

Fall 2022 Teaching Guide



In this guide, you will find activities for seven articles in the fall 2022 issue of *FFA New Horizons*. Worksheet answer keys can be found at the end of the activity worksheet. The activities are aligned to educational standards. (See each activity for the specific standards.)

VOCABULARY ACTIVITY

Write a story:

Use the vocabulary words and [Appendix 8](#) to write a story using all the vocabulary words.



AUTOMATION IN AGRICULTURE

Agriculture innovations continue to expand rapidly, connecting technological advancements with food production. One particularly fast-growing technology in agriculture is automation..

[Appendix 1: Automation in Agriculture](#)



DIFFERENTLY ABLED, SIMILARLY INVOLVED

Two FFA advisors share how they cultivated classrooms and experiences for students with disabilities.

[Appendix 5: Differently Abled, Similarly Involved](#)



BEEFING UP COMMUNITY SERVICE

The pandemic created new opportunities for the Rio Rico FFA Chapter.

[Appendix 2: Beefing Up Community Service](#)



70 YEARS OF FFA STORIES

FFA New Horizons celebrates a milestone. Take a tour of National FFA publications past and present to see how the organization — and this magazine — have evolved.

[Appendix 6: 70 Years of FFA Stories](#)



RICH IN TRADITION

Anthony Hernandez celebrates Native American life and his experience.

[Appendix 3: Rich in Tradition](#)



6 IMPORTANT FARM SAFETY TIPS

Recognize the risks. Know what to do.

[Appendix 7: 6 Important Farm Safety Tips](#)



TEACHER'S PETS

An FFA chapter in South Carolina partners with a humane society to take in, tame and rehome animals.

[Appendix 4: Teacher's Pets](#)

CLICK HERE TO DOWNLOAD THE GOOGLE WORKSHEETS.





NEW HORIZONS

Fall 2022 TEACHING GUIDE



ARTICLE SUMMARY

AUTOMATION IN AGRICULTURE

Agriculture innovations continue to expand rapidly, connecting technological advancements with food production. One particularly fast-growing technology in agriculture is automation.

Bell Ringer

Teacher Note: Hand out the first page of the "Appendix 1: Automation in Agriculture" worksheet.

Using the box on the first page of the worksheet, draw a picture of what automation looks like to you.

Discussion Questions

1. What is automation?
2. How does automation impact you?
3. How does automation in the agriculture industry impact how agricultural products are produced and what does that mean for the consumer?

Activity

Part 1: Have students share their bell ringer drawing with their neighbors and describe their pictures. Select two to four students and have them share with the class. Next, have students read the article "Automation in Agriculture" in the fall 2022 issue of FFA New Horizons and complete the activities.

Part 2: The Agriculture, Food and Natural Resources (AFNR) Value Chain shows the stages agricultural products take from research and development all the way to the consumer. During this process, many steps take place to ensure a safe product. Using the AFNR Value Chain, students will identify and describe an automation practice that occurs at each step along the way. An example is a robot being used to target and eliminate weeds in a garden (Production). Have students share with the class what they deem to be the coolest automation they learned about in their research.

Part 3: Students will research an agricultural problem and develop an idea for a machine or other piece of technology that would help solve this problem. Have students use the space provided and the rubric to brainstorm and guide their research and idea development.

FFA Tip

Have students check out the [agricultural technology and mechanical systems career development event \(CDE\)](#) to expand their knowledge of mechanical systems and how automation in agriculture can be developed.

SAE Tip

Identify automation being used in agriculture in your area — farmers using drones, satellite images, remote sensing, robots, etc. — and showcase to students. What support jobs creating, maintaining and operating automated tools do you foresee in the future? What skills or education will students need for those jobs? Contact a university near you and ask them about advances you can share. Also consider what potential pitfalls automation could create.

STANDARDS ALIGNMENT

AFNR PERFORMANCE ELEMENT: CS.02 FFA PRECEPTS: FFA.PL-A, FFA.PL-C, FFA.PL-F, FFA.PG-I, FFA.CS-M, FFA.CS-N, FFA.CS-O, FFA.CS-P COMMON CORE – READING: INFORMATIONAL TEXT CCSS.ELA.RI.9-10.2, CCSS.ELA.RI.9-10.4 COMMON CORE – WRITING: CCSS.ELA.W.9-10.4, CCSS.ELA.W.9-10.5 COMMON CORE – SPEAKING AND LISTENING: CCSS.ELA.SL.9-10.4 COMMON CORE LANGUAGE: CCSS.L.9-10.6 COMMON CAREER TECHNICAL CORE: AG2 AFNR CAREER READY PRACTICES: CRP.02, CRP.04, CRP.06, CRP.07, CRP.08 P21 SKILLS: CRITICAL THINKING AND PROBLEM SOLVING, INITIATIVE AND SELF-DIRECTION, LEADERSHIP AND RESPONSIBILITY, FLEXIBILITY AND ADAPTABILITY, PRODUCTIVITY AND ACCOUNTABILITY

VOCABULARY

Automation
Autonomous
Innovation

EXIT TICKET

How does automation in agriculture impact the future of the industry?

CAREER FOCUS AREA

Any

RESOURCE HIGHLIGHT

Fall 20218 Appendix 8: The Rise of the Robots, <https://FFA.box.com/s/qaoae-0minuda1ofcmzb0q08x90s1p2cd>
FFA Blue 365, FFA.org/blue365

APPENDIX

Appendix 1: Automation in Agriculture

Automation in Agriculture

Agriculture innovations continue to expand rapidly, connecting technological advancements with food production. One particularly fast-growing technology in agriculture is automation.

By Lauren Manning • Illustration by Matt Wood

Automation improves efficiency and accuracy in food production, and it reduces the need for human labor.

While some people are concerned that automation may put farmworkers and food producers out of jobs, many find these new tools make their jobs easier while improving profits. For instance, adding computer vision and artificial intelligence capabilities to automation helps identify problems or address issues that the human eye is unable to see. Automation can also alleviate problems that arise simply from routine human error.

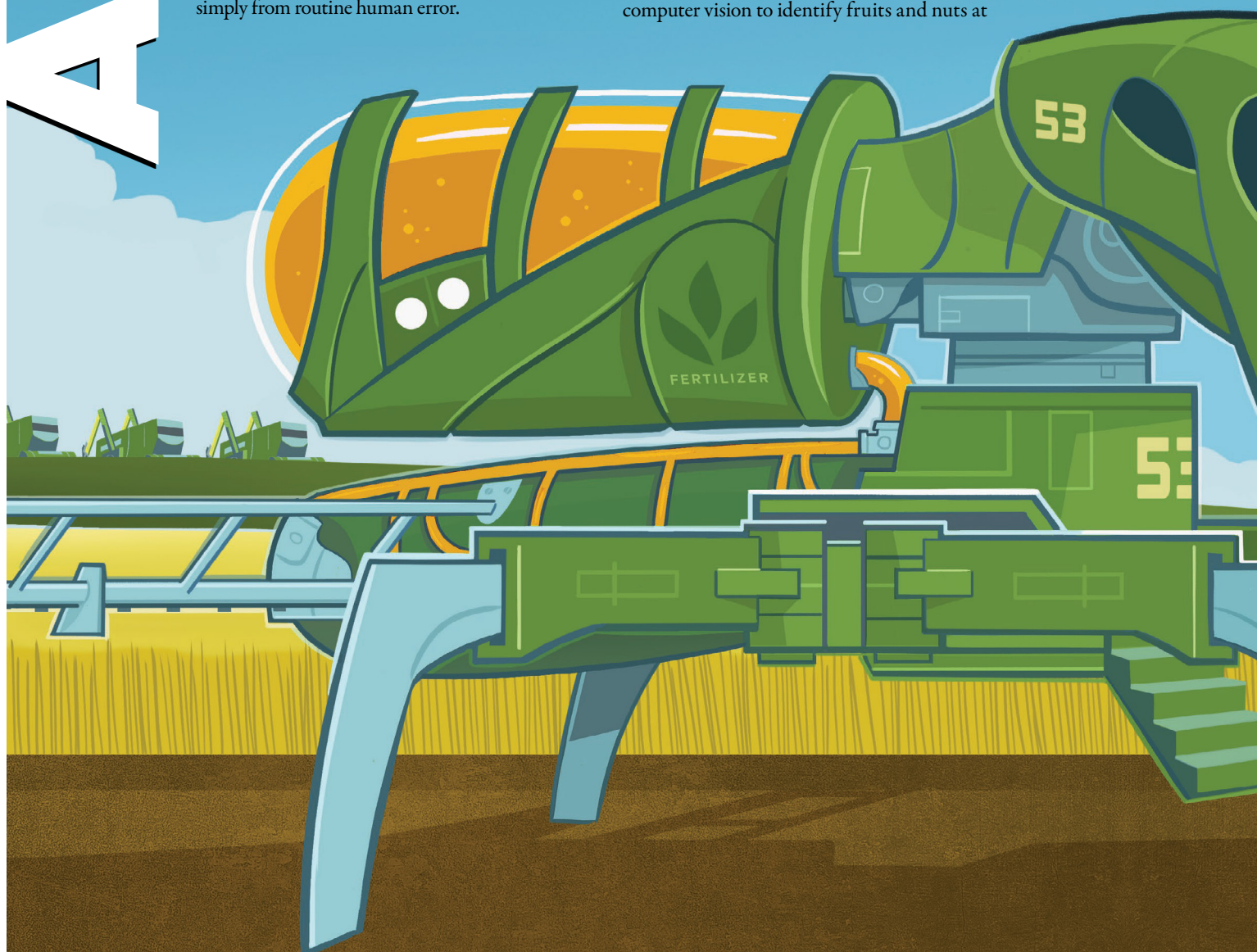
Automation Today

On the Farm

To help farmers tackle weeds around the clock, start-ups have created robots that can reduce reliance on chemical inputs and minimize soil disturbance.

These **robots remove weeds** with a variety of methods, such as electrical shock and extraction.

Autonomous robots are also used to **harvest specialty crops** such as strawberries and nuts. Outfitted with computer vision to identify fruits and nuts at



peak ripeness, robots harvest produce gently, reducing any bruising or damage.

One of the widest applications of automation in agriculture is **autonomous tractors**.

From major companies like John Deere to burgeoning start-ups such as Bear Flag Robotics, driverless tractors offer farmers a way to get tasks done without spending hours in a tractor cab.

Automation is also being deployed for **crop scouting**. A start-up called Augmenta developed a plug-and-play device that scans and analyzes plants as a tractor moves to

alert farmers of disease ahead of visual inspections. Sensors can also provide farmers with automated alerts for inclement weather, pest pressure and more, for a more proactive approach to yield-zapping problems.

Processors and Distributors

The processing and distribution sectors also benefit from an automation boost. As meat processors face increasing pressures, automation can help improve bottom lines through optimal production. Norwegian start-up Völur helps meat processors decide which cuts to harvest from a carcass to meet demand and reduce waste. Automation also helps food producers enhance food safety programs to identify defects the human eye cannot detect or contamination before it spreads.

Careers in Automation

A career at the intersection of agriculture and automation offers promise, given the growing opportunities. Consider a degree field beyond agriculture, such as **computer science, robotics and engineering**.

You can help automation grow in agriculture even if you don't intend to pursue a science or engineering degree.

Sales representatives assist farmers and food producers to understand which tools may be right for them.

Marketing communications professionals create effective communication strategies to tell the story of their product or service.

Customer service positions employ problem solvers and troubleshooters to help farmers operate a given technology.

Wherever your skills and passion collide, there's opportunity in automation.

Name: _____

Appendix 1: Automation in Agriculture



Bell Ringer

Draw a picture of what automation looks like to you.

Part 1

Directions: Read the article “Automation in Agriculture” in the fall 2022 issue of *FFA New Horizons* and complete the activities below.

 1. What does automation mean?

2. How does automation currently impact agriculture? Give two specific examples.
- (1)
- (2)

3. Based on the reading, what are two pros and cons that can be seen for those involved with automation in agriculture?

Pros	Cons

a. How do these pros and cons impact implementation of automation throughout the agriculture industry?

 4. Select an agriculture automation that caught your interest the most.

a. What about this caught your attention?

b. How does this agriculture automation impact you?

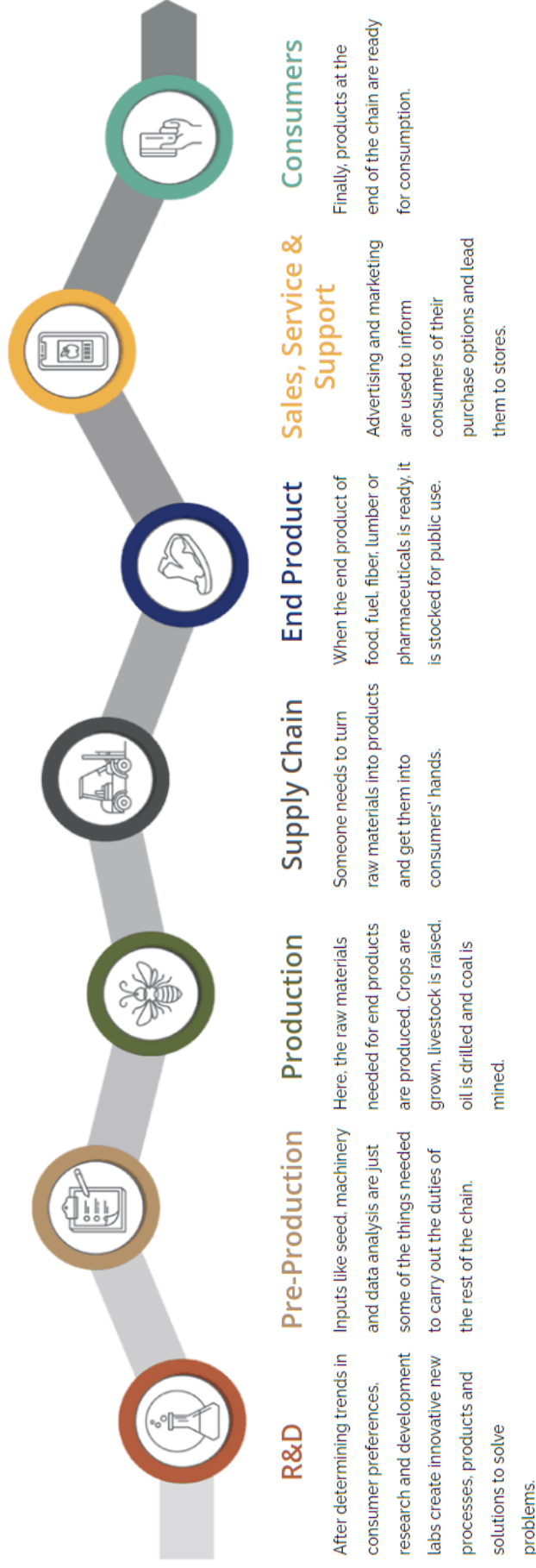
Did the image you drew at the beginning of this activity accurately reflect what automation is? Why or why not?

Name: _____

Part 2

Directions:

The Agriculture, Food and Natural Resources (AFNR) Value Chain shows the stages agricultural products take from research and development all the way to the consumer. During this process, many steps take place to ensure a safe product. Using the AFNR Value Chain below, **identify** and **describe** an automation practice that occurs at each step along the way (answers should be written above or below each icon step in the image). Use the article and your own research to determine and describe the automation practices you are highlighting. An example is a robot being used to target and eliminate weeds in a garden (Production).



What surprised you most about the automation that exists in the agriculture industry? Why?

Name: _____

Part 3

Directions:

Research an agricultural problem and develop an idea for a machine or other piece of technology that would help solve this problem. Use the space below and the rubric from your teacher to brainstorm and guide your research and idea development.

How has your idea of what automation is and how it is implemented in the industry been impacted?

