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- Webinar: Curriculum Developed in the NSF-funded ITEST and COSEE Programs
- ITEST Eighth Annual Summit

Recent and Upcoming Conferences

- AEA – Evaluation 2010 Annual Conference
- Cyberlearning Tools for STEM Education (CyTSE)
- ITEST at Society for Information Technology and Teacher Education
- ITEST Engineering Workshops for Educators at ITEEA Annual Meeting

Opportunities

- NSF Program Solicitation: Computing Education for the 21st Century
- NSF Program Solicitation: Cyberlearning: Transforming Education
- NSF Program Solicitation: Transforming STEM Learning (TSL)

What's new

2010 ITEST AWARDS ANNOUNCED
Learn about the newly awarded projects at http://itestlrc.edc.org/itest-projects. Once on the page, click on ‘2010 New ITEST Awards’ below the map.

DECEMBER 13 PRESENTATION AT NSF - DRL CENTERS: RESEARCH, CAPACITY BUILDING, AND BROADER IMPACTS IN INFORMAL STEM EDUCATION
ITEST LRC PI, Joyce Malyn-Smith, and Co-PI, Siobhan Bredin, participated in a presentation and discussion for staff from across the Foundation interested in learning about resource centers that support three DRL programs targeting informal learners: the ISE Center for the Advancement of Informal Science Education (CAISE), the ITEST Learning Resource Center (ITEST LRC), and the AYS Learning and Youth Research and Evaluation Center (LYREC). During the session, ITEST LRC and other resource center staff shared insights into effective approaches for reaching informal audiences, research and evaluation, building capacity in the field, and expanding broader impacts. Attendees contributed suggestions for effective strategies for education centers to work with and support STEM researchers.

WEBINAR ARCHIVE | EMBEDDING ASSESSMENT IN STEM LEARNING
This webinar explored types of embedded assessments, how to include them in computer-based activities, and a model system for collecting data for teachers, students, and researchers. Access the archive at: http://go.edc.org/embedding-assessment-stem-learning-webinar-archive.

WEBINAR ARCHIVE | ITEST PROGRAM FINDINGS ON YOUTH MOTIVATION, INTEREST, AND IDENTITY AS IT RELATES TO STEM CAREER DEVELOPMENT
ITEST projects working across the U.S. shared specific frameworks for fostering and assessing youth motivation and STEM career interest. Access the archive and resources at: http://go.edc.org/itest-program-findings-youth-motivation-webinar-archive

Mark your calendar

WEDNESDAY, FEBRUARY 23 2:00-3:00 ET | WEBINAR: CURRICULUM DEVELOPED IN THE NSF-FUNDLED ITEST AND COSEE PROGRAMS
In this webinar, ITEST (Innovative Technology Experiences for Students and Teachers) Learning Resource Center http://itestlrc.edc.org and COSEE (Centers for Ocean Sciences Education Excellence) http://www.cosee.net/ will showcase curriculum materials on topics ranging from computer game development to engineering design to ecology to ocean sciences. These curricula - designed for middle/high school teachers and students and available online at no charge - encourage and support innovative STEM learning and teaching and have been
adapted through collaboration with partners, educators and students across the ITEST and COSEE education programs.

**Access this webinar**
Webinar link: [http://www.learningtimes.net/itestwebcasts.html](http://www.learningtimes.net/itestwebcasts.html)
Toll free: 1-888-450-5996
Local: 1-719-955-1371
Participant Access Code: 424447#

**ITEST EIGHTH ANNUAL SUMMIT | MARCH 3-4, 2011 | ARLINGTON, VIRGINIA**
This is by invitation only, but there will be opportunities to participate virtually. These options will be posted in February.

**Recent and upcoming conferences**
- Cyberlearning Tools for STEM Education (CYTSE) Conference | March 8-9, 2011
- ITEST at Society for Information Technology and Teacher Education | March 7-11, 2011 | Nashville, Tennessee
- ITEST Engineering Workshops for Educators at ITEEA Annual Meeting | March 26th, 2011 – Minneapolis

**Opportunities**

**NSF PROGRAM SOLICITATIONS:**
- Computing Education for the 21st Century (CE21)
- Cyberlearning: Transforming Education (Cyberlearning)
- Transforming STEM Learning (TSL)

**ITEST community news**

**SRI INTERNATIONAL, TERC and Girls Inc. Partner With AC Transit to Inspire High School Girls to Create Greener Public Transportation Solutions**
Source: PRNewswire | December, 2010

**Project:** Girls InnovaTE3: Girls Innovating with Technology as Entrepreneurial Environmental Engineers

**FabLab Project at the Twelfth National Leadership Summit**

FabLab’s principal investigator Glen Bull’s interview with NPR’s WHRV, Sarah
About ITEST
* The ITEST program was established by the National Science Foundation in direct response to current concerns and projections about the growing demand for professionals and information technology workers in the U.S. and seeks solutions to help ensure the breadth and depth of the STEM workforce.

