

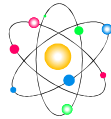
# 1999-2000 Expanding Your Horizons in Science and Mathematics Annual Report

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**“This was a great day.  
It was so worth \$10!”**

We had a great 25<sup>th</sup> Anniversary!

Last year saw EYH™ maintain its position as the premier volunteer based math and science program in the United States. Active Expanding Your Horizons in Science and Mathematics Conference sites totaled 101 during the 1999-2000 conference year. Ten sites registered, but did not host conferences. We estimate total attendance of 28,500 young women during the 1999-2000 25<sup>th</sup> Anniversary conference year.



## **Who Are the Young Women?**

What trends do we see in EYH attendance? What do we know about the young women who attend?

In 1999-2000, the percentage of middle school students relative to high school students moved above a 4 to 1 ratio. We continued to see reports of significant numbers of 6<sup>th</sup> grade and some 5<sup>th</sup> grade girls. However, the increase in the percentage of high school young women that we identified last year reversed itself into a decrease in percentage. EYH remains overwhelmingly a program for middle school young women.

The average attendance at EYH conferences continues to fall. Some sites reported size limits imposed by school districts. Sites also report choosing smaller conferences for a variety of reasons including better personal contact and better management. EYH conferences in 1999-2000 averaged attendance of 282 young women, compared to 290 the year before.

The Math/Science Network and many EYH conference organizing committees continued to work to ensure that conference attendance is a cross-section of the entire community. Outreach to non-European ethnic groups and economically depressed communities continues to be a major emphasis of our work.

The Network continues to work to develop materials and strategies that are inclusive, and to work with sites to provide resources and effective strategies for particular sites. Sites take many different approaches. Conferences engage in active outreach to professional groups, churches, sororities, and women's service organizations in communities with large non-European ethnic populations in order to recruit both role models and young women.

Some committees seek the help of young women of non-European ethnicity who attended EYH in previous years to publicize EYH at their schools. All reports indicate that personal contact is one of the keys to recruiting role models and young women from underrepresented groups.

Thirty-three percent of young women attending EYH identified themselves as members of non-European ethnic groups in 1999-2000. This percentage solidifies the progress we have all made in the last six years to make EYH inclusive. We are thrilled by the efforts of everyone concerned to bring the EYH message to *all* young women in conference areas, to involve *all* parents and teachers, and to find a diverse set of women role models for EYH conferences. Our commitment to this outreach is ongoing, sustained by the firm belief in our mission to promote the continuing development in mathematics and science of *all* women and girls, in *all* communities.

The EYH Adult programs continued to bring a vibrant and varied group of activities to sites. Adult programs ranged from small ones on encouraging daughters in math and providing information about the educational barriers they may face, to larger ones encompassing workshops for parents and caregivers, others for teachers, and still others for counselors.

### **Costs for EYH Sites**

The cost of putting on an EYH returned to levels seen prior to the drop of the past two years. Sites reported average conference expenses of \$6,655, an almost 13% increase from the 1998-1999 projected average of \$5,909. But the costs were not so great across the board; 29% of conferences were hosted on a budget of \$2,500 or less, with many of those supporting attendance of 150 to 250 young women.

Many sites reported sponsorship by local private enterprises. Support from the business community ranged from local banks, power companies, and copy centers to global corporations such as Hughes Space and Communications Company, Conoco, and Texas Instruments. Some sites also reported that grant funding supported their conference activities.

But funding for volunteer activities is often not stable. Many sites reported a need to rebuild portions of their funding structure each year. The almost complete elimination of gender equity funds available under the Carl Perkins Vocational Education Act did eliminate some sites in 1999-2000, as we feared, but a few sites continued to be supported by Perkins funds. Also, we also saw new sites develop in three states, funded by both public and private funds.

The fee charged to students to attend returned to mid-90's levels last year, wiping out two years of decreases. However, scholarship availability remains strong. We have no reports of students unable to attend due to lack of funds. We continue to stress our responsibility to reach out to those who will most benefit, but who may be least able to afford the fee.

One very positive trend remains that over 30% of responding sites reported no fee or a fee of \$5 or less. Some sites offset costs for the young women by charging adults a higher fee than they charge the young women. Conversely, one site only charges the adults if they don't volunteer to help serve lunch or help with materials distribution. Many sites sought out business sponsors to fund scholarships for girls who needed assistance. Some sites have established ongoing scholarship funds.

## **Pathologist class was great! Loved the human body parts!**

Each year, EYH provides a crisp illustration of the value of giving young women the opportunity to spend a day doing something math related with women who spend their work lives doing something math related.

EYH demonstrates that there is no substitute for reality, real hands-on activity, with women who work in real, accessible careers that use math and science. No “virtual” activity can adequately replace the opportunity to do something hands-on with and to talk to a real person who uses math every day to do real work. After months of hard work the joy of young women rewards conference organizers in a way that is hard to describe. What’s so great about EYH? “My favorite class was ‘We Do More than Take Temperatures’ because we had hands-on experiences using the equipment.” USING things is important.