Name: _____

Criteria	Excellent 20-16 points	Above Average 15-11 points	Average 10-6 points	Below Average 5-0 points	Points Earned
Identification of the Problem	The problem has been clearly shown to exist with supporting factual evidence.	A problem is stated but has weak supporting evidence.	A problem is stated but lacks supporting evidence.	A problem is not stated.	
Research and Information Gathering	Existing solutions to the problem, including their good and bad points, have been stated.	Existing solutions have been stated, but those solutions are not evaluated for effectiveness.	A review of existing solutions is stated, but it is not complete and/or related research is not shared.	Little to no research was completed.	
Brainstorming Ideas	At least three possible technological solutions were generated. The most appropriate solution was selected, and the reason for the choice was clearly explained.	Three possible technological solutions were generated. An appropriate solution was selected, and the choice is somewhat explained.	Two possible technological solutions were generated. A solution was selected, but no explanation is provided.	On possible technological solution was generated.	
Design	A clear description of the proposed technological solution is provided, including an explanation of how it works and how it will help solve the problem. If applicable, rough sketches of the design are provided.	A clear description of the proposed technological solution, including an explanation of how it works, is provided, but the explanation of how it will help the problem is limited. If applicable, rough sketches of the design are provided.	A vague description of the proposed technological solution is provided, but the explanation of how it works and how it will help the problem is limited.	A vague description of the proposed technological solution is provided, and no explanation is provided.	
Teamwork	Team members worked well together and settled differences in a positive manner. Each member contributed in a valuable way to the project.	The majority of the team demonstrated good team-working skills. Most members contributed in a valuable way to the project.	The team demonstrated good team-working skills only part of the time, and some members did not contribute to the project.	The team demonstrated few team-working skills, and the majority of the assignment was completed by only one or two members of the group.	
Total Points:					



Fall 2022
TEACHING GUIDE



BEEFING UP COMMUNITY SERVICE

The pandemic created new opportunities for the Rio Rico FFA Chapter.

Bell Ringer

Discuss student thoughts and share the answer to the first question that requires students to circle products they believe come from beef cattle.

Discussion Questions

1. What role does beef production play in the economy?
2. What is the beef cattle life cycle?
3. How does beef production impact me?

Activity

Part 2: Have students use the Farm Credit Knowledge Center (<https://www.farmcreditofvirginias.com/knowledge-center/blog/beef-cattle-production-and-life-cycle>) to learn more about the beef cattle production cycle. Have students share the images that they drew and discuss the process they depicted. Students will use the provided image from Farm Credit Knowledge Center to further explore the three beef cattle roles in the beef cattle life cycle. Have students share their thoughts on the impacts to agriculture and themselves.

Part 4: Students are going to learn about what happens to the non-meat portions of the animal. Using the provided image from AgriBeef Co., students will identify a product that they have in their homes, schools or backpacks that fits into each category. They will draw a picture of what the product looks like. Have students share their thoughts on the impact of the products they learned about.

FFA Tip

SAE Tip

Have students explore and design a food production program for your chapter to raise and market an agricultural product. Do you have a greenhouse, a school land lab, a football field, a local supporter with some land or empty facilities? Any of these could be used as a real or a model business. Even if your school doesn't have facilities, get parameters from other schools or local producers to use real-world limits to create the designs. Have students design the facilities, production practices, manpower, marketing and financing.

STANDARDS ALIGNMENT

AFNR PERFORMANCE ELEMENT: CS.02 FFA PRECEPTS; FFA.CS-O, FFA.CS-P, FFA.PL-A, FFA.CS-N COMMON CORE – READING: INFORMATIONAL TEXT
CCSS.ELA.R.9-10.2 COMMON CORE-LITERACY IN SCIENCE & TECHNICAL SUBJECTS: WRITING CCSS.ELA.WHST.9.10.4 COMMON CORE – MATH PRACTICES: MP.1,
MP.6 COMMON CORE – WRITING CCSS.ELA.W.9-10.2 COMMON CAREER TECHNICAL CORE: CRP.02, CRP.04, CRP.08 AFNR CAREER READY PRACTICES: AG2 PS1
SKILLS: CRITICAL THINKING AND PROBLEM SOLVING, FLEXIBILITY AND ADAPTABILITY, INITIATIVE AND SELF-DIRECTION, LEADERSHIP AND RESPONSIBILITY, THINK
CREATIVELY

VOCABULARY

Backgrounding	Production
Cow/Calf operation	Retail
Finishing	Stocker

EXIT TICKET

How are you and/or your family impacted by the beef cattle industry?

CAREER FOCUS AREA

Animal Systems

RESOURCE HIGHLIGHTS

Animal Science, 2.7 Where's the Beef Come From? <https://FFA.box.com/s/yt74ehxm-j2gudns14cx2vmgu75scl3ml>

Tough Work for Tender Meats, <https://ffabox.com/s/8z2mr92evtdueznrfk6bx7q-7c3aqsbo>

REFERENCES

Farm Credit of Virginias, <https://www.farmcreditofvirginias.com/knowledge-center/blog/beef-cattle-production-and-lifecycle>

National Ag Institute, Ag 101, https://facebook.com/1.php?u=http%3A%2F%2Fwww.national-ag-institute.org%2F%3Ffbclid%3D%5B2C0E-P8EU4KiO6xw-KilWkmiEHa6Z9Qii-BODb0BaeFBq-p5AR8bJP0pX-M&h=AT-03nAymH6v0Q06AuKgsKj7TqTgtHREig-JG5YRp-MgJu5s_4jgBNbY3ph6chKiqI-QUE5YpMBgUOcpLrPQ3xfFPUnohtaN1mzb-26zeZl9z9h2MA4ZF-ZdPphXyHYZtOG-X

APPENDIX

Appendix 2: Beefing Up Community Service

Beefing Up Community Service

The pandemic created new opportunities for the Rio Rico FFA Chapter.

– By Jodi Helmer

At the beginning of the pandemic, when supply chain issues led to bare shelves in the supermarkets, Richard McPherson, agricultural education teacher and Rio Rico FFA advisor, started getting calls from concerned community members.

“They were hearing about the beef shortage in the news and wanted to know if we could raise cattle for them,” McPherson recalls.

The Rio Rico FFA Chapter in Rio Rico, Ariz., was eager to help. The chapter officer team spent several weeks running numbers and working out the logistics to launch a cattle operation at the high school farm. The result: a student-led commercial feeding operation.

Residents purchase feeder cattle from local ranchers and importers, and students raise them to market weight, which takes about seven months. Students divide the responsibilities, taking turns feeding, watering and monitoring the health of the cattle.

When it’s time to process the animals, they’re transported from the high school farm to local processing facilities, including the meat processing program at Gilbert High School in Gilbert, Ariz. Residents then pick up their cuts from the processor.

The FFA chapter doesn’t own the cattle or sell the beef, simplifying the operation, according to McPherson. Community members purchase the cattle and pay Rio Rico FFA for the feed and care.



Rio Rico FFA members run a commercial feeding operation and get hands-on experience raising beef cattle. They monitor the herd’s health and care from horseback.

Since 2020, Rio Rico FFA has raised and processed 12 head of Charolais cattle for the local community. Funds from the feeding operation are used to cover the cost of feed and vet care. The remaining revenue goes toward FFA jackets, travel and competition fees.

The funding is helpful but McPherson believes the experience is the biggest return on investment.

“It’s a real-life scenario and taking any shortcuts, like missing a feeding or not feeding the cattle

enough, results in the livestock not performing,” McPherson says. “The students are learning valuable lessons from this.”

Even though he comes from a ranching family, Rio Rico FFA member Gerardo Verdugo appreciated the opportunity to expand his understanding of cattle management practices and behavior.

“Taking care of cows and watching them grow up is a huge responsibility and takes a lot of knowledge,” he says.

Rio Rico FFA member Jesus Mohinea has a part-time job at a local cattle ranch and understands what it takes to get beef from farm to table. He appreciates that other FFA members are learning about the beef industry too.

“It’s very important that students know where their food comes from,” he says. “Raising cattle on the school farm teaches them about the beef industry and how much goes into producing the food on their tables.”

Residents purchase feeder cattle from local ranchers and importers, and students raise them to market weight, which takes about seven months.

Name: _____

Aligned to the following standards:

CS.02; FFA.CS-O; FFA.CS-P; FFA.PL-A; FFA.CS-N; AG2; CCSS.ELA.RI.9-10.2; CCSS.ELA.W.9-10.2; CCSS.ELA.WHST.9.10.4; MP1; MP6; CRP.02; CRP.04; CRP.08

Appendix 2: Beefing Up Community Service

Bell Ringer

Directions:

In **purple**, circle the everyday product(s) produced from beef cattle.



Chewing Gum



Chalk



Tennis Racquet Strings



Steak

Check with your teacher to see if you circled the correct item(s)!

Why did you choose the item(s) above that you did? What surprised you about this activity?

In three to five images, depict your knowledge of the beef production industry.

Do you feel that beef cattle impact you every day? Why or why not?

Name: _____

Part 1

Directions:

Read the article "Beefing Up Community Service" in the fall 2022 issue of *FFA New Horizons* and complete the following activities.

Name and draw the state the Rio Rico FFA is in.

What breed of cattle did the chapter start with?

What does this breed look like?

In your own words, why do you think this project was beneficial to students regardless of their interests or future career aspirations?

About how long does it take for the students to raise a calf to market weight?

- a. 7 months
- b. 7 years
- c. 8 months
- d. 12 months

According to the chapter's advisor, what is the biggest gain from completing this project?

How many head of cattle did the chapter start with?

- a. 7
- b. 10
- c. 12
- d. 20



Name: _____

Part 2

Directions:

Using the Farm Credit Knowledge Center, <https://www.farmcreditoftexas.com/knowledge-center/blog/beef-cattle-production-and-lifecycle>, complete the following activities.

What are the three categories of beef cattle production?

(1)

(2)

(3)

In your own words, what is the purpose of each of these categories of beef cattle production?

(1)

(2)

(3)

How does understanding the different categories of cattle production impact you and your perception of the industry?

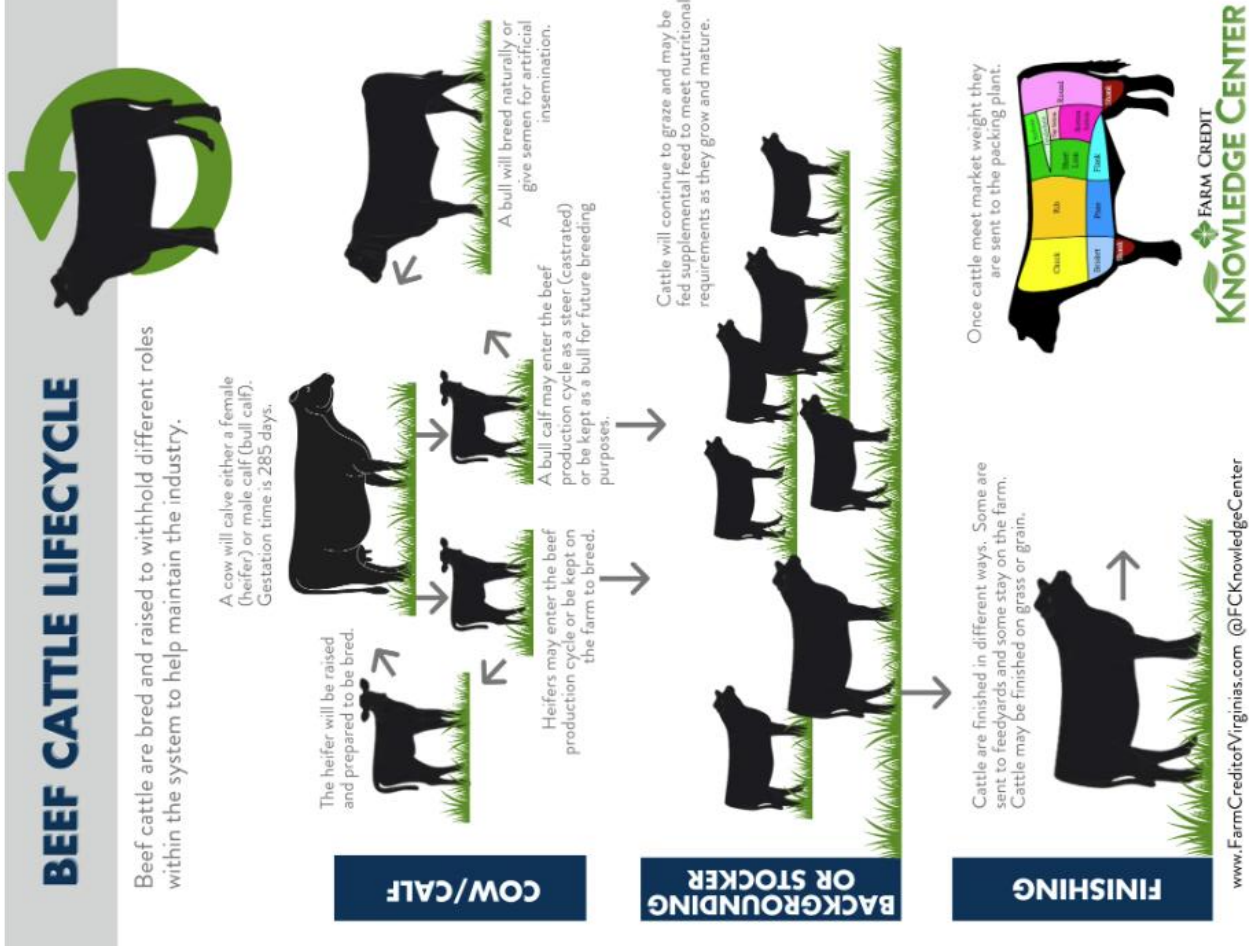


If you had to draw a picture to describe each of these three categories for someone that is unfamiliar with the beef cattle industry, what would that look like? Draw your thoughts and label them in the space below.

Name: _____

Directions:

Using the image below, complete the activities.



Cow/Calf: In your own words, describe a cow/calf operation in a way that someone unfamiliar with agriculture would understand.

Purpose:

Impact on the agriculture industry:

Impact for the consumer:

Backgrounding or Stocker: In your own words, describe a backgrounding or stocker operation in a way that someone unfamiliar with agriculture would understand.

Purpose:

Impact on the agriculture industry:

Impact for the consumer:

Finishing: In your own words, describe a finishing operation in a way that someone unfamiliar with agriculture would understand.

Purpose:

Impact on the agriculture industry:

Impact for the consumer:

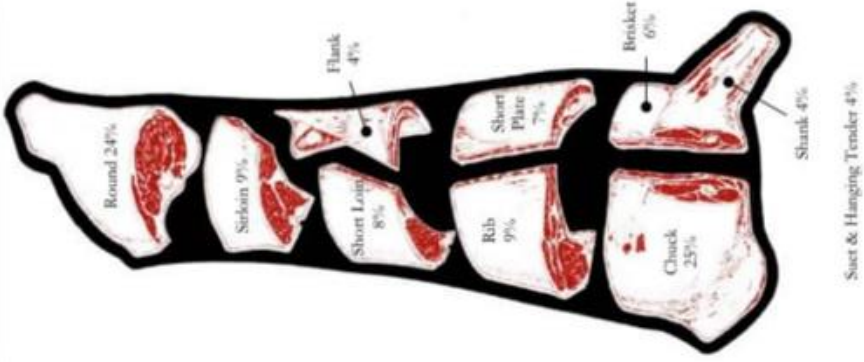
Name: _____

Part 3

Directions:

Now that you understand the on-farm production process, let's take a look at the products that come from the finished market-weight beef animal.

