

Antje Cramer

Bureau, U.S. Census. "Women Are Nearly Half of U.S. Workforce but Only 27% of STEM Workers." *Census.gov*, 8 Oct. 2021, <https://www.census.gov/library/stories/2021/01/women-making-gains-in-stem-occupations-but-still-underrepresented.html>.

This source tells me that women only take up 27% of stem jobs, compared to men who take up 73%. That's what I'm trying to push in a more balanced direction! The one problem is that this source doesn't take into account people who aren't men or women, which has to be at least a fraction of a percent! Those are also people I'm aiming to help. As I told Mr. Kamal, the shy nerds are the ones who need help getting interested in the more hands-on stem careers like engineering and carpentry.

Survey

This is a source that I'll be making myself! It'll be sent out to the whole school in the advisory memo, aimed at freshmen and sophomores, but anyone's input would be appreciated. I want to hear from younger people who are interested in engineering and their feelings around the shop. Are they excited to build in it? Are they intimidated by it? Does it feel welcoming or unwelcoming? How does their response relate to any personal history with engineering? One problem is that... A lot of people don't read the advisory memo. Especially the kids who feel less connected to school overall. My target audience, nerdy girls, will probably be reading the memo, but there's other people my project could benefit from that may not see the survey.

Interview with Mr. Kamal

This source kickstarted my project. I met with Mr. Kamal during a lab period a few weeks ago, and he showed me around the shop and around the resources he had set up. Mr. Kamal said that a previous senior made a handful of labels with safety information that I can build off of if I want. Overall, I don't think I'll be continuing directly off of the previous person's work. Safety is important, but you can't even get to the point where safety matters if you don't know what the machines do. I liked how he designed his labels, so I may take them as inspiration for my own labels.

"5 Ways to Get Girls into STEM." Edutopia, www.edutopia.org/blog/5-ways-girls-involved-STEM-karen-purcell.

"How Do You Interest Teenage Girls in Physics and Engineering?" Institution of Civil Engineers (ICE), 2 Dec. 2020,

www.ice.org.uk/news-and-insight/ice-community-blog/february-2020/how-do-you-interest-teenage-girls-in-engineering. Accessed 28 Jan. 2022.

These sources aren't the MOST useful to me, because I'm not planning on having a minicourse or anything like that. However, it does talk about having the same goal as I do. I want to make the engineering space encouraging, not nerve wracking or intimidating! The second article is similar; I can't use their strategies directly, but I can use their mindsets. A lot of the wording and intentions of these articles will be helpful for me to be inspired by in my capstone.

Mr. Kamal's resource folder

This source is a google drive folder that mr. Kamal shared with me when I first proposed my capstone to him. It has everything from tool safety manuals to floor plans to tutorials. This will serve as the core of my project. After all, it's about OUR shop! Not just any shop! It has to be personalized to our school and our students. Hopefully, my capstone will involve adding things to this folder, for the future generations of students and their captions.

Przybyla, Dena. "Color Psychology - the Ultimate Guide to Color Meanings." Color Psychology, 2019, www.colorpsychology.org.

This source provides information about the psychology of color theory and how different colors can cause different reactions in people. I want to maximize comfort and minimize confusion! That means I'll use a red border to draw attention, so your eye goes directly to it. I plan on having blue be a primary color there as well, because it's calming and creates a relaxing atmosphere. It's also SLA's color! I'm also going to be sure that the background color is light and the text is dark. That combination is high-contrast, so the colors don't blur as easily and can be seen from further away.

Aland, Maggie. "Storefront Signs – How to Choose the Right Sign for Your Business." Fit Small Business, Fit Small Business, 5 Dec. 2017, <https://fitsmallbusiness.com/storefront-signs/>.

Storefront signs and the labels I'm making both have something in common: they have to be eye-catching! To draw people in, a sign has to be bold and nice-looking. This source will help me design a good design for my labels that will really bring people in. I plan on using bold text and high-contrast colors so you can read it from far away, as well as a sans-serif font that's dyslexia friendly. Accessibility is key in my capstone!

Bennett, Jordan. "Academic Achievement Isn't the Reason There Are More Men than Women Majoring in Physics, Engineering and Computer Science." NYU, 18 June 2020,

www.nyu.edu/about/news-publications/news/2020/june/study--academic-achievement-isn-t-the-reason-there-are-more-men-.html. Accessed 28 Jan. 2022.

This source is about a common misconception about the gender divide in STEM. It's not that men are just "better" at it than women. They don't have higher academic achievement than women. In fact, it's the other way around! A lot of the time, the women in STEM have been much more high-achieving than their male peers. For my capstone, I need to understand that I can make a difference. My work will not magically make women do better in engineering, but it will give them the drive! It's not that they are prevented from choosing STEM by their grades, it's that they just don't want to do it. They don't feel supported or accepted like men do in the field. So, I want to support them.

Arno, Jon, and Reader's Digest Association. *The Woodworkers Visual Handbook : From Standards to Styles, from Tools to Techniques : The Ultimate Guide to Every Phrase of Woodworking*. Pleasantville, N.Y. ; Montreal, Reader's Digest Association, 2001.

There's nothing more important to carpentry than knowing how to do carpentry. I'll look through this book for ideas of things to make as examples! It talks about different styles of woodworking, from different eras and places on earth. Want to make a 1800s style french chair? Want to make a modern shelf? This book can help with both! Also, the techniques here are important regardless of what you're making. Using this book i'll be able to do more by myself without Mr. Kamal having to teach me absolutely everything himself.

"Dyslexic Fonts: The Top 10 Dyslexia Friendly Styles." *Exceptional Individuals*, 10 Nov. 2020, <https://exceptionalindividuals.com/about-us/blog/our-top-10-dyslexia-friendly-fonts/>. Accessed 28 Jan. 2022.

This source is valuable to me because accessibility is important!! Typing this up in a fancy, cursive font may look good, but a large number of students may not be able to read it easily. The whole point of my capstone is to make the engineering shop accessible to more groups, and that includes people with dyslexia! The source lists ten fonts that would all be good choices. I'm either going to choose verdana, for its simple legibility, or century gothic, for its school friendliness. Accessibility is the key, so I'm going to optimize everything for it.