



Lesson 4 of 8

Production Careers

Created: 03/2025 by the National FFA Organization

Description of Lesson Series: *There are a wide range of careers available in the Power, Structural, and Technical Systems pathway. Students might not even be aware of many of these careers. This lesson series will dive into the multitude of careers that are needed to take a precision agriculture product from idea to finished product and beyond. These lessons are designed to be used in order.*

Student Learning Objectives:

After completing these activities, students will ...

1. Understand the role of production careers in manufacturing agricultural products.
2. Construct a model of a precision agriculture product.

Suggested Grade Level:

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

Suggested Time: 100 minutes (*Time requirements may vary based upon student understanding and class schedule.)

Resources/References:

1. Website: AgExplorer.FFA.org/career/

Related Resources:

1. "Power Up" Your Future With John Deere, <https://FFA.box.com/s/rmzz3a341ei4f0te2hasrch2ep2tgme1>
2. We Are John Deere Series, <https://FFA.box.com/s/3fjke9572nl1zt298rx5oo0k65m8horv>

Equipment and Supplies Needed:

1. A copy of the "Production Careers" worksheet for each student
2. A [PST Production Career Card](#), one per student
3. Supplies to create the products could include:
 - a. Modeling clay
 - b. Craft supplies
 - c. Cardboard
 - d. Legos

Vocabulary:

1. Model
2. Production

Cross-Curricular Connections:

English/Language Arts	Engineering
• Evaluate and provide feedback.	• Create a model for a product. • Make changes based on feedback.

Name: _____

SAE and FFA Connections

1. Agricultural Technology and Mechanical Systems CDE, [FFA.org/participate/cdes/agricultural-technology/](https://ffa.org/participate/cdes/agricultural-technology/)

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/eq6wg02pwcxkq4aevpm8qz7717xnl20> (Word)

<https://ffa.box.com/s/ccldnjlzodzmhp9wd5ii4ww3pw1965dv> (PDF)

https://docs.google.com/document/d/1GxAR7WAB33lWalp58nQrLICISH_-qrrR1WJxJ8iYltE/copy (Google)

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.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.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.
- FFA.CS-N.Decision Making: Analyze a situation and execute an appropriate course of action.

AFNR Cluster Skills

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

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

Common Core – Science & Technical Subjects

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

AFNR Career Ready Practices

- 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.
- CRP.10. Plan education and career path aligned to personal goals. Career-ready individuals take personal ownership of their own educational and career goals, and they regularly act on a plan to attain these goals.

Partnership for 21st Century Skills

- Communication
- Critical Thinking and Problem Solving
- Initiative and Self-direction
- Leadership and Responsibility

Name: _____

Lesson Plan:

1. **Bell Ringer:** Why is teamwork important in the production process?
2. **Introduction:** *Transforming a design into a physical product requires specialized skills and teamwork. Careers in production ensure that innovative designs are built accurately and efficiently. Today, you will explore the manufacturing careers used to create high-quality agricultural equipment and create a model of your new product.*
3. **Activity:** Each student needs a copy of the worksheet "Production Careers."
 - a. **Part 1:** Have students draw a PST Production Career Card. They will research that career and create a "day in the life" social media profile.
 - b. **Part 2:** The career profiles will be hung up around the room for a gallery showcase. Students will fill out an activity on their student worksheets as they learn about the different careers. They should answer the questions for five careers of their choosing.
 - c. **Part 3:** Joining their groups from yesterday, students will create a model of their precision agriculture product using materials provided by the teacher and the included rubric. The materials for this can be as extensive or limited as you want to provide. When done, instruct students to answer the discussion questions.
4. **Follow-up:** Take students to tour a production plant in your local community to see how different products are made.
5. **Optional – Extended Learning Opportunities (Not factored into time requirement):**
 - a. Have students watch the John Deere virtual field trip and write a short summary of what they learned, focusing on the role of production workers and the technology used to manufacture agricultural equipment.
6. **Exit Ticket:** Name one career in production and explain its importance in creating agricultural equipment.

