

ODE RFP – STEM, STEAM and/or CTE Program and Activity Grant

Project Summary: The Girls Inc. SMART (science, math and relevant technology) Initiative addresses the following goals: extend the reach and impact of our STEM programming; strengthen girls’ academic success and post-secondary readiness; inspire girls to adopt more positive aspirations for their futures; deepen family involvement; and continuously improve our program quality and cultural responsiveness. This investment will enable us to serve more Girls Groups with impactful STEM experiences and launch our comprehensive Eureka! Program which engages older girls in exciting year round STEM learning, post-secondary preparation and career connections. Based on our track record, we anticipate that 65% of our participants will increase their knowledge of STEM subject matter, pro-social behavior and self-confidence. Key partners include numerous K-12 schools, STEM businesses and associations, as well as local colleges and universities.

Project Rationale: Girls Inc. of NW Oregon recognizes multiple barriers to girls’ personal and academic success in our community, and their achievement and interest in STEM fields/careers. Our participant profile for the 2012-2013 program cycle reflected high racial and ethnic diversity with girls identifying as follows: Asian (4%); Black/African American (17%); Latina (30%); Native American/Alaska Native (7%); Mixed-Race (7%); Other (7%); White (24%).

Socioeconomic: In the past decade the percentage of students of color in the Portland Metro area increased significantly and many of these youth and their families have faced barriers linked with high poverty. Further, Portland students who qualify for the free or reduced-price lunch program increased from less than half to the majority of students in four of the five districts. At the same time, investments in girls of color targeted to advance their personal and academic achievement have not kept pace. Underserved girls’ access to role models and mentors

through local programs, particularly in STEM fields, are limited to non-existent. White girls are much more likely to know someone in a STEM career, compared to African American and Hispanic girls (Girl Scout Research Institute, 2012). A mere 2.4% of advanced degrees in STEM fields are held by women of color (National Science Foundation, 2012). Given that many schools continue to be under resourced, out-of-school time providers are uniquely positioned to create and extend STEM meaningful connections for youth.

Academic Achievement: Research shows that girls make determinations about their math and science aptitude as early as 2nd and 3rd grade. Between 4th and 8th grade, more girls than boys begin to turn away from STEM subjects due to developing fixed mindsets about their ability. The issue is not just about curiosity, but also confidence in the skills needed to do the work. This is a critical transition time for the development of future career aspirations of youth generally (Maltese & Tai, 2010), and girls specifically (Wigfield et al, 1991). It is a prime moment to influence girls' self-efficacy, associated with academic achievement and a selection of STEM related college and career choices (Britner & Pajares, 2006). National Assessment of Educational Progress (NAEP) scores show that 33% and 35% of Oregon's eighth graders test at or above proficient in math and science, respectively. SAT scores in mathematics remain lower for girls than boys. Of teens surveyed, 7% of girls intended to work in science, engineering, and technology, compared to 17% of boys (Marlino & Wilson, 2003). These achievement gaps along with the challenge of increasing the graduation rate for minority students, point out that girls are less likely to be prepared to enter STEM-related post-secondary education and training leading to well-paying jobs in STEM fields (Portland Metro STEM Partnership, Executive Summary April 2012).

Gender: Assumptions about the distinct abilities and interests of boys and girls plus persistent structural inequity limit girls' access to opportunities. Girls Inc. plays a key role in reducing socioeconomic and racial inequities that at-risk, low-income, highly diverse girls have inherited, all challenges which we know affect student success, by engaging them in quality learning experiences designed to create a safe, girl space where they can talk about their challenges, gain new skills and knowledge, adopt and practice more pro-social behaviors, and improve self-confidence.

STEM: Nine of the 10 fastest growing occupations requiring at least a bachelor's degree will involve substantial mathematical or scientific training (US Department of Labor, 2009). Women, however, hold only about 25% of the positions in STEM related fields (National Science Board, 2008). In Oregon, employment in STEM careers, such as healthcare, engineering and technology, is expected to grow up to 10% in the next five years and the median rate of hourly pay for STEM workers is twice that of all workers (Oregon Employment Department, 2009). In the absence of intentional and authentic STEM connections, data show that too few girls are translating math and science academic achievement into choosing STEM post-secondary and career directions that will increase their access job security and higher wages. Motivating more girls to choose STEM related post-secondary and career options along with persisting with attaining academic achievement are more critical goals than ever (AAUW, 2010).

Project Plan: Girls Inc. seeks funding to expand our SMART (science, math, and relevant technology) Initiative, including quality STEM focused after-school Girls Groups and year-round Eureka! Program STEM experiences for older girls. We will deliver SMART programming to 35 after-school Girls Groups and launch the year round Eureka! Program.

