



Chat Transcript Girls STEAM Ahead with NASA Free Resources Webinar on May 20, 2020

Event Website: <https://ngcproject.org/girls-steam-ahead-with-nasa-free-resources-0>

Marisa Garcia: Hello! I'm Marisa with NGCP. Joining from Seattle
Melanie Kamm: Hi from STARBASE Oklahoma, joining from Tulsa
Patricia Bradley: Hi, I'm Pat Bradley from Half Moon Bay California
Kelly: Hi! I'm Kelly, joining from Fairfax County, Virginia. I'm a public children's librarian.
Kathy - Socorro Public Library: Kathy Spring - Socorro Public Library, Socorro, NM
Maggie Connelly: Hello! Maggie Connelly from Greenville SC
Tokiwa Smith: Tokiwa Smith, with SEM Link, I am in Atlanta, GA
Mary Harrison: Hi Mary Harrison, Lewisburg, PA
Amanda Pegg-Wheat: I'm Amanda Pegg-Wheat from Thomas Crane Library in Quincy, MA
Veronica Coffey: Hi from Poughkeepsie Public Library in NY
LaTonya Frazier-Goatley: Hello LaTonya Frazier-Goatley assistant principal Louisville Ky
Jennifer Gagnon: Good afternoon, my name is Jennifer, joining from NH
Jade: Jade from VA Beach Public Library
Amy Christian: Good Morning! Amy Christian from Wisconsin
Carol Unterreiner: Carol Unterreiner Longwood Fl, Milwee Middle School
Jennifer Stockdale: Jennifer Stockdale, Williamson County TN 4-H STEM youth educator
Johnna Tselides: Hi, I'm Johnna, joining from Warrenton, Virginia
Kimberly King: Kim King from Priestley Forsyth Memorial Library, Northumberland pa
Jenniffer Stetler: Jenniffer Stetler Atlanta
Adrienne Graham: Adrienne Graham from Georgia
Susan Corrigan: Hello. I am from Virginia and am a director of a federal STEM program
Kristina Wang: Kristina Wang from Henderson Public Libraries
Angela Stevens: Hi Angela from Philadelphia
William Fee: Hi, Bill Fee from the State Library of PA in Harrisburg, PA
Lori DeNee: Hello everyone from Albuquerque, NM.
Denise Stanley: Denise Stanley - Grade 6 Computer Science teacher - Massachusetts
David Padgett: Greetings! David Padgett, GLOBE Trainer, Tennessee State University, Nashville, TN
Lauren Dahl: Hello! I'm Lauren Dahl, Visual Arts Teacher at STEAM centered all girls school in
Louisville KY (Grace James Academy, JCPS)
Gretchen Nelson: Gretchen from King County Library near Seattle, Washington
Kayla R, GSCTX: Hello! I'm Kayla R with Girl Scouts of Central Texas
David McMahon: Hi! I'm David McMahon from Woodbury, NJ. I am the Teen and Adult Services
Librarian for Woodbury Public Library. Can't wait to get started!
Tara Hawkins: Tara Hawkins, joining from Urbana, IL- I do the after school program
Bridget Stith: Hi from Oneonta, NY! I'm a library assistant who runs all our library's digital literacy
programming.
Frances Caldwell: Hi from Virginia Beach!
Susan Smith: Susan Smith, STEM Experience Specialist from Girl Scouts of CT
Kim Arcand: Hello, Kim Arcand here from NASA's Chandra X-ray Observatory, I will be helping with
questions today!
paul wagner: paul wagner from the beach in nj
Mary M: Mary MacDonald, Christa McAuliffe Center Framingham MA
Amy Zock: Hello from Dalton, GA
Sage Zepeda: Sage Zepeda- Kindergarten teacher in Bentonville Arkansas
Sarah Betts: Sarah with Girl Scouts Eastern Washington and Northern Idaho
Will Brown: Will Brown, I work on Teach for America's Computer Science team

