

REPORT 2019 October Cycle

GENERAL INFORMATION

Organization Information

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REPORT INFORMATION

Report Funding Cycle: 2019 October Cycle	Report Date: 08/17/2020 12:00 am
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1: Please include in your report the dollar amount of the funds that were awarded, the date they were funded and what the funds supported.

Awarded Amount: 5,000	Date: 11/11/2019
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2: Were the objectives cited in your original proposal met? Please address each started objective and how it was met.

2019-20

2,672 4th-5th grade girls (93 schools, 27 districts)*

San Antonio (North East ISD): 60 girls

Girlstart After School partner schools in San Antonio's NEISD in 2019-20 were:

Camelot Elementary

Montgomery Elementary

Windcrest Elementary

December 2019 Outcomes (due to COVID-19, schools closed in March 2020 and we were unable to complete final surveys):

Goal 1: Participants will demonstrate competency in conducting scientific inquiry, investigations, and reasoning and will gain competency in STEM skills.

- o 81% of participants correctly identified all the steps of the engineering design process.

- o 89% reported a willingness to redesign their activity if it did not work on the first try (demonstrates confidence in solving problems).

o 83% agreed with the statement, "I like science!"

Goal 2: Increase # of girls interested in continued/future STEM study (in high school and college), including interest in STEM electives, additional STEM study, STEM higher education, and STEM majors.

o 90% agree that, "if I try hard, I can be good at science."

o 84% want to return to Girlstart next school year.

o 77% report a strong interest in taking more STEM courses in middle and high school.

o 90% understand that doing well in STEM in school means that they are more likely to get into college.

o 89% report intent to go to college.

Goal 3: Increase # of girls interested in STEM careers.

o 91% understand that doing well in STEM in college can lead to a better job.

o 90% report at least a moderate desire to pursue a STEM career.

3: Please explain any changes from the original proposal and the circumstances that lead to the modification of the objective.

Due to the COVID-19 crisis, all Girlstart After School partner school closed early for the 2019-20 school year. To respond to this, Girlstart piloted a virtual Girlstart After School with our partner schools in April 2020 to prepare for any future virtual programs. We continue to monitor our school districts' responses to the pandemic and look forward to resuming our free, hands-on STEM after school programming as soon as we can do so. Girlstart's team is working to explore more engaging solutions for 'distance learning'. We quickly realized that most of the offerings that are being provided to children as a solution in place of the classroom fall into one of these general categories: 1. Lectures (on video); 2. Worksheets (such as online quizzes or printed worksheets); or 3. Combinations of the two, often cloaked in a term like 'portal'. Spring 2020's experiment to test existing 'distance learning' tools has demonstrated the limitations of existing efforts, but has also shown some promise. To respond to the limitations we observe, Girlstart has been piloting a virtual version Girlstart After School with our participants. We are using these pilots as a way to learn more about how we might advance our in-person work through the screen to make learning engaging via video. We anticipate that given the likely limitations on convening groups of people in the coming months, a virtual model for all of our programs (including a more robust Girlstart After School) will be fully developed. This may present opportunities for new strategic options for Girlstart; we are comprehending this as part of our strategic planning process, which is taking place throughout 2020.

4: What needs were addressed?

Efforts to build the nation's STEM workforce must grapple with the fact that nearly half of this potential workforce--women and girls--is going largely untapped. While nearly as many women hold undergraduate degrees as men overall, they make up only about 30% of all STEM degree holders. Females also remain proportionally under-represented in STEM careers, comprising 47% of the country's total working population but just 25% of college-educated STEM workers. Disparities are even higher among women of color: in 2015, minority women held less than 10% of science and engineering jobs. Research points to enduring gender bias, internalized stereotype threat, and lack of female role models as persistent factors that discourage girls and women from pursuing STEM and STEM-related professions.

Studies show that gender differences in attitudes and interest in science are present by the end of the elementary grades. These early years therefore represent a crucial window not only for providing students with a solid foundation in STEM subjects, but also for cultivating an enthusiasm for STEM among girls. Efforts to improve mathematics and science learning generally have placed a new focus on elementary STEM education, bolstered by passage of the Every Student Succeeds Act (2015)--which identifies STEM as integral to a well-rounded education for all students--and the adoption of Common Core Standards and/or Next Generation Science Standards (NGSS) in several states. However, elementary schools in low-income Local Education Agencies (LEAs) experience difficulties recruiting highly qualified math and science teachers, and many K-5 teachers are generalists who do not feel well-prepared to teach elementary science or are uncomfortable with inquiry-oriented teaching and learning.

