NY STEAM Kick Off Conference

October 25, 2014
Welcome to HVCC, Penny Hill

- Training and Education Center for Semiconductor Manufacturing and Alternative and Renewable Technologies

- Tour sign up and meet up at the Media Consent Table
  - LEED Platinum Facility
  - General Features
  - Labs and Classrooms
Welcome to NY STEAM, Stephanie Lemnios

Share a few words from Senator Gillibrand

Our goal today is to:

• Inspire you to make a difference
• Make new connections that could result in a collaboration
• Learn something new to share with your networks
• Spread the word about NY STEAM
• Have some fun too!
NGCP/NY STEAM Vision

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).
Reminders about today, Stephanie Lemnios

• Tweet using #NYSTEAMKickOff
• Professional development certificates available at Registration Desk at 4 pm
• Media consent forms
• Share photos at nysteam4girls@gmail.com
• Evaluation--for reference. Wait for emailed version!
• Sharing Table in the Atrium
Share Your Thoughts,
Stephanie Lemnios

- Is there a resource that you would like to share for collaboration, STEM activities, etc?
- What are you hoping to learn about today?
- I am excited to be here today because...
- What inspired you today?
- What will you do as a result of being here today?
NY STEAM Girls Collaborative
Jennifer Goodall
Co-Leader of NY STEAM

Director, Informatics Undergraduate Program - University of Albany

- Builds community among current SUNY students
- Outreach activities with collaborators including Junior FIRST Lego League Expo, the Social Robotics Workshop, Digigirlz
Agenda

• Welcome & NY STEAM/NGCP Background
• Speed Networking
• *In Their Own Words* Panel
• Lunch & Keynote
• *Power of Collaboration* Panel
• NY STEAM Upcoming
• Hands on STEAM: SciGirls Style
• Collaboration & Food for Thought
NY STEAM Leadership Team

Collaborative Co-Leads
- Jennifer Goodall, College of Computing and Information Women in Technology, University at Albany
- Stephanie Lemnios, Informal STEM Education Consultant

Leadership Team
- Ballston Spa Central School District
- Center for Economic Growth (CEG)
- Campbell-Savona Central School District
- East Meadow Public Library
- Girls Inc.
- Girls Scouts/FIRST Robotics All Girls Team (Long Island)
- Hudson Valley Community College
- Microsoft
- New York State Energy Research and Development Authority (NYSERDA)
- New York State United Teachers (NYSUT)
- Northeast Advanced Technological Education Center (NEATEC)
- Questar III
- Schenectady County Community College (SCCC)
- Society of Women Engineers
- WMHT
- WSKG
NY STEAM Kick Off Sponsors
NY STEAM Kick Off Team

Katherine Jetter, NY STEAM Leadership Team Member
Mary Burke, NY STEAM Champions Board Member

MANY others!

Thank you!
NY STEAM Champions Board

- 1st Playable
- 4-H Cornell Cooperative Extension
- ACM-W
- American Association of University for Women (AAUW)
- ASME
- The Community Foundation for the Greater Capital Region
- Business Council of New York State
- Capital Affairs LLC
- Center for Economic Growth (CEG)
- Clarkson University – North Country Regional STEM Hub
- CNSE Children’s Museum of Science and Technology
- Corning Incorporated
- CTECH

- FIRST
- GE Water and Power/Society of Women Engineers & Women of Wind Energy
- IBM
- Jolt Consulting Group
- The New York Hall of Science
- NBC2
- miSci
- New State Education Department (NYSED)
- New York State Energy Research and Development Authority (NYSERDA)
- New York State School Counseling Association
- University at Albany, Center for Technology in Government
- Wings of Eagles Discovery Center
Margaret Ashida (1956-2014), NY STEAM CB Member
Why are we still having this conversation?
Negative Stereotypes about Girls and Women in STEM Persist
Why Girls?

- Girls and boys do not display a significant difference in their abilities in math and science.
- Women continue to be underrepresented in STEM at college and workforce level.
- STEM is an equity issue.
Employed women 16 years and older as a percentage of selected occupations: 2011

All occupations
Registered nurses
Dietitians
Therapists
Teachers, except postsecondary
Psychologists
Social scientists
All professional and related occupations
Pharmacists
Biological and life scientists
Postsecondary teachers
Physical scientists
Physicians
Lawyers and judges
Mathematical/computer scientists
Engineers

Why New York?

