Lesson Plan

National FFA Secretary Finds His Spark

Created: 04/2022 by the National FFA Organization

Description of Lesson: This lesson will have students reflect on a national officer's path to his chosen career in the welding field. Additionally, students will research careers associated with welding and try their hand at a welding activity.

Student Learning Objectives:

After completing these activities, students will …

1. Explore careers associated with welding.
2. Research safety components for welding.
3. Demonstrate welding.

Suggested Grade Level:

Grades 9 and 10 (This lesson is written so instructors can scale up or down based on class needs.)

Suggested Time:

45 minutes (*Time requirements may vary based upon student understanding and class schedule.)

Resources/References:

1. Article: "National FFA Secretary Finds His Spark," FFA.org/the-feed/national-ffa-secretary-finds-his-spark/
2. Website: Personal Protective Equipment, https://www.lincolnelectric.com/en/Safety-Resources/Welding-Safety-FAQs---Personal-Protective-Equipment

Related Resources:

1. Website: Safety in Agriculture for Youth, https://ag-safety.extension.org/safety-in-agriculture-for-youth/#:~:text=Safety%20in%20Agriculture%20for%20Youth%20(SAY)%20is%20a%20grant%20project,and%20health%20curriculum%20for%20youth.
2. Article: "We Can Do It: Women in Welding," FFA.org/career-success/we-can-do-it/
3. Lesson Plan: "Welding Safety," (PDF), (Word)
4. Article: "Engineering for Elephants," FFA.org/ffa-new-horizons/engineering-for-elephants/
5. Article: "6 Promising Ag Mechanics Careers," FFA.org/the-feed/this-longtime-oklahoma-ag-teacher-uncovers-some-in-demand-jobs/
6. Article: "MIGs, TIGs and Oil Rigs," FFA.org/ffa-new-horizons/migs-tigs-and-oil-rigs/
7. Article: "Students Learn to Weld at National FFA Expo," FFA.org/power-structural-technical/students-learn-to-weld-at-national-ffa-expo/
8. Article: "Chapter Serves Up Smoking Hot Service Project," https://www.ffa.org/the-feed/chapter-serves-up-smoking-hot-service-project/

Equipment and Supplies Needed:

1. A copy of the "National FFA Secretary Finds His Spark" worksheet for each student
2. At least two full-size graham cracker sheets per student
3. One small bag of icing per student
4. One paper towel per student
5. One pair of scissors per student

Vocabulary:

1. Precision
2. Contemplating

Cross-Curricular Connections:

English/Language Arts
• Explore careers associated with welding. • Research safety components for welding.

Virtual Instruction Ideas:

This lesson can be loaded into a learning management system (LMS) and completed virtually. Students can then use a discussion board through the LMS to discuss the lesson content. For Part 4 of the worksheet, students who are attending virtually can complete the activity using items they have around the house.

Student Activity Sheets:

Direct access to student activity sheets without lesson plan or answer key for easy upload to a learning management system or printing for classwork.

https://ffa.box.com/s/ygvrsmk5mg7xj7d81my6fiaa4ws34tld (Word)
https://ffa.box.com/s/d29064hwv5zxlzql2g1f1a56g6b5zlfg (PDF)
https://ffa.box.com/s/fly69ukdzwzekrx0mw4x384bwbodl6ql (Non-Designed)
https://docs.google.com/document/d/1ot4evDt_VFv0h-d4KHG5tHfR3uiyznsPoYZ4m1hzt2Q/copy (Google)

These Activities are Aligned to the Following Standards:

AFNR Performance Element

- CS.05. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources career pathways.

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.PL-C.Vision: Visualize the future and how to get there.
- FFA.PL-E.Awareness: Understand personal vision, mission and goals.
- FFA.PL-F.Continuous Improvement: Accept responsibility for learning and personal growth.
- FFA.CS-M.Communication: Effectively interact with others in personal and professional settings.
- FFA.CS-N.Decision Making: Analyze a situation and execute an appropriate course of action.

Common Career Technical Core

- AG5 Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.

NASDCTEc

- AGC09.02 Select, research and examine critical aspects of career opportunities in one or more AFNR career pathways in order to gain an understanding of the breadth of occupations within this cluster.

Common Core – Reading: Informational Text

- CCSS.ELA-Literacy.RI.9-10.2 Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- CCSS.ELA-Literacy.RI.9-10.3 Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

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.

