

STEM^{TO} STEAM

A briefing marking Rhode Island's commitment to fostering innovation through the addition of Art and Design to STEM education and research

Case Studies



Make it Better Symposium

Rhode Island School of Design

On March 11 and 12, 2011, Rhode Island School of Design opened a series of ongoing national conversations with Make It Better, a two-day symposium on art, design and the future of healthcare. Sponsored by the Robert Wood Johnson Foundation's Pioneer Portfolio, this vital series of conversations brought leading artists, designers and activists together with health professionals, policymakers, entrepreneurs and members of the RISD community to frame an expanded role for art and design in improving public health and the delivery of healthcare.



RI STEM Center

Rhode Island College

The goal of the RI STEM Center at Rhode Island College is to improve the quality of STEM education throughout the state of Rhode Island. The Center engages pre-service, in-service, and informal educators in high quality programming to increase student awareness, interest, motivation, opportunities, and achievement in STEM at all educational levels. A creative approach, often associated with the fine and performing arts and design, is a core element in programming. The Center works to develop new initiatives in partnership with other institutions, pre-kindergarten through graduate school and to facilitate collaboration among all stakeholders in STEM education.



SmART Schools

The Rhode Island Foundation

SmART Schools is a K -12 research-based, comprehensive, whole-school reform initiative that provides daily opportunities for all students to engage in, and demonstrate skills, knowledge, and understanding in and through the arts. SmART Schools was started in Rhode Island 12 years ago by Eileen Mackin, Ed.M., with funding support from The Rhode Island Foundation. Piloted for elementary schools, the concept gained momentum when a researcher at Brown University found students taught by the SmART Schools approach benefitted significantly in reading, writing, and math on standardized tests. With funding from the U.S. Department of Education, the program expanded in Rhode Island and to New Hampshire and Vermont, and later to California.

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Toys and Technologies for Rehabilitation

Rhode Island Science and Technology Advisory Council

“Toys and Technologies for Rehabilitation” was funded with a grant from the Rhode Island Research Alliance, to create a line of toys designed specifically for children with movement disorders. With the thought that children use toys as a primary learning tool, the collaborators sought to help children with neurological conditions rehabilitate through high-tech toys. The project stems from concepts that were developed by students in a joint RISD-Brown University course. The group of collaborators includes Dr. Trey Crisco from Brown University, Dr. Karen Kerman from Hasbro Children's Hospital, Dr. Susan D'Andrea from Afferent Corporation, Dr. Dave Durfee from Bay Computer Associates and Dr. Khipra Nichols from RISD.



Promoting Innovation

Rhode Island Department of Education

The Rhode Island Department of Education has been aggressively tackling some of public education's historical and cultural barriers to innovation. How do governmental agencies, institutions that are often the most calcified of all bureaucracies, transform themselves into dynamic organizations that simultaneously exemplify and promote innovation? How do state departments of education promote practices that aren't defined by their adherence to the comfortable and time-tested, but rather, by their embrace of the uncomfortably new? Though still short of the complete answer, the Rhode Island Department of Education has been striving to promote innovation by:

- dismantling the relationship between seat time and grade promotion decisions
- eliminating the requirement for credit-counting
- divorcing the definition of a “course” from strict disciplinary, textbooks, and classrooms
- graduating students based on their demonstration of proficiency rather than the years they've spent in classrooms
- promoting statutes and regulations that protect innovation -- in schools, classrooms, and everywhere else that today's students might receive instruction.