

Celebrate Women in STEAM during Women's History Month

Womenshistory.org states that “every year, March is designated Women’s History Month by presidential proclamation. The month is set aside to honor women’s contributions in American history.” This DoIT STEAM Newsletter is dedicated to sharing resources intended to spark curiosity and help increase the number of girls interested in STEAM careers.

According to the [Illinois Science & Technology Coalition “2020 STEM Talent Index](#), “in 2019, Illinois awarded 24,861 bachelors, masters, and doctoral degrees in STEM areas—a new record for the state. However, STEM degrees awarded in Illinois have grown by 4.7 percent annually since 2010, slower than the national growth of 5.9 percent annually over the same period.” Regarding diversity, equity, and inclusion in STEM, the Index notes “in 2019, 37.1 percent of STEM degrees in Illinois were awarded to women. The share of STEM degrees awarded to women has grown by just 1 percent since 2010. Women are further underrepresented in STEM jobs, making up just 27.1 percent of Illinois’ STEM workforce. Despite making up 14.1 percent of the state’s population, just 5.7 percent of STEM degrees were awarded to Black students in 2019. The share of STEM degrees awarded to Black students in Illinois has fallen since 2010, when 6.1 percent of STEM degrees were awarded to Black students. Black professionals in Illinois make up just 6.5 percent of STEM jobs. More substantial progress has been made among Illinois’ Latinx population. In 2019, Illinois’ Latinx population made up 17.5 percent of the population and were awarded 12.1 percent of the STEM degrees, more than double the share awarded to Latinx students in 2010. Latinx professionals make up 8.5 percent of STEM jobs in Illinois.” We need to expand efforts to increase the number of students interested in STEAM!

Let off some STEAM with these fun activities!

K - 4

University of Illinois Extension “Children Looking Undercover for Energy”

5 - 8

NASA’s “Graphing Global Temperature Trends”

9 -12

Argonne National Lab “Science Careers in Search of Women”

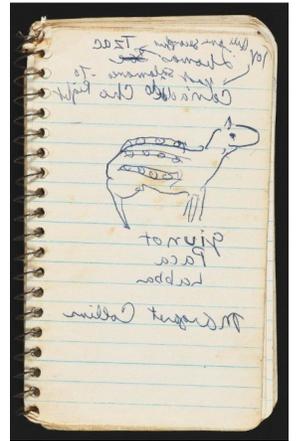
Educator’s Corner

STEAM resources for in-person, hybrid, remote learning, and professional development

- [We are Teachers “18 of Our Favorite Women’s History Month Activities”](#)
- [National Endowment for the Humanities Teacher’s Guide “Women’s History in the United States”](#)
- [Britannica Digital Learning “Women’s History Month Activities: Celebrating Women in STEM”](#)
- [Women @ NASA, NASA’s Universe of Learning, and NASA’s “Six Things You Didn’t Know About Engineering”](#)
- [Library of Congress “The Women Codebreakers of WWII”](#)
- [Black Girls Code](#)
- [National Park Service “The Magic Sash Podcast”](#)
- [Smithsonian’s “Because of Her Story”](#)
- [National Q-12 Education Partnership “Quantime”](#)
- [University of North Carolina World View “Go for the Gold! Globally-Focused Lessons on the Olympics and Paralympics”](#)

News & Events

Smithsonian STEM Teacher Workshop: Inside the Mind of Margaret Collins - ‘The Termite Lady’ March 8, 2022

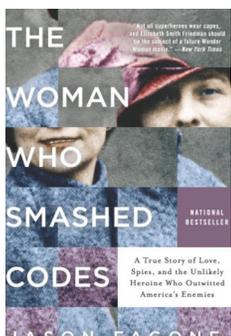


“There are more than 2,000 species of termites and they are found on all continents except Antarctica. Despite being known best for destroying buildings’ wooden structures, these insects are essential to the natural ecosystem. They help remove downed trees and are a food source for many animals. On March 8th, 2022, join the National Museum of African American History and Culture as we offer a virtual workshop where we use the research notebook of Dr. Margaret Collins to examine termites’ ecological relationships, both inside and outside of their bodies. Dr. Collins, known as the ‘Termite Lady’, was the first African American woman entomologist. During her career she traveled the globe to study termites, identified a new species of termite, and served as an instructor and researcher at multiple organizations in Washington DC. Through all of her research and travel, she remained committed to the Civil Rights Movement in the 1950s and 60s.

Workshop participants will use Smithsonian digital resources such as the SI Transcription Center and research experiences of Dr. Collins to learn how scientists gather & interpret data and investigate ecological connections. This workshop will be held virtually and will have pre-recorded and live components. Participants who complete the workshop live will be eligible to receive four (4) hours of teacher professional development credit.”