STEM Girls Groups: Groups engage 10-15 girls, ages 6 to 18, from no more than two consecutive grades and explore one curriculum each term during 90 minute weekly meetings (three terms each school year). Trained facilitators who lead the groups are drawn from a diverse and dynamic base of volunteers and serve as positive, professional, female adult role models to girls. Our developmentally appropriate, research based STEM curricula are designed with the specific needs of girls in mind and integrate post-secondary and career connections. Girls Inc. staff coordinate closely with school principals, counselors, teachers, and Schools Uniting Neighborhoods (SUN) partners to sequence curriculum so that it is relevant and interesting for participants.

Eureka! Program: This is a five-year effort to connect older girls, many who will be first generation college or university applicants, to intensive summer and school year experiences that augment and sustain the skills, tools and self-efficacy developed in Girls Groups. From the summer before 8th grade through graduation, girls access programming and mentoring aimed at increasing their motivation to succeed academically, graduate on time and choose post-secondary options that prepare them for STEM-related careers. The program is a community wide effort that thrives on partnerships and interactions with schools, community-based organizations and local businesses and corporations enabling Girls Inc. to link girls to meaningful experiences such as Guest Speakers, Field Trips and internships.

Target Population: We will serve 350 girls ages 7-18 in STEM Girls Groups with 30 of these girls (entering 8th grade) participating in the Eureka! Program (50% of participants will be racial and/or ethnic minorities or multicultural with 80% will be eligible for free and reduced lunch).

Delivery and Staffing: Our Program Director, Karin Malbrough, has more than 15 years of experience designing, implementing and evaluating youth programs. She has explored the intersection between race, ethnicity, gender, class, and culture as they all influence youth's positive identity formation and thriving. Funding will support a new STEM Coordinator position (.75 FTE) to oversee STEM Girls Groups, recruit Eureka! Program participants, refine STEM program offerings with partners, and organize exciting Guest Speaker plus Field Trip opportunities. Facilitators come from a range of personal and professional backgrounds, all are experienced with underserved and underrepresented youth from diverse communities. When recruiting, we intentionally advertise in spaces accessed by racially and ethnically diverse youth development practitioners and other professionals of color, including networks respected by communities of color. We also carefully place Facilitators with whom participants' can identify.

Partnership Details: The Eureka! Program model leverages key local partnerships with unique and fun models, such as ChickTech, a non-profit dedicated to increasing the number of women and girls pursuing technology-based careers and retaining women in the technology workforce, and Saturday Academy. Other committed partners interested in providing space, instructors, and in-kind resources to support STEM programming areas like engineering and digital arts include SUN site partners, Portland Community College, Portland State University, and the Oregon Museum of Science and Industry.

Our Executive Director Elizabeth Nye represents Girls Inc. on a number of committees dedicated to building cultural competency and community connection, such as the Coalition of Advocates for Equal Access for Girls. Girls Inc. is also connected to the Portland Metro STEM Partnership, the East Metro STEAM Partnership, and the Oregon Girls Collaborative. In 2012 we launched our STEM Advisory Council made up of professional women in STEM fields and advocates for

STEM education. Advisory Council objectives include: implementing the Eureka! Program; broadening our STEM partnerships with SMART stakeholders; expanding our network of collaborators and supporters; and increasing grant funds to support all of these efforts.

Evaluation Plan: We take a comprehensive approach to measuring outcomes and improving program quality. We collect demographic, attendance and outcomes information for all participants. We administer anonymous pre and post surveys for each term which are designed to measure change on specific outcomes that are related to curriculum and that are predictors of girls' improved academic performance and engagement. Based on our proven track-record, we anticipate that 65% of participants will demonstrate gains in knowledge, pro-social behavior and self-confidence. Year to year, we have continued to meet or exceed program evaluation benchmarks.

Sustainability Plan: As an affiliate of the national organization Girls Incorporated, we are connected with a national network that shares learning and best practices. At the 2010 Clinton Global Initiative, Girls Inc. made a commitment to engage more underserved girls and young women through the Eureka! Program. The national organization is now actively raising funds to support Eureka! efforts across the country. To stay at the forefront of gender-specific programming locally, we have made strategic investments in increasing the focus we place on connecting girls to STEM opportunities. Furthermore, our partner network creates a strong infrastructure to support this effort. With support from ODE, we will be able to build out our extended STEM programming over the next two years. This work will include anticipated confirmation of corporate support from Intel, Tektronix, HP, Girls Inc. nationally and others. Finally, we are confident that the work of the STEM Advisory Council will yield ample financial and in-kind support to sustain these activities beyond the grant period.