STEM-ulating Collaboration: Sustaining Equity and Resources for Indiana Girls

March 19, 2014
Indiana Girls Collaborative Project
Indianapolis, Indiana
Welcome to the Indiana Girls Collaborative Project Annual Conference. We are honored to be your host for this exciting day of learning and networking. We have been planning for several months to provide exciting keynote speakers and sessions that will share information and enhance our collaborative efforts in bringing Indiana organizations together to inform and encourage girls to pursue careers in STEM.

March is National Women’s History Month which offers us a great opportunity to celebrate STEM women in Indiana. We encourage you to help us “share your past and spark a future” by becoming an online role model through FabFems. Visit the website at www.fabfems.org. It’s an easy and effective way to reach out to girls who might share your interests. We also encourage you to post on our INGCP Facebook page (facebook.com/IndianaGirlsCollaborative) to help us spread the word about Indiana women in STEM.

Through learning and leadership, our members are collaborating on engaging workshops and curriculum that increase the female representation in STEM fields. We want to thank everyone who has helped make this conference a success, and we hope that you benefit from the information provided in today’s conference sessions.
## INDIANA GIRLS COLLABORATIVE PROJECT
### 2014 ANNUAL CONFERENCE

Indiana Government Center South (IGCS), Indianapolis, IN  
March 19, 2014

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**Event** | **Time** | **Location**
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Continental Breakfast | 8:00 am | Room #22
Check-In and Registration | 8:30 am | Outside Gov’t Ctr. Auditorium
Start Session - Welcome and Introduction | 9:00 am | Auditorium
Keynote: Susan Brooks, Congresswoman | 9:15 am | Auditorium
Break | 9:45 am | Auditorium
Break-Out Session #1:  
“I don’t have time to teach Engineering!” | 10:00 am | Auditorium
Project Learning Tree | | Room #22
Data Driven Instruction | | Room #19
Research in STEM Education for Girls | | Room #18
Break | 11:00 am | Auditorium
Break-Out Session #2:  
Girls Only (GO) STEM Camp | 11:10 am | Auditorium
Building a Bridge Between Girls & STEM | | Room #22
Project Lead The Way Launch | | Room #19
All Together Now | | Room #18
Lunch | 12:10 pm | Room #22
Keynote: Glenda Ritz, Superintendent | 12:45 pm | Auditorium
Break | 1:15 pm | Auditorium
Break-Out Session #3:  
Equity within STEM Education | 1:25 pm | Auditorium
Engineering Projects in Community Service | | Room #22
NASA Ignite! | | Room #19
Engaging Girls in Computer Programming | | Room #18
Break | 2:25 pm | Auditorium
Exemplary Practices for Mini-Grants | 2:35 pm | Auditorium
Wrap-up and Closing | 3:30 pm | Auditorium

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Concurrent Sessions:

Session #1: 10:00 - 11:00 am

“I don’t have time to teach Engineering!” - Auditorium

If you think, “I don’t have time to teach engineering!”, then this session is for you! During this presentation, attendees will learn how to get girls to see themselves as engineers by using picture books, both fiction and nonfiction. If you are a classroom teacher, you won’t want to miss this session!

Session Leaders - Kelly Masters and Sara Hunter, Zionsville Community Schools

Project Learning Tree - Room #22

Whether learning about trees, the forests where they grow or the many aspects of nature, Project Learning Tree (PLT) can provide activities to get girls involved in learning about the environment. A sampling of PLT activities will be presented.

Session Leader - Donna Rogler, Project Learning Tree - Indiana DNR Forestry

Data Driven Instruction - Room #19

Data driven instruction is a buzz phrase in education but that shouldn’t undervalue its importance in our work. Any and all decisions about programming and best practices should be grounded in data. Dr. Peggy Wild, Indiana Department of Education, will provide attendees with some of the more relevant and reliable data to Indiana programs in order to help guide the decisions we make.

Session Leaders - Peggy Wild & Jeremy Eltz, Indiana Department of Education

Research in STEM Education for Girls - Room #18

The focus of this session is to discuss relevant research regarding girls and their pursuit of STEM education and careers. The layout of the session will include discussion, hands-on activities and group activities that will speak to multiple adult learning best practices. Participants will be given a packet of relevant research, best practices and tips/tools for success.

