

Name _____ School _____ Contestant Number _____

**2012 Wyoming State FFA CDE
Agricultural Technology and Mechanical Systems
Structural Systems – Welding Skill**

You have been looking for a good used utility trailer to mount a spray rig for use in controlling the Canadian Thistle that has become a problem in your pasture. Your neighbor has recently had a farm auction and you were able to purchase a good trailer at a reasonable price that would be suitable for this application. The utility trailer you purchased has a broken hitch. You will need to be able to take the trailer home and repair the hitch so that it will be suitable for use with your four-wheeler that you intend to pull it with. To repair the hitch, you need to weld the new trailer tongue (1.5" square tubing) to the front of the trailer to replace the one that was damaged (3" X 4" Pad). The tubing needs to be correctly centered on the metal provided, and the hole for the hitch pin needs to be properly positioned in order to attach the trailer to the four-wheeler. Refer to the diagram found in the skill area for further information.

Using the two pieces of steel provided, one 3" X 4" pad and one 1.5" X 4" sq. tubing, determine the optimum location for the new trailer tongue and weld all four sides in contact with the 3" X 4".

Use the 6011 electrode, 1/8" dia., to make the appropriate welds.

Provide an answer for the following questions.

1. What is the approximate amperage range for an AWS Hobart 1/8" E6011 Electrode?

2. When selecting an electrode for welding use, what does **AWS** refer to in the welding description?

3. Using the AWS classification system, **match the definitions with X.**

A	Tensile Strength	EXX11	
B	Type of coating and current	E60X1	
C	Welding position	E601X	

Criterion	Points Possible	Points Earned
Tongue correctly positioned	3	
Quality of Left weld	3	
Quality of Right weld	3	
Quality of Top weld	3	
Quality of Bottom weld	3	
Questions	10 (2 points ea.)	
Safety	5	