Common Core – Speaking and Listening

- CCSS.ELA-Literacy.SL.9-10.2 Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

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.07. Employ valid and reliable research strategies. Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies.
- 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

- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Initiative and Self-direction
- Leadership and Responsibility
- Think Creatively

Lesson Plan:

1. **Bell Ringer:** What are your current plans for life after high school graduation? If you aren't sure yet, what are your current hobbies that could lead to a future career?
2. **Introduction:** "*What are you going to do after high school graduation?"* This is probably a question you have heard during your time in high school. A lot of factors go into determining what you want to do post-graduation such as deciding if you want to go to a university or college or go straight into the workforce. This was a similar situation for one of our national FFA officers. Today, we are going to learn about National FFA Secretary Jackson Sylvester and his path to his chosen career.
3. **Activity:** Each student needs a copy of the worksheet "National FFA Secretary Finds His Spark."
    a. **Part 1:** Read the article "National FFA Secretary Finds His Spark," found at FFA.org/the-feed/national-ffa-secretary-finds-his-spark/ and answer the questions.
    b. **Part 2:** Students will go to AgExplorer, https://agexplorer.ffa.org/, and answer the questions to explore the responsibilities associated with careers related to welding. Students will choose one of the careers identified and dig deeper by clicking See Available Jobs on the career profile page.
    c. **Part 3:** Safety is extremely important when welding. Students will look at welding safety and personal protection equipment. Use this website, https://www.lincolnelectric.com/en/Safety-Resources/Welding-Safety-FAQs---Personal-Protective-Equipment, to complete the activity.
    d. **Part 4:** Now, it's the students turn to try welding! They will follow these steps to complete the activity.
    Items needed (per student):
        i. One pair of scissors
        ii. At least two full-size graham cracker sheets.
        iii. One small bag of icing (*Students will cut a small corner off the bag.)*
        iv. One paper towel
    Instructions for students:
    Step 1: Choose a type of weld to do. Use this website to see different types of welds: https://weldguru.com/weld-types-joints/. *What weld did you choose? Use the box below to sketch your weld.*
    Step 2: Lay the paper towel down on the table.
    Step 3: Create the weld using the graham crackers and icing.
    Step 4: Answer the questions on the worksheet after completing the activity.
4. **Follow-up:** Have students share their "weld" with a partner. Students should identify a positive comment about their partner's weld.
5. **Optional – Extended Learning Opportunities (Not factored into time requirement):**
    a. Have students create a resume using the FFA Resume Generator (or update an already created resume).
    b. Have students share their resume with a partner. Students should share with each other two or three things that they like about the resume and one suggestion of how to improve the resume.

6. **Exit Ticket:** What are three steps that you will take for your plans after high school graduation? *Example: Taking classes that align with a career I am interested in.*

Name: _____

Aligned to the following standards:
CS.05; FFA.PL-A; FFA.PL-C; FFA.PL-E; FFA.PL-F; FFA.CS-M; FFA.CS-N; AG5; AGC09.02; RI.9-10.2; RI.9-10.3; W.9-10.2; SL.9-10.1; SL.9-10.2; CRP.02; CRP.04; CRP.07; CRP.08

National FFA Secretary Finds His Spark

Part 1

Directions:

Read the article "National FFA Secretary Finds His Spark," found at FFA.org/the-feed/national-ffa-secretary-finds-his-spark/, and complete the following activities.

Who is the National FFA Secretary?

What is his hometown and state?

What was his experience with college?

What did he decide to do after college?

Why did he enjoy agricultural education?

From 2020 to _____, Sylvester — who learned to weld as a member of the _____ _____ FFA — worked with ____ different _____ companies.

What tasks did he learn at those companies?

What did agricultural education grant him?

What is his next move, after national office?

What is his long-term goal?

"It's OK to _____ _____ what you want to _____. When we have the _____, we can _____ anything we _____ our minds to.

How can you apply this quote and statement in your life?

What is available from FFA to help with a trade education?

Name: _____

Part 2

Directions:

Go to AgExplorer, https://agexplorer.ffa.org/, and answer the following questions.

In what career focus area do you think welder would fit?

Click on the career focus area tile that you chose.

Describe the career focus area in **two** sentences:

Choose **three** careers within the career focus area you identified above and answer the questions below.

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

b._____

_____

c._____

_____

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

b._____

_____

c._____

_____

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

Choose one of the careers you identified and click See Available Jobs on the career profile page. What is one currently available job? _____

b._____

_____

c._____

_____

What role do you think the three careers you highlighted above play in the economy? What would happen if they disappeared?

Name: _____

Part 3

Directions:

Safety is extremely important when welding. Let's take a look at welding safety and personal protection equipment. Use this website, https://www.lincolnelectric.com/en/Safety-Resources/Welding-Safety-FAQs---Personal-Protective-Equipment, to complete the activity below.

What is the most common injury to a welder?

Circle True or False for this statement: Protective clothing needed for welding includes general fire-resistant clothing, flip flops, safety glasses, gloves and helmet.

Using the space below, draw a flyer to help promote safety in welding.

-Include at least five of the FAQ in your drawing.

