and label orthographic  single-line drawings. | I can usually draw and label orthographic  single-line drawings. | I sometimes need assistance to draw and label orthographic  single-line drawings. | I often need assistance to draw and label orthographic  single-line drawings. | I have not yet provided evidence of this performance task. |
| 2.3 draw and label isometric single-line piping drawings | I can consistently draw and label isometric single-line piping drawings. | I can usually draw and label isometric single-line piping drawings. | I sometimes need assistance to draw and label isometric single-line piping drawings. | I often need assistance to draw and label isometric single-line piping drawings. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3456: INTERPRETING DRAWINGS**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3451: Sketching and Drawing

**Description:** Students interpret architectural drawings and mechanical drawings used in the plumbing trade.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3456: INTERPRETING DRAWINGS**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. interpret drawings** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3456: INTERPRETING DRAWINGS**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. interpret drawings** | | | | | | |
| 1.1 identify the views of a drawing | I can consistently identify the views of a drawing. | I can usually identify the views of a drawing. | | I sometimes need assistance to identify the views of a drawing. | I often need assistance to identify the views of a drawing. | I have not yet provided evidence of this performance task. |
| 1.2 explain the usage of scales | I can consistently explain the usage of scales. | I can usually explain the usage of scales. | | I sometimes need assistance to explain the usage of scales. | I often need assistance to explain the usage of scales. | I have not yet provided evidence of this performance task. |
| 1.3 calculate dimensions using imperial scales and metric scales | I can consistently calculate dimensions using imperial scales and metric scales. | I can usually calculate dimensions using imperial scales and metric scales. | | I sometimes need assistance to calculate dimensions using imperial scales and metric scales. | I often need assistance to calculate dimensions using imperial scales and metric scales. | I have not yet provided evidence of this performance task. |
| 1.4 describe symbols found on a drawing | I can consistently describe symbols found on a drawing. | I can usually describe symbols found on a drawing. | | I sometimes need assistance to describe symbols found on a drawing. | I often need assistance to describe symbols found on a drawing. | I have not yet provided evidence of this performance task. |
| 1.5 identify the five divisions of a drawing package | I can consistently identify the five divisions of a drawing package. | I can usually identify the five divisions of a drawing package. | | I sometimes need assistance to identify the five divisions of a drawing package. | I often need assistance to identify the five divisions of a drawing package. | I have not yet provided evidence of this performance task. |
| 1.6 describe the purpose of drawing divisions | I can consistently describe the purpose of drawing divisions. | I can usually describe the purpose of drawing divisions. | | I sometimes need assistance to describe the purpose of drawing divisions. | I often need assistance to describe the purpose of drawing divisions. | I have not yet provided evidence of this performance task. |
| 1.7 identify architectural drawings and mechanical drawings | I can consistently identify architectural drawings and mechanical drawings. | I can usually identify architectural drawings and mechanical drawings. | | I sometimes need assistance to identify architectural drawings and mechanical drawings. | I often need assistance to identify architectural drawings and mechanical drawings. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3461: PLUMBING CALCULATIONS**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3900: Apprenticeship Safety

