

NEBRASKA
AGRICULTURE
IN THE CLASSROOM
NEBRASKA FARM BUREAU FOUNDATION

CHIEF CAREERS



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Scan the QR Code or go to
nefbfoundation.org/chief-careers/
to access the Chief Careers booklet digitally

Lesson 1

Meet the 14 National Career Clusters

Lesson Outline

Essential Question:

How can the 14 National Career Clusters help me find out more about careers?
Why is it important to be familiar with the 14 National Career Clusters?

Learning Goal:

Students will identify characteristics of Career Clusters.
Students will explore how different careers in non-agriculture clusters might still relate to the agriculture industry.

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.
AFNR.HS.20.3.c Determine common qualities of a specific career area (e.g. educational requirements, work environment).

Materials:

14 Career Clusters bulletin board kit (1 large poster, mini poster - 1 per student, 1 set of Discover Agriculture Career Cards); Career Cluster Reflection Worksheet, 1 per student

Interest Approach:

Begin by holding up two of the 48 Discover Career cards, showing the job titles and images.

Ask:

- “What kind of jobs are these?”
- “What kinds of work environments might they be part of?”
- “What skills are needed for these jobs?”

Encourage students to share their ideas and make observations based on the images and job descriptions. Explain that all jobs can be organized into 14 Career Clusters, each grouping together careers that share common environments, required skills, or core values.

At their desks, provide each student or pair with:

- A poster of the 14 Career Clusters and groupings
- 2–3 Career Cards from the 48-card set

Tell them:

- “Using the Career Cluster posters on your desk, your job is to decide where each of your Career Cards belongs. Some cards might fit into more than one cluster—that’s okay! We’ll talk about it.”
- Give students a few minutes to review their cards and match them to the most fitting clusters by placing the cards next to or on top of the corresponding cluster posters.

Activity:

Once students have sorted their cards,

1. Briefly introduce each of the 14 Career Clusters, explaining the types of careers and work environments found in each.
2. As you go through each cluster, prompt class discussion:
 - “Who matched a card to this cluster?”
 - “Why did you place it here?”
 - “Could this career also fit into another cluster?”
 - “Does this job sound like something that might interest you?”

Encourage students to move or reassign cards if their thinking changes during the discussion. Students will most likely make the connection that these Discover Career Cards will all fall into the agriculture cluster in one way or another.

3. Ask: “Can you find a way to connect one of your agriculture Career Cards to another Career Cluster?”

Brainstorm how these roles could support or collaborate with other careers. Sometimes the most interesting jobs happen where fields overlap. You may consider using the additional careers list provided, encouraging students to see cross-cluster connections.

Use examples to kick off the brainstorming:

- Health Science: Veterinarians, food safety inspectors, animal nutritionists
- Business Management and Administration: Agribusiness owners, marketing and sales for farm products
- Information Technology: Drone operators, data analysts, software developers in precision agriculture
- STEM: Soil scientists, crop researchers, ag engineers
- Education and Training: Agriculture educators or extension agents

Ask:

“What surprised you about how agriculture connects across so many fields?”

Reinforce the idea that many jobs, even if they seem specific to one field, may cross into other industries, including agriculture.

To close the activity, have students complete the Career Cluster Reflection Worksheet to reflect. Use these questions to reflect and check for understanding:

- “What Career Clusters are most interesting to you right now?”
- “Did you discover a new career today that you hadn’t thought about before?”
- “How could one of your interests relate to a job in agriculture, even if the interest doesn’t seem farm-related?”

Career Cluster Reflection Worksheet

Answer the following questions based on what you have learned about the 14 National Career Clusters. Be thoughtful and use examples from the class activity to complete each question.

Cluster Characteristics

Select two Career Clusters that stood out to you during the class activity. For each cluster, answer the following:

Cluster 1: _____

- What types of jobs are typically found in this cluster?

- What skills or values are important for jobs in this cluster?

- Can you think of an example of how this cluster might be connected to agriculture?

Cluster 2: _____

- What types of jobs are typically found in this cluster?

- What skills or values are important for jobs in this cluster?

- Can you think of an example of how this cluster might be connected to agriculture?

Personal Reflection

Out of all the Career Clusters we discussed today, which one do you feel best fits your personal interests or strengths? Why?

Cross-Cluster Thinking

Choose a career that you believe could fit into more than one cluster. What clusters could this career belong to, and why?

Real-Life Application

Think of someone you know (a family member, friend, or public figure) and describe their career. Which Career Cluster does their job belong to?

Challenge:

Think about how your favorite subject in school connects to a Career Cluster. Write down the subject and a possible career path related to that cluster:

Subject: _____ Career Path: _____

Additional Careers to Consider

These careers can cross-connect to various career clusters - not just agriculture.

Agri-Tourism Coordinator

Develops tourism programs centered on farms and agriculture, blending hospitality and agriculture.

Agricultural Communications Specialist

Works in public relations or marketing for agricultural firms, connecting media and agriculture.

Agricultural Compliance Officer

Ensures farms and agricultural businesses comply with local, state, and federal regulations, linking agriculture with legal and regulatory services.

Agricultural Drone Operator

Operates drones to monitor crops and apply treatments, linking agriculture with technology and aviation.

Agricultural Economist

Analyzes data and trends to make economic decisions about agricultural markets, connecting with business, finance, and government sectors.

Agricultural Educator

Teaches agricultural concepts and practices, blending education with agricultural science.

Agricultural Journalist

Reports on agricultural developments, intersecting with media, journalism, and communication.

Agricultural Lawyer

Handles legal issues related to farming, land use, and food production, connecting agriculture with the legal profession.

Agricultural Photographer

Specializes in capturing images of agricultural landscapes and practices, linking agriculture with visual arts and media.

Agricultural Policy Analyst

Evaluates agricultural policies for governments or organizations, intersecting with political science and agriculture.

Agricultural Research Scientist

Conducts research to improve agricultural practices, linking with science and technology sectors.

Agricultural Software Developer

Creates technology solutions for agricultural problems, blending programming and farming.

Agroforester

Combines agriculture and forestry to create sustainable land-use practices, blending environmental science and farming.

Aquaculture Specialist

Manages the farming of fish and other aquatic species, connecting agriculture with marine science.

Biotechnologist

Uses biological processes to improve agricultural products, intersecting with science and technology sectors.

Compost Specialist

Manages organic waste to create compost for farming, blending waste management and agriculture.

Crop Consultant

Advises farmers on how to improve crop yields and health, connecting with consultancy services.

Dairy Technologist

Oversees the production and processing of dairy products, linking food science and agriculture.

