

| Identifier | Poplar - Apprentice - Welding | | Introduced | Completed |
|------------|--|---|------------|-----------|
| A W 1 | GENERAL LAB SAFETY | | | |
| A W 1.1.01 | General Rules | Read safety requirements found in the welding lab. | | |
| A W 1.1.02 | General Rules | Identify safety procedures of machines, tools, and equipment. | | |
| A W 1.1.03 | General Rules | Identify safe behaviors/attitudes. | | |
| A W 1.1.04 | General Rules | List different types of hearing protection. | | |
| A W 1.2.01 | Fire Safety Rules | Read fire safety requirements found in the welding lab. | | |
| A W 1.2.02 | Fire Safety Rules | Identify fire evacuation procedures. | | |
| A W 1.2.03 | Fire Safety Rules | Identify all locations of fire extinguishers, safety blankets, and exit routes. | | |
| A W 2 | MEASUREMENT AND LAYOUT TECHNIQUES | | | |
| A W 2.1.01 | Measurement | Identify semi-precision measuring devices. | | |
| A W 2.1.02 | Measurement | Identify precision measuring devices. | | |
| A W 2.2.01 | Layout tools | Identify common layout tools. | | |
| A W 2.2.02 | Layout tools | Observe a video and/or demonstration on layout tools and techniques. | | |
| A W 2.3.01 | Interpret Prints | Differentiate between a working drawing and an orthographic projection. | | |
| A W 2.3.02 | Interpret Prints | Identify basic welding symbols. | | |
| A W 2.4.01 | Mathematical Skills | Identify whole numbers, fractions, and decimals. | | |
| A W 2.4.02 | Mathematical Skills | Solve job-related problems operating a handheld calculator. | | |
| A W 3 | METALLURGY | | | |
| A W 3.1.01 | Types and Shapes | Describe metal making processes. | | |
| A W 3.1.02 | Types and Shapes | Observe a metal making process video. | | |
| A W 3.2.01 | Effects | Recognize hot materials in the welding lab. | | |
| A W 3.2.02 | Effects | Explain the difference between tempering, hardening, and the annealing processes. | | |
| A W 4 | TOOLS AND MACHINES | | | |
| A W 4.1.01 | Stationary Machines | Identify basic stationary power machines such as grinders, buffers, sanders, band saws, chop saws, shears, and presses. | | |
| A W 4.1.02 | Stationary Machines | Identify safety features of basic stationary power machines such as grinders, buffers, sanders, band saws, chop saws, shears, and presses. | | |
| A W 4.1.03 | Stationary Machines | Observe safety video and demonstration. | | |
| A W 4.2.01 | Portable Machines | Identify basic portable power machines such as grinders, buffers, sanders, band saws, shears, and drills. | | |
| A W 4.2.02 | Portable Machines | Identify safety features of basic portable power machines such as grinders, buffers, sanders, band saws, shears, and drills. | | |
| A W 4.2.03 | Portable Machines | Observe a safety video and demonstration. | | |
| A W 4.3.01 | Welding Machines | Identify basic hand tools such as pliers, files, chisels, punches, hard face and soft face hammers, hacksaw, vises, and brushes. | | |
| A W 4.3.02 | Welding Machines | Identify safety features of basic hand tools such as pliers, files, chisels, punches, hard face and soft face hammers, hacksaw, vises, and brushes. | | |
| A W 5 | OXY-FUEL WELDING/ CUTTING | | | |
| A W 5.1.01 | Protection | List personal protective safety equipment. | | |
| A W 5.1.02 | Protection | Observe a safety video and/or demonstration. | | |
| A W 5.2.01 | Welding Equipment | List, identify and select oxy-fuel welding equipment. | | |
| A W 5.2.02 | Welding Equipment | Identify the various types of industrial gas cylinders. | | |
| A W 5.2.03 | Welding Equipment | Observe a video and/or demonstration. | | |
| A W 5.3.01 | Cutting Equipment | List, identify, and select oxy-fuel cutting equipment. | | |
| A W 5.3.02 | Cutting Equipment | Identify the various types of industrial gas cylinders. | | |
| A W 5.3.03 | Cutting Equipment | Observe a video and/or demonstration. | | |
| A W 5.4.01 | Brazing | List, identify, and select oxy-fuel brazing equipment. | | |
| A W 5.4.02 | Brazing | Identify the various types of industrial gas cylinders. | | |
| A W 5.4.03 | Brazing | Observe video and/or demonstration. | | |