**Description:** Students identify and demonstrate basic mathematic calculations used in the plumbing trade.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| --- | --- |
| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3461: PLUMBING CALCULATIONS**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. apply mathematical skills using both metric measurements and imperial measurements** |  |  |  |
| **2. solve mathematical problems involving perimeter, areas, percentage, and grade** |  |  |  |
| **3. calculate volumetric capacities for tanks and cylinders** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3461: PLUMBING CALCULATIONS**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. apply mathematical skills using both metric measurements and imperial measurements** | | | | | | |
| 1.1 perform arithmetic calculations using whole numbers, fractions, and decimals | I can consistently perform arithmetic calculations using whole numbers, fractions, and decimals. | I can usually perform arithmetic calculations using whole numbers, fractions, and decimals. | | I sometimes need assistance to perform arithmetic calculations using whole numbers, fractions, and decimals. | I often need assistance to perform arithmetic calculations using whole numbers, fractions, and decimals. | I have not yet provided evidence of this performance task. |
| 1.2 describe the metric and imperial measurement systems | I can consistently describe the metric and imperial measurement systems. | I can usually describe the metric and imperial measurement systems. | | I sometimes need assistance to describe the metric and imperial measurement systems. | I often need assistance to describe the metric and imperial measurement systems. | I have not yet provided evidence of this performance task. |
| 1.3 describe the operation of the AIT calculator, which is provided to students for exams administered by AIT | I can consistently describe the operation of the AIT calculator, which is provided to students for exams administered by AIT. | I can usually describe the operation of the AIT calculator, which is provided to students for exams administered by AIT. | | I sometimes need assistance to describe the operation of the AIT calculator, which is provided to students for exams administered by AIT. | I often need assistance to describe the operation of the AIT calculator, which is provided to students for exams administered by AIT. | I have not yet provided evidence of this performance task. |
| 1.4 perform number conversions using whole numbers, fractions, and decimals | I can consistently perform number conversions using whole numbers, fractions, and decimals. | I can usually perform number conversions using whole numbers, fractions, and decimals. | | I sometimes need assistance to perform number conversions using whole numbers, fractions, and decimals. | I often need assistance to perform number conversions using whole numbers, fractions, and decimals. | I have not yet provided evidence of this performance task. |
| 1.5 perform measurement conversions using whole numbers, fractions, and decimals | I can consistently perform measurement conversions using whole numbers, fractions, and decimals. | I can usually perform measurement conversions using whole numbers, fractions, and decimals. | | I sometimes need assistance to perform measurement conversions using whole numbers, fractions, and decimals. | I often need assistance to perform measurement conversions using whole numbers, fractions, and decimals. | I have not yet provided evidence of this performance task. |

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| **2. solve mathematical problems involving perimeter, areas, percentage, and grade** | | | | | |
| 2.1 identify concepts used when working with formulas | I can consistently identify concepts used when working with formulas. | I can usually identify concepts used when working with formulas. | I sometimes need assistance to identify concepts used when working with formulas. | I often need assistance to identify concepts used when working with formulas. | I have not yet provided evidence of this performance task. |
| 2.2 apply formulas for calculating perimeters of rectangles, triangles, and circles | I can consistently apply formulas for calculating perimeters of rectangles, triangles, and circles. | I can usually apply formulas for calculating perimeters of rectangles, triangles, and circles. | I sometimes need assistance to apply formulas for calculating perimeters of rectangles, triangles, and circles. | I often need assistance to apply formulas for calculating perimeters of rectangles, triangles, and circles. | I have not yet provided evidence of this performance task. |

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| 2.3 apply formulas for calculating the surface area of regular-shaped solids, tanks, and cylinders | I can consistently apply formulas for calculating the surface area of regular-shaped solids, tanks, and cylinders. | I can usually apply formulas for calculating the surface area of regular-shaped solids, tanks, and cylinders. | I sometimes need assistance to apply formulas for calculating the surface area of regular-shaped solids, tanks, and cylinders. | I often need assistance to apply formulas for calculating the surface area of regular-shaped solids, tanks, and cylinders. | I have not yet provided evidence of this performance task. |
| 2.4 apply the formula for calculating percentages | I can consistently apply the formula for calculating percentages. | I can usually apply the formula for calculating percentages. | I sometimes need assistance to apply the formula for calculating percentages. | I often need assistance to apply the formula for calculating percentages. | I have not yet provided evidence of this performance task. |
| 2.5 calculate grades in percentage, fractions, and ratio | I can consistently calculate grades in percentage, fractions, and ratio. | I can usually calculate grades in percentage, fractions, and ratio. | I sometimes need assistance to calculate grades in percentage, fractions, and ratio. | I often need assistance to calculate grades in percentage, fractions, and ratio. | I have not yet provided evidence of this performance task. |

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| **3. calculate volumetric capacities for tanks and cylinders** | | | | | |
| 3.1 apply formulas for calculating volumes of regular-shaped solids, tanks, and cylinders | I can consistently apply formulas for calculating volumes of regular-shaped solids, tanks, and cylinders. | I can usually apply formulas for calculating volumes of regular-shaped solids, tanks, and cylinders. | I sometimes need assistance to apply formulas for calculating volumes of regular-shaped solids, tanks, and cylinders. | I often need assistance to apply formulas for calculating volumes of regular-shaped solids, tanks, and cylinders. | I have not yet provided evidence of this performance task. |