Stephanie Rayome: Hi! I am Stephanie Rayome from St. Louis Public Library
Cheri: I'm from AAUW Tech Trek NM.
Lora Tepe: Hello everyone! Lora Tepe from Midway ISD in Waco, TX!
Jean Fahy: Jean Fahy from the Girl Scouts of Northern California
Cynthia Brez: Cynthia Brez teacher with SHINE afterschool program in PA
Katie Weber: Hello from Turtle Bay Exploration Park in Redding, CA
Ellie Chabot: Ellie Chabot, Community Program Specialist Girl Scouts of Eastern Mass
Myra Adams: Myra Adams St Louis Program Assistant in an Afterschool Program
Adrienne Provenzano 2: Hi, Adrienne from Indiana. NASA Solar System Ambassador! Informal educator...
Grayling: Good Afternoon from sunny Detroit! Representing the Hoffman Planetarium in Oak Park Michigan! Howdy!!
Danniel: Danniel Wright with SARSEF in Tucson, AZ
Anna Sumner: Greetings, this is from Prairie STEM (a non-profit in Omaha, NE)
Terra: Hello from Houston, TX area! Representing Bellaire City Library.
Martha Register: Hi! Martha from rainy Greensboro, NC and the Greensboro Science Center!
Marta Larson: Michigan After-School Partnership, Michigan Collaborative Lead
Charmesa Brown: Charmesa Brown from Boys & Girls Clubs of Buffalo
Shannon Jones: Shannon Jones, Museum of Discovery's Girls in STEM Program Director in Little Rock, Arkansas
Lisa Hiruki-Raring: Lisa Hiruki-Raring education coordinator with NOAA Fisheries
Shahana: Hello, Shahana Parvas from Fairfax County Public Library in Fairfax, VA
Genevieve Wilson: hello i'm genevieve
Tabitha Dunn: Hi from NH! I'm the STEM Coordinator for Girls Inc of NH (Afterschool & Summer Camp).
Stephanie Espy: Stephanie Espy from STEM Gems
Sarah - Brilliant Labs: Sarah, Program Director, Brilliant Labs Nova Scotia, Canada
Mr. K: Mr.K Math and Science teacher with Massachusetts Department of Youth Services. I teach the boys, but expect to learn something here.
Carol Unterreiner: I will be using the resources as a part of my girls' engineering breakfast club meetings
Alice Ochanda - UNESCO: My name is Dr. Alice Ochanda joining from UNESCO Regional Office in Nairobi, Kenya. Thank you very much for the warm welcome and for allowing me to join the webinar
Adrienne Provenzano 2: Online learning. International Space Station focus.
Will Brown: I want to share the resources with our teachers to set up STEM clubs for girls at their school
Marta Larson: There is no place on the poll for my role, but I am an educational consultant that trains after-school staff members
Bryan Casey: Hi, Bryan from Ottawa, Canada. Did want to share our Women in STEM poster celebrating the frontline effort women are playing in the COVID struggle:
<https://womeninstem.ingeniumcanada.org/portfolio-item/women-of-covid/>
Ambrette Gilkey: Poudre Learning Center, Greeley Colorado. In STEAM Outreach. Ambrette Gilkey
Denise Stanley: After School or Summer Programs
Brenda Sims: Brenda Sims DeKalb County Georgia Library Technician
Anna Sumner: We would like to use these resources in our Girls in STEAM program.
William Fee: Not sure yet. Depends on whether we get the school classes as we usually do
David McMahon: I have not had a lot of time to think of ideas but, I think we would most likely work with our 21st Century Program at our local Jr. & Sr. High School to create a special event.
Mary Harrison: We are trying to do our summer program at the library with STEM virtual program. I thought I may find some ideas to use.
Terra: STEAM Camp focusing on engineering, environment, and space
Angela Stevens: I'll be sharing this information in my after school program

Alice Ochanda - UNESCO: I am a Gender in science Programme Specialist and a coordinator of STEM Education in the Africa region.