Farm Auditor

Reviews financial and operational aspects of a farm, blending finance and agricultural management.

Farm Financial Consultant

Advises farmers on financial matters, blending accounting and agriculture.

Farm Labor Contractor

Recruits and manages farm laborers, blending human resources with agriculture.

Farm Manager

Oversees the operations of a farm, managing workers, production, and finances, blending agriculture with business management.

Farm Service Agent

Works for the USDA to manage government assistance aid to producers through loans, conservation, crop insurance, and disaster relief, blending public service, finance, and agriculture.

Food Packaging Specialist

Designs and implements packaging solutions for food products, blending industrial design and agriculture.

Food Safety Inspector

Ensures agricultural products are safe for consumption, intersecting with public health and safety.

Food Scientist

Develops safe and nutritious food products, linking agriculture with food production and safety.

Irrigation Engineer

Designs efficient irrigation systems for agriculture, blending water management and engineering.

Land Appraiser

Evaluates agricultural land for sale, development, or conservation, blending business and real estate practices with agriculture.

Land Surveyor

Maps and measures land for agricultural purposes, connecting with the construction and civil engineering sectors.

Pesticide Applicator

Safely applies chemicals to protect crops from pests, linking with public safety and health.

Plant Breeder

Develops new plant varieties for better yield and resistance, blending genetics and agriculture.

Poultry Scientist

Researches and manages poultry production, linking with animal science and agriculture.

Ranch Manager

Oversees the care and breeding of livestock, connecting to management and animal science.

Renewable Energy Project Manager

Oversees the development of renewable energy projects on farms, such as wind turbines or solar panels, linking energy and agriculture.

Seed Analyst

Tests seeds for quality and viability, blending biology with agricultural production.

Seed Sales Representative

Sells seeds and agricultural products to farmers, linking with sales and plant science.

Soil Conservationist

Works to prevent soil erosion and degradation, blending environmental science and agriculture.

Urban Farmer

Cultivates crops in urban areas, connecting urban planning and agriculture.

Water Resource Specialist

Manages water use in agricultural practices, closely linking with environmental science and conservation.

Wildlife Biologist

Studies animals in agricultural environments to balance farming with wildlife conservation, linking with biology and environmental science.

Lesson 2

Personal Preferences Inventory

Lesson Outline

Essential Question:

How can knowing about myself and my preferences help me find satisfying career options?

Learning Goal:

Students will select personal work preferences and interests related to work environments, then compare qualities of agriculture-related careers and classify them according to their personal interests.

Standards Alignment:

AFNR.HS.20.3.a Inventory personal work preferences and interests related to the Agriculture, Food, and Natural Resources career field.

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

Materials:

Would You Rather? Agriculture Careers Edition, 1 per student

Interest Approach:

"Today, we'll start with a game of 'Would You Rather...?' I'll ask questions about what you prefer in scenarios one could imagine about work environments, work styles, and personal behavior preferences." Using a list of your choosing (search internet for 'work environment would you rather'), explain to students how they'll express their choice: 'Walk the Line' where the room is divided in half, the question is read aloud indicating one side for one answer, the other side for the other answer, and students walk to a side of the room to indicate their answer; 'Popcorn' which is similar but indicators are either stand for one answer or sit for the other; or 'Debate' where students persuade in favor of their opinion.

Conclude the activity:

- I hope this helped you start thinking about the things you naturally enjoy or don't care for.

Content / Procedure / Activity:

"Let's get more specific, comparing the similarities and differences of work environments and activities within agriculture-related careers." Share a copy of the worksheet 'Would You Rather' – Ag Careers. Invite students to split into pairs, complete the worksheet with their individual interests, and discuss one or two of the careers that interest them with their partner.

Group Discussion following content:

- Who would like to name a career from your worksheet that you didn't expect to find in agriculture?
- What surprised you about it?

Would You Rather? – Agriculture Careers Edition

Answer these 20 'Would You Rather' questions to think about your preferences for types of work and environments! Circle or highlight which option you prefer for each question.

Would you rather...

1. ... work outside managing a large farm OR inside developing new food products in a lab? Farm Manager vs. Food Scientist
2. ... work with animals, making sure they're healthy and well-fed OR work with plants, finding ways to grow more crops? Veterinarian vs. Agronomist
3. ... fly a drone over fields to check on crops OR repair and maintain farm machinery to keep everything running smoothly? Agricultural Drone Operator vs. Farm Equipment Mechanic
4. ... help create laws that protect farmers and the environment OR design new equipment to make farming more efficient? Agricultural Lawyer vs. Agricultural Engineer
5. ... teach students about agriculture and food production OR inspect farms and food-processing plants to make sure everything is safe and clean? Agriculture Educator vs. Food Safety Inspector
6. ... use science to improve the soil for growing better crops OR use data to predict how much food farmers should grow and sell? Soil Scientist vs. Agricultural Economist
7. ... manage a greenhouse to grow plants in a controlled environment OR manage a forest to ensure sustainable logging and wildlife protection? Greenhouse Manager vs. Forester
8. ... create marketing strategies to help farmers sell their products OR advise farmers on how to improve the health and growth of their crops? Agriculture Marketing Specialist vs. Crop Consultant
9. ... design packaging to keep food fresh and safe OR develop new seeds that are more resistant to disease and drought? Food Packaging Specialist vs. Plant Breeder
10. ... monitor water resources to ensure crops get enough water OR work in labs using genetics to develop stronger crops and animals? Water Resource Specialist vs. Biotechnologist
11. ... work in a big office in the city, advising on agricultural policies OR spend your days outdoors managing a fish farm or fishery? Agricultural Policy Analyst vs. Fisheries Manager
12. ... focus on improving animal nutrition to make sure farm animals are healthy OR focus on improving soil quality for better crop production? Animal Nutritionist vs. Soil Conservationist
13. ... travel to farms and help sell products like seeds and fertilizers OR travel to farms to take care of sick animals? Seed Sales Representative vs. Farm Veterinarian Technician
14. ... help develop biofuels from plants to create renewable energy OR work with data and computers to improve precision farming techniques? Biofuels Engineer vs. Precision Agriculture Specialist
15. ... capture and share stories and images about life on farms OR work with numbers and data to help farmers manage their finances? Agriculture Journalist vs. Farm Auditor
16. ... create educational programs for tourists visiting farms OR create programs for farmers to learn the latest agricultural techniques? Agri-Tourism Coordinator vs. Agricultural Educator
17. ... help protect crops from pests and diseases OR help design new ways to harvest crops using advanced technology? Entomologist vs. Agricultural Software Developer

Lesson 3

Career Webs in Agriculture

Lesson Outline

Essential Question:

What are some (expected and unexpected) careers related to agriculture?

