



STEM Opportunities at NASA and Beyond

Chabot Space & Science Center Re-Opening Event 11/13/2021

Presented By:

Amanda M. Saravia-Butler, Ph.D.
NASA GeneLab Data Processing Lead
Contractor: Logyx, LLC

STEM Outreach & Internship Opportunities – K-12

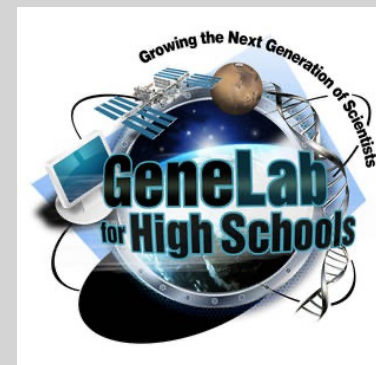


GeneLab for High Schools (GL4HS): A four-week intensive training summer program for rising high school juniors and seniors sponsored by NASA Ames Research Center

During the training program, students learn and obtain training in:

- NASA space biology research
- Designing an experimental proposal based on analyzed GeneLab data
- Bioinformatics and computational biology methods and techniques to analyze omics data
- Formal oral presentation skills
- Networking opportunities

Learn more and apply at: <https://www.nasa.gov/ames/genelab-for-high-schools>



Genes in Space:

- Students in grades 7 through 12 work along or in teams of up to 4 to design DNA experiments that address a challenge in space exploration
- Contest winners will have their experiments conducted in space on the International Space Station!

Learn more and submit a proposal at :

<https://www.genesinspace.org/>



- **NASA Ames ECN Outreach Committee** works with K-12 educators to host virtual Q&A sessions with NASA Scientists and Engineers

For more information about Ames ECN visit:

<https://www.nasa.gov/ames/ocs/the-ames-early-career-network>

STEM Outreach & Internship Opportunities – College+



Young Scientist Program

Blue Marble Space
Institute of Science



- Opportunities for students and early career scientists to participate in basic research, learn about effective science communication, and develop critical thinking skills in ethics, policy, and more
- **The NASA/BMSIS Young Scientist Program in Space Biosciences:** For post-bachelors and pre-doctoral students (at Mountain View, CA)
- **The BMSIS Young Scientist Program:** For undergraduate students and those who have completed undergraduate studies but have not yet enrolled in graduate school (primarily virtual)
- Learn more and apply at: <https://www.bmsis.org/ysp/>

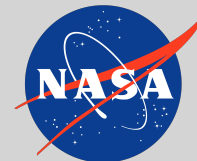


Learn more and apply at:

<https://www.nasa.gov/ames/research/space-life-sciences-training-program>

SLSTP: Provides undergraduate students entering their junior or senior years, and entering graduate students, with professional experience in space life science disciplines including:

- The effects of spaceflight on living systems
- The development and operation of specialized research facilities to support investigations in microgravity, partial gravity, and hypergravity
- Research and development of advanced biotechnologies that enable NASA's exploration of distant destinations



NASA STEM Engagement

Discover more NASA Internship opportunities and apply at: <https://intern.nasa.gov/>



For more info visit:

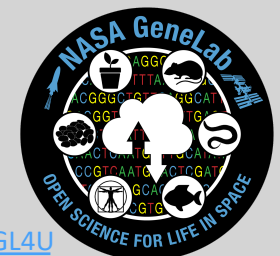
<https://www.nasa.gov/careers/pathways-program>

- Provides current students and recent grads with a dynamic career development program at a NASA center
- Participants are given an opportunity for permanent employment with NASA

GeneLab for Colleges/Universities (GL4U):

- For educators and students to learn how analyze omics data using GeneLab standard pipelines and space-relevant data

<https://github.com/nasa/GeneLab-Training/tree/main/GL4U>



NASA STEM Engagement – Stay Informed

NASA Express



<https://www.nasa.gov/stem/express>

- Sign-up for the NASA EXPRESS Newsletter
- Receive weekly emails containing:
 - Instructions for at-home activities
 - The latest NASA videos
 - Updates on NASA workshops, internships, contests, and challenges

Educator Professional Development Collaborative



<https://www.txstate-epdc.net/>

- Are you an educator seeking ways to incorporate NASA STEM activities into your classroom?
- NASA EPDC provides webinars, STEM teaching tips, info about up-coming NASA events, and so much more!

Next Gen STEM



<https://www.nasa.gov/stem/nextgenstem/index.html>

- Looking for how students can contribute to NASA's mission?
- Next Gen STEM keeps you in the know for up-coming opportunities including:
 - K-12 opportunities with the Commercial Crew Program
 - Learn and contribute to NASA's advances in aeronautics with Aeronaut-X
 - Get involved with NASA's Exploration Campaign for Moon to Mars
 - Connect with the International Space Station

Aeronautics @ Home



<https://www.nasa.gov/aero-at-home>

- Believe it or not, many of the concepts that enable NASA missions can be learned at home!
- Aero@Home is your one-stop-shop for at home activities to bring NASA magic to life.

For all things NASA STEM visit:

<https://www.nasa.gov/stem>

Women in STEM



National Girls Collaborative Project (NGCP)

Encouraging girls to pursue careers in Science, Technology, Engineering, and Mathematics.

@ngcproject | ngcproject.org



Girls Who Code

Building the largest pipeline of female engineers in the US

@girlswhocode | girlswhocode.com



STEM for Her offers funding for STEM-related field trips, speaker events, programs, curriculum development, and clubs for young girls to become excited about the prospect of career in STEM.

@STEMforHer | stemforher.org



Women Who Code

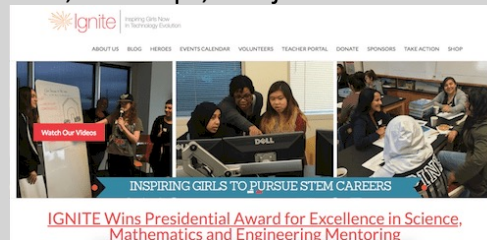
Proportional representation of women as technical leaders, executives, founders, VCs, board members, and software engineers.

@womenwhocode | womenwhocode.com

IGNITE Worldwide

Encouraging girls and non-binary students to participate in tech by organizing panel discussions, field trips, and job shadows during the school year.

@IGNITEworldwide | igniteworldwide.org



National Math and Science Initiative

Improving the way STEM subjects are taught by increasing the number of high school science and math teachers with degrees in the subjects they'll teach.

@NMSI | nms.org



Million Women Mentors

Mentorship for girls through high school, college, and into career life to prevent women from leaving STEM fields.

@MillionWMentors | mwm.stemconnector.com



Emerging Women is a global network of brilliant women creating new leadership paradigms and supporting the rise of leaders across all sectors of society.

@EmergingWomen | emergingwomen.com