610 lbs. Beef (on the rail)



430 lbs. Retail Cuts (cut & wrapped, bring home)

- **Round 103.2 lbs.**
 - Round Steak
 - Rump Roast
 - Sirloin Tip Steak
 - Pikes Peak Roast
 - Cubed Steaks
 - Stew Beef & Ground Beef
- **Sirloin 38.7 lbs**
 - Sirloin Steak
 - Stew Beef & Ground Beef
- **Short Loin 34.4 lbs.**
 - Porterhouse Steak
 - T-Bone Steak
 - Stew Beef & Ground Beef
- **Flank 17.2 lbs.**
 - Flank Steak
 - Short Ribs
 - Ground Beef
- **Rib 38.7 lbs.**
 - Rib Eye Steak
 - Rib Steaks
 - Back Ribs
 - Stew Beef & Ground Beef
- **Short Plate 30.1 lbs.**
 - Skirt Steak
 - Short Ribs
 - Ground Beef
- **Chuck 107.5 lbs.**
 - Chuck Roast or Steak
 - Arm Roast or Steak
 - Short Ribs
 - Stew Beef & Ground Beef
- **Brisket 25.8 lbs.**
 - Brisket
- **Shank 17.2 lbs.**
 - Shank Soup Bone
 - Stew Beef & Ground Beef
- **Suet & Hanging Tender 17.2 lbs.**

When a beef animal is processed, the live weight does not correspond to the final hanging weight. A processor can expect weight loss due to loss of hide, hooves, head, organs, etc. The hanging weight will be approximately 61% of the live weight.

Using that percentage, calculate the hanging weight of the following steers.

1. Live weight: 1,234 lbs → Hanging weight: _____ lbs
2. Live weight: 1,421 lbs → Hanging weight: _____ lbs
3. Live weight: 1,287 lbs → Hanging weight: _____ lbs

Study the image to the left. Why do you think the total retail cut weight is lower?

Identify three cuts that you are familiar with or have heard of and identify how that cut could be prepared for a meal (Ex. grill, fry, bake, etc.).

1. Cut: _____ Preparation: _____
2. Cut: _____ Preparation: _____
3. Cut: _____ Preparation: _____

How does understanding where meat cuts come from and how to prepare them help you to become a better consumer?

Image sourced from: Ag 101-National Agricultural Institute,
www.national-ag-institute.org.

Name: _____

Part 4

Directions:

Once we have the meat products that we can consume, what happens to all the other parts of the beef animal that we do not directly consume as meat? Using the image below, identify a product that you have in your home, school or backpack that fits into each category in the table. Draw a picture of what the product looks like.

<u>Brain</u> Name of Product: _____	Image:
<u>Bones</u> Name of Product: _____	Image:
<u>Hair</u> Name of Product: _____	Image:
<u>Skin</u> Name of Product: _____	Image:
<u>Fat</u> Name of Product: _____	Image:
<u>Internal Organs</u> Name of Product: _____	Image:
<u>Hooves/Horns</u> Name of Product: _____	Image:

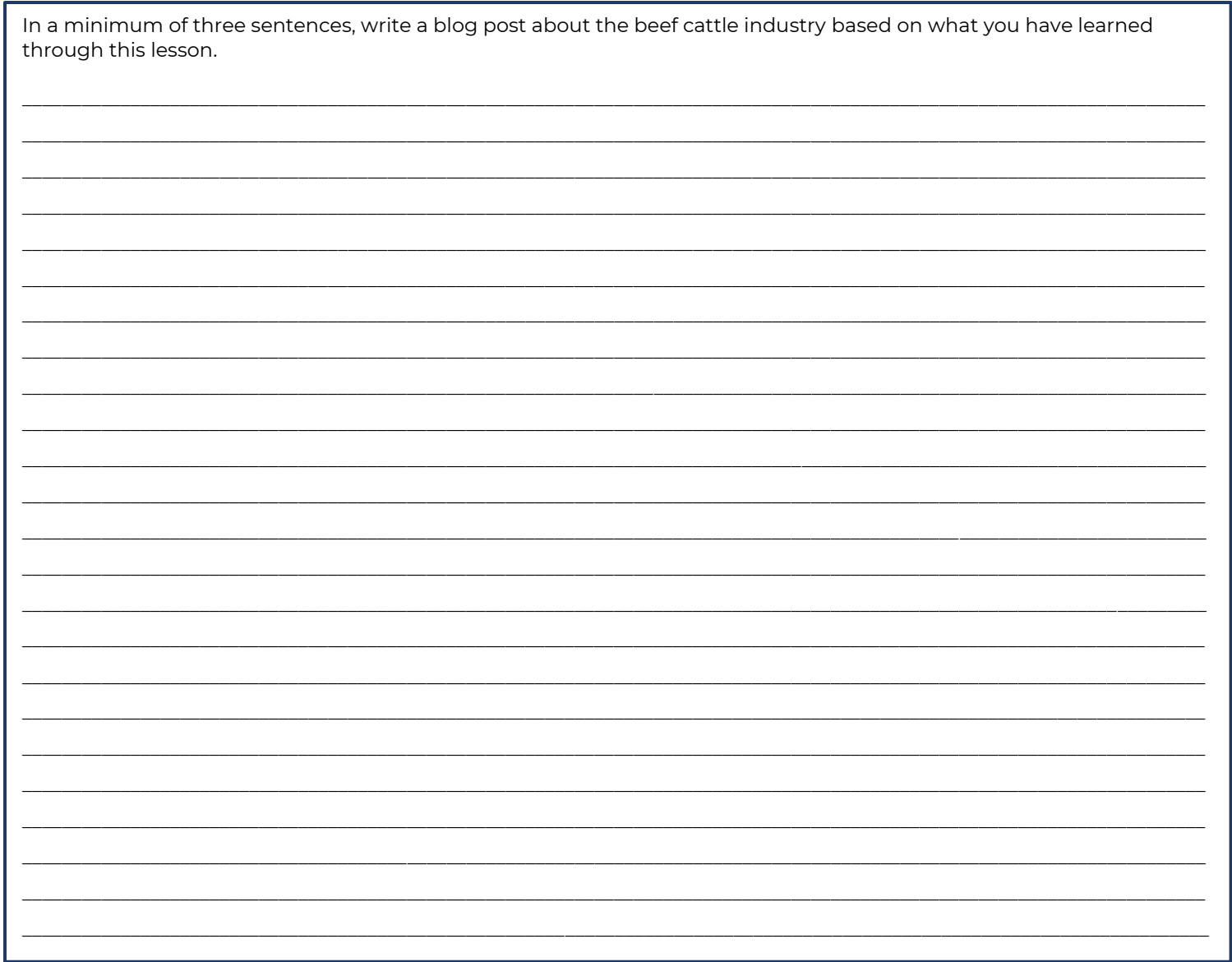


Considering what you now know about cattle production, what would you say to someone who says the livestock industry is wasteful?

Could you go a day without using and/or consuming products that come from the beef cattle industry? Why or why not?

Using one emoji, how do you feel about the beef cattle industry?

Explain why you chose the emoji you did.





NEW HORIZONS

Fall 2022 TEACHING GUIDE



ARTICLE SUMMARY

RICH IN TRADITION

Anthony Hernandez celebrates Native American life and his experience.

Bell Ringer

Why does Native American Heritage Month exist?

Discussion Questions

1. When is Native American Heritage Month, and why does it exist?
2. Why is agriculture important to Native American culture and heritage?

Activity

Part 1: Have students read the article "Rich in Tradition" in the fall 2022 issue of FFA New Horizons and complete the questions.

Part 2: Using the [Native Land Digital](#) program, have students type in their home or school zip code to determine what Native American tribes used to and/or still reside where they live/go to school. Students will identify four facts that they find interesting about the tribe they are researching.

Part 3: Now that students have learned a little about the cultural history, students will explore the agricultural history and the impact it has on today's agricultural practices. Students will read the article "[7 Facts About Indigenous Agriculture](#)" to get them started learning about the impact that indigenous agriculture has had on current agriculture. (Note: This is not an exhaustive list.) Next, students will select an indigenous agricultural practice (consider one that may have been practiced by the tribe they learned about in Part 2) and identify the traditional practice and the modern agricultural practice it has led to. Have student share the Instagram post they develop.

FFA Tip

Plan a presentation to teach members about Native American agricultural practices.

SAE Tip

Challenge your students to learn and report on the agricultural traditions and practices from their own ancestry or practices of ethnic groups prevalent in your area. What practices do we still use? Are there methods or philosophies that could be beneficial if adapted to today's practices? Explore regional differences in agricultural practices from around our nation or the world.

VOCABULARY

Culture
Heritage
Misconception
Tradition

EXIT TICKET

Why is it important to learn about the different cultures and traditions that exist?

CAREER FOCUS AREA

Any

RESOURCE HIGHLIGHTS

Fall 2019, Appendix 2: Here's to Our Hispanic Members, <https://FFA.box.com/s/ym9mx-uglk7b8fbrdo0v4se4d00g0k5dx>

Spring 2020, Appendix 5: Black History Month, <https://FFA.box.com/s/x2ziei2b-13pr4qug60rr8f113j7zrg36>

REFERENCES

7 Facts About Indigenous Agriculture, <https://native-land.ca>

Native Land Digital, <https://native-land.ca>

APPENDIX

Appendix 3: Rich in Tradition

STANDARDS ALIGNMENT

FFA PRECEPTS: FFA.PL-A, FFA.PL-D, FFA.PL-F, FFA.PG-I, FFA.CS-N, FFA.CS-O, FFA.CS-P COMMON CORE – READING: INFORMATIONAL TEXT: CCSS.ELA.RI.9-10.2 COMMON CORE – WRITING: CCSS.ELA.W.9-10.2, CCSS.ELA.W.9-10.4, CCSS.ELA.W.9-10.5 AFNR CAREER READY PRACTICES: CRP.01, CRP.04, CRP.07 P21 SKILLS: CRITICAL THINKING AND PROBLEM SOLVING, GLOBAL AWARENESS, INITIATIVE AND SELF-DIRECTION, LEADERSHIP AND RESPONSIBILITY, PRODUCTIVITY AND ACCOUNTABILITY

RICH IN TRADITION

Anthony Hernandez celebrates Native American life and his FFA experience. – By Jessica Mozo

November is Native American Heritage Month, a time to celebrate the cultures, accomplishments and contributions of Native Americans. The National FFA Organization now includes more than 12,000 Native American members, and that number keeps growing. Anthony Hernandez, 2022-23 Montana FFA parliamentarian, shares more about the rich culture.

Q: Tell me a bit about yourself.

A: I am attending Montana State University in Bozeman, Mont., where I am majoring in agricultural education. I grew up in Lodge Grass, Mont., located on the Crow Indian Reservation. I am Apsáalooke (Crow) and Shoshone Bannock (Fort Hall). I have been in FFA for six years, and I'm a first-generation FFA member.

Q: How did you get involved with FFA?

A: In 2016, I was going into seventh grade and I saw a sign-up sheet for District Leadership Schools, one of the first trips FFA members in Montana get to go on to learn about FFA. I decided I would attend, not expecting much, but to my surprise, the state officers had me hooked. They had members participate in icebreakers and leadership activities, and I really enjoyed it. That trip was the start of my FFA journey, and I am proud of how far I have come by staying involved in this organization.

Q: Why is agriculture important to Native American culture and heritage?

A: Native Americans have always been involved in agriculture. Many Natives lived a nomadic lifestyle. They would plant crops in the spring, hunt in the summer, harvest their crops in the fall and hunt in the winter. Agriculture and farming have always been important in Native cultures because it helped our ancestors survive. Today, many Native tribes are still involved in agriculture.

Q: Besides agriculture, what else is important to Native American culture?

A: Natives are passionate about family, food and keeping both our traditions and languages alive. Montana FFA has an event called the FFA/

American Indian program, where chapters from across the state get to present on topics like Native American heritage, religion, traditions and more to improve the knowledge of Native culture throughout FFA. Though we only have a few chapters that participate, it is always great to see Natives represented in FFA.

Q: Is there anything you feel people sometimes misunderstand about Native Americans?

A: Many people think we follow stereotypes — that we still live in teepees, don't speak English and so on. In reality, we live in our own houses, most do speak English and we are like everyone else — human. It's important to have a genuine understanding of what Indigenous people face, collectively and individually.

Q: What do you enjoy most about being in FFA?

A: I have always enjoyed the friendships I have made in FFA, from attending Washington Leadership Conference my sophomore year to attending FFA camp here in Montana. I will never forget the friendships and memories I have made.



Name: _____

Appendix 3: Rich in Tradition

Part 1

Directions:

Read the article "Rich in Tradition" in the fall 2022 issue of *FFA New Horizons* and complete the following questions.

1. Using the color **green**, color in the box that names the month Native American Heritage is celebrated.

January	February	March	April	May	June
July	August	September	October	November	December

2. Approximately how many Native Americans are now members of FFA?

- 5,000
- 8,000
- 12,000
- 20,000

3. How did Anthony first get hooked on FFA?



- How do you think these types of experiences could impact other students who may be interested in joining a club or organization?

4. Many Natives lived a _____ lifestyle.

- What does this term mean?

- What are you passionate about?

- _____
- _____
- _____
- _____

- According to the article, what are Natives passionate about?

- _____
- _____
- _____
- _____

5. What is a misconception?

6. What are two misconceptions people still hold today about Native Americans?

1)

2)

- Why do you think these misconceptions still exist? What can be done to ensure these misconceptions are not continued?



What similarities and differences exist?



Name: _____

Part 2

Directions:

Using the [Native Land Digital](#) program, type in your home or school zip code to determine what Native American tribes used to and/or still reside where you live/go to school.

1. My zip code: _____
2. Which tribes used to and/or still reside in the zip code you searched? (These will show on the left side of the screen or show as you move your mouse over the map.)
3. Select one tribe you would like to learn more about (record it here): _____
4. Click on the tribe to begin learning more.
 - a. Record four facts that you found interesting about this tribe. What made them interesting to you?

<u>Fact</u>	<u>Why is this fact interesting to you?</u>
(1)	
(2)	
(3)	
(4)	

Name: _____

Part 3

Directions:

Now that you have learned a little about the cultural history, let's take a look at the agricultural history and the impact it has on today's agricultural practices. Read the article "[7 Facts About Indigenous Agriculture](#)" to start learning about the impact that indigenous agriculture has had on current agriculture. (Note: This is not an exhaustive list.) Select an indigenous agricultural practice (consider one that may have been practiced by the tribe you learned about in Part 2) and identify the traditional practice and the modern agricultural practice it has led to.

1. Describe the indigenous practice you selected.

a. What supplies were needed?

b. What commodity was raised?

c. What need did this practice fulfill for the people who depended on it (trade, food, home, etc.)? Explain.



2. Describe how this indigenous practice has changed today. If it has not changed, describe why.

a. What commodity or commodities are raised through this practice today?

b. How has this indigenous practice shaped the way that agriculture has progressed to meet the needs of the current economy and population?



- Create an Instagram post to share the impact indigenous people had, and are still having, on agriculture across the U.S. Be sure to include a description and image.



How does this information impact you and your involvement in agriculture or everyday life?

Name: _____

Popcorn is a crop that was first grown by Native Americans that has become a very common food consumed today. Draw a picture of popcorn in a food stage and a growing stage.



Think about the research you just completed. How did the indigenous practices impact popcorn production as we know it today?

Cotton is a crop that was first grown by Native Americans that has become very common today. Draw a picture of cotton in a stage of use and a growing stage.



Consider the research you just completed. How did the indigenous practices impact cotton production as we know it today?

What indigenous customs or practices do you find most interesting and why?



Describe why it is important to learn history.

By drawing a series of emojis, describe how you feel impacted by what you have learned in this lesson. Include a minimum of three emojis.



NEW HORIZONS

Fall 2022 TEACHING GUIDE



ARTICLE SUMMARY

TEACHER'S PETS

An FFA chapter in South Carolina partners with a humane society to take in, tame and rehome animals.

Bell Ringer

What roles do animals play in our lives?

Discussion Questions

1. What role do animals play in our lives?
2. What skills can be gained from caring for animals?
3. How can animals enhance the learning experience?

Activity

Part 1: Have students read the article "Teacher's Pets" in the fall 2022 issue of FFA New Horizons. Complete the activities to learn more.

Part 2: Using the [American Veterinary Medical Association \(AVMA\)](https://www.avma.org/), students will explore the many small animals that have homes in the United States. Students will select two companion animals and three exotic animals and create a bar chart that depicts the total number of households that own small animals in the U.S. Students need to be sure to label everything, including the axis! Have students share their thoughts on what they discovered.

