

Material ID#: 19847  
Course Title: - Core + Plumbing 1

Strand Standard or Performance Skill	Curriculum	Module ID #	Module	Section #, Page # or Asset where covered	Direct Link to Asset (if applicable)	Notes/Comments
<b>Strand 1: Students will participate in personal and leadership development activities through SkillsUSA or another appropriate career and technical student organization</b>						
Student will use communication skills to effectively communicate with others.	Core	00107	Basic Communication Skills	Section 1.0.0		
• Understand when it is appropriate to listen and to speak.	Core	00107	Basic Communication Skills	Section 1.1.2		
• Understand and follow verbal and written instructions for classroom and laboratory activities.	Core	00107	Basic Communication Skills	Section 1.2.0		
Student will effectively use teamwork to respectfully work with others.	Core	00108	Basic Employability Skills	Section 3.5.0		
Identify and understand different roles in working with a team.	Core	00108	Basic Employability Skills	Section 3.5.0		
Student will use critical thinking and problem-solving skills.	Core	00108	Basic Employability Skills	Section 2.1.0		
• Analyze the cause of the problem.	Core	00108	Basic Employability Skills	Section 2.2.0		
• Develop a solution to address the problem.	Core	00108	Basic Employability Skills	Section 2.2.0		
• Implement the plan.	Core	00108	Basic Employability Skills	Section 2.2.0		
• Evaluate the effectiveness of the plan.	Core	00108	Basic Employability Skills	Section 2.2.0		
Student will be dependable, reliable, steady, trustworthy, and consistent in performance and behavior.	Core	00108	Basic Employability Skills	Section 3.1.0		
• Set and meet goals on attendance and punctuality.	Core	00108	Basic Employability Skills	Section 3.1.3		
• Prioritize, plan, and manage work to complete assignments and projects on time.	Core	00108	Basic Employability Skills	Section 3.1.2		
Student will be accountable for results.	Core	00108	Basic Employability Skills	Section 3.1.2		
• Use an achievement chart for activities and behaviors in class that encourages a personal evaluation of classroom performance.						
• File a regular written report on progress toward completion of assignments and projects.	Core	00107	Basic Communication Skills	Section 2.3.0		
• Be familiar with the course disclosure statement and all requirements for successful completion of the course.						
• Demonstrate workplace ethics, e.g., fair, honest, disciplined.	Core	00108	Basic Employability Skills	Section 3.1.0		
<b>Strand 2: Students will participate in work-place readiness activities</b>						
Student will demonstrate employability skills.	Core	00108	Basic Employability Skills	Section 3.0.0		
• Use a career search network to find career choices.	Core	00108	Basic Employability Skills	Section 1.2.0		
• Write a resume including a list of demonstrated skills.	Core	00108	Basic Employability Skills	Section 1.2.0		
• Write a letter of application.	Core	00108	Basic Employability Skills	Section 1.2.0		
• Complete a job application.	Core	00108	Basic Employability Skills	Section 1.2.0		
• Participate in an actual or simulated job interview.						
Student will participate in a work-based learning experience outside the classroom.						
• Student will plan and implement a work-based learning experience aligned with their career goal.	Core	00100	Build Your Future in Construction	Section 4.0.0		
<b>Strand 3: Students will receive an orientation to the plumbing trade</b>						
Describe the history of the plumbing trade.	Plumbing	02101	Introduction to the Plumbing Profession	Section 1.1.0		
Identify the stages of progress within the plumbing trade.	Plumbing	02101	Introduction to the Plumbing Profession	Section 1.2.4		
Identify responsibilities of a person working in the construction industry.	Core	00100	Build Your Future in Construction	Section 3.2.0		
Explain the importance of safety in the construction industry.	Core	00101	Basic Safety	Section 1.1.0		
<b>Performance Skills</b>						
Understand and demonstrate their knowledge of the plumbing trade.	Plumbing	02101	Introduction to the Plumbing Profession	Section 1.2.2		
• Describe the history of the plumbing trade.	Plumbing	02101	Introduction to the Plumbing Profession	Section 1.1.0		
• Identify the stages of progress within the plumbing trade.	Plumbing	02101	Introduction to the Plumbing Profession	Section 1.2.4		
• Identify responsibilities of a person working in the construction industry.	Core	00100	Build Your Future in Construction	Section 3.2.0		
• Explain the importance of safety in the construction industry.	Core	00101	Basic Safety	Section 1.1.0		
<b>Strand 4: Students understand and demonstrate the safe use of plumbing tools</b>						
Identify the basic hand and power tools used in the plumbing trade.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.0.0 Section 2.0.0		
Demonstrate the proper maintenance procedures to be used for hand and power tools.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.0.0 Section 2.0.0		We discuss the maintenance of the individual tools of each section.
Explain safety as it applies to plumbing tools.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.1.0 Section 2.1.0		
<b>Performance Skills</b>						
Understand and demonstrate the use of plumbing tools.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.0.0 Section 2.0.0		
• Identify the basic hand and power tools used in the plumbing trade.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.0.0 Section 2.0.0		
Demonstrate the proper maintenance procedures to be used for hand and power tools.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.0.0 Section 2.0.0		We discuss the maintenance of the individual tools in each subsection.
