Girls STEAM Ahead with NASA Resources in Action

October 17, 2023
The vision of the National Girls Collaborative Project is to support and create STEM experiences that are as diverse as the world we live in.
Our Goals
Connect + Create + Collaborate

1. Build and sustain a network of advocates to provide equitable and inclusive STEM opportunities.

2. Catalyze equity in STEM from research to practice by providing actionable knowledge that transforms the STEM experience.

3. Increase our collective impact by strengthening organizational effectiveness and enhancing our fiscal sustainability.
NGCP Activities

• Network Partnerships
• IF/THEN Collection
• State Leadership Teams
• Youth Advisory Board
Girls STEAM Ahead with NASA

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NASA’s Universe of Learning is an integrated astrophysics STEM learning and literacy program funded by NASA.

Learners of all ages and backgrounds are engaged and immersed in exploring the universe for themselves.
Direct connection to the NASA's science & missions
NASA’s Universe of Learning Themes

How does the universe work?

Life and Death of Stars
Origin & History of the Universe
Structure & Composition of the Universe
Other Solar Systems, Other Earths
Cosmic Mysteries
Extreme Physics & Phenomena
How Do We Know?

Are we alone?

How did we get here?
NASA’s Universe of Learning

RESOURCES

PROJECTS

Data Manipulation

Discover how to create your own measurement of exoplanets and contribute them to the DIY Planet Search community.

Diaries of the Cosmos

Explore the universe yourself through the "Diaries of the Cosmos," an audio narrative showcasing stories of scientists and discovery.

DIY Planet Search

Help NASA observe distant worlds around other stars by using a modified backyard telescope and camera to trace their light. Join the DIY Planet Search community.

Exoplanet Watch

Help NASA observe distant worlds around other stars by using a modified backyard telescope and camera to trace their light. Join the DIY Planet Search community.

Girls STEAM Ahead with NASA

Join Girls STEAM Ahead with NASA to catalyze the next generation of women in STEM and NASA astrophysics.

Informal Learning Network

Connect to our resources to tailor educational experiences and implement program models that are specific to your audiences.
NASA’s Universe of Learning

PROJECTS

ASTROPHOTO CHALLENGE

MICRO OBSERVATORY

VIEWSPACE

ACCESSIBLE LEARNING
Our aim is to empower public libraries and community-based organizations to engage girls and their families in STEM.
Girls STEAM Ahead with NASA (GSAWN)

GSAWN Program Cookbook

Menu of activities and resources related to the topic

Recipe with background content for the facilitator

Sample event scenarios
Girls STEAM Ahead with NASA (GSAWN)

GSAWN Program Cookbook – Recipe 4: Stars

Stellar Life Cycle Bookmark/Bracelet
Girls STEAM Ahead with NASA (GSAWN)

GSAWN Program Cookbook – Recipe 4: Stars

Stellar Evolution Scavenger Hunt

NASA'S UNIVERSE OF LEARNING
Girls STEAM Ahead with NASA (GSAWN)

GSAWN Program Cookbook – Recipe 4: Stars

Stellar Evolution Flipbook
NASA’s Universe of Learning SMEs

Subject Matter Experts (SMEs)
Email: girlsSTEAMahead@universe-of-learning.org

Request a NASA Subject Matter Expert for your GSAWN event
https://www.universe-of-learning.org/informal-educators/request-an-expert

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Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.
GSAWN at BGCC
Who We Are

Afterschool Service Provider who targets young people who need us most through targeted programs and high-yield activities
Who Our Kids Are

Key Demographics

Race/Ethnicity
- 33.7% Hispanic
- 28.8% Black/African American
- 5.1% Asian & Filipino
- 4.5% Other
- 3.9% Latino
- 4.5% Other

Gender
- 50.86% Male
- 48.87% Female
- 0.26% Other

Free/Reduced Lunch
- 82.94%

STEM Demographics
- 1847 members attended at least 1 STEM program
- 18 sites
Targeted Students

- Students are wary of STEM
- King Drew HS targeted for career-focus and exposing students to BIPOC women in space science.
- 186th St. ES targeted for STEM interest and building STEM confidence.
GSAWN Event

King Drew Magnet High School | July 20th

Activities

- Nebula Spin Art
- Galaxy Circuit Cards
- Chandra X-Ray Recoloring the Universe
- DIY Women in STEM Zine

Students Impacted = 15
GSAWN Event

186th Street Elementary | July 24th

Activities

- Galaxy Circuit Cards
- Chandra X-Ray Recoloring the Universe

Students Impacted = 19
Lessons Learned

1. Train additional staff to lead program to expand reach.
2. Consider time constraints; we run program for 1 hour each.
3. Anticipate learning-level of students and lesson impact.
GSAWN Impact

GSAWN Event

• Highly engaging and educational
• Youngest students brought their own knowledge and passion
• Inspired students they can be space scientists

Post GSAWN Event

• 7 Additional school sites ran Astronomy Week using GSAWN and NASA’s Cookbook lesson programming
• Students reporting it is their most enjoyable lesson this school year
Thank You