Session Leader - Tiffany Lemons, Girl Scouts of Central Indiana
Session #2: 11:10 am - 12:10 pm

**Girls Only (GO) STEM Camp - Auditorium**

The Girls Only (GO) STEM! Camp focuses on helping high school girls overcome barriers and stereotypes faced while preparing for, and pursuing, STEM-related careers through a five-day summer camp experience. GO STEM! also involves female college students in the STEM disciplines by allowing them to work with and mentor these high school students. The SwiSTEM Resource Center has used a strategic partnership with the Rickover Naval Academy (Chicago, IL) and Thea Bowman Leadership Academy (Gary, IN) to bring the camp to high school girls from underrepresented minority populations.

Session Leader - **Allison Grabert, Southwest Indiana STEM Resource Center, University of Southern Indiana**

**Building a Bridge between Girls and STEM - Room #22**

At Girls Inc. of Greater Indianapolis, we strive to encourage all girls to take part in STEM programs. Each summer we provide girls ages 6-14 with the opportunity to explore the world around them through our Operation SMART programs. This presentation will provide outlines for successful experiences, our top ten ways to encourage girls to discover STEM and resources for developing STEM activities for your site.

Session Leader - **Ashley Miser, Girls Inc of Greater Indianapolis**

**Project Lead The Way Launch - Room #19**

In order to attract females into the STEM fields, schools must start engaging girls early. Project Lead The Way (PLTW) is doing just that. In the Fall of 2014, PLTW will introduce a new standards-based elementary program called PLTW Launch. Through PLTW Launch, students learn important, future-changing lessons, such as it’s okay to take risks and make mistakes, and it’s great to employ critical thinking. As teachers and students learn and discover together, education becomes far more engaging. PLTW Launch is appropriate for both in-school and out-of-school learning.

Session Leader - **Terri Schulz, Project Lead The Way**

**All Together Now - Room #18**

Several groups will “Come Together” to outline a statewide system designed to increase, enhance and sustain collaboration among regional leaders in Indiana who are committed to informing and encouraging girls to pursue careers in STEM. By developing a system of regional leadership groups around the state, we hope to better reach our goals to maximize access to shared resources, strengthen capacity of existing and evolving projects and leverage our networks to create the tipping point for gender equity in STEM. If your group shares this vision and goals, we would like you to be at the table—please join us for this session – “Don’t Let Me Down.”

Session Leader - **Bev Bitzegaio, IN Girls Collaborative Lead and Indiana State University**
Session #3: 1:25 - 2:25 pm

**Equity within STEM Education - Auditorium**

This learning experience will present a framework for culturally responsive STEM teaching and learning. The presented framework synthesizes elements of effective STEM instruction as described by Banilower et al., (2008) and elements of culturally responsive practices (Gay, G. 2000 & Ladson-Billings, G. 1995). Specifically, participants will be able to define equity within STEM education and state at least three practices that reflect presented framework.

Session Leaders - **Seena Skelton & Camille Warren, Great Lakes Equity Center**

**Engineering Projects in Community Service - Room #22**

“Integrating engineering practices into service-learning is the focus of the EPICS Program (Engineering Projects in Community Service). The goal of EPICS High Program and its curriculum is to engage high school students in the fields of engineering and technology while meeting a critical educational need of providing hands-on engineering and technical design opportunities. EPICS has the potential to transform how the STEM fields are introduced to high school students by using the service-learning approach to tap into student populations that are not currently being drawn into engineering, especially female and underrepresented minority students.

Session Leaders - **Jean Trusedell and Mindy Hart, EPICS High & Purdue University**

**NASA Ignite! - Room #19**

Curious what resources NASA has for science educators? Our program, NASA Ignite!, has been implemented in out-of-school programs across the state of Indiana and has had great success in attracting and engaging girls and other underrepresented groups to STEM topics through hands-on, experiential and collaborative projects. NASA activities cover a wide variety of STEM content areas including rocketry, life science, cosmology, physics, mathematics, engineering and culture. This breakout session will highlight the quality, hands-on activities available from NASA education for k-12 students with a focus on grades 4-9. Both formal and informal educators are welcome.

Session Leader - **Adrienne Fernandez, NASA Ignite/ Wisdom Tools, Inc.**

**Engaging Girls in Computer Programming - Room #18**

“Engaging Girls in Computer Programming Using Alice.” Alice is an innovative free, drag-drop, computer programming environment developed by Carnegie Mellon. The program allows students to create 3D animations to tell a story, develop a game or create a video for web posting. This gentle introduction to computer programming allows students to see their code animated using the same basic programming constructs they would find if they used actual Java programming language. I have used Alice with students as young as third grade to create simple stories. Middle school students enjoy a more robust introduction and find that they can do computer programming.”