Learning Goal:

Students will discover agriculture-related careers that played a role in producing everyday food items. Students will explore careers related to agriculture using resources available online to match them with careers associated with their interests.

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

Materials:

Large paper (poster board, butcher paper, etc.) for Career Web activity, markers

Interest Approach:

Ask students what they ate for breakfast? Anyone care to share where their food came from? Explain that we will be discussing the infrastructure of people and careers that touch food on its way to our pantries and kitchens.

Activity:

Display the Grocery List and incomplete Milk Career Web Template. Divide students into groups of two or three and give each group a large piece of paper and some markers. Assign a food item from the Grocery List. Invite the students to take five minutes to brainstorm all the careers that touch the grocery item before it reaches the hands of consumers like you and me. Refer to the incomplete career web and instruct them to draw a career web with the brainstormed careers on their paper. Write the food item in the middle and connect each career to the product or other careers to create a concept map.

Start a five-minute timer, preferably counting down within their view, and allow students to collaborate and fill their paper. Once the timer goes off, ask each group to count the careers they listed and compare with the class. Ask groups to share their web with the class. Discuss with students the many careers that touch our food supply and about similar career webs for other agriculture sectors.

Draw a large career web for cheese using the careers listed and briefly describe how the careers are an important part of the process of producing milk and making cheese. Please also note the web could be much larger!

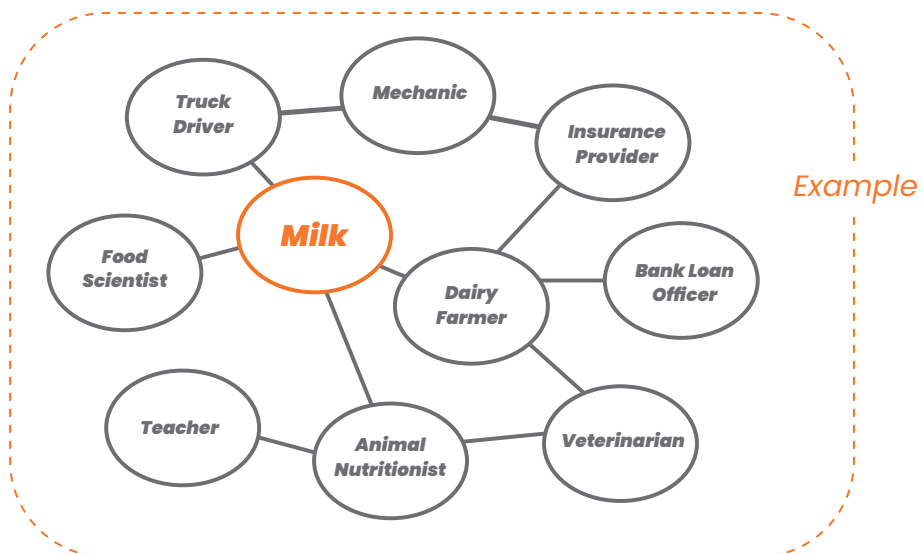
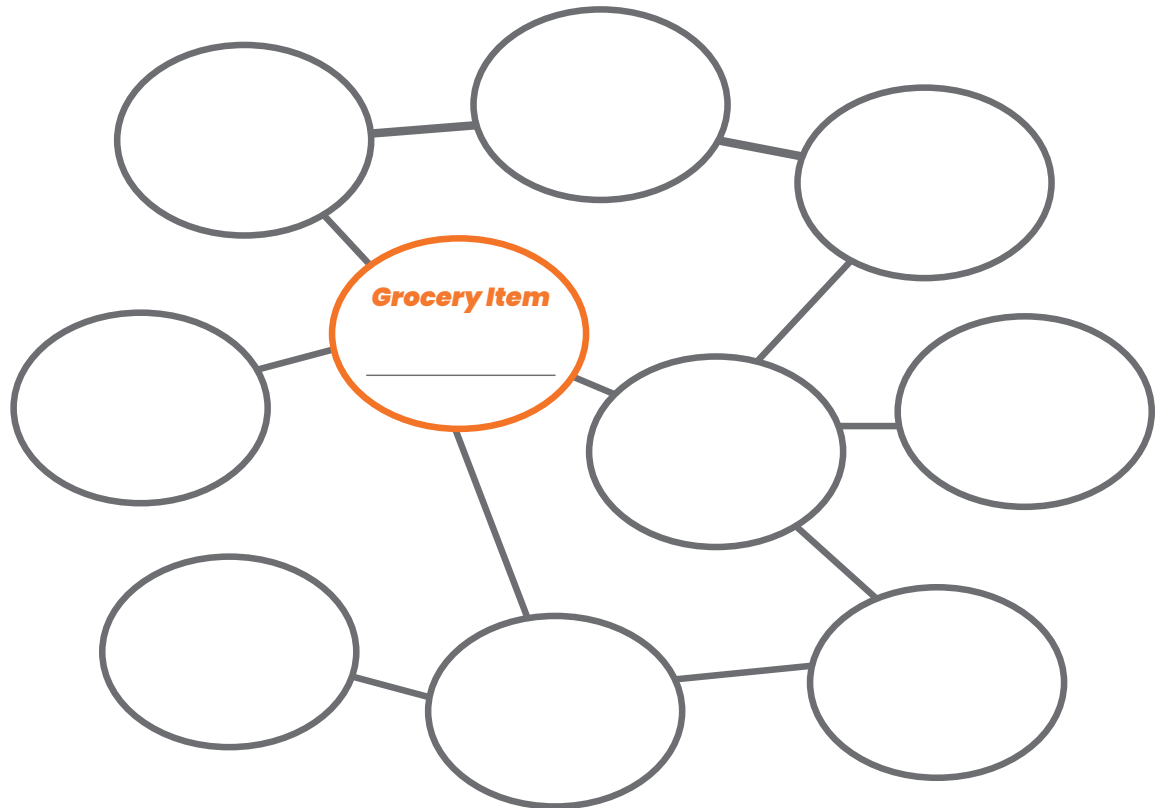
Group Discussion following content:

- Food security is just one of many important issues in agriculture, offering a variety of careers working on solutions.

Career Web Activity

Grocery Item

1. Ice Cream
2. Eggs
3. Bread
4. Apples
5. Chicken
6. Tomatoes
7. Hamburger
8. Bacon
9. Popcorn
10. Potatoes



Lesson 4

Finding Agricultural Jobs

Lesson Outline

Essential Question:

How do I find agriculture job listings and determine if they are a good fit for me?

