Unit One addressed the big picture of labor market realities— which industries are growing, which are shrinking, and technology’s impact on the market. Students learned about a wide range of careers in the Food Production sector and which subsectors have the most plentiful jobs in their region. They learned about the industrialization of Food Production throughout history, how our food gets from the farm to our table, and examples of careers available at each stage of the food system. Students also learned about cutting edge technology that is changing the way our food is grown and manufactured.

Unit Two addressed the inner workings of the job-seeker. What are her interests and passions? What kind of work environment will she enjoy? What careers should she consider based on what she knows about herself and what factors might influence someone making a career change? Students also learned to navigate career database websites, assess their own interests and conduct a group research project about careers in the Food Production sector.

In Unit Three, students’ research becomes personalized. They hear from Food Production workers themselves, through firsthand accounts and interviews from workers in text and video, and discuss what they learn. They develop informational interview questions and conduct further research on Food Production careers of interest.
Unit 3 • Summary

1. **VIDEO NARRATIVES IN FOOD PRODUCTION**
   Students watch and discuss videos about Food Production careers, then respond to the videos in writing, citing evidence from the text to support their responses.

2. **ANDREA SMITH, SANITARY WELDER**
   Students read an interview with a Sanitary Welder, Andrea Smith. Then they describe in writing Andrea’s career journey, current position, and the people who helped her along the way. Students practice identifying the main idea, supporting ideas, and other textual elements.

3. **CAREER NARRATIVES IN FOOD PRODUCTION SERIES**
   Students practice reading, research and note-taking skills by reading Food Production career narratives, then conducting further research on a Food Production career of their choice.

   3.1 • Using Question Stems as a Reading Strategy: Career Narratives in Food Production
   Students develop and answer questions about career narratives as a reading technique.

   3.2 • Computer Research: Career Narratives in Food Production
   After reading a Food Production career narrative, students learn more about the career by reading descriptions of it on a career database, such as the Bureau of Labor Statistics.
Video Narratives in Food Production

Students view short videos about workers describing their jobs in the Food Production sector and write responses to questions about the videos. The following page describes and provides links to short videos on various careers in the sector. YouTube has hundreds of short videos on dozens of careers. Teachers may use the ones listed or find additional ones.

PREP

• Pre-screen and select a video that students will view, using the recommended lists on the following pages or other videos that you find.
• Adapt the Food Production Career Video Narratives worksheet to the video you choose.

MATERIALS

• Requires use of a computer and projector.
• Food Production Career Video Narratives worksheet

EXPLAIN

1 Analyzing data about careers is important, but it’s also helpful to hear about how workers in the field experience their jobs. If you met someone who works in a field you are interested in, what questions would you ask them?
   > What is your typical day like? How did you get your job? What do you like and dislike about your job? What advice do you have for people entering the field?

2 Today we are going to watch a video about working as a _____________. We are going to watch it twice. The first time, listen for the main ideas. Which career does the video describe? Does the worker seem to like his/her job? How do you know? Then, you are going to read a series of questions about the video, and listen with answering the questions in mind. After watching a second time, you are going to write responses to the questions.

3 Play the video. Have a brief discussion about what students learned about the career and the worker’s experience of it.

4 Distribute the Food Production Career Video Narratives worksheet. Ask students to read the questions, but not write anything yet.

5 Play the video a second time.

6 Ask students to complete the worksheet.
Video Narratives About Careers in Food Production

The videos listed below depict Food Production careers from the worker’s perspective. YouTube has hundreds more which can be found by conducting keywords searches for “_____________ career,” for example “packaging specialist.”

FOOD MANUFACTURING CAREERS

1. **Employment in the Food Manufacturing Industry — Midwest Food Processors Association**
   An overview of available and fulfilling careers in Food Manufacturing transforming vegetables grown on a farm into packaged vegetables, like tater tots and diced carrots. (4:35)
   https://www.youtube.com/watch?v=WbOhvHE8JcI

2. **Packaging and Filling Machine Operator**
   This video offers an overview of the requirements and duties of Packaging and Machine Operators in Food Manufacturing facilities. This career can also be found in other Manufacturing subsectors. (2:08)
   https://www.youtube.com/watch?v=1d8ikzRm-cM&t=11s

3. **Industrial Maintenance Mechanic**
   This video offers an overview of the requirements, duties and skills of an Industrial Maintenance Mechanic. This career is in high demand in Food Manufacturing facilities and can also be found in other Manufacturing subsectors. (1:36)
   https://www.youtube.com/watch?v=rnEOhHETbrE&t=14s

4. **Truck Driver for Food Manufacturer**
   On the road with a truck driver for a food manufacturer, this is an in-depth look at a typical day that includes the many responsibilities of a driver committed to customer satisfaction. (3:43)
   https://www.youtube.com/watch?v=DtaTLMVXKUk

