

Expectations and Outcomes

Grade Level/Course: 11-12

Content Area: Tech Ed

Unit Title	Guarantees
Unit 1	<ul style="list-style-type: none"> • Identify tools and understand uses • Understand welding rod identification and welder setup • Able to setup and operate different cutting apparatuses (shears, grinders) • Demonstrate proper shop safety • Know dangers associated with each piece of equipment • Identify material characteristics
Unit 2	<ul style="list-style-type: none"> • Surface lap and T joint using SMAW and GMAW process in flat and horizontal position using .035" wire. • Surface lap and T joint using SMAW and GMAW process in vertical and overhead position.
Unit 3	<ul style="list-style-type: none"> • Identify safety features of an oxy-acetylene outfit. • List safety precautions when performing oxy-fuel welding and cutting. • Describe the safety precautions when handling and storing oxy-fuel cylinders.
Unit 4	<ul style="list-style-type: none"> • Demonstrate safe operating principles while reforming cutting operations. • Inspect visually all flame cut edges. • Make adjustments in technique to compensate for cutting variables.
Unit 5	<ul style="list-style-type: none"> • List safety hazards associated with the operation of the plasma cutting torch. • Identify capacity of the plasma cutting equipment. • Identify components of the plasma torch. • Inspect visually the cut edge.
Unit 6	<ul style="list-style-type: none"> • Identify capacity of the plasma cutting equipment. • List types of materials the plasma torch will cut (carbon steel, stainless steel and aluminum).
Unit 7	<ul style="list-style-type: none"> • Demonstrate safe operating procedures while performing cutting operations as specified in the student's worksheets. • Inspect visually all plasma cut edges. • Make adjustments in technique to compensate for cutting variables.

Unit Title	Guarantees
Unit 8	<ul style="list-style-type: none">• Use research information to design a project that is durable, practical, ergonomic, safe, and economical.• Design using at least two views in orthographic projection• Complete bill of materials
Unit 9	<ul style="list-style-type: none">• Cut parts to correct size according to bill of materials• Complete acceptable welds• Perform grinding and sanding techniques• Perform cleaning and prepping for pain techniques• Paint or seal for preservation