-Include why safety in welding is important.

-Be creative!

Explain what steps you can take to prevent hot sparks from being trapped in your clothing.

Why are safe practices and equipment so important with welding?

What would happen if these protocols were not followed? Give specific examples.

Name: _____

Part 4

Directions:

Now, it's your turn to try welding! Follow the steps below to complete this activity.

Items you will need:
-One pair of scissors
-At least two full-size graham cracker sheets
-One small bag of icing (*Cut a small corner off the bag.)*
-One paper towel

Instructions:
Step 1: Choose a type of weld to do. Use this website to see different types of welds: https://weldguru.com/weld-types-joints/. *What weld did you choose?* _____ *Use the box below to sketch your weld.*
Step 2: Lay the paper towel down on the table.
Step 3: Create the weld using the graham crackers and icing.
Step 4: Answer the questions below.

Sketch your weld:

Was this process easy? Why or why not?

How can you apply this activity to actual welding?

Summarize what you learned from the welding activity in two or three sentences:

Name: _____

Aligned to the following standards:
CS.05; FFA.PL-A; FFA.PL-C; FFA.PL-E; FFA.PL-F; FFA.CS-M; FFA.CS-N; AG5; AGC09.02; RI.9-10.2; RI.9-10.3; W.9-10.2; SL.9-10.1; SL.9-10.2; CRP.02; CRP.04; CRP.07; CRP.08

KEY: National FFA Secretary Finds His Spark

Part 1

Directions:

Read the article "National FFA Secretary Finds His Spark," found at FFA.org/the-feed/national-ffa-secretary-finds-his-spark/, and complete the following activities.

Who is the National FFA Secretary?
Jackson Sylvester

What is his hometown and state?
Felton, Delaware

What was his experience with college? He attended for a semester at the University of Delaware but realized college was not a good fit for his personality.

What did he decide to do after college? He decided to enter the workforce in his hometown.

Why did he enjoy agricultural education?
It granted him time to work with his hands. He loved building things, working with raw materials to create something functional.

From 2020 to 2021, Sylvester — who learned to weld as a member of the

Lake Forest FFA — worked with two different welding companies.

What tasks did he learn at those companies?
His tasks included cutting metal, welding steel and aluminum and running the machine shop.

What did agricultural education grant him?
The opportunities within the classroom that were applicable to a real-life setting. He said he felt like he could step into the industry prepared to work.

What is his next move, after national office?
He may pursue a formal education in welding or return to college for a four-year degree in business or agricultural education.

What is his long-term goal? His long-term goal is to open a welding shop.

"It's OK to not know what you want to do. When

we have the drive, we can accomplish anything we set our minds to.

How can you apply this quote and statement in your life? Answers will vary.

What is available from FFA to help with a trade education?
FFA offers several scholarships for members interested in pursuing trade careers.

Name: _____

Part 2

Directions:

Go to AgExplorer, https://agexplorer.ffa.org/, and answer the following questions.

In what career focus area do you think welder would fit? Power, Structural and Technical Systems

Click on the career focus area tile that you chose.

Describe the career focus area in **two** sentences: Answers will vary.

Choose **three** careers within the career focus area you identified above and answer the questions below. Answers will vary but the careers in this pathway can be found at AgExplorer.FFA.org/focus/power-structural-technical-systems.

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

b._____

_____

c._____

_____

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

b._____

_____

c._____

_____

Career: _____

Identify three responsibilities associated with this career:

a._____

_____

Choose one of the careers you identified and click See Available Jobs on the career profile page. What is one currently available job? Answers will vary.

b._____

_____

c._____

_____

What role do you think the three careers you highlighted above play in the economy? What would happen if they disappeared? Answers will vary.

Name: _____

Part 3

Directions:

Safety is extremely important when welding. Let's take a look at welding safety and personal protection equipment. Use this website, https://www.lincolnelectric.com/en/Safety-Resources/Welding-Safety-FAQs---Personal-Protective-Equipment, to complete the activity below.

What is the most common injury to a welder? Burns are the most common injury due to sparks landing on the skin.

Circle True or False for this statement: Protective clothing needed for welding includes general fire-resistant clothing, flip flops, safety glasses, gloves and helmet.

Using the space below, draw a flyer to help promote safety in welding.

-Include at least five of the FAQ in your drawing.

-Include why safety in welding is important.

-Be creative!

Explain what steps you can take to prevent hot sparks from being trapped in your clothing. Avoid rolling up your sleeves or pant cuffs, because sparks or hot metal could deposit in the folds. Also, wear your pants outside your work boots, not tucked in, to keep particles from falling into your boots.

Why are safe practices and equipment so important with welding? Answers will vary.

What would happen if these protocols were not followed? Give specific examples. Answers will vary.