



Cassandra Walls, Kyleigh Hanson and Kiana Oakry are all smiles at Technology Goddess camp. Walls has launched her own online newspaper.

■ CAREERS

Girl Power!

From Technology Goddesses camp to your future IT workforce. **By Julia King**

SAN DIEGO

IT'S 10 O'CLOCK on a sunny April morning in Balboa Park. In a spacious Girl Scout cabin tucked away amid lush green palm trees, 20 girls ranging in age from 11 to 14, most wearing jeans and pigtails, are gearing up for today's camp activities. But there are no sit-upons or s'mores, potholders or paper crafts — just 21 laptops, two color printers, 10 digital cameras, two scanners and a palpable abundance of preadolescent energy

and creative enthusiasm.

Welcome to Technology Goddesses, a program of weekend and weeklong technology camps that aims to keep young girls engaged in computing and technology, especially through those dicey middle-school years when girls' interest in computing begins to decline. Studies show that prior to fifth grade, boys and girls have a similar level of interest in computers. But after that, boys' interest increases and girls'

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Sobering Statistics

37%

Percentage of computer science degrees awarded to women in 1984

70%

Percentage decline in the number of women choosing to major in computer science between 2000 and 2005

15%

Percentage of girls taking Advanced Placement exams for computer science in 2006 — the lowest female representation of any AP exam

19%

Percentage of computer science degrees awarded to women in 2007

9%

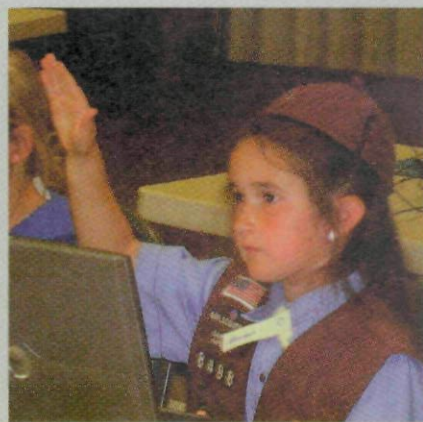
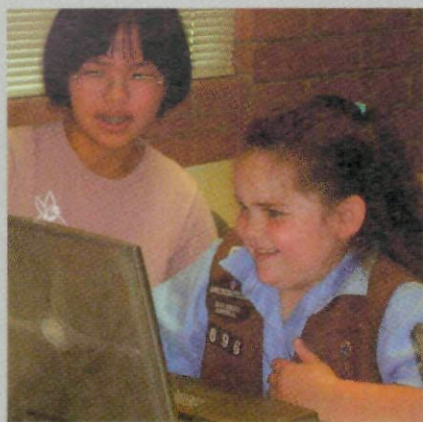
Percentage of U.S. technology patents in which women were involved

SOURCE: NATIONAL CENTER FOR WOMEN AND INFORMATION TECHNOLOGY (WWW.NCWIT.ORG)

PHOTOS BY JULIA KING

“Any one of these girls could be a CIO one day because they’re starting now.”

CORA CARMODY, SENIOR VICE PRESIDENT FOR GLOBAL IT, JACOBS ENGINEERING GROUP INC.



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interest begins to wane. The upshot is fewer female computer science graduates and fewer women in IT careers.

Cora Carmody is hoping that Technology Goddesses will help reverse that trend and make technology relevant — even cool — for this at-risk age and gender group, by teaching girls about digital design, Web site development, computer graphics and digital moviemaking, and by exposing them to women in technology-related careers.

Carmody, senior vice president for global IT at Jacobs Engineering Group Inc. in Pasadena, Calif., also considers the program a way to build the future IT workforce. “Any one of these girls could be a CIO one day because they’re starting now,” she says.

Carmody founded the program in 2002 on the East Coast and began working with the Girl Scouts in 2003, when she moved to the West Coast to work at Science Applications International Corp. Since then, the program

has logged more than 11,000 hours and reached more than 1,000 girls through 33 workshops, seven weekend programs, three weeklong camps and eight field trips to places like Microsoft Corp.’s Innovation Center in Irvine, Calif., and Cox Communications Inc.’s multimedia digital production studio at Petco Park, the home playing field of the San Diego Padres.

All of the programs take place in a “girl-friendly” learning environment. “The patterns of learning are different for girls,” says Carmody, who is the mother of three sons and a daughter and the leader of a Girl Scout troop.

“Girls are much more social. They like working together in teams. They’re also much more impressionable by role models. And their role models tend to be older girls, not adults. An older girl is the best technology mentor for a younger girl,” she says.

