

Bridging Gaps: Forging Alliances
5th Annual Women in New Jersey's
Science and Technology Workforce Summit



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Connection to 2010: Taking Initiative



- New Jersey should work to strengthen linkages between academic institutions, communities, and state and federal governments and groups, with a particular focus on bridging the gap between academic expectations and industry needs.
- To address this recommendation, the 2011 Summit brought together representatives, researchers, employees and observers, from both academia and industry around the theme, *Bridging Gaps: Forging Alliances*.

The Gaps



- Women's representation in STEM professions relative to that of men decreases at every stage of the educational and professional hierarchy.
- Among those women who “beat the odds” to establish a career in a STEM field, the attrition rate is substantially higher than for men, with the rate for women exceeding 50 percent by mid-career (Schick, Lincoln, & Pincus, 2009).
- According to Butson (2011), existing practices in higher education reflect educational theories and norms that may be well-suited to the compulsory education of children but that often fail to adequately prepare individuals “to succeed in their future academic/professional and societal roles (p. 1).”

The Audience



- **127...**
 - teachers, administrators, and students from high schools, community colleges and universities;
 - job seekers;
 - consultants;
 - business and industry representatives;
 - non-profit organization representatives; and
 - representatives from state and local government agencies
- **representing critical “junctions” along the STEM “pipeline”**
 - A pipeline which for women can be quite porous

Breakout Sessions



- **Career Brush Up: Key Topics and Current Insights**
- **Diversity and Inclusion Fuels Innovation**
- **Student to Scientist: College to Career**
- **Social Media Branding and Targeting**
- **Where Do We Go From Here?**
- **Women Impacting Sustainability Policy**

Recommendations



Elementary and Secondary Education



- **Build science and mathematics education programs that...**
 - Reinforce effort and risk-taking rather than accomplishment
 - Reward growth and learning rather than performance
 - Apply learning to real-life problems and needs
 - Incorporate a substantial “hands-on” component
 - Are interdisciplinary

Elementary and Secondary Education (cont.)



- **Examine the role of high school guidance counselor; ensure that this role is designed and adequately supported to offer a full range of opportunities to young women and men**
- **Expose students to women who are successful in STEM fields**
- **Develop performance standards that are clear and consistently applied**
- **Expose students to available jobs and careers beyond the female-stereotyped options, such as nursing and physical therapy**

Higher Education



- **Accelerate and spread the development of professional science master's education that...**
 - has deep knowledge of science
 - is interdisciplinary
 - strongly emphasizes effective communication and problem solving
 - provides an understanding of entrepreneurial skills and technical innovation
- **Connect women in STEM majors to resources, advising, mentoring, and support, that will follow them throughout their college years**
- **Connect learning, both in the classroom and in affinity groups, with real-world problems and real-world efforts to generate solutions**

Profession / Career



- **Develop standards for a “diversity-friendly” company and recognize excellence in valuing and managing diversity**
- **Develop policies intended to improve retention and advancement in STEM careers by addressing the full context of contemporary family life (e.g. child care supports, paid family and medical leave)**

Profession / Career (cont.)



- Develop volunteering programs for those just starting in their careers or facing transitions; provide visibility and recognition of the idea that volunteering builds skills
- Develop and support programs such as *Crucial Conversations* (p. 19, <http://www.vitalSMARTS.com/crucialconversationstraining.aspx>) that teaches communication skills to employees, and focuses on how to talk about one's views, how to present different ideas, and how to manage conflict

Across the Pipeline



- Disseminate information at all educational and professional levels about ongoing programs and activities for girls and women in STEM
- Develop vibrant and sustainable partnerships between community colleges, other institutions of higher education, state and local government, and industry

Across the Pipeline (cont.)



- Create clear performance standards, with an eye toward making sure that standards are not skewed toward “what men are already doing”
- Develop and support forums for women; women in general, but especially those in non-traditional fields, benefit from a “space” in which they can become role models for up-and-coming women in their field, recognize one another for their unique accomplishments, and support one another in workplace and academic settings