



STEM Smart: Lessons Learned From Successful Schools

February 28, 2012 | Pacific Science Center | Seattle, WA



AGENDA

8:00–8:30 am	Registration (Continental breakfast served)
8:30–9:30	Welcome and Opening Remarks <ul style="list-style-type: none">• Janice Earle, Coordinator, Evaluation Activities, Directorate for Education and Human Resources, National Science Foundation• R. Bryce Seidl, President & Chief Executive Officer, Pacific Science Center• Alan Burke, Deputy Superintendent, Washington State Office of Superintendent of Public Instruction• Patricia Galloway, Member, National Science Board and CEO, Pegasus Global Holdings, Inc.• Barbara Olds, Deputy Assistant Director (Acting), National Science Foundation [<i>Tentative</i>]
9:30–10:00	What Everyone Should Know About the Successful K–12 STEM Education Report* <ul style="list-style-type: none">• Barbara Means, Director, Center for Technology in Learning, SRI International
10:00–10:15	Break
10:15 am–12:15 pm	Elements of Successful STEM Education—<i>Breakout Sessions</i> <p><i>Effective Instruction:</i> The <i>Successful K–12 STEM Education</i> report notes that “effective instruction capitalizes on students’ early interest and experiences, identifies and builds on what they know, and provides them with experiences to engage them in the practices of science and sustain their interest.” This session highlights programs in which teachers use what they know about students’ understanding to actively engage students in science, mathematics, and engineering practices. As stated in the report, “in this way, students successively deepen their understanding both of core ideas in the STEM fields and of concepts that are shared across areas of science, mathematics, and engineering.”</p> <ul style="list-style-type: none">• Erin Fitzgerald, Senior Professional Development/Curriculum Associate, Museum of Science, Boston• Nicole Schechtman, Senior Researcher, SRI International

*National Research Council. (2011). *Successful K-12 STEM education: Identifying effective approaches in science, technology, engineering, and mathematics*. Committee on Highly Successful Schools or Programs for K-12 STEM Education. Board on Science Education and Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

- Andrew Shouse, Associate Director, UW Institute for Science and Mathematics Education
- Cary Sneider, Associate Research Professor, Portland State University

Equal Access to Quality STEM Experiences: The report discusses findings that draw a direct line between a nation’s competitiveness and K–12 STEM education to support the next generation of scientists and innovators. Thus, a goal for K–12 STEM education is a focus on the flow of students into STEM courses, majors, and careers. An important dimension of this goal is to increase the participation of groups that are underrepresented while ensuring equal access to quality STEM learning experiences for all students. Therefore, this session will highlight practices that lead to opportunities for all students to become engaged in strong STEM learning.

- Babette Moeller, Senior Research Scientist, Education Development Center, Inc.
- Oscar Porter, Executive Director, California's Mathematics, Engineering, Science Achievement (MESA) program
- Keisha Varma, Professor, University of Minnesota

Supportive Infrastructure for STEM Learning: The *Successful K–12 STEM Education* report highlights that “research suggests that although teacher qualifications matter, the school context matters just as much [including] . . . multiple factors that strengthen and sustain those learning communities (e.g., school and district leaders, parents, and community).” This session highlights programs that have proven strategies to develop the essential infrastructure required to support teachers and students.

- Edward (Ted) Britton, Associate Director, STEM Program, WestEd
- Kara Jackson, Assistant Professor, McGill University
- John Moore, NREL Director/Research Scientist, Colorado State University
- Keisha Scarlett, Principal, Seattle Public Schools

12:15–1:30

Networking (Lunch served)

1:30–3:30

Repeat of Morning *Breakout Sessions* (See list of presenters above)

- Effective Instruction
- Equal Access to Quality STEM Experiences
- Supportive Infrastructure for STEM Learning

3:30–3:45

Break

3:45–4:45

Synthesis and Concluding Remarks

STEM education leaders will reflect on the day’s presentations and conversations, highlighting major issues, concerns, and recommendations of participants.

- Philip Bell, Associate Professor, University of Washington
- James Dorsey, Executive Director, Washington State Mathematics, Engineering, and Science Achievement (MESA)
- Kit Peixotto, Program Director, Education Northwest, Oregon
- Mike Town, Teacher and former Einstein Fellow