Technology Goddesses and Girl Scouts made a perfect pairing, especially since one of the Girl Scouts’ mot-

toes is “As you learn, teach someone else.” Also, as of sixth grade, every Interest Project, or IP, for which Girl Scouts earn a badge includes a career component, as well as skills, technology and service components.

“Through Technology Goddesses, the girls learn to use technology and gain life skills and develop critical-thinking skills,” says Jo Dee Jacob, CEO of Girl Scouts, San Diego-Imperial Council. “They educate themselves and others.”

This particular weekend, the seventh-, eighth- and ninth-grade scouts, called Cadettes, are using Bureau of Labor Statistics data to research IT-related careers. They are also coaching younger Brownies and Daisies, who are in kindergarten through third grade, and the campers join briefly for various technology lessons.

Today, it’s eighth-grader Angela

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MORE GODDESSES

Additional photos and the girls’ multimedia presentations can be viewed at computerworld.com/more.



Angel Rodriguez, age 14, helps Brownie Ashley Cancino, age 6, navigate the Internet.

Even Goddesses Need Role Models

Not all technology professionals are geeks; not all technology professionals are CIOs. Some make movies. Others are graphic designers or Internet entrepreneurs. The possibilities are infinite.

That's the message that Technology Goddesses wants to send to the tween girls who participate in its programs, and it needs help getting the word out.

There are lots of ways to help, says Technology Goddesses founder Cora Carmody. "During field trips and workshops, we have career panels and bring in professionals from various fields to talk about what they do and how technology fits in," she explains. Some girls have also been allowed to shadow tech professionals on the job or intern at tech companies.

Companies such as Microsoft, Dell and SAIC have helped by donating money, computers, printers, digital cameras and other equipment.

For IT professionals who want to do more, one option is to take a week off from work and volunteer to help at a Technology Goddesses summer camp or, better yet, start a camp of your own, suggests Carmody.

Aside from a lot of fun, the benefits of volunteering include building your company's reputation as an IT employer of choice and getting a glimpse of tomorrow's high-tech workforce, says Susie Schmitt, an Internet manager at SAIC who has served on career panels at Technology Goddesses camps.

Young girls need to see and talk to women and men who work in and with IT so they can develop a realistic view of what a career in technology might hold, says Joy Hughes, CIO at George Mason University and an early volunteer.

"We did a lot of research on how to get girls more involved [in technology]. What we found out is that girls don't understand IT jobs," Hughes says. "When we talked to girls about a career in technology, they'd say, 'Who wants to be a geek and sit at a computer all day and be by yourself?'"

By volunteering to talk about your IT job, career and work life at a Technology Goddesses program, Carmody believes you can help dispel that negative stereotype and perhaps nurture a nascent IT career.

She even has a firsthand success story to tell. "My daughter, Katie, used to want to be a veterinarian. Now she wants to study engineering," Carmody says. "She wants to be a CIO."

— JULIA KING

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Zhang's turn to lead a group of Daisies through a "Point, Click and Go" Internet navigation and safety session. A Girl Scout since the fourth grade, Zhang aspires to be a surgeon. This summer, she'll spend three weeks at a camp for talented youth sponsored by Johns Hopkins University.

"I like this camp because it's so relaxed and you learn so much," Zhang says.

In the afternoon, Leslie Biasi, a Girl Scout co-leader and project coordinator at Dot Hill Systems Corp., a RAID storage firm in Carlsbad, Calif., teaches a multimedia workshop for the older girls. Last year, Biasi took an unpaid leave of absence from her job to volunteer at the Technology Goddesses weeklong camp.

Like Carmody, she is committed to helping girls appreciate the creative and career possibilities that IT has to offer.

Years ago, "when I first started learning HTML and saw how easy it was, I thought, 'Why are only guys doing it?'" Biasi recalls. "HTML is just text telling the computer to display a picture or make text a certain color."

The products from Biasi's session are the main attraction on Day 2 of camp. That's when the girls showcase the multimedia presentations they've created about Technology Goddesses programs. These incorporate video, clip art, photos and lots of music, ranging from Beethoven's Ninth Symphony to the bilingual rap and rock tunes of Karsh Kale.

Over the course of the two days, the girls also get girly with technology. They make scented bath salts and use graphics software and designs downloaded from the Internet to create labels for the jars. These items, Carmody points out, can be sold to raise additional funds for more Technology Goddesses programs or the Girl Scout troops, or to offer scholarships to Technology Goddesses summer camp. This, too, is in line with another Girl Scout motto: "A Girl Scout uses resources wisely."

Virtually all of the Technology Goddesses' camp activities, workshops and programs are designed to be repeated by other Girl Scout troops. Step-by-step materials and directions are available in a "badge-in-a-box" format at www.technology-goddesses.org.

"I'd like to see this program grow," says Carmody. ■

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