Mark and Krys

Hope you had a nice long weekend and you're staying safe! The girls in my summer STEM club thought we should send a thank-you note! Because of the closures we've been doing meetings remotely (I think we're finally getting the hang of it LOL) but even still the girls have been working hard on their career research projects. They pick a field related to STEM and do some research and share their findings with the club... Charlotte (she's 11!) was doing research and ended up on your Science in Motion page <https://www.lccc.edu/academics/science-and-engineering/science-in-motion/free-online-educational-activities> and thought you would like to know that she found some excellent resources there which she showed me, especially NASA's STEM at Home, so thank you!! And Charlotte wanted to share another educational STEM page she found...
Char's link: "Women in Engineering and Technology" <https://www.elevators.com/women-in-engineering-and-technology/>

It's an excellent resource for girls & young women, so Charlotte thought it would be a helpful additional link for your page she found, for other students who find it! Would you be able to use it? She seems to really be enjoying the club so far, so I think it would go a long way for her to see her suggestion... Especially during these times. I can let her know at our next meeting, she's excited to know if it's helpful!

Thank you both so much again :) Stay safe and keep healthy this summer !

Best,
Stacey Martin (and Charlotte B.)

**Women in Engineering and Technology**

By [Andy Darnley](https://www.elevators.com/andy-darnley/)

Through the use of science and math, engineering has helped to create the technologically advanced world that is often taken for granted in modern times. Although engineering is responsible for many modern marvels, its use can be found centuries in the past, as far back as ancient times. While engineering has historically been a field dominated by men, they are not the only ones to have made major accomplishments in this area. There have been, and continue to be, numerous highly successful female engineers. While their accomplishments are well-known, their names may not be universally recognized by those outside of their field. Through education, people can acknowledge and celebrate the contributions of famous female engineers and, as a result, encourage more girls to pursue engineering as a future career path.