Name: _____

Aligned to the following standards:

CS.05; CCSS.SL.9-10.1; CCSS.SL.9-10.2; AG5; CRP.04; CRP.07; CRP.08; CRP.10

Production Careers

Part 1

Directions:

Get a Production Career Card from your teacher. Using that career and AgExplorer, create a “day in the life” social media profile below.

Profile Picture	Cover Photo: (Setting/Location of Career)
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Name of Career:

Career Focus Area:

Friends: (Who would I work with? What careers are related?)

Interests/Groups: (What professional organizations are useful for me?)

Basic Information: (Where do I work? What companies could I work for/with?)

★

★

★

Name: _____

Schooling: (What education is needed for this career?)

Status Update: (Why is this career the coolest?)

About: (What do I do? What are my responsibilities?)

★

★

★

★

Name: _____

Part 2

Directions:

As you move around the room, stop at each career profile. Read the information provided and answer the questions below for five different careers of your choice. Be sure to fill out all sections. Use complete sentences where applicable.

Career 1

Career Name: _____

1. What are the main responsibilities of this career?
2. What skills or education are needed for this career?
3. What is one interesting fact about this career?
4. How does this career relate to agricultural equipment production?

Career 2

Career Name: _____

1. What are the main responsibilities of this career?
2. What skills or education are needed for this career?
3. What is one interesting fact about this career?
4. How does this career relate to agricultural equipment production?

Name: _____

Career 3

Career Name: _____

1. What are the main responsibilities of this career?

2. What skills or education are needed for this career?

3. What is one interesting fact about this career?

4. How does this career relate to agricultural equipment production?

Career 4

Career Name: _____

1. What are the main responsibilities of this career?

2. What skills or education are needed for this career?

3. What is one interesting fact about this career?

4. How does this career relate to agricultural equipment production?

Name: _____

Career 5

Career Name: _____

1. What are the main responsibilities of this career?

2. What skills or education are needed for this career?

3. What is one interesting fact about this career?

4. How does this career relate to agricultural equipment production?

Reflection Questions:

1. Which career did you find the most interesting? Why?

2. What skills do you already have that could help you succeed in one of these careers?

3. What is one new thing you learned about agricultural careers today?

Name: _____

Part 3

Directions:

Joining your group, create a model of your precision agriculture product using materials provided by your teacher and the included rubric. When done, answer the discussion questions below.

Discussion Questions:

1. What roles did each team member take on during the design and production process?
2. How did your group ensure everyone's voice was heard during planning and design?
3. What challenges did your team face when working together, and how did you overcome them?
4. What materials or tools did you use to create your model, and why did you choose them?
5. If you could improve one aspect of your product, what would it be and why?
6. If you were to start over, what would you do differently in the design or production process?
7. What careers in the design and production process interest you and why?

Name: _____

Precision Agriculture Product Model Rubric

	4 — Accomplished	3 — Satisfactory	2 — Basic	1 — Very Limited	Total
Creativity and Innovation	The model is highly creative and innovative.	The model shows some creativity and innovation.	The model has limited creativity or innovation.	The model lacks creativity and innovation.	
Functionality	The product's purpose is clear and addresses an agricultural problem.	The product's purpose is clear and addresses a problem but lacks some details.	The product's purpose is somewhat unclear or does not effectively address a problem.	The product's purpose is unclear and fails to address an agricultural problem.	
Teamwork	Strong evidence of collaboration; all group members contributed equally and effectively	Evidence of collaboration; most group members contributed effectively	Some evidence of collaboration; uneven contribution from group members	Little evidence of collaboration; one or a few members did most of the work	
Model Quality	Model is detailed, visually appealing and clearly represents the product's purpose.	Model is neat and represents the product's purpose but lacks some detail.	Model is somewhat neat but lacks clarity or detail about the product's purpose.	Model is messy or incomplete and does not clearly represent the product.	
Total					

Comments:

Name: _____

KEY: Production Careers

Part 1

Directions:

Draw a Production Career Card from your teacher. Using that career and AgExplorer, create a “day in the life” social media profile below.

