Welcome to the NGCP December Webcast!

NGCP Collaboration Conference Highlights

We will begin in at 11:00 AM Pacific / 2:00 PM Eastern.
Webcast Agenda

• Introduction to NGCP
• Overview of NGCP Collaboration Conference
• Highlights from participants
  – Cathy Law, Saturday Academy
  – Michelle Higgins, Sahuaroo Girl Scout Council
• Highlights from policy panel
  – Patricia MacGowan, NGCP
• Questions and Next Steps
National Girls Collaborative Project

The National Girls Collaborative Project (NGCP) brings together organizations that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).

www.ngcproject.org
Current Regional Collaboratives

http://ngcproject.org/map_regions.html

California
Connecticut
Florida
Great Lakes
Kentucky
Maine
Mid-Atlantic
Midwest
New Hampshire/
Vermont
North Carolina
Pacific Northwest
Pennsylvania
Southern New England
Texas
Tennessee
Project Goals

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 promising 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.
NGCP Collaboration Conference

Date: October 21st - 22nd, 2010
Location: Washington, DC
Funding provided by National Science Foundation, Noyce Foundation
NGCP Collaboration Conference

Purpose: To bring together individuals and organizations who are interested in expanding STEM opportunities for girls and women, including local practitioners, national level experts, and research-based program models and resources.
NGCP Collaboration Conference

Goal:
Increase collaboration between local girl-serving STEM professionals and with national level experts
Goal:
Increase girl-serving STEM professionals’ access to resources such as research-based program models and resources
NGCP Collaboration Conference

Goal:
Provide training and incentives to collaborate on a local, regional and national level
Professional Development

Evidence-based programs provided in-depth workshops on resources and strategies for working effectively with girls in STEM

An Equity Approach to STEM, Gender and Afterschool
(Educational Equity Center at AED: www.edequity.org)

You Can Make a Difference: Planning Role Model Visits and Field Trips to Inspire Girls in Science, Technology, and Engineering
(Techbridge: www.techbridgegirls.org)
Professional Development

The SciGirls Seven: Strategies to Engage Girls in STEM (http://pbskids.org/scigirls/)

Seven Steps to Getting What You Want – Best Practices in Assessment (AWE: www.aweonline.org)
Resources and Partnerships

The following organizations and programs shared their resources related to encouraging girls in STEM and examples of partnership opportunities:

• Design Squad, Dot Diva, and Engineer Your Life (WGBH) pbskids.org/designsquad, www.dotdiva.org, www.engineeryourlife.org
• Society of Women Engineers www.societyofwomenengineers.swe.org
• Institute of Electrical and Electronics Engineers (IEEE) www.ieee.org/index.html
• National Lab Day – Everyday Connections between STEM-Professionals and K-12 Classroom www.nationallabday.org
Resources and Partnerships

- AAUW: ‘Why So Few’ report
  [www.aauw.org/learn/research/whysofew.cfm](http://www.aauw.org/learn/research/whysofew.cfm)
- Encouraging Parent Involvement in Girls’ Science Learning
  [www.fi.edu/cisl/parent_involvement.html](http://www.fi.edu/cisl/parent_involvement.html)
- National Governors Association Center for Best Practices
  [www.nga.org/portal/site/nga/menuitem.50aeae5ff70b817ae8e8b856a11010a0](http://www.nga.org/portal/site/nga/menuitem.50aeae5ff70b817ae8e8b856a11010a0)
- The American School Counselor Association
  [www.schoolcounselor.org](http://www.schoolcounselor.org)
- AWIS (Association for Women in Science)
  [www.awis.org](http://www.awis.org)
- National Center for Women & Information Technology (NCWIT)
  [www.ncwit.org](http://www.ncwit.org)
Resources and Partnerships