5. **Food Scientist/Quality Assurance Manager**
   A Quality Assurance Manager at a small batch ice cream manufacturer explains her job responsibilities, as well as her education and career pathway. (5:56)
   https://www.youtube.com/watch?v=RFE9ByZ_oUo
6. A Day in the Life of a Food Scientist at NASA
   The Food Science team at NASA shows how they use science to develop the food necessary to feed astronauts in space. (3:38)
   https://www.youtube.com/watch?v=4wAC-ST77Ow

7. Food Entrepreneur
   Elizabeth Woods, founder of Magnificent Quiche, explains her journey from early life challenges to becoming a successful food entrepreneur. (6:05)
   https://www.youtube.com/watch?v=9EPiGLzPZVM

8. Sanitary Welder
   A sanitary welder in the beverage industry discusses his path to welding, job training, and plans for the future. (4:55)
   https://www.youtube.com/watch?time_continue=5&v=BBEkWY8GzX0

AGRICULTURE CAREERS

1. New York Potato and Grain Farmer
   A grain and potato farmer in Gabriels, NY discusses his career as a full time farmer. (4:40)
   https://www.youtube.com/watch?time_continue=1&v=uE7a6-VgluE

2. Dairy Farmer
   A Dairy Farmer gives a guided tour of his farm and explains his daily responsibilities, his education and career path, as well as the wide range of jobs available on a dairy farm. (3:40)
   https://www.youtube.com/watch?v=N8izMWzULW4

3. Agricultural Equipment Sales
   An Agricultural Equipment Salesperson talks about jobs in Agricultural equipment, from mechanics, to sales, to technology and development. In addition to talking about the responsibilities and challenges of working with Agricultural equipment, he encourages people to think about jobs in Agriculture that exist outside the farm. (2:52)
   https://www.youtube.com/watch?v=XzFFr1Dl_TA
4. **A Day-in-the-Life of Wind Turbine Service Technician**

   A Wind Turbine Technician narrates his typical day on the job, talks about the challenges and rewards of his career, and the path he took to achieve his career goals. Wind power has been used for centuries on farms and is now (along with solar power) increasingly in demand as support for renewable forms of energy has risen. (2:59)

   https://www.youtube.com/watch?v=J6Gykr__pzQ

5. **Biological Sciences Technician**

   A Biological Sciences Technician who studies disease in native bees explains how and why she chose her career path, plus the important impact her work has on Agriculture and Food Production. (2:16)

   https://www.youtube.com/watch?v=j4HNMeJjgs&index=21&list=PL7B61381EE0438243

6. **Crop Consultant**

   An experienced Crop Consultant of 24 years explains what he does, his educational and career pathway, and why he loves what he does. (5:12)

   https://www.youtube.com/watch?v=3Z_mC4M_bWU

7. **Precision Agriculture Consultant**

   A Precision Agriculture Consultant talks about his education and career pathway to the high tech farming world of precision agriculture, including how this technology has advanced the science of agriculture. (4:51)

   https://www.youtube.com/watch?v=CYsSQ9b77LU

8. **Pest Control Advisor**

   An overview of what it’s like to work in pest control in the world of Agriculture.

   https://www.youtube.com/watch?v=hN-xsApTdFE

9. **Organic Farmer**

   An Organic Farmer discusses his daily activities, challenges, joys, and why it’s important that someone who wants to be a farmer is passionate about the work. (2:54)

   https://connectedstudios.org/url-zuF2ha7ENUkhXWnhzOFCCGrTnKFIAxYaCUodeL00J
Food Production Career Video Narratives

Write complete responses to the questions below, based on the video narrative.

1. Which career(s) does this video describe?

2. What does the person/people in the video do at work?

3. In addition to what they describe doing at work, what additional tasks do you think they do at work?

4. Does the main speaker in the video enjoy his/her job? Provide evidence from the video that supports your claim.
5 What kind of preparation is required for this career?

6 What are some advantages and disadvantages of working in this field?

7 Which additional careers does this career interact with?

8 Is this a career you would be interested in? Why or why not?
Andrea Smith, Sanitary Welder

Students read an interview with a sanitary welder in the Food Manufacturing industry. After reading the interview, they answer questions about her career journey, current position, and the people who helped her along the way.

**PREP**
- Read Interview with Andrea Smith, Sanitary Welder article

**MATERIALS**
- Milk pasteurization machine image
- Interview with Andrea Smith, Sanitary Welder article
- Respond in Writing: Andrea Smith, Sanitary Welder handout

**EXPLAIN**

1. Manufacturing has traditionally been seen as hard, dirty work that is mostly a job for men. Today’s Manufacturing jobs look very different. There are also more and more women working in the sector. Welders can work in a variety of Manufacturing settings and for a wide range of companies, including those in Food Manufacturing.

2. Write the word “weld” on the board. Ask for volunteers to define the word. If students are having trouble, provide them with the following definition:

   - **Weld:** to join together metal pieces or parts by heating the surfaces to the point of melting using a blowtorch or other means, and then pressing or hammering the pieces together so they cool as one piece.

3. Companies in the food and beverage manufacturing industry are held to very high standards when it comes to sanitation or cleanliness and safety. Why do you think this is?

   - Because contaminated or spoiled food and beverages can make people very sick and sometimes even kill them.

