Breaking Stereotypes
How Role Models and Mentors are Inspiring Girls in STEM

January 28, 2015
Agenda

• NGCP & FabFems Overview
• Guest Presenters
  – STEM Mentoring Cafes
  – International Connections in Mexico City
  – eSTEM Morocco
  – Project Scientist Superstars
• Resources/Ways to Get Involved
• Questions and Answers
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
National Network of Collaborative Teams
NGCP Goals

- **Maximize** access to shared resources
- **Strengthen** capacity of existing projects
- **Collaborate** to create the tipping point for gender equity in STEM
Breaking Stereotypes
FabFems Website

FabFems is an international, online, searchable directory of women STEM professionals interested in outreach to girls

**Audience:**
- Role Models
- Girl-Serving Programs
- Parents and Girls

www.fabfems.org
Search & Connect

- Keyword
- City
- State
- Interest
- Ethnicity
- Student Age
- Field of Work
- Type of Visit
- Affiliations

FabFems

Role Model Profile

Ashlee Ford Versypt
Dorchester, MA

Field of Work
Chemical Engineering
Pharmacology, Computational Science

Company
Massachusetts Institute of Technology
Postdoctoral Researcher

Education
University of Illinois at Urbana-Champaign, University of Oklahoma
BS, MS, and PhD in Chemical Engineering. Minors in Computational Science & Engineering and Mathematics

Education Level
PhD

Profile Biography
I grew up in a small rural town in Oklahoma. Most of the people in my family are teachers, nurses, mechanics, farmers, or factory workers. I wanted to do something different. I was interested in science and math and having an intellectually stimulating career that challenged me and benefited society. My high school counselors and teachers didn't know much about STEM career paths other than becoming a doctor, but they were great at referring me to science

FabFems

Share your past. Spark a future.
Various Ways to Engage

- Online (Email, Skype, Google Hangouts, etc)
- Job shadowing
- Field trips
- Visits to your site/location
STEM Mentoring Cafe

• We recruit 5th through 8th grade students and their teachers to spend a few hours engaged in quick show-and-tell chats with federal employees in STEM careers.
• The federal STEM professionals move table to table to share how they got their start in STEM, what interests them the most about their job, what exciting projects they have currently, and why STEM matters to our society.
• Teachers are given take-home material to continue STEM learning in the classroom.
• Federal participants commit to serving an additional 20 hours annually as a mentor to students in their community.

www.energy.gov/STEM
POC: annemarie.horowitz@hq.doe.gov
## Join a STEM Mentoring Cafe

<table>
<thead>
<tr>
<th>Location</th>
<th>Federal Mentors</th>
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<tbody>
<tr>
<td>Chicago Museum of Science and Industry (Chicago, IL)</td>
<td>Argonne National Laboratory</td>
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<td>Children’s Museum of Houston (Houston, TX)</td>
<td>NASA Johnson Space Center</td>
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<tr>
<td>Columbia REACH (Tri-Cities, WA)</td>
<td>Pacific Northwest National Laboratory</td>
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<tr>
<td>National Museum of Nuclear Science and History (Albuquerque, NM)</td>
<td>Sandia National Laboratory</td>
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<tr>
<td>Intrepid Sea, Air, and Space Museum (New York City, NY)</td>
<td>NASA Goddard Space Center</td>
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<tr>
<td>TBD, Washington. D.C.</td>
<td>17+ federal agencies</td>
</tr>
<tr>
<td>Museum of Science and Industry (Tampa, FL)</td>
<td>TBD</td>
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## Role Model Toolkit Focus Areas

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<tr>
<th>Focus Area</th>
<th>Icon</th>
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<tbody>
<tr>
<td>The Role Model Impact</td>
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<tr>
<td>Breaking the Ice</td>
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<td>Sharing About You</td>
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<td>STEM Messaging</td>
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<td>Technobabble</td>
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<td>Crowd Control</td>
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<td>Engineering Design Process</td>
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<td>Career Exploration</td>
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<td>The Art of Questioning</td>
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<td>Giving Girls Feedback</td>
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*Check back soon for new materials!*
<table>
<thead>
<tr>
<th>Dell, Rebecca</th>
<th><a href="mailto:Rebecca.dell@hq.energy.gov">Rebecca.dell@hq.energy.gov</a></th>
<th>Department of Energy</th>
<th>Work in energy policy, training in climate science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunams, Detiger</td>
<td><a href="mailto:Detiger.dunams@ars.usda.gov">Detiger.dunams@ars.usda.gov</a></td>
<td>Agricultural Research Service, USDA</td>
<td>Molecular Biology, Microbiology, Genetics, Parasitology</td>
</tr>
<tr>
<td>Durham, Latisha</td>
<td><a href="mailto:Latisha.durham@navy.mil">Latisha.durham@navy.mil</a></td>
<td>NAVAIR</td>
<td>Program Management/System Engineering, background in Computer and Systems Engineering</td>
</tr>
</tbody>
</table>
Second Annual Interagency STEM Volunteer Fair

Creating opportunities for federal employees and contractors to volunteer for STEM organizations

RSVP via email to annemarie.horowitz@hq.doe.gov
Women @ Energy

Over 230 profiles of women who work in STEM at the Department of Energy, sharing their personal stories.

www.energy.gov/womeninSTEM
1) What inspired you to work in STEM?
2) What excites you about your work at the Energy Department?
3) How can our country engage more women, girls, and other underrepresented groups in STEM?
4) Do you have tips you'd recommend for someone looking to enter your field of work?
5) When you have free time, what are your hobbies?
#womeninSTEM videos

Carter Wall
Director, Performance Solar Division, Broadway Electrical Co.