• 89% of projected job openings could be filled by computing degrees.

• Even during economic downtimes in NY, demand is still high for STEM jobs.
  
  – 1.7 STEM jobs for every unemployed person
  
  – 3.6 people for every non-STEM job

• Despite being a large share of the population, women, blacks and Hispanics earn a small share of STEM degrees.

Sources: NCWIT EdJobsMap
Change the equation, Vital Signs: New York
NY STEAM/NGCP Goals:
Maximize Access to Shared Resources

Building a Network Through Collaboration

Girl Scout Council
Wants to host STEM program for girls but their facilities are booked and they are looking for exciting hands-on activities.
NEED: Facility, exciting hands-on activities, role models to deliver activities
RESOURCE: Access to girls

Science Museum
Looking for ways to attract more Latino, African American, and American Indian visitors.
NEED: Access to girls, particularly under-represented girls
RESOURCE: Facility, exciting hands-on activities

University
A college chapter female engineering students wants to get involved in bringing more girls into the profession.
NEED: Access to girls, exciting hands-on activities
RESOURCE: Role models to inspire girls

Girls Inc.
An afterschool program for middle school girls needs ideas for how to offer motivating and engaging STEM experiences.
NEED: Exciting hands-on activities, role models
RESOURCE: Transportation to the event

During NanoDays (week-long celebration of nanotechnology), the science museum hosted a STEM Expo and lunch with role models and engineering students for an audience of 100 Latina mothers and daughters from local Girl Scout troops and Girls Inc. members. Activities from SciGirls and NISE Network (nanotech) engaged girls in hands-on activities, introduced girls and their mothers to local STEM role models, and informed mothers about the educational pipeline for STEM opportunities for their daughters.
NY STEAM/NGCP Goals: Gender Equity in STEM
Project Impact

- **15.4 million** visits to the NGCP website
- **3,387** programs are listed in the online NGCP Program Directory
- **27,579** participants served in **241** mini-grants completing activities
- **18,434** practitioners have been served through events and webinars
- **8.35 million girls** are served indirectly by NGCP by having their leaders trained in the philosophy, knowledge, and methods of NGCP (**4.8 million Boys served too!**)  

4/28/14
Why is Collaboration Important?

High levels of collaboration among educators and programs engaging girls in STEM increases the efficiency and effectiveness and overall capacity of programs and therefore increases opportunities and improves experiences for girls in STEM.
Increased Collaboration Benefits Girl-Serving STEM Programs

- Helped my program be more effective: 91%
- Reduced feelings of organizational isolation: 88%
- Helped my program be more efficient: 85%
- Improved my program’s sustainability: 82%

Source: NGCP 2013 Annual Survey
Background on NGCP, Karen Peterson

Chief Executive Officer – National Girls Collaborative and Principal Investigator (PI) - National Girls Collaborative Project (NGCP)

- Published in The Journal of Women and Minorities in Science and Engineering and CBE Life Sciences Education
- Profiled in STEMConnector’s™ 100 Women Leaders in STEM
- Over 25 years of experience in education as a classroom teacher, university instructor, teacher educator, program administrator, and researcher.
NGCP History 2002-2006

Northwest Girls Collaborative Project
2002-2004
- Creating the Model

California, Massachusetts, and Wisconsin
2004-2006
- Replication Development
- South Central and Missouri Rural Urban
NGCP History 2006-2016

National: 2006-2011
20 Collaboratives
• Replication Refinement
• Model Fidelity
• Building the Network

National: 2011-2016
31 Collaboratives
• Growing the Network
• Building Capacity
• National Presence
Speed Networking
Speed Networking

• Your Name
• Your Organization/Program & Role
• Resources *(what do you have to share?)*
• Needs *(what do you need to meet your goals?)*
• 2 Minutes Each
• Bring your business card to exchange
• You will need a pen to write down great ideas!
• Trees & leaves
In Their Own Words...,
Jeff Oskin

- President and CEO — Jolt Consulting Group
- NY STEAM Girls Collaborative CB

- Learn directly from a panel of girls what they enjoy and recommend about STEM
In Their Own Words...