The hands-on workshops are always the high points of the conference: In Tennessee, the young women enthused about the making, using, doing, playing, dissecting, and other actions that make hands-on so compelling. A New York site invited young women from a residential center for troubled youth and the young women were so engaged and excited about the hands-on workshops that EYH site volunteers started an outreach program at the center. The way that hands-on workshops ignites the young women makes all the hard work worth it for conference organizers: “The enthusiasm of the girls was incredible.”

What were the negatives? The young women always identify problems. Too much listening or sitting is always on the list. “We just watched a dumb video.” And there is the subject of food. The bad food, the wrong food, or not enough food, and “we always have complaints about lunch, sandwiches.” There are the problems of not getting a first-choice workshop, or being separated from a friend. However, this is somewhat made up for by interesting and a feeling of belonging. “Thanks for having us, bird lady!”

But the young women did want more. The girls wanted more hands-on experiences, more experiments, more women to interact with, more careers represented, longer classes, more chemistry, more science fair, basically more EYH™.

When asked what they liked about the EYH Conference, the responses of the young women gave voice to the positive effects of EYH. One young woman wrote at the end of the day that, “I loved “Magical Math’ and lunch. I loved petting the dogs.” Another said, “It really influenced me to be a vet and that I really am smart enough to be a vet.” A young woman in Oregon enthused, “I loved all of it. I loved the teachers too because they were so nice and showed me how to do things right and things I didn’t know about.”

## **Impact and Effect of EYH**

Every year we gather more evidence that EYH is clearly effective in increasing the participation of young women in math and science. After the conference at San Bruno, California, 40% of EYH participants planned to take more math and science. In San Jose, California, 75% of the girls rated the conference as above average in getting students to consider different kinds of careers.

Clearly, EYH helps girls make informed choices about their futures. At the San Jose EYH, 76% of the young women said it was above average in providing them specific information about careers using math

and science, and 62% rated it better than average in helping them to plan high school or college classes. In San Bruno, 34% learned about new career opportunities.

The impact of the conference on their future plans was plain. Wrote one young woman, "It was fun—it made me really think about a future...job." Another liked "the air stuff and talking to the pilot, and I think it has influenced me a lot." For another girl, the importance of the hands-on workshops not only was the fun, but also "I'm very alert now on what math and science can do to help women and girls understand that they are important also in this field and can do the same things as men."

### **Real Role Models Are Crucial**

The presence of women role models was crucial in making those connections. For one young woman the high point was, "I loved the pathology, especially the presenter; she even let us use real needles." Another young woman was truly pleased: "I really liked that I had the opportunity to learn all about the different kinds of jobs in math and science." Underlying the declarations that "I really liked making makeup and touching the 'brain'," that "I loved playing with the magnets in the electricity workshop," and the immense popularity of the Rocket Car trials, was the enthusiasm and preparation of the presenters. Science *is* women's work.

### **Learning Can Be Fun!**

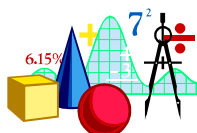
And the young women loved that they had fun learning. "I loved Expanding Your Horizons." One young woman wished that she "had brought one of her friends with me." Another liked a workshop because "I liked dissecting the eye; that was cool." For another it was learning how to make a Web page. In fact, many young women are looking forward to coming back again: "I had so much fun and hope I can come back."

For twenty-six years, thousands upon thousands of conference volunteers, role models, career panelists, and the small staff of the Math/Science Network have helped to bring the message of the value of math and science education, and the fun of the careers that go with them, to the more than 525,000 young women who have attended Expanding Your Horizons in Science and Mathematics™ Conferences. And each year young women discover EYH™ and take away from it happy discoveries. For organizers, the extremely hard work of putting on a conference is rewarded.

"Well, I loved it! I thought it would turn out bad, but it didn't."

"I really liked taking a day off for math and science. Once I got here I didn't want to leave!"

One-on-one we can change the world.



## 1999-2000 EYH Annual Report Evaluation Summary Data\*

Subject	Count-Estimate	Percentage	Average
Active Conferences	101		
Middle School Girls	24,400	86%	243
High School Girls	4,100	14%	40
Minority Students	9,400	33%	92
<b>Total Students</b>	<b>28,500</b>	<b>100%</b>	<b>282</b>
Adults Attending	5,400	18% minority	54
Role Models	5,000	13% minority	50
Committee Members	1500	n/a	15

Conference Cost                      average: \$6,655  
range: \$440 to \$27,700

Conference Fee                        average: \$8.22  
range: free to \$20

\* Projected figures based on **62%** evaluation response (63 of 101 sites holding conferences). Percentages may not add up to 100%.