

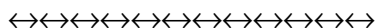
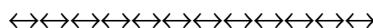
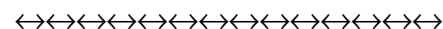
Expanding Your Horizons in Science and Mathematics 2002-2003 Annual Report



Founded in 1974, the Math/Science Network is an organization of educators, scientists, mathematicians, parents, community leaders,

students, and government and corporate representatives whose mission is to promote the continuing development in mathematics and science of all people, with particular emphasis on the needs of women and girls. To achieve this the Network developed, licenses and

coordinates educational conference opportunities: Expanding Your Horizons in Science and Mathematics™ (EYH), for 6th to 12th grade young women.



Expanding Your Horizons Conference Goals

To provide young women with opportunities to meet and interact with engaging women role models who are active in science and math-based careers;

To involve young women in positive, enjoyable experiences in mathematics and science, especially those with limited exposure to such experiences;

To increase the interest of young women in math and science by providing exciting and fun hands-on learning experiences in workshops led by female scientists and engineers from their local community who act as role models;

To encourage young women to study as much math and science as possible in middle and high school by showing them the benefits of a scientific or technical education and science and technology's relevance to their lives;

To foster young women's (and their parents' and teachers') awareness of career opportunities in science, engineering and math-based careers.

☛ **Happy Birthday to M/SN!**
Founded in 1974, we're turning 30!



We are pleased to report that the average cost of attending an EYH conference did not increase this year. The average cost remained stable at \$10. Unfortunately, as in past years, some young women were turned away due to lack of space, caused by reduced corporate sponsorship.

None were turned away due to lack of individual funds.

"Thank you for inviting me and giving me the chance to come even without having the money. I really appreciate that."



Snapshots Of 2002-2003

- ✓ 89 conferences took place in 31 states.
- ✓ New sites included a conference in Kuala Lumpur, Malaysia and another in Tacoma, Washington. We welcome them!
- ✓ The national economic downturn affected some conferences. It was harder for conference volunteers to secure corporate and in-kind funding. Most continued, however, serving fewer young women. The overall cost of producing an EYH conference decreased by \$182.
- ✓ California, Washington and Texas hold the most EYH conferences.

Is there still a need for EYH conferences?

Women have made great gains in the fields of science and mathematics over the past 30 years, but remain severely underrepresented in many areas, especially physical sciences, engineering and computing. In 2000 women received 20.6% of engineering bachelors degrees, a sizable increase from the 1.6% in 1974, but still far from 50%. In 1999 women received 22% of all physical science doctorates (most recent data from National Science Foundation).

In order to introduce more young women to careers in the physical sciences and engineering we are working with EYH conference sites to encourage them to develop more workshops focusing on these fields.

In order to create a technologically savvy workforce, and in order to increase women's interest in studying science and mathematics, Expanding Your Horizons Conferences must continue.



EYH Overall Impact

Year after year our evaluation forms indicate that the conferences introduce young women to careers they had not previously considered and have encouraged young women to take more math and science. For example, at the EYH San Diego conference, 65% of the participants stated that the conference directly influenced their decision to take more math and science classes in high school.



Evaluation Counts!

What is the long-term impact of EYH? Do young women take more math and science courses in high school after they have attended a conference? Is the EYH message of the importance of taking as much math as possible in high school sinking in? This year the National Office instituted a project to continue to explore these questions by implementing a longitudinal survey. Pre and post conference evaluation forms have been developed and administered at two Washington sites and sites in Montana and New York. An early result: eighty-five percent of the attendees at one WA site agreed that "based on what I learned today, I feel a science career is obtainable for me". Follow-up surveys will be sent out after 9 months, 3 and 5 years. Other sites will be invited to join.

The Math/Science Network has not initiated a longitudinal survey since 1981 and we are eager to see the results.

What They Said!

"The bugs were cool but I would not be a bug lady. Bugs give me the creeps."

"It was great, I learned a lot about different careers that I had not thought of before."

"This will make me think over my future more closely."

"Pinning a bug, icky but cool."

"I love it! The class helped to confirm my desire to be a forensics specialist."

All About Our Role Models and Adults Attending Conferences

This year approximately 4,476 role models (workshop leaders) conducted hands-on and career workshops and brought the magic of science and math based careers to the attention of the young women. These workshops are the "bread and butter" of every EYH conference. When the young women participate in hands-on experiments and get a chance to interact with real women scientists, they begin to understand that they too can truly reach for the sky! They also learn that it is possible to have a challenging career and a family at the same time.