Session Leaders - **Deobrah Gaff, Greensburg Junior High School**

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Welcome from the Host College

Keynote Speaker:
Susan Brooks, Congresswoman
5th District of Indiana

Congresswoman Susan W. Brooks represents the 5th District of Indiana, which spans eight diverse counties throughout the central part of the Hoosier State. As a new member of Congress, she currently serves on the Education and Workforce, Homeland Security and Ethics Committees. She is also the Chairwoman of the Emergency Preparedness, Response and Communications Subcommittee.

Her strong background in both the public and private sectors includes experience as a proven difference maker in areas such as public safety, homeland security, counter-terrorism and economic development.

Job Creation

Before joining the House of Representatives, Susan served as Senior Vice President and General Counsel for Ivy Tech Community College. Collaborating with a wide network of stakeholders, she implemented workforce development strategies aiming to enhance job training and placement for thousands of Hoosier residents.

Public Service

In 2001, President George W. Bush appointed Susan as U.S. Attorney for the Southern District of Indiana. Serving as the chief federal law enforcement officer for a majority of the Hoosier state, she received bi-partisan acclaim for efforts to battle mortgage fraud, gun violence, drug trafficking, gangs, child exploitation and identity theft.

Susan also earned recognition as Deputy Mayor of Indianapolis during the Steve Goldsmith administration, where she provided oversight on public safety operations and drove community dialogue on vital civic issues. Over her tenure, she managed police, fire and emergency response efforts while serving on boards related to criminal justice, community corrections, violence and race relations.

Private Sector Experience

Susan practiced law at the Indianapolis firm of Ice Miller and also served as a criminal defense attorney for Indianapolis based McClure, McClure and Kammen.

Family & Education

After receiving her undergraduate degree from Miami University of Ohio, Susan pursued a Juris Doctor (J.D.) from the Indiana University School of Law. She resides in Carmel, Indiana with her husband David and two children.
Glenda Ritz has been an educator since 1978, and until her election in 2012 as the Superintendent of Public Instruction, she served as a Library Media Specialist at Crooked Creek Elementary School in Indianapolis, Indiana.

Superintendent Ritz is a National Board Certified Teacher. She holds two masters degrees with licenses to teach elementary, middle and high school in the areas of education, general education and library science.

Superintendent Ritz is dedicated to working with educators, parents, policy makers, business leaders and community leaders to ensure that the Department of Education provides the support needed to our public schools to give Indiana children an education of the highest quality.
Indiana Girls Collaborative Project (INGCP) Members:

**Leadership Team**
- Ray Amos, Cook Medical Inc
- Bev Bitzegaio, Indiana State University
- Patricia Crouch, American Association of University Women (IN)
- Jeremy Eltz, Indiana Department of Education
- Adrienne Evans Fernandez, Wisdom Tools
- Barbara Gibson, Purdue University
- Jennifer Groh, Purdue University
- Rene Hankins, Ivy Tech Community College
- Jaime Hubbard, Girl Scouts of Central Indiana
- LaTasha Hudson, Girls Inc. of Indianapolis
- Lynn Hughes, Terre Haute Children’s Museum
- Kelli McGregor, Lake Central High School
- Anneliese Payne, Saint Mary of the Woods College
- Katie Pope, Purdue University
- Brandon Sorge, IUPUI
- Camille Warren, Great Lakes Equity Center
- Edie Wittenmyer, Indiana State University
- Debbie Zipes, Indiana Afterschool Network

**Champions Board**
- Liz Brown, Indiana State University
- Becky Buse, Girl Scouts of Central Indiana
- Barrett Caldwell, Purdue School of Industrial Engineering
- Jennifer Hale, J3 Concepts
- Beth Holloway, Purdue University
- Christina Howe, University of Evansville
- Dottie King, Saint Mary of the Woods College
- Sonny Kirkley, Wisdom Tools
- Tina Kruger Newsham, Indiana State University
- Linda Maule, Indiana State University
- Heather Miklozek, Indiana State University
- Susan Powers, Indiana State University
- Cathy Ritchie, Girl Scouts of Central Indiana
- Terri Schulz, Project Lead the Way Inc.
- Seena Skelton, Great Lakes Equity Center
- Joi Smith, Girls Inc. of Indianapolis
- Trish Whitcomb, Indiana Department of Education

Indiana Girls Collaborative Project (INGCP)

The vision of the INGCP is to bring together organizations throughout the United States that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).

The goals of NGCP are to:

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

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