



OKLAHOMA
EPSCoR OUTREACH

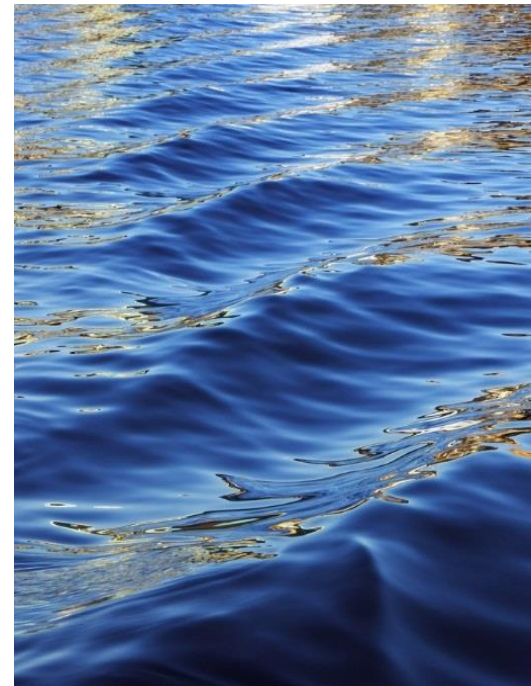
NSF Award No. IIA-1301789

“Adapting Socio-Ecological Systems to Increased Climate Variability”



Oklahoma
NSF EPSCoR
State Conference

December 3, 2015



OKLAHOMA EPSCoR OUTREACH

STEM Outreach Highlights

Presenter:

Gina Miller, Outreach Coordinator

Oklahoma NSF EPSCoR

OKLAHOMA EPSCoR OUTREACH

Outreach Portfolio

We have a diverse outreach portfolio designed to reach all segments of the STEM pipeline, with special emphasis on underrepresented groups.

Outreach Goals

- Increase diversity
- Climate and environmental science research theme interwoven in programs
- Encourage regional college participation
- Enhance communication and public awareness of research
- Increase STEM participation
- Enhance STEM skills and knowledge
- Enhance research competitiveness
- Support cyber-infrastructure (*connecting labs, data, computers and people*)
- Foster business applications of products

[video](#)

OKLAHOMA EPSCoR OUTREACH

Computer Lab & STEM Camps for Native American Students

- **Computer lab established in Fall 2013 (13 laptops / 23 PCs)**
 - Over 190 students from grades 1-12 served
 - As many as 29 Tribes represented
 - EPSCoR researcher Dana Brunson
- **Inaugural STEM Camp held Summer 2014**
 - 14 HS students from 6 Tribes
 - EPSCoR researchers from SCCSC
- **2015 STEM Camp expanded**
 - 30 HS students from 10 Tribes
 - EPSCoR researchers Fox, McCarthy, & SCCSC staff



[video](#)

**Choctaw Nation's
Jones Academy Boarding School**

OKLAHOMA EPSCoR OUTREACH

Why Girl Scouts?

- Existing network
- 12,000 Scouts & Troop Leaders in 39 counties
- Covers breadth of the K-12 pipeline
- Girl Scouts' recent (national) commitment to STEM



Girl Scouts of Western Oklahoma STEM Initiative

OKLAHOMA EPSCoR OUTREACH

STEM Curriculum, Training & Mentorship

Project initiated in 2013 (Year 1 of RII Award)

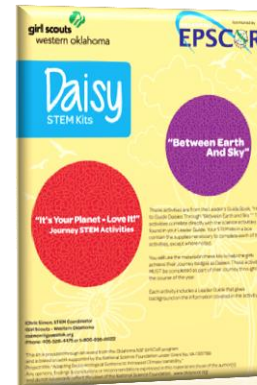
- STEM Coordinator (licensed science educator) & STEM interns hired
 - Position to be sustained by Scouts post-award
- STEM oversight committee provides guidance
- Environmental Science curriculum & STEM kits-in-a-box developed w/Oklahoma EPSCoR researchers (*Drs. Renee McPherson & Jodi Campiche*)
- Troop leaders, teachers and volunteers trained (in-person + online videos)
- EPSCoR summer research experiences for Coordinator (*Drs. Garey Fox, Heather McCarthy, Jack Friedman, Aparna Bamzai*)



**Girl Scouts of Western Oklahoma
STEM Initiative**

Environmental Science Curriculum & Kits-in-a-Box

- Supports the “It’s Your Planet-Love It!” Girl Scouts Journey
- Curriculum for Scouts at all grade levels
- Pilot testing of curriculum: *“I can see myself working in STEM in the future.”*
Presurvey (47% agree); Postsurvey (83% agree)
- All hands-on science materials are provided