| A W 6 | SHIELDED METAL ARC WELDING | | | |
| A W 6.1.01 | Procedures | List SMAW equipment procedures. | | |
| A W 6.1.02 | Procedures | Observe SMAW video and/or demonstration procedures. | | |
| A W 6.1.03 | Procedures | List five (5) SMAW safety concerns. | | |
| A W 6.1.04 | Procedures | List personal safety gear required for SMAW. | | |
| A W 6.2.01 | Select and Setup | List SMAW equipment setups. | | |
| A W 6.2.02 | Select and Setup | Observe SMAW video and/or demonstration setups. | | |
| A W 6.3.01 | Safety | List SMAW equipment safety. | | |
| A W 6.3.02 | Safety | Observe SMAW video and/or demonstration safety. | | |
| A W 6.3.03 | Safety | List and draw the five (5) welding joints utilizing SMAW. | | |
| A W 6.3.04 | Safety | List the four (4) welding positions utilizing SMAW. | | |
| A W 7 | GAS METAL ARC WELDING | | | |
| A W 7.1.01 | Procedures | List GMAW equipment procedures. | | |
| A W 7.1.02 | Procedures | Observe GMAW video and/or demonstration procedures. | | |
| A W 7.1.03 | Procedures | List five (5) GMAW safety concerns. | | |
| A W 7.1.04 | Procedures | List personal safety gear required for GMAW. | | |
| A W 7.2.01 | Select and Setup | List GMAW equipment setups. | | |

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| A W 7.2.02 | Select and Setup | Observe GMAW video and/or demonstration setups. | | |
| A W 7.3.01 | Safety | List GMAW equipment safety. | | |
| A W 7.3.02 | Safety | Observe GMAW video and/or demonstration safety. | | |
| A W 7.3.03 | Safety | List and draw the five (5) welding joints utilizing GMAW. | | |
| A W 7.3.04 | Safety | List the four (4) welding positions utilizing GMAW. | | |
| A W 8 | FLUX CORE ARC WELDING | | | |
| A W 8.1.01 | Procedures | List FCAW equipment procedures. | | |
| A W 8.1.02 | Procedures | Observe FCAW video and/or demonstration procedures. | | |
| A W 8.1.03 | Procedures | List five (5) FCAW safety concerns. | | |
| A W 8.1.04 | Procedures | List personal safety gear required for FCAW. | | |
| A W 8.2.01 | Select and Setup | List FCAW equipment setups. | | |
| A W 8.2.02 | Select and Setup | Observe FCAW video and/or demonstration setups. | | |
| A W 8.3.01 | Safety | List FCAW equipment safety. | | |
| A W 8.3.02 | Safety | Observe FCAW video and/or demonstration safety. | | |
| A W 8.3.03 | Safety | List and draw the five (5) welding joints utilizing FCAW. | | |
| A W 8.3.04 | Safety | List the four (4) welding positions utilizing FCAW. | | |
| A W 9 | GAS TUNGSTEN ARC WELDING | | | |
| A W 9.1.01 | Procedures | List GTAW equipment procedures. | | |
| A W 9.1.02 | Procedures | Observe GTAW video and/or demonstration procedures. | | |
| A W 9.1.03 | Procedures | List five (5) GTAW safety concerns. | | |
| A W 9.1.04 | Procedures | List personal safety gear required for GTAW. | | |
| A W 9.2.01 | Select and Setup | List GTAW equipment setups. | | |
| A W 9.2.02 | Select and Setup | Observe GTAW video and/or demonstration setups. | | |
| A W 9.3.01 | Safety | List GTAW equipment safety. | | |
| A W 9.3.02 | Safety | Observe GTAW video and/or demonstration safety. | | |
| A W 9.3.03 | Safety | List and draw the five (5) welding joints utilizing GTAW. | | |
| A W 9.3.04 | Safety | List the four (4) welding positions utilizing GTAW. | | |
| A W 10 | PLASMA ARC CUTTING | | | |
| A W 10.1.01 | Procedures | List Plasma Arc Cutting equipment procedures. | | |
| A W 10.1.02 | Procedures | Observe Plasma Arc Cutting video and/or demonstration procedures. | | |
| A W 10.1.03 | Procedures | List five (5) Plasma Arc Cutting safety concerns. | | |
| A W 10.1.04 | Procedures | List personal safety gear required for Plasma Arc Cutting. | | |
| A W 10.2.01 | Select and Setup | List Plasma Arc Cutting equipment setups. | | |
| A W 10.2.02 | Select and Setup | Observe Plasma Arc Cutting video and/or demonstration setups. | | |
| A W 10.3.01 | Safety | List Plasma Arc Cutting equipment safety. | | |
| A W 10.3.02 | Safety | Observe Plasma Arc Cutting video and/or demonstration safety. | | |
| A W 10.3.03 | Safety | List and draw the five (5) welding joints utilizing Plasma Arc Cutting. | | |
