

Course Title

Welding 1A
Agriculture Welding 1A

Description of Target Group

This course is designed for all students interested in learning welding skills for a possible future vocation.

Purpose

Survey of welding is a one-semester course. It will provide a combination of subject matter and activities designed to develop skills necessary to perform practices for self and others. They will learn an appreciation for welding, fundamentals of gas and electrical welding, and study the economic role welding plays in today's agriculture and related industries. The course provides students with the opportunity to decide whether welding as a career fits their personal aptitudes, abilities, and interest. It is recommended that agricultural students complete basic agricultural mechanics prior to enrollment.

Standards of Expected Student Achievement

Upon completion of this course, students will be able to successfully demonstrate the following skills:

1. Complete district safety test with a passing score
2. Work safely with oxyacetylene equipment and understand how it works
3. Set up the oxyacetylene unit.
4. Adjust the oxyacetylene flame.
5. Use and understand welding joints.
6. Puddle and run a bead with rod.
7. Fuse bead metal together.
8. Make lap, butt and fillet welds.
9. Operate a cutting torch.
10. Work safely with electric arc welders.
11. Understand how the electric arc works.
12. Run arc beads.
13. Use the weave pattern to weld.
14. Make single and multiple pass welds.
15. Weld a beveled butt and fillet weld.
16. Weld outside corner welds.
17. Be able to identify rods and select the right rod for welding joint.
18. Run the 30-ton shear.
19. Pay all fees pending.

Welding 1A and Agriculture Welding 1A (continued)

Instructional Materials

Text and Supplementary Materials

Refer to: Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District.

Activities

The student will be exposed to media such as films, filmstrips, and charts to help them conceive the ideas presented. This will reinforce the concepts and techniques presented. Considerable time is spent on building skills for job entry level. The students do many fabrication jobs; these are similar to ones they would do in industry. A variety of other welding processes are covered as indicated in the course outline.

Course Title

Welding 1B
Agriculture Welding 1B

Description of Target Group

This course is designed for any student who has completed Welding 1A.

Purpose

Welding 1B is a one-semester course. It will provide a combination of subject matter and activities designed to develop skills necessary to perform basic welding techniques. It will also develop in the student a positive attitude toward safe shop practices, appreciation for welding, fundamentals of gas and electric welding and an insight into the important economic role welding plays in today's agriculture and related industries. The areas of T.I.B. and M.I.G. are explored and the students become aware of their important role in welding. Other areas stressed help the student develop insight into specialty areas in welding. The student will become involved in the educational value of welding and become aware of career preparation in welding.

Standards of Expected Student Achievement

Upon completion of this course, students will be able to successfully demonstrate the following skills:

1. Complete the district safety test with a passing score.
2. Braze weld pipe.
3. Braze weld in the overlap and fillet positions on pipe.
4. Understand where and how to purchase welding supplies.
5. Weld horizontal beads.
6. Weld vertical beads.
7. Weld overhead.
8. Electric weld pipe.
9. Understand about heat distortion.
10. Work safely in the construction of larger farm welding projects.
11. Understand the importance that must be given to details and assembly of welding projects.
12. Pay all shop fees pending.

Instructional Materials

Text and Supplementary Materials

Refer to: Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District.

Activities

Lectures, demonstrations, filmstrips, movies, quizzes and tests, reading assignments and study sheets.