Learn about the program at http://itestlrc.edc.org/about-ittest-lrc

Next ITEST Solicitation
A new solicitation should be available in late Spring, 2011.

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**McConnell, “Good Reason,” listen at**
http://curry.virginia.edu/class/edlf/701/radio_interview.html

**Game Design as a Pathway to STEM Careers**
Source: NSTA WebNews Digest | October, 2010
By: Debra Shapiro
At first glance, you might think the students—most of whom come from underserved populations—spending Saturdays or summer days at McKinley Technology High School in Washington, D.C., are just playing video games on their computers. But actually they are acquiring experience in game design, 3D modeling, and animation; some of the high school students stationed nearby are mentoring their peers and younger students. More at
http://itestlrc.edc.org/news_and_events/game-design-pathway-stem-careers

**Project:** Game Design Through Mentoring and Collaboration

**Video Game Design Program Boosts Interest in Science Careers**
Source: LiveScience [Technology: Behind the Scenes] - October, 2010
By: Colleen Kearney Rich, George Mason University
"Your game is annoying," one student at the Be the Game summer camp tells another. The boy just laughs. "That's because you can't beat it," he says. This is an exchange between Schuyler Truesdale, a sophomore at Suitland High School in Forestville, Md., and seventh grader Jordan Chandler of Stephen Decatur Middle School in Clinton, Md. Both students participated in a four-week camp focused on . . . View the entire story at:
http://itestlrc.edc.org/news_and_events/video-game-design-program-boosts-interest-science-careers

**Project:** Game Design Through Mentoring and Collaboration

**Science Students Get Stars in Their Eyes**
Source: The Washington Post | October, 2010
By: Eric Niiler
When the giant Green Bank Telescope in West Virginia got stuck in one position a few years ago, astronomers collected a big pile of electronic data from one part of the sky but had nobody willing to sift through it. So they did what many of us do for boring chores: They found some teenagers. They set teams of high school science students to scanning thousands of computerized "star plots" in search of pulsars . . . View the entire story at
http://itestlrc.edc.org/news_and_events/science-students-get-stars-their-eyes

**Project:** The Pulsar Search Collaboratory

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**Children-produced Drawings: An Interpretive and Analytic Tool for Researchers | Chapter 12**
program on longitudinal development of students’ perceptions of what engineers do at work.

**Project:** Learning through Engineering Design and Practice: Using our Human Capital for an Equitable Future

**Engaging Students in Environmental Research Projects: Perceptions of Fluency with Innovative Technologies and Levels of Scientific Inquiry Abilities**


By: Ebenezer, J., Kaya, O.N., & Ebenezer, D.L.

The purpose of this mixed-method study was to investigate the changes in high school students' perceptions of fluency with innovative technologies (IT) and the levels of students' scientific inquiry abilities as a result of engaging students in long-term scientific research projects focusing on community-based environmental issues. Read more at: [http://onlinelibrary.wiley.com/doi/10.1002/tea.20387/abstract](http://onlinelibrary.wiley.com/doi/10.1002/tea.20387/abstract)

**Project:** Translating Information Technology Into Classrooms: Teacher-Student's Research on Lake Erie Ecosystem

**Place-Based Education and Geographic Information Systems: Enhancing the Spatial Awareness of Middle School Students in Maine**


By: Nancy Perkins; Eric Hazelton; Jeri Erickson; Walter Allan (C3 ITEST PI)

ABSTRACT: Spatial literacy is a new frontier in K–12 education. This article describes a place-based introductory GIS/GPS middle school curriculum unit in which students used measuring tools, GPS units, and My World GIS software to collect physical and spatial data of trees to create a schoolyard tree inventory. Read the complete article at: [http://go.edc.org/place-based-education-and-gis](http://go.edc.org/place-based-education-and-gis)

**Project:** EcoScienceWorks: Exploring and Modeling Ecosystems Using Information Technology

**K–12 Computational Learning**

Source: November 2010 | vol. 53 | no. 11 | Communications of the ACM

By: Stephen Cooper (C4 ITEST PI), Lance C. Pérez, and Daphne Rainey

Enhancing student learning and understanding by combining theories of learning with the computer’s unique attributes.

