

Montana NSF EPSCoR: INSTEP III - Infrastructure via Science and Technology Enhanced Partnerships III

PI: Dr. Ray Callaway, University of Montana; Co-PI: Dr. Cathy Whitlock, Montana State University

Montana NSF EPSCoR is committed to addressing one of the critical scientific and social issues facing the nation: the effects of climate change in sustaining healthy ecosystems and economic growth. By bridging the worlds of microbiology, ecology and climatology, we seek to understand the dynamics and linkages of ecosystem processes that govern how ecosystems respond to climate change. Through this interdisciplinary and ecosystem-centric approach, the program provides an innovative model that is both regionally relevant and nationally significant, while capitalizing on the unique resources and scientific strengths found in Montana. Embedded throughout its work, Montana NSF EPSCoR seeks to broaden participation in STEM education and our workforce.

This project is based upon work supported in part by the National Science Foundation EPSCoR Cooperative Agreement OIA-1443108 and EPS-1101342



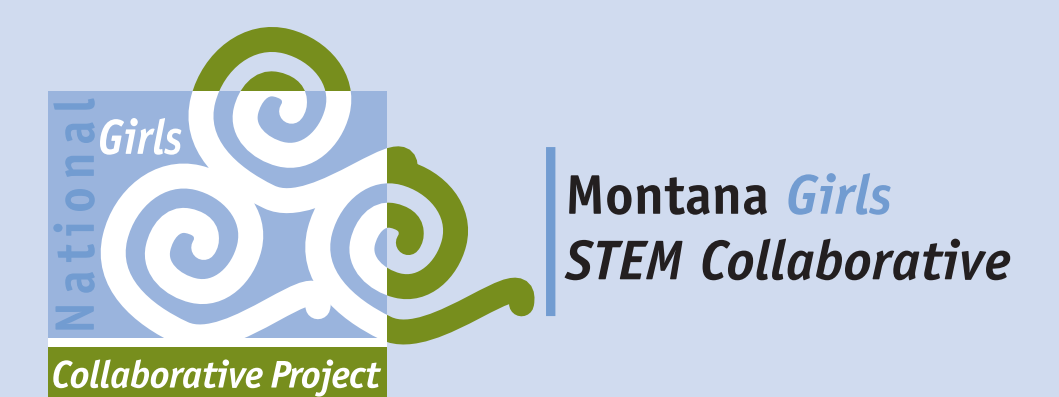
Broadening participation through collaboration...

Montana Girls STEM Collaborative



The Montana Girls STEM Collaborative was launched in 2012 as an EOD project of Montana NSF EPSCoR. As part of the National Girls Collaborative (also originally funded by the National Science Foundation), the Montana Girls STEM Collaborative:

- brings together organizations and individuals who are committed to informing and motivating girls to pursue careers in STEM
- shares research and exemplary practices
- offers professional development and opportunities for collaboration
- funds mini-grants and brings national STEM resources to Montana
- strives to introduce girls to STEM mentors and role models along with hands-on STEM opportunities



Networking and Collaboration

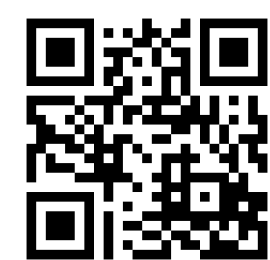


The primary goals of the Montana Girls STEM Collaborative are to:

- Maximize access to shared resources within projects, and with public and private sector organizations and institutions interested in expanding girls' participation in STEM.
- Strengthen capacity of existing and evolving projects by sharing exemplary practice research and program models, outcomes, and products.
- Use the leverage of a network and the collaboration of individual girl-serving programs to create the tipping point for gender equity in STEM.

We do this through....

- Collaboration forums that include networking, presentations on local STEM projects and best practices
- Social media: [facebook.com/MontanaGirlsSTEM](https://www.facebook.com/MontanaGirlsSTEM) and [Twitter: @MTGirlsSTEM](https://twitter.com/MTGirlsSTEM)
- A free quarterly e-newsletter that includes STEM events and opportunities - sign up at <http://bit.ly/mgsc-newsletter>
- Presentations to professional associations and other organizations
- Links to national programs including [The Connector](#) and [FabFems](#)



STEM Projects for Youth



As part of the National Girls Collaborative, we can take part in national "network projects" through which STEM resources for youth are distributed in Montana communities. Via these national programs, Montana Girls STEM Collaborative has **brought more than \$100,000 of resources to Montana** with emphasis on serving girls and boys who are typically under-represented in STEM, particularly those in our rural and reservation communities.

Network projects include:

Role Models Matter (TechBridge Girls)

This training prepares organization leaders, educators, and STEM professionals and students how to increase and improve the quality of outreach to girls in STEM.



Habitat Connections (Cornell Lab of Ornithology)

A hands-on curriculum that directly connects young people with their local habitats in order to build their scientific and environmental literacy.



Science Action Club (California Academy of Sciences)

A STEM program for middle school youth in out-of-school time that includes units on birds, bugs and clouds and a heavy focus on citizen science.



CryptoClub (University of Chicago)

A middle school program that helps youth crack ciphers, discover secrets and improve math skills with engaging activities.



Professional Development / Training



The Montana Girls STEM Collaborative seeks to:

- Strengthen the capacity of girl-serving STEM programs to effectively reach and serve underrepresented girls in STEM by providing professional development and exemplary practices.

Professional development partners have included:

- Montana Afterschool Alliance
- Women's Foundation of Montana
- Montana Environmental Education Association
- MSU Women's Center
- Montana Educators Association
- Montana Library Association

In addition, the Montana Girls STEM Collaborative is served by volunteer board members at organizations such as D.A. Davidson, ExxonMobil, Department of Defense STARBASE and even the First Lady of Montana and the president of Montana State University!