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| 3.2 calculate the capacity of regular-shaped tanks and cylinders using both metric values and imperial values | I can consistently calculate the capacity of regular-shaped tanks and cylinders using both metric values and imperial values. | I can usually calculate the capacity of  regular-shaped tanks and cylinders using both metric values and imperial values. | I sometimes need assistance to calculate the capacity of regular-shaped tanks and cylinders using both metric values and imperial values. | I often need assistance to calculate the capacity of regular-shaped tanks and cylinders using both metric values and imperial values. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3466: PIPING OFFSETS AND DENSITY**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3461: Plumbing Calculations

**Description:** Students describe and demonstrate piping offset and density calculations used in the plumbing trade.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3466: PIPING OFFSETS AND DENSITY**

**Checklist**

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| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. calculate 45° and 90° offsets for piping systems** |  |  |  |
| **2. calculate mass, volumes, densities, and relative densities** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3466: PIPING OFFSETS AND DENSITY**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. calculate 45° and 90° offsets for piping systems** | | | | | | |
| 1.1 calculate offsets for right angle triangles | I can consistently calculate offsets for right angle triangles. | I can usually calculate offsets for right angle triangles. | | I sometimes need assistance to calculate offsets for right angle triangles. | I often need assistance to calculate offsets for right angle triangles. | I have not yet provided evidence of this performance task. |
| 1.2 apply formulas for 45° and 90° offsets | I can consistently apply formulas for 45° and 90° offsets. | I can usually apply formulas for 45° and 90° offsets. | | I sometimes need assistance to apply formulas for 45° and 90° offsets. | I often need assistance to apply formulas for 45° and 90° offsets. | I have not yet provided evidence of this performance task. |
| 1.3 calculate offset dimensions around an object | I can consistently calculate offset dimensions around an object. | I can usually calculate offset dimensions around an object. | | I sometimes need assistance to calculate offset dimensions around an object. | I often need assistance to calculate offset dimensions around an object. | I have not yet provided evidence of this performance task. |

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| **2. calculate mass, volumes, densities, and relative densities** | | | | | |
| 2.1 define the terms matter, element, compound, and mixture | I can consistently define the terms matter, element, compound, and mixture. | I can usually define the terms matter, element, compound, and mixture. | I sometimes need assistance to define the terms matter, element, compound, and mixture. | I often need assistance to define the terms matter, element, compound, and mixture. | I have not yet provided evidence of this performance task. |
| 2.2 describe the three common states of matter | I can consistently describe the three common states of matter. | I can usually describe the three common states of matter. | I sometimes need assistance to describe the three common states of matter. | I often need assistance to describe the three common states of matter. | I have not yet provided evidence of this performance task. |
| 2.3 define the terms adhesion, cohesion, surface tension, and capillarity | I can consistently define the terms adhesion, cohesion, surface tension, and capillarity. | I can usually define the terms adhesion, cohesion, surface tension, and capillarity. | I sometimes need assistance to define the terms adhesion, cohesion, surface tension, and capillarity. | I often need assistance to define the terms adhesion, cohesion, surface tension, and capillarity. | I have not yet provided evidence of this performance task. |
| 2.4 calculate density, mass, and volume of substances | I can consistently calculate density, mass, and volume of substances. | I can usually calculate density, mass, and volume of substances. | I sometimes need assistance to calculate density, mass, and volume of substances. | I often need assistance to calculate density, mass, and volume of substances. | I have not yet provided evidence of this performance task. |
| 2.5 calculate mass and density using relative densities | I can consistently calculate mass and density using relative densities. | I can usually calculate mass and density using relative densities. | I sometimes need assistance to calculate mass and density using relative densities. | I often need assistance to calculate mass and density using relative densities. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3471: PRINCIPLES OF PRESSURE, ATMOSPHERE, AND ELECTRICITY**

**Level:** First Period Apprenticeship

**Prerequisite:** PLA3466: Piping Offsets and Density

**Description:** Students understand and apply the principles of pressure, atmosphere, and electricity used in the plumbing trade. Students calculate pressures and perform electrical calculations.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3471: PRINCIPLES OF PRESSURE, ATMOSPHERE, AND ELECTRICITY**

**Checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. calculate pressures in metric values and imperial values** |  |  |  |
| **2. perform electrical calculations** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3471: PRINCIPLES OF PRESSURE, ATMOSPHERE, AND ELECTRICITY**

**Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. calculate pressures in metric values and imperial values** | | | | | | |
| 1.1 define pressure and force | I can consistently define pressure and force. | I can usually define pressure and force. | | I sometimes need assistance to define pressure and force. | I often need assistance to define pressure and force. | I have not yet provided evidence of this performance task. |
| 1.2 state the six principles of hydrostatics | I can consistently state the six principles of hydrostatics. | I can usually state the six principles of hydrostatics. | | I sometimes need assistance to state the six principles of hydrostatics. | I often need assistance to state the six principles of hydrostatics. | I have not yet provided evidence of this performance task. |
| 1.3 define pressure constants used for calculating pressures | I can consistently define pressure constants used for calculating pressures. | I can usually define pressure constants used for calculating pressures. | | I sometimes need assistance to define pressure constants used for calculating pressures. | I often need assistance to define pressure constants used for calculating pressures. | I have not yet provided evidence of this performance task. |
| 1.4 perform pressure and force calculations in both metric units and imperial units | I can consistently perform pressure and force calculations in both metric units and imperial units. | I can usually perform pressure and force calculations in both metric units and imperial units. | | I sometimes need assistance to perform pressure and force calculations in both metric units and imperial units. | I often need assistance to perform pressure and force calculations in both metric units and imperial units. | I have not yet provided evidence of this performance task. |
| 1.5 describe atmospheric pressure and the effect of altitude | I can consistently describe atmospheric pressure and the effect of altitude. | I can usually describe atmospheric pressure and the effect of altitude. | | I sometimes need assistance to describe atmospheric pressure and the effect of altitude. | I often need assistance to describe atmospheric pressure and the effect of altitude. | I have not yet provided evidence of this performance task. |
| 1.6 perform calculations to convert absolute, gauge, and mercury pressures | I can consistently perform calculations to convert absolute, gauge, and mercury pressures. | I can usually perform calculations to convert absolute, gauge, and mercury pressures. | | I sometimes need perform calculations to convert absolute, gauge, and mercury pressures. | I often need perform calculations to convert absolute, gauge, and mercury pressures. | I have not yet provided evidence of this performance task. |

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| **2. perform electrical calculations** | | | | | |
| 2.1 identify principles of electricity, including direct current and alternating current flow, electrolysis, and electromagnetism | I can consistently identify principles of electricity, including direct current and alternating current flow, electrolysis, and electromagnetism. | I can usually identify principles of electricity, including direct current and alternating current flow, electrolysis, and electromagnetism. | I sometimes need assistance to identify principles of electricity, including direct current and alternating current flow, electrolysis, and electromagnetism. | I often need assistance to identify principles of electricity, including direct current and alternating current flow, electrolysis, and electromagnetism. | I have not yet provided evidence of this performance task. |
| 2.2 sketch series and parallel electrical circuits | I can consistently sketch series and parallel electrical circuits. | I can usually sketch series and parallel electrical circuits. | I sometimes need assistance to sketch series and parallel electrical circuits. | I often need assistance to sketch series and parallel electrical circuits. | I have not yet provided evidence of this performance task. |
| 2.3 perform calculations using Ohm’s law | I can consistently perform calculations using Ohm’s law. | I can usually perform calculations using Ohm’s law. | I sometimes need assistance to perform calculations using Ohm’s law. | I often need assistance to perform calculations using Ohm’s law. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |

**PLUMBER APPRENTICESHIP ASSESSMENT**

**COURSE PLA3900: APPRENTICESHIP SAFETY**

**Level:** First Period Apprenticeship

**Prerequisite:** None

**Description:** Students develop the knowledge and skills required to maintain a personal health and safety plan; identify the steps for obtaining a journeyperson certificate; and describe how to apply legislation, regulations, and practices of the industry. Students also learn to use the codes and standards that are applied in the pipe trades.

**Parameters:** Access to a materials work centre, complete with basic plumbing tools and materials, and to instruction from an individual with journeyperson certification in the plumbing trade.

