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