

# CHERRYVALE HIGH SCHOOL OCCUPATIONAL PROFILE

## Advanced Agricultural Mechanics

Name \_\_\_\_\_ SS# \_\_\_\_\_

School \_\_\_\_\_ Instructor \_\_\_\_\_

- Rating Scale:**
- 3- Skilled – Works independently
  - 2- Limited Skill- Requires assistance to perform task
  - 1- Skill undeveloped- received instruction but has not developed skill
  - 0- No exposure – No instruction or training in this area.

**Directions -** Circle the appropriate number to indicate the degree of competency reached

S = Science    M = Math    L = Language Arts    C = Career Development Skills

Enrollment Date _____	Completion Date _____	Hours Completed _____
<b>I certify that the student received training in the areas indicated</b>		
Student Signature _____	Date _____	
Instructor Signature _____	Date _____	
Administrator Signature _____	Date _____	

### I. Career Orientation

- 3 2 1 0 1. Compile career opportunities in Ag Mechanics
- 3 2 1 0 2. Determine education levels for various careers
- 3 2 1 0 3. Identifies resource people for obtaining career assistance in agriculture

### II. Safety in Welding Fabrication

- 3 2 1 0 1. Keep the shop/work area clean and orderly
- 3 2 1 0 2. Operate a fire extinguisher
- 3 2 1 0 3. Use appropriate guard shields
- 3 2 1 0 4. Demonstrate proper handling of cylinders
- 3 2 1 0 5. Demonstrate proper use of ventilation
- 3 2 1 0 6. Administer basic first aid
- 3 2 1 0 7. Identify hazardous conditions    S
- 3 2 1 0 9. Follow safety procedures according to operators manuals
- 3 2 1 0 10. Follow safety procedures during lifting
- 3 2 1 0 11. Observe safety color codes
- 3 2 1 0 12. Use proper protective clothing

### III. Caring for Hand Tools

- 3 2 1 0 1. Identify tools
- 3 2 1 0 2. Recognize unserviceable hand tools
- 3 2 1 0 3. Maintain hand tools
- 3 2 1 0 4. Prevent rust
- 3 2 1 0 5. Remove rust
- 3 2 1 0 6. Replace handles

### IV. Caring for Power Tools

- 3 2 1 0 1. Perform maintenance and operation of tools    C
- 3 2 1 0 2. Operate and maintain mig welders
- 3 2 1 0 3. Cut metal with power tools    C
- 3 2 1 0 4. Drill holes with power tools
- 3 2 1 0 5. Grind metal

### V. Working with Metal

- 3 2 1 0 1. Identify metals
- 3 2 1 0 2. Use squaring tools    M
- 3 2 1 0 3. Mark metal    M
- 3 2 1 0 4. Measure metal    M
- 3 2 1 0 5. Cut metal
- 3 2 1 0 6. Bend metal
- 3 2 1 0 7. Shape metal
- 3 2 1 0 8. Join metal    M
- 3 2 1 0 9. Drill holes

### VI. Using Oxy-Acetylene Equipment

- 3 2 1 0 1. Observe safety practices when operating oxy-acetylene equipment
- 3 2 1 0 2. Set up equipment for welding, cutting, heating and brazing
- 3 2 1 0 3. Join metal by brazing    SC
- 3 2 1 0 4. Make a 90 degree cut    MC
- 3 2 1 0 5. Cut a hole
- 3 2 1 0 6. Cut tubing
- 3 2 1 0 7. Weld a flat butt joint    C

- 3 2 1 0 8. Weld a T-joint    C
- 3 2 1 0 9. Weld a lap joint    C

### VII. Using Arc Welding Equipment

- 3 2 1 0 1. Observe safety practices when using arc welding equipment
- 3 2 1 0 2. Set up equipment for welding    M
- 3 2 1 0 3. Weld a square butt joint in the vertical position
- 3 2 1 0 4. Weld a square butt joint in the horizontal position    C
- 3 2 1 0 5. Weld a T joint in the horizontal position
- 3 2 1 0 6. Weld a T joint in the vertical position    C
- 3 2 1 0 7. Weld a lap joint in the flat position
- 3 2 1 0 8. Weld a lap joint in the horizontal position
- 3 2 1 0 9. Weld a lap joint in the vertical position    C

### VIII. Using MIG Welding Equipment

- 3 2 1 0 1. Observe safety practices
- 3 2 1 0 2. Set up equipment    M
- 3 2 1 0 3. Weld square butt joint in all positions    C
- 3 2 1 0 3. Weld square tee joint in all positions    C
- 3 2 1 0 3. Weld square lap joint in all positions    C
- 3 2 1 0 4. Weld pipe tee joints

### IX. Using Plasma Arc Torch

- 3 2 1 0 1. Observe safety practices
- 3 2 1 0 2. Maintain equipment
- 3 2 1 0 3. Set up equipment    M

3 2 1 0 4.Cut sheet metal

### **X. Planning for Construction**

3 2 1 0 1.Sketch a plan

3 2 1 0 2.Prepare a bill of materials L

3 2 1 0 3.Estimate costs of materials M

3 2 1 0 4.Read a blueprint M

### **XI. Employment**

3 2 1 0 1.Fill out a job application L

3 2 1 0 2.Recognize positive job characteristics L

3 2 1 0 3.Demonstrate a job interview L

3 2 1 0 4.Prepare job interview questions L

3 2 1 0 5.Create a personal resume L

### **XII. FFA Leadership**

3 2 1 0 1.Demonstrate skills needed for  
participation in Ag Mechanics CDE C

3 2 1 0 2.Submit award applications L

3 2 1 0 3.Promote community service

3 2 1 0 4.Participate in FFA meetings

### **XIII. SAE**

3 2 1 0 1.Demonstrate good money management M

3 2 1 0 2.Create self confidence L

3 2 1 0 3.Develop competencies for work

3 2 1 0 4.Provide record keeping skills M

3 2 1 0 5.Exhibit ability to work and relate well with  
others L

### **XIII. Plasma Cam**

3 2 1 0 1.Lay out Parts on the Cutting Table

3 2 1 0 2.Adjusting the Machine Settings

3 2 1 0 3.Coordinate points on screen

3 2 1 0 4.Select Paths in the Drawing

3 2 1 0 5.Detect Intersections