Marilyn Riddle: Marilyn Riddle Williamsburg , va retired h s math teacher

Angela Stevens: as well as our summer camp program

Rose McCandless: Hello! Rose McCandless, digital innovation coach for a new all-girls STEAM school startin in the fall, 6th grade, focused on girls of color.

Mary Soto: Hi! I'm Mary, STEAM Day Camp Director for the Greater Bergen County YMCA in Hackensack, NJ. STEAM Festival

April Brantley: Special Populations Coordinator - Career Technical Education

Amy Zock: we have a Girls Who Code club that will be sponsoring a student run EdCamp when social distance guidelines are lifted

Kimberly King: Some ideas for a Virtual Summer STEM program at the library

Steve Strange :Hi, I am a 21st CCLC Afterschool/Summer School Program Director in Uniontown, PA.

Kathy Thomas: Hi everyone, Kathy from The Connectory calling in from Seattle today.

Daniela Delvescovo: Hello! My name is Daniela Delvescovo and I will be teaching 6th grade science in a New all girls school focusing on STEAM :)

Jennifer Stockdale: We hope to have a Space Fair at our local library but we may move to a virtual event due to COVID.

Stephanie Espy: Check out the STEM Gems book for girls and young women:

www.STEMGemsBook.com

Maree Pascall: Hello! Maree Pascall, Program Facilitator at the Girl Scouts STEM Center of Excellence. We are trying to solve virtual programming dilemmas for this summer.

Amy Zock: <https://swe.org/k-12-outreach/youth-programs/>

Frances Caldwell: I'm looking for ideas to use in virtual programming this summer and then live programming in the fall.

Frances Caldwell: virtual Library programming, that is and then live library programming

Shannon Jones: We will be using the resources for our Girls in STEM sumer sessions as well as a Family STEAM night with the girls and their families as a cumulative event, at our museum.

Martin-Fairey: Hello All,

Alice Ochanda - UNESCO: I would like learn how I can be more innovative in the implementation of my STEM Mentorship Programme. More so now in the COVID'19 period.

Kathy Thomas: <https://theconnectory.org/>

Kimberly King: We do LEAP into Science also at our library. We have one workshop we have done. I al also a Girl Scout leader so looking for ideas for girls in our area

Casi Herrera: FabFems: www.FabFems.org

Martin-Fairey: Hi I am the program coordinator of a science outreach program aimed at "at rick" youth and a professor at an hbcu

Kim Arcand: Hi Casi from FabFems! I've enjoyed being a part of your network :)

Katherine Weber: Hello, Katherine Weber from Kitchener, Ontario Canada.

Casi Herrera: So wonderful, Kim! We love having you as a FabFem!

Alice Ochanda - UNESCO: I love the FabFem idea!

Karen Peterson: Alice - let's talk!

Karen Peterson: It's international

Sidney Hamilton: Hello, Sidney Hamilton from Girls Inc. of the Berkshires. I run a STEM program called Eureka!

Alice Ochanda - UNESCO: I sure will Karen!

Amanda Pegg-Wheat: I run a program called StoryLab that integrates science activities with storytelling to encourage both reading and science literacy. Always looking for more resources and ideas!

Adrienne Provenzano 2: UNOOSA has a program called Space4 Women. Connected with the UN's Sustainable Development Goals.

Danniey: We have a camp each summer for middle school girls from title 1 schools. We're going virtual this year, so looking for ideas and tips!

Casi Herrera: Girls STEAM Ahead with NASA website: <https://www.universe-of-learning.org/gsawn>

Karen Peterson: Danniey - we are going to launch a virtual speaker series - maybe that might help you?

Marilyn Riddle: You know that high school across the country have Mu Alpha Theta clubs, do you not?

Karen Peterson: Ask questions here

Kathy Thomas: Girls STEAM Ahead with NASA website: <https://www.universe-of-learning.org/gsawn>

Patricia Bradley: Will this presentation be available?

