

SmartGrrls/Girlstart

Southwest Texas Section

1.0 Program Description

1.1 Program Goal

The goal of the SWE/SmartGrrls/Girlstart After School Program is to empower middle school girls in math, science and technology through girl friendly interactive after school programs.

1.2 Description Of The Program

SmartGrrls changed its name to Girlstart in early 2000. The program is now called Club Girlstart & has been enhanced to be a once per week 20-week program that is flexible in location.

The program that was run was a school-managed program that allowed the school to determine the start/end dates, meeting day & times, field trip, guest speaker dates and other activities associated with the program. Lessons in the program ranged from building a roller coaster - learning underlying physics principles to reviewing quality control in candy packaging to investigating the images of girls found in the media.

SWE Leadership & volunteer role possibilities in this program ranged from program leader, sponsoring field trips, volunteering as a guest speaker, or e-mail mentor/advisor.

Education is a cornerstone of the Girlstart mission to encourage and empower young women in math, science and technical fields using hands-on activities and role models. Girls explore math, physics, science, and computer skills while exploring opportunities for women in non-traditional careers. This exposure helps them gain skills & confidence for the future. Girlstart supports diversity by encouraging increased participation in the high technology world.

1.3 Need For The Program

(From the Girlstart web page) “This innovative program encourages young women to develop their skills by creating a fun, all-girl, supportive, and collaborative environment. Girlstart enables young women to explore technology and engineering. Girls also gain a greater appreciation for the achievements of women and, most importantly, begin to realize their potential. The program significantly impacts girl’s attitudes towards math and science, influencing them to pursue education and career paths they otherwise might not have considered. “

1.4 Key Staff

Shafali Rastogi & Melissa Tata working with the schoolteachers & Girlstart staff directed the 2000 SWE/Girlstart program. Additional SWE & non-SWE volunteers were utilized during the program for plant tours and program support.

2.0 Program Details

The 2000 after school affiliate program ran during the school semester. The group met after school for one hour per week from fall 2000 to spring 2001. It included 20 hands-on math and science lessons geared to engage middle school in a girl-friendly, fun environment. Girls engineered roller coasters, combined compounds to create polymers, studied gender biases in media, etc.

2.1 Schedule

The group met Tuesdays after school for one hour per week.

3.0 Success Measures

3.1 Student Survey Results

See attachment of overall Girlstart program results. The students self esteem improved through this program. Their ability to think of themselves as smart, able to pursue a career in math, science, or technology was increased.

4.0 Fund Donor Questions

4.1 What did you originally hope to accomplish under your grant?

The grant money was to be used to fund a Girlstart affiliate program in the Austin Independent School District to encourage & empower a group of middle school girls in math, science, and technology.

4.2 How did you go about realizing the project goals?

Before submitting the application for grant. A team of SWE volunteers was gathered. Upon receipt of the check from SWE Feb. 00, the team was to begin/complete Girlstart training & begin working with a school in South Austin. At that time due to economic, location & time issues the original group of volunteers was unable to meet the volunteer requirements. Urgent pleas for volunteers resulted in no volunteers for the Austin Independent School District. Two leaders in the North Austin in the Round Rock Independent School District were found.

Dell Plant Tour

The students toured the Dell main site in Round Rock, TX. There they toured the manufacturing floor & learned about the manufacturing process.

4.3 What are the principal outcomes of your project?

The main accomplishment of the Girlstart program was to give the girls the opportunity to learn, grow, and to see their potential in an all girl environment. They were empowered to study for careers in math, science and technology.

The Girlstart program allowed SWE volunteers to gain exposure as an engineering organization at local schools & to Girlstart who in 2000 & 2001 continues to gain national recognition. SWE volunteers also gained knowledge in how the local school district works, interacted with teachers and staff. It also allowed our members to become mentors to the students & teachers.

4.4 Are there any recommendations to continue or build on the work accomplished under the grant?

SWE- SWTX does not plan on continuing this program due to the lack of time commitment from SWE volunteers. The program leader role and one hour per week requirement is the key issue in our not continuing to support this program. The Girlstart program is an excellent program that if a group has the time and energy to commit volunteer resources we recommend.

4.5 Were the monies you received adequate for the project?

The grant money received covered 2 semesters adequately. Additional funds for tour buses to the Dell facility could have been beneficial.

4.6 Was the time allotted for your project adequate?

Yes, one full school year is adequate. Planning up front before the school year & receiving the grant monies before the school year would help facilitate a more contiguous program

4.7 Did you encounter any significant problems in carrying out your project?

Yes, the lack of volunteer commitment was a problem for SWE.

4.7.1 Lessons Learned

Time commitment for all involved key - when training occurs, when the program takes place, weekly preparation for program

Location commitment from all involved - where will program occur

Teacher participation key to success – attending during session very helpful

Having a 4-person team & 2 teachers was successful – never having to cancel/postpone a lesson due to travel, sickness, etc.

