

Introduction

Welcome to another exciting newsletter! This newsletter is a celebration of Women's History Month, and we will be talking about the contributions of achievements of Women in STEM. A fun fact is that Women's History month was actually only a week, and it was founded by the executive branch of the government in 1981 to celebrate the accomplishments of women across America in their respective fields. Over the next decade, the timeframe of the celebration gradually grew as the government reviewed petitions and passed resolutions designating the month of March as Women's History Month, due to how important it is to acknowledge and celebrate women. Women have top achievements in almost every field, building rockets, making advances in medicine, publishing research, and even helping make the internet possible!

Northeastern Connections

Faculty Connection

Loretta A. Fernandez ([web](#))

Professor Fernandez is passionate about environmental organic chemistry, and the transformation as well as the transport of contaminants and pollutants in the environment. She is an Associate Professor of Civil and Environmental Engineering at Northeastern University. She has also been an active member of the Northeastern Community when it comes to reducing the spread of COVID, as she has been giving helpful advice backed up by scientific research, such as choosing the best mask and designing the most effective face mask.





Carol Livermore ([web](#))

Professor Livermore is an Associate Professor of Mechanical and Industrial Engineering here at Northeastern University. She has won many awards, including a research award and a Northeastern University College of Engineering Faculty Fellow award. Her teaching interests include Solid Mechanics, the study of the motion of solid materials under the actions of force, as well as Microelectromechanical systems, which is the study of systems that combine mechanical and electrical components. She

has also been leading a research team that uses origami to develop tissues that mimic tissues in the human body. How cool does that sound!

Student Connection

MaryBeth Rockett is actually an Alumni Connection, as she has graduated from Northeastern last December and is currently a full-time Engineer now! MaryBeth's journey with STEM actually started before she studied Bioengineering and Biomedical Engineering here at Northeastern. Back when MaryBeth was between the 6th and 7th grade, she attended a Summer Science Camp, where she spent 2 weeks at Northeastern, immersed in STEM activities, going to labs, working on projects, and talking to students at Northeastern.



It was when she finally started to understand what being an engineer meant and was exposed to women in various STEM fields. This experience sparked her interest in STEM, as she started taking it more seriously during High School. This inspired her to take part in the Young Scholar's Program (YSP) at Northeastern, where high schoolers work on research and have Northeastern Professors as Mentors. YSP amplified her interest in STEM and Northeastern, where she ended up pursuing a degree in Bioengineering and Biomedical Engineering and even going on to do her masters at Northeastern! During her time at Northeastern, MaryBeth loved learning. She enjoyed her classes and learned a lot about different medical devices, tissues, and organs. She even ended up working in the Center of STEM Education during her time at college, and lead YSP, the same program that was part of sparking her interest in STEM. She also completed 2 co-ops (6-months of work experience each) that gave her a much better understanding of what bioengineering is like in the real world, as well as understanding the large scope it encompasses, helping her understand what she liked and what she didn't like. MaryBeth is proud of how far she has come, and encourages girls to pursue STEM if they're interested in it, and give it a try even if they're not. Even though

MaryBeth often finds herself being the only woman on the team, she doesn't let that discourage her. She describes herself as her own superfan, encouraging herself to keep going and to keep learning and innovating. There are so many more opportunities for girls in STEM now, and MaryBeth strongly advises taking advantage of them. Don't let people's gender stereotypes keep you from doing what you want to do!

Do Now

[Women In Science Encourage Young Girls: "You Belong In The STEM Fields"](#)

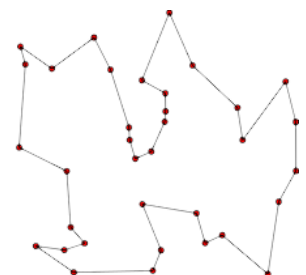
Watch the video above and think about the questions listed below afterward.

Discussion Questions:

- What was the best piece of advice from that video?
- What actions can we take to make girls feel welcome in different STEM fields?

Activity

For this activity we'll be looking at the work of a great female engineer, Emily Warren Roebling. Her husband was assigned Chief Engineer of the Brooklyn Bridge. Unfortunately, he developed a disease, so Emily took charge of ensuring the completion of the Brooklyn Bridge after her husband became bedridden. She is known as the first female field engineer and was recognized for her hard work by Congressman Abram Hewitt. Emily actually became the first person to cross the Brooklyn Bridge. For this activity, we'll be celebrating Emily's accomplishments by modeling the Brooklyn Bridge out of popsicle sticks!





Materials Needed:

You can use any materials you want but here are some suggestions:

- Popsicle sticks
 - Twine
 - Glue
 - Tape
 - PlayDough
- Pencil and Paper

Steps:

- Look up images of the Brooklyn Bridge (or use the photo above) for inspiration
- Plan out a simplified structure on paper
- Start making your bridge out of the popsicle sticks!
- Follow the Engineering Design Process to help with creating the structure, iterate and repeat the process if you don't get the desired outcome.

Discussion Questions:

- What was the most challenging part of creating the bridge?
- What techniques did you use to create your bridge and keep it up?
- Did following the Engineering Design Process help?

Share Your Results

We'd love to know how the activity and/or the "do now" turned out! What worked and what didn't work? Please share with us something you learned and/or send us pictures! Email us at stem@northeastern.edu.

Related links/Extensions

- [7 Activities Featuring Women in STEM History](#)
- [About Women's History Month.](#)
- [IWD: About International Women's Day](#)
- [Women in Science, Engineering, and Medicine](#)
- [STEM is Beautiful: Women in Science](#)

- [Unsung Women of the Civil Rights Movement](#)