• 4-H [www.4-h.org](http://www.4-h.org)
• Cisco (Business and Industry) [www.cisco.com](http://www.cisco.com)
• Higher Education
  University of Maryland [www.umd.edu](http://www.umd.edu)
  University of Kentucky [www.uky.edu](http://www.uky.edu)
Cathy Law
Saturday Academy
Oregon State University
catherine.law@oregonstate.edu
541-737-1822
NGCP Collaboration Conference
Top Three Take-A-Ways

1. AWE (Assessing Women & Men in Engineering)
2. Untapped Collaborations
3. Programming Ideas & Resources
AWE (Assessing Women & Men in Engineering)

What they offer:

- Tested and validated surveys you can use.
- Practical tools and learning materials.
- Ways to make your program better and more effective.
- Ways to make assessment easier.
AWE (cont.)

Seven Steps to Getting What you Want:

1. Identify overarching goal (ASPIRATIONAL).
2. Define measurable objectives (specific statements about what you want to achieve).
3. PLAN data collection (RELATED to objectives, explore variety of measures/tools).
4. Identify activity (after you have the objective).
5. Explore resources (best practices, proven activities, research).
6. Collect data (confirm that it relates to objectives).
7. USE the data!
   - Improve activities & programs
   - Motivate volunteers & participants
   - Utilize resources effectively
   - Attract sponsors & funders
AWE (cont.)

Variety of assessment tools (online, easy to register)

- Diversity Activity Surveys
- Retention Surveys
- Classroom Environment Surveys
- Pre-College Recruiting Surveys
- Applying Research to Practice
- Data Management
- Implementation Tools
- Research & Publications
Assessment questions that can lead you to program efficacy

FOR EXAMPLE (pre and post):

4. Please mark how much you agree ☺ or disagree ☹. (☺ Means that you are not sure)

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<td>c. Yo soy bueno para la ingeniería.</td>
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<td>d. Me gusta saber como funcionan las cosas.</td>
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<td>e. Yo soy creativo.</td>
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Untapped Collaborations

• **Grant Funding** (IEEE, Cisco, AAUW)

• **Grant Partnering** (SWE, AWIS, Girl Scouts, local/campus groups)

• **Assistance with Expertise/Programming** (SWE, AWIS, SciGirls, Tech Bridge)

• **Student recruitment & support**
  - Those well-connected
  - Other opportunities for students (i.e. internships, “Costal Studies”, Cisco’s Networking Academy).
  - Scholarships for students (i.e. AAUW)
Untapped Collaborations (cont.)

•Mentors
  ➢ Professional organizations (SWE, AWIS, Society of Hispanic Professional Engineers, MESA, Graduate Women in Science, IEEE Women in Engineering)
  ➢ Student groups (Latina sororities, Engineering sororities, MANRRS, Louis Stokes)

•Other collaborations left to explore (additional professional organizations, corporate partners, outreach on campus/community)
Programming Ideas & Resources

• **Refreshing Current Programming** (i.e. “Water Botics”, “Try Engineering/Science/Nano”)

• **New Programming** (i.e. Microsoft K’NEX Software)

• **Targeted Programming**
  - “Engineering your Future” (NACME, National Action Council for Minorities in Engineering)
  - SciGirls (PBS)
  - Tech Bridge (involve families)
  - GEMS (Girls Excelling in Math & Science)
Programming Ideas & Resources (cont.)

• More programs to explore
  ➢ Tri-it (NSF Grant, high school outreach, partner w/ universities)
  ➢ Girlstart
  ➢ Smart Girls
  ➢ Expanding your Horizons

• Useful tips/making each act *INTENTIONAL*
  (i.e. “Stack ‘em UP”: ice breaker, team-building)
Sahuarro Girl Scout Council (SGSC)

Michelle Higgins
STEM at SGSC – Existing Relationships

- University of Arizona
- National Optical Astronomy Observatory
- Steward Observatory
- Physics Factory
- SciGirls
- NASA
A Time for Change