4.8 Has your project received any public attention to date?

The SWE Girlstart Program has been described in the SWE-SWTX newsletter.

Girlstart Program Results Spring 2000

The Spring 2000 Girlstart programs at Fulmore Middle School, Webb Middle School, Paredes Middle School, Mendez Middle School, Westview Middle School, and Pearl C. Anderson Learning Center were extremely successful. Girlstart served 125 girls and was well received by students, parents, educators, and administrators. These schools represented Independent School Districts in Austin, Pflugerville, and Dallas.

Spring 2000 students had this to say about their experiences in Girlstart

- 90% of the girls said Girlstart encouraged them to think about career opportunities in math, science, and technology that they might not have considered before.
- 82% of the girls feel that Girlstart made them feel more confident about their skills in math, science, and technology.
- 77% of the girls said that Girlstart made them feel better about themselves.
- 63% of the girls agree that as a result of Girlstart, they will take more math, science, and technology coursework.
- 64% of the girls feel that Girlstart increased their interest in math, science, and technology.
- 89% of the girls agree that Girlstart helped them realize that math and science are important to their education and career.

What I liked best about being in Girlstart....

“It was cool! I liked that it was only girls and we did fun experiments together in class.”
Westview student

“It made me feel special that our teachers picked us from all the students to be in Girlstart. We got to experience math and science and have fun!”
Paredes student

“My daughter has brought up her math TAAS scores from failing to above average since she went through the Girlstart program in her school!”
Westview parent

“It was my first time to go on the Internet and I learned that it wasn’t that hard. We had an online chat with women that taught us to go towards our goals and never give up.”
Fulmore student

“I liked getting to go to college and see what it was like in a college classroom. It wasn’t as hard as I thought.”
Paredes student

“It was great! We had fun doing the experiments and I would go home and teach my brother what we learned.”
Fulmore student

Girlstart Spring 2000 Student Enrollment

The majority of all girls enrolled in Girlstart represent traditionally under-served, ethnically diverse communities.

Fulmore Middle School

Anglo/Caucasian	7
African American	2
Hispanic	15
Asian American	1
Other	0

Total 25

Paredes Middle School

Anglo/Caucasian	4
African American	1
Hispanic	11
Asian American	0
Other	0

Total 16

Westview Middle School

Anglo/Caucasian	4
African American	7
Hispanic	11
Asian American	1
Other	0

Total 23

Webb Middle School

Anglo/Caucasian	0
African American	2
Hispanic	18
Asian American	0
Other	0

Total 20

Mendez Middle School

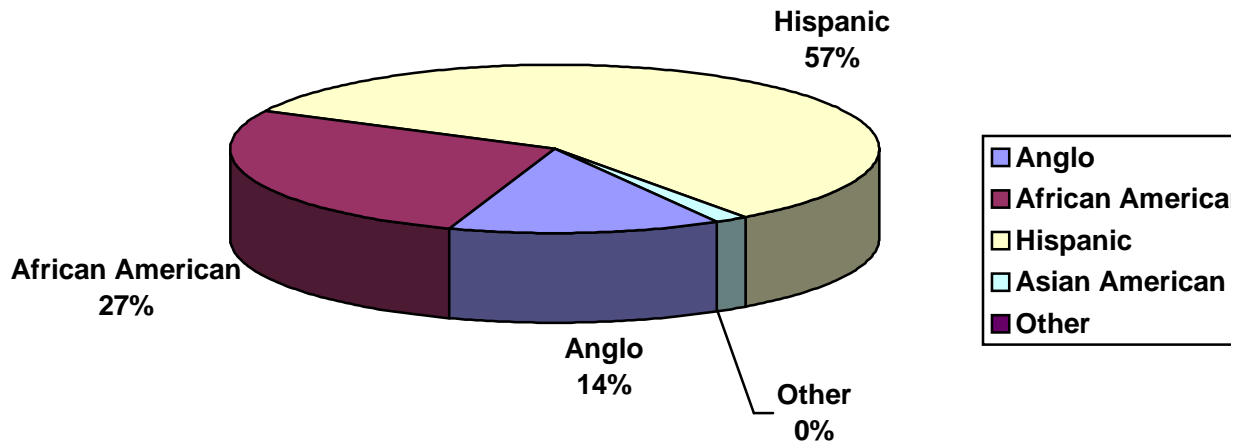
Anglo/Caucasian	2
African American	2
Hispanic	10
Asian American	0
Other	0

Total 14

Pearl C. Anderson Learning Ctr

Anglo/Caucasian	0
African American	20
Hispanic	7
Asian American	0
Other	0

Total 27





Girlstart Program Statistics -- 2000 Compiled Program Results

During the 2000, Girlstart served 288 girls in grades 4 through 9. Affiliate programs included: Andrews Elementary School, Blackshear Middle School, C.D. Fulkes Middle School (Round Rock), Fulmore Middle School, Mendez Middle School, Paredes Middle School, Pearl C. Anderson Learning Center (Dallas), Riverside Middle School (Fort Worth), Webb Middle School, and Westview Middle School (Pflugerville).

