

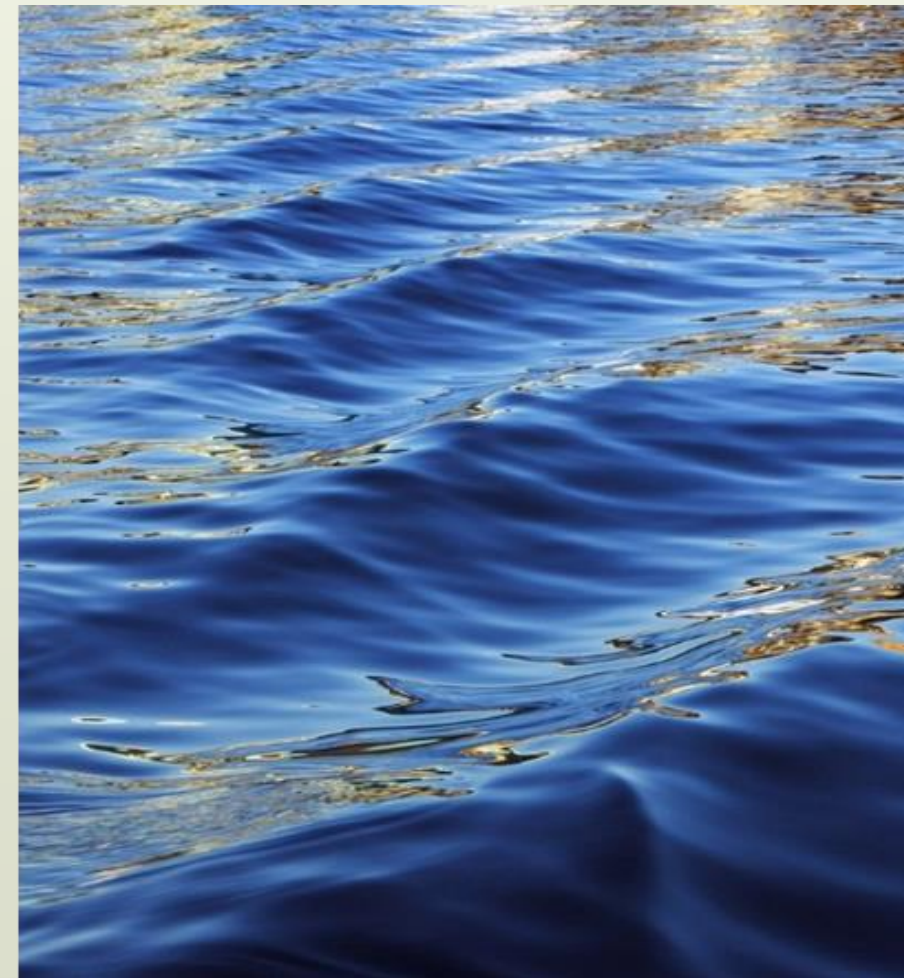


NSF Award No. IIA-1301789

"Adapting Socio-Ecological Systems to Increased Climate Variability"

## Outreach & Education Programs: Year 3-4 Researcher Participation

Gina Miller  
Outreach Coordinator  
Oklahoma EPSCoR



# Oklahoma EPSCoR Outreach

Oklahoma EPSCoR outreach must include EPSCoR researcher involvement. On the following pages you will find summaries of Year 3-4 outreach initiatives that provide specific opportunities for researcher participation.

Please contact Gina Miller at [gmiller@okepscor.org](mailto:gmiller@okepscor.org) or 405.744.7645 for more information or to signify that you are interested in participating in a particular initiative.

Thank you for your participation! I look forward to working with you! --gina



Authentic Research Experiences for K-12 Teachers

Plan: Spring '16  
Implement: Summer 16



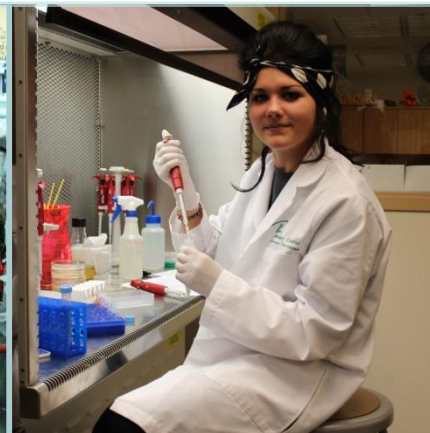
Girl Scouts of Western Oklahoma STEM Initiative

Summer '15-'16



Native American Summer Research Experience

Summer '15-'16



Pontotoc Tech Center Environmental Biotechnology STEM Academy

2015-2016 School Year



Research Opportunity Award Plus (ROA+) for Faculty

Apply by March 1, 2016  
Implement: Summer '16



Women in Science Conference

Register now  
Event: 10/13/15



# Oklahoma EPSCoR Outreach

## About the Program:

EPSCoR researchers, post-docs and grad students, with guidance from OU K20 Center specialists, will guide twelve K-12 teachers as they translate climate variability research into classroom lessons that will be shared virtually across Oklahoma to ~3,000 students.