The hands-on workshops always get high marks. At one West Coast conference, 98% of the young women reported that the presenters were knowledgeable and able to give answers to all of the questions asked. 81% of the presenters explained why taking math and science is important.

Parents of the young women also attend specially designed workshops designed to help them learn how to finance their daughter's college education and how to boost their self-esteem. They also discussed how gender bias plays out in the media and in the schools. One parent attendee commented:

"With this class, it helped take the fear away that I had of not being able to help my child get into college".

Career Information Too!

In addition to leading hands-on workshops, countless numbers of adult community members participated in career fairs where the young women are exposed to a large number of careers all at one time during an EYH.

Teacher! Teacher!



Some conferences hold special sessions for teachers focusing on making the teaching of math and science more exciting. At the University of South Alabama, EYH, 15 teachers came together to learn from one another. All participants reported this to be a useful experience.

Who attends EYH Conferences?

The EYH program is geared primarily for middle school students. In fact, 80% of all conference participants are in middle school. However, we are starting to notice more and more conferences are holding events geared toward young girls. This year, some conferences including one in Visalia, CA and another in New Mexico planned conferences for girls in the 3rd-5th grades.

But the Food Stunk!

Complaints are few at EYH conferences, but they do exist. Gripes are not usually about the workshop leaders or the hands-on activities. It's mostly about the chow! The young women never seem to like what is served. This year some sites tried serving a BBQ lunch, that proved to be a big hit, but wraps bombed!

Local and National Support

Many conferences continued to depend on the generosity of local funders. Local funders help print brochures and sometimes underwrite the cost of food. This year conference sites reported that it was more difficult to solicit in-kind donations than it has been in previous years. Many conferences continued to look for in-kind donations, but received smaller donations, or had to work with 3 or 4 different donors.

The Math/Science Network has also suffered a reduction in the donations it receives for nationally coordinating all EYH activities. We increased the site fees for the first time in over 10 years.



"This workshop was wonderful because I've never touched a real heart in my life. This heart was of a pig. I'm sorry, but it smelled weird, but anyways, it was a very good experience."

Did she really say...

"I learned a lot about starch and bacteria. It was so much fun. I learned that I have strong spit!"

"Lunch was fun, please serve carrots".



2002-2003

Workshop Sampler!

"Love at First Byte"
(Computers)
"It Makes Scents" (Chemistry)
"Fascinating Fungi"
(Microbiology)
"DNA Detective" (Bioscience)
"A Sticky Situation"
(Mechanical Engineering)
"Veterama" (Veterinarian)

Look What the Young Women Are Saying About EYH!

"That was an awesome experience and I would love to come again".
"Thank you for this fun adventure".
"It's inspirational to all women".
"Thank you for the opportunity to expand my horizons".

"This was great, now I can expect more from life".

"This was a great day. I have strong spit".

"It was cool, I had a lot of fun."

The Impact Continues!

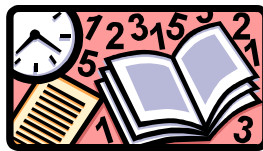
At the San Diego EYH 92% of conference participants reported that they would return again next year.

At the San Jose, California EYH 87% of the young women stated that the conference was helpful or very helpful in helping them clarify future career plans.

Before one California conference, 60% said that math is a useful subject. After the conference 80% said that math is useful!

2002-2003 EYH Evaluation Data

Subject	Count- Estimate	Percentage	Average number per conference
Active Conferences	89	N/A	N/A
Elementary School Girls (3 rd -5 th)	756	3%	8
Middle School Girls 6 th -8 th	23,391	88%	263
High School Girls	2,569	10%	29
Minority Students	10,152	37%	114
Total number of Students	26,717	100%	300
Adults Attending	3,115		35
Role Models	4,476		50
Committee Members	2,529		28



Conference Attendance Fee
Average Cost \$10
Fee range: Free to \$25

Conference Cost
Average cost \$6,914
Cost range \$606 to \$25,689

The Math/Science Network
5000 MacArthur Blvd.
Oakland, CA 94613
(510) 430-2222
(510) 430-2090 Fax
www.expandingyourhorizon.org

Data based on 38 sites reporting. Percentages may not add up to 100%.