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### Teaching & Learning Template: Plumbing by Learning Type and Style

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Integration Framework for College of Trades Curriculum and Ministry Standards

# Teaching & Learning Template

Plumbing by Learning Type and Style

	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
Leadership in Learning	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00021.0 Workplace Safety, Rigging and Hoisting</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	21.1 - Codes, Acts & Regulations 21.4 - Control Hazards 21.9 - Read and Interpret Specifications & Shop Drawings 21.18- Communicate through the lift	1--Complete all work in compliance with current legislation, standards, regulations and guidelines.  7--Interpret, prepare & modify mechanical drawings & other related technical documents.
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>		
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>	21.6 – Lock out & tagging procedures 21.16 – Plan to perform the lift	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  10-Contribute to the planning, implementation & evaluation of projects
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>	21.3 - Recognize & assess hazardous conditions 21.10 - Inspect the job site 21.11 - Determine the required equipment 21.13 – Inspect the rigging	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  3--Comply with current health & safety legislation, as well as organizational practices & procedures.
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>	21.2 Personal Protective Equipment	
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>	21.12 - Schedule the lift 21.15 - Secure the hoisting area	2--Apply quality control & quality assurance procedures to meet organizational standards & <b>requirements.</b>  <b>3--Comply with current health &amp; safety legislation, as well as organizational practices &amp; procedures.</b>
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	21.5 – Work Platforms 21.7 - Operate and maintain tools 21.8 – Perform Housekeeping Duties 21.14 – Connect the equipment to the rigging 21.17 – Position, secure & disconnect the load 21.19 - Remove and store the rigging	8--Perform technical measurements accurately using appropriate instruments & equipment  9--Manufacture, assemble, maintain & repair mechanical components according to required specifications.  11--Select, use & maintain machinery, tools & equipment for the installation, manufacturing & repair of basic mechanical components

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00022.0 Plumbing Systems – Pipe &amp; Fitting Materials, Pipe Supports and Hangers (1-12)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	22.1 – Steel Pipe & Fittings 22.2 – Cast Iron Soil Pipe & Fittings 22.3 – ABS Plastic Pipe & Fittings 22.4 – PVC Plastic Pipe & Fittings 22.5 – CPVC Plastic Pipe & Fittings 22.6- Polyethylene Plastic Pipe & Fittings 22.7 – Cross-linked Polyethylene/Aluminium/Cross-linked Polyethylene (PEX/AL/PEX) Composite Pipe & Cross-linked Polyethylene Plastic Pipe and Fittings 22.8 – Polyethylene/Aluminium/Polyethylene (PE/AL/PE) Composite Pipe & Polypropylene (PP-R) Pipe & Fittings 22.9 – Copper Pipe and Fittings 22.10 – Glass Pipe & Fittings 22.11 – Pipe Supports & Hangers 22.12 – Joining Dissimilar Materials	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00022.0 Plumbing Systems – Drainage Systems (13-25)</b>	
Directive Cognitive Structure	<p>Communication</p> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	<p>22.13 – Drainage Terms and Definitions</p> <p>22.14 – Cleanouts and Locations</p> <p>22.15 – Prohibited Fittings and Connections</p> <p>22.16 – Purpose of a Drain Plan</p> <p>22.17 – How to Draw a Drain Plan</p> <p>22.18 – Foundation Drains</p> <p>22.19 – Floor Drains</p> <p>22.20 – Hub Drains and Funnel Floor Drains</p> <p>22.21 – Trap Seal Primers</p> <p>22.22 – Drain System Design</p> <p>22.23 – Building Traps</p> <p>22.24 – Purpose of a Stack Elevation</p> <p>22.25 – How to Draw a Stack Elevation</p>	
	<p>Numeracy</p> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <p>Conceptualizing</p>		
	<p>Information Management</p> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<p>Critical Thinking &amp; Problem Solving</p> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<p>Personal</p> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<p>Interpersonal</p> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<p>Physical Literacy</p> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
Leadership in Learning	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00022.0 Plumbing Systems – Waste Pipe Systems (26-31)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	22.26 – Traps and Types 22.27 – Trap Sizing 22.28 – Trap Seal Loss 22.29 – Fixture Drain Requirements	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>	22.30 – Sanitary Drain System Sizing	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  10--Contribute to the planning, implementation & evaluation of projects
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	22.31 – Grading Waste Pipes	8--Perform technical measurements accurately using appropriate instruments & equipment  9--Manufacture, assemble, maintain & repair mechanical components according to required specifications.