Part 3: Students will select one of the animals shared from the AVMA in the previous activity. They will research the supplies needed to care for the animal and use the Tractor Supply Co. website, https://www.tractorsupply.com/?cm_sp=Header_Nav_-Links_-Logo, to determine the cost. Students will then develop a daily care plan for their selected animal.

FFA Tip

Have students check out the veterinary science CDE, <https://www.ffa.org/participate/cdes/veterinary-science>, to learn more about animal care.

SAE Tip

Consider these questions to find animal science SAE opportunities in your area: Is there a shelter nearby? What opportunities are there for animal science students to volunteer, work or intern? What could agricultural mechanics students repair, design or expand at the shelter? What could plant science students do to enhance the facilities? What safe and humane experiments could be conducted with shelter animals or patrons? What adoption or promotion programs could students interested in agricultural communications create?

VOCABULARY

Reptile
Socialize
Welfare

EXIT TICKET

What impact do animals have in our lives?
Give a specific example.

CAREER FOCUS AREA

Animal Systems

RESOURCE HIGHLIGHT

SAE Video: Humane Society SAE – Nicole Ford, <https://vimeo.com/315691987>

Animal Science, Unit 5: Animal Welfare and Care, <https://ffa.box.com/s/h32sjm1dkjhon-n9w68kbkithtzdc0q5>

REFERENCES

[American Veterinary Medical Association \(AVMA\)](https://www.avma.org/)

Tractor Supply Co., https://www.tractorsupply.com/?cm_sp=Header_Nav_-Links_-Logo

APPENDIX

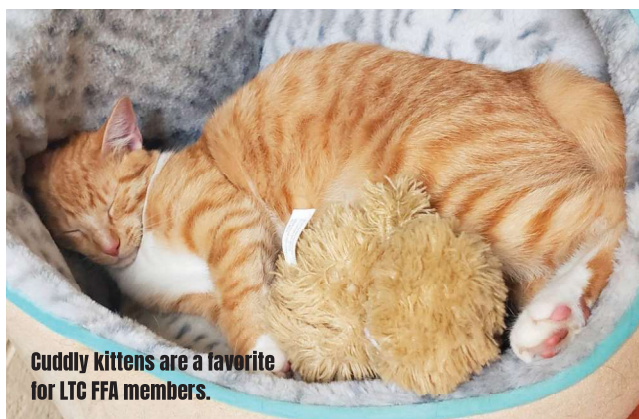
Appendix 4: Teacher's Pets

STANDARDS ALIGNMENT

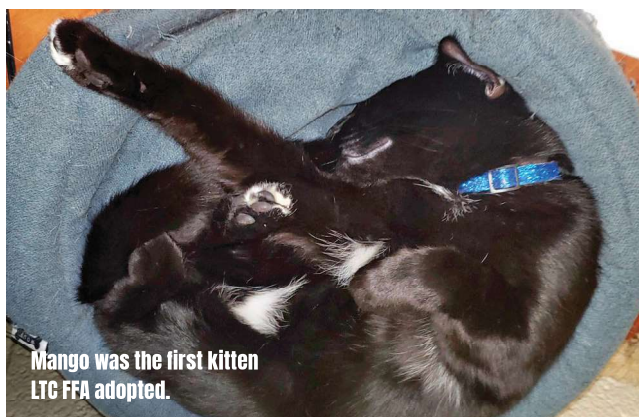
AFNR PERFORMANCE ELEMENT: AS.02 FFA PRECEPTS: FFA.PL-A, FFA.PL-C, FFA.PL-D, FFA.PL-E, FFA.PL-F, FFA.PG-I, FFA.CS-N, FFA.CS-O, FFA.CS-P COMMON CORE – READING: INFORMATIONAL TEXT: CCSS.ELA.RI.9-10.2, CCSS.ELA.RI.9-10.4 COMMON CORE – MATH PRACTICES: MP.1, MP.6 COMMON CORE – WRITING: CCSS.W.9-10.4, CCSS.W.9-10.8 COMMON CORE – SPEAKING AND LISTENING: CCSS.SL.9-10.2 AFNR CAREER READY PRACTICES: CRP.02, CRP.04, CRP.07, CRP.08 P.2.1 SKILLS: CRITICAL THINKING AND PROBLEM SOLVING, INITIATIVE AND SELF-DIRECTION, PRODUCTIVITY AND ACCOUNTABILITY, THINK CREATIVELY

Teacher's Pets

This FFA chapter in South Carolina partners with a local humane society to take in, tame and rehome animals. – By Lauren Denton



Cuddly kittens are a favorite for LTC FFA members.



Mango was the first kitten LTC FFA adopted.

Robert Bollier's classroom at Lexington Technology Center (LTC) in South Carolina unites students from five high schools. The diverse classes get hands-on experience with a variety of small animals, socializing them for adoption.

It began four years ago when a student brought in a stray black kitten named Mango. Bollier remembers saying, "We'll see what we can do for that one wild-as-can-be animal."

The project has grown since. More than 30 animals have been adopted in four years; over half of those found new homes in 2022. In addition to cats, the students have tamed rabbits, guinea pigs and even a parakeet they found in a bush outside the school.

"I draw the line at reptiles," says Bollier, who has taught animal science for nine years at LTC.

Bollier and LTC FFA had been using their own funds for basic care, including spaying and neutering, when a partnership with the Humane Society of South Carolina occurred by chance, Bollier says. The organization's executive director, Dawn Wilkinson, stopped by to donate her family's guinea pig supplies, spotted all the small animals and instantly offered to provide basic care. Now the two groups work together to promote animal welfare and match pets with homes.

"The students get to love on the animals," Bollier says. And the animals love them back. "The animals know when every block starts," he adds. "They wait at the door, and the first thing the kids do when they come in the room is pet them."

"Those animals are living their best lives," Wilkinson says. "I wish every school district had a similar program to take the burden off shelters. Not only are more animals finding a home, but also we know we're sending them out with the best start possible."

"It does the kids good too," Bollier says. "It's one of those things that makes a difference for them — and that they can make a difference in."

Name: _____

Aligned to the following standards: AS.02; FFA.PL-A; FFA.PL-C; FFA.PL-D; FFA.PL-E; FFA.PL-F; FFA.PG-I; FFA.CS-N; FFA.CS-O; FFA.CS-P; CS.02; AG2; CCSS.ELA.RI.9-10.2; CCSS.ELA.RI.9-10.4; CCSS.W.9-10.4; CCSS.ELA.W.9-10.8; CCSS.SL.9-10.2; MP1; MP6; CRP.02; CRP.04; CRP.07; CRP.08

Appendix 4: Teacher's Pets

Part 1

Directions:

Read the article "Teacher's Pets" in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

- Where is the Lexington Technology Center (LTC) located? In the space provided, draw the outline of the state and place a star where the school is located.



- In your own words, describe the purpose of the animal program at LTC.

- What group is now a partner with LTC for the small animal project?

H_____ S_____ of S_____ C_____



- What is the overall purpose of a local humane society?

- Where is your local/closest humane society located? Provide the address.



- What life skills can be gained from working with small animals? Give a minimum of three.

(1)

(2)

(3)

- Select one of the three identified skills above, and describe how this skill would benefit you in your everyday life or in your future career plans/goals.

Name: _____

Part 2

Directions:

Complete the following activities to learn about small pets, their needs and overall care.



Using the [American Veterinary Medical Association \(AVMA\)](https://www.avma.org), explore the number of small animals that have homes in the United States. Select two companion animals and three exotic animals and create a bar chart that depicts the total number of households that own small animals in the U.S. Be sure to label everything, including the axis!

Draw an emoji that depicts your thoughts as you look at the statistic you explored from the AVMA.

What do these numbers mean for our economy?



Name: _____

Part 3

Directions:

Explore small animals and the care needed through the following activities.

1. Select one of the small animals shared on the [AVMA](#).
 - a. My animal is _____.
2. Research to determine the supplies you will need to properly care for the small animal you selected. Include notes from your research in the brainstorm section below.

3. Use the [Tractor Supply Co.](#) website to explore all the supplies you need to care for the small animal you selected.
 - a. Be sure to include the following items: housing, bedding, feed and supplements, stimulation (Ex. ball, running wheel, etc.) Note: If you need more space, add another row, and if you have extra rows, place an X in the empty boxes.

Supply Needed	Description/Reason	Cost

Name: _____

4. In the space provided, draw a picture of the habitat for the animal you selected. Label all the important supplies you identified in Step 3.

5. Develop a daily plan to care for the animal you selected in Step 1. Be sure to consider food, water, cleaning and interaction with the pet. Note: If you need more space, add another row, and if you have extra rows, place an X in the empty boxes.

Time	Care Procedure	Why is this necessary?

What is one thing that surprised you as you were learning about your selected animal and developing your supply and care lists?

What is one thing that you learned about yourself while learning about your selected animal?

In one sentence, why is it important to plan prior to adding an animal to your household?



ARTICLE SUMMARY

DIFFERENTLY ABLED, SIMILARLY INVOLVED

Two FFA advisors share how they cultivated classrooms and experiences for students with disabilities.

Bell Ringer

When you hear the word “inclusive,” what do you think of?

Discussion Questions

1. In your daily life, do you see inclusivity? If so, where?
2. Why is it important to be inclusive?

Activity

Part 1: Have students read the article “Differently Abled, Similarly Involved” in the fall 2022 issue of FFA New Horizons. Complete the activities to learn more.

Part 2: Students will complete the activities to plan an inclusive FFA meeting and/or school-related event. Have students think about what inclusivity means to them and different ways that they can incorporate inclusivity in a meeting or event they are planning. Prompt students to think outside themselves when completing this activity.

Part 3: Students will complete a Venn diagram showing the similarities and differences of the National FFA Organization and the New Farmers of America.

Part 4: Students will answer questions in Part 4 to reflect on the article and what they have learned throughout the lesson.

FFA Tip

Have chapter officers pair up with another school club/organization to plan and host a joint event for the school community. Officers can take concepts from this activity to aid them in the planning of the event.

SAE Tip

Design challenge: What assistive technologies can your students create to ensure all students are enabled to fully perform agricultural tasks? Give groups different tasks to focus a design around. Check out AgrAbility (<http://www.agrability.org>) to learn more about technologies that can help people with disabilities working in agriculture and other fields.

VOCABULARY

Cultivated
Philosophy
Inclusion
Diverse

EXIT TICKET

After reading the article and completing the activities, what are at least two other ways we can be inclusive in our agricultural classes and school?

CAREER FOCUS AREA

Agricultural Education

RESOURCE HIGHLIGHT

SAE Video: Dairy Heifers SAE – Jonathan Jones, <https://vimeo.com/235413243>

FFA Value Statements Reinforce Ag Ed for All, <https://ffa.box.com/s/5z0m60ix87aqp1dm-k8q3kgdtz0j7y5ly>

REFERENCES

Life Knowledge: Goal-Setting Strategies (Pages 7 and 8), <https://ffa.box.com/s/ol3jtx40mn0l56omwk6ci8s-drd3yzsz1>

APPENDIX

Appendix 5: Differently Abled, Similarly Involved

STANDARDS ALIGNMENT

FFA Precepts: FFA.PL-A, FFA.PL-C, FFA.PL-D, FFA.PL-E, FFA.PL-F, FFA.PG-I, FFA.CS-N, FFA.CS-O, FFA.CS-P Common Core – Reading: Informational Text: CCSS.ELA.RI.9-10.2, CCSS.ELA.RI.9-10.4 Common Core – Writing: CCSS.ELA.W.9-10.8 Common Core – Speaking and Listening: CCSS.ELA.SL.9-10.2, CCSS.ELA.SL.9-10.4 Common Career Technical Core: AG2, AG5 AFNR Career Ready Practices: CRP.02, CRP.04, CRP.07, CRP.08 P21 Skills: Communication, Critical Thinking and Problem Solving, Initiative and Self-direction, Information, Communications, and Technology Literacy, Leadership and Responsibility, Media Literacy Productivity and Accountability, Think Creatively

County Line FFA member Jake Sholtzman shows a lamb at the county fair.



DIFFERENTLY ABLED, SIMILARLY INVOLVED

Two FFA advisors share how they cultivated classrooms and experiences for students with disabilities. – By Lauren Denton

December 3 marks the 20th annual International Day of Persons with Disabilities. The observance is threefold: raise awareness, establish support and celebrate all individuals' impact. These goals include advocacy and inclusion, which positions FFA as a model where all students not only belong but also thrive. "Agriculture is so broad. There are so many

diverse opportunities to find something students with disabilities want to be involved in," says Ron Koch, advisor for the County Line FFA Chapter in Branch, Ark. He taught Jake Sholtzman, a 2017 graduate with cerebral palsy who uses a motorized wheelchair and a speaking device.

Koch knew Sholtzman loved livestock, so he researched assistive technology and constructed a wheelchair attachment for leading lambs around a show ring — some of which went on to win county fair grand champion. "He was just so appreciative to be able to participate," Koch says.

Harrisburg FFA advisor Levi Jones of Arkansas, whose chapter vice president, Sadey Bowen, uses a wheelchair, shares a similar sentiment: "It's really an opportunity more than a disability," he says. "Sadey has found things to do that others haven't."

While Jones updated the ag building's entrance and provided a custom stool for welding, Bowen built her own shop table, and she can farm her own plot of soybeans after assistance into the cab.

Despite separate experiences, the two advisors' takeaways fall right in line.

COMMUNICATE OPENLY. Koch interviewed Sholtzman's parents about the wheelchair's mechanics. Jones communicates directly with Bowen to learn what she needs.

OFFER THE SAME OPPORTUNITIES. "Jake just wanted to do the same things as his classmates," Koch says. Jones adds, "If Sadey can't do something, none of us are going to do it."

KEEP YOUR MIND AND EYES OPEN. "Sometimes it's fly by the seat of your pants," says Jones, referring to the time Bowen's classmates carried her down flights of stairs to watch the rodeo at the National FFA Convention. Similarly, Koch didn't consider that wood shavings might interfere with Sholtzman's wheelchair. "His brother cleared them out of the way as they piled up in the show ring," he says.

HELP STUDENTS FIND THEIR PASSIONS AND SOURCE THE RESOURCES

THEY NEED. "Any educator would understand that we do our job for the students," Koch says. "If that's our philosophy, we need to do our best."

Let them teach you. Says Jones: "Sadey has taught me more in three years than I could have taught her in 40."

"Sadey has taught me more in three years than I could have taught her in 40."
– Levi Jones



Harrisburg FFA ensures all opportunities are accessible for all members.

Name: _____

Appendix 5: Differently Abled, Similarly Involved

Part 1

Directions:

Read the article "Differently Abled, Similarly Involved" in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

1. December ____ marks the ____ annual International Day of Persons with Disabilities.



2. What are the three goals of this day of observance?



1

3. Explain what FFA advisor Ron Koch did for one of his students so he could be involved with livestock:



2

3

4. Explain what FFA advisor Levi Jones did for one of his students so she could be involved with welding in the classroom:

5. What four takeaways did the two FFA advisors share from their experiences?

Identify a quote that stood out to you in the article.

Explain why this quote stood out to you.

Name: _____

Part 2

Directions:

Answer the questions below to plan an inclusive FFA meeting or school-related event.

1. What event could you plan for your FFA chapter and/or other school organization/club?

Define inclusivity in your own words.

2. What is the purpose of the event? _____

3. Using the “SMART” method, what are three goals of the event? *For more information about the SMART method, follow this link to Pages 7 and 8: <https://FFA.box.com/s/ol3jtx40mn0l56omwk6ci8sdrd3yzsz1>.*

- a. _____
- _____
- b. _____
- _____
- c. _____
- _____

4. Considering all types of students, identify three areas of the event and explain ways to ensure that all students can fully participate in the event. (Tip: Remember all disabilities are not immediately visible and are not only physical in nature.)

Example: Access — A wheelchair ramp and handrails are available.

