



Lesson 2 of 8

Product Planning 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. Identify careers needed to plan for a new product.
2. Create a plan for their new 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: 60 minutes (*Time requirements may vary based upon student understanding and class schedule.)

Resources/References:

- i. Video: AgExplorer.FFA.org/virtual-field-trips/john-deere-careers-that-innovate/

Related Resources:

1. "Power Up" Your Future With John Deere, <https://FFA.box.com/s/rmzz3a34lei4f0te2hasrch2ep2tqme1>
2. We Are John Deere Series, <https://FFA.box.com/s/3fjke9572nl1zt298rx5oo0k65m8horv>

Equipment and Supplies Needed:

1. A copy of the "Product Planning" worksheet for each student
2. Internet access
3. A [Customer Card](#) cut out for each group of three students

Vocabulary:

1. Benefits
2. Features
3. Innovative
4. Product planning

Cross-Curricular Connections:

English/Language Arts	Engineering
• Read and synthesize information.	• Plan a product.

SAE and FFA Connections

Name: _____

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/4z1d3mlges2amp0tgadgikiyj0v68afm> (Word)

<https://ffa.box.com/s/bee0hlay3yp7p90jnnnydz18kf0p25mxy> (PDF)

https://docs.google.com/document/d/1F6eu0vqi9UqbYyxw4Uk-ZT_D3iicwoa3eE5Qe559PnY/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:** Think about planning a large event (like prom or FFA banquet). List the steps you would take to make it successful. How does this compare to planning a new product?
2. **Introduction:** *Every successful product starts with a strong plan. Product planning careers focus on identifying problems, setting goals and outlining the steps needed to bring a new idea to life. In this lesson, you will delve into roles like project managers and product planners, understanding how these professionals shape ideas into market-ready solutions. With your team, you will take your first steps in designing your precision agriculture product by defining its purpose, audience and development timeline, building a foundation for success.*
3. **Activity:** Each student needs a copy of the worksheet “Project Planning.”
 - a. **Part 1:** Show the [John Deere virtual field trip Chapter 2: Product Planning](#) from the beginning until 3:40. While students watch that video, instruct them to fill in on their student worksheets the careers needed for product planning and how those careers are utilized for product planning. When done with the video, students will answer the discussion questions.
 - b. **Part 2:** Students will break into the groups of three they were given in Lesson 1. Each group will be given a customer card that has a different scenario on it. They will use this scenario to begin to plan for their new precision agriculture product. They will fill out the planning document on their student activity sheets and answer the discussion questions.
4. **Follow-up:** Have students share the customer scenario they received and the results they came up with for that scenario. When done, ask students to research current precision agriculture products on the market and discuss how their product could compete or fill a gap in the market.
5. **Optional – Extended Learning Opportunities (Not factored into time requirement):**
 - a. Have a guest speaker from a local manufacturing business come to talk about how they plan for new products.
6. **Exit Ticket:** What was the biggest challenge your team faced in the planning process, and how did you overcome it?

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

Product Planning

Part 1

Directions:

As you watch the [video](#), fill in the table below for the careers that are mentioned and how those careers impact product planning at John Deere. When done with the video, answer the discussion questions below.

Career	How

Discussion Questions:

1. Which career mentioned in the video do you think had the most significant impact on product planning at John Deere? Why?
2. How do the roles of different careers work together to ensure effective product planning?
3. What challenges might arise if one of these roles was not performed well?
4. Why is product planning important?

Name: _____

Part 2

Directions:

Get into the group assigned to you. With your group, obtain one Customer Card from your teacher. Use this scenario to help you fill out the planning document below.

Precision Agriculture Product Planning

Group Members:

Customer Scenario:

1. Problem Overview

Describe the customer’s problem.

-
-

Explain how your product will solve this problem.

-

2. Brainstorming Your Product

Product Idea	Problem(s) It Solves	How Is It Unique or Innovative?

3. Target Audience/Customer

Who will use or benefit from your product?

-

What are their specific needs or challenges?

-

4. Key Features and Benefits

List the key features of your product.

- 1.
- 2.
- 3.

Describe the benefits of these features to the customer.

-
-

Discussion Questions:

1. What was the most challenging part of product planning?
2. How did you work together as a group to plan?

Name: _____

KEY: Activity 2: Product Planning

Part 1

Directions:

As you watch the video, fill in the table below for the careers that are mentioned and how those careers impact product planning at John Deere. When done with the video, answer the discussion questions below.

Career	How
Marketing	To understand market research and trends in the industry as well as customer needs
Product Planners	To understand how their plans fit with the other product planners
Engineering	To understand how planners can solve a problem for a customer and what different features look like in action

Discussion Questions:

1.

Which career mentioned in the video do you think had the most significant impact on product planning at John Deere? Why?

Answers will vary.
2.

How do the roles of different careers work together to ensure effective product planning?

Answers will vary.
3.

What challenges might arise if one of these roles was not performed well?

Answers will vary.
4.

Why is product planning important?

Answers will vary.

Name: _____

Part 2

Directions:

Get into the groups assigned to you. With your group, obtain one Customer Card from your teacher. Use this scenario to help you fill out the planning document below.

Precision Agriculture Product Planning

Group Members:

Customer Scenario: Answers will vary.

1. Problem Overview

Describe the customer's problem. Answers will vary.

-
-

Explain how your product will solve this problem.

- Answers will vary.

2. Brainstorming Your Product

Product Idea	Problem(s) It Solves	How Is It Unique or Innovative?
Answers will vary.	Answers will vary.	Answers will vary.
Answers will vary.	Answers will vary.	Answers will vary.
Answers will vary.	Answers will vary.	Answers will vary.
Answers will vary.	Answers will vary.	Answers will vary.

3. Target Audience/Customer

Who will use or benefit from your product?

- Answers will vary.

What are their specific needs or challenges?

- Answers will vary.

4. Key Features and Benefits

List the key features of your product.

1. Answers will vary.
2. Answers will vary.
3. Answers will vary.

Describe the benefits of these features to the customer.

- Answers will vary.
- Answers will vary.

Discussion Questions:

1. What was the most challenging part of product planning?

Answers will vary.

2. How did you work together as a group to plan?

Answers will vary.