

# 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

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**1 Demonstrate a MIG series welds: flat – stringer, pad, butt, T, lap horizontal-stringer, butt, lap vertical – stringer, butt, T, lap** GMW.LA.1

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**3 Demonstrate MIG pipe-on-plate T-weld in flat position** GMW.LA.3

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**Oxy-Acetylene Welding and Cutting** OWC

**1 List the oxy-acetylene welding and brazing safety guidelines** OWC.1

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**2 List the oxy-acetylene cutting safety guidelines** OWC.2

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**3 Identify oxy-acetylene cutting, welding, and brazing equipment** OWC.3

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**4 Explain the physical processes of oxyacetylene welding, cutting, and brazing** OWC.4

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**Lab Activities** OWC.LA

**1 Demonstrate an oxy-acetylene filler bead weld** OWC.LA.1

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**2 Demonstrate an oxy-acetylene filler butt weld** OWC.LA.2

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**3 Demonstrate an oxy-acetylene bead weld** OWC.LA.3

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**4 Demonstrate a braze butt weld** OWC.LA.4

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**5 Demonstrate a braze lap weld** OWC.LA.5

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**6 Demonstrate oxy-acetylene cutting techniques: straight – freehand, guided round/circle – freehand, guided** OWC.LA.6

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**VII. Plasma Cutting** PC

**1 List the plasma cutting safety guidelines** PC.1

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**2 Identify plasma cutting equipment** PC.2

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**3 Explain the processes of plasma cutting and proper the techniques involved.** PC.3

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**Lab Activities** PC.LA

**1 Demonstrate plasma cutting techniques: straight – freehand, guided round/circle – freehand, guided** PC.LA.1

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**2 Demonstrate proper setups and adjustments for different metal thicknesses** PC.LA.2

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**VIII. General Shop Safety/Machine Use** GSSMU

**1 Explain the use and function of the bench grinder** GSSMU.1

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**2 Explain the use and function of the hand grinder** GSSMU.2

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**3 Explain the use and function of the chop saw** GSSMU.3

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**4 Explain the use and function of the hot saw** GSSMU.4

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**5 Explain the use and function of the floor sheer** GSSMU.5

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**6 Explain the use and function of the drill press** GSSMU.6

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**7 Explain the use and function of power hand drills** GSSMU.7

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**8 Explain the use and function of pneumatic tools** GSSMU.8

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**9 List the proper bench grinder safety guidelines** GSSMU.9

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**10 List the proper hand grinder safety guidelines** GSSMU.10

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**11 List the proper chop saw safety guidelines** GSSMU.11

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**12 List the proper hot saw safety guidelines** GSSMU.12

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**13 List the proper floor sheer safety guidelines** GSSMU.13

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**14 List the proper drill press safety guidelines** GSSMU.14

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**15 List the proper power hand tools safety guidelines** GSSMU.15

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**16 List the proper pneumatic tools safety guidelines** GSSMU.16

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**Lab Activities** GSSMU.LA

**1 Demonstrate the proper bench grinder safety guidelines** GSSMU.LA.1

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**2 Demonstrate the proper hand grinder safety guidelines** GSSMU.LA.2

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**3 Demonstrate the proper chop saw safety guidelines** GSSMU.LA.3

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**4 Demonstrate the proper hot saw safety guidelines** GSSMU.LA.4

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**5 Demonstrate the proper floor sheer safety guidelines** GSSMU.LA.5

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**6 Demonstrate the proper drill press safety guidelines** GSSMU.LA.6

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**7 Demonstrate the proper power hand tools safety guidelines** GSSMU.LA.7

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**8 Demonstrate the proper pneumatic tools safety guidelines** GSSMU.LA.8

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**Safety / Lab  
Orientation** SLO

**1 Identify and demonstrate proper methods of shop/lab clean-up** SLO.1

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**2 Identify various tool storage locations** SLO.2

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**3 Learn the components of the fire triangle** SLO.3

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**4 Explain the proper use of a fire extinguisher** SLO.4

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**5 Explain proper shop safety color coding** SLO.5

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**Lab Activities** SLO.LA

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