- Schenectady County CC—Aviation Science Program
- Girls Inc. Eureka Program & Guilderland High School
- Project Lead the Way & Saratoga High School
- FIRST Robotics Competition (FRC) & Shaker High School
- Clarkson University
- Cornell Cooperative Extension of Broome County & Binghamton High School — Citizen U
- Questar III BOCES & Rensselaer Polytechnic Institute (RPI)
- Clean Technologies & Sustainable Industries Early College High School, NYS PTECH
Mainstreaming STEM,
Fran Berman

- Get your lunch
- Sit with people you don’t know
- Listen to some thought provoking comments
- Ask good questions
- Share your thoughts
- Come back to the Auditorium
The Power of Collaboration, Renee Walrath

- President and CEO – Walrath Recruiting
- Engaging youth; giving back (organizational philosophy/mission); ways to expose girls to STEAM fields such as internships, apprenticeships, job shadowing, other hands on learning/career programs; mentors and role models to inspire, encourage, support girls
The Power of Collaboration

• Heather Briccetti, President and CEO — The Business Council of New York State & NY STEAM Girls Collaborative CB
• Luticha Andre Doucette, Fellow — University at Rochester
• Laurel Logan-King, Assistant Superintendent — Ballston Spa Central School District & NY STEAM Girls Collaborative LT
• Sarah McKinney, Developer Experience and Evangelism — Microsoft & NY STEAM Girls Collaborative LT
• Philip Morris, Chief Executive Officer — Proctors
NY STEAM Upcoming & Resources, Stephanie Lemnios

- NGCP Webinars
- NGCP & NY STEAM Website Resources
- Program Directory
- NY STEAM Newsletter and Social Media
- Mini-grants
- Collaboration/Professional Forums
NGCP Components and Activities

Virtually:
• Content Rich Project Website
• NGCP Program Directory
• E-Newsletter & Social Media
• Webinars

Collaboratives:
• Professional Development: Conferences and Forums
• Incentives to Collaborate: Mini-Grants
• Newsletters and Local Resources
“We have used resources found on the NGCP website and our girls’ scores in science and interest surveys showed great improvements.”
NGCP Program Directory: Building a Collaboration Nation
NY STEAM E-Newsletter

In This Issue
Get Involved
Join Us at NY STEAM Events
Highlight on NY STEAM Leadership
Upcoming STEAM Events in New York State
Funding Available
STEM Resources
Our Vision

Sign up at http://goo.gl/CaqNvz
NY STEAM & NGCP Social Media

Over 23 million students have learned one Hour of Code and due to the positive feedback from teachers, Code.org launched a free 20-hour Intro to Computer Science course.

The free curriculum and professional development are for grades K-8... See More

K-8 Intro to Computer Science
code.org

NY STEAM Girls Collaborative Project
Science, Technology, Engineering, Arts, Math

NATIONAL GIRLS COLLABORATIVE PROJECT
American School Counselor Association
Women in Engineering
Learning transforms lives.
Mini-Grants

The grant we received was less than $1000. The impact it made was priceless. It may have greatly changed the lives of these little girls. They have decided that science and engineering are interesting, fun, exciting, and for girls. Thank you!
NY STEAM Upcoming Events

- Collaboration Forum (11/12/14)
  For individuals and organizations looking to collaborate on a project for girls in STEAM
- Mini-grants (Winter 2014-15)
  Two or more groups can apply for seed funding
- Collaboration/Professional Development Forum (Spring 2015)
  In Westchester County New York
Million Women Mentors™
Advancing Women and Girls in STEM Careers Through Mentoring
What Can You Do?

• Complete the online survey about this Kick Off Conference
• Sign up for the NY STEAM e-newsletter
• Find us on social media (Facebook, LinkedIn, Twitter)
• Attend our conferences
• Tell a colleague
• Encourage a girl
• Pledge to be a mentor
• COLLABORATE WITH ANOTHER ORGANIZATION
Hands on STEAM—SciGirls Style, Nancy Coddington

- Certified National PBS SciGirls Trainer
- Community Outreach Coordinator at WSKG Public Media
- NY STEAM Leadership Team
Collaboration & Food for Thought, Stephanie Lemnios

Final thoughts
Reminder of next steps
TEC-SMART Building Tour, Penny Hill
• LEED Platinum Facility
• General Features
• Labs and Classrooms
NY STEAM Resources

- Jennifer Goodall or Stephanie Lemnios: nysteam4girls@gmail.com
- https://www.facebook.com/NYGCP
- https://twitter.com/NYSTEAM4girls
- https://www.linkedin.com/groups/NY-STEAM-Girls-Collaborative-Project
- E-newsletter: http://goo.gl/E7qTnS