- Increased momentum in the community
- Making STEM a focus at SGSC
NGCP Conference

An Atmosphere of Inspiration
Sessions

- Encouraging Parent Involvement in Girls’ Science Learning – Franklin Institute
- Professional Organizations - Society of Women Engineers (SWE) and Association of Women In Science (AWIS)
- An Equity Approach to STEM, Gender and Afterschool – Educational Equity Center (EEC)
Program Models

Florida Girls Collaborative Project
(Girl Scouts of West Central Florida)
The Kentucky Girls STEM Collaborative (KGCP) is based upon a model developed by the National Girls Collaborative Project (NGCP). Organizations involved represent K-12 education, higher education, government, professional organizations, business, non-profit and other community-based organizations. The KGCP management structure is composed of a state leadership team, champion’s board, regional STEM leadership teams, and national and statewide partners and financial sponsors.

MISSION

The Kentucky Girls STEM Collaborative Project brings together organizations and individuals that are committed to informing and motivating girls to pursue careers in science, technology, engineering and mathematics (STEM) to encourage collaboration and improve inter-program communication.

VISION

The KGCP brings together programs that inform and motivate girls to pursue educational choices in science, technology, engineering and mathematics (STEM) in order to build a strong, diverse workforce in Kentucky.

MINI-GRANTS

The Kentucky Girls STEM Collaborative awards mini-grants in an effort to build collaboration between existing programs and organizations in order to encourage girls to pursue STEM-related educational programs and careers.

Over 20 mini-grants have been awarded to date.

Additional Information:
- Mini-grants are awarded to organizations that collaborate with one or more partners
- Mini-grants support collaboration, address gaps and overlaps in services, and share promising practices
- Mini-grants are seed funding of up to $1000 and are not intended to fully fund entire projects

PARTNERSHIPS & SPONSORS

University of Kentucky
University of Louisville
Eastern Kentucky University
Northern Kentucky University
Western Kentucky University
Kentucky State University
Murray State University
Kentucky Wilderness Road Council
...and many more regional organizations.

AT&T
Lexmark, Inc.
Ceradyne, Inc.
General Cable
Kentucky American Water
Michelin
AAUW
Louisville Science Center

PROGRAMS & EVENTS

Annual Conferences
2009 - Lexington, KY
2010 - Louisville, KY

Regional Forums
Northern Kentucky Forum (2010)
Eastern Kentucky Forum (2009)
West Kentucky Forum (2010)
Central Kentucky Forum (2008 & 2010)

Girls ONLY:
Girls Day Out (2009)
Math Across Campus (2010)
The Mid-Atlantic Girls Collaborative
MAGiC

MAGiC
The Mid-Atlantic Girls Collaborative (MAGiC) connects girls serving and supporting organizations across Maryland, Virginia and Washington, DC, that are committed to increasing the number of young women pursuing science, technology, engineering and math (STEM) careers. Led by the Women in Engineering Program at the University of Maryland, leaders from industry, academic, and philanthropic organizations are working together to serve on the MAGiC Leadership Team and Champions Board, creating that girls and young women are effectively served in STEM.

Quarterly Newsletter
MAGiC provides a quarterly newsletter to promote STEM opportunities in the region and to provide resources to the collaborative. To sign up visit: http://www.magicproject.org/magic/

Kickoff Conference
September 26, 2009
University of Study Grove
Rockville, MD

Winning Strategies to Engage Female Students
Catherine O'Shea
Senior Program Officer, National Academy of Engineering

Theory to Practice – Designing Effective Programs
Midwest-Ohio-Eastern PDE, CHEM-PiLL & American Society of Civil Engineers Center Hill American Association of University Women,
Crestwood, MD

Introduction to MAGIC
Mary Groff & Elizabeth Coolbruth

Leadership Team

Forum
September 26, 2010
University of Maryland
College Park, MD

Seven Steps to Getting What You Want – Best Practices in Assessment
Barbara Boge, Director and Co-Founder, Assessing Women and Men in Engineering