Marisa Garcia: yes, the recording will be available on the NGCP website tomorrow

Patricia Bradley: Thanks

Casi Herrera: NASA's Universe of Learning at Home: <https://www.universe-of-learning.org/universe-at-home>

Marilyn Riddle: NCTM is a good resource--especially this year, the 100th anniversary of the organization.

Alice Ochanda - UNESCO: How can I have this programme reach my secondary school girls in Kenya?

Kim Arcand: Coding activity: complete with guiding videos <https://chandra.si.edu/edu/code/>

Genevieve Wilson: ok thank you

Adrienne Provenzano 2: shespeaksscience.com is a rather new non-profit online with free resources connecting STEM and storytelling to inspire girls

Kim Arcand: Binary code activity for use with paper, pins/beads, etc: <https://chandra.si.edu/binary/>

Denise Stanley: I teach a Binary/Hexadecimal unit. I could use these resources in my classroom.

Tabitha Dunn0: Is or will there be a list compiling all these resources?

Karen Peterson: Alice - this is all available online - let's talk about how we can help you. I'll reach out.

Kim Arcand: Viewspace is a really handy application: <https://viewspace.org>

Varoujan Gorjian: Some of the videos can be seen at:

Varoujan Gorjian: <https://universeunplugged.ipac.caltech.edu/>

Martin-Fairey: Great resources

Holly Kelsven, Homewood Science Center: We are looking for hybrid programming and building kits for students to pick up and then we all do it together virtually. Ages 12-16. Any recommendations for activities with something that we can give hands-on materials for?

Varoujan Gorjian: and universeunplugged.org

Genevieve Wilson: there is a black hole in the center of the galaxy

Kim Arcand: Women in STEM project: <https://chandra.si.edu/women/>

Kim Arcand :Also, Nancy Roman is a free printable poster -WFIRST was just renamed after her :)

Adrienne Provenzano 2: That's great news, Kim!

Jennifer Stockdale: Holly Kelsven, that is what I am thinking, too. Binary code keyrings and bracelets are a great option for a kit. I've found that boys tend to like the keyrings; they put them on their backpack zipper pulls.

Kim Arcand: Jennifer, excellent idea with the key rings! Pins have been popular too.

Kim Arcand: Paper circuits: <https://chandra.si.edu/make/> along with all paper activities for zines, flibooks, airplanes and spacecrafts

Sarah - Brilliant Labs: Nice! We have many Makerspace -- including space-related content, DIY projects, and more! Brilliantlabs.ca

Kim Arcand: Using real NASA 3D data online: <https://chandra.si.edu/tinkercad/>

Irene Porro: If you are looking for an environment that brings together many of these resources in one coherent program, check DIY Universe at <https://diyuniverse.org>. This program is also funded through NASA's Universe of Learning

Kim Arcand: And 3D print it if you have access: <https://chandra.si.edu/3dprint>

Genevieve Wilson: do you like coding?

Karen Peterson: Great resource Irene! Thanks for sharing. (and nice to see you)

Adrienne Provenzano 2: 3D printing is great for making astronomy more inclusive and accessible...fun to hold a galaxy in your hand!

Sarah - Brilliant Labs: Or binary calligraphy

Kim Arcand: Genevieve, yes, I personally enjoy coding a lot, it's very useful for astronomy!

Kim Arcand: Adrienne - Very much. We worked with students at NFB to improve our 3Dprints: <https://chandra.si.edu/tactile/>

Genevieve Wilson: me too because you can do a lot a things

Quyen Hart: I would say that coding is a NECESSARY part of astronomy. I love coding and was introduced to it when I was in 3rd grade!

Marisa Garcia: I would love to learn more about binary calligraphy, @sarah - Brilliant Labs

Kim Arcand: 95% of astronomers use coding in their jobs :) And of course way more people today than just astronomers have to code for their work.

