Kansas CTE

Ag Welding (2018)

Welding Industry and Careers WIC	1	**Describe 10 careers in the field of ag welding** WIC.1
	2	**Explain the importance of welding and construction in the local economy** WIC.2
	3	**Identify local businesses that require ag welding skills** WIC.3
	4	**List the causes of accidents in the workplace** WIC.4
	5	**Write a 1 and ½ page paper over two agriculture careers of interest** WIC.5
	6	**Select an agriculture career, research, and write a ½ page report over the education needed** WIC.6
SMAW (Arc) Welding SAW	1	**Explain the physical processes of arc welding** SAW.1
	2	**List the proper arc welding safety guidelines** SAW.2
	3	**Identify arc welding safety hazards** SAW.3
	4	**Identify pieces of arc welding equipment** SAW.4
	5	**Differentiate between AC and DC welding** SAW.5
Lab Activities SAW.LA	1	**Demonstrate a 6011 series arc welds: flat – stringer, pad, butt, T, lap horizontal- stringer, butt, lap vertical – stringer, butt, T, lap** SAW.LA.1
	2	**Demonstrate a 6013 series arc welds: flat – stringer, pad, butt, T, lap horizontal- stringer, butt, lap vertical – stringer, butt, T, lap** SAW.LA.2
	3	**Demonstrate 7018 pipe-on-pipe butt in flat position** SAW.LA.3
	4	**Demonstrate 7018 pipe-on-plate T-weld in flat position** SAW.LA.4
GMAW (MIG) Welding GMW	1	**List the proper MIG welding safety guidelines** GMW.1
	2	**Identify MIG welding safety hazards** GMW.2
	3	**Identify pieces of MIG welding equipment** GMW.3
	4	**Explain the physical processes of MIG welding** GMW.4

Lab Activities GMW.LA	2 **Demonstrate MIG pipe-on-pipe butt in flat position** GMW.LA.2
	1 **Demonstrate a MIG series welds: flat – stringer, pad, butt, T, lap horizontal-stringer, butt, lap vertical – stringer, butt, T, lap** GMW.LA.1
	3 **Demonstrate MIG pipe-on-plate T-weld in flat position** GMW.LA.3
Oxy-Acetylene Welding and Cutting OWC	1 **List the oxy-acetylene welding and brazing safety guidelines** OWC.1
	2 **List the oxy-acetylene cutting safety guidelines** OWC.2
	3 **Identify oxy-acetylene cutting, welding, and brazing equipment** OWC.3
	4 **Explain the physical processes of oxyacetylene welding, cutting, and brazing** OWC.4
Lab Activities OWC.LA	1 **Demonstrate an oxy-acetylene filler bead weld** OWC.LA.1
	2 **Demonstrate an oxy-acetylene filler butt weld** OWC.LA.2
	3 **Demonstrate an oxy-acetylene bead weld** OWC.LA.3
	4 **Demonstrate a braze butt weld** OWC.LA.4
	5 **Demonstrate a braze lap weld** OWC.LA.5
	6 **Demonstrate oxy-acetylene cutting techniques: straight – freehand, guided round/circle – freehand, guided** OWC.LA.6
VII. Plasma Cutting PC	1 **List the plasma cutting safety guidelines** PC.1
	2 **Identify plasma cutting equipment** PC.2
	3 **Explain the processes of plasma cutting and proper the techniques involved.** PC.3
Lab Activities PC.LA	1 **Demonstrate plasma cutting techniques: straight – freehand, guided round/circle – freehand, guided** PC.LA.1
	2 **Demonstrate proper setups and adjustments for different metal thicknesses** PC.LA.2
VIII. General Shop Safety/Machine Use GSSMU	1 **Explain the use and function of the bench grinder** GSSMU.1
	2 **Explain the use and function of the hand grinder** GSSMU.2
	3 **Explain the use and function of the chop saw** GSSMU.3
	4 **Explain the use and function of the hot saw** GSSMU.4

	5 Explain the use and function of the floor sheer GSSMU.5
	6 Explain the use and function of the drill press GSSMU.6
	7 Explain the use and function of power hand drills GSSMU.7
	8 Explain the use and function of pneumatic tools GSSMU.8
	9 List the proper bench grinder safety guidelines GSSMU.9
	10 List the proper hand grinder safety guidelines GSSMU.10
	11 List the proper chop saw safety guidelines GSSMU.11
	12 List the proper hot saw safety guidelines GSSMU.12
	13 List the proper floor sheer safety guidelines GSSMU.13
	14 List the proper drill press safety guidelines GSSMU.14
	15 List the proper power hand tools safety guidelines GSSMU.15
	16 List the proper pneumatic tools safety guidelines GSSMU.16
Lab Activities GSSMU.LA	1 Demonstrate the proper bench grinder safety guidelines GSSMU.LA.1
	2 Demonstrate the proper hand grinder safety guidelines GSSMU.LA.2
	3 Demonstrate the proper chop saw safety guidelines GSSMU.LA.3
	4 Demonstrate the proper hot saw safety guidelines GSSMU.LA.4
	5 Demonstrate the proper floor sheer safety guidelines GSSMU.LA.5
	6 Demonstrate the proper drill press safety guidelines GSSMU.LA.6
	7 Demonstrate the proper power hand tools safety guidelines GSSMU.LA.7
	8 Demonstrate the proper pneumatic tools safety guidelines GSSMU.LA.8
Safety / Lab Orientation SLO	1 Identify and demonstrate proper methods of shop/lab clean-up SLO.1
	2 Identify various tool storage locations SLO.2
	3 Learn the components of the fire triangle SLO.3
	4 Explain the proper use of a fire extinguisher SLO.4
	5 Explain proper shop safety color coding SLO.5

Lab Activities SLO.LA

1 **Complete a shop/lab safety test with 100% accuracy** SLO.LA.1