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00022.0 Plumbing Systems – Venting Systems (32-39)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	22.32 – Purpose of Venting 22.33 – Types of Individual Vents 22.34 – Sizing Individual Vents 22.35 – Branch Vents 22.36 – Dual Vents 22.37 – Wet Venting 22.38 – Roof Flashings 22.39 – Stack & Vent Terminals	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00022.0 Plumbing Systems – Codes, Regulations &amp; Standards (40)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	22.40 Code, Regulations & Standards	1--Complete all work in compliance with current legislation, standards, regulations and guidelines.
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		



Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00023.0 Tools &amp; Piping Methods</b>	
Directive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>		
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>	23.1 – Measuring Tools & Instruments 23.7 – Build Piping Projects Incorporating Different Offsets	6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics.
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	23.2 – Identify & Use Various Hand Tools 23.3 – Identify & Use Various Power Tools 23.4 – Steel Pipe Joining Methods 23.5 – Cast Iron Pipe Joining Methods 23.6 – Copper Pipe Joining Methods	8--Perform technical measurements accurately using appropriate instruments & equipment  9--Manufacture, assemble, maintain & repair mechanical components according to required specifications.  11--Select, use & maintain machinery, tools & equipment for the installation, manufacturing & repair of basic mechanical components

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00024.0 Trade Calculations</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>		
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>	24.1 – Basic Math 24.2 – Conversions of SI to Imperial and U.S. Values 24.3 – Linear Measurements 24.4 – Calculation of Various Offsets 24.5 – Square Roots	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics.
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00025.0 Trade Documentation</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	25.1 – Identify and Use Various Drafting Instruments 25.2 – Identify and Draw Various Projection Drawings 25.3 – Identify and Interpret Construction Drawings	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  7--Interpret, prepare & modify mechanical drawings & other related technical documents  8--Perform technical measurements accurately using appropriate instruments & equipment
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>		
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>	25.4 – Demonstrate Effective Interpersonal Relations  25.5 – Receive & React to Instructions	1--Complete all work in compliance with current legislation, standards, regulations and guidelines.
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level One	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00026.0 Welding</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	26.3 – Oxy-Acetylene Welding Principles	
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>		
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	26.1 – Oxy-Acetylene Cutting and Welding Equipment and Accessories 26.2 – Oxy-Acetylene Cutting Theory, Cutting and Welding Safety Requirements 26.4 – Lay Down Beads, Prepare, Tack & Weld a Butt Joint	8--Perform technical measurements accurately using appropriate instruments & equipment 9--Manufacture, assemble, maintain & repair mechanical components according to required specifications. 11--Select, use & maintain machinery, tools & equipment for the installation, manufacturing & repair of basic mechanical components

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Pipe &amp; Fitting Materials, Pipe Supports and Hangers (1-2)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.1 – Drilling & Notching 27.2 – Sleeving	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
Leadership in Learning	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Drainage Systems (3-5)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.3 – Drainage Terms & Definitions 27.4 – Sanitary & Storm System Design	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing	27.5 – Datum Line and Instrument Reading	6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics.
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
Leadership in Learning	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Waste Pipe Systems (6-11)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.7 – Grease Interceptors 27.8 – Oil Interceptors 27.9 – Sediment Interceptors 27.10 – Blow Down & Blow Off Tanks 27.11 – Ejectors & Sumps	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>	27.6 – Commercial Sanitary Drain System Sizing	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  10--Contribute to the planning, implementation & evaluation of projects
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Venting Systems (12-16)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.13 – Wet Venting 27.14 – Vent Stacks 27.15 – Circuit Vent	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition Structures	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>	27.12 – Branch Vents 27.16 – Yoke, Auxiliary Stacks, & Offset Relief Vents	2--Apply quality control and quality assurance procedures to meet organizational standards and requirements.  10--Contribute to the planning, implementation & evaluation of projects
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		



Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Water Distribution Systems (17-23)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.17 – Types of Valves 27.18 – Location of Valves 27.19 – Water Distribution Terms & Definitions 27.21 – Hot Water Thermostatic Mixing Valves 27.22 – Temperature & Pressure relief Valves 27.23 – Water Meters	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Plumbing Fixtures, Appliances &amp; Equipment (24- 26)</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.24 – Plumbing Fixtures 27.25 – Faucets & Shower Control Valves 27.26 – Water Closets, Urinals, Flush Tanks, & Flushometers	
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Codes (27-28)</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.27 – Testing Requirements 27.28 – Required Inspection	
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>		
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard	
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes	
	Skill Category - Defined	<b>S00027.0 Plumbing Systems – Properties of Water (29-32)</b>		
Directive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	27.29 – Heat Transfer 27.30 – Latent & Sensible Heat		
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing	27.31 – British Thermal Units 27.32 – Properties of Water		6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics.
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>			
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>			
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>			
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>			
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>			