Learning Goal:

Students will learn how to identify job opportunities in agriculture.

Students will understand how to read and analyze job descriptions.

Students will develop the skills to determine if a job fits their interests and qualifications.

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

AFNR.HS.20.3.e Identify opportunities for work placed learning within your community.

Materials:

Whiteboard and markers, sample job posting (choose one before class to pass out to students during their homework/activity time), internet access for researching job postings in agriculture

Interest Approach:

“The last time you watched a TV show or movie, how did you decide which one to pick?” Did they just pick a random title, or did they look into it before deciding? The same kind of thought process goes into finding a job: research, consideration of interests, and understanding the details. Today’s focus is on learning how to find agriculture jobs that fit your interests and qualifications.

Activity:

Introduce students to agriculture job search resources. Identifying Job-Hunting Resources in Agriculture: Ask students where they might find information about jobs in agriculture (e.g., job boards like AgCareers.com, company websites, local agriculture departments, social media). List student answers on the whiteboard. It’s important to explore multiple sources! Understanding Different Job Titles: Ask students if they’ve heard of a “crop consultant.” Then explain how this role might have other titles like “agronomy advisor” or “farm consultant.” Highlight how different companies may use different names for similar roles in agriculture, just like “lightning bug” vs. “firefly.” Discuss how students should research variations in job titles when looking for agriculture careers. Lead students through Exploring Agriculture Job Titles on their worksheet.

Teach students how to thoroughly read job descriptions. Even if two jobs have the same title, the duties could be very different based on the company. Read job descriptions carefully to understand qualifications and responsibilities. Then reflect on whether agriculture jobs align with their personal interests. Nonprofit jobs might include working for a community garden initiative, while for-profit jobs could include working for a large agricultural corporation. Each type of job serves a purpose and can be fulfilling.

Research potential employers by looking up an agriculture company they might want to work for and researching its values, work environment, and opportunities for growth. Does that fit their personal interests?

Finding Agricultural Jobs Activities

Pick a partner in class to complete these activities as 'pair and share.'

Exploring Agriculture Job Titles

- Find a partner and choose one of these titles to research: Farm Manager, Agricultural Engineer, Crop Inspector
- In five minutes, brainstorm as many alternative job titles for their assigned role as possible! Write the alternative job titles in the space below and be prepared to share:

Analyzing a Job Description:

- Read through the job posting your teacher gives you.
- Highlight key details: qualifications, duties, how to apply, and special instructions (e.g., do you need to email your resume or submit it through a portal?).
- Take five minutes, then we'll share what we've highlighted. Did anything in this posting surprise you? Write two sentences about what stood out to you.

Company Research Reflection:

- Take 10 minutes to research an agriculture company. Be prepared to share about it.
- Did the company culture or job opportunities match your expectations? Would you consider working for that company based on what you found? Write two sentences giving your answer.

Finding the right job is a process that needs time, consideration, and confidence! It's okay not to meet every single qualification; applying is still worth it if the job aligns with your interests.

Lesson 5

Chief Industries Career Videos

Lesson Outline

Essential Question:

How can learning about different careers available at a local agriculture employer help me understand which jobs might align with my interests, skills, and goals?

Learning Goal:

Students will learn about various careers in agriculture through video interviews.

Students will take notes on the roles, responsibilities, and skills of different professionals.

Students will reinforce their learning through an interactive Career Headbands guessing game.

Standards Alignment:

AFNR.HS.20.3.e Identify opportunities for work placed learning within your community.

Materials:

Internet access to Chief Industries Career videos - <https://nefbfoundation.org/chief-careers/>, notebook or device for taking notes on videos, construction paper for headbands, tape, paper for career name cards, markers

Interest Approach:

“Has anyone ever played the game Guess Who? or Headbands?”

Explain the rules of the game briefly, emphasizing how players ask yes/no questions to figure out the person or character they’re pretending to be. Then explain that today, they’ll be doing something similar – only instead of guessing people, they’ll be guessing careers based on clues from their classmates!

Activity:

“Who can name agriculture-related companies in our community and surrounding area?” Allow students to name a few agriculture-connected businesses in the area. Introduce Chief Industries as an employer. Play two minutes of the nine-minute video on the Chief Industries website’s About page - <https://chiefind.com/about/>. This introduces the company’s brands including construction, biofuels, manufacturing, and prefab housing, Chief Agri, Chief Buildings, Chief Carriers, Chief Construction, Chief Ethanol, Chief Fabrication, and BonnaVilla.

Introduce the eight careers featured in the Chief Industries videos: Structural Engineer, Commodities Director, CNC Machine Operator, Dip Tank Technician, Construction Project Superintendent, Controller, Business Development/Project Manager, Welder. Tell students they’ll be watching short video interviews with professionals in these roles to learn more about what each person does and show the eight career videos from Chief Industries. (Full transcripts from the interviews can be found here - <https://docs.google.com/document/d/1nc2TXb-oIK7OZnW2lQsz9Hrb0zJs7-K7nDuZ5G3NJxE/edit?usp=sharing>.)

Show the eight career videos from Chief Industries, encouraging students to take notes on the key responsibilities, skills required, and unique details about each career as they watch. Here are some guiding questions for note-taking:

1. What does this person do in their job?
2. What skills or education does this job require?
3. What types of tools, machines, or technology do they use?
4. What impact does this work have on their customers/clients/partners?
5. What surprised you about this job?

Chief Industries Career Headbands Activity

Today, we'll be playing a Guess Who game – only instead of guessing people, we'll be guessing careers based on clues from our classmates and Chief employee videos!

Materials:

- Construction paper or cardboard for headbands.
- Tape, glue, or staples to create headbands.
- Notecard-sized paper for career name labels.
- Pens or markers.

Prepare for the game:

1. Create your own headband using construction paper or cardboard. Make sure the band fits comfortably around your head.
2. Take a piece of paper that has the name of one of the careers you have just learned about. You can use the list provided below.
3. Do NOT look at the career name! Tape it to the front of your headband so that everyone can see it except you.

Career Headbands Game Instructions:

1. Once everyone has a career card on their headband, walk around the classroom and give each other clues about the career on each other's headband.
 - Clues should not directly name the career but instead describe the job's responsibilities, required skills, or other related aspects (like the equipment or environment).
 - For example: If the career is a CNC Machine Operator, clues might be: "You work with machines that cut and shape metal parts," or "You need to understand computer codes to do your job."
2. Ask yes/no questions to guess the career on your headband. For example, you might ask:
 - "Do I work with machines?"
 - "Do I manage other people?"
 - "Do I need to understand construction plans?"
3. The goal is to correctly guess the career on your headband based on the clues and questions.