4. A specific kind of welding is necessary in the food and beverage industry that helps keep food safe for consumption. It is called Sanitary Welding. Sanitary welders use heat to weld metal parts together, such as pipes and joints, on
machinery that will come into contact with the food or beverage product. One example of such machinery is a milk pasteurizing machine. Milk has to go through a process called pasteurization that kills harmful bacteria and makes milk safe for humans to drink.

5 Show Milk pasteurization machine image to students. Explain: This is a milk pasteurization machine. Fresh milk is poured into the machine where it travels through the pipes and goes through a process of heating and cooling that kills harmful bacteria and makes it safe for drinking. A Sanitary Welder’s job is to help make and repair these machines with a specific kind of welding that connects the parts and ensures they are airtight. The parts have to be airtight so that the milk doesn’t leak out and other bacteria can’t get in during the pasteurization process. This is one example of the role of Sanitary Welders in the Food Production sector. Today we are going to read an interview with a woman who works as a Sanitary Welder.

6 Distribute the Interview with Andrea Smith, Sanitary Welder article. Ask students to read and annotate it, noting what she does at her job, what her educational background is, and what she likes about being a Sanitary Welder.

DISCUSS

1 In pairs, ask students to discuss what they learned in the reading, and what was interesting, surprising or confusing.

2 Ask students to share what they learned about welding jobs with the class. Would you like a job like Andrea Smith’s? Why or why not?

3 Distribute Respond in Writing: Andrea Smith, Sanitary Welder handout. Ask students to work in pairs to complete the handout.
Milk pasteurization machine

Interview with Andrea Smith, Sanitary Welder

Adapted from an interview with Amanda Reel http://www.pma.org/campaign/8WIM/impact/Holidays2016-WIM-Impact.pdf

Please tell our readers a little bit about your job and what your work looks like every day.

I am a sanitary welder at D&C, Inc., a company that provides sanitary stainless steel welding, pipe-fitting, polishing, rigging, and equipment installation in dairy processing plants. We create, install, and repair the steel machinery used in the processing of milk and other dairy products. Sanitary welding plays a key role in the safety of our food system. It is my job to ensure the welding, installation, and repairs that I perform are done correctly, efficiently, and on time, so that all our clients’ dairy products can be made with the utmost attention to health and sanitation. Some days I weld, some days I clean pipes and installations, and other days I run the machinery to make sure they are in working order. I also cover for my supervisor or lead man when they are out. Every day I come into work and do a different job, so it’s always interesting. Because we serve dairy processing facilities all over the country, sometimes I get to travel to new places, which can be exhausting, but is also very exciting. When I am welding, I have to read blueprints and fabricate parts for the dairy processing machines, which means I have to be able to read and understand blueprints. After I’ve read and understood the blueprints, then I assemble the parts and weld them together.

How did you arrive at your current position? What attracted you to a career in welding?

When I was 14, I chose welding as the trade I would study through high school. My junior year I decided to make welding my career because it’s not often you get to turn your passion into a career. My teachers explained to us that welding was a great skill to have because there are welding jobs available in all different kinds of Manufacturing industries, including Food Manufacturing. Because of this I knew that I would have a good chance at landing a steady, well-paying job if I stuck with welding. Also, I like the challenge of manufacturing—something about making things from scratch entices me. When I was just about to turn 18, D&C called my high school and asked if they had any welders with a good welding
skill set and my teacher asked me if I would be interested in an interview. I took the opportunity in a heartbeat. Within one week they contacted me and set up my initial interview. The interviewer asked me to read a blueprint and tell them everything I knew about every type of welding. I was also asked to describe my skills. I would say it went very well. I was immediately offered an in-the-field interview, to demonstrate my physical welding skills. In the field interview, I demonstrated my TIG welding skills. TIG welding is a specific technique that is used in sanitary welding. They told me that was all they needed to see and that I would be contacted soon with my start date. I have been a welder for D&C ever since.

There are a lot of outdated stereotypes about the manufacturing sector, for example, that the workplaces are dirty and dangerous and that the field and skills required are a better fit for men. Have you encountered stereotypes like these in your education or career and how did you overcome them?

My whole career has been full of encounters with these stereotypes. One comment I hear far too often, when someone asks me what I do and I explain to them that I am a welder, is “Wow, I’ve never met a pretty welder...actually I’ve never met a female welder!” I am D&C’s first woman welder, but I will not be the last! It is not true that women can’t be welders. Unfortunately, many are steered away by the awful stereotypes that exist about welding such as it being a man’s
job, a dirty job, or a hard job. It is also untrue that welding is only performed in a very dirty environment. That is not the case at my job and at many other manufacturing companies. In fact, many facilities are cleaner than you can ever imagine! Especially in Food Manufacturing where cleanliness is a matter of life and death. If food gets contaminated, we can make people sick. Most of the factories I've seen have been picture-perfect.