Kim Arcand: Light exhibit: <http://lightexhibit.org> It was just the International Day of Light on May 16. This is celebrated by UN each year <http://lightexhibit.org>

Varoujan Gorjian: If you want to learn more about the TRAPPIST-1 system that Carolyn just mentioned check out:<https://www.nasa.gov/press-release/nasa-telescope-reveals-largest-batch-of-earth-size-habitable-zone-planets-around>

Kim Arcand: Visions of the Universe: <http://history.amazingspace.org/visions/>

Kim Arcand: Women of color handout: https://media.universe-of-learning.org/documents/UoL_poster_Women_of_Color.pdf

Genevieve Wilson: thank you for the websites

Sarah - Brilliant Labs: @Marisa we are launching a binary calligraphy activity tied to UN SDGs on May 27th1

Kim Arcand: Women in STEM: <https://chandra.si.edu/women/>

Adrienne Provenzano 2: What site can we go to Sarah/Brilliant LABs>

Martin-Fairey: I love this imagery!!!

Kim Arcand: Lovely to hear Martin-Fairey!

Sarah - Brilliant Labs: <https://www.brilliantlabs.ca/makerfun>

Marisa Garcia: thanks you for sharing, @Sarah - Brilliant Labs

Kim Arcand: Exoplanet posters , just gorgeous: <https://exoplanets.nasa.gov/alien-worlds/exoplanet-travel-bureau/>

Varoujan Gorjian: Additional posters here:<https://www.jpl.nasa.gov/visions-of-the-future/>

Sarah - Brilliant Labs: and also follow @brilliant_labs and @sarah_sarahryan on Twitter as we post hourly

Sarah - Brilliant Labs: My Pleasure!

Katherine Weber: Hi Sarah, where are you located in Canada?

Stephanie Rayome: Thanks for sharing Sarah!

Sarah - Brilliant Labs: NS, NB, PEI and NFLD

Katherine Weber:Very cool, do you have plans to expand to Ontario?

Carmen Stanton: yes

Karen Peterson: Katherine and Sarah - Connect!

Sarah - Brilliant Labs: @katherine -- we are looking to. Our Comm TV show is currently available via Rogers and EastlinK

Kim Arcand: Crab interactive to follow along: https://viewspace.org/interactives/unveiling_invisible_universe/star_death/crab_nebula

Martin-Fairey: I definitely want to get few of these for our young ladies.

Katherine Weber: I would love to connect Sarah I would love to connect my email address is: ccEquityinSTEM@gmail.com

Sarah - Brilliant Labs: sarah@brilliantlabs.ca

Katherine Weber: I will have to look for your TV show

Irene Porro: DIY Universe at <https://diyuniverse.org> is a program that already combines and leverages many of these resources in one coherent program. TDIY Universe si also funded through NASA's Universe of Learning!

Varoujan Gorjian: A great visualization of the different wavelengths of the Crab Nebula is available at Universe Unplugged:<https://universeunplugged.ipac.caltech.edu/video/astroviz-3d-crab-nebula>
Sarah - Brilliant Labs: <https://www.youtube.com/watch?v=oX-Jv4ViRa4> link to one episode "Wellness"

Katherine Weber: Sarah - would love to get involved if you expand your program beyond the tv show into programming in Ontario.

Kim Arcand: This index might be useful too, it lists some activities by topic and also there is a menu up top to select by the resources you have (pencil/paper, online, tech, etc):

<https://chandra.si.edu/corps/activities.html>

Sarah - Brilliant Labs: We try to keep "lower tech" STEM for more at-home accessibility

Maryam: there should be a youth girls astronomy club in Ontario

Adrienne Provenzano 2: NASA's Art and the Cosmic Connection curriculum is a great STEAM program to use images and visual arts activities

Kim Arcand: Lower tech options: <https://chandra.si.edu/corps/exhibit.html>

Katherine Weber: Sarah - thanks for sharing! In the time we live in, your at-home approach is very fitting.

Kim Arcand: Astropix: <https://astropix.ipac.caltech.edu>

Kim Arcand: Microobservatory: <https://mo-www.cfa.harvard.edu/MicroObservatory/>

Sarah - Brilliant Labs: Thank-you! I am sending a greeting email to you now :)

Katherine Weber: Great! looking forward to continuing our conversation:-)

Myra Adams: can I get a copy of the slide show?