After the game, come back together to discuss:

- What was the hardest career to guess and why?
- Did anything surprise you about the careers or the skills needed?
- Which career sounded most interesting to you and why?

Lesson 5

Chief Industries Career Videos

Materials for Career Headbands Game

Print and cut out the roles below. Place face down on table with rolled-up tape or another way to adhere to headbands, and instruct students not to look at the role name before placing it on their headbands.

***CNC Machine
Operator***

***Structural
Engineer***

Controller

***Dip Tank
Technician***

***Construction
Project
Superintendent***

***Business
Development/
Project Manager***

***Commodities
Director***

Welder

**CNC Machine
Operator**

**Structural
Engineer**

Controller

**Dip Tank
Technician**

**Construction
Project
Superintendent**

**Business
Development/
Project Manager**

**Commodities
Director**

Welder

Lesson 6

Ag Careers Scavenger Hunt

Lesson Outline

Essential Question:

How can exploring agriculture careers through FFA's AgExplorer tool help me identify careers that match my interests, skills, and future goals? How can Career and Technical Student Organizations (CTSOs) like FFA support my career pathway?

Learning Goal:

Students will use the FFA AgExplorer tool to learn about job requirements, skills, and job outlook.
Students will understand the role of CTSOs like FFA in supporting career exploration and development.
Students will reflect on how CTSOs can help them reach their career goals.

Standards Alignment:

AFNR.HS.20.2.c Articulate elements of career plans (academic, CTE coursework, CTSO participation, Immersion SAE).

Materials:

Access to internet for FFA Ag Explorer MyCareer Quiz - <https://agexplorer.ffa.org/ag-explorer-quiz/>,
Discover Agriculture Careers - <https://agclassroom.org/discover-agriculture-careers/>

Interest Approach:

Career Corners Game

Label the four corners of the classroom with large signs.

- "That's totally me!"
- "Not really my thing."
- "I'm somewhat interested."
- "I'm not sure yet."

"Today we're going to play a quick game to explore your interests and how they might connect to future careers. We'll use your opinions and interests to kick off our career exploration activity."

Explain the rules of the game. Read a prompt aloud (see list below). Students move to the corner that best matches how they feel about that prompt. After each round, invite 1–2 students to share why they chose that corner (optional).

Prompts

1. I like figuring out how machines or tools work.
2. I enjoy caring for animals or learning about them.
3. I'm a creative communicator—I like writing, design, or social media.
4. I want to help protect the environment or solve global issues.
5. I enjoy working with food—cooking, nutrition, or food safety.
6. I'm interested in science or experimenting with new ideas.
7. I like working with money, marketing, or managing projects.
8. I enjoy teaching or helping others learn something new.
9. I want a job where I can work outside or with my hands.
10. I like organizing people or planning events or activities.

“You just explored your interests. in a fun and active way. What you enjoy and what you’re good at can be the starting point for discovering a career that fits you. Today, we’re going to take that a step further by using a career exploration tool from FFA called AgExplorer. It will help you match your interests with real careers in agriculture, science, business, technology, and beyond.”

Activity:

Meet the FFA AgExplorer tool!

This website offers insight into a wide range of agriculture careers. As we’ve been learning, agriculture is more than farming — it includes diverse fields like science, technology, business, and more, all working to address global challenges. These are 12 Career Focus Areas on AgExplorer:

Agribusiness Systems

The business side of agriculture, focusing on marketing, sales, and management.

Animal Systems

Careers related to the care and management of animals in agriculture.

Biotechnology Systems

The intersection of biology and technology in developing agricultural solutions.

Environmental Service Systems

Careers focused on natural resource management and environmental protection.

Food Products and Processing Systems

Involves the production, development, and quality control of food products.

Natural Resources Systems

The management and conservation of natural resources like water, soil, and forests.

Plant Systems

Focuses on the production and care of crops, including research and plant breeding.

Power, Structural, and Technical Systems

Engineering and technology that support the infrastructure of agriculture.

Agricultural Education

Teaching and outreach related to agriculture and related careers.

Agricultural Communications

Communicating the importance and advancements in agriculture through media and public relations.

Agricultural Mechanics

Hands-on work involving machinery, equipment, and technology in agriculture.

Agricultural Sales and Service

Involves selling agricultural products and providing service to agricultural businesses.

Pass out the Ag Careers Scavenger Hunt worksheet and invite students to choose two Career Focus areas to browse on AgExplorer - <https://agexplorer.ffa.org/focus/>. Choose one career for your scavenger hunt and complete the questions with information you find! Students may also utilize Discover Agriculture Careers - <https://agclassroom.org/discover-agriculture-careers/> to explore more career opportunities from the career cards utilized in previous lessons.

Lesson 6

Ag Careers Scavenger Hunt

Ag Career Scavenger Hunt

Using one of the roles listed in your results from the FFA AgExplorer MyCareer Quiz, answer the following questions to complete your scavenger hunt.

Career name: _____

What education level do most people in this career have?

What is one activity you didn't know you would be doing in this job?

Name one skill you would need for this job that you're already good at.

Name one or more activities you might do in this job that interest you.

What is one ability people in this career often have?

What is one of the occupations related to this job?



What is the average wage for this job?	Name one local place you can get training or education for this job.
What is the job outlook for this occupation?	Are there going to be lots of jobs or lots of competition?
Describe the environment you might work in when doing this job.	What kind of schedule does this job usually have?

Lesson 7

Mapping a Career Pathway in Agriculture

Lesson Outline

Essential Question:

How can I identify the steps and requirements needed for a specific career in agriculture? How can that help me choose classes and jobs in high school?

Learning Goal:

Students will identify the education, skills, and experiences required for a chosen agriculture-related career. Students will reflect on who can support them in their career journey (family, friends, teachers, institutions, etc.).

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

Interest Approach:

“Who can name an exotic place you would like to visit?” Let the group call out their dream destinations and pick one that is far away and not easily accessible. “What would you need to plan a trip from the classroom to this place, and how can you make sure you get there in the shortest time possible?” Let them share ideas such as: a map or GPS to guide them, various types of transportation (plane, train, car), and people and institutions to help them along the way (travel agents, airports, hotels). Connect this to their career journey: “Just like planning a trip, reaching a career goal requires a map — a plan that shows the education, skills, and support you need to get there. Today, we’ll start building your career map!”

Activity:

Explain that a career in agriculture, just like any career, has multiple possible routes. Some jobs require a two-year degree or specific certifications, while others might need more advanced education and experience. Use examples like: A Vet Technician could pursue a two-year degree. A Veterinarian would need a four-year degree followed by specialized training and certifications. A Precision Agriculture Specialist might need a degree in agriculture technology and hands-on experience with new tools and systems.