**Research shows that women, especially women in STEM fields, do better if they have a mentor. Has mentorship played any role in your career?**

Mentorship has definitely played a huge role in my career. I would not be where I am today without the help of my mentors. My two welding teachers in high school were my first mentors and they helped me to learn almost everything I know about welding. My mentor at my current position is our lead man, Don Williams. Don has helped me learn new skills, like repair work and time management, through hands-on training. He has also demonstrated great work ethic, leadership skills and brainstorming to make even the most difficult problem seem easy. I try to emulate these skills as I grow in my career.

**What do you think can be done to spread the word to women about career options in modern Manufacturing?**

Certainly organizations (like Women in Manufacturing) that make it their mission to support women in Manufacturing go a long way towards raising awareness about Manufacturing. Promoting Manufacturing as a career to middle and high school students—and not just the boys—is crucial. Teachers, guidance counselors and parents are instrumental in communicating the opportunities Manufacturing presents. Many kids, especially girls, don't even know these good, high-paying, rewarding jobs exist. I'm sure if young women knew what an interesting, well-paying career they could have in Manufacturing they would give it a closer look.
Respond in Writing: Andrea Smith, Sanitary Welder

Answer the questions below based on the reading about Andrea Smith's career in Sanitary Welding.

1. Describe Andrea’s feelings about her career.

2. Identify two ways that Andrea became prepared for her job or updated her skills.

3. Explain why the author chose to include the two images you see in the article. What information do you get from them as a reader?

4. What has been challenging for Andrea in her career as a welder?
Section 2

5. How did Andrea first begin working in the Food Manufacturing field?

6. Why does Andrea mention a few specific people as being influential in her life?

7. What does Andrea say about women working in Manufacturing?

8. This text type is an interview. In your own words, explain what an interview is. How do you think this article would have been different if the author had written a story about Andrea instead of publishing the interview with her? Do you think it would have been a more or less effective text? Explain your answer.

9. What else would you like to ask Andrea?
Career Narratives in Food Production Series

Students learn about Food Production careers from workers themselves, while practicing reading strategies such as developing and answering questions from question stems.

ACTIVITIES IN THIS SERIES

3.1 • Using Question Stems as a Reading Strategy:
Career Narratives in Food Production
  • Maintenance Technician
  • Baker
  • Commercial Fisherman
  • Cattle Rancher
  • Farm Manager

3.2 • Computer Research: Career Narratives in Food Production
Lesson Guide

Using Question Stems as a Reading Strategy: Career Narratives in Food Production

Students read one or more Food Production career narratives, then develop and answer questions as a reading strategy. Studies have shown that when students develop their own questions about a text, their comprehension and retention of the text is increased.

PREP

In the preceding class, have students sign up to read the Food Production narrative of their choice. It’s okay if there is a career that no one signs up for. Be prepared to discuss the utility of this activity for students who are interested in sectors other than Food Production.

Examples of uses include improving reading skills, practicing developing questions about reading, expanding vocabulary, learning about Food Production professions or learning facts about Food Production that are important to their health, safety, and satisfaction as a consumer of food products.

MATERIALS

• Career Narrative Sign-up
• Career Narrative Questions handout
• Career Narratives

EXPLAIN

1. Distribute the Career Narrative Questions handout. Ask students to complete the first three prompts explaining why they chose the story, what they predict it will be about and what they expect to learn from reading it.

2. Ask students to read and annotate, marking parts they thought were important, interesting, surprising or confusing.

NOTE
For guidance on teaching annotation, see “How to Teach Annotation” in the User’s Guide, found at www.tinyurl.com/cunycareerkits
3 Distribute the career narratives, and give students time to read and annotate.

4 When students have finished reading, direct them back to the *Career Narrative Questions* handout. Explain that research shows that when people ask their own questions, they remember more of what they read. Here, part of the question is written for them, and part of the question they will have to fill in. Ask students to complete the questions. You may want to have students read aloud a few of the questions once they are completed, or you can circulate to check progress.

5 After students write the questions, ask them to answer the questions.
Career Narrative Sign-up

In the space below, sign up to read a story about one of the following careers:

- Maintenance Technician
- Baker
- Commercial Fisherman
- Cattle Rancher
- Farm Manager

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<th>Name</th>
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Career Narrative Questions

Before reading the story, complete the statements below:

1 I chose the story about being a ____________________ because ____________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2 I predict this narrative is about ______________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

3 I expect to learn __________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

   from reading this narrative.

After reading the narrative, complete and answer the following questions:

1 What does a ____________________ do every day?

2 What are the best parts of being a ____________________?
3. What are the challenges of being a ________________?

4. Why did ________________ say ________________? What does it mean, and why is it important?

5. What is one surprising and/or interesting thing you learned about being a ________________?

6. In your own words, explain the image or images included in your career narrative. Why do you think the author chose to include the specific image or images? What information do you learn from them?

7. What else do you want to find out about being a ________________ that’s not explained in the article?

8. Do you think you would want to be a ________________? Why or why not?
Hello, I’m Jim Frydenlund. With skills I gained while working as a Maintenance Technician in the U.S. Air Force, and with an Associate’s Degree from Western Wisconsin Technical College in the Electro-Mechanical Program, I have found that working as a Maintenance Technician in the manufacturing facility of Westby Cooperative Creamery is a great career fit for me. Every day I get to apply my skills, education, and experience in helping to keep this complex dairy manufacturing plant operating safely, productively, and efficiently, and in compliance with numerous food manufacturing regulations. And, I get to do so while working with a great group of people.

My typical workday, Monday through Friday, begins at 7:00AM. My duties include installation, maintenance and troubleshooting various processing and packaging equipment. I also maintain the boiler on a daily basis, change air filters and clean refrigeration equipment. I do welding to repair or create things as needed, along with plumbing, gas and electrical work, and snow removal. As you can imagine, every day is a busy day, because so much is going on in the Creamery from one end of the building to another.

I also am a Grade Level 4 Wastewater Operator and have been maintaining the Westby Cooperative Creamery Wastewater Pond System since May of 2006. This wastewater system serves to treat all of the water that is used to wash out vats, tanks, and equipment at the plant. At the wastewater ponds, I take daily checks of the water flow levels, test water pH, test the temperature and amount of dissolved oxygen in the water, and take samples for lab analysis. I also complete
a monthly report that is filed with the Wisconsin Department of Natural Resources (DNR) to ensure that our wastewater is meeting all regulated pollution control limits before leaving the pond system. I do love my trout fishing. So, this is more than just a job. I do have a vested interest to ensure we are sending clean water back into our environment.

One task I have each day includes checking the plant-facility boiler with tests. We keep a close eye on the quality of the water in the boiler to be sure the steam system pipes are protected from damage. This will ensure a long, healthy life for the entire boiler system which provides heat for milk pasteurization (the process that kills bacteria and makes milk safe for drinking), hot water for cleaning equipment, and heat for the plant.

Another task I perform that is very important to overall product quality is the adjustment, and repair if needed, of the Pasteurizing Vat Temperature Chart Recording equipment in the main Product Processing Room. Proper pasteurization temperatures ensure that the products being processed in, and then leaving these vats, meet all food safety requirements.

Beyond routine daily duties and projects, there are a variety of other tasks performed to ensure that procedures and machinery run reliably every hour of every day. You can never guess where the next call for a repair or adjustment will take you. It may be that the packaging machine has a heat sealer that is not properly sealing the foil-lid onto the product cup due to a bad heater element; it could be a door in the warehouse that is not opening due to a broken spring; or, it could be a pump that will not run due to a bad motor. It can be fast paced, which I really do enjoy. This is a job that keeps me on the move. Guess that’s why the past ten years have gone by so quickly. And, it has been exciting to be part of the growth of this business over those years as well.

I really like how Westby Cooperative Creamery has been on a path of improvement and growth. The expansion and investment in new packaging machines, processing tanks, and other plant equipment are clear signs of a strong business moving in the right direction and adding new jobs. As production has steadily increased, our Maintenance Team itself has tripled in
size since I first started here in March of 2005. And it is great to have the new people on board. I enjoy working with a group of very experienced maintenance technicians and other personnel.

I live in, and grew up in Westby. I have eaten Westby cheese and cultured dairy food products all my life. So, it is a matter of home town pride to do my best and to work hard in continuing the long history of Westby Cooperative Creamery in manufacturing the highest quality products. It always puts a smile on my face when I meet someone and tell them where I work, and they say—“Westby cottage cheese is the best” or “I love your cheese curds.”
The Typical Day of a Baker

Adapted from https://www.shmoop.com/careers/baker/typical-day.html

At 2:30AM, most people are sound asleep in their beds. Dorothy, an aspiring baker, is just waking up.

Rolling out of bed, Dorothy ties her hair into a knot, pulls on her reflective jacket, and hops on her bike to work. It’s still pitch-black outside, but such is the life of a morning-shift baker at a local bakery called, “Yeast of Eden.”

Dorothy gets to Yeast of Eden seven minutes early. Her shift manager, Donald, is a notorious stickler for timeliness. Last week, one of Dorothy’s co-workers arrived exactly two minutes late, out of breath after her train broke down and she was forced to run nearly two blocks from the second-nearest station. The co-worker was fired after that.

Dorothy makes a point never to be late. And she isn’t late today, either, as she enters through the side entrance to the bakery at a cool 3:23AM. She picks her apron off its hook and slides her feet into the ugly, but ergonomic, clogs that bakers use. With seventeen-hour-long shifts, Dorothy came to understand the value of comfortable shoes pretty early on in her baking career.

Dressed and raring to go, Dorothy checks her name on the bakery’s task list. It’s the wee hours of the morning, so the list is geared towards producing all the fresh baked goods patrons are going to want with their morning lattes, cappuccinos, and other fancy drinks that Dorothy can barely afford on her baker’s salary. Generally, that means cinnamon rolls, croissants, and Danishes, in addition to the artisanal breads like Italian Rosemary and Kalamata Olive that are staples at a bakery like Yeast of Eden.

The first thing on Dorothy’s list is to prepare the croissant dough. As a baker, Dorothy spends a lot of her time at work preparing, kneading, and taste-testing dough.

In order to begin making the dough, Dorothy heads to the huge industrial fridge to grab the milk. It needs to be heated until it’s warm, but there’s no need to use the microwave. The oven has been going for a while now, and it’s...
extremely hot already in the kitchen. It should take just a few minutes for the milk to be warm.

In a bakery, there’s no such thing as a free moment to wait around for something to finish, not when there are dozens and dozens of cinnamon rolls to be prepped—and not when Donald is watching her every move, just waiting to pounce on the briefest of brief moments of inactivity. Sometimes Dorothy thinks Donald faults her for not having an extra set of hands.

In the meantime, she heads back to the main kitchen area in order to begin the dough for the baguettes. For most other people, dough is just an unfinished product. Dorothy, however, knows that dough is the most important part of any bakery.

There’s a reason only experienced bakers are trusted with the task of making dough. Interns and trainees are assigned things like cutting out cookies and rolling up the rugelach. But dough? That’s where the magic happens.

Dorothy loses herself in the dough for a while. A timer goes off somewhere, waking her from her trance. It’s 4:20AM, and the croissants need to be rolled up. Dripping with sweat, Dorothy pushes up her sleeves as high as they go, cracks her knuckles, and starts rolling. The only thing to break the monotony is deciding which croissants she should top with a stick of chocolate or a dusting of almond sprinkles.

At 6:00AM, Dorothy and the other bakers start loading the prepped, not-yet-baked goods into the industrial ovens. The ultimate goal is to have the bread baked and on the shelves by 6:45AM, so that it’s warm and soft for the early-bird customers to step through the door at 7:00AM.

Her first shift is done; Dorothy has a thirty-minute break before starting the second, early-afternoon shift. As she takes off her apron and clogs, Dorothy watches the businesspeople in their suits rush through the door, grab their coffees and almond croissants, and rush out the door again in a hurry to get to their high-paying desk jobs. She never talks to these customers, and they don’t even know she exists. But they love her baked goods.

After so long on her feet, just sitting in a chair at all is an amazing feeling. In the corner of the bakeshop, Dorothy pulls out a small parcel from her back pocket, and unwraps a fragrant, good-sized stash of the day’s croissants, cinnamon rolls, and grain breads.

At last, breakfast. It only took her six hours, two sore arms, and a few broken nails and opened callouses to make—but does it matter? Maybe not so much when it’s bread made by your own hands after a long, long day’s honest work.
A Day in the Life of a Commercial Fisherman

By Ian Corbin

I come from a commercial fishing family. My father has been a fisherman for over 30 years and fishes for crab, black cod and halibut along the west coast and Alaska. When I was growing up, in the summer, my sister and I used to live and work on the boat with my dad in Alaska while he was salmon tendering.

Summary:
A salmon tender is a mid-sized boat (in my case 56 feet) that is contracted out by a cannery (a factory where food is put into cans) to navigate around the ocean or a bay and collect fish. The primary responsibility of a tender is to pick up all salmon along a specified route from a specified group of fishermen who work with the cannery you are representing, do an official weigh-in of the fish being picked up, and write up a ticket (fish ticket) to the fishermen declaring how much fish was delivered, organized by species. A species is a group of things (animals, people, plants, etc.) that belong together and have some shared quality. The salmon fishermen use these tickets to get paid by the cannery.

The following was a typical work day, from my perspective, as a salmon tender.

Steps:
1. Wake up around 6am and start navigating towards the first stop on your route. This is the time to do any prep work on the boat that needs to be
done before you start taking on fish. This could be pressure washing the
deck, organizing the deck or simply making coffee.

2. Tie the smaller boats that have the fish up to the tender (larger boat) so you can begin the process of unloading fish.

3. One of two scenarios will take place: 1) The fishermen will have their salmon presorted into bags (500–1000 lbs each), in which case we would simply direct a hydraulic crane (a type of heavy-duty equipment used for lifting and hoisting) attached to a scale to their boat and pick up the bags to weigh. Or, 2) The fishermen would not have their salmon presorted and we would attach a reusable bag to the scale that they would load on the spot.

4. After the salmon is loaded onto the hydraulic crane, the bags are brought onto the tender boat to be weighed. The weight declared by the scale, as read by the tender is the weight added to the “fish ticket”—which is the document ultimately used to have the cannery pay the fishermen for the fish they caught.

5. Once the salmon is weighed, a deckhand (in this case, me), unhooks the bag from the crane and drops the fish into a type of container or refrigerator called a fish hold. These fish holds vary in capacity. In our case we could carry up to 50–60k lbs of salmon. Fish holds are typically cooled with a refrigeration system or ice. Our system was refrigerated.

6. Repeat steps 2–5 until all of the salmon are removed from the salmon fishermen's boat.

7. Give the fishermen their fish ticket and move on to the next stop on your route.

In my case we ran through each route twice per day. Each route took about 5 hours to complete. That was including both labor and travel time to each destination.

Upon completion of the second route, our boat was usually close to full capacity for the amount of salmon we could store. In this case, it meant we had to do one of two things:

1. Communicate to a bigger tender boat (100+ feet / 400k lb capacity) that we needed to unload our fish, so we could continue our normal schedule in the morning.

2. Drive to the nearest cannery (which was an 8 hour drive by boat) to unload our salmon, so we could continue working.
In most cases we would drive to the nearest large tender to unload our fish. We would get to the large tender boat no earlier than 10pm. In some cases midnight or later. So, there was an opportunity for a nap while traveling and waiting to meet up with the large tender boat. Once we were able to tie our boat up next to the large tender, the large tender would direct a very large vacuum system into our fish hold to begin the offloading process. The first step in the process to offload the salmon via vacuum took about one hour. This would offload about 35–40k lbs of salmon. By this time the water in the fish hold was about waist high and the fish were very thick. For the remaining 10–15k lbs of salmon, I would have to climb down into the fish hold and shovel fish into the vacuum. This process took about one more hour and was very cold because you are essentially in a refrigerated room, standing in refrigerated water. After this process was complete, we would drop an anchor in the nearest weather-protected area and sleep until about 6am, before we did it all over again.

For the most part, the job was 7 days a week for long periods of time, unless there was a closure on the fishery, which could happen for various reasons. As long as the season was open, it was an opportunity to make money, so there was no concept of a weekend, days off or sick days.

I hope this gives some perspective on salmon tendering. Tendering is widely considered to be one of the easiest jobs in commercial fishing because there is a consistency to the schedule and the weather conditions are generally better than those when you are working an actual fishery. It should be noted that weather played a huge role in the progress of a day. When the weather in Alaskan waters gets out of control, it makes the job (even tendering) incredibly dangerous at times and can add hours onto an already long day.

Then you wake up and do it all over again.
Life as a US Cattle Rancher

By Amelia Kent

Adapted from https://www.theguardian.com/commentisfree/2013/jul/15/cattle-ranch-job-daily-life

My husband and I run a farm with over 300 cows. The ‘chores’ never stop, but it’s bliss working outside with the animals.

Amelia and Russell Kent own Kent Farms and run beef cattle in south Louisiana and Mississippi. They are primarily a cow/calf operation, but also raise and sell replacement heifers (female cows) and source product to local restaurants in New Orleans and Baton Rouge.

1. What's your typical day like?
There isn’t a typical day. We have to check all of our cattle several times a week throughout the year. It’s a chore in itself as we have over 300 cattle on seven different locations within a 60-mile radius. Taking care of our cattle requires different chores depending on the season.

In the winter, when cows are giving birth to their calves and caring for them (otherwise known as calving), we have to check them daily. We also have to put hay out regularly. In the spring and summer we perform our herd-health measures, cut grass that dries to become hay for the cows to eat throughout the year, and perform pasture maintenance. The pasture is the land where the cows spend most of their time, move about, and where they eat. Most of our calves are sold at cattle auctions, where people buy the calves to raise on their own land. This typically happens in mid-August and the money earned is the majority of the income the ranch will make for the year. A few are also sold throughout the year to restaurants. We continue work in the hayfield in the fall, which quickly transitions into planting our winter forages. By November, we start our cycle over again with calving.

2. What's the biggest mistake you've ever made while working?
One of us routinely gets a truck stuck in the mud when we know we shouldn't be driving in wet conditions. Especially this past winter in record-rainfall conditions, we got stuck at least weekly!

3. What's the craziest/most unexpected thing that's ever happened to you while on the job?
The most unexpected thing we’ve experienced is the bond amongst our friends and neighbors in the farming community. The willingness of people able and wanting to help each other is humbling, whether it is assistance throughout the year, during sale day, or simply watching out for one another.

There is a real sense of community in the Clinton (Louisiana) area we are privileged to live and have our farm. My husband grew up in it, but it’s new to me. I grew up on family farms and ranches in both Colorado and Louisiana.
where we had help, but it often came at a price.Usually someone wanted something if they offered to help you. It’s different here.

4. There’s been a lot of talk lately about people wanting work/life balance. Does your job provide that?
Absolutely! When you do something you love, it isn’t work. We put in really hard days on a regular basis, but whether we’re sitting on a tractor, building a fence, working with the horses and cattle, or any other tasks we face, we enjoy most of our “chores.” It also helps that no day is ever boring or “routine.” Having grown up on farms, I can also say that it’s a great way to get the entire family outdoors and doing things together.

5. What makes for a really good day on the job?
A really good day is the two of us working together and making substantial progress without any major breakdowns of equipment. The most rewarding part of our job is at the conclusion of a productive day when we check on the cattle and are almost able to see the calves growing. There is something really neat about watching our calves mature and progressing through the different cycles and seasons in our year. I have been trying to share some of these milestones on a Facebook page and on Twitter for our farm. I know many people are not as connected to where their food comes from these days, but I hope they get a glimpse of modern farming.

6. What’s your annual salary? Do you get benefits?
We don’t have an annual salary given that our farm income is entirely earned from the cows we sell. Russell has another job in addition to farming that comes with benefits in the traditional sense like healthcare, but the benefits we get from our daily responsibilities on the farm is the sense of pride we have in the cattle we sell.

The truth is we enjoy a rural lifestyle including working outdoors with animals and equipment, working with the land and mother nature, and contributing to the local economy. We know some young people want to leave the farming life, but there’s still a lot of joy and satisfaction in our profession. •
What is it Like to be a Farm Manager?
https://sustainability.ncsu.edu/blog/changeyourstate/how-hard-is-farming/

There's always a person behind the fruits and vegetables you eat. On NC State's Agroecology Education Farm, that person is farm manager Alison Reeves, who oversees the planting, growth and harvest of hundreds of pounds of produce each season.

We were curious what goes into being a farm manager, so we asked Alison to talk about a typical week managing this six-acre farm off Lake Wheeler Road in Raleigh. What exactly does it take to grow the food that ends up on our dinner plate?

WEEDS, WEEDS AND MORE WEEDS
First things first—Mondays are for weeding and pest management triage. On a farm that limits chemical and pesticide usage, bugs and weeds can seriously damage a harvest, so it's important to stay ahead of the game. That's why Alison and two farm assistants spend Monday morning walking crop rows. They weed as they walk, ensure no big problems are developing and even squish insect eggs to prevent future pest outbreaks.

For Alison, the farm assistants and volunteers who help at the farm twice each week, the war on weeds is constant. All week long there's mowing, using a weed-eater machine to cut away weeds the mower can't reach, and mulch spreading to be done. Mulch is a mixture of natural materials (such as decaying leaves, bark, or compost) spread around or over a plant to enrich the soil. About the only automated task at the farm is irrigation, which is done via a drip irrigation system—a system of hoses installed alongside crops that slowly delivers water to the crops. The drip irrigation system limits water waste and prevents the spread of diseases that overhead sprinklers cause.

Non-chemical weed and pest management techniques are being tried all the time. This summer Alison is experimenting with solarizing techniques, which
involve covering weeds with clear plastic sheets and allowing the sun to roast the unwanted vegetation underneath.

**HARVEST TIME**
For a farm manager, harvest is when all this hard work is rewarded with ripe produce. Even with just a half acre in production, hundreds of pounds of fresh fruits and vegetables are harvested at the farm and eventually served in campus dining halls and other venues.

**PLANNING FOR PLANTS**
Amid the splendor of harvest, planning efforts build for future seasons. Seeds are started in the greenhouse so they can soon be planted in the field, and new technology is researched that might allow the farm to produce more food. For example, building a hoop house (pictured above), which is a structure made of a series of large hoops or bows—made of metal, plastic pipe or wood—covered with a layer of heavy plastic. The plastic is stretched tight and fastened to baseboards with strips of wood, metal or wire. The hoop house is heated by the sun and it protects the crops inside from bad weather. Crops planted inside the hoop house can grow about a month longer than they could outside, meaning fall season crops such as kale, broccoli and chard can be grown into early winter. And as you might expect, maximizing produce yield is among a farm manager’s highest priorities.

**ELEVATING EDUCATION EFFORTS**
This farm isn’t just about produce yield. Alison is committed to educating the campus and the community about agroecology, and she often works with NC State agroecology students, crop science classes and student organizations. Agroecology is the study of the role of agriculture in the world. She leads volunteer days at the farm, hosts K-12 students for farm tours and has launched a series of educational workshops on topics such as natural dyes and honey extraction.

That’s all in a week’s work for just one farm manager. So next time you pile your plate high with fruits and veggies, be thankful for the farmer that made that meal possible.

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A hoop house used for longer growing seasons. Source: https://www.profitableplantsdigest.com/hoophouse/
Computer Research:  
Career Narratives in Food Production

Students conduct additional research on the career they read about in the Career Narrative activity, using a career database.

PREP

- Explore the following career database websites and choose one for this activity:
  - www.careerzone.ny.gov — The New York State career database
  - www.careercruising.com — A subscription-based career database. Requires a login and password. Many programs have subscriptions to this database.
  - www.agexplorer.com — a free resource of careers in agriculture

- Choose a career from the database and be prepared to navigate to, explore and discuss this example career with students.

MATERIALS

- *Researching Careers Online* worksheet
- Computers are required for this activity.

EXPLAIN

1. If students have not previously used the database you have chosen to use for this activity, give a brief introduction to the website (refer to Career Database Lessons in Unit 2 for database information). Emphasize the ways the database is organized and how students can use it to find careers.

2. Ask students to navigate to the website. Look at a sample career as a class, discussing what information is included and how it is organized.

3. Distribute *Researching Careers Online* worksheet. Ask students to explore careers related to the one they read about in the Career Narratives and complete the worksheet.

4. If time remains, students can research the career of their choice, paraphrasing the information they find.
Researching Careers Online

Use the career database to answer the questions below.

1. What are some careers that are similar or related to the career narrative you read in the previous lesson? Find at least 6 and list them below:

2. Choose one of the careers you listed above. Write four questions you would like answered about this career.

3. Research the career listed above, and write the answers, in your own words, to the questions you wrote in #2.