

STEM RESOURCES

Meet Jill Heinerth, cave diver, underwater explorer, writer, photographer, and filmmaker.

<https://youtu.be/vVs77rz96RE>

Exploring underwater caves with Jill Heinerth More people have been to the moon than some of the places Jill has dived. Does she still feel scared to venture into the depths of underwater caves? Watch to find out!

Visit the International Space Station

<https://topdocumentaryfilms.com/space-station-tour/>

Sunita Williams is one of the most experienced spacewalkers in NASA history. Near the conclusion of her final voyage as commander of the International Space Station for NASA in 2012 - a mere twelve hours before landing back to Earth - Williams filmed an informal tour of the quarters where she and other astronauts lived and worked while on space expeditions.

Space Station Tour is a no-frills affair devoid of insert shots or cutaways, and it succeeds in conveying a "you are there" perspective as a result. Williams is obviously an extraordinarily accomplished astronaut who knows every detail of the massive spacecraft, and she's never less than a congenial, appealing and instructive host during the course of the short film.

In between are a series of practical spaces which allow for everyday activities under zero gravity conditions. We enter their kitchen area and see a vast menu of food packages representing various cuisines from around the world. Williams shows us the modest exercise equipment aboard the craft, which prove essential in combating the potential for bone density and muscle loss that occurs in space flight. We're even given a tour of their restroom facilities, which Williams jokingly refers to as their "orbital outhouse". The overall environment of the station is one of contrasts - it's massive, yet strangely claustrophobic, messy, yet intricately organized, and technologically awe-inspiring yet basic in many of its everyday living functions.

Roadtrip Nation: Women in STEM

<https://roadtripnation.com/roadtrip/women-in-stem>

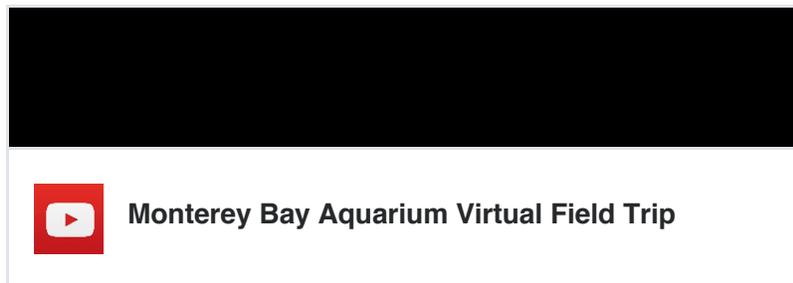
You can't be what you can't see—so we sent three young women out on the road to meet leaders in STEM who are blasting past barriers and launching us into the future.

From rocket scientists at NASA to engineers, professors, computer scientists, artists, and more, follow the journey of road-trippers Ariel, Elicia, and Regina as they get a firsthand look at how women in STEM are overcoming challenges and building the future of science, technology, engineering, and mathematics.

The site also offers a viewing guide to help with discussions.

Monterey Bay Aquarium .. they have a variety of different ocean creatures that can be viewed on virtual field trip site

[Monterey Bay Aquarium Virtual Field Trip](#)



NPR's Science Friday has a variety of educational resources including remote learning ideas and activities, ranging from:

<https://www.sciencefriday.com/educational-resources/get-cheesy-make-curd-and-mozzarella/>

to <https://www.sciencefriday.com/educational-resources/engineering-a-fix-for-the-great-pacific-garbage-patch/>

And many more, you can find at: <https://www.sciencefriday.com/educate/>

SheTech Virtual workshops – lots of virtual workshops from basic cell phone repair to DIY Virtual Reality headset to protein manipulation, turning milk into plastic, making your own seismograph and more.

<http://shetechexplorer.com/student-workshops/>

Girls STEAM Ahead with NASA – includes a variety of activities to engage youth in the process of science using NASA Astrophysics data with activities designed to

encourage exploration of our universe and how we know what we know. Click on the “summary document” in one of the last introductory paragraphs to get a full scope of all that is available.

<https://www.universe-of-learning.org/gsawn/>

National Math Festival Resources – puzzles, problems, games, videos, books and other cool math activities that can be selected based on age range

<https://www.nationalmathfestival.org/more-math/>

Mission Unstoppable: Mission Unstoppable with Miranda Cosgrove celebrates women who have become superstars in STEM-related careers - science, technology, engineering and math. Each week, our host and her intrepid team of field reporters will shine a light on these visionaries who work on the cutting edge of science - including zoologists, engineers, astronauts, code-breakers and oceanographers. (several different Mission Unstoppable videos on youtube to check out)

<https://www.youtube.com/channel/UCtgUyLVqgkVkVgVZTHMkECQ>

Video Profiles of 3 Women in STEM (short, just a few minutes each/ space craft engineer, cancer researcher, DNA scientist with an interesting twist)

<https://newseu.cgtn.com/news/2020-03-09/Women-in-STEM-Space-engineers-and-cancer-fighters-push-the-boundaries-OHkBmQsxZm/index.html>

Girls Talk Tech This web series aims to inspire a new generation of engineers by showcasing women who work in technology. Features technical tutorials, day-in-the-life videos shadowing multi-faceted engineers, and virtual panels exploring the dilemmas and challenges that women engineers face today. Aimed specifically at children and young adults who might be interested in learning more about what it is like to be an engineer but are intimidated by STEM.