Tell students that today they will be mapping out their own pathway to a career of their choice in the Agriculture, Food, and Natural Resources cluster. Invite students to select an agriculture-related career: They can choose a career from their results in the MyCareers Quiz they completed earlier. They can use FFA AgExplorer - <https://agexplorer.ffa.org/focus/> or Discover Agriculture Careers - <https://agclassroom.org/discover-agriculture-careers/> to browse through different careers if they want more options.

Give students time to research their chosen career using the internet or career resources to find the required education, skills (technical and soft), and experience that will help them achieve this career. They’ll map these on a simple visual in their homework assignment. Guide students in thinking about the people and resources that will support them on this journey and add those as Support Systems on their map. Invite students to share their career pathway maps with the class; discuss the variety of careers, education, and skills; and ask students to share who they think will be their biggest supporters in reaching their career goals.

Mapping Your Career Pathway Assignment

It's time to start planning your path to a career in agriculture! Choose one agriculture-related career. You can use your results from the MyCareers Quiz or explore more career opportunities on FFA AgExplorer or Discover Agriculture Careers.

1. Research

Research the following for your career choice.

Education: What degrees or certifications do you need?

Skills: What skills are most important for this career? Think about both technical skills (like using certain tools or technology) and soft skills (like communication or problem-solving).

Experience: Are there internships, apprenticeships, or other work experiences that will help you?

2. Pathway

Next, create your pathway by drawing a simple map showing steps to reach your career goal. Make your map as creative as you want! You can use words, pictures, or diagrams to show each step.

Start: Start with where you are now, a middle school student.

Next: Include your high school or first training experiences. What classes or opportunities might help you?

Education: List the degrees or certifications you'll need.

Skills and Experience: Add any special skills or work experience that will help you on your path.

Destination: Your final career goal (the job you want to have in the agriculture industry).

3. Support System

Add a section to your map that shows your support system. Make notes on your map:

Family: Who in your family might help support your career goals?

Teachers: Is there a teacher or counselor who can give you guidance?

Institutions: Are there schools, programs, or organizations like FFA that can offer resources and help?

Mentors: Do you know anyone working in your chosen career who can provide advice or inspiration?

4. Grading

You will be graded based on the following:

Career Pathway Map: Did you accurately identify the education, skills, and experience needed for your chosen career? Did you include a support system in your map?

Class Participation: Were you engaged in the class discussion? Did you share your ideas and your map with the class?

By completing this assignment, you'll have a clearer picture of what it takes to achieve your career goals in agriculture — and who can help you along the way!

Lesson 8

Values at Work in Agriculture

Lesson Outline

Essential Question:

How can identifying our values help us make meaningful career choices, particularly within the Agriculture Career Cluster?

Learning Goal:

Students will reflect on and identify their core values, and understand how aligning their core values with a career in ag can lead to meaningful work.

Students will learn to connect personal values with potential career paths within the agriculture industry and build self-awareness to help them make informed career decisions in the future.

Standards Alignment:

AFNR.HS.20.3.c Determine common qualities of a specific career area (e.g. educational requirements, work environment).

Materials Needed:

A worksheet listing possible values (search for Brené Brown's 'Living Into Our Values' or print values sheets included), a notebook or device for writing your reflection, internet access

Interest Approach:

Begin the class by introducing the concept of values – the things we believe are most important in life and that guide our decisions and behaviors. Show a short video featuring employees in agriculture sharing why they love their jobs and how their work aligns with their personal values (e.g., sustainability, helping others, innovation). Ask students: What values did the people in the video seem to prioritize? How did their work reflect those values?

Activity:

"When we understand our values, we can make better choices about our future, including what kind of work will make us feel fulfilled. Reflecting on our values helps us know what matters most to us and live in a way that honors those values." Distribute a worksheet that lists a wide range of possible values (e.g., honesty, creativity, teamwork, independence, responsibility, environmental stewardship). Have students: Circle their top 10 values from the list, then narrow their choices down to one or two core values that are most important to them, and reflect on the following questions: Why are these values important to you? How do you try to live by these values in your daily life? Can you think of situations where you had to make choices that reflected these values? Give students time to write their answers individually, then if there is time, pair and share with follow-up questions: How do you think your values could guide your career choices? Are there any jobs you've heard of that align with your values?

Bring the class back together and lead a discussion on how agriculture-related careers can reflect a variety of values. For example: Environmental Stewardship: Careers in sustainable farming, conservation, or environmental science. Helping Others: Careers that focus on feeding the community, animal care, or agricultural education. Innovation: Careers in agricultural technology, food science, or genetic engineering. Explain that identifying their values can help students find meaningful work in agriculture or other industries, where they can contribute in ways that matter to them personally.

Identifying Your Values Assignment

How can knowing your values help you find a career that is meaningful and fulfilling? Knowing your values – those things that are most important to you in life – can help you make better choices about your future, including what kind of work you'll find rewarding. Refer to the list of values given to you by your teacher, and when selecting values that resonate with you, ask yourself the following questions (from Brene Brown's 'Living Into Our Values' activity, 2022):

- Why are these values important to me?
- Do these values reflect who I am at my best?
- Are these values a filter I can use to make hard decisions? Has there been a time when this value has helped me through a challenge?
- What are one or two behaviors that support this value? What are one or two slippery behaviors that are outside my value?
- What's an example of a time when I was fully living into this value?
- Who is someone who knows my values and supports my efforts to live them? What does support from this person look like?
- What can I do to support myself in the hard work of living into these values?
- What does it feel like when I'm living into my values? How can I check myself?

For your homework, you'll complete the following:

Reflection: Write a one-page reflection on how your top three to five core values align with a career in agriculture. Choose at least one agriculture career that you think reflects your values and explain why it might be a good fit for you.

Research (Optional): If you can, research a real-life agriculture career that aligns with your values. You can look online or ask someone you know who works in agriculture. Write a short paragraph about what you find.

Materials Needed:

- A worksheet listing possible values (printed list or digital access to list given in class).
- A notebook or device for writing your reflection.
- Internet access (optional) for researching agriculture careers.

How You Will Be Assessed:

Your grade will be based on:

1. Reflection: Did you clearly explain your top values and how they connect to a career in agriculture?
2. Effort: Did you put thought into how your values might guide your career choices?
3. Participation: Were you engaged in class activities, such as the pair and share discussion?

By completing this assignment, you'll have a better understanding of your personal values and how they might help you find work that feels meaningful to you in the future.