Explain safety as it applies to plumbing tools.	Plumbing	02103	Tools of the Plumbing Trade	Section 1.1.0 Section 2.1.0		
<b>Strand 5: Students will understand and demonstrate the use of plumbing math.</b>						
Identify the parts of a fitting and use common pipe measuring techniques.	Plumbing	02104	Introduction to Plumbing Math	Section 2.1.0		
• Use fitting dimension tables and a framing square to determine fitting allowances and pipe makeup.	Plumbing	02104	Introduction to Plumbing Math	Section 2.1.4		We do not mention framing squares in relation to fitting dimension tables.
Calculate end-to-end measurements by figuring fitting allowances and pipe makeup.	Plumbing	02104	Introduction to Plumbing Math	Section 2.2.3		We call it "face-to-face"
• Use a framing square to find the center of fittings.	Plumbing	02103 02104	Tools of the Plumbing Trade Introduction to Plumbing Math	Section 1.2.5 Section 2.1.0		We do not relate framing squares to finding the center specifically. We talk about each separately in different modules.
<b>Figure 45-degree offsets and travel using the Pythagorean Theorem.</b>						This is in Level 2
<b>Figure 45-degree offsets and travel using a framing square or tape measure.</b>						This is in Level 2
Use a ruler or measuring tape to measure within a sixteenth (1/16) of an inch.	Core	00103	Introduction to Hand Tools	Section 2.1.2		
<b>Performance Skills</b>						
Understand and demonstrate the use of plumbing math.	Plumbing	02104	Introduction to Plumbing Math	Section 2.1.0		
• Identify the parts of a fitting and use common pipe measuring techniques.	Plumbing	02104	Introduction to Plumbing Math	Section 2.1.0		
• Use fitting dimension tables and a framing square to determine fitting allowances and pipe makeup.	Plumbing	02104	Introduction to Plumbing Math	Section 2.1.4		We do not mention framing squares in relation to fitting dimension tables.
• Calculate end-to-end measurements by figuring fitting allowances and pipe makeup.	Plumbing	02104	Introduction to Plumbing Math	Section 2.2.3		We call it "face-to-face"
• Use a framing square to find the center of fittings.	Plumbing	02103 02104	Tools of the Plumbing Trade Introduction to Plumbing Math	Section 1.2.5 Section 2.1.0		We do not relate framing squares to finding the center specifically. We talk about each separately in different modules.
<b>Figure 45-degree offsets and travel using the Pythagorean Theorem.</b>						This is in Level 2
<b>Figure 45-degree offsets and travel using a framing square or tape measure.</b>						This is in Level 2
• Use a ruler or measuring tape to measure within a sixteenth (1/16) of an inch.	Core	00103	Introduction to Hand Tools	Section 2.1.2		
<b>Strand 6: Students will understand and use plumbing drawings.</b>						
Identify pictorial (isometric and oblique), schematic, and orthographic drawings, and discuss how different views are used to depict information about objects.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.0.0		
Explain the types of drawings that may be included in a set of plumbing drawings and the relationship between the different drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.4.0		
Interpret plumbing-related information from a set of plumbing drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.4.0		
Use an architect's scale to draw lines to scale and to measure lines drawn to scale.	Plumbing	02105	Introduction to Plumbing Drawings	Section 1.3.1		
Discuss how local code requirements apply to certain drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 1.5.1		
<b>Performance Skills</b>						
Understand and use plumbing drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.4.0		
• Identify pictorial (isometric and oblique), schematic, and orthographic drawings, and discuss how different views are used to depict information about objects.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.0.0		
• Explain the types of drawings that may be included in a set of plumbing drawings and the relationship between the different drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.4.0		
• Interpret plumbing-related information from a set of plumbing drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 2.4.0		
• Use an architect's scale to draw lines to scale and to measure lines drawn to scale.	Plumbing	02105	Introduction to Plumbing Drawings	Section 1.3.1		
• Discuss how local code requirements apply to certain drawings.	Plumbing	02105	Introduction to Plumbing Drawings	Section 1.5.1		
<b>Strand 7: Students will understand and demonstrate the use of plastic pipe and fittings.</b>						
Identify the common types of materials and schedules of plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0		
Identify the common types of fittings used with plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.3.0		
Identify and determine the kinds of hangers and supports needed for plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 3.1.0		
Identify the various techniques used in hanging and supporting plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 3.1.0		
Demonstrate the ability to properly measure, cut, and join plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 2.1.0 Section 2.2.0		
Follow basic safety precautions for the installation, operation, and maintenance of plastic tubing.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0		
Identify the hazards and safety precautions associated with plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0		
<b>Performance Skills</b>						
Understand and demonstrate the use of plastic pipe and fittings.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0		
• Identify the common types of materials and schedules of plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0		
• Identify the common types of fittings used with plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.3.0		
• Identify and determine the kinds of hangers and supports needed for plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 3.1.0		
• Identify the various techniques used in hanging and supporting plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 3.1.0		
Demonstrate the ability to properly measure, cut, and join plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 2.1.0 Section 2.2.0		

Follow basic safety precautions for the installation, operation, and maintenance of plastic tubing.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0	
Identify the hazards and safety precautions associated with plastic piping.	Plumbing	02106	Plastic Pipe and Fittings	Section 1.1.0	
Strand 8: Students will select the correct types of materials for copper piping systems.					