Area	Description

Develop an inclusive hashtag, based on your definition from above, to help promote your event on social media.

Why is it important to plan inclusive events?

How can you take what you have learned in this process and apply it in the future?



NEW HORIZONS

Fall 2022 TEACHING GUIDE



ARTICLE SUMMARY

70 YEARS OF FFA STORIES

FFA New Horizons celebrates a milestone. Take a tour of National FFA publications past and present to see how the organization — and this magazine — have evolved.

Bell Ringer

Why do you think it is important to celebrate milestones?

Discussion Questions

1. What are some significant events that have occurred in your FFA chapter and/or school?
2. Why are those events significant and important to remember?
3. How have those events impacted where the FFA chapter and/or school is today?

Activity

Part 1: Have students read the article "70 Years of FFA Stories" in the fall 2022 issue of FFA New Horizons. Complete the activities to learn more.

Part 2: Students will utilize the provided magazine-cover template to design and create their very own FFA New Horizons magazine cover to represent and summarize their FFA and/or agricultural class experience. If students so choose, they can create the cover digitally using the [PosterMyWall](https://www.postermywall.com) website. Students will answer questions to reflect on the design experience.

Additionally, have students display their covers around the classroom and complete a gallery walk. Prompt students to pick out two to three covers that stood out to them and have them discuss why.

FFA Tip

Have FFA members write a short paragraph or blurb about why they joined FFA, their favorite FFA memory, etc. and have the chapter reporter or historian create a newsletter using the paragraphs/blurbs. This can be shared with other FFA members and potential new members on why students join the FFA.

SAE Tip

Challenge members to list and explore careers in agricultural communications such as producing and writing radio shows, TV shows and web articles. Remind them that topics ranging from the latest technical innovations in agriculture and natural resources to stories about agriculture and FFA history and everything in between is a possibility. Don't forget visuals! Photos and film are important for many uses. Being a spokesperson for organizations is another important role of communications.

STANDARDS ALIGNMENT

FFA PRECEPTS: FFA.PL-A, FFA.PL-C, FFA.PL-D, FFA.PL-E, FFA.PL-F, FFA.PL-G, FFA.CS-N, FFA.CS-O, FFA.CS-P
COMMON CORE – READING: INFORMATIONAL TEXT: CCSS.ELA.RI.9-10.2, CCSS.ELA.RI.9-10.4
COMMON CORE – WRITING: CCSS.ELA.W.9-10.8
COMMON CORE – SPEAKING AND LISTENING: CCSS.ELA.SL.9-10.2, CCSS.ELA.SL.9-10.4
COMMON CAREER TECHNICAL CORE: AG2, AG5 AFNR CAREER READY PRACTICES: CRP.02, CRP.04, CRP.07, CRP.08
P21 SKILLS: COMMUNICATION, CRITICAL THINKING AND PROBLEM SOLVING, INITIATIVE AND SELF-DIRECTION
INFORMATION, COMMUNICATIONS, AND TECHNOLOGY LITERACY, LEADERSHIP AND RESPONSIBILITY, MEDIA LITERACY, PRODUCTIVITY AND ACCOUNTABILITY, THINK CREATIVELY

VOCABULARY

Literacy	Interchange	Commod-
Distribution	Delegates	ities
Revolution	Policy	Genetically
Repository	Commemo-	modified
Manufac-	rated	Prestigious
turer	Pathology	Ingenuity
Sentiment	Interest Rate	Evolution

EXIT TICKET

Summarize what you learned today in one sentence.

CAREER FOCUS AREA

Agricultural Education, Any

RESOURCE HIGHLIGHT

FFA New Horizons Teaching Guides, <https://FFA.box.com/v/newhorizonsteachingguides>

Digital FFA New Horizons Lessons, <https://FFA.box.com/s/0dbbakjxqly9u7eny08nrxcmm1t-fg6>

REFERENCES

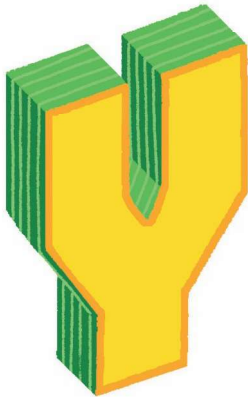
PosterMyWall, <https://www.postermywall.com>

APPENDIX

Appendix 6: 70 Years of FFA Stories

70 YEARS OF IFFA STORIES





ou can find them in doctor's offices across the country. They line the checkout aisles of grocery stores. They arrive through the mail at our homes. Magazines have been an important communications tool since the first literary reviews were published in the 1800s.

Distribution of the written word, including pamphlets that drove the American Revolution and gossip sheets of the Victorian era, has developed culture and fostered knowledge transfer throughout society.

The first agricultural magazine, *The Agricultural Museum*, was published in 1810 and served as a "repository of valuable information to the farmer and manufacturer and the means of a free communication of sentiment and interchange of ideas on the important subjects of their occupation," as stated on the cover of the magazine. In other words, it was a publication by farmers, for farmers and about farming. Fast-forward more

than 100 years, and the *National Future Farmer*, a publication for FFA members about FFA activities, hits members' mailboxes.

"It would be nearly impossible to measure the editorial impact of FFA publications," says Jack Pitzer, a longtime editor of FFA publications. "Thousands of FFA members have been inspired or motivated to greater achievement and found new ideas to start them on their way to success."

While browsing the National FFA Organization archives, you might run across the National FFA Board minutes from Oct. 7, 1950. The very last line on the very last page reads, "It was moved by Vice President King that the Board of Trustees and Advisory Council advise the delegates at the convention that we are working on a national magazine and have requested that it be published at the earliest possible date."

Since this motion was made more than 70 years ago, millions of copies of national FFA magazines have been circulated to FFA members across the country. "When I joined the magazine staff in the mid-1950s, our editorial





policy at the time was to provide members a well-rounded combination of subject matter,” Pitzer says. “In selecting articles for the magazine, we tried for a mix of 50 percent about FFA, 25 percent about agriculture, and 25 percent general youth interest.”

Known today as *FFA New Horizons* magazine, each edition has shared inspiring, impactful and unique stories about members, alumni and supporters. Just as the news has evolved over the years, so has this publication.

Where American History and FFA Merge

A historical timeline of moments that shaped U.S. agriculture and FFA.

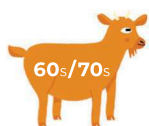
The first national FFA publication was published in the late 1940s as *Future Farmers of America in Action*. It shared convention proceedings and functioned like a scrapbook, printing photos from various national events and programs. The first FFA publication commemorated the 7,188 FFA members who lost their lives while serving in the armed forces during World War II.



By 1952, the publication evolved into *The National Future Farmer* magazine. The cover featured

alumnus Howard J. Miller of Tucson, Ariz., and the 1949 Miss America winner, Jacque Mercer. Writer Louis Bromfield covered the need for better farming practices and scientific methods to raise production. Best agricultural practices of that time included creating irrigation channels using dynamite. Robert Louis Ellis was featured in this issue for winning the New Farmers of America (NFA) top degree, Star Superior Farmer.

A few years later, in 1959, the world was caught up in a race to the moon. A decade before Neil Armstrong took his first steps there, FFA members were encouraged to prepare for “Agriculture in the Space Age” and study fields such as engineering, chemistry, pathology, genetics and business management.



Throughout the 1960s and 1970s, *The National Future Farmer* continued to document historical moments in U.S. history as reflected in FFA. President Lyndon B. Johnson spoke at the 40th National FFA Convention, the same convention where NFA and FFA merged, amid the American Civil Rights Movement. American agriculture was booming in the 1970s, but the energy crisis posed a big challenge for continued success, as noted in

the editor’s letter by Wilson Carnes in the August-September 1973 issue.



The 1980s farm crisis brought skyrocketing farm debt, soaring interest rates, low commodities prices and high input costs to farms. During that time, stories in the magazine expressed optimism for future agriculturists, sharing the promise of biotechnology to increase production. In 1989, the magazine changed names to become *FFA New Horizons*, representing a new era and a renewed faith in the future of agriculture.



True to its name, *FFA New Horizons* captured life-changing events through the turn of the century and beyond, including what the invention of the internet meant for agriculture, and member and chapter reactions to the attack on the World Trade Center on Sept. 11, 2001.

Where Technological Advancements Are Predicted

The evolution of agricultural technology shown through FFA member experiences.

The pages of FFA publications shared practices and technologies that were ahead of the times. Pages within the fall 1980 issue predicted what agriculture might look like in the future. Before ethanol was a mainstream product, readers were encouraged to feed their cattle biomass by-products from energy production. Only a decade later, corn growers in the United States would lead the charge in ethanol production, which today produces by-products that are high-protein, high-fat and high-fiber feed for livestock.

Before the first genetically modified (GM) seed products hit the market, *The National Future Farmer* shared insights into plant breeding experiments. That same year, the first GM seeds were patented, and one year later, the magazine cover featured FFA members studying genetic engineering.

Early issues of the magazine recommended ways for members to simplify record keeping by hand. In 1988, *The National Future Farmer* shared how one FFA member won the Star in Agriscience, National Diversified Crop Production proficiency award and acceptance into a prestigious technology program — all in the same year — because of his ingenuity in using computers on the farm. Mark Knudson from North Dakota created programs from scratch that allowed him to track financial information, crop production records and compliance with government wheat and feed grain programs.



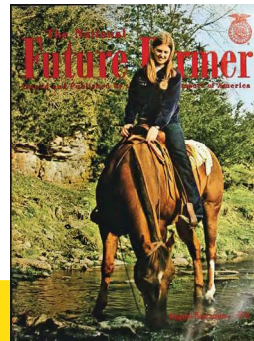
1950s

The National Future Farmer magazine was first published in the fall of 1952. In the same decade, FFA members watched as the world began a race to the moon. Agriculture followed suit, focusing on developments in engineering, chemistry and more.



1960s

Amid the American Civil Rights Movement and the push for women's rights, FFA grew to include African-American males in 1965 and allowed for female membership starting in 1969.



1970s

Agriculture prospered in the 1970s, and FFA continued to grow in diversity. Articles in *The National Future Farmer* encouraged FFA members to pursue production agriculture careers, build business management skills and gain economic expertise.



1980s

Tides turned in the next decade, and agriculture faced its worst financial crisis since the Great Depression in the 1930s. Despite the challenge, FFA members saw promise to increase production through new technology, including biotechnology.

“I was a part of these publications for over half of my life. In all that time, I learned that magic happens in FFA.”

— Jack Pitzer,
longtime editor of FFA publications

It was considered revolutionary at the time, but Knudson would likely complete all these tasks from his cell phone today, as smartphones and apps are tools for record keeping, crop monitoring, social media advocacy and more.

Where Members and Their Stories Shine **The many faces and experiences of FFA members, alumni and supporters.**

FFA members, alumni, and supporters today represent a variety of faces, places and experiences. Throughout the decades, FFA publications have documented how the organization has grown.

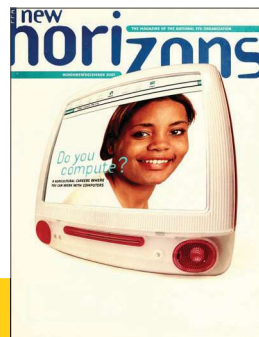
As early as the first issue of *The National Future Farmer*, both men and women have graced the cover. However, the first female farmer wasn't spotlighted until 1959, before females gained FFA membership. Mary Jane Zipse of Mt.

Explore past issues of
FFA New Horizons.



1990s

The FFA magazine began a new decade with a new name: *FFA New Horizons*. With a renewed sense of faith in agriculture, FFA members embraced the changes in agriculture with optimism.



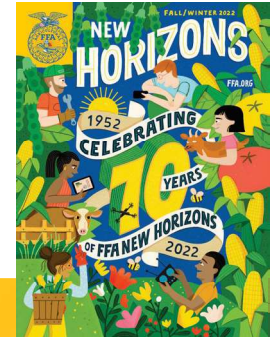
2000s

The invention of the internet changed agriculture — and the world — forever. Careers combining tech and agriculture emerged overnight. FFA members began using the internet to create efficiencies in record keeping and information sharing.



2010s

Technology took the wheel through the next decade. Stories in *FFA New Horizons* captured members using high-tech tools in classrooms, shops, greenhouses and on farms all across the country.



Today

To celebrate the 70th Anniversary of *FFA New Horizons*, editors reflect on the growth of FFA as documented through these pages. A bright future is ahead, and *FFA New Horizons* continues to share stories that connect and inspire FFA members everywhere.

Morris, Ill., grew up in agriculture and always knew she wanted to work on the farm. Her advisor, Melvin Burkhalter, is quoted: “She could have been an American Star Farmer herself if girls were eligible.” Ten years later, females were granted FFA membership. Another decade later, Debbie Nelson of Canton, Minn., became the first female FFA member on the cover of *The National Future Farmer* for her work in the equine industry.

Other notable magazine covers include moments with members who represented the true cultural diversity within the National FFA Organization. In a 1954 issue, Floyd Middle River of the Blackfoot tribe from Browning, Mont., was recognized for his part in a tribal dance showcase at the National FFA Convention. In 1981, Hispanic-American and African-American members were represented for the first time by Nicholas

Juan of the Baboquivari FFA Chapter in Arizona and Dwaine Rowe of the Paris FFA Chapter in Tennessee.

Scrolling through the 100-plus archived copies of FFA publications marries the worlds of FFA timelines and U.S. history. Their advertisements reflect the evolution of agricultural machinery and technologies. As FFA has evolved, its magazines have shown growth and change through its members. These moments are forever memorialized because of a single motion at a National FFA Board meeting and the work behind *FFA New Horizons*.

“I’m 80 years old now, and I was a part of these publications for over half of my life,” Pitzer says. “In all that time, I learned that magic happens in FFA. Members in towns all across America learn things that their families and teachers never even knew existed. They learn what they want to do in their lives and have a big impact on agriculture.” •

Name: _____

Appendix 6: 70 Years of FFA Stories

Part 1

Directions:

Read the article “70 Years of FFA Stories” in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

1. What was the title of the first agricultural magazine? _____

1a. When was the magazine published?

- a. 1811
- b. 1810
- c. 1825
- d. 1928

2. It was a publication by _____ for _____ and about _____.

3. Fast-forward more than _____ years, and the _____

Future _____, a publication for FFA members about FFA _____ hits members’ mailboxes.

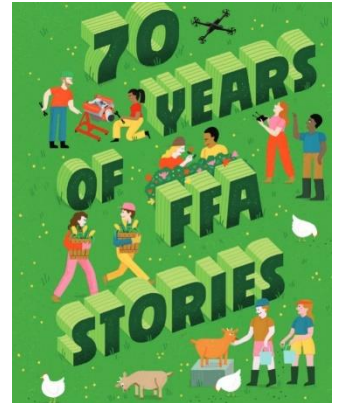
4. While browsing the National FFA Organization archives, you might run across the National FFA Board minutes from October 7, _____. The very last line on the very last page reads, “It was moved by _____ King that the Board of Trustees and _____ Council advise the _____ at the convention that we are working on a _____ magazine and have requested that it be published at the earliest possible _____.

5. What has happened since that motion was passed?

6. In what decade did the name of the magazine change to *FFA New Horizons*?

- a. 1970s
- b. 1980s
- c. 1990s
- d. 2000s

7. Identify a quote from the article that stands out to you and explain why.



Name: _____

Part 2

Directions:

Utilize the magazine-cover template, on the next page, to design and create your very own *FFA New Horizons* magazine cover to represent and summarize your FFA and agricultural class experience. If you want to design your cover digitally, you can use the [PosterMyWall](https://www.postermywall.com/) website. After you're done, display your cover around the classroom and complete a gallery walk to look at other covers. Pick out two to three covers that stood out to you and be prepared to discuss why.

Items to include in your design:

- Picture
- Three or four story titles (like in the example covers below)
- Your design should be colorful. Be creative!

Examples of past covers:



After you design your cover, answer these questions to reflect.