Career Values List – Middle School Agriculture Career Exploration

1. Helping Others

Careers that focus on improving lives, caring for others, or making a difference in people's well-being (e.g., healthcare, education, social work).

2. Creativity

Jobs that allow for self-expression, innovation, and coming up with new ideas or designs (e.g., art, media, marketing, design).

3. Independence

Roles where you can work on your own, set your own schedule, or make your own decisions (e.g., freelance work, entrepreneurship, research).

4. Teamwork

Jobs where collaborating with others is key, requiring good communication and cooperation (e.g., business, sports, project management).

5. Problem-Solving

Careers that involve critical thinking, troubleshooting, and developing solutions to challenges (e.g., engineering, information technology, science).

6. Adventure

Roles that involve risk-taking, exploration, and hands-on experiences (e.g., travel, outdoor careers, emergency services).

7. Learning and Knowledge

Careers that involve continuous learning, curiosity, and researching new things (e.g., academia, research, science).

8. Financial Success

Jobs where earning a good salary and achieving financial stability are top priorities (e.g., finance, law, business).

9. Job Security

Roles that offer long-term stability and consistent work opportunities (e.g., government jobs, healthcare, education).

10. Helping the Environment

Careers focused on sustainability, conservation, and protecting the planet (e.g., environmental science, forestry, agriculture).

11. Leadership

Positions where leading others, making decisions, and guiding teams or organizations are central (e.g., management, politics, business).

12. Work-Life Balance

Jobs that allow for personal time, with flexibility or predictable schedules (e.g., remote work, part-time roles).

13. Making a Positive Impact on Society

Roles that focus on societal change, advocacy, or influencing policy (e.g., law, politics, non-profit organizations).

14. Recognition and Achievement

Careers where success is acknowledged through awards, promotions, or public recognition (e.g., sports, entertainment, business).

15. Innovation

Jobs where being on the cutting edge of technology or ideas is key (e.g., tech startups, engineering, product development).

16. Structure and Order

Careers where clear rules, routines, and organization are important (e.g., law enforcement, administration, accounting).

17. Physical Activity

Jobs that involve movement, physical labor, or being outdoors (e.g., construction, athletics, agriculture).

18. Creativity in Problem-Solving

Roles that blend logical thinking with imaginative solutions to complex challenges (e.g., architecture, product design, marketing).

19. Social Interaction

Jobs where interacting with a variety of people and building relationships are key (e.g., customer service, sales, public relations).

20. Prestige

Careers that offer status, respect, and recognition in society (e.g., medicine, law, executive positions).

21. Precision and Accuracy

Roles that require attention to detail and precise work (e.g., surgery, engineering, accounting).

22. Technology

Jobs that involve working with cutting-edge technology or creating new tech products (e.g., information technology, robotics, game development).

23. Innovation and Discovery

Careers that focus on creating new things, advancing ideas, or making new discoveries (e.g., research, entrepreneurship, science).

24. Compassion

Roles centered on empathy, care, and emotional support (e.g., counseling, healthcare, teaching).

25. Cultural Expression

Jobs that allow for exploring or sharing different cultures, histories, or languages (e.g., anthropology, history, international relations).

26. Entrepreneurship

Careers that involve starting your own business or being your own boss (e.g., small business owner, inventor).

27. Diversity and Inclusion

Jobs that focus on ensuring everyone is treated fairly, and that different voices are heard (e.g., human resources, advocacy, education).

28. Fun and Enjoyment

Careers where entertainment, playfulness, or having fun is a core part of the job (e.g., entertainment, theme park management, game design).

29. Helping Animals

Jobs centered around working with and caring for animals (e.g., veterinary science, wildlife conservation, farming).

30. Innovation in Sustainability

Careers that focus on creating new ways to protect the environment and use resources wisely (e.g., green energy, sustainable design).

31. Customer Satisfaction

Roles that focus on providing excellent service and making customers happy (e.g., retail, hospitality, customer service).

32. Cultural Awareness

Careers where understanding and working with people from different backgrounds are important (e.g., international business, diplomacy).

33. Personal Growth

Jobs that challenge you to grow as a person and develop new skills (e.g., coaching, personal development, education).

34. Artistic Expression

Roles that allow for expressing emotions, ideas, or beauty through various forms of art (e.g., painting, music, theater).

35. Scientific Discovery

Jobs focused on exploring the natural world and discovering new scientific principles (e.g., physics, biology, chemistry).

36. Innovation in Medicine

Careers where you're involved in advancing healthcare or developing new medical technologies (e.g., medical research, biotechnology).

37. Safety and Protection

Roles that involve protecting people, property, or the environment (e.g., law enforcement, security, firefighting).

38. Tradition and Routine

Jobs that value traditional ways of working and follow established practices (e.g., craftsmanship, agriculture, law).

39. Mentorship and Teaching

Careers where guiding, educating, or mentoring others is key (e.g., teaching, coaching, leadership roles).

40. Efficiency

Jobs that focus on improving processes, saving time, or reducing waste (e.g., logistics, manufacturing, process improvement).

Lesson 9

Get Curious About the Future of Ag

Lesson Outline

Essential Question:

How do current events and global issues in agriculture impact our world, and what new careers might emerge in response to these challenges?

Learning Goal:

Students will explore and understand current issues affecting the agriculture industry.

Students will analyze how global events shape agriculture and food systems.

Students will brainstorm careers that could emerge in response to agricultural challenges.

Students will practice journalism skills by reporting on or writing about a current issue in agriculture.

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

Materials Needed:

Computer or tablet for research and writing, articles or videos on current ag issues

Interest Approach:

“Have you heard of any recent news stories related to farming, food production, or the environment? How do you think changes in weather, technology, or population growth might affect agriculture in the future?” Show a short video clip or read an article about a current global issue in agriculture (e.g., climate change affecting crop yields, water scarcity, or innovations in sustainable farming). After watching the video or reading the article, ask students to share: What is the problem in this story? How is it affecting farmers or communities? Why do you think this issue is important?

Activity:

Briefly introduce some key global issues that are impacting agriculture, such as: sustainability and food security (how agriculture must adapt to feed a growing population), climate change (how extreme weather events are affecting farming and food production), water scarcity (the challenge of maintaining water supplies for crops and livestock), or technology and innovation (how precision farming, automation, and genetic engineering are changing the industry). Emphasize that these problems are not just affecting farmers but also shaping the world we live in, influencing food prices, health, and even jobs.