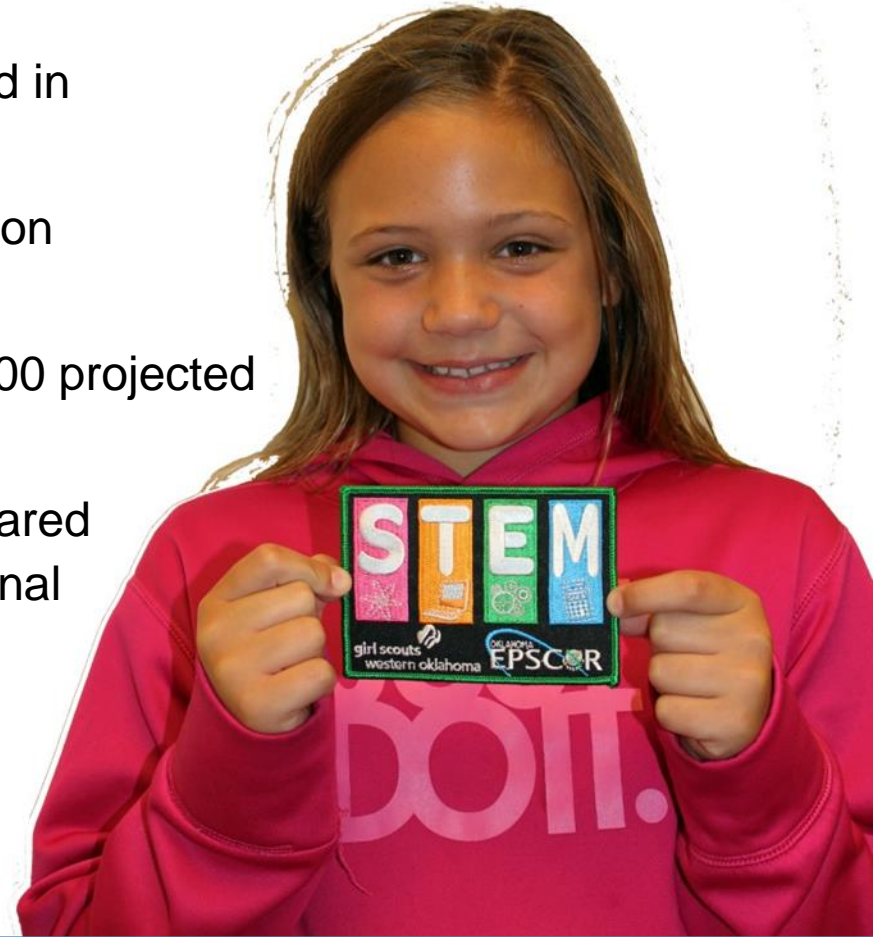
“Unanimous praise for the kits’ simplicity & perceived ease of use.”

**Girl Scouts of Western Oklahoma
STEM Initiative**

OKLAHOMA EPSCoR OUTREACH

STEM Coordinator: Mentorship & Education

- Years 1-2: Over 5,000 girls have participated in STEM programming
- Scouts earn OK EPSCoR STEM badges upon completing curriculum levels
- Over 2,100 badges issued to date; over 4,000 projected within next six months
- Curriculum & EPSCoR research mission shared with National Girl Scout Convention & National EPSCoR audience (*Dr. Heather McCarthy*)
- 12,000 Scouts = Great growth potential



**Girl Scouts of Western Oklahoma
STEM Initiative**

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Researcher Involvement: An Outreach Program to Fit Varying Schedules & Interests



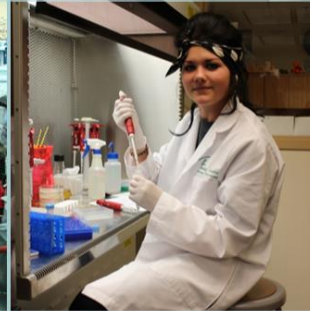
Authentic
Research
Experiences for
K-12 Teachers



Girl Scouts of
Western
Oklahoma STEM
Initiative



Native American
Summer Research
Experience



Pontotoc Tech
Center
Environmental
Biotechnology
STEM Academy



Research
Opportunity
Award Plus
(ROA+) for Faculty



Women in Science
Conference

OKLAHOMA EPSCoR OUTREACH

Upcoming Opportunities

1 Hour Time Commitment

- Native American Student Summer Research Experience

Half-Day Maximum

- Girl Scouts
- Pontotoc Technology Center's Environmental Biotech STEM Academy

1-Day

- Women in Science Conference

4 Half-Days in the Summer (2 hrs via phone/planning spring)

- Authentic Research Experience for Teachers

Summer Months—Time Varies

- Research Opportunity Award Plus (ROA+)
- Research Experience for Undergrads (REU)



OKLAHOMA EPSCoR OUTREACH

How to Get Involved

Contact:

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to find the right OK EPSCoR outreach project for YOU!