| A W 10.3.04 | Safety | List the four (4) welding positions utilizing Plasma Arc Cutting. | | |
| A W 11 | FABRICATION | | | |
| A W 11.1.01 | Techniques | List the steps to assure accurate layout. | | |
| A W 11.1.02 | Techniques | List steps to layout miter cuts. | | |
| A W 11.1.03 | Techniques | Compute miter cut angles. | | |
| A W 12 | WELD TESTING | | | |
| A W 12.1.01 | Non-Destructive | List the non-destructive weld defects | | |
| A W 12.2.01 | Destructive | List destructive weld defects. | | |
| A W 13 | EMPLOYABILITY | | | |
| A W 13.1.01 | Problem Solving | Identify the basic steps in the problem-solving process. | | |
| A W 13.1.02 | Problem Solving | Identify alternative solutions to a problem. | | |
| A W 13.1.03 | Problem Solving | Identify the basic components of an action plan. | | |
| A W 13.2.01 | Critical Thinking | State the importance of critical thinking in identifying, analyzing, and solving a welding problem. | | |
| A W 13.2.02 | Critical Thinking | Identify the essential steps of critical thinking. | | |
| A W 13.2.03 | Critical Thinking | Define emotional and logical thinking. | | |
| A W 13.2.04 | Critical Thinking | Identify the difference between opinions and statements of fact. | | |
| A W 13.3.01 | Speak, Write, Listen | Define communications. | | |
| A W 13.3.02 | Speak, Write, Listen | Explain the benefits of effective communication in the welding trade. | | |
| A W 13.3.03 | Speak, Write, Listen | Explain how cultural and physical diversity affect communication. | | |
| A W 13.3.04 | Speak, Write, Listen | Identify applicable medium for conveying messages. | | |
| A W 13.4.01 | Technology | Recognize technology used in the welding trade. | | |
| A W 13.4.02 | Technology | Use an Internet browser to locate specific Websites related to welding trades. | | |
| A W 13.5.01 | Leadership and Teamwork | Explain the importance of groups. | | |
| A W 13.5.02 | Leadership and Teamwork | Explain how to organize groups. | | |
| A W 13.5.03 | Leadership and Teamwork | Wear appropriate attire. | | |
| A W 13.6.01 | Ethics | List the important ethics in the workplace. | | |
| A W 13.6.02 | Ethics | Meet attendance standards. | | |

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| A W 13.6.03 | Ethics | Describe an organized workplace. | | |
| A W 13.6.04 | Ethics | Identify appropriate responses to unethical actions. | | |
| A W 13.7.01 | Workplace | List effective time management skills. | | |
| A W 13.7.02 | Workplace | Use technology to complete assignments. | | |
| A W 13.7.03 | Workplace | Utilize materials, tools, and processes to complete a task related to a career selection. | | |
| A W 13.7.04 | Workplace | Read and follow instructions from manuals on the use and care of materials, tools, and equipment. | | |
| A W 13.7.05 | Workplace | Maintain a clean, organized, and safe job site. | | |
| A W 13.7.06 | Workplace | Identify traits needed for cooperation and leadership in a team at school or in a workplace setting. | | |
| A W 13.7.07 | Workplace | Identify the material resources and space requirements needed to complete an assignment. | | |
| A W 13.8.01 | Career | Locate employment opportunities. | | |
| A W 13.8.02 | Career | Identify job requirements for entry-level positions in the welding industry. | | |
| A W 13.8.03 | Career | Identify general conditions for employment. | | |
| A W 13.8.04 | Career | Identify educational/training requirements for related welding fields. | | |
| A W 13.8.05 | Career | Identify the elements of goal setting. | | |
| A W 13.8.06 | Career | Identify welding-related careers. | | |
| A W 13.8.07 | Career | Describe essential job interview skills. | | |
| A W 13.8.08 | Career | Identify the components of a career portfolio. | | |
| A W 13.9.01 | Retention | Describe the importance of a portfolio. | | |
| A W 13.9.02 | Retention | Identify options for lifelong learning. | | |
| A W 13.9.03 | Retention | Identify interpersonal skills needed for job retention. | | |
| A W 13.9.04 | Retention | Identify jobs with opportunity for advancement. | | |
| A W 13.9.05 | Retention | Describe the importance of career planning. | | |