This sample rubric is for assessing technical elements that students need to know to be successful if they challenge the first-period apprenticeship exam. The rubric does not include the last two common outcomes that address the demonstration of teamwork and personal management and identification of steps to achieve personal goals. It is the certificated teacher’s responsibility to ensure that all outcomes are taught and assessed.

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| **Assessment Tools** | **Notes** |
| **Checklist** | * Prior to instruction, a copy of the checklist should be provided to the **student** to review outcomes that will need to be demonstrated. * The **student** may use this checklist as a guide when completing this course. * The **teacher** should review and sign the checklist when the course is complete to ensure student outcomes have been successfully demonstrated. |
| **Rubric** | * Prior to instruction, a copy of the rubric should be provided to the **student** to review and reflect on meeting expectations set out in the criteria. * This rubric may be used as **one** element of an assessment process. **Teachers** should use both formative and summative assessments to ensure students’ competency in this course. |

**COURSE PLA3900: APPRENTICESHIP SAFETY**

**Checklist**

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| --- | --- | --- | --- |
| **Student Outcomes** | **Student**  **Check** | **Teacher**  **Check** | **Student, Teacher or Instructor Comments** |
| **1. apply legislation, regulations, and practices ensuring safe work in the plumbing trade** |  |  |  |
| **2. use industry standard practices for climbing, lifting, rigging, and hoisting in the plumbing trade** |  |  |  |
| **3. apply industry standard practices for hazardous materials and fire protection in the plumbing trade** |  |  |  |
| **4. manage an apprenticeship to earn journeyperson certification** |  |  |  |
| **5. use codes and standards that are applied in the pipe trades** |  |  |  |
| **6. apply arc flash safety and lockout and tagout on a jobsite** |  |  |  |

**Teacher Signature Date**

**COURSE PLA3900: APPRENTICESHIP SAFETY**

**Rubric**

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| --- | --- | --- | --- | --- | --- | --- |
| **Student Name:** | | | | | **Date:** | |
| **Level**  **Criteria** | **Excellent** | | **Proficient** | **Adequate** | **Limited** | **Not Yet Demonstrated** |
| **1. apply legislation, regulations, and practices ensuring safe work in the plumbing trade** | | | | | | |
| 1.1 demonstrate the application of the *Occupational Health and Safety Act*, *Regulation*, and *Code* | I can consistently demonstrate the application of the *Occupational Health and Safety Act*, *Regulation*, and *Code*. | I can usually demonstrate the application of the *Occupational Health and Safety Act*, *Regulation*, and *Code*. | | I sometimes need assistance to demonstrate the application of the *Occupational Health and Safety Act*, *Regulation*, and *Code*. | I often need assistance to demonstrate the application of the *Occupational Health and Safety Act*, *Regulation*, and *Code*. | I have not yet provided evidence of this performance task. |
| 1.2 describe the employer’s and employee’s role with Occupational Health and Safety (OH&S) regulations, Worksite Hazardous Materials Information Systems (WHMIS), fire regulations, Workers’ Compensation Board regulations, and related advisory bodies and agencies | I can consistently describe the employer’s and employee’s role with OH&S regulations, WHMIS, fire regulations, Workers’ Compensation Board regulations, and related advisory bodies and agencies. | I can usually describe the employer’s and employee’s role with OH&S regulations, WHMIS, fire regulations, Workers’ Compensation Board regulations, and related advisory bodies and agencies. | | I sometimes need assistance to describe the employer’s and employee’s role with OH&S regulations, WHMIS, fire regulations, Workers’ Compensation Board regulations, and related advisory bodies and agencies. | I often need assistance to describe the employer’s and employee’s role with OH&S regulations, WHMIS, fire regulations, Workers’ Compensation Board regulations, and related advisory bodies and agencies. | I have not yet provided evidence of this performance task. |
| 1.3 describe Alberta’s *Public Health Act* and the Personal Services Regulation as it pertains to the plumbing industry | I can consistently describe Alberta’s *Public Health Act* and the Personal Services Regulation as it pertains to the plumbing industry. | I can usually describe Alberta’s *Public Health Act* and the Personal Services Regulation as it pertains to the plumbing industry. | | I sometimes need assistance to describe Alberta’s *Public Health Act* and the Personal Services Regulation as it pertains to the plumbing industry. | I often need assistance to describe Alberta’s *Public Health Act* and the Personal Services Regulation as it pertains to the plumbing industry. | I have not yet provided evidence of this performance task. |
| 1.4 describe industry practices for hazard assessment and control procedures | I can consistently describe industry practices for hazard assessment and control procedures. | I can usually describe industry practices for hazard assessment and control procedures. | | I sometimes need assistance to describe industry practices for hazard assessment and control procedures. | I often need assistance to describe industry practices for hazard assessment and control procedures. | I have not yet provided evidence of this performance task. |
| 1.5 describe the responsibilities of workers and employers to apply emergency procedures | I can consistently describe the responsibilities of workers and employers to apply emergency procedures. | I can usually describe the responsibilities of workers and employers to apply emergency procedures. | | I sometimes need assistance to describe the responsibilities of workers and employers to apply emergency procedures. | I often need assistance to describe the responsibilities of workers and employers to apply emergency procedures. | I have not yet provided evidence of this performance task. |
| 1.6 describe tradesperson attitudes with respect to housekeeping, personal protective equipment (PPE), and emergency procedures | I can consistently describe tradesperson attitudes with respect to housekeeping, PPE, and emergency procedures. | I can usually describe tradesperson attitudes with respect to housekeeping, PPE, and emergency procedures. | | I sometimes need assistance to describe tradesperson attitudes with respect to housekeeping, PPE, and emergency procedures. | I often need assistance to describe tradesperson attitudes with respect to housekeeping, PPE, and emergency procedures. | I have not yet provided evidence of this performance task. |