How does your experience in FFA and/or agricultural class(es) influence some of your future behaviors and decisions?

Explain why you chose the stories and images you did.

Looking back at your completed magazine cover, which activity that you experienced was the most enjoyable and why?

Name: _____



NEW

HORIZONS

FFANEWHORIZONS.ORG

Fall 2022



NEW HORIZONS

Fall 2022 TEACHING GUIDE



ARTICLE SUMMARY

6 IMPORTANT FARM SAFETY TIPS

Recognize the risks. Know what to do.

Bell Ringer

Why is it important to learn about safety?

Discussion Questions

1. How are you impacted by safety in your daily life? Explain.
2. How would you explain the importance of safety to elementary-age students?

Activity

Part 1: Have students read the article "6 Important Farm Safety Tips" in the fall 2022 issue of FFA New Horizons and complete the activities to learn more.

Part 2: Students will choose a safety practice from the article and create a demonstration for it. Students will answer questions and complete an activity to plan out the demonstration.

Part 3: Students will create a flyer to promote the demonstration.

Part 4: Students will utilize AgExplorer (AgExplorer.FFA.org), to complete activities to learn more about a career as an occupational health and safety manager.

FFA Tip

Have chapter officers and members plan and host an agricultural safety day for elementary-aged students. Officers and members can take concepts from this activity to aid them in the planning of the event.

SAE Tip

Have your students identify and report on potential safety issues in their own SAEs or projects they are considering. Have them design safety programs to mitigate those risks..

STANDARDS ALIGNMENT

AFNR PERFORMANCE ELEMENT: CS.03 FFA PRECEPTS: FFA.PL-A, FFA.PL-C, FFA.PL-D, FFA.PL-E, FFA.PL-F, FFA.PG-I, FFA.CS-N, FFA.CS-Q, FA.CS-P COMMON CORE – READING: INFORMATIONAL TEXT: CCSS.ELA.RI.9-10.2, CCSS.ELA.RI.9-10.4 COMMON CORE – WRITING: CCSS.ELA.W.9-10.8 COMMON CORE – SPEAKING AND LISTENING: CCSS.ELA.SL.9-10.2, CCSS.ELA.SL.9-10.4 COMMON CAREER TECHNICAL CORE: AG2, AG3, AG5 AFNR CAREER READY PRACTICES: CRP.02, CRP.04, CRP.07, CRP.08 P21 SKILLS: COMMUNICATION, CRITICAL THINKING AND PROBLEM SOLVING, INITIATIVE AND SELF-DIRECTION, INFORMATION, COMMUNICATIONS AND TECHNOLOGY LITERACY, LEADERSHIP AND RESPONSIBILITY, MEDIA LITERACY, PRODUCTIVITY AND ACCOUNTABILITY, THINK CREATIVELY

VOCABULARY

Hazard	Thermal
Extensive	Propellant
Paramedic	PTO shaft

EXIT TICKET

How would you explain farm safety to elementary-aged students?

CAREER FOCUS AREA

Any

RESOURCE HIGHLIGHTS

Safety in Agriculture for Youth (SAY), <https://ag-safety.extension.org/safety-in-agriculture-for-youth>

REFERENCES

AgExplorer, AgExplorer.FFA.org

How to Give a Method Demonstration, <https://www.lsuagcenter.com/MCMS/RelatedFiles/%7BD4E91CD0-EA91-4041-9326-C2BBF3694450%7D/How-to-Give-a-Method-Demonstration.pdf>

Indiana FFA Association Leadership Development Events – Demonstrations, https://www.inffa.org/docs/10428_Demonstrations%20Scorecard%20Discovery%20.pdf

APPENDIX

Appendix 7: 6 Important Farm Safety Tips



IMPORTANT FARM SAFETY TIPS

Recognize the risks. Know what to do. – By Lauren Denton

National Farm Safety and Health Week is recognized every year during the third week in September, intentionally coinciding with fall harvest, one of the busiest and most dangerous times of year for farmers.

However, farming hazards are present during any season, and it's important to know how to spot and prevent them. While agriculture safety applies to a broad range of topics, here are a few general tips to keep in mind, no matter what your task.

1. Educate yourself. Before you begin, learn all about the mechanics and risks of your specific project. Start with the National Education Center for Agricultural Safety (NECAS), which hosts National Farm Safety and Health Week. In addition to free webinars, you can find an extensive list of resources on its website.

The Occupational Safety and Health Administration also has resources dedicated to agricultural operations, including a page for youth. Treat this like a research paper: Find and note as much information as you can.

2. Stock a first aid kit. And restock, emphasizes Dan Neenan, director of NECAS. Neenan, a trained paramedic, has developed a farm first aid kit based on the injuries he and his team see most in farming situations. It comes in a sturdy canvas bag and includes large bandages, a thermal blanket, large shears, and four times the eyewash of standard kits.



In some cases, you might want to stock it with additional supplies to relieve allergic reactions in an emergency. Your kit should go wherever you go.

3. Check your fire extinguisher. Ideally, test it twice a year. Sometimes it will have power but not propellant, so make sure to fill it after each use.



4. Read markings on every vehicle you'll be in or near. Neenan notes that while tractor rollovers are decreasing, ATV/UTV rollovers are increasing. Don't exceed the weight limits, as that can impact steering and braking, and avoid roadways because the tires are created for off-road driving.

Wear your helmet and seat belt, if there is one, and steer clear of moving parts of any vehicle, especially PTO shafts behind tractors.

5. Avoid wearing loose clothing and jewelry. They can get in the way of your job, or worse – snag and injure you.

6. Ask for help. Neenan says stress and emotional health concerns are rising in farming communities. Know who to call, and recognize when you need to call.

For more specific farming safety tips, visit NECASag.org.

Name: _____

Appendix 7: 6 Important Farm Safety Tips

Part 1

Directions:

Read the article “6 Important Farm Safety Tips” in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.



National Farm Safety and Health Week is _____ every _____ during the _____ week in _____.

1a. What harvest season does it coincide with? _____

In the table below, identify and explain each safety tip.

Safety Tip	Description

Name: _____

Part 2

Directions:

Follow the steps below to develop a demonstration for a safety practice. Reference this site, and similar sites, when planning your demonstration: <https://www.lsuaqcenter.com/MCMS/RelatedFiles/%7BD4E91CD0-EA91-4041-9326-C2BBF3694450%7D/How-to-Give-a-Method-Demonstration.pdf>. Another resource that can be referenced is the Safety in Agriculture for Youth website: <https://aq-safety.extension.org/safety-in-agriculture-for-youth/>.

Choose a safety practice from the article and create a demonstration for it.

Why did you choose this practice?

Use this space to plan the demonstration: What activities will occur during the demonstration? *Include in your plan an introduction, middle and conclusion to the demonstration. Reference the rubric while planning the demonstration.*

What materials and resources will you need for the event?

Identify individuals that can help with this demonstration AND explain what they can help with.

How will planning this demonstration influence your future?

Name: _____

Rubric

This rubric is adapted from Indiana FFA Association Leadership Development Events – Demonstrations.
https://www.inffa.org/docs/10428_Demonstrations%20Scorecard%20Discovery%20.pdf

Standard	Accomplished (10–7 points)	Proficient (6–4 points)	Basic (3–1 points)	Unacceptable (0 points)	Points Earned
Introduction (Opening of the demonstration)	Students introduce themselves to the judges in a professional manner and thoroughly introduce the demonstration and give background information to show the importance of the demo to agriculture.	Students introduce themselves to the judges well but in a less impressive manner than desired and introduce the demonstration but give little background information on the importance of the demo to agriculture.	Students introduce themselves in a "so-so" manner but fail to introduce the demonstration and do not give any information about the importance of the demo to agriculture.	Students fail to introduce themselves and/or the demonstration and give no evidence of understanding the importance of the demo to agriculture.	
Preparation (Members are prepared for the demo.)	Everything in working order, in place or readily accessible; evidence of rehearsal; high quality visuals provided	Most things work well; one or two deficiencies; clear evidence of rehearsal but lacks finesse; good quality visuals provided	Things don't work well or flow smoothly; one or two things out of place or missing; only fair quality visuals	Things are not in working order; demo fails; no evidence of rehearsal or adequate preparation	
Knowledge (Members seem to understand topic.)	Exhibit clear understanding of principles or concepts involved; accurately relate concept to demonstration	Exhibit only slightly limited understanding of principles or concepts involved; minor inaccuracies in relating demonstration	Exhibit somewhat limited understanding of principles or concepts involved; minor inaccuracies in relating demonstration	Exhibit lack of understanding of the principles or concepts involved; inaccurately relate concept to demonstration	
Safety (If no safety equipment is needed, give full points.)	Safety googles or protective screen was used if appropriate; kept hazards away; if needed; kept first aid and other emergency equipment on hand; took full advantage of facilities	Expressed some degree of regard for safety of self and others but failed to take adequate precautions to prevent possible minor harm to self or judges	Expressed some degree of regard for safety of self and judges but failed to take adequate precautions to prevent possible major harm to self or others	Showed positive disregard for safety of self or others; showed negligence; threatened own or others safety	
Simplicity (Ease of following topic)	Avoided unnecessary complexity and used commonplace	Degree of complexity was effective only with a knowledgeable	Somewhat complex — the demonstration was not overly helpful in	Students "can't see the forest for the trees" — too complicated and difficult.	

Name: _____

	materials if possible	audience; others left somewhat confused	making a point or introducing a concept.		
Suitability (Proper demonstration area and best practices)	Demonstration employed is probably the best for demonstrating the concept.	Demonstration employed is probably the best for demonstrating the concept.	Poor connection between demonstration and concept or principle	Little connection between demo and concept of principle	
Conclusion (Wraps up and ties it all together)	Thoroughly concludes the demonstration by summarizing key points; ties everything together well to bring it all back to the importance of the demo to the agriculture industry	Gives an acceptable conclusion by summarizing key points in the demonstration; ties the demo to the agriculture industry	Little conclusion evident; fails to properly summarize the key points in the demonstration and fails to tie the demo back to the agriculture industry	No conclusion evident at the end of the demonstration; demo abruptly stops	

Name: _____

Part 3

Directions:

In the space below, map out a poster that you could use for the demonstration.

Name: _____

Part 4

Directions:

Use AgExplorer, AgExplorer.FFA.org, to complete the following activities to learn about a safety-related career as an occupational health and safety manager.

Career: Occupational Health and Safety Manager

What are the responsibilities of this career? *Use the space below to identify the responsibilities.*

Who are the typical employers?

What are the suggested professional organizations and associations?



What is the average annual full-time salary?

What is the future job market outlook? *Circle the answer.*

Fair-----Good-----Excellent



What are the recommended high school courses?

What is the education/training required?



What are two related careers?

Find a local institution that you could attend to prepare you for this career.

Name: _____

Appendix 8: Vocabulary Activity

Directions:

In the space below, create a blog post using all the vocabulary words identified below. In the post, include one or two pictures to help tell the story.

Vocabulary Words: Automation, Autonomous, Innovation, Backgrounding, Cow/Calf operation, Finishing, Production, Retail, Stocker, Culture, Heritage, Misconception, Tradition, Reptile, Socialize, Welfare, Cultivated, Philosophy, Inclusion, Diverse, Literacy, Distribution, Revolution, Repository, Manufacturer, Sentiment, Interchange, Delegates, Policy, Commemorated, Pathology, Interest rate, Commodities, Genetically modified, Prestigious, Ingenuity, Evolution, Hazard, Extensive, Paramedic, Thermal, Propellant, PTO shaft

ANSWER KEYS

Name: _____

KEY: Appendix 1: Automation in Agriculture



Bell Ringer

Draw a picture of what automation looks like to you. **Answers will vary.**

Part 1

Directions: Read the article “Automation in Agriculture” in the fall 2022 issue of *FFA New Horizons*.



1. What does automation mean?

Technology being used to minimize human-input need

2. How does automation currently impact agriculture? Give two specific examples.

(1) **Increases efficiency and accuracy in food production**

(2) **Reduces need for human labor**

3. Based on the reading, what are two pros and cons that can be seen for those involved with automation in agriculture?

Pros	Cons
Increases efficiency in food production and efficiency	Could reduce the need for human labor
Make jobs easier and improve profits	Cost

- a. How do these pros and cons impact implementation of automation throughout the agriculture industry? **Answers will vary.**



4. Select an agriculture automation that caught your interest the most. **Answers will vary.**

- a. What about this caught your attention?

Answers will vary.

- b. How does this agriculture automation impact you?

Answers will vary.

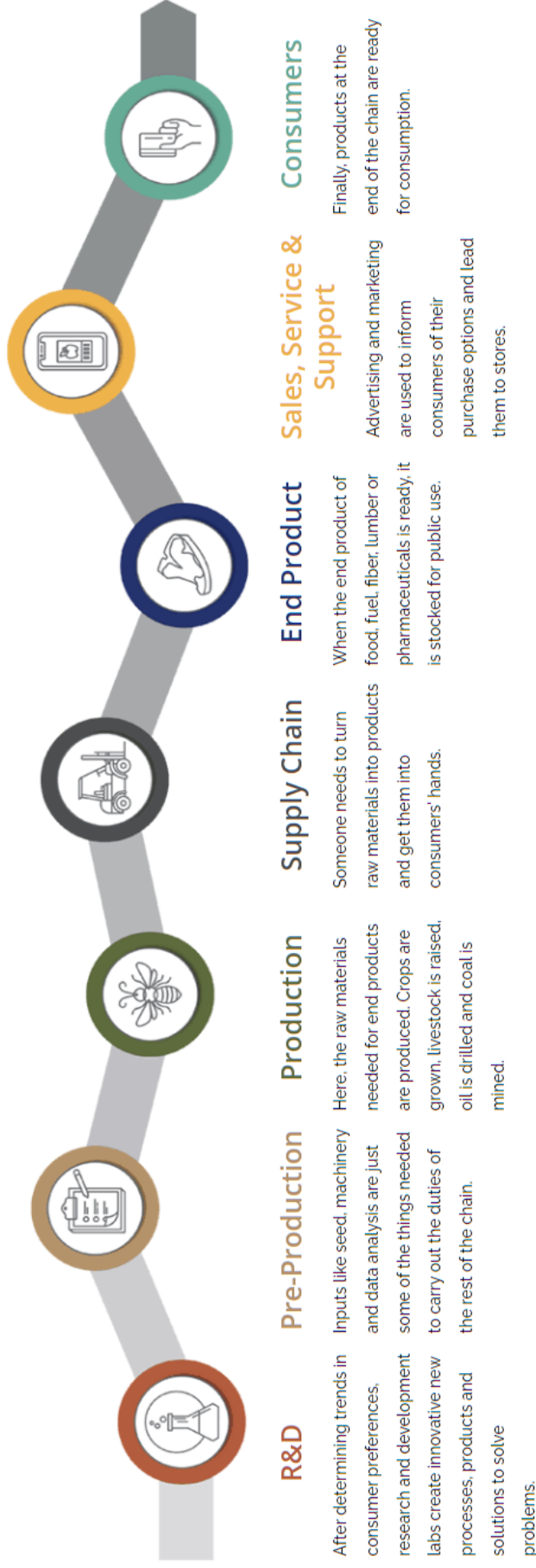
Did the image you drew at the beginning of this activity accurately reflect what automation is? Why or why not? **Answers will vary.**

Name: _____

Part 2

Directions:

The Agriculture, Food and Natural Resources (AFNR) Value Chain shows the stages agricultural products take from research and development all the way to the consumer. During this process, many steps take place to ensure a safe product. Using the AFNR Value Chain below, **identify** and **describe** an automation practice that occurs at each step along the way (answers should be written above or below each icon step in the image). Use the article and your own research to determine and describe the automation practices you are highlighting. An example is a robot being used to target and eliminate weeds in a garden (Production). **Answers will vary.**



What surprised you most about the automation that exists in the agriculture industry? Why? **Answers will vary.**

Name: _____

Part 3

Directions:

Research an agricultural problem and develop an idea for a machine or other piece of technology that would help solve this problem. Use the space below and the rubric from your teacher to brainstorm and guide your research and idea development. **Brainstorming results recorded in the space below will vary. Use the rubric to evaluate student presentations.**

How has your idea of what automation is and how it is implemented in the industry been impacted?

