

WHO WE ARE

The Institute for Connecting Science Research to the Classroom (ICSRC), founded in 1996, provides opportunities for researchers at Virginia Tech to collaborate with K-12 teachers in making the research process an integral part of the pre-college learning experience. Housed in the College of Liberal Arts and Human Sciences, ICSRC scans research in sciences, technology, engineering, and mathematics (STEM) disciplines for ways to link the research to K-12 student inquiry. Student involvement can take many forms, from simulating aspects of a given research project to serving as field scientists in data collection or designing original investigations.

PARTICIPATING COLLEGES

- Agriculture and Life Sciences
- Architecture and Urban Studies
- Engineering
- Liberal Arts and Human Sciences
- Natural Resources
- Science
- Veterinary Medicine

SPONSORS AND AFFILIATES

- Bill and Melinda Gates Foundation
- NASA
- National Consortium of Specialized Secondary Schools
- Toyota USA Foundation
- United States Geological Survey
- Virginia Association of Science Teachers (VAST)

DISTINCTIONS

- Designated headquarters of the National Consortium for Connecting Science Research to the Classroom
- Named Signature Research Project by the Weinberg Center of the Living Classrooms Foundation
- Awards include:
 - The Blue Ridge PBS McGlothlin Award for Excellence in Teaching
 - The American Association of University Women Outstanding Project Award
 - The Discover Life in America First Place Award
 - The National Wildlife Federation Schoolyard Habitat Award
 - The Virginia Department of Game and Inland Fisheries Outstanding Projects Award

Institute for Connecting Science Research to the Classroom

WHAT WE DO

In an effort to enrich teaching and learning experiences in the areas of science, technology, engineering, and mathematics, the Institute for Connecting Science Research to the Classroom (ICSRC) provides three types of services: 1) brokers collaborations between university researchers and elementary, middle, and high school teachers; 2) assists the collaborative teams in translating research into learning applications that can be an integral part of pre-college curricula; and 3) disseminates the new learning applications via professional development for teachers while also assisting school leaders in managing the technologies needed to support those new learning applications.

Research – The central purpose of the institute is to provide ways for K-12 students to participate actively in the research process, using as closely as possible the actual protocols and technologies that practicing scientists use in their inquiries. To that end the institute created the award winning TILT Program as a framework for initiating a variety of research-based projects that emphasize teaching inquiry with the latest technologies. Each project in the TILT Program is developed by a collaborative team of university researchers and K-12 teachers. Projects generally focus on the “new” sciences (biotechnology, bioinformatics), engineering concepts, and technology, and are grounded in state and national standards. Most projects are either related to the data collection of ongoing research at Virginia Tech or other agencies or are simulation spin-offs of specific research. In either case, participating students are involved in authentic problem-solving, with results going to “real” audiences.

Education – The institute provides professional development for teachers who wish to implement TILT research projects. In addition, the institute partners with the University of Virginia, the Virginia Department of Education, and the Virginia Educational Technology Alliance to provide professional development for all superintendents and principals in Virginia through the Virginia Initiative for Technology and Administrative Leadership (VITAK). The emphasis in the VITAL program is on building the capacity of school leaders to apply systems thinking to the management of technologies essential to active, inquiry-based teaching and learning.

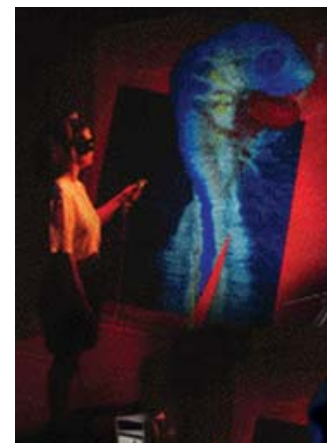
Facilities – The Institute for Connecting Research to the Classroom is based in War Memorial Hall. The programs it coordinates are located in facilities across the campus and in K-12 schools across the commonwealth.

Priorities and Opportunities

The ICSRC has established a menu of funding priorities for gaining corporate support in continuing the development and dissemination of programs bringing opportunities for participation in science research to K-12 students.



Inquiry in the Outdoor Laboratory, a TILT research project



CAVE applications for the desktop, a TILT research project

ACTIVITIES

- Developing the National Consortium for Connecting Science Research to the Classroom
- Providing professional development for superintendents and principals through the VITAL Program (Virginia Initiative for Technology and Administrative Leadership)
- Maintaining professional development for K-12 teachers using TILT programs (Teaching Inquiry with the Latest Technologies)
- Assisting in the development of the VT-STEM Outreach Initiative
- Providing statewide leadership in Internet2 applications for K-12

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