



Lesson Plan

Welding Safety

Created: 04/2017 by the National FFA Organization

STUDENT LEARNING OBJECTIVES

After completing these activities students will...

1. Identify safety precautions when welding.
2. Describe potential safety hazards while welding and steps to avoid them.

Time Required: 45 minutes

RESOURCES:

1. FFA.org
2. Website: Lincoln Electric Welding Safety <http://safety.lincolnelectric.com/>

EQUIPMENT AND SUPPLIES NEEDED:

1. Internet and computer access for students to watch the welding safety videos on the Lincoln Electric website.

THIS QUICK LESSON PLAN WOULD WORK WELL AS:

1. Part of a unit about agricultural safety.
2. Part of a unit about agricultural companies.
3. Part of a unit about welding.

THESE ACTIVITIES ARE ALIGNED TO THE FOLLOWING STANDARDS:

FFA Precept

- FFA.PL-A.Action: Assume responsibility and take the necessary steps to achieve the desired results, no matter what the goal or task at hand.
- FFA.PG-I.Professional Growth: Assume responsibility for attaining and improving upon the skills needed for career success.
- FFA.PG-J.Mental Growth: Embrace cognitive and intellectual development relative to reasoning, thinking and coping.
- FFA.CS-M.Communication: Effectively interact with others in personal and professional settings.

AFNR Cluster Skills

- CS.01. Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster.

Common Core- Writing

- CCSS.ELA-LITERACY.W.9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
- CCSS.ELA-LITERACY.W.9-10.4 Produce clear and coherent writing the development, organization, and style are appropriate to task, purpose, and audience.

Common Core- Speaking and Listening

- CCSS.ELA-LITERACY.SL.9-10.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
- CCSS.ELA-LITERACY.SL.9-10.4 Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Common Core- Language

- CCSS.ELA-LITERACY.L.9-10.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Common Core- Math Practices

- CCSS.MP3: Construct viable arguments and critique the reasoning of others.
- CCSS.MP6: Attend to precision.
- CCSS.MP7: Look for and make use of structure.

AFNR Career Ready Practices

- CRP.02. Apply appropriate academic and technical skills. Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive.
- CRP.04. Communicate clearly, effectively, and with reason. Career-ready individuals communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods.
- CRP.05. Consider the environmental, social and economic impact of decisions. Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organizations and the environment.
- CRP.06. Demonstrate creativity and innovation. Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization.
- CRP.08. Utilize critical thinking to make sense of problems and persevere in solving them. Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem.

Partnership for 21st Century Skills

- Civic Literacy
- Communication
- Critical Thinking and Problem Solving
- Productivity and Accountability

LESSON PLAN:

1. Introduction: Safety is the most important thing when welding. Before we begin welding, we must understand the potential safety hazards and know how to prevent them.

2. Activity: Have students work through each of the safety modules and complete the Safety Photo Hunt at the end. The safety modules can be found at <http://safety.lincolnelectric.com/>.

3. Follow-up: Have students share the safety hazard they found most interesting and how they can take the proper precautions when welding.

4. Leveling Up: If an agricultural mechanics shop with welding equipment is present at the school, have students go into the shop and identify the safety precautions they learned about in the modules.