Why So Few? Girls and Women in Science, Technology, Engineering and Math
NGSP Webcast & Discussion
Barbara Boge, Cindy Smith & Elizabeth Vanvliet

Mini-Grants
ARES Rocketry Challenge for Chesapeake GEMS
Astronomy Research in Earth & Science (ARES), Virginia

Baltimore Great Science for Girls 4-H Training
The Other School Institute, Maryland

Extending the Pipeline – GEMS for Young Girls, GEMS Jr, Virginia

PSR MOE University, MD, RE: Robotics, Delaware

GEMS Club Expansion, The GEMS Club, Virginia

Girls Play: innovation through playful activities
University of Maryland

Introducing 3rd Grade Girls to Biotechnology
BRAINeS, Washington, DC

Summer in Engineering GEMS, Maryland

Smart and Beautiful: The Wood Project, Virginia

Stemming Workshop: Work for Astronomy & Engineering Program, Maryland

The Bridging Strategies in Engineering Project
University of Maryland, Maryland
Resources

- Education Equity Center – Great Science for Girls
- SWE – Wow! That’s Engineering!
- Franklin Institute – Girls at the Center
- Techbridge
Next Steps for SGSC

- More STEM strategic learning
- 3-year plan
- Southwest Girls Collaboratives
Thank You

Michelle Higgins
mhiggins@sahuarogsc.org
Public Policy Implications and Resources for Women and Girls in STEM – Patricia MacGowan

Panelists:
Jessie DeAro, Office of Science and Technology Policy, White House
Anita Krishnamurthi, Afterschool Alliance
Sharon Pearce, GSUSA
Tracy Sherman, AAUW
Alice Popejoy, AWIS
Public Policy Implications and Resources for Women and Girls in STEM

Key points:
• Policy plays a critical role in creating the tipping point for gender equity in STEM
• Need to bring together individuals and organizations concerned about this issue
• Barriers to being active in policy work
  • Lack of time
  • Not part of official role
  • Lack of expertise
Public Policy Implications and Resources for Women and Girls in STEM

Action Items:

• Support Congressman Lynn Woolsey’s bill, H.R. 2047, the Balancing Act.

• Read and use ‘Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math (STEM) for America’s Future’.

• Support Title IX; project enforcements are ramping up and compliance reviews will have more transparency.

• Support the reauthorization of the Elementary and Secondary Education Act (ESEA); key to support STEM and afterschool programs.

• Support the America COMPETES Reauthorization Act of 2010.
‘Prepare and Inspire’ Report

The report includes five overarching priorities:

(1) improve Federal coordination and leadership on STEM education;

(2) support the state-led movement to ensure that the Nation adopts a common baseline for what students learn in STEM;

(3) cultivate, recruit, and reward STEM teachers that prepare and inspire students;

(4) create STEM-related experiences that excite and interest students of all backgrounds; and

(5) support states and school districts in their efforts to transform schools into vibrant STEM learning environments.
Resources

Prepare and Inspire report:  
http://www.whitehouse.gov/ostp/pcast

Balancing Act:  
http://woolsey.house.gov/legislationissues.asp?ARTICLE4936=61553

Afterschool Alliance:  www.afterschoolalliance.org

AAUW:  http://www.aauw.org/act/index.cfm

America COMPETES:  
http://www.awis.org/displaycommon.cfm?an=1&subcategory=203
More NGCP Information

Program Directory
www.ngcproject.org/directory

Mini-Grant Schedule
http://ngcproject.org/mini-grant/schedule.cfm

Join the NGCP listserv
www.ngcproject.org/resources/newsletter.html

Next Webcast: National Center for Women & Information Technology (NCWIT)
February 9, 2011 11:00AM Pacific/2:00PM Eastern

NGCP archived webcasts:
http://ngcproject.org/resources/webcastarchive.cfm