

Xavier University Computer Science Club

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Girls Advancing Technology – Computer Science Outreach Event

Proposal for WOX Grant

Abstract: Girls Advancing Technology – Computer Science Outreach Event

Seeking funds: \$2680

For most middle school girls, Computer Science is a foreign concept. It's perceived from a young age as something for boys or simply something not interesting. The statistics support this stereotype and the numbers are getting worse every year – the number of women graduating with a Bachelor's degree in CS is down 80% since 2000 (National Science Foundation). One of the most glaring gaps for girls and the strongest barriers to entry into a tech career is the lack of female role models.

Girls Advancing Technology seeks to improve girls' perception of careers in technology by exposing them to fun Computer Science activities, through hands-on activities with female industry mentors. To build off the success of last year's ½ day event, we plan on bringing more students and industry mentors to Xavier's campus for a full day of exploration to show how tech careers can be meaningful and interesting.

Required Signatures:

X

Gary Lewandowski
Computer Science Club Advisor

X

Janice Walker
Dean of Students

Budget:

Item	Cost
T-Shirts	\$500
Food	
Snacks & Breakfast	\$400
Lunch	\$500
Publicity	\$200
USB Flashdrives	\$500
Book	\$480
Volunteer Gifts	\$100
Total Amount Requested	\$2680

- **T-Shirts:** given to all the students, as well as the volunteers (students, faculty & alums) who participate to wear during event. The design will incorporate the WOX logo, to recognize the support of the WoX GC. *50 student & volunteer shirts at approximately \$10 each.*
- **Food:** light breakfast of juice, bagels, etc. to begin event. Also water, juice & snacks for during the event. Sandwiches & drinks for lunch –*\$900*
- **Publicity:** costs will include postage and copying costs for flyers and handouts for local middle school teachers. We will also plan on publicizing through email, school websites and Facebook.
- **USB Flashdrives:** branded flashdrive for each student & volunteer with information about the activities we do during the day, videos, installers for applications we use, and a place to save all their projects for continued work - *50 flashdrives at \$10 each, \$500 total*
- **Book:** “Hot X: Algebra Exposed” Math is the basis of Computer Science & Technology. Often girls shy away from CS because of the Math requirements, but the lessons taught in this book make math accessible. The approachable style of the book teaches girls that it’s okay to be smart and that they are capable of taking on a field that is predominantly male. - *30 books at \$16 each, \$480*
- **Volunteer Gifts:** Xavier themed thank you gifts for each of the volunteers – *approximately 10 volunteers, \$100 total*

Narrative:

The Xavier University Computer Science Club requests funding for a 2nd annual outreach event for middle-school students, Girls Advancing Technology. The mission of this event is to introduce girls to the idea of technology as a career through hands-on activities and mentorship with industry and academic professionals. Interest in Computer Science is declining at a time when we need not only more people in technology, but specifically a more *diverse* set of talent in the field. The Women of Excellence Giving Circle provides support for programs that “seek to incorporate new ways of introducing gender issues in traditional subjects,” as well as “programming related to the development of women.” This outreach event aligns perfectly with these ideals, as it seeks to bring more females into a field where they are woefully underrepresented. Studies on US technology patenting have shown that mixed gender groups create more useful and innovative patents (National Center for Women & Information Technology). In other words, incorporating more females in the field will be beneficial to both men and women, and an outreach event to girls will help develop women in a field where their absence has hindered progress.

Xavier University’s Jesuit heritage centers of the model of “men and women for others.” The University Mission Statement also begins with the basic idea that “Xavier’s mission is to educate.” By supporting Girls Advancing Technology, the WoX GC will be helping to further Xavier’s mission through the education of middle school girls on a topic that they would have had little exposure to otherwise. Although the prevalence of technology in our society has only increased over the past forty years, the number of women in Computer Science has continued to fall. In 2007, females only represented a dismal 17% of AP Computer Science test-takers. The trend is consistent at the University level as well: only 18% of Bachelor’s degrees in Computer and Information Sciences are women. *Xavier’s own Computer Science department is not immune to this trend, typically graduating only 1 female each year.*

Girls Advancing Technology actively seeks to engage girls and interest them in Computer Science from a young age, so that they will choose to try CS courses in high school and college. By giving middle school girls inspiration and information, we hope to challenge gender stereotypes and breakdown the societal barriers to entry that exist today. Over the course of one day at Xavier, industry and academic volunteers will show girls how a Computer Science degree can open doors to a multi-disciplinary field with incredible opportunity for growth. Studies show that girls want to know their work matters. Where boys find working on video games thrilling, more girls want to know they are making a difference with what they do. Girls Advancing Technology will showcase the ways that their future in tech could truly change the world. Most importantly, we’ll help them discover that they do have the talent to pursue a tech career.

In December of 2011, 20 girls and 8 mentors came together for the first annual Girls Advancing Technology event at Xavier, thanks to the funding of the WOX GC. Over the course of a morning, they learned about innovation, team work, basic programming, and heard the personal stories of our volunteers. The results of our first event were promising, of the girls who responded to our post-event survey, 2/3 of the girls who responded to our survey said they would be likely to take a Computer Science class in high school and 100% were interested in attending future events. 88% of the girls who responded said that they are more likely or are still interested in a career in technology. With that positive feedback, along with suggestions from our mentors, we are seeking to expand our ½ day event to a full day. Additionally, due to the high level of interest in participation, our goal is to bring in 30 girls and 10 industry mentors to campus. Student, faculty, and alumni volunteers from the Computer Science department will also participate to bring their unique perspective to participants.

With a full day, Girls Advancing Tech 2012 will be able to take a successful model and expand upon it, inviting previous attendees as well as new faces to the event. In the fall of 2012, an entire day will be devoted to increasing the girls' knowledge of technology and giving them the tools to work on a project themselves. The extended period of time will allow for increased collaboration between mentors and girls, as well as between the girls themselves, creating a community. The expanded time frame will also allow for a larger project in the afternoon, and the opportunity for the girls to present their work to one another. At the end of the day, they will be able to save their work to a Girls Advancing Tech flash drive and take it home with them to play with and show their family. In the day that they are with us, we'll dispel stereotypes about computer science and help girls realize that not only do they use technology all the time, but they can also be the creators of their favorite innovations.

At the conclusion of the event, we will survey both the girls and the mentors in order to get feedback, as well as gauge interest in technology careers. A high priority of Girls Advancing Technology is ensuring that the event is making a genuine difference in the perspective of the girls in attendance. We welcome any member of the Women of Excellence to join us at the event as a mentor or simply to mingle with the girls. In addition to including the WOX logo on all our materials and t-shirts, we also feel it is important to highlight to our mentors and girls the impact the WOX GC circle has had on our event. The Giving Circle's mission is the epitome of the philosophy we are trying to cultivate with our girls: strong women coming together to support one another and encourage innovation.



(Girls Advancing Technology 2011 Participants pose for a photo)