Answers will vary.

Aligned to the following standards:

CS.02; FFA.PL-A; FFA.CS-N; AG2; CCSS.ELA.RI.9-10.2; CCSS.ELA.W.9-10.2;
CCSS.ELA.WHST.9.10.4; MP1; MP6; CRP.02; CRP.04; CRP.08

Name: _____

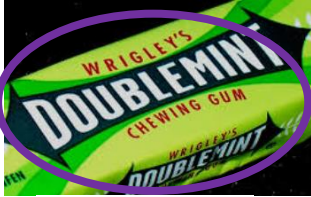
KEY: Appendix 2: Beefing Up Community Service

Bell Ringer

Directions:

In **purple**, circle the everyday product(s) produced from beef cattle.

Check with your
teacher to see if
you circled the
correct item(s)!



Chewing Gum



Chalk



Tennis Racquet Strings



Steak

Why did you choose the item(s) above that you did? What surprised you about this activity?

Answers will vary.

Do you feel that beef cattle impact you every day? Why or why not?

Answers will vary.

In three to five images, depict your knowledge of the beef production industry.

Answers will vary.

Name: _____

Part 1

Directions:

Read the article "Beefing Up Community Service" in the fall 2022 issue of *FFA New Horizons* and complete the following activities.

Name and draw the state that the Rio Rico FFA is in.



Arizona

What breed of cattle did the chapter start with?

Charolais

What does this breed look like?

Typically, white with a pink muzzle

In your own words, why do you think this project was beneficial to students regardless of their interests or future career aspirations?

Answers will vary.

About how long does it take for the students to raise a calf to market weight?

- a. 7 months
- b. 7 years
- c. 8 months
- d. 12 months

According to the chapter's advisor, what is the biggest gain from completing this project? The student experience

They gain an understanding of the true farm-to-table process as well as what happens if a plan is not followed through (Ex. feeding on time, etc.).

How many head of cattle did the chapter start with?

- a. 7
- b. 10
- c. 12
- d. 20



Name: _____

Part 2

Directions:

Using the Farm Credit Knowledge Center, <https://www.farmcreditoftexas.com/knowledge-center/blog/beef-cattle-production-and-lifecycle>, complete the following activities.

What are the three categories of beef cattle production?

- (1) Cow/Calf operation
- (2) Backgrounding or stocker
- (3) Finishing

In your own words, what is the purpose of each of these categories of beef cattle production?

- (1) Cow/calf: Prepare calves to become feeders or go back into breeding
- (2) Ensuring weight gain of calves for next steps
- (3) Calves are fed until market weight is obtained.

How does understanding the different categories of cattle production impact you and your perception of the industry?
Answers will vary. Example: Understanding the different categories makes you a more agriculturally literate individual to then have an appreciation for the production process.



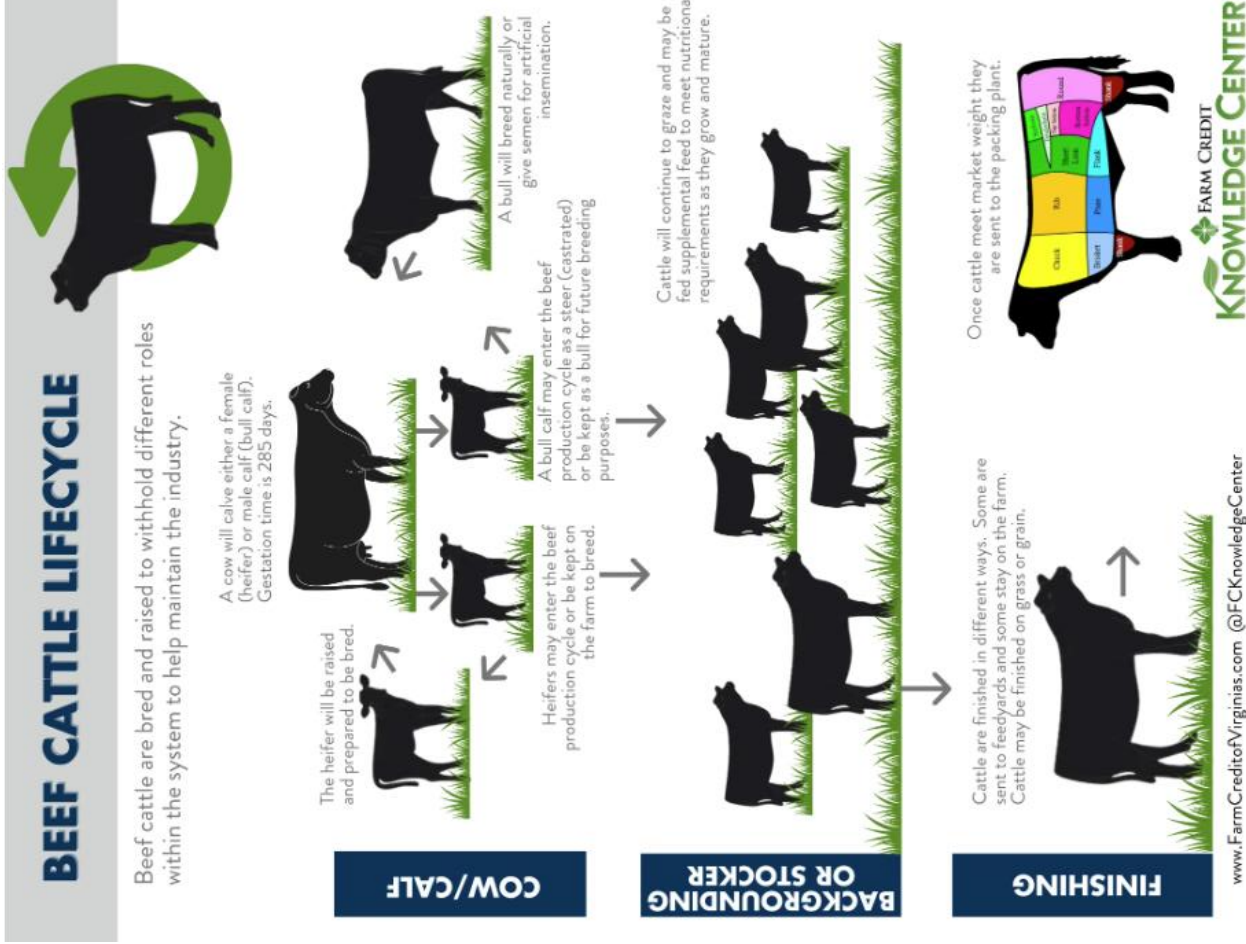
If you had to draw a picture to describe each of these three categories for someone that is unfamiliar with the beef cattle industry, what would that look like? Draw your thoughts in the space below.

Answers will vary.

Name: _____

Directions:

Using the image below, complete the activities.



Cow/Calf: In your own words, describe a cow/calf operation in a way that someone unfamiliar with agriculture would understand.

Purpose: Produce calves to either become breeding or feeder stock for the industry.

Impact on the agriculture industry: Answers will vary. Example: Ensuring cattle production through producing breeding or feeder stock

Impact for the consumer: Answers will vary. Example: Continue to produce a supply of calves for the beef industry

Backgrounding or Stocker: In your own words, describe a backgrounding or stocker operation in a way that someone unfamiliar with agriculture would understand.

Purpose: Answers will vary. Example: Feeding calves appropriately to ensure healthy animals

Impact on the agriculture industry: Answers will vary. Example: Feeding animals appropriately ensures animal welfare as well as producing a better end product

Impact for the consumer: Answers will vary. Example: Proper nutrition ensures healthy beef stock, which helps ensure a quality final product.

Finishing: In your own words, describe a finishing operation in a way that someone unfamiliar with agriculture would understand.

Purpose: Answers will vary. Example: Feed cattle appropriately to a weight suitable for market

Impact on the agriculture industry: Bringing cattle to market weight ensures product supply and income for the producer once cattle are sold.

Impact for the consumer: Answers will vary. Example: Cattle being finished means beef being sent to market that will then end up being purchased by the consumer

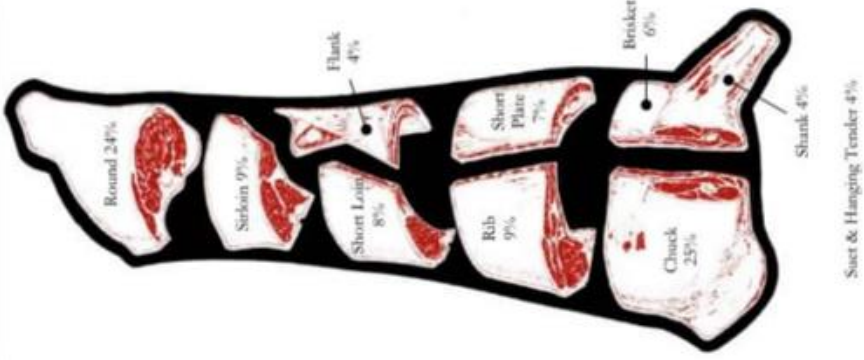
Name: _____

Part 3

Directions:

Now that you understand the on-farm production process, let's take a look at the products that come from the finished market-weight beef animal.

610 lbs. Beef
(on the rail)



430 lbs. Retail Cuts
(cut & wrapped, bring home)

- **Round 103.2 lbs.**
 - Round Steak
 - Rump Roast
 - Sirloin Tip Steak
 - Pikes Peak Roast
 - Cubed Steaks
 - Stew Beef & Ground Beef
- **Sirloin 38.7 lbs**
 - Sirloin Steak
 - Stew Beef & Ground Beef
- **Short Loin 34.4 lbs.**
 - Porterhouse Steak
 - T-Bone Steak
 - Stew Beef & Ground Beef
- **Flank 17.2 lbs.**
 - Flank Steak
 - Short Ribs
 - Ground Beef
- **Rib 38.7 lbs.**
 - Rib Eye Steak
 - Rib Steaks
 - Back Ribs
 - Stew Beef & Ground Beef
- **Short Plate 30.1 lbs.**
 - Skirt Steak
 - Short Ribs
 - Ground Beef
- **Chuck 107.5 lbs.**
 - Chuck Roast or Steak
 - Arm Roast or Steak
 - Short Ribs
 - Stew Beef & Ground Beef
- **Brisket 25.8 lbs.**
 - Brisket
- **Shank 17.2 lbs.**
 - Shank Soup Bone
 - Stew Beef & Ground Beef
- **Suet & Hanging Tender 17.2 lbs.**

When a beef animal is processed, the live weight does not correspond to the final hanging weight. A processor can expect weight loss due to loss of hide, hooves, head, organs, etc. The hanging weight will be approximately 61% of the live weight.

Using that percentage, calculate the hanging weight of the following steers.

1. Live weight: 1,234 lbs → Hanging weight: 753 lbs
2. Live weight: 1,421 lbs → Hanging weight: 867 lbs
3. Live weight: 1,287 lbs → Hanging weight: 785 lbs

Study the image to the left. Why do you think the total retail cut weight is lower?
Bones are removed, etc.

Identify three cuts that you are familiar with or have heard of and identify how that cut could be prepared for a meal (Ex. grill, fry, bake, etc.). **Answers will vary.**

1. Cut: _____ Preparation: _____
2. Cut: _____ Preparation: _____
3. Cut: _____ Preparation: _____

How does understanding where meat cuts come from and how to prepare them help you to become a better consumer? **Understanding where meat cuts come from makes you a more informed consumer. Additionally, you can have a better understanding of food preparation abilities knowing the cuts, which could also help save money if you know what you are looking at when purchasing meat.**

Image sourced from: Ag 101-National Agricultural Institute,
www.national-ag-institute.org.

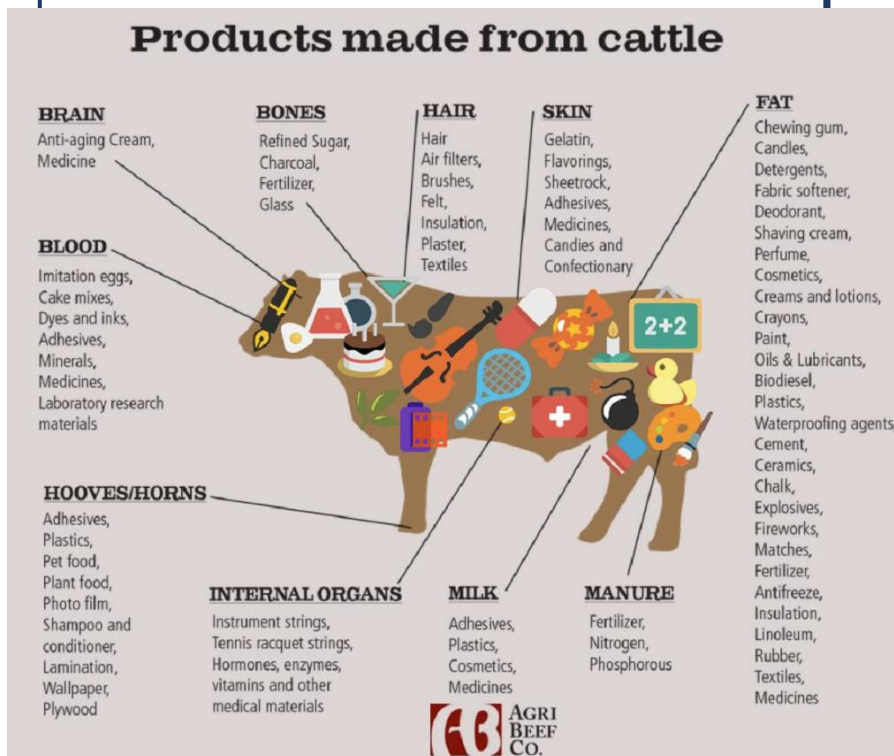
Name: _____

Part 4

Directions:

Once we have the meat products that we can consume, what happens to all the other parts of the beef animal that we do not directly consume as meat? Using the image below, identify a product that you have in your home, school or backpack that fits into each category in the table. Draw a picture of what the product looks like. **Answers will vary.**

<u>Brain</u> Name of Product: _____	Image:
<u>Bones</u> Name of Product: _____	Image:
<u>Hair</u> Name of Product: _____	Image:
<u>Skin</u> Name of Product: _____	Image:
<u>Fat</u> Name of Product: _____	Image:
<u>Internal Organs</u> Name of Product: _____	Image:
<u>Hooves/Horns</u> Name of Product: _____	Image:



Considering what you now know about cattle production, what would you say to someone who says the livestock industry is wasteful?

Answers will vary.

Could you go a day without using and/or consuming products that come from the beef cattle industry? Why or why not?

Answers will vary.

Name: _____

Using one emoji, how do you feel about the beef cattle industry?

Answers will vary.

Explain why you chose the emoji you did.

Answers will vary.



In a minimum of three sentences, write a blog post about the beef cattle industry based on what you have learned through this lesson. **Answers will vary.**

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Name: _____

Aligned to the following standards:

FFA.PL-A; FFA.PL-D; FFA.PL-F; FFA.PG-I; FFA.CS-N; FFA.CS-O; FFA.CS-P; CCSS.ELA.RI.9-10.2; CCSS.ELA.W.9-10.2; CCSS.ELA.W.9-10.4; CCSS.ELA.W.9-10.5; CRP.01; CRP.04; CRP.07

KEY: Appendix 3: Rich in Tradition

Part 1

Directions:

Read the article "Rich in Tradition" in the fall 2022 issue of *FFA New Horizons* and complete the following questions.

1. Using the color **green**, color in the box that names the month Native American Heritage is celebrated.

January	February	March	April	May	June
July	August	September	October	November	December

2. Approximately how many Native Americans are now members of FFA?

- a. 5,000
- b. 8,000
- c. **12,000**
- d. 20,000

3. How did Anthony first get hooked on FFA?

Meeting the state officers at DLS



- a. How do you think these types of experiences could impact other students that may be interested in joining a club or organization? **Answers will vary.**

4. Many Natives lived a **nomadic** lifestyle.

- a. What does this term mean?