Women in STEM -- Why We Need All Hands on Deck
Inspiring Girls in STEM: Role Model Network in Mexico
Students are enthusiastic and curious about STEM careers
Promoting FabFems Role Models and SciGirls
FabFems Mexico

Find a Role Model

Enter your search criteria on the right to find a role model. To search by State, use the official two letter abbreviation. Click here for State Abbreviations.

Visit the Resources page to learn more about facilitating role model experiences. Explore the directory with our interactive "Our Reach" map.

Violeta Anaya
Queretaro, Queretaro, MX
Contact
Field of Work: Biology
Ethnicity: Hispanic or Latino
Type of Visit: Field trip

Resources: Field trip hosting, Hands-on activities for students

Maria del Carmen Duran-Dominguez-de-Bazua
Mexico, DF, MX
Contact
Field of Work: Chemical Engineering
Ethnicity: Hispanic or Latino
Type of Visit: Other

Resources: Hands-on activities for students, Other

Miroslava Melendez
Mexico DF, Mexico City, MX
Contact
Field of Work: Energy
Ethnicity: Hispanic or Latino
Type of Visit: Online role model

Resources: Field trip hosting, Hands-on activities for students, identifying other role models
FabFems Mexico: What’s next?

• Grow role model network nationally
  ✓ Connect and engage – educators, students, scientists, other STEM professionals.
  ✓ Contact schools (public & private), universities, research centers, science museums, national organizations, companies, media.
  ✓ Reach out to potential funders (government and non-government)
FabFems Mexico: How to get involved?

• Become a FabFem
• Spread the word!
  ✓ Encourage other women in STEM to join FabFems.
• Stay connected
  ✓ Sign up for the monthly NGCP newsletter [www.ngcproject.org](http://www.ngcproject.org)
  ✓ Join or Connect with FabFems Online [www.fabfems.org](http://www.fabfems.org)
  ✓ Facebook/Twitter [www.facebook.com/FabFems](http://www.facebook.com/FabFems) @FabFems
  ✓ Email: info@fabfems.org
Program Overview, Roll out in Morocco

• Techwomen:
  • Annual program since 2011
  • Targets 21 countries from Africa, Central Asia, Middle East
  • More than 200 emerging leaders trained

• eSTEM Morocco:
  • Supported by a seed grant from Techwomen
  • 120 High school girls from 4 schools reached
  • 1 intensive week of activities

Nezha Larhrissi
January 28th 2015
www.techwomen.org
www.facebook.com/estemmorocco
Mentors & Girls Experiences
FabFems Database as resource for mentors
Next

- Mentors train girls on entrepreneurship
- Support them in Apps Creation
Get Involved

• Be a mentor and role model
• Host visits or suggest sites to visit
• Provide a training as a coach
• Be active on Social Media
• Share resources for role models
• Share info on international competitions targeted to high school girls
Merci !
Research Based Solutions
Research Based Solutions

**Parents**
Engage/educate parents to validate & encourage girls interests in STEM

**Confidence**
- build confidence
- encourage failure
- drive innovation

**Relevance**
Local STEM companies, field trips and female role models to inspire and create vision

**Year Round**
- Summer intensive
- Year long after school engagement
Researched and Proven Outcomes

Outcomes Proven By Harvard

Results for:

- **See myself as a scientist**: Strongly Agree: 3.1, Agree: 3.4, Disagree: 2.9, Strongly Disagree: 3.5
- **Know or have met a scientist**: Strongly Agree: 3.1, Agree: 3.4, Disagree: 2.9, Strongly Disagree: 3.5

(HARVARD MEDICAL SCHOOL logo)
Researched and Proven Outcomes

Outcomes Proven By Harvard
Researched and Proven Outcomes

Strongly Agree
Agree
Disagree
Strongly Disagree

Career Interest
Career Knowledge

Strongly Agree: 3.3
Agree: 3.7
Disagree: 2.1
Strongly Disagree: 3.1
Unique Business Model

Project Scientist Superstar Partnerships
www.projectscientist.org

Sandy Marshall
(704)363-6411
sandy@projectscientist.org
https://www.youtube.com/user/ProjectScientist?feature=watch
Additional Resources

Curiosity Machine
www.curiositymachine.org

EngineerGirl – Ask An Engineer
http://www.engineergirl.org/
Get Involved with NGCP

- FabFems Project: www.fabfems.org

- Content Rich Website: www.ngcproject.org
  - E-Newsletter
  - Webinars
  - Program Directory
  - Events
  - Leadership Teams & Champions Boards
Make your pledge today!
https://www.millionwomenmentors.org
Connect With Today’s Presenters

AnneMarie Horowitz, Department of Energy
AnneMarie.Horowitz@Hq.Doe.Gov

Alicia Santiago, SciGirls Connect
santimiller@mac.com

Nezha Larhrissi, eSTEM Morocco
larhrissi.nezha@gmail.com

Sandy Marshall, Project Scientist
sandy@projectscientist.org
Questions?