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| 1.7 describe the roles and responsibilities of employers and employees with the selection and use of PPE | I can consistently describe the roles and responsibilities of employers and employees with the selection and use of PPE. | I can usually describe the roles and responsibilities of employers and employees with the selection and use of PPE. | I sometimes need assistance to describe the roles and responsibilities of employers and employees with the selection and use of PPE. | I often need assistance to describe the roles and responsibilities of employers and employees with the selection and use of PPE. | I have not yet provided evidence of this performance task. |
| 1.8 select, use, and maintain appropriate PPE for worksite applications | I can consistently select, use, and maintain appropriate PPE for worksite applications. | I can usually select, use, and maintain appropriate PPE for worksite applications. | I sometimes need assistance to select, use, and maintain appropriate PPE for worksite applications. | I often need assistance to select, use, and maintain appropriate PPE for worksite applications. | I have not yet provided evidence of this performance task. |
| 1.9 use required PPE for tasks | I can consistently use required PPE for tasks. | I can usually use required PPE for tasks. | I sometimes need assistance to use required PPE for tasks. | I often need assistance to use required PPE for tasks. | I have not yet provided evidence of this performance task. |

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| **2. use industry standard practices for climbing, lifting, rigging, and hoisting in the plumbing trade** | | | | | |
| 2.1 describe manual lifting procedures | I can consistently describe manual lifting procedures. | I can usually describe manual lifting procedures. | I sometimes need assistance to describe manual lifting procedures. | I often need assistance to describe manual lifting procedures. | I have not yet provided evidence of this performance task. |
| 2.2 describe rigging hardware and associated safety factors | I can consistently describe rigging hardware and associated safety factors. | I can usually describe rigging hardware and associated safety factors. | I sometimes need assistance to describe rigging hardware and associated safety factors. | I often need assistance to describe rigging hardware and associated safety factors. | I have not yet provided evidence of this performance task. |
| 2.3 describe industry**-**related body mechanics | I can consistently describe  industry**-**related body mechanics. | I can usually describe  industry**-**related body mechanics. | I sometimes need assistance to describe industry**-**related body mechanics. | I often need assistance to describe industry**-**related body mechanics. | I have not yet provided evidence of this performance task. |
| 2.4 select equipment for rigging loads | I can consistently select equipment for rigging loads. | I can usually select equipment for rigging loads. | I sometimes need assistance to select equipment for rigging loads. | I often need assistance to select equipment for rigging loads. | I have not yet provided evidence of this performance task. |
| 2.5 describe hoisting and load moving procedures | I can consistently describe hoisting and load moving procedures. | I can usually describe hoisting and load moving procedures. | I sometimes need assistance to describe hoisting and load moving procedures. | I often need assistance to describe hoisting and load moving procedures. | I have not yet provided evidence of this performance task. |
| 2.6 maintain PPE for climbing, lifting, and load moving equipment | I can consistently maintain PPE for climbing, lifting, and load moving equipment. | I can usually maintain PPE for climbing, lifting, and load moving equipment. | I sometimes need assistance to maintain PPE for climbing, lifting, and load moving equipment. | I often need assistance to maintain PPE for climbing, lifting, and load moving equipment. | I have not yet provided evidence of this performance task. |
| 2.7 practise workplace ergonomics | I can consistently practise workplace ergonomics. | I can usually practise workplace ergonomics. | I sometimes need assistance to practise workplace ergonomics. | I often need assistance to practise workplace ergonomics. | I have not yet provided evidence of this performance task. |
| 2.8 use PPE for climbing, lifting, and load moving equipment | I can consistently use PPE for climbing, lifting, and load moving equipment. | I can usually use PPE for climbing, lifting, and load moving equipment. | I sometimes need assistance to use PPE for climbing, lifting, and load moving equipment. | I often need assistance to use PPE for climbing, lifting, and load moving equipment. | I have not yet provided evidence of this performance task. |