<https://www.girlstalk.tech/>

Pollinator Party – was held in June but lots of good ideas on the website

<https://web.cvent.com/event/1d1b8383-ed03-4854-ba60-272d02424667/summary?rp=00000000-0000-0000-0000-000000000000>

<https://youtu.be/XM0egRFEy8c>

Pollinators such as bees, birds, bats and butterflies bring us one out of every three bites of food, so if you like coffee, almonds, chocolate or honey, thank a pollinator. To learn more about these critters, register for EPRI's virtual Pollinator Power Party -- a week's worth of family-friendly activities centered around pollinators and cooking, science, art, music and gardening. You can even attend the premier of a new documentary film! SMUD is a member of the EPRI's Power-in-Pollinators initiative which supports pollinator conservation among energy utilities.

Electrifying Engineering – by General Motors

<https://gmauthority.com/blog/2020/06/general-motors-launches-stem-summer-school-series-on-youtube/>

GM describes Electrifying Engineering as “a free educational video series designed to foster ingenuity through hands-on activities while educating kids about electric vehicle technology.” Electrifying Engineering episodes will be released on YouTube every Sunday through to the end of July. Electrifying Engineering videos are hosted by different members of the GM team and touch on a wide range of topics, including electric vehicle charging, electric vehicle motors, autonomous vehicle sensors and more. Additionally, Electrifying Engineering episodes will feature an interactive engineering project that will be easy for viewers to mimic from the comfort of their own homes with common, everyday household items. This will give the online classes a bit more engagement and allow viewers to put what they've learned to the test – whether it be with regard to science, mathematics or vehicle design. The automaker is also encouraging viewers to share their completed engineering projects on social media using the hashtag #ElectrifyingEngineering.

The Electrifying Engineering video series can be found via GM's YouTube page. – <https://www.youtube.com/playlist?list=PL5UWrgmuniqIWKXCnlgtmMUvpLrBkCHHi>

Movies that promote women in STEM:

STEM (Science, Technology, Engineering, Math) industries are among the most important sectors today. They thrive by innovative ideas, and the ability of workers to bring them into being. As such, they benefit enormously from attracting a more diverse range of workers, thinkers, and leaders. While there's been some improvement to women's presence in STEM fields, we are still a long way from true equality. The gender gap is particularly prevalent in computer sciences and engineering, with the number of women in bachelor's degree programs for those specialisations at around 18% and 20% respectively. Historically, STEM subjects haven't been pitched to girls in school, and as a culture, we haven't encouraged women or highlighted role models in nearly the same way that men and boys have enjoyed.

This article takes a look at some of the movies that can promote female STEM workers, and inspire the innovators of the future.

https://womenlovetech.com/must-watch-movies-that-promote-women-in-stem/?fbclid=IwAR015w0tEskIBjDYUN9_4jvE50DavsXXU9r5mbVvJzzK1D8te8jNILFFtKo&mc_cid=89add67398&mc_eid=2bf86b2700

Movies mentioned: *Contact, Enigma, Big Hero 6, Outbreak, Avatar, Hidden Figures*
(Before recommending, we suggest you view them yourself)

Stem Gems

<https://stemgemsbook.com>

Goal is to provide role models in STEM fields for girls and young women. Camp was in June. They offer a book, blog, newsletter, #GiveGirlsRoleModels Campaign, and other materials.

Girls who have STEM role models are 1.4 times more likely to pursue opportunities within these fields, yet only 40% of girls say they have a role model in STEM. The STEM Gems #GiveGirlsRoleModels Campaign is a STEM women visibility and awareness campaign that has reached 20,000+ diverse women and girls around the world in its first 2 years. Join the movement to #GiveGirlsRoleModels.

Rosie the Riveter – various activities for different ages. You can sign up for their free e-newsletter that offers a variety of ideas from different sources

https://www.rosieriveters.com/distance_learning_programs

Coollest Careers in STEM and how to get them, according to Seventeen Magazine
“Whether you’re starting high school soon or getting ready to begin your college search, it’s ~never~ too early to start thinking about what career paths really interest you. Do you ever find yourself thinking about cool new inventions? Or ways that the things you use every day (like your phone, duh) could be better? What about the testing that goes into getting your fave beauty products from the lab into your makeup bag? If any of those ideas sound cool to you, a career path in one of the STEM fields (science, technology, engineering, and math) might be a perfect fit. Every day, women in STEM are doing AMAZING things to improve the world we live in.”

<https://www.seventeen.com/life/school/a32121112/cool-careers-women-in-stem/>

Celebrity Song Remix Grades 6-12. Students can use code to remix real celebrity songs provided by Grammy Award Winning artists Ciara and Common. This experience is part of Georgia Tech's EarSketch, a free way to use music to learn to code.

<https://www.amazonfutureengineer.com/ears sketch>

Computer Science Courses Grades 6-12. Independent learners or teachers can take our free computer science courses through Edhesive. They include introductory computer science through advanced, including certified Advanced Placement coursework. Teachers can take online professional development.

https://edhesive.com/amazon/free_access

UC Davis Bohart Entomology Museum Virtual Tour (Great for bug enthusiasts!)

https://video.ucdavis.edu/media/Bohart+Museum+of+Entomology+Virtual+TourA+Introduction+to+the+Museum+%28Dr.+Lynn+Kimsey%29/0_5z27aleb

Join Museum Director Dr. Lynn Kimsey, for an introduction to the Bohart Museum. Founded in 1946, the Museum is dedicated to teaching, research and service. We have the seventh largest insect collection in North America, and are worldwide in coverage. The collection holdings total more than seven million specimens of terrestrial and freshwater arthropods. Click on the various tours on the right side of the screen .. lots of options