

# Agricultural Structures Design & Fabrication

## At-A-Glance - Lamar CISD

<b>Ongoing Skills Imbedded All Year</b>	<b>Professional Standards/Employability Skills/Technical Skills</b>		
<b>Ongoing Ways to Show</b>			
<b>Grading Period</b>	<b>Unit Name</b>	<b>Estimated Time Frame</b>	<b>TEKS</b>
<b>Grading Period 1 28 Days</b>	<b>Career/Entrepreneur</b>	<b>11 Days</b>	1A, 1B, 1F
	ASDF 1(A) The student will identify career development and entrepreneurship opportunities in the field of mechanized agriculture. ASDF 1(B) The student will apply competencies related to resources, information, interpersonal skills, and systems of operation of mechanized agriculture. ASDF 1(F) The student will demonstrate characteristics of good citizenship, including advocacy, stewardship, and community leadership.		
	<b>Safety</b>	<b>12 Days</b>	1D, 1E
	ASDF 1(D) The student will demonstrate knowledge of personal and occupational health and safety practices in the workplace. ASDF 1(E) The student will identify employer expectations and appropriate work habits.		
	<b>Licensing, Certification &amp; Credentials</b>	<b>5 Days</b>	1C
ASDF 1(C) The student will research licensing, certification, and credentialing requirements.			
<b>Grading Period 2 25 Days</b>	<b>Building Plans</b>	<b>9 Days</b>	3A, 3B, 3C
	ASDF 3(A) The student will develop building plans. ASDF 3(C) The student will estimate materials and costs needed for construction with an emphasis on renewable and eco-friendly materials. ASDF 3(B) The student will select site and locate agricultural building placement.		
	<b>Welding Project Plans</b>	<b>10 Days</b>	AWS
	AWS The student will plan welding project. AWS The student will recognize welding symbols, joint design, and welds in plans. AWS The student will estimate welding material costs.		
	<b>Green Technology</b>	<b>2 Days</b>	3D, AWS
	ASDF 3(D) and AWS The student will select appropriate environmental control systems with a special emphasis on green technology.		
	<b>Inspections</b>	<b>2 Days</b>	AWS
	AWS The student will recognize the intricacies of inspections and related codes for welding.		
<b>CAD</b>	<b>2 Days</b>	3E	
ASDF 3(E) The student will use computer-aided design software as appropriate.			
<b>Grading Period 3 25 Days</b>	<b>Electricity</b>	<b>22 Days</b>	4A, 4B, 4C, 4D, 4E, 4F, 4G, AWS
	ASDF 4(A) The student will define the terms and principles of electricity. ASDF 4(B) The student will estimate electrical needs and loads. ASDF 4(C) The student will plan installations using local codes and National Electric Code guidelines. ASDF 4(D) The student will demonstrate the use of various meters. ASDF 4(E) The student will select circuit wiring materials and supplies. ASDF 4(F) The student will demonstrate electrical systems repair. ASDF 4(G) The student will explore alternative power systems, including solar, wind, and biomass. AWS The student demonstrate the theories of electrical relationships such as alternating current and direct current, heat transfer, and polarity.		

	<b>Welding Project Revisions</b>	<b>3 Days</b>	AWS
	AWS The student will review plans for welding project and make any necessary revisions.		
<b>Grading Period 4</b> <b>33 Days</b>	<b>Surveying</b>	<b>7 Days</b>	5A, 5B
	ASDF 5(A) The student will demonstrate appropriate use of surveying equipment. ASDF 5(B) The student will demonstrate and apply Geographic Information System (GIS) and Global Positioning System (GPS) principles.		
	<b>Concrete</b>	<b>2 Days</b>	5C
	ASDF 5(C) The student will reinforce, place, finish and cure concrete.		
	<b>Water</b>	<b>2 Days</b>	5D, 5H
	ASDF 5(D) The student will plan, establish, and maintain water-management systems. ASDF 5(H) The student will install plumbing equipment and fixtures to comply with governmental regulations and applicable codes.		
	<b>Eco-Friendly</b>	<b>2 Days</b>	5E
	ASDF 5(E) The student will identify non-traditional structural building techniques, including industry trends that are eco-friendly.		
	<b>Drywall/Door/Window/Roof</b>	<b>2 Days</b>	5F, 5G
	ASDF 5(F) The student will discuss the use of masonry and drywall construction. ASDF 5(G) The student will install doors, windows, and roofing materials.		
	<b>Welding Project</b>	<b>18 Days</b>	AWS
	AWS The student will build welding project.		
<b>Grading Period 5</b> <b>34 Days</b>	<b>Oxy-Fuel</b>	<b>17 Days</b>	6A, AWS
	ASDF 6(A) and AWS The student will explain the operations of safe oxy-fuel cutting.		
	<b>Welding</b>	<b>17 Days</b>	6B, AWS
	ASDF 6(B) and AWS The student will demonstrate safe electrical welding.		
<b>Grading Period 6</b> <b>28 Days</b>	<b>Record-Keeping &amp; FFA</b>	<b>28 Days</b>	2A, 2B, 2C, 2D, AWS
	ASDF 2(A) The student will plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity. ASDF 2(B) The student will apply proper record-keeping skills as they relate to the supervised agriculture experience. ASDF 2(C) The student will participate in youth leadership opportunities to create a well-rounded experience program. ASDF 2(D) The student will produce and participate in a local program of activities using a strategic planning process. AWS The student will plan, propose, conduct, and evaluate entrepreneurship; placement; exploratory; research, either experimental or analytical; improvement; supplementary; laboratory-based; or other identified, supervised agricultural experience as an experiential learning activity for welding.		