Illinois Digital Educators Alliance STEAM Coaching Office Hour March 8, 2022 11:00am—12:00pm

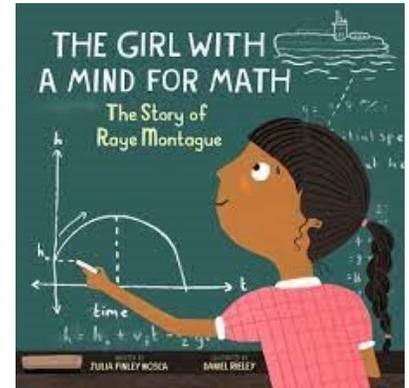
Illinois State Museum “Elizabeth Smith Friedman: Poet, Codebreaker, Nazi Hunter” March 9, 2022 6:30pm – 7:30pm



Free online event intended for teens to adult audience. “Bootleggers, smugglers, spies, Nazis, and mobsters found themselves no match for a petite woman with an English degree, a love of Shakespeare, and a remarkable ability to break even the most complex codes. Yet despite bringing down criminal organizations of every kind over several decades, Elizabeth Smith Friedman's code-breaking work was often attributed to men: her husband, colleagues, even the FBI's J. Edgar Hoover. Join author Jason Fagone as he brings Friedman's contributions to light in this talk based on his book *The Woman Who Smashed Codes: A True Story of Love, Spies, and the Unlikely Heroine Who Outwitted America's Enemies*.” Advanced [registration](#) required.

News & Events Continued

Smithsonian: “Flights of Fancy Story Time: The Girl with a Mind For Math” March 11, 2022 9am—9:30am



“Join us for a reading of *The Girl with a Mind for Math: The Story of Raye Montague* by Finley Mosca and learn about a girl who followed her dreams to become an engineer. Learn more about the math behind aircraft carriers. How can such huge objects float in the water and even be designed for airplanes to land and take off?” Free with registration. Sponsored by the Air and Space Museum via Zoom.

STEAM Resource Spotlight



Meet a Super Scientist! Dr. Mae Jemison

“Astronauts aren't born — they go to school and learn about science just like everyone else! Dr. Mae Jemison's curiosity and energy led her to learn about many things. She went to the library and dancing school. She even acted in school plays and was elected to her school government. And even though astronauts are brave, Dr. Jemison had to conquer her own feelings of fear growing up, too, as all children do.

Mae Jemison: The First Black Woman Astronaut

It was the first day of school, 1961. Five-year-old Mae Carol Jemison was a confident kindergartner who could already read. When her teacher asked her, "What do you want to be when you grow up?" Mae replied: "A scientist." Her teacher looked surprised: Not many women became scientists then, and certainly few black women. But that was Mae's first and only choice.”

STEAM Resource Spotlight Continued

Illinois State Museum “In Her Footsteps Women’s History Trail”

ILLINOIS STATE • MUSEUM
explore. discover. learn. share.

“Throughout time, women have made history. This site features female history makers with a connection to Illinois. You may know a story well or you may have heard a name and not remember how or why you recognize it. “In Her Footsteps Women’s History Trail” seeks to highlight the stories of Illinois history makers and offer resources for continued learning.”



Sally Ride EarthKAM @ Space Camp

“The view from the space shuttle’s window inspired Sally Ride to start [EarthKam](#). She wanted students all over the world to share the incredible learning experience of observing our planet from space.”

Argonne expands its digital education and outreach presence into STEAMville and Instagram

“Argonne National Laboratory is expanding its digital presence in science, technology, engineering and mathematics (STEM) education with two channels aimed specifically at students and teachers: STEAMville and a new education-focused Instagram account. These new virtual programming initiatives, led by the laboratory’s Educational Programs and Outreach (EDU) department, will connect EDU and Argonne to STEM-driven students, teachers, and communities in Chicagoland and beyond.



One of the new platforms being explored by EDU is [STEAMville](#), a combination of a social learning network and a learning management system. Northwestern University has developed the network over the course of a decade to give schools, students, and science organizations their own virtual space to share and utilize STEM activities. This creates a rich catalogue of STEM programming that individuals and institutions can use and apply to their own programs, while also letting different groups and individuals interact with each other.”

The 'A' in STEAM



"Arts foster scientific success" -Dr. Temple Grandin

This series is dedicated to showing how art and creativity play a crucial role in our society on its own and even within the STEM fields. There's a great deal of artistry that goes into our favorite products and media we consume that make our lives easier, or at least a bit more enjoyable, and teach us valuable lessons about history.

Smithsonian Hirshhorn Museum and Sculpture Garden

"The Hirshhorn is the national museum of modern and contemporary art, exploring the art and ideas of our time. We're committed to sharing the power of art—to bring people together, to offer inspiration, to respond to history in real time—with everyone, for free."

Located on the National Mall in Washington, D.C., the Museum opened in 1974. The Museum makes available recorded conversations with artists at "[Program Recordings](#).' The Hirshhorn "[Kids' Projects, Tips, and Lessons](#)" includes activities for younger children as well as intermediate and advanced projects.

The Hirshhorn provides weekly highlights, projects, art world news, and ARTLAB for Teens through [sign-up subscription opportunities](#).

"As one of the most visited modern art museums in the US, we seek to share the transformative power of modern and contemporary art by creating meaningful, personal experiences in which art, artists, audiences, and ideas converge. Through groundbreaking exhibitions, events, research, and acquisitions, we create the space where people encounter the most important artists of the 21st century. The Hirshhorn's holdings encompass one of the most important collections of postwar American and European art in the world, and we are committed to providing the artists of today a national platform to explore new ways to create, with performance, digital media, video, and technology."



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