- b. What are you passionate about? **Answers will vary.**

- 1) _____
- 2) _____
- 3) _____
- 4) _____

- c. According to the article, what are Natives passionate about?

- 1) **Family**
- 2) **Food**
- 3) **Keeping traditions alive**
- 4) **Keeping languages alive**

5. What are two misconceptions people still hold today about Native Americans?

- 1) **Teepees are still used.**
- 2) **English is not spoken.**



What similarities and differences exist?
Answers will vary.



Why do you think these misconceptions still exist? What can be done to ensure these misconceptions are not continued? **Answers will vary.**

Name: _____

Part 2

Directions:

Using the [Native Land Digital](#) program, type in your home or school zip code to determine what Native American tribes used to and/or still reside where you live/go to school. **Answers will vary.**

1. My zip code: _____
2. Which tribes used to and/or still reside in the zip code you searched? (These will show on the left side of the screen or show as you move your mouse over the map.)
3. Select one tribe you would like to learn more about (record it here): _____
4. Click on the tribe to begin learning more.
 - a. Record two facts that you found interesting about this tribe. What made them interesting to you?

Fact	<u>Why is this fact interesting to you?</u>
(1) Answers will vary.	Answers will vary.
(2) Answers will vary.	Answers will vary.
(3) Answers will vary.	Answers will vary.
(4) Answers will vary.	Answers will vary.

Name: _____

Part 3

Directions:

Now that you have learned a little about the cultural history, let's take a look at the agricultural history and the impact it has on today's agricultural practices. Read the article "[7 Facts About Indigenous Agriculture](#)" to start learning about the impact that indigenous agriculture has had on current agriculture. (Note: This is not an exhaustive list.) Select an indigenous agricultural practice (consider one that may have been practiced by the tribe you learned about in Part 2) and identify the traditional practice and the modern agricultural practice it has led to.

1. Describe the indigenous practice you selected. *Answers will vary.*
 - a. What supplies were needed? *Answers will vary.*
 - b. What commodity was raised? *Answers will vary.*
 - c. What need did this practice fulfill for the people that depended on it (trade, food, home, etc.)? Explain. *Answers will vary.*



2. Describe how this indigenous practice has changed today. If it has not changed, describe why. *Answers will vary.*

- a. What commodity or commodities are raised through this practice today? *Answers will vary.*
- b. How has this indigenous practice shaped the way that agriculture has progressed to meet the needs of the current economy and population? *Answers will vary.*



- Create an Instagram post to share the impact indigenous people had, and are still having, on agriculture across the U.S. Be sure to include a description and image. *Answers will vary.*



How does this information impact you and your involvement in agriculture or everyday life? *Answers will vary.*

Name: _____

Popcorn is a crop that was first grown by Native Americans that has become a very common food consumed today. Draw a picture of popcorn in a food stage and a growing stage.

Answers will vary.



Think about the research you just completed. How did the indigenous practices impact popcorn production as we know it today? *Answers will vary.*

Cotton is a crop that was first grown by Native Americans that has become very common today. Draw a picture of cotton in a stage of use and a growing stage.

Answers will vary.



Consider the research you just completed. How did the indigenous practices impact cotton production as we know it today? *Answers will vary.*

What indigenous customs or practices do you find most interesting and why? *Answers will vary.*



Describe why it is important to learn history. *Answers will vary.*

By drawing a series of emojis, describe how you feel impacted by what you have learned in this lesson. Include a minimum of three emojis.

Answers will vary.

Name: _____

KEY: Appendix 4: Teacher's Pets

Part 1

Directions:

Read the article "Teacher's Pets" in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

- Where is the Lexington Technology Center (LTC) located? In the space provided, draw the outline of the state and place a star where the school is located.



- In your own words, describe the purpose of the animal program at LTC.
Answers will vary.



- What group is now a partner with LTC for the small animal project?

Humane Society of South Carolina

- What is the overall purpose of a local humane society?
A humane society is an organization that looks to maintain animal welfare. Humane societies also work to adopt animals into homes. Many also offer low-cost spay/neuter services.

- Where is your local/closest humane society located? Provide the address.
Answers will vary.



- What life skills can be gained from working with small animals? Give a minimum of three.
(1) *Answers will vary.*

(2)

(3)

- o Select one of the three identified skills above and describe how this skill would benefit you in your everyday life or in your future career plans/goals.
Answers will vary.

Name: _____

Part 2

Directions:

Complete the following activities to learn about small pets, their needs and overall care.



Using the [American Veterinary Medical Association \(AVMA\)](https://www.avma.org), explore the number of small animals that have homes in the United States. Select two companion animals and three exotic animals and create a bar chart that depicts the total number of households that own small animals in the U.S. Be sure to label everything, including the axis!

Answers will vary.

Draw an emoji that depicts your thoughts as you look at the statistic you explored from the AVMA.
Answers will vary.

What do these numbers mean for our economy? Answers will vary. Example: With large numbers of people owning companion animals, there is a large need for supplies and education to ensure proper care.



Name: _____

Part 3

Directions:

Explore small animals and the care needed through the following activities.

1. Select one of the small animals shared on the [AVMA](#).
 - a. My animal is answers will vary.
2. Research to determine the supplies you will need to properly care for the small animal you have selected. Include notes from your research in the brainstorm section below.

Answers will vary.

3. Use the [Tractor Supply Co.](#) website to explore all the supplies you need to care for the small animal you selected.
 - a. Be sure to include the following items: housing, bedding, feed and supplements, stimulation (Ex. ball, running wheel, etc.) Note: If you need more space, add another row, and if you have extra rows, place an X in the empty boxes.

Supply Needed	Description/Reason	Cost
Answers will vary.		

Name: _____

4. In the space provided, draw a picture of the habitat for the animal you selected. Label all the important supplies you identified in Step 3. **Answers will vary.**

5. Develop a daily plan to care for the animal you selected in Step 1. Be sure to consider food, water, cleaning and interaction with the pet. Note: If you need more space, add another row, and if you have extra rows, place an X in the empty boxes. **Answers will vary.**

Time	Care Procedure	Why is this necessary?

What is one thing that surprised you as you were learning about your selected animal and developing your supply and care lists? **Answers will vary.**

What is one thing that you learned about yourself while learning about your selected animal? **Answers will vary.**

In one sentence, why is it important to plan prior to adding an animal to your household? **Answers will vary.**

Name: _____

KEY: Appendix 5: Differently Abled, Similarly Involved

Part 1

Directions:

Read the article “Differently Abled, Similarly Involved” in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

1. December 3 marks the 20th annual International Day of Persons with Disabilities.



2. What are the three goals of this day of observance?



Raise awareness

1

3. Explain what FFA advisor Ron Koch did for one of his students so he could be involved with livestock:

He researched assistive technology and constructed a wheelchair attachment for leading lambs around a show ring, some of which went on to win county fair grand champion.



2

Establish support

3

celebrate all individuals' impact

4. Explain what FFA advisor Levi Jones did for one of his students so she could be involved with welding in the classroom:

A custom stool for welding was provided, and the student built her own shop table. She can also farm her own plot of soybeans after assistance into the cab.

5. What four takeaways did the two FFA advisors share from their experiences?

Communicate openly.

Offer the same opportunities.

Keep your mind and eyes open.

Help students find their passions and source the resources they need.

Identify a quote that stood out to you in the article.

Answers will vary.

Explain why this quote stood out to you.

Answers will vary.

Name: _____

Part 2

Directions:

Answer the questions below to plan an inclusive FFA meeting or school-related event. **Answers will vary.**

1. What event could you plan for your FFA chapter and/or other school organization/club?

Define inclusivity in your own words.

2. What is the purpose of the event? _____

3. Using the “SMART” method, what are three goals of the event? *For more information about the SMART method, follow this link to Pages 7 and 8: <https://FFA.box.com/s/ol3jtx40mn0l56omwk6ci8sdrd3yzsz1>.*

- a. _____
- _____
- b. _____
- _____
- c. _____
- _____

4. Considering all types of students, identify three areas of the event and explain ways to ensure that all students can fully participate in the event. (Tip: Remember all disabilities are not immediately visible and are not only physical in nature.)

Example: Access — A wheelchair ramp and handrails are available.

Area	Description

Develop an inclusive hashtag, based on your definition from above, to help promote your event on social media.

Why is it important to plan inclusive events?

How can you take what you have learned in this process and apply it in the future?

Name: _____

KEY: Appendix 6: 70 Years of FFA Stories

Part 1

Directions:

Read the article “70 Years of FFA Stories” in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.

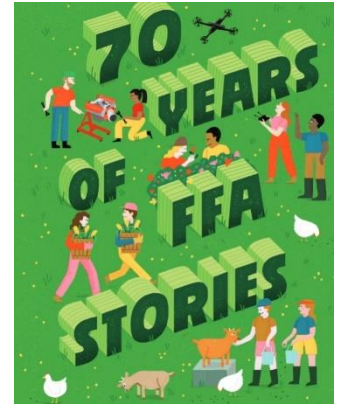
1. What was the title of the first agricultural magazine? *The Agricultural Museum*

1a. When was the magazine published?

- a. 1811
- b. 1810
- c. 1825
- d. 1928

2. It was a publication by farmers for farmers and about farming.

3. Fast-forward more than 100 years, and the National *Future Farmer*, a publication for FFA members about FFA activities hits members' mailboxes.



4. While browsing the National FFA Organization archives, you might run across the National FFA board minutes from October 7, 1950. The very last line on the very last page reads, “It was moved by Vice President King that the Board of Trustees and Advisory Council advise the delegates at the convention that we are working on a national magazine and have requested that it be published at the earliest possible date.”

5. What has happened since that motion was passed? *Since the motion was made more than 70 years ago, millions of copies of national FFA magazines have been circulated to FFA members across the country.*

6. In what decade did the name of the magazine change to *FFA New Horizons*?

- a. 1970s
- b. 1980s
- c. 1990s
- d. 2000s

7. Identify a quote from the article that stands out to you and explain why. *Answers will vary.*



Name: _____

Part 2

Directions:

Utilize the magazine-cover template, on the next page, to design and create your very own *FFA New Horizons* magazine cover to represent and summarize your FFA and agricultural class experience. If you want to design your cover digitally, you can use the [PosterMyWall](https://www.postermywall.com/) website. After you're done, display your cover around the classroom and complete a gallery walk to look at other covers. Pick out two to three covers that stood out to you and be prepared to discuss why. **Answers will vary.**

Items to include in your design:

- Picture
- Three or four story titles (like in the example covers below)
- Your design should be colorful. Be creative!

Examples of past covers:



After you design your cover, answer these questions to reflect.

How does your experience in FFA and/or agricultural class(es) influence some of your future behaviors and decisions?

Explain why you chose the stories and images you did.

Looking back at your completed magazine cover, which activity that you experienced was the most enjoyable and why?

Name: _____



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Fall 2022

Answers will vary.

Name: _____

Aligned to the following standards: AG2; AG3 AG5;; CS.03; FFA.PL-A; FFA.PL-C; FFA.PL-D; FFA.PL-E; FFA.PL-F; FFA.PG-I; FFA.CS-N; FFA.CS-O; FFA.CS-P; CS.02; AG2; CCSS.ELA.RI.9-10.2; CCSS.ELA.RI.9-10.4; CCSS.W.9-10.4; CCSS.ELA.W.9-10.8; CCSS.SL.9-10.2; CCSS.SL.9-10.4; CRP.02; CRP.04; CRP.07; CRP.08

KEY: Appendix 7: 6 Important Farm Safety Tips

Part 1

Directions:

Read the article "6 Important Farm Safety Tips" in the fall 2022 issue of *FFA New Horizons*. Complete the following activities to learn more.



1. National Farm Safety and Health Week is recognized every year during the third week in September.

1a. What harvest season does it coincide with? Fall

2. In the table below, identify and explain each safety tip.

Safety Tip	Description
Educate yourself.	Learn all about the mechanics and risks of your specific project. Start with the National Education Center for Agricultural Safety. You can find free webinars and a list of resources on its website. The Occupational Safety and Health Administration has resources dedicated to agriculture operators.
Stock a first aid kit.	Be sure to restock. A farm first aid kit has been developed by a paramedic based on injuries he has seen. It includes large bandages, a thermal blanket, large shears and four times the eyewash of standard kits. You may want it to be stocked with additional supplies to relieve allergic reactions in an emergency. The kit should be with you at all times.
Check your fire extinguisher.	Test it twice a year. Sometimes it will have power but not propellant so make sure to fill it after each use.
Read markings on every vehicle you'll be in or near.	Tractor rollovers are decreasing, but ATV/UTV rollovers are increasing. Don't exceed weight limits as that can impact steering and braking, and avoid roadways because the tires are created for off-road driving. Wear your helmet and seat belt, if there is one, and steer clear of moving parts of any vehicle, especially PTO shafts behind tractors.
Avoid wearing loose clothing and jewelry.	Loose clothing and jewelry can get in the way of your job, or worse — snag and injure you.
Ask for help.	Stress and emotional health concerns are rising in farming communities. Know who to call, and recognize when you need to call.

Name: _____

Part 2

Directions:

Follow the steps below to develop a demonstration for a safety practice. Reference this site, and similar sites, when planning your demonstration: <https://www.lsuaqcenter.com/MCMS/RelatedFiles/%7BD4E91CD0-EA91-4041-9326-C2BBF3694450%7D/How-to-Give-a-Method-Demonstration.pdf>. Another resource that can be referenced is the Safety in Agriculture for Youth website: <https://aq-safety.extension.org/safety-in-agriculture-for-youth/>.

Choose a safety practice from the article and create a demonstration for it.

Answers will vary.



Why did you choose this practice? *Answers will vary.*

Use this space to plan the demonstration: What activities will occur during the demonstration? *Include in your plan an introduction, middle and conclusion to the demonstration. Reference the rubric while planning out the demonstration.*

Answers will vary.

What materials and resources will you need for the event?
Answers will vary.

Identify individuals that can help with this demonstration AND explain what they can help with.
Answers will vary.

How will planning this demonstration influence your future?
Answers will vary.

Name: _____

Part 3

Directions:

In the space below, map out a poster that you could use for the demonstration.

Answers will vary.

Name: _____

Part 4

Directions:

Use AgExplorer, AgExplorer.FFA.org, to complete the following activities to learn about a safety-related career as an occupational health and safety manager.

Career: Occupational Health and Safety Manager

What are the responsibilities of this career? *Use the space below to identify the responsibilities.*

- Establish maintenance of safe and healthy working conditions
- Devise and coordinate safety programs
- Assist in meeting obligations under occupational health and safety legislation
- Coordinate ongoing training for safety and environmental awareness
- Coordinate training for emergency response teams set-up in workplaces
- Inspect the workplace and regularly audit safety procedures
- Investigate accidents and prepare and maintain required reports
- Provide new hire orientation outlining the company's safety rules
- Promote a proactive safety culture
- Organize and participate in safety committee activities
- Develop specific safety objectives and create action plans to meet those objectives
- Maintain, review and report safety performance

Who are the typical employers?
Occupational safety and health managers are employed by any agriculture company that has processing- or manufacturing-related jobs.

What is the future job market outlook? *Circle the answer.*

Fair-----Good-----Excellent



What are the suggested professional organizations and associations?

National Association of Safety Professionals

National Safety Council

What is the education/training required?

Occupational safety and health managers would be most successful if they have formal training and education, such as an associate or bachelor's degree, in human health, engineering, chemistry or environmental health sciences.



What is the average annual full-time salary?

\$52,000

What are the recommended high school courses?

Agricultural education, anatomy, biology, mathematics, chemistry and physics

What are two related careers?

Possible answers: food production supervisor, food safety/quality assurance manager, sanitation coordinator, etc.

Find a local institution that you could attend to prepare you for this career.