

UPCOMING CONFERENCES

Workshops: Teachers Using GIS
Marion, VA, June 15-19
Ben Hur, VA, July 20-14
[Email us](#) to learn how to register

2nd National Summit on Geospatial Technologies in K-12 Education
James Madison University, Harrisonburg, June 26-27
PJ Dempsey presents: *What Can GIS Do For You: Using GIS in the Classroom*

New CTE Administrators Conference
Richmond, VA, July 7-8
PJ Dempsey presents: *Trailblazers: What We Can Do For You.*

Va Counselors Association Summer Academy IV
Richmond, July 10-11
PJ Dempsey presents: *Stereotype Threat*

CTE Co-op Workshop
Richmond, VA, July 14-15
PJ Dempsey presents: *Trailblazers: What We Can Do For You.*

2009 Career & Technical Education Summer Professional Development Institute
Richmond, VA, August 3-7
PJ Dempsey presents: *Stereotype Threat*
Meredith Gunter presents: *Update on the Revision of Virginia's Workplace Readiness Skills*
PJ Dempsey presents: *2 Day Workshop on Using GIS in the Classroom.*

Virginia Counselors Association Convention 2009
Williamsburg, Nov 11-14
[Call for Presentations](#)

SPATIAL SKILLS TRAINING HELPS STUDENTS WITH STEM PROGRAMS

Enhancing spatial reasoning increases retention of women (and men) in the technology classroom.

Video games and other fun activities help students improve spatial skills. [Learn more about this](#) from the National Institute for Women in Trades, Technology & Science

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Best Practices Around Virginia: Promote nontraditional enrollment in all your activities

MARKETING INTRODUCES THE COMMUNITY TO THE NEW ADVANTAGES OF CTE

CTE is growing and changing in communities across Virginia. Schools are teaching new programs and bringing more opportunities to students than were ever available in their parents' generation.

Now it is important for CTE to reach out to the community and make sure that everyone knows about new possibilities. "**Reach out**" is the key idea here. It is tempting to believe that *If you build it, they will come*. Sadly, that's not true. You need to market what you offer and encourage people to come.

We live in a world where marketing is king (just ask your Marketing teachers). People in your community are constantly sur-

rounded by great marketing and have come to expect it. In fact, they have come to distrust products that don't have great marketing. Therefore, to be effective, CTE needs to be marketed with skill, conviction, and professionalism.

While promoting CTE, it is best practice to use the opportunity to market to nontraditional students as well. You don't have to devote the entire event to this purpose, but carve out part of the time for this. It is especially effective to involve your current nontraditional students in public events and activities, because their presence demonstrates your commitment to equality of opportunity.

Smyth Career and Technology Center Community Day and Car Show

One of the best ways to reintroduce CTE to the community is to combine an open house with an activity that the community already knows and cares about. In Smyth County, people love their cars. They turned out in droves for the Career and Technology Center Community Day and Car Show.

The success of the event was well beyond expectations. About 600 people attended in spite of inclement weather. Forty-five cars were registered for the car show, all 22 members of the faculty and staff were in attendance, 46 students volunteered for the entire day, and all food items were sold out. Without a doubt, this event brought out the most people since SCTC opened in 1971.

Some guests were SCTC graduates who had not been back in years, making the event somewhat of a reunion. Several teachers from throughout the division were in attendance and most brought their families. The division superintendent and a former superintendent were there to show their support. Most of the guests had never been

inside the school. That alone, made the event a success.

Success like this doesn't happen without organization and teamwork. Instructors and students took the lead. The Auto Body, Auto Tech, Precision Machining, Welding and Drafting departments planned and organized the car show. The Nurse Aide, Practical Nursing departments, and HOSA conducted free health screenings. The Cosmetology department orchestrated games for children. Culinary Arts sold lunches. The Criminal Justice instructor and students directed traffic. Student members of SkillsUSA led guided tours. Community Colleges representatives and military recruiters were there to talk to students and parents.

Excitement continued with door prizes and gift card drawings for adults, educators, high school student, student helpers, and even a Wii game system for a visiting elementary or middle school student.

Learn more:

www.ctetrailblazers.org/carshow

WWW.CTETRAILBLAZERS.ORG

A How-To Guide from the Institute of Education Sciences, What Works Clearinghouse

Encouraging Girls in Math and Science

Decades of research help us understand how children learn. The federal [What Works Clearinghouse](#) now offers a guidebook to provide clear, direct assistance in helping girls to learn math and science. Gaining skills in math and science is a key first step to helping girls succeed in many nontraditional courses and programs.