Ethnicity	Number	Percentage	Grade	Number	Percentage
African	75	26%	4	6	2%
American			5	29	10%
Caucasian	84	29%	6	88	30%
Latina/Hispanic	120	42%	7	96	33%
Other	9	3%	8	59	20%
Age	Number	Percentage	9	10	3%
9	8	3%			
10	23	8%			
11	65	22%			
12	77	27%			
13	81	28%			
14	28	10%			
15	5	2%			
16	1	<1%			

After the program*:

92% (233 of 253) of the girls said Girlstart encouraged them to think about career opportunities in math, science, and technology that they might not have considered before.

85% (216 of 253) of the girls said Girlstart made them feel more confident about their skills in math, science and technology.

81% (204 of 253) of the girls said Girlstart made them feel better about themselves.

72% (182 of 253) of the girls said as a result of Girlstart, they may take more mathematics, science and technology coursework.

77% (194 of 253) of the girls said Girlstart increased their interest in math, science and technology.

91% (230 of 253) of the girls said Girlstart helped them realize math and science are important to their education and career.

Pre- and Post- Survey Comparisons:**

	Pre-	Post
Girls do just as well as boys in math, science, and technology.	86% (185 of 214)	92% (197 of 214)
Women are just as capable as men in math, science, and technology.	93% (198 of 214)	94% (202 of 214)
I sometimes hide how smart I am just to fit in or be popular.	27% (57 of 214)	12% (25 of 214)

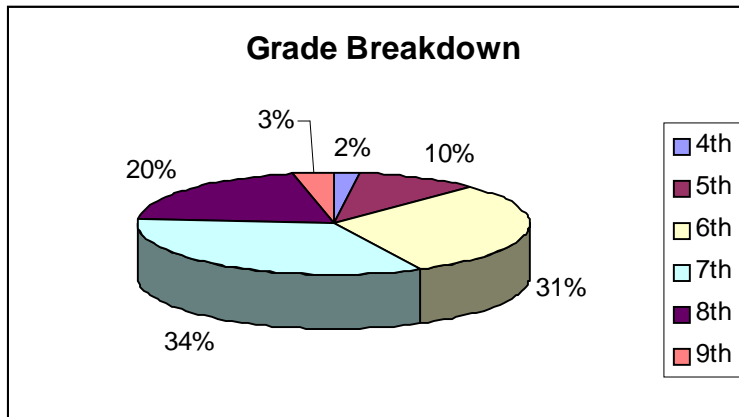
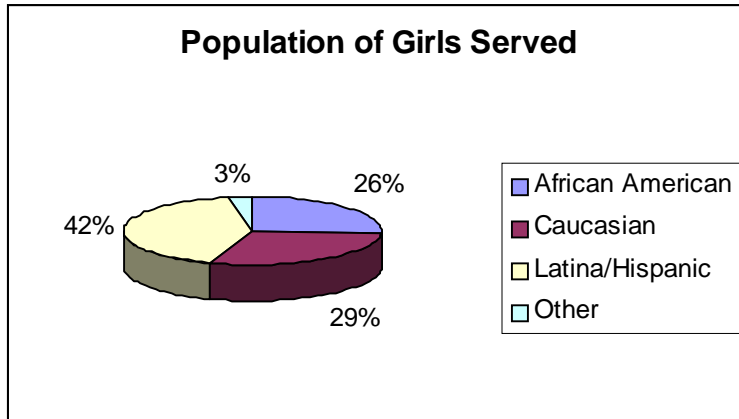
I plan to take a lot of math, science, and technology coursework in high school.

79%
(170 of 214)

82%
(176 of 214)

*253 girls completed post-surveys.

**Two hundred fourteen (214) girls completed both pre- and post-surveys.





Comparison of Program Results from 1999 to 2000

Comparing program results from 1999 to 2000, we find significant increases in the percentage of girls who say Girlstart had an impact on their attitudes about mathematics, science, engineering and technology.

From 1999 to 2000, there was a:

24% increase in the percentage (from 74% to 92%) of girls who said Girlstart encouraged them to think about career opportunities in math, science, and technology that they might not have considered before.

25% increase in the percentage (from 68% to 85%) of girls who said Girlstart made them feel more confident about their skills in math, science and technology.

28% increase in the percentage (from 63% to 81%) of girls who said Girlstart made them feel better about themselves.

44% increase in the percentage (from 50% to 72%) of girls who said as a result of Girlstart, they may take more mathematics, science and technology coursework.

48% increase in the percentage (from 52% to 77%) of girls who said Girlstart increased their interest in math, science and technology.

3% increase in the percentage (from 88% to 91%) of the girls who said Girlstart helped them realize math and science are important to their education and career.

