

Clifton-Clyde High School

Name _____ SSN ____-____-_____

Instructor _____

RATING SCALE: 3: Skilled, works independently
2: Competent, may need assistance
1: Received instruction, skill undeveloped
0: No exposure, instruction or training

INTEGRATION: (M) Math (S) Science
(E) Language Arts (C) Career Development Skill
(L) Lab Activity

Agricultural Mechanics

Enrollment Date	Completion Date	Hours completed
____/____/____	____/____/____	_____

I certify that the student received the training in the area indicated.

Student Signature _____ Date _____

Instructor Signature _____ Date _____

Administrator Signature _____ Date _____

I. Mechanics in the World of Agriculture

- 3 2 1 0 1. Define agriculture and agricultural mechanics (E)
- 3 2 1 0 2. Describe the role of mechanics and mechanical applications in society (E)
- 3 2 1 0 3. Demonstrate knowledge of contributions made by mechanical application to the development of agriculture (E)
- 3 2 1 0 4. Name 8 Inventors of important agricultural machines
- 3 2 1 0 5. _____
- 3 2 1 0 6. _____

II. Career Options in Agricultural Mechanics

- 3 2 1 0 1. List the major divisions in the agricultural cluster of occupations (E)
- 3 2 1 0 2. Identify occupations in agriculture that require mechanical skill (E)
- 3 2 1 0 3. Conduct an in-depth study of a job in agriculture mechanics (E,L,C)
- 3 2 1 0 4. Establish tentative personal goals for using agricultural mechanics skills (E,L,C)
- 3 2 1 0 5. _____

3 2 1 0 6. _____

III. Electrical Principles and Wiring Materials

- 3 2 1 0 1. Describe some basic principles of electricity and magnetism (E)
- 3 2 1 0 2. Use safety practices with electricity (L,C)
- 3 2 1 0 3. Describe the relationships among volts, amperes, and watts (E)
- 3 2 1 0 4. Select materials for electrical wiring (L)
- 3 2 1 0 5. Design simple wiring systems (L,C)
- 3 2 1 0 6. _____
- 3 2 1 0 7. _____

IV. Installing Branch Circuits

- 3 2 1 0 1. Select electrical boxes, outlets, and switches (S,C)
- 3 2 1 0 2. Install and replace switches, outlets, and fixtures (S,C,L)
- 3 2 1 0 3. Install, extend and modify branch circuits (S,C,L)
- 3 2 1 0 4. Test electric circuits (S,C,L)
- 3 2 1 0 5. _____
- 3 2 1 0 6. _____

V. Plumbing

- 3 2 1 0 1. Identify plumbing tools (E)
- 3 2 1 0 2. Identify and select pipe (E)
- 3 2 1 0 3. Identify common pipe fittings (E)
- 3 2 1 0 4. Assemble pipe (L,C)
- 3 2 1 0 5. Maintain water systems (L,C)
- 3 2 1 0 6. _____
- 3 2 1 0 7. _____

V. Sketching and Drawing Projects

- 3 2 1 0 1. Identify common drawing equipment
- 3 2 1 0 2. Match basic drawing symbols with their definitions
- 3 2 1 0 3. Distinguish between pictorial and three-view drawings (E)
- 3 2 1 0 4. Use common drawing techniques to represent ideas
- 3 2 1 0 5. Read and interpret a drawing (E,L)
- 3 2 1 0 6. Make a three-view drawing of a given object (M,S,L,C)
- 3 2 1 0 7. _____
- 3 2 1 0 8. _____

VI. Figuring a Bill of Materials

- 3 2 1 0 1. Determine terms associated with a bill of materials
- 3 2 1 0 2. State the components of a bill of materials (E)
- 3 2 1 0 3. Record dimensions of structural metals (E,M)
- 3 2 1 0 4. Calculate costs included in a bill of materials (M,C)
- 3 2 1 0 5. Prepare a written bill of materials (E,M,C)
- 3 2 1 0 6. _____
- 3 2 1 0 7. _____

VII. Shop Safety

- 3 2 1 0 1. List safety equipment (E)
- 3 2 1 0 2. Identify safety rules (E)
- 3 2 1 0 3. Analyze what to do in an emergency (E,S)
- 3 2 1 0 4. Classify fires and use of fire extinguishers
- 3 2 1 0 5. Identify safety colors and what they mean
- 3 2 1 0 6. Pass safety exam with a 100% (L)
- 3 2 1 0 7. Demonstrate safe operation of the oxy-acetylene torch (L)
- 3 2 1 0 8. Demonstrate safe operation of the plasma cutter (L)
- 3 2 1 0 9. Demonstrate safe operation of the chop saw (L)
- 3 2 1 0 10. Demonstrate safe operation of the grinders (L)
- 3 2 1 0 11. Demonstrate safe operation of the drills (L)
- 3 2 1 0 12. Demonstrate safe operation of the arc welder (L)
- 3 2 1 0 13. Demonstrate safe operation of the MIG welder (L)
- 3 2 1 0 14. Demonstrate safe operation of the metal saw (L)
- 3 2 1 0 15. _____
- 3 2 1 0 16. _____

VIII. Shop Skills

- 3 2 1 0 1. Complete a bead, butt, lap and tee with the arc welder and E6011 (L,C)
- 3 2 1 0 2. Complete a bead, butt, lap and tee with the arc welder and E6013 (L,C)
- 3 2 1 0 3. Complete a bead, butt, lap and tee with the MIG welder (L,C)
- 3 2 1 0 4. Cut a 2" x 2" square of steel with the oxy-acetylene torch (M,L,C)
- 3 2 1 0 5. _____
- 3 2 1 0 6. _____

IX. Project Construction

- 3 2 1 0 1. Design a project to be constructed (M,S,L,C)
- 3 2 1 0 2. Create a three-view drawing of the project (M,L)
- 3 2 1 0 3. Develop a project estimate from the drawing (M,L,C)
- 3 2 1 0 4. Measure and cut pieces for project (M)
- 3 2 1 0 5. Assemble pieces (L)
- 3 2 1 0 6. Prepare for finish (L)
- 3 2 1 0 7. Apply finish (L)
- 3 2 1 0 8. Formulate bill of materials (M,C,L)
- 3 2 1 0 9. _____
- 3 2 1 0 10. _____

X. FFA/SAE

- 3 2 1 0 1. Prepare and compete in the Ag Mechanics CDE (L)
- 3 2 1 0 2. List steps for improving the SAE (E)
- 3 2 1 0 3. Apply for chapter/district proficiency awards (E,M,C)
- 3 2 1 0 4. Examine goals and future plans for SAE (E)
- 3 2 1 0 5. Make arrangements for an SAE visitation by the instructor (E,C)
- 3 2 1 0 6. Demonstrate how to closeout a record book (M,C)
- 3 2 1 0 7. Perform end of year balances (M,C)
- 3 2 1 0 8. Complete an enterprise analysis (E,M,C)

3 2 1 0 9. _____

3 2 1 0 10. _____