Adrienne Provenzano 2: www.jpl.nasa.gov/edu/teach/activity/art-the-cosmic-connection/

Kim Arcand: Js94! <https://waps.cfa.harvard.edu/eduportal/js9/software.php>

Marisa Garcia: We will post the slide show and link to resources on the ngcp website tomorrow. everyone will receive an email

Myra Adams: thank you

Tabitha Dunn: Thank you!

Marilyn Riddle: Thank you!

Kim Arcand: Binary code: <https://chandra.si.edu/binary/>

Marisa Garcia: type your questions here, we'll begin Q&A soon

Adrienne Provenzano 2: great to connect with Morse Code!

Kim Arcand: <https://chandra.si.edu/code/>

Jennifer Stockdale: Love these ideas! Especially for having to go virtual

Kim Arcand: Using real NASA data sets and guided videos to do a lot of the heavy lifting :)

Adrienne Provenzano 2: Another tie

Kim Arcand: Resource guide: <https://media.universe-of-learning.org/documents/girlsSTEAM-Stars-ResourceGuide.pdf>

Adrienne Provenzano 2: Another tie-in with women's history is that STS-93 which launched Chandra was commanded by Eileen Collins. First Shuttle mission commanded by a woman.

Kim Arcand: EMS video: <https://universeunplugged.ipac.caltech.edu/video/notglados-electromagnetic-spectrum-the-musical>

Kim Arcand: Eileen Collins is featured in our women in STEM posters:

<https://chandra.si.edu/women/>

Kim Arcand: And she's in a new augmented reality app with other women explorers:

<https://chandra.si.edu/women/ar/>

Katherine Weber: It is amazing how much the parents learn when they are involved! Most times they are unaware of how to promote STEM with their daughters.

Marisa Garcia: I agree, just showing an interest in a child's interest is powerful!

Kim Arcand: Absolutely

Adrienne Provenzano 2: Parents can be self-conscious about their own STEM knowledge, and learning with their families is great!

Myra Adams: Looks great

Casi Herrera: NASA's Universe of Learning at Home: <https://www.universe-of-learning.org/universe-at-home>

Myra Adams: i'm in an Elementary school Thanks

Cindy G: Excellent resources. Thank you!

Katherine Weber: Love the idea of using the construction paper beads!

Marisa Garcia: love the chalk art posters!

Katherine Weber: coloured pasta could also be used:-)

Kathy Thomas: #SidewalkScience

Kim Arcand: Colored pasta is a great idea!

Katherine Weber: or homemade play dough beads would also work:-)

Casi Herrera: NASA's Astrophoto Challenge:

https://waps.cfa.harvard.edu/eduportal/js9/softwareChallenge_Archive.php

Angela Stevens: these are some really great resources

Marisa Garcia: a cool way to involve citizen science!

Casi Herrera: GSAWN sign up: <https://www.universe-of-learning.org/girls-steam-ahead-survey>

Katherine Weber: Wow! Thank you for all the resources you have shared! This is great!

Adrienne Provenzano 2: These are wonderful resources! Thank you!

Varoujan Gorjian: Look for the Universe Unplugged Live show discussing the latest Astrophoto Challenge in the second half of June at universeunplugged.org

Casi Herrera: Email: girlsSTEAMahead@universe-of-learning.org

Quyen Hart: Please reach out to us if you need more information and help with planning.

Quyen Hart: We will be sending everyone an invitation to fill out a survey to find out ways that we can create program guides to help you plan your future GSAWN events!

Casi Herrera: Please complete today's survey: <https://ngc2018.typeform.com/to/PJ8IHO>

Marisa Garcia: you can access all webinar recordings on our website: ngcproject.org

Casi Herrera: Survey: <https://ngc2018.typeform.com/to/PJ8IHO>