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*. 
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 “junctures” 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)
- 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](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
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