Select the correct types of materials for copper piping systems.	Plumbing	02107	Copper Tube and Fittings	Section 1.1.0	
Identify types of fittings and valves and their uses.	Plumbing	02107	Copper Tube and Fittings	Section 1.3.0	
Select the correct hanger or support for the application.	Plumbing	02107	Copper Tube and Fittings	Section 3.1.0	
Select the appropriate personal protective equipment for working with copper piping.	Core	00101	Basic Safety	Section 5.0.0	We do not specify what PPE to use with copper
Correctly measure, cut, ream, and join copper piping.	Plumbing	02107	Copper Tube and Fittings	Section 2.0.0 Section 2.4.0	
Performance Skills					
Understand and demonstrate the use of copper pipe and fittings.	Plumbing	02107	Copper Tube and Fittings	Section 1.1.0	
Select the correct types of materials for copper piping systems.	Plumbing	02107	Copper Tube and Fittings	Section 1.1.0	
Identify types of fittings and valves and their uses.	Plumbing	02107	Copper Tube and Fittings	Section 1.3.0	
Select the correct hanger or support for the application.	Plumbing	02107	Copper Tube and Fittings	Section 3.1.0	
Select the appropriate personal protective equipment for working with copper piping.	Core	00101	Basic Safety	Section 5.0.0	We do not specify what PPE to use with copper
Correctly measure, cut, ream, and join copper piping.	Plumbing	02107	Copper Tube and Fittings	Section 2.0.0 Section 2.4.0	
Strand 9: Students will understand drain, waste, and vent (DWV) systems.					
Explain how waste moves from a fixture through the drain system to the environment.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 1.0.0	
Identify the major components of a drainage system and describe their functions.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 1.1.0	
Identify types and parts of traps and explain the importance of traps and how traps lose their seals.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 2.0.0	
Identify the various types of DWV fittings and describe their application.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 3.0.0	
Performance Skills					
Understand drain, waste, and vent (DWV) systems.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 1.0.0	
Explain how waste moves from a fixture through the drain system to the environment.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 1.0.0	
Identify the major components of a drainage system and describe their functions.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 1.1.0	
Identify types and parts of traps and explain the importance of traps and how traps lose their seals.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 2.0.0	
Identify the various types of DWV fittings and describe their application.	Plumbing	02111	Introduction to Drain, Waste, and Vent (DWV) Systems	Section 3.0.0	
Strand 10: Students will understand water distribution systems.					
Discuss how water moves from the source, through the water distribution system, and to the fixture.	Plumbing	02112	Introduction to Water Distribution Systems	Section 1.0.0	
Identify the major components of water distribution systems and describe the function of each component.	Plumbing	02112	Introduction to Water Distribution Systems	Section 2.0.0	
Explain the relationships between the components of a water distribution system.	Plumbing	02112	Introduction to Water Distribution Systems	Section 3.0.0	
Performance Skills					
Understand water distribution systems.	Plumbing	02112	Introduction to Water Distribution Systems	Section 1.0.0	
Discuss how water moves from the source, through the water distribution system, and to the fixture.	Plumbing	02112	Introduction to Water Distribution Systems	Section 1.0.0	
Identify the major components of water distribution systems and describe the function of each component.	Plumbing	02112	Introduction to Water Distribution Systems	Section 2.0.0	
System.	Plumbing	02112	Introduction to Water Distribution Systems	Section 3.0.0	
Strand 11: Students will understand and demonstrate the use of fixtures and faucets.					
fixtures.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.1.0	
Discuss common types of sinks, lavatories, and faucets.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.2.1	
Discuss common types of bathtubs, bath-shower modules, shower stalls, and shower baths.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.2.2 Section 1.2.3	
Discuss common types of toilets, urinals, and bidets.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.3.0	
Discuss common types of drinking fountains and water coolers.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.5.3	
Discuss common types of garbage disposals and domestic dishwashers.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.4.0	
Performance Skills					
Understand and demonstrate the use of fixtures and faucets.	Plumbing	02210	Introduction to Plumbing Fixtures	Section 1.0.0	
Discuss common types of sinks, lavatories, and faucets.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.1.0 Section 1.2.1 Section 1.2.3	
Discuss common types of toilets, urinals, and bidets.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.3.0	
Discuss common types of drinking fountains and water coolers.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.5.3	
Discuss common types of garbage disposals and domestic dishwashers.	Plumbing	02110	Introduction to Plumbing Fixtures	Section 1.4.0	