- > Five-day summer program (four days at research locations; 1 virtual day)
- > Teacher participants: 12 from grades K-5 (Y4); 12 from grades 6-12 (Y3)
- > Native American teachers & teachers from high Native American enrollment schools will be targeted
- > K-12 students impacted during our five-year RII award: ~3,000

## EPSCoR Researcher Involvement:

**Who:** Minimum of 2 researchers, grad students or postdocs from multiple research areas and disciplines are needed annually. Male or female.

**Time Commitment:** Researchers should allow time for pre-program strategizing/training with OU K20 staff in the spring (~6 hrs.), as well as four half-days of on-site program implementation during the summer.

**Website for more program details:**

<http://www.oepscor.org/education/k-12-teachers/authentic-research-experiences-for-teachers>



## Authentic Research Experiences for K-12 Teachers

# Oklahoma EPSCoR Outreach

## About the Program:

Through OK EPSCoR funding, the Girl Scouts of Western Oklahoma (GSWO) now has a full-time STEM Coordinator to guide the program's 12,000 Scouts and leaders as they explore environmental science-themed STEM kits-in-a-box that were developed with assistance from our researchers—Drs. Renee McPherson and Jodi Campiche. To enhance the Coordinator's awareness of EPSCoR research, a one-day summer research experience with EPSCoR researchers is held each summer of the RII award.

- > Original environmental science-themed STEM kits-in-a-box plus easy-to-follow curriculum materials at all six Scout levels
- > 12,000 girls, located in more than half of the state's 77 counties, have access to the science kits
- > Scouts earn EPSCoR STEM badges when they complete the curriculum (200+ earned to date)
- > STEM Coordinator position will be sustained by GSWO at the end of our RII award

## EPSCoR Researcher Involvement:

**Who:** Two researchers (½ day per researcher) representing two different research areas. (OU was represented in Y2, OSU in Y3.)  
Male or female.

**What:** Act as a host researcher/educator during a ~half-day summer research experience/field trip for the GSWO STEM coordinator. Lab and field activities are to be developed by the participating researcher, with input from the GSWO coordinator.

**Time Commitment:** Half-day max., dependent on the project that you develop.

**Website for more program details:**

<http://www.okepscor.org/girl-scouts-stem-initiative/girl-scouts-western-oklahoma-stem-initiative>



## Girl Scouts of Western Oklahoma STEM Initiative



# Oklahoma EPSCoR Outreach

## About the Program:

This EPSCoR summer STEM research experience runs parallel at a regional and Tribal college in the state. The program was launched in Y1-2 at SEOSU and College of the Muscogee Nation. In Y3-4, it is being collaboratively hosted by Cameron University and Comanche Nation College. Eight Native American students will learn important basic research skills and study the impact of climate change by measuring changes in water quality, microbial populations, and tree growth and development. An important component of the project includes site visits to labs of major research institutions in the state, so students may become familiar with the more expansive campuses and aware of their future education possibilities.

- > Collaborative project allows students to compare findings with counterparts at partner institution
- > Climate science research performed at rural sites across Oklahoma
- > Students earn course credit and laptop computer after successfully complete course

## EPSCoR Researcher Involvement:

**Who:** Multiple researchers representing each of the EPSCoR institutions. Male or female.

**What:** Act as a host researcher/educator during a ~one hour lab tour for the student researchers and their faculty mentors.

**Time Commitment:** Approx. one hour, but will vary dependent on what you plan for your particular tour and the time available.

## **Website for more program details:**

<http://www.oepscor.org/education/college-students/summer-research-experiences-regional-and-tribal-college-students>



# Native American Summer Research Experience

# Oklahoma EPSCoR Outreach

## About the Program:

Through an OK EPSCoR award, Pontotoc Technology Center in Ada offered its first STEM course last year. The Environmental Biotechnology STEM Academy was launched in August, providing students from nine school districts in six rural southern Oklahoma counties access to the two-year, multidisciplinary, career pathway course that includes a new, state-of-the-art lab. Junior and senior high school students have real-world experiences in environmental science techniques and theory through classroom instruction, visiting scientist lectures, lab and field experimentation, and internship/job shadowing opportunities.

