Georgia CTAE

Welding 1 (2013)

Demonstrate employability skills required by business and industry. AC-WI-1	1 **Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.** AC-WI-1.1
	2 **Demonstrate creativity by asking challenging questions and applying innovative procedures and methods** AC-WI-1.2
	3 **Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.** AC-WI-1.3
	4 **Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity** AC-WI-1.4
	5 **Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.** AC-WI-1.5
	6 **Present a professional image through appearance, behavior and language** AC-WI-1.6
Demonstrate proficiency in Arc Welding & Oxyfuel Safety. AC-WI-2	1 **Explain some common hazards in arc welding and oxyfuel cutting.** AC-WI-2.1
	2 **Demonstrate proficiency in use of proper personal protection equipment** AC-WI-2.2
	3 **Demonstrate proficiency in the proper use of safety data sheets.** AC-WI-2.3
	4 **Demonstrate proficiency in the proper material handling methods.** AC-WI-2.4
Identify and use oxyfuel cutting equipment with acetylene and alternate fuels (propane). AC-WI-3	1 **Explain and demonstrate proper oxyfuel cutting safety.** AC-WI-3.1
	2 **Demonstrate setting up and disassembling oxyfuel equipment.** AC-WI-3.2
	3 **Demonstrate lighting, adjusting, and making cuts with acetylene gas** AC-WI-3.3
	4 **Demonstrate lighting, adjusting, and making cuts with propane gas (alternate fuel).** AC-WI-3.4
	)**emonstrate setting up and operating a motorized cutting machine.** AC-WI-3.5

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Identify and use welding symbols and read detailed drawings AC-WI-4	1	**Identify and use the parts of welding symbols** AC-WI-4.1
	2	**Identify and use of basic welding symbols for fillet welds, groove welds, and other basic welds** AC-WI-4.2
	3	**Identify and demonstrate the use of elements of a detailed drawing.** AC-WI-4.3
	4	**Interpret welding symbols from a detailed drawing.** AC-WI-4.4
	5	**Identify and use the basic weld types, weld joints, and weld positions.** AC-WI-4.5
Identify and explain welding procedures and testing. AC-WI-5	1	**Identify and explain common destructive and nondestructive weld test methods.** AC-WI-5.1
	2	**Identify and explain the American Welding Society (AWS) codes for welding.** AC-WI-5.2
	3	**Identify and explain the elements of Welding Procedure Specification (WPS).** AC-WI-5.3
	4	**Identify and explain the requirements for a Welding Performance Qualification Record (WPQR)** AC-WI-5.4
Demonstrate knowledge of basic shielded metal arc welding (SMAW). AC-WI-6	1	**Demonstrate setting up equipment for basic shield metal arc welding (SMAW).** AC-WI-6.1
	2	**Demonstrate the preparation of base metal for welding.** AC-WI-6.2
	3	**Demonstrate the preparation of base metal for welding.** AC-WI-6.3
	4	**Identify and explain the proper AWS codes for fillet weld quality.** AC-WI-6.4
	5	**Demonstrate performing of fillet welds using E7018 and E6010 electrodes in the flat, horizontal, vertical, and overhead positions to AWS code.** AC-WI-6.5
Demonstrate knowledge of basic shielded metal arc welding (SMAW). AC-WI-7	1	**Demonstrate setting up of equipment for gas metal arc welding (GMAW)** AC-WI-7.1
	2	**Demonstrate preparation of base metal for welding.** AC-WI-7.2
	3	**Identify and explain the American Welding Society (AWS) classification of wire.** AC-WI-7.3
	4	**Identify and explain the proper AWS codes for fillet weld quality.** AC-WI-7.4
	5	**Demonstrate performing fillet welds in the flat, horizontal, vertical, and overhead positions to AWS code** AC-WI-7.5
De of	Skip to main content	**dentify and explain the proper safety procedures and fume extraction for plasma rc cutting.** AC-WI-8.1

cutting. AC-WI-8	**2** Identify and explain the use of plasma arc cutting processes. AC-WI-8.2
	3 Identify and describe setting up plasma arc cutting equipment AC-WI-8.3
	4 Demonstrate the knowledge required to perform various cuts with plasma arc on various materials, including steel, aluminum, and stainless steel. AC-WI-8.4
Examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events AC-WI-9	**1** Explain the purpose, mission, objectives, motto, colors, official dress and other distinguishing characteristics of SkillsUSA AC-WI-9.1
	2 Explain how participation in SkillsUSA can promote lifelong responsibility for community service, professional growth and development AC-WI-9.2
	3 Explore the impact and opportunities that SkillsUSA can develop to bring business and industry together with education in a positive working relationship through innovative leadership and career development programs AC-WI-9.3
	4 Explore the local, state, and national opportunities available to students through participation in SkillsUSA, including but not limited to conferences, competitions, community service, philanthropy, and other SkillsUSA activities AC-WI-9.4