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| **3. apply industry standard practices for hazardous materials and fire protection in the plumbing trade** | | | | | |
| 3.1 describe roles, responsibilities, features, and practices related to the WHMIS program | I can consistently describe roles, responsibilities, features, and practices related to the WHMIS program. | I can usually describe roles, responsibilities, features, and practices related to the WHMIS program. | I sometimes need assistance to describe roles, responsibilities, features, and practices related to the WHMIS program. | I often need assistance to describe roles, responsibilities, features, and practices related to the WHMIS program. | I have not yet provided evidence of this performance task. |
| 3.2 describe three key elements of WHMIS | I can consistently describe three key elements of WHMIS. | I can usually describe three key elements of WHMIS. | I sometimes need assistance to describe three key elements of WHMIS. | I often need assistance to describe three key elements of WHMIS. | I have not yet provided evidence of this performance task. |
| 3.3 describe handling, storing, and transporting procedures for hazardous material | I can consistently describe handling, storing, and transporting procedures for hazardous material. | I can usually describe handling, storing, and transporting procedures for hazardous material. | I sometimes need assistance to describe handling, storing, and transporting procedures for hazardous material. | I often need assistance to describe handling, storing, and transporting procedures for hazardous material. | I have not yet provided evidence of this performance task. |
| 3.4 describe venting procedures when working with hazardous materials | I can consistently describe venting procedures when working with hazardous materials. | I can usually describe venting procedures when working with hazardous materials. | I sometimes need assistance to describe venting procedures when working with hazardous materials. | I often need assistance to describe venting procedures when working with hazardous materials. | I have not yet provided evidence of this performance task. |
| 3.5 describe hazards, classes, procedures, and equipment related to fire protection | I can consistently describe hazards, classes, procedures, and equipment related to fire protection. | I can usually describe hazards, classes, procedures, and equipment related to fire protection. | I sometimes need assistance to describe hazards, classes, procedures, and equipment related to fire protection. | I often need assistance to describe hazards, classes, procedures, and equipment related to fire protection. | I have not yet provided evidence of this performance task. |