In “Computational Thinking,” Jeannette Wing struck a chord that has resonated strongly (generating positive as well as negative responses) with many computer scientists and non-computer scientists. Read the complete article at: [http://itestlrc.edc.org/resources/k12-computational-learning](http://itestlrc.edc.org/resources/k12-computational-learning)

**Project:** An Innovative Approach for Attracting Students to Computing

**Teacher Professional Development Through a Collaborative Curriculum Project – An Example of TPACK in Maine**


By: Walter Allan, Jeryl Erickson, Phil Brookhouse, and Judith Johnson (C3 PIs)

ABSTRACT: Maine’s one-to-one laptop program provides an ideal opportunity to explore conditions that optimize teacher integration of technology-focused
curriculum into the classroom. Read the complete article at:
http://go.edc.org/ecoscience-techtrends

**Project:** EcoScienceWorks: Exploring and Modeling Ecosystems Using Information Technology

**Climate Literacy & Energy Awareness Network (CLEAN) Launched**

Cohort 3 ITEST PI, Tamara Ledley of TERC, along with partners from NOAA, SERC, and CIRES, launched CLEAN, a reviewed collection of educational resources for educators to use build students' understanding of the core ideas in climate and energy science. View the site at: http://cleanet.org/

**Project:** DataTools: Tools for Data Analysis in the Middle School Classroom

**CoastLines GIS Lessons Available Free on Science-Approach.com!**

Middle school and high school lessons developed for and adapted by the NSF-funded CoastLines project are now available free from the Science Approach web site.

**Project:** CoastLines

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**Resources**

**Getting Started With Your Evaluation | Webinar Archive**

*Source: EvaluA|T|E the Evaluation Resource Center*

This webinar provided information and resources you need to get your evaluation started off on the right track. View the archive at http://evaluate.org/events/pastevents

**Making Sense of Your Evaluation Data – January 19, 2011 | 1-2:30 PM EST**

Sometimes what seemed crystal-clear when the evaluation of your grant was being planned gets a little fuzzy once the data are actually in. Register at http://evaluate.org/events/

**Learning Science: Computer Games, Simulations, and Education | Prepublication**

Authors: Margaret A. Honey and Margaret Hilton

At a time when scientific and technological competence is vital to the nation's future, the weak performance of U.S. students in science reflects the uneven quality of current science education. Although young children come to school with innate curiosity.... Read more at http://www.nap.edu/catalog.php?record_id=13078#description

**27th Annual Conference on Distance Teaching & Learning | August 3-5, 2011, in Madison, Wisconsin**

Check the site for details at http://www.depd.wisc.edu/info/.

- Proposal **Deadline Approaching:** January 19, 2011 at 4:00 pm--CST

**NGCP Webcast NCWIT Resources: Inspiring Girls to Pursue Careers in Information Technology | Wednesday, February 9, 2011 - 11:00 AM-12:00 PM Pacific**

This webcast will highlight free materials and information for attracting more
girls and underrepresented groups to computing and information technology and share how formal and informal educators are using these resources to strengthen programming for girls. Register: http://www.ngcproject.org/events/events.cfm?eventid=186

FORUMS ON FIDELITY OF IMPLEMENTATION | WEBINAR ARCHIVES
The Center for Elementary Mathematics and Science Education at the University of Chicago held a series of on-line forums on fidelity of implementation with a particular focus on STEM education programs. Read more and view the webinar archives at: http://itestlrc.edc.org/news_and_events/december-forums-fidelity-implementation

SMARTR: THE MSP2’S VIRTUAL LEARNING EXPERIENCES FOR YOUTH: NOW AVAILABLE!
Designed for and by youth, the SMARTR site contains a series of highly interactive math/science virtual learning experiences for youth. Visit SMARTR today! http://smartr.edc.org

E-NEWS FROM THE NATIONAL GIRLS COLLABORATIVE PROJECT (NGCP)

DRLNET WEBSITES
The ITEST LRC is a member of DRLnet, a group of resource centers serving five NSF Division of Research and Learning in Formal and Informal Settings (DRL)-funded program communities including: Academies for Young Scientists, Discovery Research K-12, Informal Science Education, and Research and Evaluation on Education in Science and Engineering. Each of these websites has information of interest to the STEM education and workforce development community.

Social Networking

FACEBOOK: http://go.edc.org/Facebook-National-ITEST-STEM-LRC

The ITEST Learning Resource Center