* [Harriet Ruth Brisbane Tracy](http://www.hillmanc.fsnet.co.uk/obitandbiog_harriet_ruth_brisbane.htm): This is the obituary page for Harriet Ruth Brisbane Tracy. She was credited with at least 11 patents that were related to elevators, folding beds, and sewing machines. Machines based on her elevator patents were featured in the 1893 Chicago World’s Fair.
* [Hedy Lamarr](https://www.uh.edu/engines/epi435.htm): Hedy Lamarr was the inventor of frequency-hopping and spread-spectrum technology. This patented work became the basis of not only U.S. Navy technology but also Wi-Fi and Bluetooth technology that the Internet and computers use today. Visit the University of Houston’s “Engines of Our Ingenuity” website here for a more in-depth look at the life of Hedy Lamarr.
* [Edith Clarke](https://slice.mit.edu/2015/04/08/first-female-engineer-inducted-into-inventors-hall-of-fame/): Edith Clarke was the first woman to earn a Master of Science degree in electrical engineering at the Massachusetts Institute of Technology. She invented a graphical calculator called the Clarke calculator, for which she received a patent in 1925.
* [Helen Augusta Blanchard](http://www.moah.org/stitches/inventors.html#blanchard): Click here to read about Helen Augusta Blanchard on the Museum of American Heritage’s website. Blanchard made nearly 30 inventions, including the patented Blanchard overseaming machine, a version of which is on display at the Smithsonian Institute’s Museum of American History. She also invented another famous device, the “zigzag” overstitching machine.
* [Sally Ride](https://sallyridescience.com/about/dr-sally-ride): Visit the UC San Diego Sally Ride Science website to read about Dr. Sally Kristen Ride, America’s first female astronaut. She earned her bachelor’s, master’s and Ph.D. in physics at Stanford University and joined NASA in 1978. She was one of the developers of the space shuttle’s robot arm and took her first of two space flights in 1983. She also participated in the investigations concerning the Challenger and Columbia disasters.
* [Kate Gleason](https://www.rit.edu/kgcoe/women/about/about-kate-gleason): The Rochester Institute of Technology presents a short biography of Kate Gleason on its Women in Engineering website. Gleason was born in Rochester, NY, in 1865 and became the first female engineering student at Cornell University in 1884. Gleason contributed heavily to the success of her father’s company, Gleason Works. In addition, she invented new ways for pouring concrete and was the first woman to become a member of the American Concrete Institute and the American Society of Mechanical Engineers. She was also the first woman to become the president of a major bank, the First National Bank of East Rochester. Rochester University’s Kate Gleason College of Engineering was named in honor of her many achievements.
* [Emily Warren Roebling](http://roeblingmuseum.org/about-us/emily-warren-roebling/): Click this link to visit the Roebling Museum website for information about Emily Warren Roebling. Roebling was effectively the chief engineer in charge of the construction of the Brooklyn Bridge. When her husband, the man who held the title of chief engineer, became bedridden due to disease, she took over managing the construction of the bridge and saw the project through to its completion in 1883.
* [Olive Wetzel Dennis](http://www.goucher.edu/news-and-events/olive-wetzel-dennis): Go here to read Goucher College’s article on Olive Dennis. Dennis was a math teacher who earned a master’s degree in mathematics in 1909 and then a bachelor’s in civil engineering from Cornell University in 1920. While working for the B&O Railroad, Dennis invented reclining seats for passenger trains, ceiling lights with adjustable brightness, and window vents with filters for keeping out dust.
* [Dr. Patricia E. Bath](https://www.nlm.nih.gov/changingthefaceofmedicine/physicians/biography_26.html): Visit the National Library of Medicine’s website for a biography of Dr. Patricia Bath. Bath’s achievements began at the age of 16, when she joined a cancer research group funded by the National Science Foundation. Her research and findings were published by Dr. Robert Bernard while she was still a teenager. Bath received her doctorate from Howard University and is most famous for the invention of the Laserphaco Probe in 1986. The Laserphaco Probe, patented in 1988, is a machine that is widely used for modern cataract surgery and has been responsible for saving the eyesight of many patients.
* [Ellen Ochoa](http://oeop.larc.nasa.gov/hep/lwon/LWONbios/jsc-EOchoa.html): Click this link to go to the NASA page for Dr. Ellen Ochoa, the first Latina woman astronaut. Ochoa earned a doctorate in electrical engineering from Stanford University and is a flight engineer and an astronaut for NASA. Her first of four space flights was in 1993. She is also named as a co-inventor on three optics-related patents involving the processing of images from space.
* [Grace Murray Hopper](http://www.cs.yale.edu/homes/tap/Files/hopper-story.html): Learn about the life and achievements of Admiral Dr. Grace Hopper on Yale’s website. She is famous for inventing the first computer program compiler, which enabled programmers to write software using English-language code. The first compiled computer languages that came directly from her work were MATH-MATIC, FLOW-MATIC, and COBOL.
* [Marie Curie](https://www.nobelprize.org/nobel_prizes/physics/laureates/1903/marie-curie-bio.html): The Nobel Prize website features a biography about Marie Curie, a Polish-born chemist and physicist. She is famous for her ground-breaking work in the field of radioactivity studies and was the first woman to earn a Nobel Prize. The curie (Ci), a unit that measures radioactivity, was named after her and her husband Pierre.

Women make up more 51 percent of the population but less than 15 percent of engineers. The lack of women in the science, technology, engineering, and math (STEM) fields threatens to reduce the diversity of talent that is necessary for the 21st century. The potential amount of talent lost as a result is unknown but clearly significant in magnitude. One of the ways to alleviate the shortage of women in the engineering fields is offering scholarships as an incentive to take up engineering as a major in college. A variety of (scholarship) programs are available today that are geared toward encouraging women to become engineers.

* [The Society of Women Engineers Scholarships](http://societyofwomenengineers.swe.org/scholarships)
* [The Google Anita Borg Memorial Scholarship](https://www.google.com/anitaborg/)
* [Alpha Omega Epsilon (AOE) National Foundation: Scholarships](http://www.aoefoundation.org/scholarships.php)
* [Kate Gleason Scholarship](https://www.asme.org/career-education/scholarships-and-grants/scholarship-and-loans)
* [Women in Aviation International: Scholarships](https://www.wai.org/education/scholarships)