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00028.0 Drain Waste &amp; Vent (DWV) Piping Systems</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>		
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	28.1 – Design, Draw, Install & Test Various Drain, Waste, Vent, Storm, & Fixture Installations 28.2 – Perform Various Services, Maintenance and Repairs Labs	8--Perform technical measurements accurately using appropriate instruments & equipment 9--Manufacture, assemble, maintain & repair mechanical components according to required specifications. 11--Select, use & maintain machinery, tools & equipment for the installation, manufacturing & repair of basic mechanical components

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00029.0 Trade Calculations</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>		
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>	29.1 – Area Calculations 29.2 – Surface Area Calculations 29.3 – Volume Calculations 29.4 – Percentages and Ratios	6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics.
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00030.0 Trade Documentation</b>	
Directive Cognitive Structure	Communication <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	30.1 – Read & Apply Information from Construction Drawings 30.2 – Read & Interpret Job Specifications 30.3 – Produce Various Plumbing Drawings 30.6 – Write Job-Related Documents	1--Complete all work in compliance with current legislation, standards, regulations and guidelines. 2--Apply quality control and quality assurance procedures to meet organizational standards and requirements. 6--Analyze & solve mechanical problems by applying mathematics & fundamentals of mechanics. 7--Interpret, prepare & modify mechanical drawings & other related technical documents. 10-Contribute to the planning, implementation & evaluation of projects
	Numeracy <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> Conceptualizing		
	Information Management <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	Critical Thinking & Problem Solving <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	Personal <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	Interpersonal <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>	30.4 – Demonstrate Effective Interpersonal Relations 30.5. – Receive and React to Instructions	1--Complete all work in compliance with current legislation, standards, regulations and guidelines.
Achievement Role-Play	Physical Literacy <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>		

Leadership in Learning	Mechanical Technician Program Standard	Apprenticeship Curriculum Standard	Mechanical Technician Program Standard
	Essential Employability Skills	Plumber Level Two	Vocational Learning Outcomes
	Skill Category - Defined	<b>S00031.0 Welding</b>	
Directive Cognitive Structure	<b>Communication</b> <ul style="list-style-type: none"> <li>● Reading</li> <li>● Writing</li> <li>● Speaking</li> <li>● Listening</li> <li>● Presenting</li> <li>● Visual literacy</li> </ul>	31.1 – Arc Welding Theory, Terminology, Equipment, Procedures & Safety Precautions	
	<b>Numeracy</b> <ul style="list-style-type: none"> <li>● Understanding &amp; applying math concepts &amp; reasoning</li> <li>● Analyzing &amp; using numerical data</li> </ul> <b>Conceptualizing</b>		
	<b>Information Management</b> <ul style="list-style-type: none"> <li>● Gathering &amp; managing information</li> <li>● Selecting &amp; using appropriate tools &amp; technology for a task or a project</li> <li>● Computer literacy</li> <li>● Internet skills</li> </ul>		
Participative Meta-Cognition	<b>Critical Thinking &amp; Problem Solving</b> <ul style="list-style-type: none"> <li>● Analyzing</li> <li>● Synthesizing</li> <li>● Evaluating</li> <li>● Decision making</li> <li>● Creative &amp; innovative thinking</li> </ul>		
	<b>Personal</b> <ul style="list-style-type: none"> <li>● Managing self</li> <li>● Managing change &amp; being flexible &amp; adaptable</li> <li>● Engaging in reflective practices</li> <li>● Demonstrating personal responsibility</li> </ul>		
Supportive Collaborative	<b>Interpersonal</b> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Relationship management</li> <li>● Conflict resolution</li> <li>● Leadership</li> <li>● Networking</li> </ul>		
Achievement Role-Play	<b>Physical Literacy</b> <ul style="list-style-type: none"> <li>● Performance activity or task</li> <li>● Knowledge utilization</li> <li>● Tactic and kinetic</li> </ul>	31.2 – Arc Welding Procedures	8--Perform technical measurements accurately using appropriate instruments & equipment 9--Manufacture, assemble, maintain & repair mechanical components according to required specifications. 11--Select, use & maintain machinery, tools & equipment for the installation, manufacturing & repair of basic mechanical components