Profile Picture	Cover Photo: (Setting/Location of Career)
Name of Career: Answers will vary.	Career Focus Area: Answers will vary.

Friends: (Who would I work with? What careers are related?)
Answers will vary.

Interests/Groups: (What professional organizations are useful for me?)
Answers will vary.

Basic Information: (Where do I work? What companies could I work for/with?)

- ★ Answers will vary.
- ★ Answers will vary.
- ★ Answers will vary.
- ★ Answers will vary.

Name: _____

Schooling: (What education is needed for this career?)

Answers will vary.

Status Update: (Why is this career the coolest?)

Answers will vary.

About: (What do I do? What are my responsibilities?)

★ Answers will vary.

★ Answers will vary.

★ Answers will vary.

★ Answers will vary.

Name: _____

Part 2

Directions:

As you move around the room, stop at each career profile. Read the information provided and answer the questions below for five different careers of your choice. Be sure to fill out all sections. Use complete sentences where applicable.

Career 1

Career Name: ____ **Answers will vary.** _____

1. What are the main responsibilities of this career?

Answers will vary.

2. What skills or education are needed for this career?

Answers will vary.

3. What is one interesting fact about this career?

Answers will vary.

4. How does this career relate to agricultural equipment production?

Answers will vary.

Career 2

Career Name: ____ **Answers will vary.** _____

1. What are the main responsibilities of this career?

Answers will vary.

2. What skills or education are needed for this career?

Answers will vary.

3. What is one interesting fact about this career?

Answers will vary.

4. How does this career relate to agricultural equipment production?

Answers will vary.

Name: _____

Career 3

Career Name: _____ *Answers will vary.* _____

1. What are the main responsibilities of this career?

Answers will vary.

2. What skills or education are needed for this career?

Answers will vary.

3. What is one interesting fact about this career?

Answers will vary.

4. How does this career relate to agricultural equipment production?

Answers will vary.

Career 4

Career Name: _____ *Answers will vary.* _____

1. What are the main responsibilities of this career?

Answers will vary.

2. What skills or education are needed for this career?

Answers will vary.

3. What is one interesting fact about this career?

Answers will vary.

4. How does this career relate to agricultural equipment production?

Answers will vary.

Career 5

Career Name: _____ *Answers will vary.* _____

1. What are the main responsibilities of this career?

Answers will vary.

Name: _____

2. What skills or education are needed for this career?

Answers will vary.

3. What is one interesting fact about this career?

Answers will vary.

4. How does this career relate to agricultural equipment production?

Answers will vary.

Reflection Questions:

1. Which career did you find the most interesting? Why?

Answers will vary.

2. What skills do you already have that could help you succeed in one of these careers?

Answers will vary.

3. What is one new thing you learned about agricultural careers today?

Answers will vary.

Name: _____

Part 3

Directions:

Joining your group, create a model of your precision agriculture product using materials provided by your teacher and the included rubric. When done, answer the discussion questions below.

Discussion Questions:

1. What roles did each team member take on during the design and production process?

Answers will vary.

2. How did your group ensure everyone's voice was heard during planning and design?

Answers will vary.

3. What challenges did your team face when working together, and how did you overcome them?

Answers will vary.

4. What materials or tools did you use to create your model, and why did you choose them?

Answers will vary.

5. If you could improve one aspect of your product, what would it be and why?

Answers will vary.

6. If you were to start over, what would you do differently in the design or production process?

Answers will vary.

7. What careers in the design and production process interest you and why?

Answers will vary.

Name: _____

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Comments: