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 interpreted graphs and charts depicting recent employment trends in Construction and learned about a wide range of careers in the sector. They also learned about how technology has impacted the sector, what a labor union is, and the various types of career families and employer types available in Construction.

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 Construction sector.

In Unit Three, students’ research becomes personalized. They hear from Construction 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 Construction careers of interest.
1. **VIDEO NARRATIVES IN CONSTRUCTION**

Students watch and discuss videos about Construction careers, then respond to them in writing.

2. **USING QUESTION STEMS AS A READING STRATEGY: CAREER NARRATIVES IN CONSTRUCTION**

Students develop and answer questions about career narratives as a reading technique.

2.1 • **Computer Research: Career Narratives in Construction**

After reading a Construction career narrative, students learn more about the career by reading descriptions of it on a career database, such as the Bureau of Labor Statistics, Occupational Outlook Handbook.

3. **SPOTLIGHT ON WOMEN IN CONSTRUCTION**

Students read and discuss interviews with women Construction workers, and consider both the challenges and successes women have had historically and in today’s Construction industry. Students then use the interviews to practice making inferences and citing specific quotes to support ideas from the text.

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To find out what one is fitted to do, and to secure an opportunity to do it, is the key to happiness.

— John Dewey

JOHN DEWEY (October 20, 1859–June 1, 1952) was an American philosopher, psychologist, and educational reformer. Dewey asserted that complete democracy required not just extending voting rights but also ensuring a fully formed public opinion, by communication among citizens, experts, and politicians, who would be accountable for the policies they adopt. Dewey believed in scientific method and democracy as a way of life.

Video Narratives in Construction

Students view short videos of workers describing their jobs in Construction 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 new ones.

PREP

- Pre-screen and select one or two videos that students will view, using the recommended lists on the following pages or other videos that you find. Make sure the links are functional. You may search for additional career videos on YouTube by conducting a search with the career name, such as Plumber, followed by the word “Career”. They should be “a day in the life” type videos that describe a worker’s job responsibilities or career pathway.

- Write the URL(s) of the video(s) on the board.

- Review the Construction Career Video Narratives worksheet. Make sure the questions are relevant to the videos you have selected.

MATERIALS

- Requires use of a computer lab.

- Construction Career Video Narratives worksheet, at least 2 copies per student

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 they do at work, how they got their job, what they like and don’t like about it, and advice for newcomers to the field.

2. Today we are going to watch two different videos about careers in Construction. One video is about working as a __________________________ and the other is about working as a __________________________. We are going to watch the videos 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? (Teacher may want to write these questions on the board.)

Then, you are going to read a series of questions about the video, and watch the video a second time with these questions in mind. After watching a second time, you are going to write responses to the questions.

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

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

5 Play the video for a second time and ask students to complete the worksheet.

6 Repeat the same process with a second video, having students watch once, then read the worksheet, watch the video a second time with the questions in mind, and answer the questions.

7 Ask students to form groups of 3-4 students, and discuss the videos.

- Was there one career they preferred over the other? Why?
- Was one more interesting? Confusing? Boring?
- What stood out to them the most about the workers?
- What stood out to them the most about the careers? Did they learn anything they didn’t know before?
- Would they be interested in working in one of these careers? Why or why not?
Video Narratives About Careers in Construction

The videos listed below depict a variety of Construction careers. YouTube has hundreds more which can be found by doing keywords searches for careers, for example, “carpenter career” or “day in the life carpenter.”

1. **Angel's Story: Climbing a Career in Roofing**
   Angel tells the story of how he made a meaningful career out of roofing as an immigrant, husband, and father of two. (2:45)
   https://www.youtube.com/watch?v=oNqN2D-vy-U

2. **Career Spotlight: Electrician**
   This video offers a look at the responsibilities of being an Electrician through the eyes of an Electrician who worked his way up in a foundry. He speaks about the education and career choices he made on his pathway to becoming an Electrician. (3:52)
   https://www.youtube.com/watch?v=X1zdvv4GPDU

3. **Construction Cost Estimator**
   This video offers an overview of the requirements, duties and skills of a Construction Cost Estimator. This career is in high demand in the Construction industry. (2:07)
   https://www.youtube.com/watch?v=771mnKpD1P0

4. **Industrial Construction Pipefitter**
   A Pipefitting Inspector explains what pipefitters do and talks about how he studied and worked his way up from a Pipefitter's Helper to a Pipefitter to his current position. (3:00)
   https://www.youtube.com/watch?v=HyrclgDkd-Y

5. **HVAC Technician**
   Two young interns at a mechanical contracting company follow an HVAC Technician and his apprentice around to experience a day in the life of a HVAC Tech. (5:38)
   https://www.youtube.com/watch?v=9L3CVgoEhas
6. **Construction Superintendent**
A Construction Superintendent gives a thorough explanation of his career pathway from being a Carpenter’s apprentice to managing job sites as a Superintendent. (4:42)
https://www.youtube.com/watch?v=KY_UOXuankk

7. **Architectural Designer**
An architect in training discusses her education and career pathway, including internships, what it’s like to be an Architect, and what she loves about her job. (2:59)
https://www.youtube.com/watch?v=2oir2QNuBS4&frags=pl%2Cw

8. **Energy Engineer (Green Construction)**
An Energy Engineer talks about his role in creating energy efficient buildings across many different labor sectors and the impact of sustainable building on the environment. (4:52)
https://www.youtube.com/watch?v=N9AUEWsmS5s&t=206s&frags=pl%2Cw

9. **Plumber**
In this interview, a Plumber discusses his typical day at work, the qualifications needed for the job, the best and worst parts of the job, and advice that can be used by students considering this line of work. (4:31)
https://www.youtube.com/watch?v=VO-zP9mx2Sc&frags=pl%2Cw

10. **Land Surveyor**
In this interview, a Land Surveyor discusses his typical day at work, the qualifications needed for the job, the best and worst parts of the job, and advice that can be used by students considering this line of work. (9:18)
http://www.drkit.org/landsurveyor/

**NOTE**: http://www.drkit.org/careervideos/ has a host of Construction related (and other) career narrative videos.
Construction 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.
Section 1

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?
Using Question Stems as a Reading Strategy: Career Narratives in Construction

Students read one or more Construction career narratives, then develop and answer questions as a reading strategy.

PREP

In the preceding class, have students sign up to read the Construction 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 Construction.

Examples of uses include improving reading skills, practicing developing questions about reading, expanding vocabulary, learning about Construction professions they may come in contact with or that are important to their health, safety, and satisfaction as a tenant, homeowner, visitor or resident of any building.

MATERIALS

• Career Narratives in Construction 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. Explain to students they should read and annotate their article, marking parts they thought were important, interesting, surprising or confusing. They should circle any unfamiliar words and write any questions they have in the margins.

3. Distribute the career narratives, and give students time to read and annotate the articles.

NOTE

For guidance on teaching annotation, see “How to Teach Annotation” in the User’s Guide, found at www.tinyurl.com/cunycareerkits.
4 When students have finished reading, direct them back to the 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 Narratives in Construction Sign-up**

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

- Carpenter
- Solar Panel Installer
- Concrete Mason
- Architectural Designer/Drafter
- Electrical Line Mechanic

<table>
<thead>
<tr>
<th>Name</th>
<th>Career Narrative</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 What else do you want to find out about being a ________________ that’s not explained in the article?

7 Do you think you would want to be a ________________? Why or why not?
Matthew Nicholas has been in the carpentry trade for over 20 years, and I had the pleasure of interviewing him about what he does with lumber day in and day out.

1. Tell us a little about yourself. Where are you from? How old are you? Describe your job and how long you've been at it, etc.

My name is Matthew Nicholas and I am a married father of two teenage girls, several dogs and a couple of cats. I’m a working Journeyman Carpenter from a small suburban town called South Lyon, near Detroit and Ann Arbor in Michigan. I’m forty-one years old and I’ve been working as a Carpenter since 1990 when I helped my neighbor build decks on weekends and during the summer.

I’m a licensed builder and work as a solo, carpenter-for-hire in remodeling projects, custom cabinetry, finish trimwork, stairways, custom doors and the like. In my past, I have been a Framing Carpenter and for a while was a Crew Foreman, which meant that I was in charge of the crew of builders. From there, I got into remodeling and renovations, working first as a “lead-carpenter” until I was a project manager. Just before the economy collapsed in 2008, I started my own business as a general contractor, but I’m mainly sought for my finish carpentry work.

2. Why did you want to get into carpentry? Was it something you always knew you wanted to do?

From a young age, I was building stuff. Whether it was playhouses in the woods with old lumber scraps, or small furniture pieces, I was often at play in my dad’s workshop and garage. I started college wanting to be an Architect or perhaps an Engineer, but lost
my direction sometime about three years in when I took a semester off to work. I became a Carpenter and found that the demands and challenges of the job suited my mind and physical abilities. I love the work, the atmosphere of the job site, and the process of making homes. As that company grew and expanded, I was introduced to new challenges and new opportunities to develop my skill-set and my overall experience. What has kept me in the game now nearly twenty-five years later, is that I am always challenged and learning new things. Also, my skills are in high demand.

3. Tell us a little bit about what you do as a Carpenter.

I may be a little unique as a Carpenter, because along with being a tradesman—practicing my skill with tools and materials—I am also a sole-owner of my business. I am continuously seeking new projects, new clients, and potential avenues to network and expand my opportunities. And, I am often my own designer, so my time gets spent in between my truck and tools and computer. I use my iPhone almost as much as I use my saw—for social networking to advertise my business and for email and text communications with job leads, current clients, and attempts to keep up with former customers who may need a follow-up project or two. I work with a few other contractors as well, so keeping the lines of communication open with them and making myself available to collaborate when needed is a constant duty.

When I’m measuring and cutting wood, it’s often a meditative time because the goals ahead of me are clearly defined and my productivity is measurable. What I find myself doing a lot more than I ever expected or even considered at the start of my career is relating to people. Particularly, to my clients. The clients who hire me want an intimate level of service and communication, and require confidence in me that everything will be taken care of to a level of quality and diligence that they don’t often receive. Because I often team with my clients on projects which are unique and “custom,” my relationship becomes far more collaborative than I suspect most other carpenters may experience. I’m a listener, a confidant, and occasionally, a therapeutic witness to some sort of life-event, because I am there and I am available to be supportive or simply a sounding board.

4. Tell us a little bit about an average work day.

Few of my days are the same, or “average,” so I’ll describe yesterday.

7am: I get to begin my mornings when I choose to. It’s one of the perks of being self-employed. I’m not one of those guys who is up before dawn, but rather, when I wake up naturally. I eat a protein and caffeine-heavy breakfast, then it’s time for work.

8:30am: My shop is my garage these days, so I had a bit of stuff to load into the truck to take to the site after spending the previous day creating parts for my current project.

9am: I was to meet a glazing (glasswork) contractor at 9:00 so they could remove panes of glass from the facade of a home I’m making structural repairs to. When I got to the site, they weren’t there, and after a phone call, I found they were running an hour behind. Not a problem, as that gave me time to run for plywood and other materials I wasn’t able to get at the beginning of the week.

10am: I arrived back at the construction site and the glass guys set to work removing the windows. I began cutting wood panels...
to temporarily fill the openings left by the removed glass. I measured each removed pane to use the dimensions for my panels and to make sure the new glass will fit. The glass guys finished and then I secured the house with plywood panels. After that I cleaned up the leftover dust, scraps, and debris from the site. With nothing more to do until the new parts are complete, I left the site and went to a previous project’s site to collect a payment. On the way, I grabbed some take-out for lunch.

1pm: On the next site, I spoke with the lead carpenter and discussed the work I had done there. I examined my stairway railing, a ceiling, and other trimwork elements that I created. I found they were now painted and the project was almost complete. We talked briefly about upcoming work and the role I may have in these projects if I’m available, then I left and deposited my check.

2:30pm: Tuesdays end early for me as I teach martial arts classes for kids in a local school. I intended to get back to the shop and roll out more epoxy—a type of coating that can be used as an adhesive bond between objects, or as a protective coating—but I didn’t have enough time, so that had to wait till this morning.

Today will include the epoxy coating of some red-cedar framework, then back to the site to prepare the interior for the process of deconstructing the window frames and preparing for the new installation work. I’m going to have to really pay attention to detail as this barrier keeps the occupied residence protected from dust and potential rainfall on the construction site.

5. What was your path to becoming a carpenter? What kind of training and certifications did you need? Did you go to trade school?

My path was common to most in my area: I knew a guy (my parent’s neighbor) who built his own home and decided to become a custom home builder. When he needed a young, strong laborer, I was just across the street and more than happy to work making a solid wage rather than taking a fast-food or retail job. Though I did attend college, I would work for his company during summers and vacation weeks. I came back to the crew after I was done with school and I expanded my skills, duties, and the range of projects I could undertake. As I progressed in my career, I learned from older guys when they were available, but also from hours spent watching DIY shows on PBS, reading trade-specific books and periodicals, as well as old-fashioned trial-and-error tactics.

6. How do you find work as a carpenter? Through a union? What’s the job market like?

Because I am a freelancer, I find work most often from homeowners themselves. I depend on my network of past clients for referrals and for follow-up projects. I’ve successfully gotten exposure from some online services which allow me to advertise my services for a fee. For the type of work I do, the variety of projects, and the area where I work, word-of-mouth
has been my best means of finding new work and new projects. I’ve never worked through a union, and while I recognize the benefits of unions for other trades and occupations, I’ve never seen a benefit to a carpenter’s union in a marketplace where something so naturally “DIY” as carpentry exists.

7. What is the work/life balance like in your career?
Because I work out of my home and garage, my work life is often my home life. I wouldn’t say that mine is particularly well-balanced, but I recognize that this is a compromise I made willingly so that I can have mornings where I choose to sleep in, or days when I leave the site early to go and teach or to watch one of my daughters’ athletic games. Vacations are infrequent, as my wife works at a corporate job and has to schedule her time well in advance, and my opportunities are often only found in between projects—projects whose start and stop dates are often difficult to schedule.

8. What’s the best part of your career?
Independence. I am an independent contractor and I am free to work when I want, where I choose, and as much as I want—assuming I’ve lined up the work and there is work for me to do. I can go out to the garage after dinner and assemble a cabinet, or paint some trimwork on a rainy Sunday afternoon. When inspired, I can sit at this computer and detail a bathroom remodel design or tweak my logo a little for some advertising emails. Because I am independent and my workspace is just outside my back door, I’m never far from making some money.

9. What’s the worst part?
Independence. I am the captain of my own ship, but I also have to be the wind and the sail. It is up to me to get exposure to potential clients, to estimate costs accurately, and sell potential leads on my capability to do the work they seek. And I have to do the work itself. The uncertainty of the next big project is always a specter looming over me. If the economy isn’t doing well, neither is my business. It makes for some stressful hours and days and sometimes, weeks. But, there is always some sort of work for a good carpenter.

10. What’s the biggest misconception people have about your job?
Carpentry is viewed by too many people to be a low-skilled, low-caliber trade not worthy of as much regard as mechanical trades or other skilled trades. The reality is that there are many of us who are very experienced professionals capable of extraordinary work… we just happen to do it while wearing dusty jeans and sweatshirts.

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**VOCABULARY**

- **lumber**: Wooden boards used in Construction
- **trimwork**: Decorative woodwork used to frame walls, doors and ceilings
- **saw**: A hand or power tool for cutting wood and other hard material
- **confidant**: A person who is trusted with confidential or private information
- **facade**: The front of a building
- **framework**: The basic structure supporting a building
- **interior**: The indoor part of a building
- **periodical**: A newspaper, journal or magazine published on a regular basis
- **word-of-mouth**: When information is passed from one person to another verbally
- **tweak**: To make small adjustments
- **specter**: A threat of something unpleasant that haunts the mind
An Interview with a Solar Panel Installer

Adapted from https://www.iseek.org/industry/energy/careers/solar-panel-installer-interview.html


Describe a typical day at your job.
I would if there was one! Every day is unique. As an organization, we do a lot of solar heating and solar electric, more heating, but we do both. We do solar heat for low-income families. We’re out in the field installing supplemental solar heating systems. It’s a smaller organization in terms of size so different people do different things. We have an installation crew in the field most days. There’s a lot of prep in doing and managing the solar energy installations. So in terms of defining a typical day, it is tricky to explain.

Do you work normal hours (9 a.m. to 5 p.m.)?
No, definitely not; 8 to 5 would be a vacation! It’s usually a 7 a.m. to 7 p.m., or 6 a.m. to 6 p.m. job with 12-hour days being common.

Do you work on the weekends?
Sometimes we work on the weekends, but we’re trying to do that less and less. Sometimes there’s just work that needs to be done.

How did you get started working in this field or interested in the field?
Personally, I got into it because I was low-income and was struggling with my winter heating bill. I wanted to get a loan for a solar energy system, because I was an environmental studies graduate student and broke. They said no, and I said “oh?” But I found a way to finance my own solar energy system installation and it dramatically reduced my heat load, expense, and carbon footprint. That was the “ah-ha” moment where we realized we could do this for other people. So I guess I got into it through experience with fuel poverty and an enthusiasm for solar energy.

Describe your training or educational background.
I have an undergraduate degree in high school education with an emphasis on social studies. I also have a graduate degree in environmental studies in policy and planning. In terms of certifications or licensures for solar energy, I have a general contractor’s license as well.

How did you know what to do when you built your first system at home?
It was probably a combination of things. I had been attending workshops on solar energy and reading about it for a decade, and I had a lot of help. It certainly was not representative of best practices in the solar industry.

Describe your work environment.
As an integrated manufacturer and installer, we have a lot of different people doing different things. It’s a combination of deskwork and fieldwork. There’s a lot of engineering time, time spent crunching numbers, time spent on the actual manufacturing and selling of our
product. We have people full time doing the manufacturing, people doing sales, and then the installation team who is basically out in the field most days working out of the truck as opposed to the desk. It takes a lot of pieces to put together the puzzle. People have different work environments.

I spend most of my time at my desk or the podium, more than with a tool belt on. That wasn't the case in the past. There are people here wearing tool belts full time, and people handling computer mice full time.

**What sort of tools, machines, or equipment do you use regularly?**

In the manufacturing facility, we use a lot of large sheers, aluminum chop saws, drill press, pneumatic riveters, and things of that nature. Of course in the field, it's a diverse collection of conventional construction tools. What's unique to the solar energy industry is that you often have to have a slightly larger toolkit because you encounter so much from the point of installing the equipment to delivering the energy. For example, with a solar electric installation, you're potentially going from the roof to the mechanic room, so you pass through a variety of boundaries. You require a large toolkit because you have to deal with all different aspects. If you do a combination of solar electricity, solar water, solar air heat, you have electricians, plumbers, and mechanical contractor toolkits all in one. And of course, trucks. As a manufacturer, we receive and ship a lot of raw materials and products, so we're using large fork trucks and things of that nature.

**When you hire people for your installation team, do you expect them to have skills with all the aspects of solar energy?**

The short answer is no. It would be difficult for any one person to have all those skills. From a project management perspective, it makes more sense for us to partner with other people in those situations. Our installation team has a broad spectrum of skills, but there are always aspects of our projects where we need to partner with others. There's a lot of on-the-job training as well.

**What skills or personal qualities are good for this job?**

I don't know if there's anything really unique about the renewable energy industry in terms of employability characteristics. With our particular mission as a non-profit, being a people person is particularly important. We work with a broad spectrum of demographics, so being comfortable and competent with our clients is important. For people on the manufacturing team, I guess being a people person is less important than people who are actually interfacing with clients.

**Is there anything specific that you look for when you are hiring people?**

A lot of what we consider when we hire people has to do with their commitment to our mission, and how well they'd fit with our existing team. We want people who are aware of our mission and willing to put in long days. We can have a really rigorous work schedule, especially during the construction season, although that's not unique to solar energy. And
as a non-profit, things are often very intense and **amorphous**. We never know what any day will bring.

**What do you enjoy most about your job?**

All of us here love our work, and we’re very dedicated to the work. The most enjoyable for me is definitely working with our lower-income families. That’s the most rewarding aspect of it. It’s great hearing the feedback from them that it has made a dramatic difference in their ability to weather the heating season. And to hear that we’re using clean energy to address poverty, that’s what you work for. Those stories and feedback are what it’s all about.

**What future changes do you expect to see in the field?**

I think there’s going to be a lot more **regulation** and a lot more competition. I think there’ll be a lot more certification required for installation services and products manufactured. It’s kind of a double-edged sword in a way, because at a time when we need to be fast-tracking renewable energy technologies, we also need to be ensuring quality in the marketplace. It’s a hard balance to strike. I really hope we start to see more demand.

**Are there any common misconceptions about this type of work?**

Different people have different misconceptions. People who have been in the trades for a long time have the misconception that they can easily understand what’s involved with a solar energy installation. We encounter a lot of people who have been builders of different types for a long period of time, who often assume they can just incorporate it into their regular trade without the understanding that solar energy is an oscillating resource, requires some rigorous math, and other aspects that might not have been part of their regular skill set.

**What is your advice to someone interested in this field?**

Great question because we actually have a youth training program. The refrain I use is today’s youth are making tomorrow’s energy choices. It’s important, at a bare minimum, to expose young adults to the different renewable energy options so it can at least be on the menu in the future. Whereas most people making the dominant energy choices don’t see it on the menu.

I guess in terms of concrete advice: get your hands dirty—volunteer, figure out if it’s what you want to do and if it’s a good match with your skill set.
My Life as a Concrete Mason
Jeremy Anderberg | May 27, 2016
Adapted from https://www.artofmanliness.com/articles/so-you-want-my-trade-concrete-mason/

Concrete foundations are, well, the foundation of the buildings we live in, work in, play in, and generally occupy. If the foundations aren’t built well, it spells serious trouble for those buildings, and boatloads of cash to repair (if it’s repairable at all!). Between planning, pouring, leveling, and all the other things that go into concrete masonry, it’s truly a job and career that requires skill, dedication, thoughtfulness, and plenty of hard work. In return, you’ll reap the satisfaction of knowing you created the literal foundation for someone’s dream.

I had the chance to interview Mark Johnson about being a Concrete Mason.

1. Tell us a little about yourself (Where are you from? How old are you? Describe your job and how long you’ve been at it, etc.).

I’m Mark Johnson. I am 32 years old, married with three kids, and for the majority of my life, I have been a Concrete Mason. Since the 1970s, my family has owned Johnson Concrete Construction which builds foundations, slabs, and decorative concrete for farms, businesses, and residential customers. My grandpa, Ken, founded the company in 1971. My dad, Tim, joined Grandpa in 1976. They worked together for many years until Grandpa retired around 1997. I then became a partner in the company in 2008, becoming the third generation to own and operate Johnson Concrete.

I don’t know how old I was when I started helping at job sites, but some of my earliest memories are of “working” beside Grandpa and Dad. I would carry around their hand tools, or lay out building materials in an effort to help. I began working seasonally full-time as a Concrete Laborer when I was about fourteen and have missed very few construction seasons since.

2. Why did you get into concrete masonry? You had other jobs/careers before this; what compelled you to make the switch?

Because Johnson Concrete is a small, family-owned business, I didn’t necessarily choose to be a Concrete Mason, like someone might choose being an Attorney or an Engineer. It is something I grew up doing, and I could not imagine life without concrete work. I have always been fascinated by the process, tools, techniques, and teamwork it takes to build a
foundation. But, more than anything else, I am fascinated with the sense of accomplishment a Concrete Mason feels at the end of each day. When you are exhausted from a hard day’s work, the concrete is finished, and the tools are put away, you can look at what you created and know that the thing you built is the manifestation of your effort, a testament to your skill and craftsmanship.

I think that one of the most appealing things about concrete is that it has the potential to last forever. Therefore, building with concrete is like leaving a small testimony of who you are through the quality of your craftsmanship. It may sound dramatic, but every slab or wall I build I think about somebody, generations from now, evaluating who I was based on my work.

3. Tell us a little bit about what you do as a concrete mason. Some people may not know that such a career existed!

Depending on the size of a company or if it is a union employer, a Concrete Mason may have one task or many. There are three main tasks for every concrete job: (1) Building the formwork and taking it down. A form is a temporary mold in which concrete is poured and formed. (2) Pouring the concrete into the form, and (3) Finishing the concrete by making sure it is even, smooth, and compact.

If the Concrete Mason works for a small company, all three tasks are going to be part of the job description. But in larger companies, a Mason may be responsible for only one task or a smaller group of related tasks.

There are some common ways people become Concrete Masons. Most people usually start out as Laborers. Much like an apprentice, a laborer has little knowledge of the trade and is learning the skills and techniques required to become proficient. Once a level of proficiency is reached, that person may pick a specialty, such as form setting or concrete finishing. If that person continues to grow in proficiency, they may be promoted to Foreman. A foreman directs a crew to accomplish tasks on a job. A Foreman manages the crew, materials, and schedule to ensure the tasks are done on time. The final promotion is to Superintendent. On large commercial, governmental, or industrial jobs there may be many crews running at one time. The job of the superintendent is to ensure these crews get the job done right, on time, and on budget.

4. Describe an average work day.

In a typical day of work, I get up around 5:30 am, have breakfast, pack a lunch, fill a water jug, and leave on time to get to the job site around 7:30 am. Most of our jobs are about an hour drive from where I live, so I have a little time to get my daily mental to-do list formed. Once everyone arrives at the job, we brief the crew of 4-5 employees on what we want to accomplish that day. Daily tasks can be separated into two buckets: slab or poured foundation wall. These tasks vary greatly and require different preparation.

A slab is concrete such as a garage floor, driveway, decorative patio, or a home’s foundation. It is usually poured on the ground.
with the top surface leveled by a screed (a flat board or aluminum tool used to smooth surfaces) and finished with a broom or steel trowel (a small handheld tool used to dig and apply or smooth surfaces).

A poured foundation wall is just what it sounds like; concrete, poured in a mold, to make a wall. Foundation walls are typically used in homes and under large, heavy buildings. Foundation walls are important because frost can creep under a building if its foundation isn’t deep enough, and it can move the entire structure! Walls require a significant amount of forming (shaping), but little finishing (smoothing) of the concrete’s surface.

If we are working on a slab project, we often try to build the forms (molds) and pour concrete on the same day. However, if other trades (plumbers, electricians, or HVAC) need to place their pipes, wires, or conduit for utilities into the concrete, it may take several days before the project is ready to pour. Walls, on the other hand, typically can be set one day and poured the next. When we have finished our work for the day and the tools are cleaned and put away, the crew sits down and fills out timecards. Then off for home around 6:00 or 7:00 pm.

5. What was your path to becoming a Concrete Mason? What kind of training and certifications did you need? Did you go to trade school?

Concrete is learned on the job. Unlike plumbers or electricians, Concrete Masons don’t need a special certification, nor are there many trade schools that teach the skills needed to become a proficient Concrete Mason. The industry is much like the old apprentice system for Bakers or Carpenters—if you want to learn how to build with concrete, you work for someone who is willing to teach you the skills necessary to become a skilled tradesperson.

6. How do you find work as a mason? What can someone expect to earn in this field?

For a concrete construction company in northwest MN and eastern ND, Concrete Laborers are hard to find, and skilled labor is nearly impossible. So whether a person is skilled or unskilled, most concrete companies are willing to hire people who have the physical capability and desire to work, and ideally have a high school diploma or equivalent. Unions are one way to find a job as a tradesman, but our area has very little union presence, so most of the work is found by personally contacting the company who is hiring. People typically find out about which companies are hiring through word-of-mouth or help wanted signs or ads.

In terms of earnings, starting hourly wages for a laborer start at $13, but, once they gain experience and proficiency, a Laborer can make up to $16 per hour. Once a person becomes a Finisher they can expect to earn $20-$30, and a foreman will make between $25-$35. The average wage among all Concrete Masons in New York State is $22/hour.

(Source: https://www.bls.gov/oes/current/oes472051.htm)
7. **What is the work/life balance like in your career?**

Balance? What’s that? During the construction season a Mason can expect to work from early in the morning to dusk. In places that have cold winters, there is typically only eight months where the weather is suitable for laying concrete, so masons must make the most of every day. I don’t see much of my wife and three children during the week because they are in bed when I leave and most nights the kids are in bed when I get home. I love spending time with my family, so it is very hard to be away from them that much. However, during the winter months we get to make up some of the lost time, because we have nearly four months off in the winter of a typical year.

8. **What’s the best part of your career?**

The best part of my job is fulfilling someone’s dream. Whether it’s a house, business, or farm project—somebody has been dreaming about the day they get to start building. So I am literally building a foundation for a customer’s dream. The construction is a culmination of everything they have worked so hard for. It is a great honor of mine to help fulfill a customer’s longtime dream through my skill as a concrete mason.

9. **What’s the worst part?**

Long hours, being away from home, delays, and unexpected machine failure are all things I dislike about being a Concrete Mason. But the worst part is any failure in communication with the customer. Being on the same page with your customer is so important. We are very careful to understand what exactly the customer is expecting because nothing is more disappointing than unmet expectations. There is nothing worse for a concrete mason than to feel like you did a great job on a project only to discover the customer is not happy because they expected something different.

10. **What’s the biggest misconception people have about your job?**

Being a Concrete Mason lacks the prestige associated with other jobs. I know of many people who would rather work in jobs that they are not particularly interested in simply because it carries more respect than a higher-paying manual labor job. I think if people were able to shake off this notion of prestige, for even just a short time, they may find the satisfaction that creating something with your hands can bring.

11. **If you had to give a young person just starting in on his or her career one piece of advice, what would it be?**

Be willing and be useful. There are two things I look for in a good Concrete Mason: a willingness to work and a desire to be useful. If someone possesses those two qualities, they will not just be a successful Concrete Mason, they will be a successful person in whatever they choose.
Interview with an Architectural Designer

By Adrienne Green | Oct. 31, 2016

Adapted from https://www.theatlantic.com/business/archive/2016/10/working-architectural-designer/505718/

Adrienne Green: How did you get started as an architectural designer?

Julie Engstrom: When I was a child, probably in fourth or fifth grade, my art teacher said, “Oh, you’re doing nice work and you get good grades too. You should be an Architect.” The idea inspired me and I decided to pursue it. I loved drawing and architecture seemed like it would be a good job to have. My high school offered a Studio Art major, so I was able to take four years of art, which helped develop my art and design skills.

When it came time to choose a college, I went with the University of Cincinnati, which has a co-op program. In a co-op program, you go to school and work in the field at the same time. It was really appealing to me to be able to get right into this field where there are jobs and on-the-job training. Because I’ve been pursuing it for so long, Architecture is a very big part of my identity.

Green: What exactly do you do as an Architectural Designer?

Engstrom: Architecture is a very time-consuming field. In the beginning, it requires a lot of apprenticeship. Registered Architects go through a testing process, similar to the process of becoming licensed in other professions. I am considered a Designer, or a Drafter, or depending on who you ask, an Intern Architect, even though I’ve been in the field for many years. Soon I’ll be going through the testing process to become registered.

My current job is a Project Architectural Lead—so from conception to completion of construction, I’m leading a team of Engineers, Acoustical Designers, Lighting Designers, Audio/Visual Technicians, IT Consultants, and so on. It takes a huge group of people to bring a project to completion, which requires a lot of project management and coordination.

VOCABULARY

Apprenticeship: Paid on-the-job training with instruction and supervision from an experienced worker.
Green: What is an average day like for you?

Engstrom: I can work anywhere from 40 to 60 hours a week, depending on the flow of the project. Work-life balance is always a challenge in this industry. In a lot of ways, Architecture really favors the young and childless because they have more time to themselves for their work. I’m recently married, and I don’t have any kids yet. It’s interesting to see people who eat, sleep, and breathe their work, but who then have kids (or something else about their life changes), and they have to pull back a little bit with their work. It’s great to see more and more people successfully balancing their personal lives and their careers.

I work for a great company in terms of flexibility. It was founded by a woman, and she had young kids at the time, and she believed that if clients are happy and people got their work done—how, when, and where they need to—that ultimately, everyone’s goals would be accomplished, including hers.

Green: Do you think that most people understand what Architects and Designers do?

Engstrom: People always assume that I must be good at math, but there’s a huge range of roles possible in the field. When I sit down at a table with my coworkers, there’s an Interior Designer, who is talented at picking out colors and finishes, another Interior Designer that addresses the technical aspects of the lighting. There is a lot of flow between architecture and interior design. I think most people are surprised that an architect doesn’t always go out with a hard hat into the field and point at skyscrapers. Most Architecture projects are about buildings and homes that are not a skyscraper in Manhattan.

Green: Architecture is a male-dominated field. Have you been affected by the gender dynamic in the profession?

Engstrom: I’ve seen a lot of changes with the gender dynamic in the 12 years that I’ve been working in the industry. It’s becoming less and less common that a bunch of guys on a Construction site act surprised that I’m a woman when I arrive. Or have a hard time taking direction from me. That’s changed a lot. Even when it does happen as soon as a conversation gets going about how to solve a Construction problem hopefully everyone can forget about gender and just focus on solving the problem. Part of that might be my own development and ability to walk into a room, know what I’m talking about, and be confident in my own skills and information. I do envy some of the men in the field, who have more confidence. The women in the field have to work a little bit harder to get to that same point.

Even though I happen to work for a really well-balanced firm, the numbers are still off in the industry. If you look at the more senior positions in the field, the number of women starts to drop off. I hope to be in the field for a long time, but I also know that people change directions in their career for many reasons. I’ve had friends
leave Architecture to do Real Estate, or Facilities Management, or Furniture Distributorship, or other kinds of related things.

**Green:** How have you seen your industry change over the last decade?

**Engstrom:** When I entered freshman year in the Architecture program at Cincinnati, it was the last year the program started by teaching hand drafting. In the last eight or so years, 3-D drafting and model building is much more typical. We use software called Revit, which allows us to create the building virtually and produce Construction documents, such as blueprints.

Nowadays, all parts of the design process are digital. We are building a real building that has materials, lighting, structure, and pipes in the virtual space. We’re able to look at furniture together online with the client and develop the design virtually as well, so that’s a huge change.

**Green:** What is the most challenging and the most rewarding part of your job?

**Engstrom:** The most rewarding part of the job is the moment when the project is complete. You walk into the new building and witness people finding their new desk, or grabbing a cup of coffee at the new café, and people are so excited. Then, in the following days, to hear how excited people are to come into work is hugely rewarding. It makes a year or two of hard work well worth it.

I think because projects go on for many months, people can feel burnt out. You have to be able to shake it off, and come in the next Monday, and remember what you’re there for—which is to create a great space that is going to be functional and last for a long time.

**Green:** How is your work tied into your identity?

**Engstrom:** Everywhere I go, I see the world through the lens of design. Just try to go out to a restaurant with Architects without them commenting on the lighting or the traffic flow from the kitchen. There are lessons and inspiration everywhere. You don’t stop designing when you go out for dinner or when you go to a museum or walk down the street. It’s very much a 24/7 way of thinking.
Keeping the Lights On

Tim Miller, a Line Mechanic Supervisor, talks about what it’s like to be responsible for distributing his community’s electricity.

By Adrienne Green

Adapted from https://www.theatlantic.com/business/archive/2016/09/aep-electricity-lineman/500759/

I spoke with Tim Miller, a Line Mechanic Supervisor for the company that supplies electricity to his area, about the safety risks of his job, the role he plays in getting power to the homes where he lives, and how changes in environmental regulations have influenced his job.

Adrienne Green: What are your responsibilities as a Line Mechanic and what do you do on a day-to-day basis?

Tim Miller: I was just recently promoted to Line-crew Supervisor, so now I supervise a crew of mechanics that do the job that I used to do. Electrical Line Mechanics build and maintain electrical power systems. They bring electricity from power plants (where electricity comes from) all the way to the customer’s meter (the gauge that measures how much electricity a building is using). The lines may be on overhead structures—like the wooden poles you see out in your city with electrical wires to and from them—or in underground vaults or trenches. Linemen also do work on traffic signals and street lights. Public safety is the most important thing Linemen have to consider on a job. Electrical wiring can be dangerous and when you’re working on public electricity, you’re often right in the thick of city streets and sidewalks. Or if you’re working on...
a residential job, you’re in and around people’s homes. The risks can be pretty overwhelming depending on the size of the job. My job is to make sure all the Linemen in my crew are performing their jobs effectively and efficiently.

On a typical day the crew shows up at 7 a.m. for a pre-job brief to discuss the day’s job. Then we load material for that job into the trucks and get an address. Then we meet at the job site to go over all the safety precautions we will need to take for this specific job. Finally, we will proceed with the safest, most efficient plan in order to get the job done.

**Green:** You work for an electricity provider. What is your role in actually getting people the power that they need?

**Miller:** We troubleshoot, testing the various electrical equipment and points of power delivery to figure out where the problem is, so that we can fix it. We make repairs when equipment malfunctions or it fails. The process includes generation (creating power), transmission (moving power from the source through electrical lines), and then distribution (making sure the power is delivered successfully to the objects that need electricity (outlets, light fixtures, street lights, etc.) so that they work. My role is on the distribution side, where we deal with the delivery of the power to the customer. We’re the last line that feeds to the houses and the businesses where the meters are that measure how much electricity is being used.

**Green:** Describe the physical part of your job. Is your safety ever a concern to you?

**Miller:** Safety is the first thing we look at with every new job. It’s always on our mind, and the company has made sure that safety is at the top of the list in the training we receive. There’s nothing more important than safety. My wife always says, the way I leave my front porch in the morning is exactly how she wants me to return home at night.

Depending on the job, climbing is a big risk. I climb the big wooden poles on the street and I work on energized conductors, which means I could easily get electrocuted if I don’t follow safety procedures. There are a lot of poles that are in what we call easements—they’re behind houses and you can’t get a truck or any equipment to it—so you have to climb the pole to fix or replace any equipment. Another risk is traffic. You can’t control the folks who are behind the wheel when you are on the side of the road working. I’d like to think that everyone’s paying attention when they’re driving down the highway and they see our signs, but we’ve had some drivers that aren’t paying attention and some of our sister corporations have had fatalities because of it. That’s a huge safety factor when you’re setting up your job with your crew for the day and when you’re working.
**Green:** What would you say is the most rewarding part of your job?

**Miller:** Seeing smiles on customer’s faces that we deal with every day. People come out, we’re doing storm restoration or a little thunderstorm goes through and they’re out of power and here come the Line Mechanics. We make the lights go back on and people can start to return to normal life. When that happens, you see some of the most thankful and grateful individuals I have ever met in my life.

**Green:** Are storms and blackouts the most hectic times for you?

**Miller:** Yes, because it’s usually after hours. You already work a regular 7 a.m. to 3:30 p.m. shift, and if a storm rolls in at 5 p.m., you could get called in and have to work all night. There is a rotating list, and they go down the list until they get the amount of workers that they need to cover a call. In my first six months as an employee, we had a terrible ice storm. It was the coldest I have ever been in my life—below zero temperatures. There were thousands of people out of power. We worked for two weeks, 16 hours a day. We had to—community members could be freezing in their home.

**Green:** How is your work tied to your identity?

**Miller:** My work is tied to my identity because I love public service. When you see someone that you don’t know, and you know you have the skills and the knowledge to help them. Especially when it comes to utilities. The average person can’t fix their own electricity. Especially if the problem is bigger than just their own home. I feel really fulfilled by being able to help people when they are experiencing something difficult.

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**DID YOU KNOW?**

LEWIS LATIMER is considered one of the 10 most important Black inventors of all time. Latimer was born on September 4, 1848 in Chelsea, Massachusetts. His parents were George and Rebecca Latimer, both escaped slavery and migrated to Massachusetts in 1842 from Virginia. In 1880, after moving to Bridgeport, Connecticut, Latimer was hired as the assistant manager and draftsman for U.S. Electric Lighting Company owned by Hiram Maxim. Maxim was the chief rival to Thomas Edison, the man who invented the electric light bulb. Maxim wanted to improve on Edison’s light bulb and focused on the main weakness—the short life span (generally only a few days.) Latimer devised a way of encasing the filament (metal wire inside the lightbulb) within a cardboard envelope which prevented the carbon from breaking and thereby provided a much longer life to the bulb and hence made the bulbs less expensive and more efficient. This enabled electric lighting to be installed within homes and throughout streets. He went on to work for the Thomas Edison company, making many important inventions in lighting, elevators, hospital safety, sanitation and temperature control.

Adapted from: http://blackinventor.com/lewis-latimer/
Computer Research: Career Narratives in Construction

Students conduct additional research on the career they read about in the previous 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.
- 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 lesson.

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.

NOTE
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.
Spotlight on Women in Construction

Students read and discuss interviews with women Construction workers. They consider the challenges and successes women have experienced in the Construction industry over time. They then use the interviews to practice making inferences and citing specific quotes to support ideas from the text.

PREP

- Make enough copies of *Women in Construction Quotes* handout for your class groups (the class will be divided into groups of four). Each group needs a complete set. Cut the quotes into individual strips as indicated by the dotted line.

- Write the following questions on the board:

  1. What are some challenges faced by women who want to enter the Construction industry?
  2. What can women do to meet these challenges or to resist unfair treatment?
  3. What are some signs that the Construction industry is changing?
  4. What can the Construction industry do to change?

MATERIALS

- *Women in Construction Quotes* handout
- *Women in Construction: Two Perspectives* reading
- *Using Quotes as Supporting Evidence* handout

EXPLAIN

Historically, it has been difficult for women to enter and advance in Construction. Nationally, women make up only 9% of the industry’s workforce. Because Construction is perceived as a man’s job, women have faced barriers to being hired and promoted, as well as challenges ranging from sexual harassment and workplace environments that do not respond to the needs of women to the unavailability of appropriately sized safety gear.
Women in Construction and advocates for increased diversity have been working to change that. In recent years, the Construction industry has begun to acknowledge and address these issues.

Advocates have worked with government to create regulations aimed at increasing the number of women and people of color in the industry. Changes have included outreach, increasing the number women and people of color admitted into apprenticeship programs and the implementation of labor agreements and contracts that bring previously excluded populations into the industry. Women have formed industry organizations such as Sisters in the Brotherhood, which was founded in 1998 to support women in the carpentry trades.

2 Read the three first questions from the board.

- What are some challenges faced by women who want to enter the Construction industry?
- What can women do to meet these challenges or to resist unfair treatment?
- What are some signs that the Construction industry is changing?

We're going to look at quotes from several different women. Each quote refers to one of these three questions.

3 Divide the class into groups of four. Distribute Women in Construction Quotes handout, one per group.

4 Say: Read each quote and then decide whether that quote
1) demonstrates a challenge that women have to face in Construction,
2) shows a strategy used to meet this challenge or to resist unequal treatment, or
3) suggests that things are changing.

Once you have finished dividing the quotes into categories, go back to the same three questions and answer them based on the quotes. Write notes so that you can discuss your answers in class.

5 Write the following three columns on the board:

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Strategies</th>
<th>Signs of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When students have finished sorting and discussing the quotes in their groups, review them as a class. Write key words for each quote in the appropriate column on the board. Ask students to explain why they think the quotes fit the column they selected.

6 Facilitate a discussion on the three questions that the students discussed in their groups with the class.

- What are some challenges faced by women who want to enter the Construction industry?
- What can women do to meet these challenges or to resist unfair treatment?
- What are some signs that the Construction industry is changing?

Also discuss:

- What were the common strategies women Construction workers used to be treated as professionals on the job? How would you summarize them?
- Which quotes on strategies match quotes on specific challenges? Why do you think this?
- What signs of change do you notice?

7 Read the fourth question on the board:

- What can the Construction industry do to change?

Facilitate a brainstorming discussion with the entire class. Write class suggestions for industry change on the board.

8 We’re going to read interviews with two women who have successfully navigated some of the challenges that we’ve discussed. In the reading, Debora Gonzalez looks back on her 15-year career as a Steamfitter and Sharon Darling looks forward to beginning her career in Construction.

9 Distribute Women in Construction: Two Perspectives reading. Ask students to read and annotate the article. First, students should mark anything they think is interesting, important, confusing, or surprising. They should circle unfamiliar words and write any questions they have in the margins.
Ask students to discuss the interview in their groups and answer the following questions:

- **What did you notice in the article?** (write down as many things as you can.)
- **What did you read that interests you?**
- **What do you want to know more about? Was anything confusing? What do you have questions about?** (be specific)

Facilitate a discussion in which students share what they talked about in groups and also ultimately discuss:

- **What did the two women have in common? What was different?**
- **Why do you think they stayed in or chose to pursue Construction?**
- **Construction has historically had low numbers of women working within the industry, particularly in upper level positions, although that is changing. Given that history, why do you think we highlighted interviews with women in this lesson?**
- **Did reading these interviews make you more or less interested in a career in Construction? Explain.**
- **How can this information be useful even if you don’t identify as a woman or are not interested in a Construction career?**

**NOTE:** Students should back up their thinking with evidence from the article. Ask follow-up questions that help students explain their thinking, delve more deeply into the questions, and cite evidence to support their responses. Some sample follow-up questions might include:

- **How do you know that?**
- **Where in the article do you see that?**
- **Why do you think that?**
- **What else do you notice?**
- **Can you say more about that?**
- **What do you think that means?**

We’re going to use the information in the readings to practice using quotes to support your statements. This is an important skill for the TASC exam.
Write on the board:

*The rate of pay is one reason that people enter and remain in Construction.*

Do you agree with this sentence? Why or why not?

The class should agree. Have the class discuss the reasons why they think salary is a reason why people enter and remain in Construction for 1-2 minutes.

13 Ask students to look through their reading and find quotes that support the idea that the rate of pay is a reason why people enter and remain in Construction. Ask students to read the quotes aloud. Write the relevant quotes on the board.

If necessary, review the difference between quotes that support the position and quotes that are not relevant. For example, quotes about challenges in Construction or personal reasons such as liking to work with your hands are not relevant to the sentence.

14 Keep students in their same groups. Distribute *Using Quotes as Supporting Evidence* handout.

15 When students are finished, review the answers with the class and clarify any questions.
“I went to apply for an apprenticeship program but no one would even take my application.”

“I have been overlooked for promotions when less qualified men were hired. Women still earn less than men. I consider that discrimination.”

“There wasn’t a bathroom I could use on site. I’d have to go to a nearby fast food restaurant or just hold it in. My employer provided safety gear, but none of it fit me right. Things like that made me feel like I didn’t belong.”

“It’s not the work that drives women out of the industry. It’s all the things you have to put up with along with the work that drives women out.”

“When I showed up on my first job, the guys thought I should be standing on the side holding a flag instead of working the same job alongside them.”

“Going to pick up a 300-pound light, I’ll have guys try to push me out of the way, saying, ‘Oh, you can’t do that.’ You just have to learn to push back and say, ‘Yes I can.’”

“You still have a few guys here and there who get caught up in their ego. I tell my sisters to be assertive. Know yourself. Don’t tolerate that and learn the job to the best of your capabilities.”

“You have to show you’re competent because you’re being judged the minute they see you.”

Site managers don’t dare to call me “love” or “sweetheart” anymore.

“It’s great money and great benefits, but you have to show your worth. Be the best you can be from day one. Put your best foot forward and keep it there so that people will respect not just you, but the next woman who comes on the job.”

I’ve met a lot of guys where the first time they see me, they couldn’t help but laugh. But then when they ask me to do a job, I’m the first one on it. When the men see that you can do the same job and you’re working just as hard, you earn their respect. I tell women coming in, ‘Just earn their respect. That’s all you have to do.’

“It’s important that women help each other out, that we lend a hand to women who are just starting. If you’re new, find mentors. If you see somebody in a place you would like to be, they already have the formula for how to get there. Listen carefully and you can go far.”

I can get safety gear in my size. I can even find boots in a size 6 now.

The stereotyping and prejudice are worse with the older generation, who are now retiring. The younger men I work with are more respectful.

A friend told me about a free New York City program called Non-Traditional Employment for Women. After seeing her complete the program and get a job, I decided to do the same. I took the test, went through the program and became a carpenter.

Sometimes little things matter, like putting up a sign that says, “Men and Women at Work,” instead of just “Men at Work.”
Women in Construction: Two Perspectives

Adapted from: https://www.nytimes.com/2010/07/15/nyregion/15entry.html

DEBORAH GONZALEZ worked as a Steamfitter on projects all around New York City for 15 years before retiring. In the interview below, she talks about the challenges and benefits of working in Construction.

SHARON DARLING, 24, is a graduate of a program at Nontraditional Employment for Women, a group that prepares women for union jobs in the building trades. She has been an apprentice with Electricians Local 3 for nearly a year. Sharon lives in Midwood, Brooklyn.

DEBORAH GONZALEZ looks back on her 15-year career in Construction

How did you get started in Construction?
I was a 46-year old single mother working in Hospitality. I wanted a job with more money and more independence. I became a Steamfitter with the support of my stepfather. I joined the Local 638 Steamfitters Union and enjoyed being a Steamfitter right away. I loved the work from brazing to soldering to sprinkler installations and working with machines. I was hands-on and left to do my job instead of always having to deal with people and their nonsense, the way you have to in Hospitality.

What is being a woman in Construction like?
I was often the only woman on the job site. You’re not going to get anything from the men if you don’t try your hardest, and when you do, you gain their respect. I pulled my own weight. I didn’t shrink away from anything. Steamfitting is a two-person job. You have to rely on your partner. I showed that I was there to work, just like everyone else.
What are the benefits of working in Construction?
Financial independence, great health and pension benefits and being left alone to do your job. I was often frustrated and tired on the job, but it gave me what I would have not been able to do without it. Along with providing for my family, I was able to retire at 60 after a 15-year career, something I would have been unable to do if I had remained in Hospitality.

What advice do you have for women who want to get into Construction?
It’s a great career and I support women getting into a trade like Steamfitting, but it’s not for everyone. It requires extremely physical work. Weather conditions are tough, especially since we run maintenance on systems during the opposing season. You’re in the boiler room during the summer and on the roof working on air conditioning in the winter. It takes a lot of stamina and determination, but it gave me the independence I didn’t previously have in my life.

Sharon Darling starts out on her own Construction career

How did you get started in Construction?
I attended a lot of schools with performing arts programs, and I found out I really loved building sets for the school musicals. I helped build the set for “The Lion King,” and I was in it, too. I went to Sullivan County Community College upstate and got an Associate’s degree in Construction Technology. Then I came back to the city and couldn’t find a job.

A friend of mine told me her grandmother had gone to the Non-traditional Employment for Women (NEW) program and become a Carpenter, so one day I went to an information session. I took a math and English exam, went through an interview, and got accepted to their program. I switched from Carpentry to Electric because I loved the math theory that you have to use.
After I graduated, I had to wait a year to take the test to get into the union. You have to wait until a spot opens. The test takes about five hours; it’s really tedious, and those who do pass it, I would call them warriors.

**What is being a woman in Construction like?**

The first job I was assigned was in Brooklyn. It was at a new school that was pretty much finished, so I was only there three days. The first day was scary. Everybody is looking at you because you’re the only girl. My second job, the one I’m still at, was much better. The Foreman got me straight to work at 7, and I felt like, “I can do this.” The fear was gone.

Then there’s the name thing. Oh, God, they call me “darling” all day long, and they say they can get away with it because it’s my name. As long as they don’t take it no further, I’m O.K. with it. But you keep it moving; you can’t mingle. When you’re on a big job, you’ve got Carpenters and Roofers and Plumbers. There can be a thousand men. And you know the stereotypes men have: They think I should be home having babies, or doing hair or nails, girly stuff. But I’m hanging in here; I’m carrying the same tools. I feel like I’m worth something.

**What are some challenges of the job?**

I was never a morning person, but when you’re in the union, you have to be at the site by 7 and **tardiness** is not tolerated. We’re like vampires, up at 4 or 5 in the morning so we can get wherever we need to be. I live in Brooklyn but my job site for the last eight months is at a school that’s being built in Queens; it takes an hour to get there.

**What are the benefits?**

Electric is the best trade as far as using your brain goes: it’s got math, physics, science, everything. I worked at the J. Crew clothing store at Rockefeller Center until the union notified me; all that year I was thinking, “I have to get this career; I have to get a job that gives you benefits and all the things you need to survive in this world.” It’s a job that gives you a future. In five years, I’ll attain the status of Mechanic, earning $40 to $50 an hour and the authority to delegate grunt work like hauling 90-pound bales of wire to apprentices like me.

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**VOCABULARY**

**Tardiness:** Arriving late
Using Quotes as Supporting Evidence

Answer the question and then find evidence in the story that supports your statement.

**QUESTION:** The two women interviewed in the reading talk about the challenges of being a woman in the Construction industry. How do they address these challenges in their work?

Your statement: ____________________________________________________________

Gonzalez: ________________________________________________________________

Darling: ________________________________________________________________

**QUESTION:** How do the women feel about the physical demands of the job?

Your statement: __________________________________________________________

Gonzalez: ________________________________________________________________

Darling: ________________________________________________________________

**QUESTION:** What can you infer about how the women feel about the Hospitality and Retail sectors based on the interviews?

Your statement: __________________________________________________________

Gonzalez: ________________________________________________________________

Darling: ________________________________________________________________
ADDITIONAL QUESTIONS

Why do you think the author put these two interviews together in the reading?

If Debora Gonzalez met Sharon Darling, what do you think they'd say to each other?
You cannot value dreams according to their odds of coming true.

— Sonia Sotomayor

SONIA SOTOMAYOR was born on June 25, 1954, in the Bronx, New York. Her family functioned on a very modest income; her mother was a nurse at a methadone clinic, and her father was a factory worker. Her desire to be a judge was first inspired by the TV show, Perry Mason. She graduated from Yale Law School and passed the bar in 1980. She became a U.S. District Court Judge in 1992 and was elevated to the U.S. Second Circuit Court of Appeals in 1998. In 2009, she became the first Latina Supreme Court Justice in U.S. history.

Source: http://www.biography.com/people/sonia-sotomayor-453906
Photo: https://upload.wikimedia.org/wikipedia/commons/1/15/Sonia_Sotomayor_in_SCOTUS_robe.jpg