- > 960-hour science-driven curricula blends rigorous academics with hand-on learning and real-life applications
- > Students attend ½ day at Pontotoc and ½ day at their home school (Aug.-May)
- > 100% of students in the inaugural class have reenrolled for the senior year of the program

## EPSCoR Researcher Involvement:

**Who:** Multiple researchers from varying disciplines. Male or female.

**What:** Collaborate with PTC instructor to schedule a visiting scientist lecture or field research experience. Help students see how their lab work can translate into “real world” research; give them an idea of what a researcher from your field does every day (and why you enjoy it).

**Time Commitment:** Presentation time estimated at 1 hour, but will vary dependent on the time available. Travel to Ada required. Morning and afternoon classes are held late Aug. to mid-May during the school year.

**Website for more program details:**

<http://www.oepscor.org/education/k-12-student/pontotoc-technology-center-environmental-science-pathway-program>



## Pontotoc Tech Center Environmental Biotechnology STEM Academy



# Oklahoma EPSCoR Outreach

## About the Program:

Research Opportunity Award Plus (ROA+) funding provides regional university faculty members from primarily undergraduate institutions in Oklahoma with the opportunity to perform research at one of Oklahoma's comprehensive research campuses (OU, OSU, TU, SRNF) . The program enhances regional faculty members' personal research experiences, while also supporting the development of ongoing collaborations across campuses. The funding also allows the visiting researcher to incorporate their research experience into their classroom curriculum and to present their work at conferences.

- > Maximum allowable budget is \$12,500
- > Participants are selected annually on a competitive basis
- > Climate variability research is given preference during the selection process

## EPSCoR Researcher Involvement:

**Who:** Multiple researchers from varying disciplines. Male or female.

**What:** Act as a host researcher for a regional university faculty member.

**Time Commitment:** Approximately eight weeks over the summer months for the actual ROA+ research experience. The visiting researcher will need some assistance with preparing the application materials prior to proposal submission, but this should be minimal (supplying letter of commitment, CV, reviewing proposal). Application materials will be available in November; submission deadline is March 1.

## **Website for more program details:**

<http://www.oepscor.org/education/faculty-development/research-opportunity-awards-roas>



# Research Opportunity Award Plus (ROA+)

# Oklahoma EPSCoR Outreach

## About the Program:

The goal of the Women in Science Conference is to show students in grades six through 12 that STEM careers are exciting, attainable and rewarding. The free, one-day event immerses students in numerous hands-on science activities, helps them discover pathways to STEM careers, and provides opportunities to interact with college and university representatives from dozens of Oklahoma institutions. Interactive panel sessions allow students to learn first-hand about the many STEM career opportunities available to them.

- > 1,100 students and teachers from 88 schools across the state are registered to attend this year (maximum occupancy reached)
- > 67 different booths are already registered to participate in the Hands-on Science & Recruitment Fair portion of the event
- > The deadline to register to host a booth is Sept. 1 *or when maximum occupancy has been reached—don't delay!*

## EPSCoR Researcher Involvement:

**Who:** Multiple researchers from varying disciplines. Male or female are encouraged to participate, but male vendors may not operate photography equipment.

**What:** Host a hands-on science booth representative of your univ./dept. and OK EPSCoR research. (Min. 2 staffers per booth are needed.)

**Time Commitment:** One day (arrive 7:30 a.m.; take down booth at 2:00 p.m.).  
The event is being held in Tulsa on Tues., Oct. 13, 2015.

**Website for more program details:** <http://www.oepscor.org/calendar/2015wis>

**Register online now to host a booth at the conference—space is limited!**

<http://www.oepscor.org/2015-women-science-conference-booth-registration-form-organizations>



## The Women in Science Conference



# Oklahoma EPSCoR Outreach

## Questions and Participation Commitments:

Thank you for taking the time to review these materials. Please email me at [gmler@okepscor.org](mailto:gmler@okepscor.org) for more information about a particular initiative or to indicate that you wish to participate in a program. As more opportunities become available, I will make the team aware of them via the listserv.

I would also like to encourage you to forward me any EPSCoR research news, information or events as they become available. I am happy to share the information via our social media accounts or on the EPSCoR website and online calendar.

Thank you for your support of Oklahoma EPSCoR outreach and education programs! It is greatly appreciated.

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## Questions? and How to Participate