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| **4. manage an apprenticeship to earn journeyperson certification** | | | | | |
| 4.1 describe the contractual responsibilities of the apprentice, employer, and Alberta Apprenticeship and Industry Training | I can consistently describe the contractual responsibilities of the apprentice, employer, and Alberta Apprenticeship and Industry Training. | I can usually describe the contractual responsibilities of the apprentice, employer, and Alberta Apprenticeship and Industry Training. | I sometimes need assistance to describe the contractual responsibilities of the apprentice, employer, and Alberta Apprenticeship and Industry Training. | I often need assistance to describe the contractual responsibilities of the apprentice, employer, and Alberta Apprenticeship and Industry Training. | I have not yet provided evidence of this performance task. |
| 4.2 describe the purpose of the apprentice record book | I can consistently describe the purpose of the apprentice record book. | I can usually describe the purpose of the apprentice record book. | I sometimes need assistance to describe the purpose of the apprentice record book. | I often need assistance to describe the purpose of the apprentice record book. | I have not yet provided evidence of this performance task. |
| 4.3 describe the procedure for changing employers during an active apprenticeship | I can consistently describe the procedure for changing employers during an active apprenticeship. | I can usually describe the procedure for changing employers during an active apprenticeship. | I sometimes need assistance to describe the procedure for changing employers during an active apprenticeship. | I often need assistance to describe the procedure for changing employers during an active apprenticeship. | I have not yet provided evidence of this performance task. |
| 4.4 describe the purpose of the course outline | I can consistently describe the purpose of the course outline. | I can usually describe the purpose of the course outline. | I sometimes need assistance to describe the purpose of the course outline. | I often need assistance to describe the purpose of the course outline. | I have not yet provided evidence of this performance task. |
| 4.5 describe the procedure for progressing through an apprenticeship | I can consistently describe the procedure for progressing through an apprenticeship. | I can usually describe the procedure for progressing through an apprenticeship. | I sometimes need assistance to describe the procedure for progressing through an apprenticeship. | I often need assistance to describe the procedure for progressing through an apprenticeship. | I have not yet provided evidence of this performance task. |
| 4.6 describe advancement opportunities in this trade | I can consistently describe advancement opportunities in this trade. | I can usually describe advancement opportunities in this trade. | I sometimes need assistance to describe advancement opportunities in this trade. | I often need assistance to describe advancement opportunities in this trade. | I have not yet provided evidence of this performance task. |

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| **5. use codes and standards that are applied in the pipe trades** | | | | | |
| 5.1 identify code documents relating to pipe trades, including ASME/ABSA, CSA, NRC, NFPA, and ASHRAE | I can consistently identify code documents relating to pipe trades. | I can usually identify code documents relating to pipe trades. | I sometimes need assistance to identify code documents relating to pipe trades. | I often need assistance to identify code documents relating to pipe trades. | I have not yet provided evidence of this performance task. |
| 5.2 explain the applicable codes and standards and which body governs the code or standard | I can consistently explain the applicable codes and standards and which body governs the code or standard. | I can usually explain the applicable codes and standards and which body governs the code or standard. | I sometimes need assistance to explain the applicable codes and standards and which body governs the code or standard. | I often need assistance to explain the applicable codes and standards and which body governs the code or standard. | I have not yet provided evidence of this performance task. |
| 5.3 describe the procedures for the acceptance of the codes by the provinces and the local authorities | I can consistently describe the procedures for the acceptance of the codes by the provinces and the local authorities. | I can usually describe the procedures for the acceptance of the codes by the provinces and the local authorities. | I sometimes need assistance to describe the procedures for the acceptance of the codes by the provinces and the local authorities. | I often need assistance to describe the procedures for the acceptance of the codes by the provinces and the local authorities. | I have not yet provided evidence of this performance task. |

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| **6. apply arc flash safety and lockout and tagout on a jobsite** | | | | | |
| 6.1 identify safe**-**work practices to protect from arc flash hazards | I can consistently identify safe**-**work practices to protect from arc flash hazards. | I can usually identify safe**-**work practices to protect from arc flash hazards. | I sometimes need assistance to identify safe**-**work practices to protect from arc flash hazards. | I often need assistance to identify safe**-**work practices to protect from arc flash hazards. | I have not yet provided evidence of this performance task. |
| 6.2 describe lockout and tagout procedures | I can consistently describe lockout and tagout procedures. | I can usually describe lockout and tagout procedures. | I sometimes need assistance to describe lockout and tagout procedures. | I often need assistance to describe lockout and tagout procedures. | I have not yet provided evidence of this performance task. |
| 6.3 identify safe**-**work practices to prevent electrical shock | I can consistently identify safe-work practices to prevent electrical shock. | I can usually identify safe-work practices to prevent electrical shock. | I sometimes need assistance to identify safe-work practices to prevent electrical shock. | I often need assistance to identify safe-work practices to prevent electrical shock. | I have not yet provided evidence of this performance task. |

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| **Teacher feedback and assessment.** |  |