Encourage students to brainstorm new careers in agriculture by discussing how these global issues might lead to new kinds of jobs. “What careers do you think might develop to solve these problems? What skills do you think people will need in these new jobs?” Encourage students to think creatively. (Some possible careers could include: climate-resilient pork production specialist improving designs of structures for improved climate control, breeding for heat tolerance, or adjusting feed to help cope with stress; subterranean drip irrigation technologist finding ways to deliver water while reducing evaporation and waste, producing high yields, and applying site-specific systems to a variety of crops like tomatoes, cotton, or vineyards; or a sustainable yellow corn crop scientist focusing on this staple crop to mitigate its vulnerability to drought, pests, and new environmental challenges.)

Invite students to complete the included AgriJournalism activity. Once completed, discuss: issues the students researched, careers they brainstormed that could help address these problems, and how their own skills and interests might fit into one of these emerging careers.

Your Agri-Journalism Activity

Now it's your turn to become a reporter and share what's happening in the world of agriculture. You'll research a current agricultural issue and create a short report, blog post, or social media post about it.

1. Choose a Topic

Pick a current issue in agriculture. This could be something you learned in class (like water shortages, new technologies, or climate change) or a topic you find interesting (such as urban farming, food waste, or crop diseases).

2. Research

Gather information from articles, videos, or even interviews if you can. Learn about what's happening, who is affected, and why it matters.

3. Write or Create

Once you have your research, put together a short report. You can write it like a news article, create a blog post, or design a social media post that explains:

- What the problem is.
- Who it affects.
- Why people should care.
- What future careers might emerge to help solve this problem.

Be creative! You can add pictures, quotes, or even create a short video if you want to.

Homework Assignment

Reflect on how your personal interests, hobbies, or skills could lead to a future career that helps solve a global agricultural issue.

- Write a short paragraph about how your current interests might fit into one of the future careers we discussed. For example, if you like working with animals, you could imagine becoming a specialist in climate-resilient pork production. If you enjoy technology, you might write about working with subterranean drip irrigation systems.
- Optional Bonus: If you can, research a specific agriculture-related career that is solving a global issue. Write a short paragraph explaining what that career is, what kind of work it involves, and why it interests you.

How You Will Be Assessed

You will be graded based on the following:

1. Journalism Activity: Did you thoroughly research and report on a current agricultural issue? Did you explain the issue clearly and suggest possible careers that could emerge in response to the problem?
2. Participation: Were you engaged in discussions and brainstorming sessions during class? Did you share your ideas and listen to others?
3. Homework Reflection: Did you thoughtfully connect your personal interests and skills to a potential agriculture career? Were you able to imagine how you might help solve future global issues through that career?

By the end of this activity, you'll have a better understanding of how global events impact agriculture and how your talents and passions might lead to a meaningful career in this growing area.

Lesson 10

Look at People You Admire in Ag

Lesson Outline

Essential Question:

How can interviewing a professional in agriculture help us understand the roles, responsibilities, and impact of careers in the Agriculture Career Cluster ?

Learning Goal:

Students will learn about the Agriculture Career Cluster and its connections to other clusters.
Students will develop skills in conducting interviews to explore career paths.
Students will practice the STAR method (Situation, Task, Action, Result) to structure interview responses.
Students will reflect on the impact of agriculture careers on their community and environment.
Students will compile and present their findings in a structured format.

Standards Alignment:

AFNR.HS.20.3.b Identify careers available in multiple AFNR Career Pathways.

Interest Approach:

Begin by showing students one or more of the Chief employee videos and review as a class: What role did the employee have? What did you learn about their work environment and daily tasks? How do you think their work impacts the community? This will help students make connections between real-world jobs and learning about ag careers.

Activity:

Explain how interviews can provide students insights into the variety and details of job roles. Introduce the STAR method, a storytelling technique used in interviews to clearly explain experiences. **Situation:** Describe the situation or challenge faced. **Task:** Explain the task or goal that needed to be accomplished. **Action:** Describe the specific actions taken to address the situation or task. **Result:** Share the outcome or result of the actions. Discuss how this structure can help both the interviewer and interviewee communicate clearly and effectively.

Prepare and conduct the interview: Have students brainstorm a list of potential interview questions, then provide them with suggestions on the worksheet provided. If possible, arrange for a local agriculture professional to visit the class or set up virtual interviews. If not, students can watch the previously recorded videos or interview an adult family member involved in a related field. Students will conduct the interview, using their prepared questions and practicing active listening. Encourage them to follow up with additional questions based on the interviewee's responses.

Summarize the interview in a slide presentation format: After the interview, students will summarize the conversation, following the STAR method, and reflect on the following questions: What did they enjoy about conducting the interview? How did the career align with their personal work preferences? Could they see themselves in a similar role in the future?

Ag Career Interview using STAR Method

You will conduct an interview with someone who works in agriculture to learn about their career. This is a chance for you to explore different agriculture jobs and what kind of work you might enjoy. To help guide your interview, we'll use the STAR method — a way to organize answers into clear stories. This method can help both you and the person you're interviewing explain situations in a detailed way. Below are suggestions for questions, but feel free to create your own.

General Questions to Start With: What is your role, and what does a typical day look like for you? What made you choose a career in agriculture? How does your job connect with other industries or Career Clusters?

You can then use the **STAR method** to ask about specific situations the interviewee has faced at work. Here's how:

Situation/Task: Ask them to describe a specific situation or challenge they encountered. "Can you tell me about a time you faced a challenge in your work?" "What was a key task you needed to accomplish?"

Action: Ask them about the steps they took to solve the problem or complete the task. "What actions did you take to address that challenge or accomplish the task?" "How do you manage competing priorities?"

Result: Ask them about the outcome of their actions. "What was the result of your efforts, and how did it impact the farm or company?" "What did you learn from the experience?"

Finish the interview with questions about the **impact of their work:** How does your work affect the community or the environment? What advice would you give someone interested in this career?

Materials You'll Need:

1. A guest speaker or interview subject (this may be someone in person, virtual, or a family member in a related field).
2. A notebook or device to take notes during your interview.
3. A computer or tablet to create a presentation summarizing your interview (Google Slides, PowerPoint, etc.).

Your grade will be based on:

1. **Completeness of your presentation:** Did you include all parts of the interview and use the STAR method?
2. **Organization:** Did you clearly explain the interviewee's role and responsibilities, and did you present a STAR story in your slides?
3. **Reflection:** What did you enjoy about conducting the interview? Does the career align with your personal work preferences? Do you see yourself in a similar role in the future?
4. **Effort and clarity:** Is your presentation well-organized and easy to understand?

This is your chance to learn about a real career in agriculture and think about whether it's something you might enjoy in the future. Be curious and have fun!

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