Girlstart intervenes at this critical juncture with opportunities for girls in grades 4-8 to explore a range of STEM disciplines and activities, within a community of role models and peers who can encourage their interest and persistence in the STEM pipeline. In addition, grades 4-5 are a vital time to invest in education and in STEM in particular. The 5th grade is the first administration of a standardized test in science (standardized tests in math are administered every year, and multiple administrations are available, so this data point, while illustrative, does not present a full picture). Performance on these tests can have a profound impact on a child's future with regard to options for taking advanced math and science courses in middle school. By enrolling in more advanced math and science courses in middle school, the doors for a child's future stay open, whereas if they do not participate in these advanced courses, future options decrease. Girlstart After School in particular is oriented around this issue, so that we can help shape a girl's future by proactively helping her get on and stay on advanced math and science tracks.

5: What method of evaluation did you use to monitor and measure the project's outcome and what are the result?

Girlstart programs are designed to build participants' skills, knowledge, confidence, and interest in STEM topics, activities, courses, and careers. To assess our programs' efficacy, Girlstart uses a system of surveys, developed in partnership with the American Institutes of Research, which are administered by program leaders at the beginning and end of each semester. These surveys test the growth of girls' knowledge and skills, and also provide an opportunity for girls to self-report their attitudes toward Girlstart and toward STEM in general.

Girlstart is also continuing to update its longitudinal study to assess the long-term impact of Girlstart After School participation on girls' academic progress, course selection, graduation rates, and college enrollment. The first iteration of this study, completed in April 2014, includes several significant findings:

- o Over two years, 71% of Austin ISD Girlstart After School participants passed the 5th grade science STAAR exam (Texas's state-mandated standardized test). 62% of students overall at our partner schools, and only 48% of a comparison group of non-participant girls matched on key demographic indicators, passed the same exam during this time.
- o Girlstart After School participants also achieved Commended Performance status on 5th grade math and science tests at a higher rate than non-participant girls.
- o After leaving Girlstart After School, participants enrolled in advanced and pre-AP math and science classes at a rate of 1.58 courses per girl (over three years), compared to 1.00 courses per non-participant girl in our comparison group.

In 2016, another quasi-experimental study was conducted. In this, the evaluator reviewed academic performance data from 1,200+ girls across 8 school districts (Austin, Connally, Del Valle, Georgetown, Hays, North East, Pflugerville, and Round Rock). These school districts span highly disparate geographies (from Waco to San Antonio) and types of school districts (urban, rural, high performing, low performing). The 2016 findings echoed those of the 2014 study, but on a dramatically larger scale. These findings show that informal science programs CAN have a palpable impact on science and math academic achievement:

- o Girlstart girls are more likely to perform better than nonparticipants on science and math standardized tests.
- o Girlstart girls are more likely to achieve high-level (Commended) STAAR science performance.
- o Post-program participation, Girlstart girls enroll in more Pre-AP science and math classes than nonparticipants. They are also more likely to increase their involvement in advanced STEM courses over time, whereas nonparticipants' enrollment decreases over time.

As we continue to expand our After School program, Girlstart will expand this study to include more data from more partner schools and districts. We will also continue to collect data as more participants age into middle and high school, graduate, and enroll in higher education.

6: Do you plan to continue this project, and if so, how do you plan to sustain it?

Yes. Girlstart After School has been one of Girlstart's core programs since our founding in 1997, and we aim to continue providing this programming for many years to come. To ensure the long-term sustainability of Girlstart After School, Girlstart is working hard to build a large and diverse base of corporate, foundation, and individual donors, and to secure multi-year funding commitments whenever possible. As we expand our programs, Girlstart is seeking collaboration with donors interested in funding programs for education, women and girls, STEM- or technology-specific education, summer enrichment programs, programs for underprivileged youth, and programs that enrich the quality of life in our various partner communities. By seeking support across these areas, Girlstart is building a network of supporters so that our funding will be sustainable and able to withstand changes in corporate, economic, and social climates.

7: Please provide any other comments of information relevant to this grant.

According to NWEA, "students may return in fall 2020 with less than 50% of typical learning gains and, in some grades, nearly a full year behind what we would expect in [mathematics] in normal conditions." This is especially impactful to the high-need population of girls that Girlstart serves. Students from economically disadvantaged families are also at the greatest risk of suffering from the "summer slump," the loss of knowledge and skills that takes place when students disengage from learning during the summer months. Coupled with the COVID-19 crisis, it is critical that the high-need communities we serve stay engaged with STEM over the coming months.

8: Please provide an updated detailed projected budget with expenses for the received grant. Also include the totals for the budgeted and actual amount. Explain any discrepancies between the budgeted and the actual expenses for the project.

Line Item Description	Total Project Funds Allocation	Najim Requested Funds	Project Funds Actual	Najim Funds Allocation
mileage/zipcar	\$9,000	\$0	\$4,500	\$0
office supplies	\$6,000	\$0	\$5,000	\$0
printing/photocopies	\$6,000	\$0	\$7,000	\$0
staff (STEM CREW program leaders)	\$36,000	\$2,500	\$35,000	\$2,500
STEM supplies/materials	\$16,000	\$2,500	\$18,000	\$2,500
TOTAL:	\$73,000	\$5,000	\$69,500	\$5,000

Signature

Meera Angus