[Encouraging Girls in Math and Science](#) offers five specific recommendations for teaching practice, and a checklist of supporting activities. It also describes the roadblocks teachers are likely to encounter when trying to follow each recommendation, and offers solutions to them.

Recommendation 1: Teach students that academic abilities are expandable and improvable.

- Teach students that working hard to learn new knowledge leads to improved performance.
- Remind students that the mind grows stronger with use and that over time and with continued effort, understanding the material will get easier.

Recommendation 2: Provide prescriptive, informational feedback.

- Provide students with feedback that focuses on strategies used during learning, as opposed to simply telling them whether they got an answer correct. This strategy encourages students to correct misunderstandings and learn from their mistakes.
- Provide students with positive feedback about the effort they expended on solving a difficult problem or completing other work related to their performance.
- Avoid using general praise, such as “good job,” when providing feedback to individual students or an entire class.
- Make sure that there are multiple opportunities for students to receive feedback on their performance.

Recommendation 3: Expose girls and young women to female role models who have succeeded in math and science.

- Invite older girls and women who have succeeded in math-related or science-related courses and professions to be guest speakers or tutors in your class.
- Assign biographical readings about women scientists, mathematicians, and engineers, as part of students’ assignments.
- Call attention to current events highlighting the achievements of women in math or science.
- When talking about potential careers, make students aware of the numbers of women who receive advanced degrees in math- and science-related disciplines.
- Provide girls and young women with information about mentoring programs designed to support students who are interested in mathematics and science.

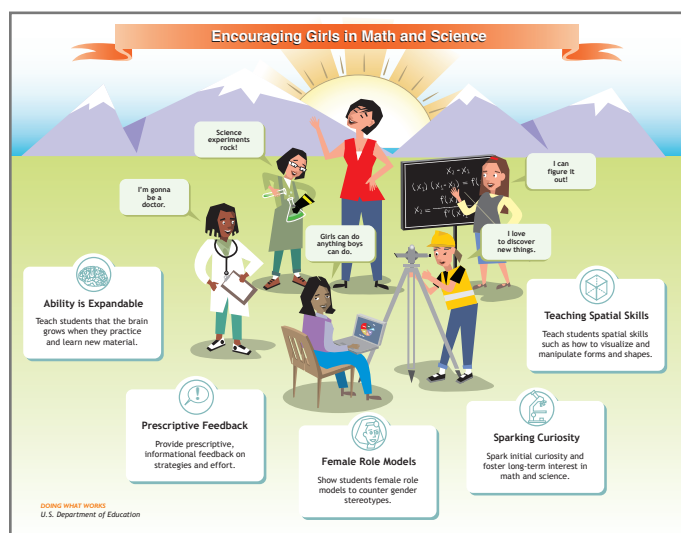
- Encourage parents to take an active role in providing opportunities for girls to be exposed to women working in the fields of math and science.

Recommendation 4: Create a classroom environment that sparks initial curiosity and fosters long-term interest in math and science.

- Embed mathematics word problems and science activities in contexts that are interesting to both boys and girls.
- Provide students with access to rich, engaging relevant informational and narrative texts as they participate in classroom science investigations.
- Capitalize on novelty to spark initial interest. That is, use project-based learning, group work, innovative tasks, and technology to stir interest in a topic.
- Encourage middle and high school students to examine their beliefs about which careers are typically female-oriented and which are typically male-oriented. Encourage these students to learn more about careers that are interesting to them but that they believe employ more members of the opposite gender.
- Connect mathematics and science activities to careers in ways that do not reinforce existing gender stereotypes of these careers.

Recommendation 5: Provide spatial skills training.

- Recognize that children may not automatically recognize when spatial strategies can be used to solve problems and that girls are less likely to use spatial strategies than boys. Teach students to mentally image and draw spatial displays in response to mathematics and science problems.
- Require students to answer mathematics and science problems using both verbal responses and spatial displays.
- Provide opportunities for specific training in spatial skills such as mental rotation of images, spatial perspective, and embedded figures.



"Researchers have found, for instance, that SAT math scores underpredict young women's performance in college math courses. This suggests that it is not ability, per se, that hinders girls and women from pursuing careers in math and science. If not ability, then what?"

Encouraging Girls in Math and Science, p6.